

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA
2 FOR THE COUNTY OF LOS ANGELES
3 DEPARTMENT 308 HON. CHARLES MC COY, JUDGE
4 RICHARD BOEKEN,)
)
5 PLAINTIFF,)
)
6)
) CASE NO. BC226593
7 VS.)
)
8 PHILIP MRRIS,)
INCORPORATED, A)
9 CORPORATION; INTERNATIONAL)
HOUSE OF PANCAKES)
10 INCORPORATED, A)
CORPORATION.)
11)
DEFENDANTS.)
12)

13 REPORTER' S DAILY TRANSCRIPT OF PROCEEDINGS
14 THURSDAY, APRIL 5TH, 2001

15 APPEARANCES:

16 (FOR PLAINTIFF)

LAW OFFICES OF
MICHAEL J. PIUZE
11755 WILSHIRE BLVD.
SUITE 1170
LOS ANGELES, CA 90025
ARNOLD & PORTER
BY: MAURICE A. LEITER
JOHN CARLTON
777 S. FIGUEROA ST.
44TH FLOOR
LOS ANGELES, CA 90017

22 LISA C. RIDLEY
23 OFFICIAL REPORTER
600 S. COMMONWEALTH AVE.
24 ROOM 308
LOS ANGELES, CA 90005

25 VOLUME 11B OF
26 PAGES 1737 THROUGH 1863

27
28

1 LOS ANGELES, CALIFORNIA; THURSDAY, APRIL 5TH, 2001

2 1:30 P. M

3 DEPARTMENT 308 HON. CHARLES MC COY, JUDGE

4

5 (THE FOLLOWING PROCEEDINGS
6 WERE HELD IN OPEN COURT OUT
7 OF THE PRESENCE OF THE JURY:)

8

9 THE COURT: ALL RIGHT, GOOD COUNSEL, WE
10 ARE OFF THE RECORD. I HAVE SOME MATTERS TO HANDLE?

11 MR. PIUZE: YOUR HONOR, WE HAVE AGREED,
12 AS FAR AS THE LAST OF THE THREE TRANSCRIPTS TO
13 DR. MELE, WE HAVE REACHED AGREEMENT BETWEEN
14 OURSELVES ON EVERYTHING, SAVE FOR ONE LITTLE BLOCK
15 AT THE VERY END. AND IF THE COURT WOULD BE THE TIE
16 BREAKER THERE FOR US, WE WOULD APPRECIATE IT.

17 MR. GOLDSTEIN: YOUR HONOR, THIS IS THE
18 TRANSCRIPT THAT THEY ARE USING.

19 THE COURT: PAGE AND LINE.

20 MR. LE BERTHON: TURN YOUR ATTENTION TO
21 PAGE 18349, AND IT IS THE TEXT BETWEEN LINES 8 AND
22 LINE 24. THE OBJECTIONS WILL NOT HAVE BEEN
23 DESIGNATED, BUT THE TEXT ITSELF HAS BEEN.

24 THE COURT: YOUR OBJECTION?

25 MR. LE BERTHON: A VARIETY OF OBJECTIONS,
26 YOUR HONOR, THE QUESTION AND ANSWERS ARE
27 ARGUMENTATIVE. DR. MELE IS A RAT STUDY RESEARCHER
28 AND HE IS NOT IN A POSITION TO HAVE ANY KNOWLEDGE

1 AS TO THE COMPANY'S VIEWS ON THE SMOKING -- ON THE
2 SAFETY OF SMOKERS OR HEALTH OF SMOKERS. CERTAINLY
3 UNDER SECTION 352 AND THE PROBATIVE VALUE IS
4 OUT-WEIGHED BY UNDUE PREJUDICE. IT'S INFLAMMATORY,
5 IT'S ARGUMENTATIVE.

6 THE COURT: IT SEEMS TO ME THAT THIS IS,
7 THIS IS TESTIMONY THAT I WILL ADMIT AND OVERRULE
8 THE OBJECTION.

9 MR. PIUZE: YOUR HONOR, SEEING THAT WE
10 HAVE A MINUTE OR TWO WHILE WE ARE WAITING FOR THE
11 JURY TO RECONSTITUTE ITSELF, IT'S MY DECISION, FOR
12 RIGHT OR WRONG, WHEN WE ARE DONE WITH THIS, WE ARE
13 GOING TO START READING FROM DOCTOR UYDESS, AND WE
14 HAVE PLENTY THAT WILL FINISH THIS DAY, BEFORE THE
15 COURT WILL BE CALLED UPON TO MAKE ANY -- WE HAD A
16 COUPLE DISAGREEMENTS, BUT WE WILL NOT GET TO THEM
17 TODAY.

18 THE COURT: DR. UYDESS, WHO IS THIS
19 PERSON?

20 MR. PIUZE: HOW DO YOU SPELL THAT?

21 MR. GOLDSTEIN: U-Y-D-E-S-S. HE WAS ALSO
22 A PHILIP MORRIS SCIENTIST. HE IS A CHEMIST.

23 YOU KNOW WHAT WE NEED IS, I THINK
24 WE NEED ANOTHER COPY FOR HIS HONOR.

25 THE COURT: EVERY NOW AND THEN ONE LITTLE
26 WORD MIGHT NOT BE EXACTLY RIGHT, BUT I LOOKED OVER
27 AT OPPOSING COUNSEL, OPPOSING COUNSEL WAS FOLLOWING
28 ALONG TOO AND I THINK WE ARE ALL OF THE AGREEMENT

1 THAT THE SENSE WAS NOT CHANGED IN ANY WAY SO NO ONE
2 INTERRUPTED.

3 MR. CARLTON: IT WAS SUBSTANTIAL.

4 THE COURT: IF THERE IS ANYTHING THAT IS
5 OFF IN A WAY THAT COUNSEL WOULD THINK IT IS
6 APPROPRIATE TO SAY SOMETHING, SPEAK UP IMMEDIATELY
7 AND I WILL GET IT CORRECTED.

8 MR. PIUZE: I JUST HAVE AN OVERWHELMING
9 URGE TO CORRECT GRAMMATICAL MISTAKES, BUT IT'S A
10 HUNDRED BILLION DOLLAR LAWYER.

11 THE COURT: PLEASE, COUNSEL.

12

13 (THE FOLLOWING PROCEEDINGS
14 WERE HELD IN OPEN COURT IN
15 THE PRESENCE OF THE JURY.)

16

17 THE COURT: GOOD AFTERNOON, LADIES AND
18 GENTLEMEN.

19 I THINK WE HAVE DONE ALL THAT WE
20 NEED TO DO ON THIS TRANSCRIPT TO GET IT PREPARED
21 FOR YOU SO YOU CAN FOLLOW ALONG.

22 REMEMBER THIS: THIS IS TESTIMONY,
23 THIS AS IF, YOU HAVE TO THINK OF THIS AS OF A REAL
24 PERSON, BECAUSE THIS IS, THIS IS A REAL PERSON
25 THAT'S TESTIFYING THROUGH THESE DOCUMENTS. SO YOU
26 NEED TO PAY AS MUCH ATTENTION TO THIS AS YOU WOULD
27 AS IF THE WITNESS WAS ACTUALLY ON THE WITNESS
28 STAND. REMEMBER, THIS WAS TESTIMONY UNDER OATH,

1 WITH AN OPPORTUNITY TO CROSS-EXAMINE, SO THERE WAS
2 SOMEONE WHO DID THE DIRECT EXAMINATION, SOMEONE
3 ELSE DID THE CROSS-EXAMINATION.

4 ALL RIGHT. COUNSEL, YOU MAY
5 CONTINUE.

6 MR. LE BERTHON: THANK YOU, YOUR HONOR.

7 "Q I REPRESENT PHILIP
8 MORRIS AND I AM HEAR TO BRING US BACK
9 A LITTLE BIT -- I AM HERE TO BRING US
10 BACK A LITTLE BIT TO SOME OF YOUR
11 TESTIMONY. I THINK IT WAS LAST
12 TUESDAY. "

13 THE COURT: ALL RIGHT. THIS IS DR. MELE
14 AGAIN; RIGHT?

15 MR. LE BERTHON: I AM SORRY, IT IS.

16 THE COURT: AND WHAT WE HAVE NOW, IS THE
17 CROSS-EXAMINATION OR ACTUALLY THESE ARE THE
18 PORTIONS OF THE TRANSCRIPT THAT THE DEFENSE WISHES
19 TO READ INTO THE RECORD FOR THE JURY?

20 MR. LE BERTHON: BOTH, YOUR HONOR. THIS
21 IS FROM A CROSS-EXAMINATION OF DR. MELE FROM
22 DECEMBER 21, 1998.

23 THE COURT: ALL RIGHT. LET ME EXPLAIN
24 THAT TO THE JURY JUST SO WE UNDERSTAND EXACTLY WHAT
25 WE ARE DOING HERE AND THE SIGNIFICANCE OF THE FACT
26 THAT YOU ARE TALKING NOW RATHER THAN MR. PIUZE.

27 BY THE WAY, WE HAVE A NEW LAWYER.
28 SIR, WOULD YOU INTRODUCE YOURSELF TO THE JURY.

1 MR. LE BERTHON: ADAM LE BERTHON, COUNSEL
2 FOR PHILIP MORRIS WITH MR. CARLTON AND MR. LEITER.

3 THE COURT: THANK YOU, SIR, WELCOME.

4 THE CLERK: COULD HE SPELL HIS LAST NAME
5 FOR OUR MINUTE ORDER.

6 MR. LE BERTHON: L-E CAPITAL
7 B-E-R-T-H-O-N.

8 THE CLERK: THANK YOU.

9 JUROR: I CAN BARELY HEAR HIM FROM HERE.

10 THE COURT: THANK YOU FOR SAYING THAT.
11 AND IF THAT EVER HAPPENS WHERE YOU CAN'T HEAR,
12 RAISE IT IMMEDIATELY BECAUSE IT IS VERY IMPORTANT
13 THAT YOU HEAR.

14 MR. LE BERTHON: PLEASE SPEAK UP. I DO
15 SPEAK KIND OF SOFTLY.

16 THE COURT: JUST RAISE YOUR HAND AGAIN,
17 HE WILL GET THE MESSAGE, AND IF WE HAVE TO, WE CAN
18 MOVE YOU DOWN A LITTLE CLOSER.

19 ALL RIGHT.

20 SO WHAT HAS HAPPENED IS, THE
21 PLAINTIFF TOOK THE TRANSCRIPT AND WENT THROUGH AND
22 SELECTED THOSE PORTIONS THAT THE PLAINTIFF WOULD
23 LIKE TO, IN THEIR DIRECT EXAMINATION, BRING OUT TO
24 YOU. AND NOW IT IS THE DEFENSE'S TURN TO GO
25 THROUGH THE TRANSCRIPT AND PICK OUT THOSE PORTIONS
26 THAT THEY WOULD LIKE TO BRING OUT TO YOU FROM THE
27 DEFENSE PERSPECTIVE.

28 SO IMAGINE IT IS SORT OF LIKE

1 DIRECT AND CROSS-EXAMINATION OF SOMEONE BROUGHT TO
2 COURT.

3 MR. LE BERTHON: (READING)

4 "Q I REPRESENT PHILIP
5 MORRIS AND I AM GOING TO TRY TO BRING
6 US BACK A LITTLE BIT TO SOME OF YOUR
7 TESTIMONY. I THINK IT WAS LAST
8 TUESDAY. I AM GOING TO BE ASKING YOU
9 QUESTIONS PRINCIPALLY ABOUT WHAT YOU
10 DID WHILE YOU WERE AT PHILIP MORRIS
11 AND THE RESULTS OF YOUR RESEARCH WHILE
12 YOU WERE THERE; OKAY?

13 "A OKAY.

14 "Q NOW, YOU WORKED IN
15 THE, I THINK WE ALL REMEMBER, YOU
16 WORKED IN THE BEHAVIORAL PHARMACOLOGY
17 LABORATORY AT THE R&D CENTER IN
18 RICHMOND; RIGHT?

19 "A CORRECT.

20 "Q AND R&D IS RESEARCH
21 AND DEVELOPMENT CENTER?

22 "A CORRECT.

23 "Q OKAY. AND AS I
24 RECALL WHAT YOU SAID, YOU WORKED WITH
25 AND FOR DR. DENOBLE, WHO WAS YOUR
26 PROJECT LEADER?

27 "A THAT IS CORRECT.
28 RIGHT.

1 "Q OKAY. AND HE,
2 DR. DENOBLE REPORTED TO DR. CHARLES?

3 "A UH-HUH

4 "Q AND DR. CHARLES
5 REPORTED ON UP TO DR. OSDENE; IS THAT
6 RIGHT?

7 "A CORRECT.

8 "Q OKAY. AND THEN I
9 GUESS DR. OSDENE REPORTED TO
10 DR. HAUSERMAN?

11 "A RIGHT, THE
12 VICE-PRESIDENT.

13 "Q OKAY -- I AM SORRY,
14 RIGHT. SO THERE WERE A WHOLE BUNCH OF
15 DIFFERENT LEVELS AT THE R&D CENTER AND
16 THAT ESSENTIALLY WAS THE REPORTING
17 STRUCTURE UP THE LINE?

18 "A PRESUMABLY, RIGHT.

19 "Q OKAY. AS FAR AS YOU
20 KNEW?

21 "A YES.

22 "Q ALL RIGHT. AND THE
23 RESEARCH AND DEVELOPMENT DEPARTMENT IN
24 RICHMOND IS ONE OF A NUMBER OF
25 DEPARTMENTS IN THE WHOLE COMPANY?

26 "A THAT IS CORRECT.

27

28 "Q OKAY. NOW, YOUR

1 DEGREE WAS IN EXPERIMENTAL
2 PHARMACOLOGY AND YOUR SPECIALTY WAS IN
3 BEHAVIORAL PHARMACOLOGY?

4 MR. CARLTON: "EXPERIMENTAL PSYCHOLOGY. "

5 MR. LE BERTHON: I AM SORRY,
6 "EXPERIMENTAL PSYCHOLOGY AND YOUR SPECIALTY WAS IN
7 BEHAVIORAL PHARMACOLOGY?

8 "A CORRECT

9 "Q AND YOUR JOB,
10 WORKING WITH DR. DENOBLE WAS TO LOOK
11 AT THE AFFECTS OF CERTAIN DRUGS AND
12 COMPOUNDS IN RATS AND THE BRAINS OF
13 RATS?

14 "A CORRECT.

15 "Q OKAY. AND THOSE
16 RATS, THOSE STUDIES WITH RATS, THE
17 CENTERPIECE OF THOSE STUDIES WITH RATS
18 WERE WHAT YOU DESCRIBED AS
19 SELF-ADMINISTRATION STUDIES, WERE THEY
20 NOT?

21 "A THEY WERE, YES. THE
22 MAJORITY OF OUR TIME WAS SPENT ON
23 THOSE.

24 "Q OKAY.

25 "A OR MUCH OF OUR TIME.

26 "Q AND THE BASIC IDEA
27 WAS TO UNDERSTAND HOW NICOTINE OR
28 OTHER -- SOME OTHER COMPOUNDS,

1 ACETALDEHYDE, FOR EXAMPLE, HOW IT
2 AFFECTED THE BRAINS AND BEHAVIOR OF
3 RATS?

4 "A CORRECT, NICOTINE
5 AND ACETALDEHYDE AND SOME OF THE OTHER
6 DRUGS WE LOOKED AT.

7 "Q AND SOME OTHERS,
8 RIGHT.

9 "AND YOU DO THESE STUDIES
10 AND DO THE RESEARCH LIKE SCIENTISTS,
11 LIKE A GOOD SCIENTIST WOULD, AND YOU
12 WOULD REPORT THE RESULTS AND THE
13 RESULTS WOULD GET REPORTED UP THE
14 CHAIN SOMEWHERE; RIGHT

15 "A CORRECT.

16 "Q OKAY. NOW, I WANT
17 TO START AND WHAT I WILL TRY TO DO,
18 DOCTOR, IS SO THAT WE ARE TALKING
19 ABOUT THE SAME THING, IF I AM SHIFTING
20 TO A DIFFERENT SUBJECT, I WILL LET YOU
21 KNOW

22 "A OKAY.

23 "Q SO YOU CAN KIND OF
24 RE-ADJUST AS WE DO THIS.

25 "BUT I WANT TO START WITH
26 NICOTINE AND SELF-ADMINISTRATION OF
27 NICOTINE. AND AM I CORRECT THAT
28 DETERMINING WHETHER OR NOT NICOTINE

1 WAS ADDICTIVE WAS NOT THE PURPOSE OF
2 THE BEHAVIORAL PHARMACOLOGY?

3 "A THAT IS CORRECT,
4 NOBODY, OUR GOAL WAS NOT TO PROVE OR
5 DISPROVE ADDICTION. OUR GOAL WAS TO
6 FIND COMPOUNDS THAT WOULD SUBSTITUTE
7 FOR NICOTINE BECAUSE THE QUESTION OF
8 ADDICTION OR DEPENDENCE WAS NEVER IN
9 DOUBT.

10 "Q OKAY.

11 "A TO MY UNDERSTANDING.

12 "Q SO YOUR JOB, YOU
13 WEREN' T LOOKING AT WHETHER NICOTINE
14 WAS ADDICTIVE IN CONNECTION WITH THE
15 ANALOG PROGRAM, YOU WERE LOOKING AT
16 USE WITH REGARD TO, FOR EXAMPLE,
17 WHETHER IT WOULD MEET THE GOALS -- THE
18 TWO GOALS THAT YOU TESTIFIED BEFORE OF
19 THE ANALOG PROGRAM, MAINTAINING THE
20 PHYSIOLOGICAL EFFECT AND REDUCING ANY
21 CARDIOVASCULAR CONCERNS; RIGHT?

22 "A THOSE WERE THE
23 PRIMARY GOALS. THOUGH, TO FULLY
24 CHARACTERIZE AN ANALOG, WHICH WAS PART
25 OF OUR JOB, WE WERE TRYING TO FULLY
26 CHARACTERIZE THE EFFECTS OF NICOTINE.
27 THERE WERE STUDIES WE RAN OTHER THAN
28 THE SELF-ADMINISTRATION TO GET A BROAD

1 VIEW OF WHAT ANY SINGLE PARTICULAR
2 DRUG WOULD LOOK LIKE.

3 "Q NOW, ONE OF THE
4 IMPORTANT THINGS YOU WERE LOOKING AT
5 WAS TO SEE WHETHER NICOTINE WAS A
6 POSITIVE REINFORCER; CORRECT?

7 "A THAT IS CORRECT

8 "Q OKAY. AND THE WAY
9 YOU DID THAT WOULD BE TO LOOK TO SEE
10 WHETHER RATS WOULD SELF-ADMINISTER THE
11 NICOTINE, WHETHER THEY WOULD WORK TO
12 GET THE NICOTINE?

13 "A THAT IS CORRECT.

14 "Q OKAY. AND WHEN YOU
15 DID, THAT WOULD BE TO LOOK AND SEE
16 WHERE THE RATS WOULD SELF-ADMINISTER
17 THE NICOTINE, WHETHER THEY WOULD WORK
18 TO GET THE NICOTINE; CORRECT?

19 "A THAT IS CORRECT.

20 "Q NOW, THERE HAVE BEEN
21 SOME STUDIES DONE BEFORE YOURS BY
22 RESEARCHERS OUTSIDE THE TOBACCO
23 COMPANIES ON SELF-ADMINISTRATION OF
24 NICOTINE BY RATS OR IN RATS, BUT I
25 THINK YOU SAID THEY WEREN' T AS
26 COMPLETE OR AS THOROUGH AS YOURS.
27 WOULD THAT BE A FAIR CHARACTERIZATION?

28 "A THAT IS CORRECT.

1 THERE WERE CERTAIN CHARACTERISTICS OF
2 THOSE STUDIES AND CERTAIN CONTROLS
3 THAT WE FELT NEEDED TO BE DONE TO
4 UNEQUIVOCALLY SHOW IN RATS.

5 "Q OKAY. THOSE STUDIES
6 DID CONCLUDE THAT THERE WAS POSITIVE
7 REINFORCEMENT, DIDN'T THEY?

8 "A I WOULD HAVE TO SEE
9 THOSE PAPERS, THEY MIGHT HAVE.

10 "Q OKAY. DO YOU
11 REMEMBER SOME WORK THAT WAS DONE BY
12 SOME AUSTRALIAN SCIENTIST?

13 "A YES.

14 "Q OKAY. AND THOSE
15 SCIENTISTS HAD CONCLUDED THAT NICOTINE
16 WAS A POSITIVE REINFORCER IN RATS?

17 "A RIGHT, THAT IS
18 CORRECT.

19 "Q OKAY. NOW, ONE OF
20 THE -- WAS ONE OF YOUR CONCERNS ABOUT
21 THOSE OTHER STUDIES, EVEN THOUGH THEY
22 SHOWED THAT NICOTINE WAS A POSITIVE
23 REINFORCER, THAT THEY -- THAT THEY
24 DIDN'T DEAL WITH FOOD ADMINISTRATION
25 IN THE WAY YOU DEALT WITH IT?

26 "A IN ORDER FOR THOSE
27 STUDIES TO GET THEIR RATS TO
28 SELF-ADMINISTER NICOTINE, THEY HAD TO

1 CONCURRENTLY PROVIDE FOOD
2 REINFORCEMENT TO THE ANIMALS OVER --
3 WHEN THE ANIMAL WAS WORKING, HE WAS
4 REALLY WORKING FOR TWO THINGS AND THE
5 ONLY WAY YOU CAN TELL WHAT HE IS
6 ACTUALLY WORKING FOR IS TO PULL ONE OR
7 THE OTHER OUT. AND WHEN THE FOOD WAS
8 ELIMINATED, THE RAT STOPPED WORKING
9 FOR THE NICOTINE.

10 "SO THEY MAY HAVE CONCLUDED
11 NICOTINE WAS A POSITIVE REINFORCER IN
12 THOSE STUDIES. THAT WOULD HAVE MET
13 THE USUAL CRITERIA OF THE COMMUNITY.

14 "Q NOW, WERE YOU AWARE
15 OF ANY STUDIES BY OUTSIDE RESEARCHERS
16 SUCH AS THE AUSTRALIAN RESEARCHERS
17 BEFORE YOURS THAT RATS WILL
18 SELF-ADMINISTER NICOTINE EVEN WITHOUT
19 A FOOD ADMINISTRATION SCHEDULE?

20 "A THERE WERE ATTEMPTS
21 TO SHOW THAT. ONE STUDY BY A
22 RESEARCHER, I BELIEVE HIS NAME WAS
23 HANSEN, HAD SOME SELF-ADMINISTRATION
24 OF NICOTINE BUT IT DIDN'T SEEM TO --
25 THE SELF-ADMINISTRATION DIDN'T VARY
26 WHEN HE SUBSTITUTED SALINE FOR
27 NICOTINE, WHICH IS ANOTHER VERY
28 CRITICAL POINT. A RAT IS GOING TO

1 PRESS A LEVER AT SOME LOW LEVEL FOR
2 BOTH A DRUG AND A VEHICLE. THAT
3 CERTAINLY DOESN'T CONFIRM THAT HE IS
4 RESPONDING TO THE DRUG.

5 "Q WERE YOU AWARE OF
6 ANY OTHER STUDIES THAT SHOWED, AGAIN,
7 BY PEOPLE WHO WERE LOOKING AT THIS
8 SUBJECT OUTSIDE THE TOBACCO COMPANIES,
9 AND I MEAN BEFORE YOU DID YOUR WORK,
10 THAT SHOWED THAT NICOTINE WAS A
11 POSITIVE REINFORCER, EVEN WITHOUT
12 REGARD TO FOOD ADMINISTRATION?

13 "A THERE WERE -- THERE
14 WERE OTHER STUDIES, AGAIN, NONE OF
15 THOSE STUDIES IN OUR VIEW,
16 UNEQUIVOCALLY SHOWED IT WAS A POSITIVE
17 REINFORCER BECAUSE THEY DIDN'T RUN
18 THROUGH THE NUMBER OF ADEQUATE AND
19 NECESSARY CONTROL PROCEEDS TO
20 DETERMINE YOU COULD MANIPULATE
21 NICOTINE SELF-ADMINISTRATION IN THE
22 RAT. YOU COULD INCREASE IT OR
23 DECREASE IT BY YOUR EXPERIMENTAL
24 CONTROL.

25 "Q OKAY. SO WHAT YOU
26 ARE SAYING IS THAT, WHILE THERE WERE
27 OUTSIDE RESEARCHERS WHO WERE LOOKING
28 AT THIS ISSUE OF NICOTINE BEING

1 SELF-ADMINISTERED BY RATS AND
2 CONCLUDED THAT THEY, THAT NICOTINE WAS
3 A POSITIVE REINFORCER, THE STUDIES
4 WEREN'T DONE SUFFICIENTLY CAREFULLY OR
5 DIDN'T HAVE SUFFICIENT CONTROLS OR AT
6 LEAST -- THEY WEREN'T AS GOOD AS YOURS
7 IN THAT REGARD?

8 "A I CAN'T EVEN SAY
9 THEY CONCLUDED. I'D HAVE TO SEE
10 THOSE. AND IN CASES WHERE YOU CAN'T
11 SHOW THAT TYPE OF MANIPULATION AND
12 DEMONSTRATION, THE CONSERVATIVE
13 REASONABLE RESPONSE WOULD BE, WE ARE
14 NOT MANIPULATING THIS TREATMENT AS WE
15 SHOULD AND FURTHER STUDIES ARE
16 WARRANTED. THERE'S CLEARLY NOT A GOOD
17 UNDERSTANDING THAT THERE ARE VARIABLES
18 OF CONTROLLED NICOTINE
19 SELF-ADMINISTRATION IN A RAT. UP
20 UNTIL THAT POINT, THERE WAS NOT A GOOD
21 UNDERSTANDING IN THE LITERATURE.

22 "Q OKAY. NOW, THE FACT
23 THAT THIS DRUG OR COMPOUND IS A
24 POSITIVE REINFORCER DOESN'T
25 NECESSARILY MEAN IT IS ADDICTIVE, DOES
26 IT?

27 "A NO, IT DOES NOT. I
28 DON'T KNOW IF YOU CAN EVER DEMONSTRATE

1 ADDICTION IN A RAT. A RAT IS A RAT.
2 ADDICTION IS A PARTICULARLY HUMAN
3 QUALITY. BUT IF A RAT WILL
4 SELF-ADMINISTER A DRUG, A HUMAN WILL
5 SELF-ADMINISTER A DRUG. THERE'S NO
6 DRUG THAT I AM AWARE OF THAT A RAT
7 SELF-ADMINISTERS AND HUMANS DON'T.

8 "ONCE YOU HAVE
9 SELF-ADMINISTRATION, ESPECIALLY IF
10 IT'S A NON-MEDICAL USE FOR THE DRUG,
11 BY DEFINITION, THAT'S DRUG ABUSE. AND
12 THEN, AS THE FREQUENCY AND
13 COMPULSIVENESS OF THAT USE EXPANDS,
14 YOU GET INTO DRUG DEPENDENCE AND
15 ADDICTION IN PEOPLE.

16 "Q RIGHT.

17 "A BUT IT IS CERTAINLY
18 A PREDICTION THAT THE COMPOUND IS
19 LIKELY TO BE ABUSED.

20 "Q WHAT I AM GETTING AT
21 IS RATS AREN'T PEOPLE. WE ALL KNOW
22 THAT; RIGHT?

23 " BUT, IF YOU SAY POSITIVE
24 REINFORCEMENT IS A FEATURE, A
25 CHARACTERISTIC OF ADDICTION, IF YOU
26 SET THAT IN HUMANS, THEN YOU CAN SEE
27 WHETHER POSITIVE REINFORCEMENT TAKES
28 PLACE IN RATS, AND THEN YOU CAN SAY

1 THAT'S PREDICTED OF HUMANS BEINGS;
2 RIGHT?

3 "A CORRECT.

4 "Q AND YOU CAN DO THAT
5 WITH OTHER THINGS AS WELL, FOR
6 EXAMPLE, IF YOU SET UP AS YOUR
7 HYPOTHESIS THAT PHYSICAL DEPENDENCE IS
8 A CRITERIA FOR ADDICTION, THEN YOU CAN
9 LOOK AND SEE WHETHER THERE IS SUCH
10 PHYSIOLOGICAL DEPENDENCE FROM NICOTINE
11 IN RATS AND THERE EITHER IS OR THERE
12 ISN'T; RIGHT?

13 "A WHEN YOU SAY THERE
14 IS OR THERE ISN'T, WITH ADEQUATE
15 TESTING AND EVALUATION, YES.

16 "Q OKAY.

17 "A I MEAN AT SOME POINT
18 YOU WOULD, WITH ENOUGH STUDIES AND
19 ENOUGH MANIPULATION, YOU WOULD REACH
20 THE CONCLUSION, ONE WAY OR THE OTHER?

21 "Q YOU WOULD CONCLUDE
22 THAT THERE EITHER IS PHYSICAL
23 DEPENDENCE OR THERE IS NOT IN RATS;
24 RIGHT?

25 "A CORRECT.

26 "Q OKAY.

27 "A YOU WOULD DO THAT.

28 "Q YOU CONCLUDED IN

1 YOUR RESEARCH THAT NICOTINE WAS A
2 RELATIVELY WEAK POSITIVE REINFORCER;
3 CORRECT?

4 "A THAT STATEMENT WAS
5 MADE VERY EARLY ON IN AN ATTEMPT --
6 YES, WE DID MAKE THAT STATEMENT VERY
7 EARLY ON IN AN ATTEMPT TO QUALIFY OUR
8 RESULTS.

9 "AGAIN, THIS WAS THE
10 FIRST -- EARLY ON AT PHILIP MORRIS,
11 WHEN I WAS THERE, THIS WAS THE FIRST
12 REAL DEMONSTRATION OF NICOTINE AS A
13 POSITIVE REINFORCER WITH RATS. WE
14 WEREN'T SURE WHAT TO EXPECT.

15 "THE SELF-ADMINISTRATION WE
16 GOT OUT OF THE RATS WAS VERY RELIABLE.
17 BUT THE NUMBERS WERE SOMEWHAT LOW, AT
18 LEAST COMPARING TO OTHER STUDIES
19 PUBLISHED IN THE LITERATURE.

20 "WHAT WE REALLY NEEDED TO
21 DO. SO IN ONE SENTENCE, WE WERE BEING
22 CONSERVATIVE BECAUSE IT WAS THE VERY
23 FIRST STUDY. AND WITH ANY STUDY, YOU
24 WANT TO SEE REPLICATION AND EXPANSION.

25 "Q DOCTOR, WERE YOU
26 COMPARING --

27 "A AND --

28 "Q I AM SORRY --

1 "A I JUST WANTED TO
2 SAY --

3 "Q FINISH YOUR ANSWER.

4 "A WHAT WE REALLY
5 NEEDED TO DO FOR THAT QUALIFIER WAS TO
6 COMPARE NICOTINE DIRECTLY TO OTHER
7 DRUGS OF ABUSE WHICH WE WERE NOT
8 ALLOWED TO DO.

9 "SO WITHOUT ANY DIRECT
10 COMPARISON, IT IS HARD TO SAY WHETHER
11 IT IS WEAKER OR STRONGER. YOU COULD
12 MAKE THE SAME CLAIM FOR HEROIN BEING
13 WEAKER THAN COCAINE, FOR EXAMPLE,
14 COMPARING A CROSS STUDY.

15 "Q WELL, DIDN'T YOU IN
16 YOUR STUDIES ACTUALLY MAKE A
17 COMPARISON BETWEEN THE REINFORCING
18 EFFECT OF NICOTINE AND THE REINFORCING
19 EFFECT OF FOUR CLASSES OF ABUSED
20 SUBSTANCES?

21 "A NOT IN OUR ACTUAL
22 EXPERIMENTS, NO. WE WERE NEVER
23 ACTUALLY ABLE TO BRING IN CONTROLLED
24 SUBSTANCES COMMONLY KNOWN HAS DRUGS OF
25 ABUSE INTO THE LAB.

26 "Q WELL, DO YOU RECALL
27 WHETHER OR NOT YOU CONTRASTED AND
28 COMPARED, FOR EXAMPLE, THE REINFORCING

1 EFFECT OF NICOTINE WHICH, AS YOU HAVE
2 SAID, YOU DESCRIBED IN YOUR EARLY ON
3 WORK AS BEING WEAK, WITH THE
4 REINFORCING EFFECT OF THINGS LIKE
5 OPIATES, AMPHETAMINES, BARBITURATE AND
6 ALCOHOL?

7 "A YES. AGAIN, THOSE
8 WERE DISCUSSED COMPARING OUR RESULTS
9 IN PUBLISHED STUDIES IF THE
10 LITERATURE.

11 "AGAIN, TO REALLY MAKE AN
12 ADEQUATE COMPARISON CONTROL FOR ALL OF
13 THE VARIABLES THAT COME INTO PLACE,
14 WHEN YOU COMPARE STUDIES FROM
15 DIFFERENT LABORATORIES, YOU REALLY
16 NEED TO DO A DIRECT COMPARISON IN YOUR
17 LABORATORY, PREFERABLY IN THE SAME
18 RATS TO GET A REAL UNDERSTANDING OF
19 THAT. AND WITHOUT THAT TYPE OF
20 ADDITIONAL DATA, THE CONCLUSION THAT
21 IT WAS WEAK WAS VERY CONSERVATIVE AND
22 PROBABLY WAS VERY UNWARRANTED IN ONE
23 SENSE.

24 "Q DOCTOR, WHAT I AM
25 GOING TO DO IS, JUST TO SEE IF I CAN
26 REFRESH YOUR RECOLLECTION ON SOME OF
27 THIS, I AM GOING TO, IF I CAN FIND IT
28 HERE IN A MINUTE, I AM GOING TO GIVE

1 YOU A COPY OF A DRAFT REPORT OF YOUR
2 RESEARCH FOR 1984 AND ASK YOU SOME
3 QUESTIONS ABOUT IT.

4 "FIRST OF ALL WHETHER YOU
5 REMEMBER IT OR NOT.

6 "DOCTOR, CAN YOU JUST TAKE A
7 QUICK LOOK AT THIS DOCUMENT AND TELL
8 ME IF YOU RECOGNIZE IT.

9 THE COURT: PAGE PLEASE.

10 MR. GOLDSTEIN: THIS IS PAGE 18295 AT
11 LINE 5.

12 "A IT LOOKS LIKE A
13 DRAFT OF AN ANNUAL REPORT.

14 "Q IS THIS, AS YOU LOOK
15 AT IT, IT BEGINS AT THE TOP, WE HAVE
16 CONTINUED TO USE THE
17 SELF-ADMINISTRATION TECHNIQUE?

18 "A CORRECT.

19 "Q DOES THIS LOOK LIKE
20 A DRAFT OF THE ANNUAL REPORT OF A
21 BEHAVIORAL PHARMACOLOGY LAB?

22 "A SURE.

23 "Q OKAY.

24 "A YES.

25 "Q AND AS YOU LOOK AT
26 SOME OF THE DATA IN THERE, FOR
27 EXAMPLE, PAGE 6, IT'S FAR TOO
28 COMPLICATED FOR ME TO TRY TO ASK YOU

1 QUESTIONS ABOUT IT, BUT DOES IT LOOK
2 LIKE TO YOU, DOES THAT LOOK LIKE THE
3 KINDS OF STUDIES THAT YOU WOULD DO?

4 "A THIS LOOKS LIKES ONE
5 OF OUR ANNUAL REPORTS, YES.

6 "Q OKAY. NOW, IN HERE,
7 YOU MAKE REFERENCE, IF YOU LOOK AT THE
8 VERY FIRST PAGE, RIGHT UNDER
9 EXPERIMENTS, ONE, WHERE YOU SAY, 'THE
10 WEAK REINFORCING EFFECT OF NICOTINE IS
11 NOTABLY DIFFERENT THAN THE FOUR
12 CLASSES OF ABUSED SUBSTANCES. '

13 "A UH-HUH

14 "Q DO YOU SEE THAT?

15 "A YES, RIGHT HERE.

16 "Q AND THEN IT SAYS,
17 ' HOWEVER, THE LACK OF A PHYSIOLOGICAL
18 DEPENDENCE FOLLOWING CHRONIC ACCESS
19 SETS NICOTINE APART FROM ONLY THREE
20 CLASSES. '

21 "NOW, ACTUALLY, WHAT YOU
22 WERE TALKING ABOUT THERE IS THAT
23 AMPHETAMINES AND COCAINE ARE THE ONE
24 CLASS THAT DOESN'T CREATE, THAT IS A
25 POWERFUL REINFORCER AS OPPOSED TO THE
26 OTHERS; RIGHT?

27 "A WOULD YOU REPEAT
28 THAT PLEASE.

1 "Q SURE. WHAT I AM
2 SAYING IS, JUST SO WE ARE SEEING WHAT
3 YOU SAID IN YOUR ANNUAL REPORT, YOUR
4 DRAFT ANNUAL REPORT HERE, IS YOU ARE
5 BASICALLY SAYING THAT THREE OF THE
6 FOUR OF THOSE CLASSES THAT WE TALKED
7 ABOUT FOR ABUSED SUBSTANCES ARE MORE
8 POWERFUL, POSITIVE REINFORCERS THAN
9 NICOTINE?

10 "A CORRECT.

11 "Q OKAY. AND THE ONE,
12 THE ONE THAT IS DIFFERENT IS
13 AMPHETAMINES AND COCAINE?

14 "A I DON'T -- I AM
15 SORRY, I AM NOT FOLLOWING THAT.

16 "Q OKAY. YOU JUST READ
17 THE FIRST PARAGRAPH THERE. LET ME SEE
18 IF I CAN STRAIGHTEN THIS OUT THIS WAY.

19 "WHY DON'T I GIVE YOU A
20 MINUTE TO READ THE FIRST PARAGRAPH AND
21 THEN YOU CAN PROBABLY HELP US ALL WITH
22 THIS.

23 "THE SUBJECT MATTER IS
24 PHYSIOLOGICAL DEPENDENCE AND
25 REINFORCEMENT.

26 "A OKAY.

27 "Q OKAY. SO YOU HAD
28 ESTABLISHED THROUGH YOUR PRELIMINARY

1 RESEARCH THAT NICOTINE DID NOT CREATE
2 A PHYSICAL DEPENDENCE; CORRECT?

3 "A CORRECT.

4 "Q AND I THINK IN THIS
5 REPORT, YOU WERE SAYING THAT EXCEPT
6 FOR AMPHETAMINES AND COCAINE, THE
7 OTHER THREE CATEGORIES, ALCOHOL,
8 HEROIN, MORPHINE DO CREATE A PHYSICAL
9 DEPENDENCE; RIGHT?

10 "A YES, ALCOHOL OR
11 BARBITURATE AND OPIATES ARE WELL KNOWN
12 IN THEIR STRONG PHYSICAL DEPENDENCE
13 PRODUCING PROPERTIES.

14 "Q YOU WERE
15 DISTINGUISHING, ON THE ONE HAND, YOU
16 WERE SAYING NICOTINE DOESN'T CREATE A
17 PHYSICAL DEPENDENCE. ALCOHOL DOES,
18 BARBITURATES DO, HEROIN DOES.

19 "BUT COCAINE IS MORE LIKE
20 NICOTINE IN THAT REGARD; IT DOES NOT?

21 "A AMPHETAMINES AND
22 COCAINES AND THOSE CLASSES OF DRUGS
23 CERTAINLY ARE DIFFERENT, YES. IN THE
24 ONE STUDY WE CONDUCTED WITH NICOTINE,
25 THE INITIAL STUDY, WE WERE UNABLE TO
26 DEMONSTRATE A PHYSICAL DEPENDENCE.

27 "Q OKAY. SO THEN, AS I
28 UNDERSTAND YOUR REPORT, WHEN I READ

1 IT, YOU THEN WENT ON TO SEE WHETHER
2 COCAINE AND AMPHETAMINES WERE
3 DIFFERENT FROM NICOTINE IN SOME OTHER
4 WAY, THAT IS, YOU DID SOME ACTUAL
5 RESEARCH STUDIES TO SEE WHETHER
6 COCAINE, SELF-ADMINISTRATION OF
7 COCAINE OR AMPHETAMINES HAD BEEN FOUND
8 TO DISRUPT ONGOING BEHAVIOR THAT WERE
9 MAINTAINED BY OTHER REINFORCERS, ISN'T
10 THAT WHAT YOU ARE SAYING AT THE BOTTOM
11 OF THAT PAGE?

12 "A I'LL HAVE TO TAKE A
13 FEW MINUTES TO READ THIS.

14 "Q SURE. TAKE A MINUTE
15 AND LOOK AT IT.

16 "YOU CAN SEE WHERE IT SAYS
17 'THE PURPOSE OF THE PRESENT
18 EXPERIMENT' ?

19 "A YES, RIGHT, OKAY.
20 YES, I SEE WHERE YOU ARE.

21 "Q OKAY. AND YOUR
22 CONCLUSION WAS THAT NICOTINE DOES NOT
23 INTERFERE WITH SELF-ADMINISTRATION OF
24 OTHER REINFORCERS LIKE FOOD BUT
25 COCAINE DOES; RIGHT?

26 "A DEPENDING UPON YOUR
27 DOSE AND YOUR CONDITIONS OF DELIVERY,
28 YES, AND THAT SORT OF THING, YES, I

1 MEAN --

2 "Q OKAY

3 "A IN THIS ONE --

4 AGAIN, IN THIS ONE FIRST STUDY IT

5 LOOKS LIKE WE WERE UNABLE TO

6 DEMONSTRATE THAT.

7 "Q OKAY. TO THE EXTENT

8 THAT, TO THE EXTENT THAT PHYSICAL

9 DEPENDENCE, PHYSIOLOGICAL DEPENDENCE

10 IS VIEWED BY THE SCIENTIFIC COMMUNITY

11 AS A CRITERIA FOR ADDICTION, YOUR

12 RESEARCH WAS ACTUALLY HELPFUL TO THE

13 QUESTION, WAS IT NOT?

14 "A WELL, ACTUALLY,

15 PHYSIOLOGICAL DEPENDENCE, AT THAT

16 TIME, WAS NOT VIEWED AS A CRITERION

17 FOR ADDICTION. IT WAS A POSSIBLE

18 CRITERIA FOR SOME BUT THAT -- ALTHOUGH

19 THAT WAS AN OVERVIEW OF THE EARLY

20 '80'S, MOST OF THE TEXTBOOKS THAT WERE

21 OUT DID NOT INSIST OF HAVING

22 PHYSIOLOGICAL DEPENDANCE AS A

23 CRITERION FOR ADDICTION, IT COULD BE

24 THERE BUT IT WASN'T ESSENTIAL

25 "Q ALL RIGHT. NOW,

26 WHEN YOU TOOK RATS OFF NICOTINE, IN

27 YOUR STUDIES OF SELF-ADMINISTRATION OF

28 NICOTINE, WHEN YOU TOOK THE RATS OFF

1 THE NICOTINE, THEY DID NOT EXPERIENCE
2 OR YOU DID NOT OBSERVE PHYSICAL
3 WITHDRAWAL SYMPTOMS IN THE RATS, DID
4 YOU?

5 "A THAT IS CORRECT.

6 "Q IT'S CORRECT THAT
7 YOU DID NOT OBSERVE WITHDRAWAL
8 SYMPTOMS?

9 "A WE DID NOT IN OUR
10 STUDIES. ALTHOUGH WITHIN FIVE TO
11 EIGHT YEARS, THERE WERE A NUMBER OF
12 REPORTS IN THE LITERATURE USING MORE
13 SENSITIVE TECHNIQUES, APPARENTLY, THAN
14 WE DID. AND THEY WERE ABLE TO
15 DEMONSTRATE IN THREE OR FOUR DIFFERENT
16 LABORATORIES, PHYSIOLOGICAL WITHDRAWAL
17 OF RATS FOLLOWING CHRONIC NICOTINE
18 ADMINISTRATION.

19 "Q BUT AS FAR AS WHAT
20 YOU WERE SAYING -- AS FAR AS WHAT YOU
21 WERE SAYING TO YOUR SUPERIORS, AND
22 WHAT YOU WERE SAYING IN YOUR REPORTS
23 TO PHILIP MORRIS, YOU DIDN'T FIND ANY?

24 "A WE COULD NOT FIND
25 ANY, WE COULD NOT DEMONSTRATE IT.

26 "Q NOW I WANT TO TALK
27 TO YOU ABOUT ANALOG; OKAY?

28 "A ABOUT?

1 "Q ANALOGS.

2 "NOW, AS I RECALL, WHAT YOU
3 SAID ON TUESDAY, YOU WERE SAYING THAT
4 THESE NICOTINE ANALOGS, ONE OF THE
5 IDEAS OR PART OF THE IDEA BEHIND THE
6 DEVELOPMENT OF A NICOTINE ANALOG, AND
7 AN ANALOG IS -- AN ANALOG IS SOMETHING
8 YOU MAKE IN THE LABORATORY AND IT'S A
9 SUBSTITUTE FOR THE NATURAL COMPOUND;
10 RIGHT?

11 "JUST SO, I WANT TO MAKE
12 SURE THE JURY -- KIND OF GET US BACK
13 TO WHERE WE WERE LAST TUESDAY.

14 "A YES.

15 "Q SO ONE OF THE
16 REASONS FOR LOOKING AT THESE ANALOGS
17 WAS THE COMPANY WAS KIND OF PROTECTING
18 ITSELF AGAINST THE POSSIBILITY THAT
19 NICOTINE WOULD BE BANNED. IF NICOTINE
20 WERE BANNED FOR USE IN CIGARETTES,
21 THEY WANTED TO HAVE SOMETHING ELSE
22 THAT THEY COULD USE.

23 "A WELL, THAT WAS ONE
24 OF THE POSSIBILITIES. IT WASN'T -- I
25 CAN'T SAY I WAS EVER -- I WAS NEVER
26 TOLD THAT WAS THE DRIVING FORCE BEHIND
27 THE ANALOGS. IT WAS ONE OF THE
28 CONSIDERATIONS THAT THEY MIGHT HAVE TO

1 DEAL WITH.

2 "THEY MAY WANT A COMPOUND --
3 THEY MAY WANT A COMPOUND THAT WAS,
4 AGAIN, BETTER IN SOME WAYS AND
5 MAINTAINED THE DESIRED QUALITIES
6 WITHOUT LOSING THOSE, YOU KNOW
7 WITHOUT LOSING THOSE QUALITIES, SO --

8 "Q OKAY. AND I
9 REMEMBER YOU TESTIFYING -- AND YOU
10 SAID THAT YOU HEARD THAT, THAT YOU
11 HEARD THAT THAT WAS ONE OF THE
12 POSSIBILITIES BUT --

13 "A THAT WAS DISCUSSED
14 AT THE MEETINGS.

15 "Q THAT WAS DISCUSSED.
16 OKAY.

17 "AND IT WAS DISCUSSED THAT
18 THE COMPANY WANTED TO BE PREPARED FOR
19 THAT POSSIBILITY; RIGHT?

20 "A I WON'T SPEAK FOR
21 THE COMPANY BUT FOR THE SCIENTIFIC
22 GROUP, YES. IN CASE THAT THEY NEEDED
23 TO PUT IN A SUBSTITUTE FOR NICOTINE,
24 THEY COULD HAVE ONE ON THE SHELF READY
25 TO GO.

26 "Q I THINK THAT'S AN
27 INTERESTING OBSERVATION YOU JUST MADE.
28 WHEN YOU SAY YOU WON'T SPEAK FOR THE

1 COMPANY.

2 "YOUR DISCUSSIONS, LARGELY,
3 EXCEPT FOR WHEN YOU HAD A VISITOR,
4 WHICH YOU SAID WASN' T OFTEN, BUT YOUR
5 DISCUSSIONS LARGELY WERE WITH THE
6 RESEARCH SCIENTISTS AT THE R&D CENTER;
7 RIGHT?

8 "A THE RESEARCH
9 SCIENTISTS AT THE R&D CENTER AND
10 SELECTED CONSULTANTS, YES.

11 "Q RIGHT. LIKE
12 DOCTOR -- WELL, WE WILL TALK ABOUT
13 SOME OF THEM BUT THAT' S RIGHT.

14 "YOU WEREN' T ACTIVELY
15 INVOLVED WITH TALKING WITH THE
16 MANAGEMENT PEOPLE IN NEW YORK, FOR
17 EXAMPLE?

18 "A WE WOULD HAVE
19 CONVERSATIONS WITH FRED NEWMAN ON OUR
20 PAPERS, THE MEANING OF OUR PAPERS,
21 THAT SORT OF THING, EXPLAINING THOSE
22 TO HIM BUT OTHER THAN FOR ONE TRIP
23 WHERE DENOBLE WENT UP TO NEW YORK TO
24 DO A PRESENTATION AT CORPORATE
25 HEADQUARTERS ON OUR WORK, MOST OF OUR
26 WORK WAS REPORTED UP THROUGH THE
27 CHAIN.

28 "Q OKAY. UP THROUGH

1 THE CHAIN AT THE R&D CENTER?

2 "A TO NEW YORK, JIM
3 CHARLES WOULD OFTEN HAVE -- WAS TOLD
4 BY HIM, CONVERSATION WITH FRED NEWMAN
5 ON THE WORK.

6 "Q WELL, WHAT I MEANT,
7 DOCTOR, YOU WEREN'T INVOLVED IN THESE
8 DECISIONS ABOUT WHAT PRODUCTS TO USE,
9 HOW TO COMMERCIALIZE PRODUCTS --

10 "A CORRECT.

11 "Q -- THOSE KINDS OF
12 DECISIONS. THAT WAS NOT ANYWHERE NEAR
13 YOUR FIELD -- YOUR RESPONSIBILITIES?

14 "A WE WEREN'T INVOLVED
15 IN PRODUCT DECISIONS.

16 "Q OKAY.

17 "A IN TERMS OF
18 MARKETING AND THAT SORT OF THING OR
19 ALTER OR MANIPULATE A PRODUCT.

20 "Q OKAY.

21 "A A SPECIFIC PRODUCT?

22 "Q OR DOING THE
23 ENGINEER WORK TO TRY TO COMMERCIALIZE
24 A PRODUCT, YOU WEREN'T INVOLVED WITH
25 THE PRODUCTION FACILITY, THE
26 MANUFACTURING PROCESS, THAT IS
27 SOMETHING YOU WEREN'T INVOLVED WITH;
28 RIGHT?

1 "A CORRECT. "

2 MR. LE BERTHON: NOW OVER TO QUESTION.

3 "Q YOU SAID OVER THE
4 TWO AND A HALF YEARS THAT YOU WORKED
5 IN THE LAB, YOU TESTED OVER CLOSE TO
6 100 ANALOGS; CORRECT?

7 "A WE TEST -- THERE ARE
8 OVER 100 ANALOGS GENERATED. WE TESTED
9 MANY OF THOSE.

10 "Q YOU WERE DOING THE
11 TESTING FOR THE BRAIN EFFECT, YOU
12 WEREN'T DOING THE CARDIOVASCULAR
13 TESTING; CORRECT?

14 "A CORRECT.

15 "Q IN FACT, ONE OF THE
16 PEOPLE THAT WAS DOING THE
17 CARDIOVASCULAR TESTING WAS DOCTOR LEO
18 ABOOD --

19 "A CORRECT.

20 "Q -- FROM THE
21 UNIVERSITY OF ROCHESTER, AND HE WAS
22 ONE OF THE OUTSIDE CONSULTANTS THAT
23 THE COMPANY WAS USING?

24 "A CORRECT.

25 "Q CORRECT? OKAY.

26 "AND HOW ABOUT JACK EAGLE
27 FROM THE MEDICAL COLLEGE OF VIRGINIA,
28 WAS HE ALSO DOING THE CARDIOVASCULAR

1 TESTING?

2 "A HE HAD HAD A
3 CONTRACT WITH PHILIP MORRIS TO DO SOME
4 OF THAT ALSO. IT TERMINATED BY THE
5 TIME I WAS THERE OR THROUGH MOST OF MY
6 TIME THERE.

7 "Q DO YOU KNOW WHETHER,
8 SUBSEQUENT TO THAT, HE ALSO DID
9 FURTHER CARDIOVASCULAR TESTING ON
10 NICOTINE ANALOGS?

11 "A I DO NOT KNOW

12 "Q NOW, DEVELOPING A
13 SUCCESSFUL NICOTINE ANALOG, ONE THAT
14 WORKED -- FULFILLED ALL OF THE
15 OBJECTIVES AND DIDN'T HAVE A DOWNSIDE,
16 WOULD HAVE BEEN A SIGNIFICANT
17 COMPETITIVE ADVANTAGE FOR PHILIP
18 MORRIS IF THE OTHER COMPANIES DIDN'T
19 HAVE ONE; RIGHT?

20 "A COMPETITIVE -- NOW
21 YOU ARE ASKING ME ABOUT BUSINESS AND
22 COMMERCIALIZATION ASPECTS OR ABOUT --

23 "Q WELL, LET ME ASK YOU
24 THIS: DID THE R&D --

25 "A MARKETING --

26 "Q DID THE R&D
27 SCIENTISTS, THOSE OF YOU WHO WERE
28 THERE, BECAUSE ALL I WANT TO KNOW

1 ABOUT IS WHAT YOU KNEW AT THE TIME,
2 DID THE R&D SCIENTISTS THINK THE
3 DEVELOPMENT OF A SUCCESSFUL ANALOG
4 WOULD BE A COMPETITIVE BREAKTHROUGH
5 FOR PHILIP MORRIS?

6 "A DEVELOPMENT OF AN
7 ANALOG WOULD HAVE BEEN, WOULD HAVE MET
8 ONE OF THE CRITERIA THAT WOULD HAVE
9 MET AN OBJECTIVE OF THE RESEARCH
10 CENTER FOR PHILIP MORRIS. WHETHER
11 THEY CONSIDERED THAT COMPETITIVE
12 VERSUS RJ REYNOLDS OR SOME OTHER
13 COMPANY OR ONLY CONCERNED ABOUT THEIR
14 OWN ASPECT, I CAN'T COMMENT ON THAT.

15 "IT CERTAINLY WAS SOMETHING
16 THEY WANTED DONE TO ENSURE THE
17 CONTINUED USE OF THEIR OWN PRODUCT.

18 "Q SURE. BECAUSE IF
19 NICOTINE HAD BEEN BANNED, THEY WOULD
20 BE ABLE TO -- SORRY.

21 "IF NICOTINE HAD BEEN
22 BANNED, THEY WOULD HAVE BEEN ABLE TO
23 CONTINUE SELLING THE PRODUCT USING THE
24 ANALOG. AND IF THE OTHER COMPANIES
25 HADN'T BEEN SUCCESSFUL, THIS WOULD
26 HAVE BEEN AN ENORMOUS COMPETITIVE
27 ADVANTAGE; RIGHT?

28 "A I SUPPOSE. I MEAN,

1 AGAIN, THAT GETS BEYOND ANYTHING I
2 WORKED ON.

3 "Q NOW, YOU SAID YOU
4 SAW SOME OF THE CARDIOVASCULAR --
5 WELL, BEFORE I GET THERE, I THINK YOU
6 SAID THERE WERE TWO CANDIDATES THAT
7 YOU THOUGHT MET THE GOALS OF THE
8 PROGRAM, 2-PRIME METHYLNICOTINE AND
9 4-PRIME METHYLNICOTINE; CORRECT?

10 "A CORRECT.

11 "Q AND THE GOALS OF THE
12 PROGRAM, AS YOU UNDERSTOOD IT, WERE
13 MAINTAINING THE SAME, THE
14 PHYSIOLOGICAL EFFECTS OF NICOTINE AND
15 DECREASING THE CARDIOVASCULAR CONCERN.

16 "A RIGHT. KEEP THE
17 RATS RESPONDING AND ELIMINATE THE
18 CARDIOVASCULAR TOXICITY.

19 "Q RIGHT. NOW, YOU
20 DIDN'T SEE, YOURSELF, PERSONALLY, ALL
21 OF THE DATA ON THE CARDIOVASCULAR
22 SIDE, DID YOU?

23 "A ALL OF THE DATA?
24 PROBABLY NOT. BECAUSE IF YOU ARE NOT
25 DOING THE STUDIES YOURSELF, RARELY
26 DOES ANYONE SEE ALL OF THE DATA.

27 "WE SAW THE DATA THAT WAS
28 SUMMARIZED AND PROVIDED BY DR. ABOOD

1 WHO WAS PRIMARILY RESPONSIBLE FOR
2 GENERATING FOR THE COMPANY.

3 "Q AND YOU DIDN' T SEE
4 DR. EAGLE' S DATA?

5 "A I DON' T RECALL
6 SEEING HIS DATA. HIS DATA WAS NOT --
7 AND HE WAS NOT A REGULAR ATTENDEE AT
8 THE ANALOG MEETINGS.

9 "Q NOW, IF YOU WANT TO
10 USE AN ANALOG IN PLACE OF NICOTINE,
11 YOU' D HAVE TO TAKE THE NICOTINE OUT
12 FIRST?

13 "A IF YOU WANTED TO USE
14 AN ANALOG IF PLACE OF NICOTINE?

15 "Q YES.

16 "A PRESUMABLY YOU WOULD
17 HAVE TO TAKE IT OUT IF YOU WERE GOING
18 TO BE REPLACING IT.

19 "Q SURE. THAT' S JUST
20 COMMON SENSE; RIGHT?

21 "AND I THINK YOU SAID, IN
22 RESPONSE TO QUESTIONS THAT WERE ASKED
23 BY PLAINTIFFS' COUNSEL, THAT YOU WERE
24 AWARE THAT EXPERIMENTALLY, IN 1984,
25 PHILIP MORRIS WAS ABLE TO TAKE
26 NICOTINE OUT OF -- OUT OF ITS,
27 EXPERIMENTAL CIGARETTES IN THE
28 LABORATORY; RIGHT?

1 MANUFACTURING?

2 "Q YES.

3 "A OR NEXT DOOR IN --
4 NO, NO, I HAVE NO IDEA.

5 "Q AND THE QUESTION,
6 DOCTOR, WAS DO YOU KNOW WHEN THOSE
7 EXPERIMENTAL CIGARETTES WERE PRODUCED
8 WITHOUT NICOTINE, WHETHER NICOTINE AND
9 NICOTINE ALONE WAS TAKEN OUT OR
10 WHETHER OTHER THINGS, THE EXPERIMENTAL
11 PROCESS THAT WAS USED TO TAKE NICOTINE
12 OUT, ALSO EXTRACTED OTHER THINGS WITH
13 IT?

14 "A I ONLY KNOW WHAT I
15 WAS TOLD BY THE RESEARCHERS AND THEY,
16 THEY CLAIM THAT IT WAS NICOTINE ONLY
17 THAT WAS REMOVED.

18 "Q DID YOU EVER ASK
19 THAT QUESTION?

20 "DID YOU EVER SAY, DID YOU
21 EVER ASK THE QUESTION, ARE YOU ONLY
22 TAKING OUT NICOTINE OR ARE THERE OTHER
23 THINGS IN THE TOBACCO THAT'S COMING
24 OUT ALONG WITH IT?

25 "DO YOU REMEMBER THAT?

26 "A WELL, NO, BECAUSE
27 THERE ARE SO MANY STUDIES BEING DONE
28 THAT THEY WOULD SELECTIVELY ALSO ALTER

1 OTHER ASPECTS OF THE CIGARETTES. SO I
2 HAD FAITH IF THE RESEARCHERS, THAT
3 WHEN THEY WERE -- SAY, THEY WERE
4 MANIPULATING A PARTICULAR ASPECT,
5 THAT'S WHAT THEY WERE DOING.

6 "THESE MIGHT HAVE BEEN
7 NICOTINE STUDIES, OTHERS WOULD HAVE
8 ALTERED FLAVOR. OTHERS WOULD ALTER
9 THE FEEL AND HEFT OF THE CIGARETTE.

10 "Q DOCTOR, DO YOU KNOW
11 WHETHER IN 1984 THERE WAS ANY
12 COMMERCIAL PROCESS THAT WAS AVAILABLE
13 TO PHILIP MORRIS TO EXTRACT NICOTINE
14 AND NICOTINE ALONE FROM CIGARETTES?

15 "A COMMERCIAL PROCESS,
16 YOU MEAN LARGE SCALE MANUFACTURING?

17 "Q RIGHT, THAT'S HOW
18 CIGARETTES ARE MADE, LARGE SCALE
19 MANUFACTURING; RIGHT?

20 "A NO, I DON'T KNOW
21 THAT.

22 "Q SO YOU, IN TERMS --

23 "A I DON'T KNOW IF
24 THERE'S A DIFFERENCE BETWEEN
25 COMMERCIAL PROCESSING AND THE
26 EXPERIMENTAL CIGARETTES PRODUCTION, IF
27 THAT'S WHAT YOU ARE ASKING.

28 "Q SO WHETHER OR NOT

1 PHILIP MORRIS HAD ANY CAPABILITY IN A
2 COMMERCIAL PRODUCTION, LARGE SCALE,
3 LARGE VOLUME PRODUCTION, TO EXTRACT
4 NICOTINE FROM CIGARETTES AS OPPOSED TO
5 WORK IN THE LABORATORY IS SOMETHING
6 YOU JUST DON'T KNOW, CORRECT?

7 "A THAT IS CORRECT

8 "Q NOW, ARE YOU AWARE
9 OF WHETHER OR NOT THE USE OF 2-PRIME
10 METHYLNICOTINE OR 4-PRIME
11 METHYLNICOTINE WOULD INCREASE OR NOT
12 INCREASE THE LEVEL OF TOBACCO-SPECIFIC
13 NITROSAMINES IN A CIGARETTE?

14 "A I DON'T KNOW

15 "Q SO IT WAS NOT WITHIN
16 YOUR AREAS OF RESPONSIBILITY AS A
17 BEHAVIORAL PHARMACOLOGIST, WORKING IN
18 THE RAT LABORATORY, DOING THE
19 EXPERIMENTS YOU WERE DOING, TO BE
20 CONCERNED WITH THE LEVEL OF TOBACCO
21 SPECIFIC NITROSAMINES IN SMOKE?

22 "A CORRECT, IT WAS NOT
23 AN AREA I WORKED IN BUT I THINK YOUR
24 QUESTION SAID, WAS IT EVER DISCUSSED,
25 AND I NEVER HEARD IT DISCUSSED.

26 "Q NOW, YOU SAID THERE
27 WERE ALSO QUESTIONS ABOUT F. D. A.
28 APPROVAL FOR ANALOGS; TRUE?

1 "A YES, CORRECT.

2 "Q AND AMONG THE
3 RESEARCH SCIENTISTS, QUESTIONS WERE
4 DISCUSSED ABOUT, FOR EXAMPLE, WHETHER
5 THE FEDERAL DRUG ADMINISTRATION -- THE
6 FOOD AND DRUG ADMINISTRATION WOULD
7 HAVE TO APPROVE AN ANALOG BEFORE IT
8 COULD BE USED IN A CIGARETTE; RIGHT?

9 "A THAT WAS A QUESTION
10 THAT DID COME UP AT THE ANALOG
11 MEETINGS.

12 "Q AND YOU AND YOUR
13 FELLOW --

14 "A NOBODY SEEMED TO
15 KNOW THE ANSWER TO THAT.

16 "Q PARDON?

17 "A NOBODY SEEMED TO
18 KNOW THE ANSWER TO THAT.

19 "Q RIGHT. AND YOU AND
20 YOUR FELLOW SCIENTISTS TALKED ABOUT
21 THE FACT THAT NOBODY KNEW THE ANSWER
22 TO THAT, NOBODY KNEW WHETHER THE
23 COMPANY WANTED WHO GET F. D. A. APPROVAL
24 OR THEY DIDN' T WANT TO GET F. D. A.
25 APPROVAL; RIGHT?

26 "A CORRECT.

27 "Q AND YOU NEVER HEARD
28 HOW, IF AT ALL, THOSE KINDS OF

1 QUESTIONS WERE RESOLVED?

2 "A CORRECT.

3 "Q YOU WERE NOT
4 INVOLVED IN ANY DECISIONS BY THE
5 COMPANY TO USE OR NOT TO USE ANALOGS
6 IN A COMMERCIAL CIGARETTE; CORRECT?

7 "A CORRECT.

8 "Q AND YOU ARE NOT
9 AWARE OF ANY FIRSTHAND KNOWLEDGE THAT
10 ANY ANALOG WAS ACTUALLY USED IN A
11 COMMERCIAL CIGARETTE?

12 "A NO, I NEVER FOUND
13 OUT WHETHER THEY WERE USED, ALTHOUGH
14 THE CLEAR INTENT OF THAT GROUP TO
15 DISCUSS THESE WAS TO FIND THE
16 COMPOUNDS THAT WE COULD RECOMMEND AS
17 BEING THE BEST ANALOGS AND THEN HAND
18 IT OFF TO THE NEXT GROUP.

19 "Q DR. MELE, I AM
20 SWITCHING GEARS, I'M SWITCHING TO A
21 DIFFERENT TOPIC HERE IN A FEW MINUTES.

22 "AND THE OTHER RESEARCH
23 EFFORT THAT YOU TESTIFIED ABOUT, I
24 THINK YOU COVERED NICOTINE AND
25 ANALOGS, I WANT TO TALK ABOUT
26 ACETALDEHYDE FOR A COUPLE MINUTES. "

27 THE COURT: MAY I TRY, ACETALDEHYDE. "

28 MR. LE BERTHON: (READING)

1 "Q I WANT TO TALK ABOUT
2 ACETALDEHYDE FOR A COUPLE MINUTES.

3 OKAY.

4 "I THINK YOU HAVE TESTIFIED
5 THAT ACETALDEHYDE WAS A COMPOUND THAT
6 IS FOUND IN CIGARETTE SMOKE, BUT ALSO
7 EXISTS IN NATURE.

8 "YOU CAN FIND IN IT FOODS
9 LIKE YOGURT; RIGHT?

10 "A CORRECT, THAT'S MY
11 UNDERSTANDING.

12 "Q OKAY, AND YOUR
13 RESEARCH WAS THAT, YOUR RESEARCH WAS
14 THAT YOU FOUND THAT RATS WOULD
15 SELF-ADMINISTER ACETALDEHYDE WHEN YOU
16 PUT IN THE SOLUTION JUST AS THEY WOULD
17 NICOTINE; RIGHT?

18 "A CORRECT.

19 "Q AND YOU FOUND THAT
20 WHEN YOU COMBINED THE TWO, NICOTINE
21 AND ACETALDEHYDE, YOU GOT MORE
22 SELF-ADMINISTRATION THAN USING EITHER
23 ONE SEPARATELY; CORRECT?

24 "A CORRECT.

25 "Q SO IN EFFECT, YOU
26 GOT MORE, YOU GOT MORE REINFORCEMENT
27 THAN YOU DID IF YOU USED EACH ONE OF
28 THEM BY THEMSELVES?

1 "A YOU COULD
2 CHARACTERIZE IT THAT WAY. THAT WOULD
3 BE FAIR.

4 "Q NOW, YOUR WORK,
5 SHOWING THAT THERE WAS MORE
6 SELF-ADMINISTRATION WHEN NICOTINE AND
7 ACETALDEHYDE WAS USED IN COMBINATION,
8 THAT WAS, I THINK, A STUDY YOU DID
9 WITH FOUR RATS; IS THAT CORRECT?

10 "A YES. IF YOU ARE
11 REFERRING TO THE -- THIS CAME UP
12 CLEARLY AT THE DEPOSITION IN SOME
13 DETAIL AND IF YOU ARE REFERRING TO
14 THAT, THE 8 AND THE 4.

15 "Q WHICHEVER.

16 "A -- WHATEVER YOU WANT
17 TO SAY.

18 "Q YOU STARTED WITH
19 EIGHT AND ENDED UP WITH A FOUR,
20 SOMEWHERE IN THE NEIGHBORHOOD OF FOUR
21 TO EIGHT RATS.

22 "A RIGHT. IT
23 DEFINITELY DEMONSTRATED PROOF OF THE
24 CONCEPT THAT THE TWO COMPOUNDS
25 TOGETHER HAD THE SYNERGISTIC EFFECT.

26 "Q YOU ALREADY SAID, I
27 THINK, EARLIER THIS AFTERNOON, THAT
28 YOUR WORK WITH NICOTINE DID NOT SHOW

1 IN THOSE STUDIES THAT YOU DID -- DID
2 NOT SHOW IN THOSE STUDIES THAT YOU DID
3 THAT NICOTINE CAUSED PHYSIOLOGICAL
4 DEPENDENCE IN RATS. AND MY QUESTION
5 IS, YOUR WORK WITH ACETALDEHYDE ALSO
6 SHOWED THAT THIS WAS TRUE, THAT
7 ACETALDEHYDE DID NOT CAUSE
8 PHYSIOLOGICAL DEPENDENCE IF RATS;
9 CORRECT?

10 "A WE CERTAINLY LOOK AT
11 THE NICOTINE ACETALDEHYDE
12 COMBINATIONS. I DON'T RECALL WHETHER
13 WE LOOKED AT ACETALDEHYDE ALONE BUT WE
14 PROBABLY DID. AND THE COMBINATIONS
15 DID NOT PRODUCE A PHYSIOLOGICAL
16 DEPENDENCE.

17 "AGAIN, USING THE SAME TESTS
18 AND PROCEDURES THAT WERE INEFFECTIVE
19 IN SHOWING NICOTINE PHYSIOLOGIC
20 WITHDRAWAL WERE ALSO INEFFECTIVE IN
21 SHOWING PHYSIOLOGICAL WITHDRAWAL WITH
22 THE COMBINATIONS. AGAIN, I THINK,
23 INDICATING OUR PROCEDURES WERE NOT AS
24 SENSITIVE AS THEY SHOULD, THEY COULD
25 HAVE BEEN.

26 "Q BUT AT LEAST AS FAR
27 AS THE DATA THAT YOU WERE REPORTING ON
28 YOUR REPORTS TO THE COMPANY, YOU WERE

1 SHOWING NICOTINE BY ITSELF DIDN' T
2 CREATE PHYSIOLOGICAL DEPENDENCE;
3 ACETALDEHYDE BY ITSELF DIDN' T CREATE A
4 PHYSIOLOGICAL DEPENDENCE.

5 "A THAT' S PROBABLY
6 TRUE. BUT I WOULD HAVE TO CHECK THE
7 DOCUMENTS ON THAT OR YOU PROBABLY HAVE
8 THOSE.

9 "Q AND YOU, AND THE
10 COMBINATION --

11 "A THE COMBINATION.

12 "Q -- OF THOSE TWO DID
13 NOT CREATE A PHYSIOLOGICAL DEPENDENCE;
14 RIGHT?

15 "A CORRECT. AGAIN, IN
16 THOSE INITIAL STUDIES THAT WE RAN.

17 "Q OKAY. SO WOULD IT
18 BE FAIR TO SAY THAT YOU DIDN' T SHOW,
19 YOU DIDN' T KNOW OF ANY DECISIONS THAT
20 WERE BEING MADE BY THE COMPANY OR THAT
21 EVER WERE MADE BY THE COMPANY TO USE
22 ACETALDEHYDE IN THE COMMERCIAL
23 PRODUCTION OF CIGARETTES WHILE YOU
24 WERE AT THE COMPANY?

25 "A THAT, THAT IS
26 CORRECT. I DO NOT KNOW HOW THEY
27 HANDLED THAT DATA.

28 "Q SO YOU LEFT THE

1 COMPANY IN NOVEMBER OR DECEMBER, WAS
2 IT?

3 "A MY LAST DAY OF
4 EMPLOYMENT AT PHILIP MORRIS WAS
5 DECEMBER 31ST, 1984.

6 "Q YOU WERE PAID UP TO
7 THE DAY YOU LEFT?

8 "A CORRECT.

9 "Q YOU HAD AN OFFICE AT
10 THE COMPANY THERE?

11 "A I HAD AN OFFICE.

12 "Q DID YOU HAVE
13 SECRETARIAL SUPPORT?

14 "A YES. WE WERE ABLE
15 TO USE THE PERSONNEL GROUP TO JOB
16 SEARCH. "

17 MR. LE BERTHON: YOUR HONOR, THAT
18 CONCLUDES THE CROSS-EXAMINATION.

19 THE COURT: THANK YOU, COUNSEL.

20 MR. PIUZE: MAY I SIT HERE?

21 THE COURT: ABSOLUTELY.

22 WE ARE GOING TO START AT WHAT PAGE?

23 MR. PIUZE: 40.

24 "Q DR. MELE, YOU SAID
25 IN RESPONSE TO MR. HEIM THAT YOU WERE
26 NOT ALLOWED TO DO STUDIES COMPARING
27 NICOTINE AND COCAINE. WHAT REASON
28 WERE YOU GIVEN AS TO WHY YOU COULD NOT

1 MAKE THOSE COMPARISON STUDIES?
2 "A WE WEREN' T ALLOWED
3 TO BRING IN ANY CONTROLLED SUBSTANCE.
4 A CONTROLLED SUBSTANCE INVOLVES ALL
5 YOUR DRUGS OF ABUSE. DRUGS THAT HAVE
6 ABUSE POTENTIAL ARE CONTROLLED BY THE
7 DRUG ENFORCEMENT AGENCY AND ARE
8 CATEGORIZED IN CERTAIN WAYS. WE WERE
9 NOT ALLOWED TO HAVE CONTROLLED
10 SUBSTANCES IN THE LAB BECAUSE, AGAIN,
11 BECAUSE OF THE ASSOCIATIVE NATURE OF A
12 CONTROLLED DRUG AND NICOTINE. WE WERE
13 JUST TOLD WE COULD NOT HAVE THOSE TWO
14 THINGS IN THE SAME ROOM IT WAS A BAD
15 ASSOCIATION.

16 "Q DID YOU AGREE WITH
17 MR. REMINGTON' S COMMENT TO THE EFFECT
18 THAT PEOPLE KNOW OR AT LEAST SOME
19 PEOPLE AT PHILIP MORRIS ACCEPT THE
20 PREMISE THAT NICOTINE IS ADDICTIVE?

21 "A CERTAINLY WITHIN THE
22 SCIENCE GROUP WE WORKED UNDER, I
23 BELIEVE THERE WAS NO QUESTION THAT
24 THAT WAS THE CASE. THAT WAS THE WHOLE
25 ASPECT OF THE ANALOG PROGRAM THERE
26 MAY HAVE BEEN ISSUES THAT WE DIDN' T
27 HAVE ALL OF THE DATA IN PLACE THAT WE
28 WOULD HAVE LIKED TO HAVE HAD. BUT,

1 AGAIN, WE WEREN' T, WE WEREN' T TRYING
2 TO PROVE THIS POINT OR DISPROVE IT.
3 WE WERE TRYING TO COME UP WITH AN
4 ANALOG THAT WOULD KEEP PEOPLE SMOKING
5 THE CIGARETTES. THAT WAS OUR -- THIS
6 QUESTION OF ADDICTION OR DEPENDENCE
7 WAS ASSUMED, OTHERWISE THE ANALOG
8 PROGRAM MAKES NO SENSE.

9 "Q DR. MELE, AT ANY
10 ANALOG MEETING THAT YOU HAVE ATTENDED,
11 AND DURING ANY DISCUSSION THAT WAS
12 EVER HELD, DID ANY OF THESE PHILIP
13 MORRIS SCIENTISTS EVER, AT ANY TIME,
14 DURING ANY MEETING, IN THAT
15 TWO-AND-A-HALF-YEAR PERIOD, EXPRESS
16 ANY INTEREST WHATSOEVER IN THE HEALTH
17 OF PHILIP MORRIS SMOKERS?

18 "A DID THAT COME UP?

19 "Q ANSWER IT, PLEASE --
20 YOU CAN ANSWER IT.

21 "A NEVER ONCE IN MY
22 WHOLE TIME AT THE COMPANY DID I HEAR
23 ANY CONCERN FOR THE CUSTOMER OTHER
24 THAN ONE SCIENTIST WHO WAS COMPLAINING
25 THAT HE WAS REPEATEDLY, REPEATEDLY
26 HAVING HIS RESEARCH CHANGED IN
27 DIRECTION ANY TIME HE CAME UPON SOME
28 HOT RESEARCH. "

1 MR. PIUZE: I THINK THAT'S IT, YOUR
2 HONOR.

3 THAT CONCLUDES THE TESTIMONY OF
4 DR. MELE THAT WE WANTED TO READ.

5 THE COURT: ALL RIGHT.

6 MR. PIUZE: WHICH IS THE GOOD NEWS.

7 THE BAD NEWS IS WE NOW WANT TO READ
8 SOME MORE FROM ANOTHER.

9 THE COURT: ACTUALLY, WE ARE GOING TO
10 READ TODAY.

11 MR. PIUZE: YES.

12 THE COURT: AND THEN -- LADIES AND
13 GENTLEMEN, I THINK IT IS A GOOD IDEA, THOUGH, IF WE
14 TAKE A STRETCH BETWEEN THIS READING AND THE NEXT,
15 HOW THAT IS? I THINK WE PROBABLY ALL AGREE TO
16 THAT.

17 ALL RIGHT, 15 MINUTES, WE WILL SEE
18 YOU AT TO FIVE TILL.

19

20 (AT THIS TIME, A RECESS
21 WAS TAKEN.)

22

23 (THE FOLLOWING PROCEEDINGS
24 WERE HELD IN OPEN COURT OUT
25 OF THE PRESENCE OF THE JURY:)

26

27 MR. PIUZE: THERE'S ONE PASSAGE OF
28 DISPUTE, PAGE -- VOLUME 147, PAGE 19.

1 MR. LE BERTHON: PAGE 95?

2 MR. PIUZE: 19.

3 THE COURT: MAY I HAVE THAT AGAIN,
4 PLEASE, PAGE 19?

5 MR. GOLDSTEIN: STARTING AT LINE 23,
6 CONTINUING ON TO THE NEXT PAGE THROUGH LINE 21,
7 EXCLUDING THE COLLOQUY.

8 MR. BRO: THEODORE BRO, B-R-O.

9 THE COURT: HOW FAR DO YOU WANT ME TO
10 KEEP GOING?

11 MR. BRO: THROUGH LINE 21 OF PAGE 20.

12 THE COURT: WHAT WAS HE IN?

13 MR. BRO: HE WAS A SCIENTIST, A RESEARCH
14 SCIENTIST.

15 THE COURT: IS THERE EVIDENCE OF
16 FOUNDATION LAID FOR HIS ABILITY TO SPEAK FOR THE
17 CORPORATION?

18 MR. PIUZE: WELL, HE IS NOT AN OFFICER,
19 DIRECTOR OR MANAGING AGENT OR ANYTHING LIKE THAT.

20 THE COURT: I MEAN, HE DOESN'T SOUND LIKE
21 THE KIND OF PERSON WHO COULD SAY THAT THE PRIMARY
22 GOAL OF THE COMPANY IS MARKET SHARE. ALTHOUGH, I
23 KNOW WHAT THE COMPANY'S PRIMARY GOAL IS.

24 MR. PIUZE: ANY EMPLOYEE IN ANY COMPANY
25 IS ABLE TO SAY THAT.

26 THE COURT: WELL, NOT IN THIS COURT.

27 OKAY. THAT WOULD BE SUSTAINED.

28 MR. BRO: THANK YOU, YOUR HONOR.

1 MR. PIUZE: THAT WASN'T MY ARGUMENT IN
2 FAVOR OF, THAT WAS JUST AN OBSERVATION.

3 THE COURT: OKAY.

4 DO WE HAVE ALL OUR JURORS?
5 BEFORE YOU BRING THEM IN, ONE OF
6 THE JURORS CAUGHT ME OUT IN THE HALLWAY AND ASKED
7 ME WHAT DOES COLLOQUY MEAN. SO I AM GOING TO TELL
8 THEM WHAT COLLOQUY IN A DEPOSITION IS WHEN THEY
9 COME IN AND SIT DOWN.

10 ALL RIGHT, EVERYONE PLEASE BE
11 SEATED.

12
13 (THE FOLLOWING PROCEEDINGS
14 WERE HELD IN OPEN COURT IN
15 THE PRESENCE OF THE JURY.)

16
17 THE COURT: WE HAVE OUR JURY PANEL WITH
18 US. ONE OF THE GOOD MEMBERS OF OUR JURY OUT IN THE
19 HALLWAY CAUGHT ME AND ASKED ME --

20 MR. CARLTON: YOUR HONOR, WE ARE MISSING
21 ONE JUROR.

22 THE COURT: WE ARE.

23 NOW WE HAVE ALL OUR JURORS.

24 ONE OF THE JURORS OUT IN THE HALL
25 ASKED ME THE QUESTION, WHAT DOES COLLOQUY MEAN,
26 BECAUSE I WAS TALKING ABOUT COLLOQUY IN CONNECTION
27 WITH THE TRIAL TRANSCRIPTS THAT THEY HAVE BEEN
28 READING OUT OF.

1 WHAT HAPPENS IN TRIAL OR IN A
2 DEPOSITION, IN BOTH, DEPOSITION BEING DONE OUTSIDE
3 OF A COURTROOM IN A LAWYER'S OFFICE WHERE LAWYERS
4 ASK QUESTIONS OF A POTENTIAL WITNESS IN A CASE AND
5 WE HAVE DEPOSITIONS IN THIS CASE, SO WE HAVEN'T
6 USED THEM YET AND ALSO WHAT HAPPENS IN THE COURSE
7 OF TRIALS IS, OF COURSE, WE HAVE COURT REPORTER'S,
8 SO MS. RIDLEY IS OUR COURT REPORTER HERE, AND SHE
9 SWITCHES OFF WITH ONE OF HER COLLEAGUES. AND SHE
10 HAS TO TAKE DOWN ABSOLUTELY EVERY WORD THAT IS SAID
11 IN THE COURSE OF THE PROCEEDINGS, ANYTHING THAT THE
12 TRIAL COURT SAYS TO THE LAWYERS, THE LAWYERS SAY TO
13 THE COURT AND ALSO ANYTHING THAT IS SAID IN FRONT
14 OF THE JURY, ANYTHING THAT THE WITNESS SAYS.

15 AND WHAT WILL HAPPEN, OFTENTIMES,
16 IS THAT THE JUDGE WILL HAVE TO SAY THINGS TO THE
17 LAWYERS OUTSIDE THE PRESENCE OF THE JURY, OUTSIDE
18 THE PRESENCE OF THE WITNESS, BUT STILL THAT IS
19 RECORDED ON HERE. THAT'S CALLED COLLOQUY.

20 ALSO, IN A DEPOSITION, WHAT CAN
21 HAPPEN IS THE LAWYERS MAY HAVE TO TALK TO EACH
22 OTHER WITHOUT TALKING TO THE WITNESS.

23 NOW, REMEMBER, EARLY ON WE HEARD
24 THAT LAWYERS' STATEMENTS TO EACH OTHER ARE NOT
25 EVIDENCE. RIGHT, AND ALL WE ARE ALLOWING IN HERE
26 IS EVIDENCE.

27 AND, OF COURSE, BELIEVE IT OR NOT,
28 IT'S ALSO TRUE THAT A JUDGE'S STATEMENT, EXCEPT IN

1 CERTAIN VERY RARE INSTANCES WHERE I TAKE JUDICIAL
2 STATEMENTS, A JUDGE'S STATEMENTS ARE NOT EVIDENCE.

3 AND THE ONLY THING THAT WE WANT
4 JURORS TO HEAR IN THE COURSE OF A CASE IS EVIDENCE
5 AND THE ARGUMENTS OF THE GOOD LAWYERS. SO ALL THE
6 REST OF IT IS CALLED COLLOQUY AND WE ELIMINATE
7 THAT.

8 AND IT'S A GOOD THING THAT WE DO,
9 TOO, BECAUSE THAT WAY WE ONLY HAVE TO READ MAYBE A
10 MUCH SMALLER PORTION OF THIS TRANSCRIPT THAN IT
11 REALLY HAS.

12 OKAY. GOOD.

13 COUNSEL, MR. PIUZE, YOU ARE GOING
14 TO CALL BY WAY OF TRANSCRIPT ANOTHER WITNESS?

15 MR. PIUZE: WITH APOLOGIES, I AM AND
16 THIS IS DR. IAN UYDESS, U-Y-D-E-S-S.

17

18

19 IAN UYDESS,

20 TRIAL TESTIMONY READ AS FOLLOWS:

21 "Q DR. UYDESS, PLEASE
22 TELL THE MEMBERS OF THE JURY YOUR NAME
23 AND YOUR PRESENT ADDRESS.

24 "A MY NAME IS IAN
25 UYDESS. I LIVE IN RICHMOND, VIRGINIA,
26 IN MIDLOTHIAN WHICH IS A SUBURB OF
27 VIRGINIA, 4309 NORTHMICH COURT,
28 N-O-R-T-H-W-I-C-H, COURT.

1 "Q I AM CALLING YOU
2 DR. UYDESS. THE JURY HAS HEARD FROM A
3 LOT OF M.D.'S IN THIS CASE. YOU ARE A
4 PH.D. AND I'LL GET TO THAT IN A
5 MINUTE. IS THAT CORRECT?

6 "A YES, IT IS.

7 "Q STARTING WITH YOUR
8 BACHELOR OF SCIENCE DEGREE, YOUR
9 UNDERGRADUATE DEGREE, TELL US WHAT
10 YOUR AREA OF FOCUS WAS AND WHAT
11 UNIVERSITIES YOU WENT TO.

12 "A STARTING WITH THE
13 BACHELOR OF SCIENCE DEGREE?

14 "Q YES.

15 "A AT THAT POINT IN
16 TIME I WAS IN NEW JERSEY AT A
17 UNIVERSITY CALLED FARLEIGH DICKENSON
18 WHERE I GOT MY BACHELOR OF SCIENCE
19 PRIMARILY IN PRE-MED. I WAS TRYING TO
20 DECIDE IF I WANT TO GO INTO MEDICAL OR
21 RESEARCH. I DECIDED I WANTED TO DO
22 RESEARCH AND APPLIED TO GRADUATE
23 SCHOOLS FOR A PH.D. BECAUSE I WANTED
24 TO REMAIN IN A MEDICALLY-ORIENTED
25 AREA, I DECIDED TO GO TO PART OF THE
26 UNIVERSITY OF BUFFALO, ACTUALLY PART
27 OF THE MEDICAL SCHOOL CALLED ROSWELL
28 PARK.

1 IT' S A VERY INTERNATIONALLY
2 RENOWNED RESEARCH CENTER AND HOSPITAL
3 FOR CANCERS LIKE EMPHYSEMA. I WAS
4 ACCEPTED THERE, VERY FORTUNATELY, AND
5 WENT TO UNDERGRAD THERE. I WENT THERE
6 FOR MOST OF MY CAREER.

7 "Q DIVISION OF -- STATE
8 UNIVERSITY OF NEW YORK, AT BUFFALO?

9 "A RIGHT. WHILE I WAS
10 THERE, I MET SOMEONE IN ROCHESTER,
11 WHICH IS A NEIGHBORING CITY TO
12 BUFFALO, WHO WAS INVOLVED IN A
13 SLIGHTLY DIFFERENT AREA WITH NASA
14 DOING SPACE RESEARCH, EXO BIOLOGY
15 RESEARCH, HAVING TO DO WITH THE
16 ORIGINAL MARS PROGRAM, WHERE A SHIP
17 WAS SENT TO MARS TO LAND A SATELLITE,
18 MAKE MEASUREMENTS.

19 "I LIKED THAT AND I GOT
20 INVOLVED WITH HIM AND DECIDED TO
21 TRANSFER FROM THE UNIVERSITY OF
22 BUFFALO, ROSWELL PARK DIVISION, TO
23 ROCHESTER, WHERE I SPENT THE FIRST
24 YEAR COMPLETING MY WORK AND WRITING MY
25 THESIS FROM BUFFALO, AND ROCHESTER
26 AWARDED ME THAT DEGREE BASED ON THAT
27 WORK. COMPLICATED. IT WAS BASED ON
28 THE WORK I DID IN BUFFALO. THAT' S

1 WHERE I STAYED FOR SEVERAL YEARS AS A
2 POST-DOCTORAL FELLOW IN THE DEPARTMENT
3 OF MEDICINE AT THE MEDICAL CENTER
4 THERE.

5 "Q NOW YOUR CURRICULUM
6 VITAE REFERS TO, IN TERMS OF YOUR
7 MASTER OF SCIENCE DEGREE, CELL AND
8 MOLECULAR BIOLOGY. TELL US WHAT THAT
9 FIELD ENCOMPASSES.

10 "A WELL, BECAUSE
11 ROSWELL PARK WAS A CANCER RESEARCH
12 INSTITUTE PRIMARILY, IF YOU ARE A
13 STUDENT THERE, A LOT OF THE
14 CURRICULUM THE COURSES YOU HAD HAD A
15 LOT TO DO WITH THE HUMAN BODY AND
16 PHYSIOLOGY, WHAT WAS KNOWN ABOUT
17 CANCER AT THE TIME, THE CAUSATIVE
18 AGENTS, WHY CANCER EXISTS, HOW DOES IT
19 HAPPEN, WHAT LEADS TO IT, WHAT
20 PROMOTES IT.

21 "AND SO THE COURSE WORK WAS
22 IN THE GENERAL REALM AND SO CELL
23 BIOLOGY, MOLECULAR BIOLOGY AND THE
24 VARIOUS STUDIES YOU DO, CELL BIOLOGY,
25 YOU'RE STUDYING CELLS AND CELL
26 SYSTEMS. AND MOLECULAR, YOU ARE
27 STUDYING THE SUBPARTS WHEN YOU ARE
28 STUDYING THESE TOPICS. MY BACKGROUND

1 WAS IN THAT AND MICROBIOLOGY WHICH IS
2 STUDYING MICROORGANISMS.

3 "Q THEN AS YOU SAID,
4 YOU CONTINUED, DID YOU YOUR
5 POST-DOCTORAL FELLOWSHIP. DOES THAT
6 MEAN AFTER YOU HAD YOUR PH. D. DEGREE?

7 "A YES.

8 "Q YOU REMAINED THERE
9 AND YOU WERE IN THE DEPARTMENT OF
10 MEDICINE AND INFECTIOUS DISEASE AT THE
11 UNIVERSITY OF ROCHESTER MEDICAL CENTER
12 AND YOUR FOCUS WAS IMMUNOLOGY AND
13 INFECTIOUS DISEASE.

14 "NOW, YOU ARE NOT AN M D.
15 AND YET YOU' RE -- SO EXPLAIN THAT.
16 HOW IS A PH. D. WITH YOUR SCIENTIFIC
17 BACKGROUND, YOU' RE FOCUSING IN ON
18 AREAS THAT PEOPLE TEND TO ASSOCIATE
19 WITH MEDICAL DOCTORS.

20 "A WELL, BECAUSE,
21 AGAIN, A LARGE PART OF MY TRAINING WAS
22 MEDICALLY-ORIENTED AND I HAD A LOT OF
23 SIMILAR COURSES THAT YOU WOULD HAVE UP
24 TO A POINT WITH REGARD TO GETTING AN
25 M D. , PHYSIOLOGY, ANATOMY, THINGS OF
26 THAT NATURE. IT' S NOT UNUSUAL TO FIND
27 AT A MEDICAL INSTITUTION, M D. ' S AND
28 PH. D. ' S WORKING TOGETHER TO ATTACK A

1 PROJECT IN WHICH THE M.D.'S HANDLE THE
2 MEDICAL SIDE AND THE PH.D.'S ARE
3 BASICALLY HELPING THEM DO THE BASIC
4 RESEARCH TO LEARN MORE ABOUT THAT
5 DISEASE, THAT SITUATION OR WHATEVER IS
6 BEING INVESTIGATED.

7 "Q SO WHEN YOU
8 COMPLETED YOUR POST-DOCTORAL
9 FELLOWSHIP IN 1977, WHAT DID YOU DO
10 THEREAFTER IN TERMS OF EMPLOYMENT?

11 "A WELL, THERE WAS A
12 STRANGE CHANGE IN MY CAREER WHICH
13 ULTIMATELY LED ME HERE.

14 "ONE DAY WHILE AT THE
15 UNIVERSITY OF ROCHESTER WHERE I ALSO
16 INTERACTED WITH THE GRADUATE SCHOOL,
17 WHICH WAS RIGHT NEXT DOOR, I WAS
18 TEACHING SOME COURSE THERE WITH
19 ANOTHER FACULTY MEMBER. A NOTICED
20 CAME AROUND THE DEPARTMENT FROM A
21 CORPORATION THAT WAS LOOKING FOR SOME
22 NEW GRADUATES WITH EITHER MASTERS
23 DEGREES OR PH.D.'S IN MATERIAL
24 SCIENCES, PEOPLE WHO LEARN HOW TO
25 INVESTIGATE MATERIALS OF VARIOUS
26 TYPES.

27 "THEY WERE ASKING US, COULD
28 WE RECOMMEND SOME STUDENTS AND PLEASE

1 PUT THEM IN CONTACT WITH THIS COMPANY.
2 AND I LOOKED AT IT AND IT WAS PHILIP
3 MORRIS CORPORATION LETTERHEAD. I KNEW
4 VERY LITTLE ABOUT PHILIP MORRIS AT THE
5 TIME, NOT BEING A SMOKER MYSELF. I
6 BEGAN TO WRITE A LETTER TO RESPOND TO
7 THE MAN WHO HAD PUBLISHED THE LETTER
8 AND TELL THEM, SORRY, WE HAVE TALKED
9 TO THE STUDENTS AND NO ONE WAS
10 INTERESTED IN RESPONDING.

11 "I WAS MAKING SOME TYPOS, IT
12 WAS BEFORE OUR COMPUTERS, AND I WAS
13 GETTING TIRED OF THROWING OUT THE
14 PAPERS AND MAKING CORRECTIONS.

15 "I DECIDED I WOULD GIVE THEM
16 A CALL.

17 "SO I CALLED THE PHONE
18 NUMBER ON THE LETTERHEAD AND SPOKE TO
19 THE MAN WHOSE NAME WAS ON THE LETTER.
20 AND IN THAT CONVERSATION, HE STARTED
21 ASKING ME WHAT I DID. SO I EXPLAINED
22 BOTH THE MEDICAL WORK AND ALSO THE
23 SPACE RESEARCH, THE NASA WORK THAT I
24 HAD DONE FOR A WHILE.

25 "AND HE SAYS, YOU KNOW, WE
26 HAVE A TECHNICAL SEMINAR PROGRAM DOWN
27 HERE AND WE FREQUENTLY BRING IN PEOPLE
28 TO GIVE TALKS ON A LOT OF DIFFERENT

1 AREAS, WOULD YOU CONSIDER COMING DOWN
2 AND TELLING US ABOUT THE NASA WORK
3 THAT YOU DID.

4 "SO I THOUGHT THAT WAS A
5 GREAT OPPORTUNITY. I SAID, SURE.

6 "SEVERAL WEEKS LATER, I CAME
7 DOWN TO RICHMOND, VIRGINIA, TO GIVE
8 THE TALK AT PHILIP MORRIS'S R&D CENTER
9 WHICH IS THERE, AND WHILE THERE SPENT
10 SEVERAL DAYS, TALKED TO A LOT OF
11 PEOPLE IN THE R&D CENTER, MET A LOT OF
12 THE DIRECTORS, INCLUDING THE GENTLEMAN
13 WHO ULTIMATELY HIRED ME, BILL FARONE.

14 "DOCTOR WILLIAM FARONE WAS
15 THE SCIENTIST WHO ACTUALLY --

16 MR. LEITER: THAT'S A QUESTION.

17 MR. GOLDSTEIN: EXCUSE ME.

18 MR. PIUZE: I HAVE TO RUN MY PIECE.

19 "Q DR. WILLIAM FARONE
20 WAS THE SCIENTIST WHO ACTUALLY HIRED
21 YOU?

22 "A YES. HE WAS NOT THE
23 INDIVIDUAL WHO WROTE THE LETTER WHICH
24 A LOT OF THESE CORPORATIONS TYPICALLY
25 DO, THEY WILL HAVE A SITUATION WHERE
26 THEY WANT TO HIRE SOMEONE OF A
27 TECHNICAL BACKGROUND, THEY KNOW WHAT
28 UNIVERSITIES ARE OUT THERE THAT HAVE

1 GRADUATE STUDENTS IN THOSE AREAS, THEY
2 SENDS OUT LETTERS TRYING TO SOLICIT
3 EMPLOYEES.

4 "BUT BILL DID NOT ACTUALLY
5 WRITE THE LETTER, ONE OF HIS MANAGERS
6 AT THE TIME DID.

7 "SO I HAD NO CONTACT WITH
8 BILL UNTIL I ACTUALLY GOT TO RICHMOND.
9 BUT WHILE THERE, WE BEGAN TO TALK. HE
10 LIKED MY BACKGROUND. I WAS ASKED
11 QUESTIONS LIKE, HOW LONG DID YOU PLAN
12 ON STAYING IN ROCHESTER.

13 I WAS ASKED TO COME BACK AND
14 LOOK AROUND AND LEARN MORE ABOUT WHAT
15 THEY DO.

16 "Q AND THERE CAME A
17 POINT WHEN YOU WENT TO WORK FOR PHILIP
18 MORRIS?

19 "A YES. AT THAT TIME,
20 I WAS ASKED DIRECTLY WOULD I CONSIDER
21 EMPLOYMENT THERE. AND BECAUSE OF THE
22 PHENOMENAL FACILITIES WHICH WERE A
23 TOTAL SURPRISE TO ME, I MEAN, I CAME
24 OUT OF TWO INSTITUTIONS, ROSWELL PARK,
25 UNIVERSITY OF BUFFALO AND ALSO
26 ROCHESTER, WHICH WERE BOTH WEALTHY
27 INSTITUTIONS, WELL-SUPPORTED, AND THE
28 EXCELLENT EQUIPMENT, EXCELLENT STAFFS,

1 TALENTED PEOPLE.
2 "TO BE QUITE HONEST, THE
3 FIRST TRIP TO RICHMOND I EXPECTED TO
4 BE TAKEN FROM THE AIRPORT IN A CAB
5 DOWN A DIRT ROAD. BEING NAIVE,
6 BECAUSE I DIDN'T REALLY KNOW MUCH
7 ABOUT THE TOBACCO INDUSTRY, I THOUGHT
8 I WAS GOING TO GO DOWN A DIRT ROAD
9 WITH PINEAPPLE FIELDS KIND OF LIKE IN
10 HAWAII. AND I WOULD WIND UP IN AN OLD
11 STONE BUILDING LIKE A STATE UNIVERSITY
12 OR STONE BUILDING AND BE SHOWN AROUND
13 AND GIVE A TALK AND GO HOME.

14 "AND INSTEAD, I SAW THIS
15 ULTRA MODERN FACILITY, NOT JUST THE
16 R&D FACILITY, AND I HAD A TOUR. THEY
17 GAVE ME A TOUR OF THE MANUFACTURING
18 CENTER, WHICH EVEN BACK IN 1977, WHICH
19 IS WHEN THIS WAS, WAS HIGHLY
20 AUTOMATED, SOPHISTICATED. I HAD NEVER
21 SEEN ANYTHING LIKE IT.

22 "AND A LOT OF THE PEOPLE I
23 MET IN THE R&D CENTER WHERE THERE WERE
24 600 SOME ODD PEOPLE LIKE ME, NOT ALL
25 PH. D. 'S, BUT TRAINED PEOPLE, WERE
26 RELATIVELY YOUNG, COME OUT OF THE
27 UNIVERSITIES, I FELT VERY COMFORTABLE
28 THERE.

1 "AND WHEN THEY ASKED ME IF I
2 WOULD LIKE TO WORK THERE, PLUS ADDED
3 THAT THE REASON THEY WANTED ME WAS
4 BECAUSE OF MY BACKGROUND, AND THEY
5 WERE LOOKING TOWARD MAKING A SAFER
6 PRODUCT, THEY WANTED TO IMPROVE,
7 ENHANCE THEIR PRODUCT, BUT WITH REGARD
8 TO MAKING IT BETTER, SAFER, THAT'S WHY
9 BILL FARONE, WHO WAS LEADING ME AROUND
10 AND SHOWING ME THE FACILITIES,
11 EXPLAINED THAT HE CAME ON AND OTHER
12 PEOPLE HAD BEEN BROUGHT IN AT THE SAME
13 TIME.

14 "Q WHAT WAS YOUR JOB
15 TITLE WHEN YOU WERE FIRST HIRED?

16 "A INITIALLY, I BELIEVE
17 IT WAS RESEARCH SCIENTIST, WHICH WAS
18 SLIGHTLY ABOVE THE ENTRY LEVEL FOR A
19 PERSON WITH A PH. D. IT MEANT YOU HAD
20 SOME ADDITIONAL EXPERIENCE ABOVE AND
21 BEYOND GETTING YOUR DEGREE.

22 "Q OKAY. NOW IN BIG
23 PICTURE TERMS, YOU WORKED FROM (SIC)
24 PHILIP MORRIS FROM 1978 UNTIL 1989,
25 BUT THERE WAS A GAP IN TIME WHERE YOU
26 WENT TO WORK FOR SOMEONE ELSE FOR,
27 WHAT, ABOUT EIGHT MONTHS?

28 "A YES.

1 "Q BUT I MEAN, OVERALL,
2 YOU WORKED FOR PHILIP MORRIS ABOUT 11
3 YEARS?

4 "A APPROXIMATELY, YES.

5 "Q AS I AM LOOKING AT
6 YOUR C. V., YOU SAY, DURING THE FIRST
7 PERIOD OF EMPLOYMENT, FROM 1978 TO
8 1980, YOUR FOCUS WAS MICROSTRUCTURE
9 ANALYSIS, TOBACCO STRUCTURE AND
10 CHEMISTRY.

11 "SO TELL US WHAT, AS A PH. D.
12 AND AS A POST-DOCTORAL FELLOW, WHAT
13 YOU WERE DOING ON A DAILY BASIS IN
14 THOSE AREAS.

15 "A WHEN I FIRST CAME TO
16 PHILIP MORRIS, I DIDN'T IMMEDIATELY
17 GET LAUNCHED INTO THE SAFER PRODUCTS
18 TYPE OF RESEARCH.

19 "THESE WERE OTHER NEEDS
20 THERE AND THAT WAS EXPLAINED TO ME
21 WHEN I WAS OFFERED THE JOB.

22 "BECAUSE SOME OF THE TOOLS I
23 USED IN MY BACKGROUND INVOLVED
24 SOMETHING LIKE AN ELECTRON MICROSCOPE,
25 WHICH MAYBE YOU HAVE SEEN PICTURES OF
26 IN MAGAZINES, WHERE YOU CAN LOOK AT
27 EXTREMELY SMALL THINGS AND BLOW THEM
28 UP. IT'S WIDELY USED IN ALL KINDS OF

1 RESEARCH AND SCIENCE.

2 "I DID QUITE A BIT OF THAT
3 IN MY PAST WORK, GRADUATE WORK, AND
4 THEY REALLY NEEDED SOMEONE AT A SENIOR
5 LEVEL TO HELP THEM DO MORE OF THAT.

6 "THEY ALREADY HAD SOMEONE IN
7 THE LABORATORY THAT DID THAT TYPE OF
8 WORK, BUT SOMEONE WHO HAD MORE
9 EXPERIENCE. I WAS ATTACHED TO THE LAB
10 AND THAT WAS WHERE I WOULD SPEND THE
11 FIRST YEARS AT PHILIP MORRIS, LEARNING
12 MORE ABOUT WHAT THEY DID AND LEARNING
13 MORE ABOUT PHILIP MORRIS, AND YET, AT
14 THE SAME TIME, USE SOME OF THE TOOLS,
15 I HAD TO LOOK AT THE STRUCTURE OF
16 TOBACCO AND RESEARCH IN THOSE AREAS.

17 "Q THERE CAME A TIME, I
18 GUESS IT WAS IN 1980, WHERE YOU LEFT
19 PHILIP MORRIS, YOU WENT TO WORK FOR AN
20 OUTFIT CALLED CARL ZEISS, Z-E-I-S-S,
21 U. S. A.

22 "WHY DID YOU DECIDE TO LEAVE
23 PHILIP MORRIS AND GO TO WORK FOR CARL
24 ZEISS?

25 "A THERE WERE SEVERAL
26 REASONS. ALTHOUGH I WAS ATTRACTED TO
27 GO TO PHILIP MORRIS -- AND I REALLY
28 WANTED TO MAKE THAT CAREER MOVE

1 BECAUSE OF THE EXPECTATION OF BEING
2 ABLE TO GET INVOLVED IN MAKING A
3 BETTER PRODUCT, A SAFER PRODUCT FOR
4 THE PUBLIC, WHICH I THOUGHT WAS REALLY
5 IMPORTANT.

6 "AGAIN, SMOKING AND HEALTH
7 WAS NOT A NEW SUBJECT FOR ME, COMING
8 OUT OF A CANCER RESEARCH INSTITUTION
9 IN THE LATE '70'S, EARLY '80'S, THEN
10 WORKING, SMOKING AND HEALTH WAS ALWAYS
11 A MAJOR ISSUE. AND ACTUALLY SOME OF
12 THE COURSE WORK I HAD WAS IN THAT
13 AREA.

14 "SO WHILE I DID ACCEPT THE
15 JOB THERE AND QUITE HAPPILY WANTED TO
16 GO TO PHILIP MORRIS, I ALWAYS HAD A
17 LITTLE BIT OF A PROBLEM INTERNALLY
18 JUSTIFYING, RATIONALIZING WHY I WAS
19 THERE. ALTHOUGH THAT WASN'T A MAJOR
20 REASON WHY I LEFT, BUT IT WAS ONE OF
21 THEM

22 "I ALSO WANTED TO DO SOME
23 WORK WITH A DIRECTOR THERE WHO I HAD
24 SUGGESTED A RESEARCH PROGRAM TO WHICH
25 I THOUGHT WOULD BE VERY BENEFICIAL TO
26 PHILIP MORRIS

27 "Q WHAT WAS THE NAME OF
28 THAT DIRECTOR?

1 "A DR. THOMAS OSDENE.
2 AND HE THOUGHT THAT THE RESEARCH I
3 SUGGESTED, WROTE A PROPOSAL FOR, WAS
4 EXCITING AND EXCELLENT, DEFINITELY
5 WANTED TO DO IT, TOLD ME HE WOULD LIKE
6 TO DO IT. BUT HE THOUGHT THAT I
7 SHOULD BE IN HIS DIVISION TO DO IT.

8 "I WAS IN BILL FARONE'S
9 DIVISION AT THE TIME AND THEY WERE
10 BOTH DIRECTORS WITHIN RESEARCH AND
11 DEVELOPMENT.

12 "I ALSO GAVE DR. FARONE THE
13 SAME PROPOSALS SO THAT HE COULD SEE
14 IT. AND WHILE DR. OSDENE WAS TRYING
15 TO MOVE ME INTO HIS DIVISION,
16 DR. FARONE WASN'T REALLY HAPPY ABOUT
17 THAT.

18 "Q FARONE WANTED YOU
19 THE REMAIN?

20 "A WANTED ME TO REMAIN
21 IN HIS DIVISION. PART OF THIS WAS MY
22 FAULT. I WAS SO FOCUSED ON THE
23 SCIENCE AT THE TIME, I WAS MUCH
24 YOUNGER, 15, 20 YEARS AGO, I WASN'T
25 PAYING ATTENTION TO SOME THINGS I
26 SHOULD HAVE BEEN PAYING ATTENTION TO.

27 "DR. FARONE INTERFERED WITH
28 THE VICE-PRESIDENT WHO ALREADY -- WHO

1 HAD ALREADY OKAYED MY MOVING AND MADE
2 A CASE TO STAY WHERE I WAS AND THAT
3 WAS REVERSED. AND NOT THAT, THAT
4 WASN'T DISAPPOINTING, I WAS VERY, VERY
5 HAPPY BEING WITH DR. FARONE, WHO WAS
6 AN EXCELLENT SCIENTIST AND WE GOT
7 ALONG VERY, VERY WELL. BUT I WAS
8 LOOKING TO APPLY TO MORE OF MY
9 BIOMEDICAL RESEARCH CAPABILITIES.

10 "Q YOU THOUGHT YOU
11 WOULD HAVE A BETTER CAPABILITY OF
12 DOING THAT IN OSDENE'S DIVISION?

13 "A YEAH, WHERE THIS
14 PROJECT INVOLVED MORE OF THE THINGS
15 THAT I DID IN MY POST-DOCTORAL
16 RESEARCH TIME, AND PREVIOUS TO THAT,
17 THEN WHAT I WAS DOING PRIMARILY IN DR.
18 FARONE'S DIVISION. SO I WAS KIND OF
19 DISAPPOINTED.

20 "THEN THE THIRD FACTOR WAS
21 THAT OUT OF THE BLUE, I GET A CALL ONE
22 DAY FROM A COMPANY THAT DESIGNS AND
23 SELLS SOME OF THE BEST ELECTRON
24 MICROSCOPES IN THE WORLD AN OLD --

25 "Q CARL ZEISS?

26 "A YES. MAKES A LOT OF
27 OPTICS, EVERYTHING FROM EYEGLASSES TO
28 A TREMENDOUS AMOUNT OF MEDICAL

1 EQUIPMENT THAT'S IN OPERATING ROOMS
2 ALL OVER THE WORLD, THE KINDS OF
3 OPTICS THAT ARE USED BY SURGEONS TO DO
4 MINUTE SURGERY ON THE BRAIN, ON THE
5 NERVOUS SYSTEM

6 "SO THOSE THREE THINGS
7 TOGETHER KIND OF LED ME TO MAKE A
8 DECISION TO LEAVE AND GO WORK FOR CARL
9 ZEISS.

10 "AFTER DISCUSSING IT WITH
11 PEOPLE I FELT CLOSE WITH AT PHILIP
12 MORRIS, I WASN'T SURE WHAT TO DO. SO
13 I DISCUSSED IT WITH BILL FARONE AND
14 TOM OSDENE AND CLIFFORD LILLY, WHO WAS
15 A PRINCIPAL SCIENTIST AT THE COMPANY.
16 THEY WERE ALL VERY SORRY THAT I WAS
17 THINKING ABOUT LEAVING AND TOLD ME
18 THAT IF ANYTHING EVER CHANGED AND I
19 WANTED TO COME BACK, TO PLEASE LET
20 THEM KNOW.

21 "Q THAT'S WHAT
22 ULTIMATELY HAPPENED? YOU WENT TO WORK
23 FOR CARL ZEISS, THAT COMPANY FOR ABOUT
24 HOW LONG?

25 "A SEVEN, EIGHT, NINE
26 MONTHS.

27 "Q THEN YOU DECIDED TO
28 COME BACK TO PHILIP MORRIS?

1 "A YES. THINGS WERE
2 NOT EXACTLY AS I HAD THOUGHT AT CARL
3 ZEISS, NOT THAT I WENT THERE AND GOT
4 UNHAPPY AND LEFT. IT WAS A SERIES OF
5 SITUATIONS THAT THE PEOPLE WHO WERE
6 HIRING ME IN NEW YORK WHO INDICATED
7 YOU WOULD BE DOING THIS, WHEN I WENT
8 TO GERMANY TO THE PARENT COMPANY WHICH
9 I DID A MONTH OR MONTH AND A HALF
10 AFTER I GOT TO NEW YORK, THINKING THAT
11 I WAS IN THIS NEW POSITION TO DO THESE
12 REALLY NEAT THINGS, THE GERMAN PARENT
13 COMPANY TOLD ME, WELL, WHATEVER NEW
14 YORK TOLD YOU, THAT'S ALL FINE AND
15 GOOD, BUT YOU ARE NOT GOING TO DO
16 THAT. WE DO THAT HERE.

17 "SO IT WAS ANOTHER
18 DISAPPOINTMENT. AT THE SAME TIME,
19 EVERY WEEKEND I WAS BEING FLOWN BACK
20 TO RICHMOND VIRGINIA BECAUSE WE HAD
21 NOT MOVED YET. AND CARL ZEISS WAS
22 FLYING ME UP MONDAY MORNING AND FLYING
23 ME BACK DURING THE INTERIM PERIOD.

24 "EVERY WEEKEND, SINCE MANY
25 OF OUR FRIENDS WERE STILL AT PHILIP
26 MORRIS, INCLUDING BILL FARONE AND TOM
27 OSDENE, WE WERE SEEING THEM THROUGHOUT
28 THAT PERIOD AND WE WERE ALWAYS

1 EXCHANGING QUESTIONS LIKE, HOW IS
2 EVERYTHING IN NEW YORK. AND I WOULD
3 SAY FINE. AND HOW IS EVERYTHING IN
4 RICHMOND, AND I SAY FINE.

5 "AND ONE DAY WHEN THEY ASKED
6 ME HOW IS EVERYTHING IN NEW YORK AND I
7 HESITATED --

8 "Q THAT WAS YOUR
9 OPENING TO GO BACK?

10 "A WELL, MAYBE I DIDN' T
11 MEAN IT TO BE THAT, BUT I KIND OF
12 HESITATED AND SAID, 'WELL, OKAY.' ONE
13 OF THEM -- AND I DON' T REMEMBER WHO IT
14 WAS AT THE TIME SAID, 'WELL, WHY DON' T
15 YOU JUST COME BACK HERE?'

16 "Q AND YOU DID GO BACK?

17 "A YES.

18 "Q THAT WOULD HAVE BEEN
19 ABOUT 1981?

20 "A I FORGET THE EXACT
21 TIME.

22 "Q WHEN YOU RETURNED
23 TO -- YOU LEFT PHILIP MORRIS, YOU WERE
24 A RESEARCH SCIENTIST, WHEN YOU
25 RETURNED TO PHILIP MORRIS AFTER THIS
26 EIGHT-MONTH GAP WITH CARL ZEISS, WAS
27 YOUR TITLE THE SAME OR WAS IT
28 DIFFERENT?

1 "A WELL, ACTUALLY, WHEN
2 I LEFT PHILIP MORRIS THE FIRST TIME,
3 AND WHATEVER IT WAS, AUGUST '80 OR
4 WHATEVER THE DATE WAS, I HAD JUST BEEN
5 PROMOTED. ALL OF THE WORK I DID THOSE
6 FIRST TWO OR THREE YEARS, IT WAS FELT
7 TO BE GOOD. AND I HAD GOTTEN VERY
8 GOOD PERFORMANCE APPRAISALS, THE
9 SPRING BEFORE I ACTUALLY LEFT, I THINK
10 I LEFT IN AUGUST, BUT THE SPRING
11 BEFORE, I WAS PROMOTED UP A LEVEL.

12 "WHEN I LEFT THE FIRST TIME,
13 I LEFT AT THAT LEVEL. AND WHEN I CAME
14 BACK EIGHT MONTHS LATER, I CAME BACK
15 TO THE SAME LEVEL WITH THE SAME
16 BENEFITS, CONTINUING AS IF I HAD
17 ACTUALLY NOT GONE.

18 "Q NOW, LOOKING AT YOUR
19 C. V. , IT SAYS FROM 1981 TO 1989, YOU
20 WERE THE SENIOR SCIENTIST IN RESEARCH
21 AND DEVELOPMENT AT PHILIP MORRIS AND
22 YOUR FOCUS WAS, AGAIN, TOBACCO
23 STRUCTURING AND CHEMISTRY. AND YOU
24 ADDED BIOENGINEERING AND
25 BIOTECHNOLOGY.

26 "NOW, LET ME ASK YOU THIS
27 BASIC QUESTION. THE AVERAGE PERSON
28 LOOKS AT A CIGARETTE, IT LOOKS LIKE A

1 FAIRLY SIMPLE THING. YOU HAVE GOT A
2 PH. D. IN BIOENGINEERING,
3 BIOTECHNOLOGY. HOW DOES THIS LITTLE
4 CIGARETTE BECOME SO COMPLICATED?

5 "A WELL, A HUNDRED
6 YEARS OR MORE AGO, A CIGARETTE WAS
7 TOBACCO LEAVES FROM THE FIELD THAT
8 EITHER GOT ROLLED UP OR CUT UP AND PUT
9 INTO A PIECE OF PAPER AND BASICALLY
10 SMOKED, PURELY NATURAL PRODUCT.

11 "OVER THE YEARS, COMPANIES
12 THAT MANUFACTURED THESE THINGS, LIKE
13 ANY COMPANY, WANT TO IMPROVE THE
14 PRODUCT, BE ABLE TO MAKE IT FASTER,
15 BETTER, MORE CONSISTENTLY, HAVE MORE
16 CONTROL OVER IT, ALL THE THINGS THAT
17 AUTOMOBILE COMPANIES DO AND VIRTUALLY
18 EVERYBODY ELSE IN THE WORLD.

19 "SO THEY BEGAN TO LEARN HOW
20 TO DO THESE THINGS SLOWLY FROM YEAR TO
21 YEAR, SOME BETTER THAN OTHERS. AND
22 QUITE OBVIOUSLY, PHILIP MORRIS WAS ONE
23 OF THESE COMPANIES, NOT ONLY LEARNED
24 HOW TO DO THESE THINGS BUT LEARNED HOW
25 TO DO THEM BETTER THAN ANYONE. AND
26 THAT'S PARTLY WHAT ATTRACTED ME TO
27 PHILIP MORRIS. IT WAS OBVIOUS, WHEN
28 YOU WENT THERE, THIS WAS NOT, IN

1 QUOTES, AN ORDINARY COMPANY.
2 "IT USED ITS GROWING
3 INFORMATION ABOUT THE CHEMISTRY OF
4 TOBACCO, ABOUT THE PHYSICS OF SMOKING,
5 AND THE MECHANICS OF MAKING THE
6 CIGARETTE IN THE FACTORIES, PUT ALL
7 THIS INFORMATION TOGETHER TO NO LONGER
8 TAKE LEAVES FROM THE FIELD, WHICH THEY
9 BUY FROM FARMERS -- THEY HAVE NOTHING
10 TO DO WITH GROWING THOSE LEAVES, THEY
11 BUY THE LEAVES. AND INSTEAD OF
12 CHOPPING THEM UP AND PUTTING THEM IN
13 PAPER AS THEY DID MANY, MANY YEARS
14 AGO, THEY CIGARETTES ARE NOW HIGHLY
15 AND SOPHISTICATEDLY ENGINEERED.
16 THAT'S WHY ON THE STAFF OF PHILIP
17 MORRIS, EVEN WHEN I GOT THERE, THERE
18 WERE VERY SENIOR EXPERIENCED,
19 SOPHISTICATED ENGINEERING PEOPLE WHO
20 HAD PHYSICS AND MATHEMATICS
21 BACKGROUND, AND THIS IS WHAT I DIDN'T
22 UNDERSTAND WHEN I FIRST GOT THERE. I
23 LOOKED AT ALL THIS AND I WAS JUST
24 AMAZED.
25 "AGAIN, THE PRODUCT HAS GONE
26 FROM BEING A NATURAL PRODUCT, ROLLED
27 UP AND SMOKED, TO THE SOPHISTICATEDLY
28 ENGINEERED PRODUCT.

1 "Q NOW, GIVE US AN IDEA
2 AS TO THE AREAS THAT YOU WERE INVOLVED
3 IN ON A DAY-TO-DAY BASIS. IT IS ONE
4 THING TO TALK ABOUT THE GOAL OF MAKING
5 A SAFER CIGARETTE, BUT WHAT WERE YOU,
6 AS A SCIENTIST, WITH YOUR BACKGROUND,
7 DOING ON A DAY-TO-DAY BASIS? AND TELL
8 US WHO YOU WERE INTERACTING WITH ON A
9 FREQUENT BASIS.

10 "A WELL, IN THE
11 BEGINNING, AGAIN, IT LARGELY WAS IN
12 THE AREA OF STRUCTURAL RESEARCH AND
13 STRUCTURAL, MEANING THE LEAF. THIS
14 WAS AT A TIME WHEN PHILIP MORRIS AND
15 ITS MAJOR COMPETITORS, REYNOLDS
16 TOBACCO AND OTHERS WERE LEARNING THAT
17 INSTEAD OF NOW JUST USING CUT UP DRIED
18 LEAF, THAT THEY ALSO ENGINEERED TO A
19 CERTAIN EXTENT IN THE MANUFACTURE OF
20 CIGARETTES, THAT THEY COULD PROCESS
21 THAT PIECE OF LEAF, WHICH GETS REALLY
22 SKINNY AND FLAT, BECAUSE OF WHAT THEY
23 CALL CURING. THEY TAKE THE TOBACCO
24 LEAF FROM THE FIELD, WHICH IS KIND OF
25 PUFFY, BIG CELLS IN IT, A LOT OF AIR
26 AND WATER, AND IT IS DIED DOWN BY THE
27 FARMERS AND IT'S DONE EITHER THROUGH A
28 HEATING PROCESS WHERE THEY PUT IT IN

1 WHAT THEY CALL A FLUE CURING BARN
2 WHERE THEY USE LITTLE GAS FLAMES LIKE
3 A BUNSEN BURNER TO HEAT THE WHOLE BARN
4 UP AND IT DRIES THE LEAVES FAIRLY
5 QUICKLY.

6 "AND AS THEY DRY, THE WATER
7 LEAVES THEM AND OTHER THINGS LEAVE
8 THEM AND IT GETS SQUASHED DOWN.

9 "THESE COMPANIES FOUND IF
10 THEY PROCESSED THE QUASHED LEAVES, THE
11 DRIED LEAVINGS, THEY COULD BLOW THEM
12 BACK UP AGAIN.

13 "THE COMPANY REFERS TO IT AS
14 A PUFFING PROCESS OR EXPANDING WHICH
15 IS THE NICER TERM, MORE SCIENTIFIC.

16 "BY DOING THIS THEY COULD DO
17 SEVERAL THINGS THAT THEY LIKED. FIRST
18 OF ALL, THEY COULD TAKE THE LITTLE
19 SHREDS, WHICH OCCUPIED VERY LITTLE
20 SPACE, AND BLOW THEM UP, WHICH
21 OCCUPIED MORE SPACE, WHICH MEANT THEY
22 COULD PUT FEWER SHREDS, WHICH SAVES
23 THEM ON TOBACCO.

24 "THAT WAS A COST-
25 EFFECTIVENESS THING.

26 "THEY COULD MAKE THE UNIT
27 COST OF EACH CIGARETTE LESS AND LESS
28 AND LESS.

1 "AT THE SAME TIME, WHICH WAS
2 ALSO A BENEFITS, THE TOBACCO INDUSTRY
3 WAS BEING PRESSURED BY THE PUBLIC AND
4 THE GOVERNMENT AND THE F. D. A. TO TRY
5 TO LESSEN THE HAZARDOUS QUALITIES OF
6 SMOKE.

7 "AND SO AS A SECOND BENEFIT,
8 PUTTING LESS TOBACCO INTO EACH
9 CIGARETTE MEANT THAT THE AMOUNT OF
10 MATERIAL THAT WENT INTO YOUR LUNGS WAS
11 LESSEMED A CERTAIN AMOUNT BY THAT.

12 "AND SO THAT WAS KIND OF A
13 POSITIVE THING THAT ACTUALLY LED TO
14 THE PRODUCT THAT CAME OUT AT THE TIME
15 WHICH WERE -- WHICH WAS REFERRED TO AS
16 LOWER DELIVERY, ONE OF THE THINGS THAT
17 LED TO THINGS LIKE LOWER DELIVERY,
18 LOWER TAR, WHICH WAS ALSO AN OKAY
19 THING IN ITSELF, ALTHOUGH THESE
20 COMPANIES LEARNED TO DO THAT -- TO DO
21 OTHER THINGS TO THE CIGARETTE TO KIND
22 OF REVERSE PART OF THAT.

23 "SO I WAS SUPPORTED -- SO I
24 SUPPORTED THAT AREA. I WAS HELPING
25 PHILIP MORRIS LOOK AT HOW THE
26 STRUCTURE CHANGED AS THEY DID THESE
27 VARIOUS KINDS OF PROCESSING. BECAUSE
28 THERE WERE TWO OR THREE DIFFERENT WAYS

1 YOU COULD DO THIS PUFFING. AND I
2 WORKED WITH CHEMISTS. THIS IS ABOUT
3 THE TIME I STARTED TO GET HEAVILY
4 INVOLVED WITH OTHER DEPARTMENTS LIKE
5 ENGINEERING AND PROCESS DEVELOPMENT
6 AND NEW PRODUCT DEVELOPMENT,
7 ANALYTICAL RESEARCH.

8 "ALL OF A SUDDEN I WAS GOING
9 OUTSIDE MY OWN GROUP AND WORKING WITH
10 OTHER PARTS OF THE COMPANY TO LOOK AT
11 HOW YOU MAKE CIGARETTES, WHICH IS A
12 FIRST STEP IN WHAT I WAS HIRED TO DO.

13 "Q WHAT WAS YOUR
14 INVOLVEMENT WITH ENGINEERING, HOW
15 WOULD YOU GET INVOLVED WITH THAT AREA?

16 "A WELL, TO DO WHAT I
17 WAS DOING, I WANTED TO KNOW AS MUCH AS
18 I COULD ABOUT WHAT HAPPENS TO THAT
19 LEAF OVER IN ENGINEERING, BECAUSE IT
20 HAD TO DO WITH HOW YOU DO THE WORK YOU
21 ARE GOING TO DO.

22 "SO I WENT OVER TO
23 ENGINEERING AND I HAD ALREADY LEARNED
24 THERE WERE SEVERAL PEOPLE WHO WERE THE
25 SENIOR ENGINEERS OF THE PEOPLE, A
26 PERSON NAMED HENRY MERRITT WHO IS THE
27 PRINCIPAL ENGINEER.

28 "AND I KIND OF ATTACHED

1 MYSELF TO HIM AND SAID, HENRY, CAN YOU
2 TAKE ME OVER AND TEACH ME THE PROCESS.
3 SO HE LED ME THROUGH THE FACTORY ONE
4 DAY. IT WAS WONDERFUL, A WALKING TOUR
5 OF THE MANUFACTURING CENTER FROM THE
6 VERY BEGINNING TO THE VERY END WITH
7 THE SENIOR ENGINEERS TELLING ME
8 BASICALLY WHAT WENT ON IN EVERY MAJOR
9 STEP.

10 "Q LIKE A PRIVATE TOUR?

11 "A YEAH. AGAIN, I
12 DIDN'T UNDERSTAND AND LEARN AND
13 MEMRIZE EVERY SINGLE STEP. BUT I
14 LEARNED A TREMENDOUS AMOUNT THAT
15 HELPED ME IN MY RESEARCH.

16 "I THEN BECAME INVOLVED WITH
17 PEOPLE IN PRODUCT DEVELOPMENT WHO WERE
18 THE PEOPLE WHO HELPED FORMULATE THE
19 CIGARETTE PRODUCTS, WORKING WITH
20 ENGINEERS AND OTHER PEOPLE.

21 "SO THERE WERE SEVERAL
22 PEOPLE THERE AT THE TIME WHO MENTORED
23 ME AND TAUGHT ME A LITTLE BIT ABOUT
24 WHAT GOES ON IN THEIR DIVISION AND HOW
25 THEY INTERACT WITH THE REST OF THE
26 COMPANY.

27 "SO I BEGAN TO SEE MORE AND
28 MORE HOW THE COMPANY FUNCTIONED

1 INTERNALLY AND I BEGAN TO WORK BETTER
2 WITH MY COLLEAGUES.

3 "Q THAT WAS MY NEXT
4 QUESTION.

5 "NOW, FOR EXAMPLE, YOUR
6 COMMUNICATION WITH AND LEARNING ABOUT
7 THESE OTHER DEPARTMENTS, ENGINEERING,
8 PROCESS DEVELOPMENT, ANALYTICAL
9 RESEARCH, IMPACTED YOUR ACTIVITIES ON
10 A DAY-TO-DAY BASIS?

11 "A IT JUST GOT ME MORE
12 INVOLVED IN A HIGHER LEVEL OF
13 INTERACTION WITHIN THE COMPANY.
14 INSTEAD OF WORKING LIKE LABORATORY
15 WORKS, LIKE MANY OF US DO, YOU WORK IN
16 A DEPARTMENT OR SOMEPLACE IN THE
17 COMPANY WITH THE SAME FOUR OR FIVE,
18 SIX PEOPLE AND EVERY ONCE IN AWHILE
19 YOU CONTACT SOMEONE OUTSIDE.

20 "I WAS NOW BEING BROUGHT BY
21 MY MANAGEMENT, BECAUSE BILL FARONE AND
22 OTHERS WANTED ME TO DO THIS. SO I WAS
23 INTERACTING WITH MANY, MANY MORE PARTS
24 OF THE COMPANY TO SUPPORT THE WORK I
25 WAS DOING, PART OF IT, SO I COULD
26 UNDERSTAND WHAT WAS GOING ON SO I
27 COULD DO WHAT I WAS ASKED TO DO BETTER

28 "Q IN TERMS OF THE WORK

1 THAT YOU DID ON PROJECTS TO DEVELOP
2 SAFER CIGARETTES, COULD YOU DESCRIBE
3 SPECIFICALLY SOME OF THOSE RESEARCH
4 PROJECTS, EXACTLY WHAT THEY INVOLVED.

5 "A THE EARLIEST, I
6 THINK, OF ANY MAJOR CONSEQUENCE WAS A
7 PROJECT THAT ACTUALLY GOT STARTED
8 BEFORE I LEFT THE FIRST TIME. IT
9 INVOLVED THE COMPANY PHILIP MORRIS
10 WANTING TO GO FIND A BETTER -- FIND A
11 WAY, A BETTER WAY, TO REMOVE SOMETHING
12 CALLED NITRATE, A CHEMICAL, WHICH IS
13 IN THE SOIL, WINDS UP IN THE PLANT AND
14 PART OF MOST BIOLOGICAL SYSTEMS, FROM
15 THE PRODUCT.

16 "IT ALREADY HAD A PROCESS TO
17 DO THIS AT ONE OF ITS FACILITIES WHICH
18 WAS CALLED PARK 500 WHERE THEY MADE
19 SOMETHING CALLED RECONSTITUTED LEAF OR
20 SHEET, WHICH, I WON'T GET INTO RIGHT
21 NOW

22 "IN THAT PROCESS, IT'S KIND
23 OF LIKE A PAPER MAKING PROCESS. IT
24 TAKES SCRAP LEAVES THAT MAYBE YOU
25 WOULD HAVE THROWN AWAY BECAUSE THEY
26 WEREN'T OF THE QUALITY YOU WANTED OR
27 THEY WERE LEFT OVER FROM SOMETHING
28 ELSE, AND INSTEAD OF THROWING THEM

1 AWAY, YOU PRESS THEM, ADD HOT WATER TO
2 THEM, SQUASH THEM IN THESE GIANT
3 ROLLER DEVICES, SEPARATING THE LIQUID
4 FROM WHAT'S LEFT, WHICH TURN OUT TO BE
5 JUST THE FIBER OF THE LEAF, THE
6 CELLULOSE IN THE PLANT LEAVES, AND IT
7 MAKES A PAPER MATERIAL, CALL IT BASE
8 WEB. AND ALL THE LIQUIDS GO OVER IN
9 THIS DIRECTION, A LOT OF THOSE LIQUIDS
10 IS WHAT'S LEFT IN THE PLANT.

11 "THEY FOUND IF YOU COULD
12 TAKE THAT LIQUID AND CHILL IT, THEY
13 COULD PRECIPITATE, HAVE ALL THAT
14 LIQUID FALL OUT. THAT WAS SOMETHING
15 THEY WANTED TO DO FOR SEVERAL REASONS.
16 THEN PUT THAT LIQUID BACK ON THIS LEAF
17 MATERIAL, THIS PAPER, AND MAKE A
18 PAPER-LIKE PRODUCT WHICH THEY COULD
19 SHRED UP AND PUT IT BACK IN
20 CIGARETTES.

21 "SO THEY WANTED A BETTER WAY
22 TO DO THIS NITRATE REMOVAL PROCESS --
23 NITRATE REMOVAL BECAUSE IT WASN'T AS
24 EFFICIENT AS THEY WOULD LIKE.

25 "THREE OR FOUR PROJECTS
26 SPRANG UP ABOUT THIS TIME, CHEMICAL
27 PROJECTS, LOOKING AT CHEMISTRY WAYS TO
28 DO THAT, PHYSICS WAYS TO DO THAT,

1 MECHANICAL WAYS TO DO THAT, USING
2 VARIOUS KINDS OF FILTRATION DEVICES,
3 THEN THE AREA THAT I WAS IN,
4 BIOLOGICAL WAYS TO DO IT. BECAUSE
5 THERE WAS LITERATURE OUT THERE IN THE
6 WORLD ABOUT MICROORGANISMS, BACTERIA,
7 YEAST, OTHER CELLS LIKE THAT THAT
8 ACTUALLY TAKE NITRATE IN AND EITHER
9 REMOVE IT FROM THE STUFF AROUND THEM
10 OR ACTUALLY KIND OF DIGEST IT, BREAK
11 IT UP INTO SOMETHING ELSE SO THAT IT
12 IS GONE. AND SOME PEOPLE IN PHILIP
13 MORRIS BEGAN TO LOOK AT THIS MICROBIAL
14 WAY --

15 "Q 'MICROBIAL' MEANING
16 WHAT?

17 "A USING BACTERIA THAT
18 WERE RESIDENTS, I MEAN, AGAIN, LEAVES
19 COME FROM THE FIELD. IN THE SOIL,
20 THERE IS BACTERIA, IN THE PLANT. THEY
21 ARE NOT HARMFUL, KIND OF AVERAGE SOIL
22 MICROORGANISMS. SOME OF THOSE
23 NATURALLY TAKE NITRATE AND DISPOSE OF
24 IT. THIS WAS DISCOVERED BY TENG, DR.
25 DANIEL TENG WAS ONE OF THEM

26 "SO WE BEGAN TO EXPLORE HOW
27 TO USE THIS AS A VERY NATURAL WAY TO
28 DO THIS DENITRIFICATION IN NITRATE

1 REMOVAL. AND THAT JUST -- AND THAT
2 BEGAN JUST BEFORE I LEFT.

3 "I WAS REALLY A CONSULTANT
4 TO IT BECAUSE OF MY BACKGROUND, I WAS
5 ASKED TO KIND OF KEEP IN TOUCH WITH
6 THE PROGRAM AND THEN I LEFT AND THAT
7 PROGRAM DIDN'T DO REAL WELL. AND THEN
8 I CAME BACK AND AFTER A SHORT TIME
9 AFTER I WAS BACK, I WAS ASKED DIRECTLY
10 BY MY DIRECTOR, WHO WAS STILL BILL
11 FARONE, TO GET DIRECTLY INVOLVED IN
12 THAT PROJECT.

13 "Q THE DENITRIFICATION
14 PROGRAM WAS A FANCY NAME FOR SIMPLY
15 THE OBJECTIVE BEING TO REMOVE THE
16 NITRATES?

17 "A YES.

18 "Q DID PHILIP MORRIS
19 HAVE THE TECHNOLOGY TO REMOVE THE
20 NITRATES?

21 "A A NEW TECHNOLOGY?

22 "Q ANY TECHNOLOGY.

23 "A THEY HAD THE ONE
24 THEY USED, THE PARK 500 WHICH WAS THE
25 PRECIPITATION TECHNOLOGY WHICH THEY
26 FELT WAS WASN'T EFFECTIVE ENOUGH,
27 THAT'S WHY THEY STARTED ALL THESE
28 OTHER PROJECTS.

1 "Q YOU HAD INVOLVEMENT
2 IN SOME OF THE OTHER PROJECTS?

3 "A NO, I JUST KNEW
4 ABOUT THEM THROUGH PEOPLE LIKE CLIFF
5 LILLY AND OTHER PEOPLE WHO WERE
6 INVOLVED IN THE ENGINEERING PART OF IT
7 OR THE CHEMISTRY PART OF IT OR
8 WHATEVER.

9 "Q DR. UYDESS, DO YOU
10 KNOW OF YOUR OWN PERSONAL KNOWLEDGE
11 WHETHER THERE CAME A TIME WHEN
12 DR. GULLOTTA'S ELECTROPHYSIOLOGY
13 PROGRAM WAS SHUT DOWN IN RICHMOND,
14 VIRGINIA?

15 "A YES.

16 "Q AND WAS IT SIMPLY
17 TERMINATED OR WAS IT MOVED?

18 "A NO, IT WAS MOVED.

19 "Q WHERE TO?

20 "A TO GERMANY.

21 "Q DID IT EVER RETURN
22 TO THE UNITED STATES?

23 "A THE PROJECT?

24 "Q GULLOTTA'S RESEARCH,
25 THE PROJECT.

26 "A NOT TO MY KNOWLEDGE,
27 NO.

28 "Q GULOTTA IS STILL

1 WITH PHILIP MORRIS?

2 "A AS FAR AS I KNOW,
3 YES.

4 "Q ARE YOU STILL
5 FRIENDS?

6 "A NO. WELL, AS FAR AS
7 I AM CONCERNED, WE ARE STILL FRIENDS,
8 BUT WE DON'T SEE EACH OTHER ANY MORE
9 OR TALK.

10 "Q IN TERMS OF YOUR OWN
11 WORK AT PHILIP MORRIS, DID YOU HAVE
12 CONTROL OVER WHAT YOU WANTED TO
13 PUBLISH?

14 "A NO.

15 "Q HOW DID THAT WORK,
16 WHAT DID YOU HAVE TO DO? IF YOU FOUND
17 SOMETHING VERY INTERESTING AND YOU
18 THOUGHT IT WOULD BE IN THE PUBLIC
19 INTEREST, AND THAT THE WIDER COMMUNITY
20 SHOULD KNOW ABOUT IT, WHAT STEPS DID
21 YOU HAVE TO GO THROUGH BEFORE YOU GOT
22 PERMISSION TO PUBLISH SOMETHING
23 OUTSIDE THE IN-HOUSE DOCUMENTATION OF
24 PHILIP MORRIS?

25 "A NORMALLY, YOU WOULD
26 PROBABLY MENTION IT INTERNALLY TO YOUR
27 SUPERVISOR, MANAGER, DIRECTOR THAT YOU
28 THOUGHT IT WOULD BE GOOD TO DO THIS.

1 THEY WOULD SOMETIMES SAY, OKAY, WHY
2 DON'T YOU GO AHEAD AND WRITE A DRAFT.

3 "YOU' D WRITE A DRAFT OF
4 WHATEVER IT WAS THAT YOU THOUGHT YOU
5 WANTED TO WRITE ABOUT, GIVE IT
6 PROBABLY BACK TO THAT PERSON, THEY
7 WOULD REVIEW IT.

8 "IF THEY THOUGHT THERE WAS A
9 REASON TO PUBLISH IT EXTERNALLY, IT
10 WOULD GO TO A REVIEW COMMITTEE,
11 PROBABLY ALSO BE LOOKED AT BY OTHER
12 PEOPLE IN THE MANAGEMENT CHAIN.

13 "SO AS AN EXAMPLE, IF THAT
14 WAS MY MANAGER LOOKING AT WHAT I HAD
15 WRITTEN, EVEN THOUGH HE THOUGHT I WAS
16 OKAY, HE OR SHE THOUGHT IT WAS OKAY,
17 IT WOULD GO UP TO A DIRECTOR OR
18 SOMETHING OF THAT NATURE. ALSO BE
19 CHECKED FOR SCIENTIFIC ACCURACY AND
20 QUALITY AND OTHER THINGS. AND THEN IF
21 SOMEONE REALLY THOUGHT THERE WAS A
22 CHANCE, IT MIGHT GO OUT TO -- IT MIGHT
23 GO OUTSIDE A REVIEW COMMITTEE WITHIN
24 PHILIP MORRIS, OTHER PEOPLE IN R&D
25 WOULD TAKE A LOOK AT IT TO SEE IF THEY
26 THOUGHT IT WAS ALSO APPROPRIATE TO GO
27 OUT.

28 "Q DO YOU KNOW WHETHER

1 LAWYERS EMPLOYED BY PHILIP MORRIS,
2 WHETHER IN-HOUSE COUNSEL OR OUTSIDE
3 COUNSEL HAD ANY INPUT IN THAT PROCESS?
4 THE PROCESS I AM REFERRING TO IS
5 DECIDING WHETHER A SCIENTIFIC MATTER
6 SHOULD BE PUBLISHED?

7 "SO ARE YOU ABLE TO ANSWER
8 THAT QUESTION WITHIN THE PARAMETERS
9 THAT THE JUDGE JUST GAVE YOU?

10 "A I BELIEVE SO,
11 THROUGH MY OWN PERSONAL EXPERIENCE.

12 "Q OKAY, TELL US ABOUT
13 IT.

14 "A YES, LAWYERS,
15 ATTORNEYS INSIDE THE COMPANY WOULD
16 INTERACT WITH ME. MANY TIMES, AS IN
17 THE CASE THAT I KNOW OF, ONE OF THE
18 CASES I KNOW OF PERSONALLY, WITH
19 REGARD TO JUST PATENT RIGHTS AND
20 PATENTABILITY OF THINGS, WANTING TO
21 MAKE SURE THAT SOMEONE DIDN'T, IN
22 THEIR EXCITEMENT ABOUT SOMETHING THEY
23 DISCOVERED, DIVULGE INFORMATION ABOUT
24 COMPETITIVE COMPANIES, ABOUT WHAT WAS
25 IMPORTANT TO PHILIP MORRIS.

26 "FREQUENTLY WHEN SOMEONE WAS
27 GOING TO PUBLISH A TECHNICAL ARTICLE,
28 THE INTERNAL LAWYER, SOMETIMES IN

1 RICHMOND AND/OR NEW YORK WOULD LOOK AT
2 IT TO MAKE SURE THAT CERTAIN THINGS
3 HAD BEEN DONE BEFORE THAT THING GOT
4 PUBLISHED, LIKE PATENT, A GOOD IDEA OR
5 WHATEVER OR NOT MENTION CERTAIN THINGS
6 IF PATENTS HAD NOT BEEN ISSUED, JUST
7 TO PROTECT THE COMPANY IN THAT NATURE.

8 "Q DID YOU KNOW A
9 SCIENTIST AT PHILIP MORRIS NAMED
10 VICTOR DENOBLE?

11 "A YES.

12 "Q WAS DENOBLE INVOLVED
13 IN ANY ANIMAL EXPERIMENTATION?

14 "A YES. AND MOST OF
15 HIS WORK WAS, HE HAD AN ANIMAL COLONY
16 IN HIS LABORATORY THAT THEY
17 EXPERIMENTED UPON.

18 "Q WHAT TYPE OF
19 ANIMALS?

20 "A SMALL RODENTS.

21 "Q RATS?

22 "A RATS, YES.

23 "Q WERE YOU EVER IN THE
24 FACILITY?

25 "A OH, YES.

26 "Q ARE YOU FAMILIAR
27 WITH THE TERM 'INBIFO?'

28 "A YES.

1 "Q HOW DID YOU BECOME
2 FAMILIAR WITH THE TERM?

3 "A OVER THE COURSE OF
4 MY 11 YEARS THERE, OVER MY 11 YEARS AT
5 PHILIP MORRIS, AS I GOT INVOLVED IN
6 MORE AND MORE THINGS AND MY WORK GOT
7 INTO THE SAFER CIGARETTE AREA, WHICH
8 IS WHAT I WAS HIRED TO DO. I
9 DEVELOPED THESE FRIENDSHIPS
10 ACCIDENTALLY WITH PEOPLE LIKE VICTOR
11 DENOBLE AND FRANK GULLOTTA IN
12 PARTICULAR, PEOPLE LIKE TOM OSDENE,
13 WHO WAS THE DIRECTOR OF ALL THESE
14 THINGS WE ARE TALKING ABOUT. I BEGAN
15 TO HEAR THIS TERM, SOMETIMES ONLY
16 REFERRED TO AS GERMANY. AND THEN AS
17 INBIFO. AND REALIZING THAT IT WAS IN
18 AN AREA THAT I HAD LEARNED OVER THOSE
19 FEW YEARS WAS KIND OF A SENSITIVE
20 TOPIC AREA, I DIDN'T ASK A WHOLE LOT
21 OF QUESTIONS ABOUT IT, WOULD SOMETIMES
22 ASK OTHER PEOPLE AROUND ME WHO I NOW,
23 WELL, DO YOU KNOW ANYTHING ABOUT THIS
24 THING CALLED INBIFO? AND I FOUND OUT
25 A LOT OF PEOPLE DIDN'T.

26 "AND YET AS MY WORKED
27 PROGRESSED AND AS MY FRIENDSHIPS WITH
28 FRANK GOT MORE EXTENSIVE AND DENOBLE

1 AND I LEARNED MORE ABOUT THESE AREAS,
2 AND AGAIN, LIKE, TOM OSDENE AND
3 OTHERS, I BEGAN TO HEAR MORE AND MORE
4 ABOUT THE KIND OF WORK BEING DONE AT
5 INBIFO.

6 "IT ESSENTIALLY WAS A
7 RESEARCH INSTITUTE THAT DID A VARIETY
8 OF HEALTH RELATED STUDIES, SOME OF
9 THEM ON EMPHYSEMA, SOME OF THEM ON
10 TOXICITY AND OTHER THINGS LIKE THAT ON
11 ANIMAL SYSTEM

12 "THEN ON OCCASION, PEOPLE
13 WENT BACK AND FORTH LIKE DR. OSDENE,
14 TO INBIFO WHERE PROJECTS WERE BEING
15 CONDUCTED FOR PHILIP MORRIS THAT WERE
16 NOT BEING CONDUCTED IN RICHMOND IN THE
17 UNITED STATES, BUT WERE BEING
18 CONDUCTED OVERSEAS IN GERMANY.

19 "Q DID YOU EVER LEARN
20 WHAT THE CRITERIA WAS, WHY CERTAIN
21 RESEARCH WOULD ONLY BE DONE IN GERMANY
22 RATHER THAN IN RICHMOND, VIRGINIA?
23 AND IF YOU DID, TELL US WHAT SOURCE
24 YOU LEARNED THAT -- EXCUSE ME -- TELL
25 US FROM WHAT SOURCE YOU LEARNED THAT?

26 "A WITH REGARD TO MY
27 OWN PERSONAL EXPERIENCE, THIS PROJECT
28 THAT WE MENTIONED AWHILE AGO, THAT I

1 HAD SUGGESTED TO DR. OSDENE, WHICH HE
2 REALLY WANTED TO DO AND WANTED ME TO
3 COME INTO HIS DIVISION TO DO, INVOLVED
4 USING DR. DENOBLE'S ANIMALS THAT THEY
5 WERE DOING THESE BEHAVIORAL
6 EXPERIMENTS ON WITH NICOTINE.

7 "I WANTED TO USE MY
8 BACKGROUND RESEARCH FROM THE
9 UNIVERSITY OF ROCHESTER, WHICH WAS IN
10 BLOOD RESEARCH, IMMUNOLOGY AND
11 ANIMALS, TO STUDY THINGS.

12 "IT INVOLVES STUDYING HOW
13 SMOKE IMPACTED THE IMMUNE SYSTEM OF
14 THE ANIMAL, SO WE COULD LEARN MORE
15 ABOUT THE IMPACT OF SMOKE ON HEALTH
16 AND OTHER THINGS LIKE THAT.

17 "WELL, DR. OSDENE REALLY
18 WANTED TO DO THAT AND WE WERE MAKING
19 PLANS FOR ME TO DO THAT WITH VICTOR IN
20 HIS LABORATORY.

21 "AND THEN THE TOPIC CAME UP,
22 WELL, YOU KNOW, THIS IS A LITTLE
23 SENSITIVE AND WE MAY NOT BE ABLE --
24 THIS IS FROM DR. OSDENE, WE MAY NOT BE
25 ABLE TO DO IT HERE IN RICHMOND.

26 "AND I SAID TO HIM, THAT'S
27 REALLY TOO BAD BECAUSE I THINK IT
28 WOULD HAVE REALLY BEEN NEAT FOR US TO

1 DO THAT. HE SAID, IT'S OKAY, IT
2 DOESN'T MEAN WE CAN'T DO IT, WE CAN'T
3 DO IT HERE. WE HAVE TO DO IT IN
4 GERMANY. WE MAY HAVE TO GO OVER THERE
5 AND HELP SET IT UP. WE CAN DO IT BUT
6 NOT HERE. WE WILL DO IT OVER THERE.

7 "THAT SAME DISCUSSION
8 HAPPENED WITH OTHER PEOPLE THAT THERE
9 WERE AREAS OF RESEARCH THAT WERE
10 CONSIDERED VERY, VERY SENSITIVE, THAT
11 THE COMPANY WANTED TO REMOVE FROM THE
12 UNITED STATES, APPARENTLY LIKE WHEN
13 THEY TOOK DOCTOR GULLOTTA'S WHOLE
14 PROJECT AND MOVED IT TO GERMANY.

15 "Q SENSITIVE IN WHAT
16 SENSE?

17 "A IT HAD TO DO WITH
18 SMOKING AND HEALTH OR THE
19 ADDICTIVENESS OF NICOTINE, HAD TO DO
20 WITH THESE VERY SENSITIVE ISSUES.

21 "Q TO YOUR KNOWLEDGE,
22 DID ANY SCIENTIST AT PHILIP MORRIS
23 WORKING IN RICHMOND, REQUEST ACCESS TO
24 THE STUDIES, TO THE RESEARCH RESULTS
25 THAT WERE BEING CONDUCTED IN GERMANY?

26 "A THE ONLY ONE I KNOW
27 OF PERSONALLY FROM MY OWN EXPERIENCE
28 IS MY DIRECTOR, DR. FARONE ONCE ASKED

1 DR. OSDENE BECAUSE OF HIS OWN
2 INTEREST. HERE WAS A DIRECTOR DOING
3 ALLIED THINGS. HE WANT TO SEE SOME OF
4 THIS. ALL I KNOW AT THE TIME WAS
5 DR. FARONE ASKED TO SEE DATA FROM
6 INBIFO AND HE DID NOT -- AND HE WAS
7 TOLD HE DID NOT HAVE ACCESS TO THAT
8 INFORMATION BY DR. OSDENE.

9 "Q NOW, WHAT DOES THE
10 TERM RATOONING MEAN TO YOU?

11 "A IT WAS A PRACTICE
12 THAT WAS USED IN AGRICULTURE WHERE A
13 PLANT GROWS AND THEN YOU LET IT GROW
14 TO A CERTAIN EXTENT AND THEN YOU KIND
15 OF WHACK IT OFF NEAR THE BASE AND LET
16 IT REGROW

17 "AND PART OF THAT WAS SO YOU
18 COULD GET TWO CROPS OUT OF SAME FIELD.
19 SO IF YOU ARE GROWING AND HARVESTING
20 THE CROP, YOU COULD DO THAT AND THEN
21 NOT GO RIGHT TO THE END OF THE SEASON
22 BUT KIND OF A COUPLE MONTHS AHEAD OF
23 IT, WHACK THE PLANT OFF, LET IT REGROW
24 AND HARVEST SOME MORE CROP. AND IT
25 MADE IT VERY CROP EFFECTIVE FOR
26 FARMERS TO DO THAT WITH CERTAIN KINDS
27 OF CROPS.

28 "PHILIP MORRIS THOUGHT THAT

1 THIS WAS AN OPPORTUNITY TO EXAMINE
2 THINGS ABOUT THE TOBACCO PLANT. AND
3 SO IT BEGAN TO DO SOME FIELD
4 EXPERIMENTS IN VARIOUS AREAS IN WHICH
5 IT STUDIED THAT, SOME OF WHICH HAD TO
6 DO WITH SOMETHING LIKE NICOTINE OR
7 THINGS LIKE NICOTINE. "

8 MR. PIUZE: OKAY, THEY TOOK A LUNCH BREAK
9 JUST THEN.

10 "Q DR. UYDESS, JUST
11 BEFORE WE BROKE FOR LUNCH, I WAS GOING
12 TO GET TO A NEW AREA. BUT I THINK YOU
13 WERE EXPLAINING, I HAD ASKED YOU ABOUT
14 THE CONCEPT OF RATOONING AND WHAT THIS
15 MEANT WITH RESPECT TO TOBACCO.

16 "I DON'T THINK YOU HAD
17 FINISHED YOUR ANSWER.

18 "A AGAIN, THAT
19 AGRICULTURAL PROCEDURE HAD SEVERAL
20 POSSIBILITIES, ONE OF WHICH, AS I
21 SAID, WAS YIELDING ANOTHER CROP FROM
22 THE SAME FIELD SO THAT WAS
23 ECONOMICALLY BENEFICIAL FOR FARMERS,
24 YOU KNOW, TO DO THAT.

25 "PHILIP MORRIS, I THINK, HAD
26 SOME OF THAT POSSIBLY IN MIND BUT WHAT
27 I KNEW BETTER ABOUT THAT PARTICULAR
28 STUDY WAS THAT ONE OF THE TARGET AREAS

1 HAD TO DO WITH THINGS LIKE NICOTINE,
2 OTHER CONSTITUENTS IN THE LEAVES OF
3 THOSE PLANTS THAT WERE REGROWN. AND
4 BECAUSE ONE OF MY PROJECTS HAD TO DO
5 WITH NICOTINE SYNTHESIS IN THE PLANT,
6 ONE OF THE PROGRAMS THAT I WAS ASKED
7 TO HEAD UP HAD TO DO WITH HOW NICOTINE
8 IS MADE IN THE ROOTS OF THE PLANT AND
9 GET SHIPPED UP TO THE PLANT, WHICH IS
10 WHAT HAPPENS IN THE TOBACCO PLANT.

11 "AND DURING THE GROWTH OF A
12 TOBACCO PLANT WHEN IT IS YOUNG, AND
13 THE ROOTS ARE VERY SMALL, AND IT'S
14 JUST STARTING TO GROW, NICOTINE IS
15 BEING SYNTHESIZED IN THOSE SMALL
16 NUMBER OF ROOTS, ARE SHIPPING -- IS
17 BEING SYNTHESIZED AND THOSE SMALL
18 NUMBER OF ROOTS ARE SHIPPING THE
19 NICOTINE TO THE PLANT. AND AS THE
20 PLANT GROWS AND THE ROOTS BECOME MUCH
21 LARGER, MORE AND MORE NICOTINE IS
22 GOING UP INTO THE PLANT.

23 "SO ONE OF THE QUESTIONS,
24 SCIENTIFIC QUESTIONS THAT WAS ASKED,
25 WAS, IF WE RATOON THE PLANTS, IF WE
26 CUT THEM BACK JUST BEFORE THEY
27 ACTUALLY REACH MATURITY, AND LET THEM
28 CONTINUE TO GROW, REGENERATING SOME

1 NEW PLANTS FROM THAT STEM THAT WAS,
2 YOU KNOW, CUT BACK, WOULD WE HAVE LEAF
3 WITH, LET'S SAY, HIGHER NICOTINE IN
4 IT, IS THAT A POSSIBILITY?

5 "AND SO PART OF THAT STUDY,
6 NOT THE ENTIRE STUDY, BUT PART OF IT
7 WAS TO EXAMINE THOSE KINDS OF
8 SCIENTIFIC QUESTIONS.

9 "Q WERE ANY CONCLUSIONS
10 REACHED ABOUT THAT, AS TO WHETHER YOU
11 COULD INCREASE THE NICOTINE?

12 "A I WASN'T PRIVY TO
13 ALL OF THE RESULTS. I SAW SOME OF
14 THEM, THE REPORTS AND ON OCCASION WHAT
15 I SAW WAS THAT, YES, HIGHER NICOTINE
16 WAS WHAT YOU GOT IN SOME OF THE LEAVES
17 THAT GREW BACK, WHICH IS
18 SCIENTIFICALLY WHAT YOU WOULD EXPECT.

19 "Q NOW, YOU LEFT PHILIP
20 MORRIS IN 1989. TELL US, YOU KNOW, IN
21 A GENERAL WAY, WHAT YOU HAVE BEEN
22 DOING PROFESSIONALLY TO EARN A LIVING
23 SINCE THEN.

24 "A WELL, FOR THE LAST
25 SIX YEARS, IN PARTICULAR, I HAVE BEEN
26 WORKING WITHIN THE PHARMACEUTICAL
27 INDUSTRY, UNTIL RECENTLY, AS AN
28 EMPLOYEE OF A COMPANY THAT ACTUALLY

1 HELPS THE PHARMACEUTICAL INDUSTRY DO
2 ALL OF THE TESTING, CLINICAL, WHAT
3 THEY CALL THE CHEMICALS TRIALS AND
4 OTHER KINDS OF TESTING TO MAKE SURE
5 THAT A NEW DRUG PRODUCT THAT A
6 PHARMACEUTICAL COMPANY IS TRYING TO
7 DEVELOP IS SAFE AND EFFECTIVE FOR
8 PUBLIC TO USE.

9 "AND THE COMPANY I WORKED
10 FOR BEHIND THOSE PHARMACEUTICAL
11 COMPANIES, THEIR CLIENTS, SET UP AND
12 CONDUCT ALL THESE TRIALS THAT THEY
13 HAVE TO DO AS PART OF THE F. D. A.
14 REGULATORY SYSTEM THAT THE
15 PHARMACEUTICAL INDUSTRY IS UNDER.

16 "AND SO I HAVE DONE THAT
17 FOR, LIKE, FIVE OR SIX YEARS. AND
18 WITHIN THE LAST YEAR, DECIDED KIND OF
19 AT THE PROMPTING OF SOME OF THE
20 CLIENTS WE HAD TO KIND OF GO OUT ON MY
21 OWN AS A CONSULTANT AND SUPPLY THE
22 THINGS I DID FOR THAT COMPANY NOW TO
23 THEM DIRECTLY.

24 "SO NOW I AM A CONSULTANT
25 DOING MANY OF THE THINGS I USED TO DO
26 AT THE PREVIOUS COMPANY.

27 "Q YOU HAD A PRETTY
28 GOOD JOB AT PHILIP MORRIS, DIDN' T YOU,

1 FOR THOSE 11 YEARS?
2 "A I REALLY HAD A GREAT
3 JOB.
4 "Q THE PAY WAS GOOD?
5 "A YES.
6 "Q BENEFITS WERE GOOD?
7 "A EXCELLENT.
8 "Q WORKING CONDITIONS
9 WERE GOOD?
10 "A WONDERFUL.
11 "Q A LOT OF PEOPLE YOU
12 LIKED, A LOT OF COLLEAGUES THERE?
13 "A YES.
14 "Q SO WHAT HAPPENED?
15 1989, YOU WHAT, DID YOU GET FIRED?
16 "A NO, NO.
17 "Q YOU QUIT?
18 "A YES.
19 "Q WHY?
20 "A OVER THOSE
21 ACCUMULATED 11 YEARS, 10 AND A HALF,
22 11 YEARS OF BEING THERE, AND BEING
23 PART OF, DIRECTLY OR INDIRECTLY, SO
24 MANY PROGRAMS THAT WERE DESIGNED TO
25 TRY TO MAKE A SAFER PRODUCT, WHICH IS
26 WHAT I WAS TOLD WHEN I CAME IN THE
27 DOOR, THIS WAS THE AREA I WOULD BE
28 WORKING IN AND SEEING SO MANY OF THEM

1 NEVER GO TO COMPLETION, JUST MAKE A
2 LOT OF ACCOMPLISHMENTS, BE SHUT DOWN,
3 NOT USED, TIME AND TIME AGAIN. AND
4 REALLY NOT EVEN MY PROJECTS, I AM NOT
5 TALKING ABOUT ME AND MY PROJECTS, JUST
6 THROUGHOUT PHILIP MORRIS, IN THIS
7 PARTICULAR AREA IS WHAT I AM TALKING
8 ABOUT. SMOKING AND HEALTH, YOU KNOW,
9 NICOTINE, TO A CERTAIN EXTENT, BUT
10 MAINLY SMOKING AND HEALTH FOR ME,
11 WHICH IS, WITH MY BACKGROUND, THE MOST
12 IMPORTANT SUBJECT TO ME, PERSONALLY.
13 AND AFTER SEEING ALL THOSE
14 OPPORTUNITIES, AND TO ME, THESE WERE
15 MISSED OPPORTUNITIES, I MEAN, YOU MAY
16 NOT --

17 "Q MISSED OPPORTUNITIES
18 FOR WHO?

19 "A FOR THE PUBLIC, FOR
20 THE CONSUMERS OF PHILIP MORRIS' AND
21 OTHER TOBACCO COMPANIES' PRODUCT, BUT
22 MAINLY PHILIP MORRIS, WHO IS WHO I
23 WORKED FOR.

24 "BUT THEY HAD ALL THESE
25 OPPORTUNITIES TO NOT HAVE THE PERFECT
26 SOLUTION YET MAYBE BUT COULD INTRODUCE
27 ONE OF THESE MANY PROCESSES THAT THEY
28 HAD AT THEIR HAND INTO PRODUCTION AND

1 AT LEAST OFFER MAYBE ONE CIGARETTE
2 PRODUCT ON THE MARKET AND KEEP IT
3 THERE, NOT LET LOW MARKET SHARE
4 DETERMINE. KEEP IT THERE, MUCH LIKE
5 THE COLA INDUSTRY WHEN THEY CAME OUT
6 WITH DECAFFEINATED COLAS.

7 "I REMEMBER KIND OF WHEN
8 DECAFFEINATED COLAS CAME OUT, I DIDN' T
9 LIKE THEM I DON' T THINK THEY REALLY
10 HAD A BIG MARKET SHARE, BUT THEY WERE
11 PUT OUT THERE FOR -- TO OFFER AN
12 ALTERNATIVE TO PEOPLE WHO WANTED A
13 HEALTHIER PRODUCT WITHOUT CAFFEINE.
14 AND I AM SURE THOSE COMPANIES WEREN' T
15 SURE THAT THAT WAS THE RIGHT DECISION
16 THEN AND THEY DID IT. AND OVER THE
17 YEARS IT BECAME VERY POPULAR AND IT
18 WAS BENEFICIAL TO THE PUBLIC. AND
19 OVER THE YEARS, I KIND OF FELT THAT' S
20 WHERE WE WERE GOING, THAT' S WHERE I
21 THOUGHT PHILIP MORRIS WAS GOING.

22 "Q WAS THERE A
23 PARTICULAR INCIDENT OR EVENT WHICH
24 CONVINCED YOU THAT THAT' S NOT WHERE
25 PHILIP MORRIS WAS GOING?

26 "A YES, I GUESS I' D
27 HAVE TO SAY THERE WAS. IN ADDITION TO
28 ALL THESE VARIOUS PROGRAMS, MANY OF

1 WHICH WERE NOT MINE, WERE OTHER
2 PEOPLE'S PROGRAMS THAT WERE NOT BEING
3 UTILIZED IN ANY FASHION AS FAR AS I
4 COULD TELL, ONE DAY --

5 "Q SUCH AS?

6 "A OH, THE VARIOUS
7 NITROSAMINE EXTRACTION PROCEDURES THAT
8 WERE, YOU KNOW, BEING INVESTIGATED AND
9 THINGS LIKE THAT. WAYS OF CONTROLLING
10 NICOTINE DELIVERY, JUST THROUGH THE
11 CHEMISTRY AND PHYSICS OF THE
12 CIGARETTE, WITHOUT PLAYING THESE
13 ADDITIONAL GAMES TO KIND OF BRING IT
14 BACK UP TO ABOVE WHERE MOST PEOPLE
15 THOUGHT IT WAS, YOU KNOW

16 "I WAS ASKED TO GIVE A
17 PRESENTATION WHEN PHILIP MORRIS
18 ACQUIRED A LOT OF OTHER COMPANIES LIKE
19 GENERAL FOODS AND CRAFT, WHICH WERE
20 REALLY GREAT THINGS TO HAVE HAPPENED.

21 "I WAS ASKED TO GIVE A --
22 ONE OF THE FEW TALKS AT WHAT THEY
23 CALLED A SYMPOSIUM, SYNERGY SYMPOSIUM,
24 TRYING TO BRING ALL THE COMPANIES
25 TOGETHER, ALL THEIR R&D SCIENTIFIC
26 PEOPLE TOGETHER TO KIND OF SAY, LOOK,
27 WE'RE ALL PART OF THE SAME TEAM, LET'S
28 TALK A LITTLE BIT ABOUT WHAT WE EACH

1 DO AND SEE HOW WE CAN POOL INFORMATION
2 IN THE FUTURE.

3 "SO THEY SELECTED A FEW
4 SCIENTISTS FROM CRAFT AND GENERAL
5 FOODS AND PHILIP MORRIS, AND I WAS
6 FORTUNATE TO BE ONE OF THE PEOPLE THEY
7 ASKED TO GIVE A TALK. AND WE WERE UP
8 AT GENERAL FOODS IN WESTCHESTER,
9 OUTSIDE OF NEW YORK FOR SEVERAL DAYS
10 DOING THIS AND IT WAS GREAT.

11 "ON THE WAY BACK ON THE
12 CORPORATE PLANE, I, WITH MY EXECUTIVE
13 MANAGEMENT TEAM, CHARLES LILLY AND
14 OTHERS, I BELIEVE, HOUGHTON WAS THERE
15 AND THEY BEGAN TALKING ABOUT THE
16 INDUSTRY, ABOUT WHAT THEIR GOAL AS
17 EXECUTIVES OF PHILIP MORRIS WAS, AND
18 IT WAS REALLY JUST TIED TO MARKET
19 SHARE AND MONEY.

20 "I JUST REALIZED ON THE
21 PLANE THAT THEY WEREN'T INTERESTED IN
22 USING A LOT OF THE TECHNOLOGIES
23 AVAILABLE.

24 "Q TO MAKE A SAFER
25 CIGARETTE?

26 "A YES, AND I FELT --
27 AND I JUST FELT LIKE, IF I WAS GOING
28 TO SPEND MY EFFORTS WORKING IN THIS

1 AREA, THAT I PROBABLY SHOULD WORK
2 SOMEWHERE ELSE AND VERY HESITANTLY
3 DECIDED THAT I NEEDED TO LEAVE,
4 BECAUSE I WAS JUST VERY DISAPPOINTED,
5 SCIENTIFICALLY, IN THE COMPANY'S
6 DECISIONS, AND MORALLY FELT THAT IT
7 WASN'T -- "

8 MR. BRO: OBJECTION.

9 MR. PIUZE: SEE LINE 15? DON'T SEE IT.

10 MR. GOLDSTEIN: SKIP TO LINE 16.

11 "AND I JUST DECIDED ON THAT
12 PLANE, THAT THE NEXT FEW WEEKS, NEXT
13 COUPLE MONTHS THAT I WOULD FIND A WAY
14 TO FIND OTHER EMPLOYMENT.

15 "Q SO YOU FOLLOWED
16 THROUGH WITH THAT?

17 "A YES. "

18 MR. PIUZE: YOUR HONOR, LET ME CONFER
19 HERE FOR A SECOND.

20 WE ARE ON PAGE 19, BETWEEN 14 AND
21 22. OKAY.

22 "A YES.

23 "Q DURING THE 11 YEARS
24 THAT YOU WERE AT PHILIP MORRIS, HAD
25 ANY OF YOUR PROJECTS WHICH WERE IN ANY
26 WAY RELATED TO THE DEVELOPMENT OF A
27 SAFER CIGARETTE EVER COME TO FRUITION?

28 "A BE PUT INTO PRODUCT

1 TO MAKE A --

2 "Q YES.

3 "A -- A PRODUCT THAT
4 WAS SOLD TO THE PUBLIC?

5 "Q CORRECT.

6 "A NO. "

7 MR. PIUZE: AND THAT'S THE END OF THE
8 DIRECT EXAMINATION OF THIS WITNESS.

9 THE COURT: ALL RIGHT.

10 MR. LEITER.

11 MR. LEITER: THANK YOU, YOUR HONOR. I
12 WILL READ THE CROSS-EXAMINATION QUESTIONS.

13 THE COURT: THANK YOU.

14 MR. LEITER: (READING)

15 "Q GOOD AFTERNOON,
16 DOCTOR UYDESS. MY NAME IS BOB HEIM
17 WE MET VERY, VERY BRIEFLY FOR A MOMENT
18 THIS MORNING. AND I AM GOING TO BE
19 ASKING YOU SOME QUESTIONS ON DIFFERENT
20 TOPICS THAT YOU TALKED ABOUT. AND I
21 WILL TRY TO KIND OF LET YOU NOW ABOUT
22 WHERE I AM GOING SO YOU KNOW WHAT I AM
23 TALKING ABOUT. OKAY?

24 "A YES, THANK YOU.

25 "Q I WANT TO START WITH
26 SOME TESTIMONY EARLIER TODAY ABOUT
27 PHILIP MORRIS SCIENTISTS AVOIDING THE
28 USE OF THE TERM ADDICTION.

1 "DO YOU RECALL THAT
2 TESTIMONY?

3 "A GENERALLY.

4 "Q OKAY, WELL, LET ME
5 ASK YOU ABOUT SOME OF THOSE
6 SCIENTISTS.

7 "WHEN DR. DENOBLE WROTE
8 MEMORANDA AT THE COMPANY ABOUT HIS
9 WORK WITH NICOTINE, I GATHER HE
10 DIDN'T, TYPICALLY, IN THE ORDINARY
11 COURSE OF BUSINESS, SEND YOU A COPY OF
12 HIS MEMOS, DID HE?

13 "A NO, I WOULD NOT HAVE
14 BEEN ON THE CIRCULATION LIST FOR THOSE
15 REPORTS.

16 "Q OKAY. AND WOULD
17 THAT BE TRUE ALSO OF MEMORANDA OR
18 REPORTS THAT DR. DUNN DID, YOU
19 WOULDN'T BE ON THE NORMAL CIRCULATION
20 LIST FOR HIS REPORTS?

21 "A IN MOST CASES,
22 PROBABLY NOT.

23 "Q HOW ABOUT FRANK
24 RYAN, I CAN NEVER REMEMBER WHETHER HE
25 WAS A DR. RYAN OR MR. RYAN, AND I AM
26 NOT SURE IT IS IMPORTANT, BUT YOU
27 WOULD -- YOU WOULD NOT HAVE BEEN ON
28 THE NORMAL CIRCULATION LIST FOR DR.

1 RYAN' S WORK?

2 "A AGAIN, PROBABLY IN
3 MOST CASES, NOT.

4 "Q AND AS I REMEMBER
5 FROM YOUR TESTIMONY THIS MORNING,
6 DR. OSDENE WAS A LITTLE HIGHER UP IN
7 THE ORGANIZATION THAN YOU WERE; RIGHT?

8 "A YES.

9 "Q OKAY. SO IN TERMS
10 OF MEMORANDA AND THINGS THAT HE WOULD
11 WRITE, TYPICALLY, NORMALLY, YOU
12 WOULDN'T BE ON THE DISTRIBUTION LIST
13 FOR THAT; RIGHT?

14 "A IN MOST INSTANCES,
15 NOT.

16 "Q OKAY. NOW, HAVE YOU
17 EVER, WHILE YOU WERE THERE, DID YOU
18 EVER TRY TO LOOK IN ANY SYSTEMATIC WAY
19 AT THE MEMORANDA THAT WERE WRITTEN BY
20 PEOPLE LIKE DR. OSDENE AND DR. DUNN,
21 DR. DENOBLE, TO REVIEW THEIR MEMORANDA
22 TO SEE WHETHER THEY ACTUALLY USED THE
23 WORD 'ADDICTION' OR NOT IN THEIR
24 MEMORANDA?

25 "A NO.

26 "Q DR. UYDESS, I AM
27 HANDING YOU A DOCUMENT THAT'S BEEN
28 PREVIOUSLY MARKED FOR IDENTIFICATION

1 AS DEFENDANT' S EXHIBIT 05514 AND IT' S
2 DATED JULY 23RD, 1980.

3 "NOW, THIS IS A MEMORANDUM
4 THAT' S ACTUALLY FROM ALL FOUR OF THOSE
5 PEOPLE THAT I JUST MENTIONED, IS IT
6 NOT, DR. DENOBLE, DR. DUNN, DR. OSDENE
7 AND DR. RYAN?

8 "A YES, IT APPEARS TO
9 BE.

10 "Q AND THE SUBJECT OF
11 IT IS SELF-ADMINISTRATION,
12 REINFORCEMENT AND ADDICTION.

13 "DO YOU SEE THAT?

14 "A YES.

15 "Q AND IF YOU LOOK DOWN
16 THROUGH THIS DOCUMENT, DOWN TO THE END
17 OF THE FIRST PARAGRAPH, YOU WILL SEE
18 WHERE THEY TALK ABOUT THE WORD
19 'ADDICTIVE' AS VERY POORLY DEFINED.

20 "DO YOU SEE THAT IN THERE?

21 "A YES, I DO.

22 "Q OKAY. AND THEN DOWN
23 AT THE BOTTOM, THEY TALK ABOUT THE
24 CRITERIA FOR WHAT IS ADDICTIVE AND
25 WHAT IS NOT AND THEN THEY COME TO A
26 CONCLUSION ABOUT THE ESTABLISHMENT OF
27 NICOTINE' S POSITION AMONG REINFORCERS
28 COUPLED WITH CLEAR EVIDENCE THAT

1 NICOTINE' S SELF-ADMINISTRATION DOES
2 NOT MEET THE ESTABLISHED CRITERIA FOR
3 ADDICTION WOULD BE MOST HELPFUL IN
4 CLARIFYING SMOKING BEHAVIOR.

5 "A WHERE IS IT THAT YOU
6 ARE READING?

7 "Q I AM SORRY?

8 "A WHERE IS IT YOU WERE
9 READING?

10 "A I WAS READING THE
11 LAST SENTENCE.

12 "OKAY, NUMBER 3.

13 "Q RIGHT. NOW, MY
14 QUESTION TO YOU IS -- DID -- IN THIS
15 WORK ON -- THAT WAS BEING DONE ON
16 SELF-ADMINISTRATION, REINFORCEMENT AND
17 ADDICTION, DID YOU, AT ANY TIME, SEE
18 THE REPORTS ON THIS SUBJECT THAT
19 DR. DENOBLE WAS MAKING?

20 "A DID I EVER SEE THEM?

21 "Q DID YOU EVER SEE
22 THEM? I AM SORRY, I MEANT TO SAY
23 THEM

24 "A YES, I, ON OCCASION,
25 I DID SEE THEM

26 "Q DID YOU LOOK IN
27 THOSE REPORTS TO SEE WHETHER THEY USED
28 THE WORD ADDICTION OR ADDICTIVE?

1 "A NO, I DID NOT.

2 "Q YOU DID NOT.

3 "IN ORDER TO KNOW WHETHER
4 SCIENTISTS LIKE DR. DENOBLE AND DR.
5 RYAN AND DR. DUNN WERE USING THE WORD
6 ADDICTION IN THEIR MEMDRANDA, YOU
7 WOULD HAVE TO KIND OF LOOK THROUGH
8 THEIR MEMDRANDA AND SEE WHETHER THEY
9 WERE USING THAT TERM OR NOT, IS THAT
10 FAIR?

11 "A WITH RESPECT TO
12 THOSE WRITTEN DOCUMENTS, BUT THAT ALSO
13 EXCLUDES THE VERBAL USE OF THE WORD,
14 WHICH I NEVER --

15 "Q I UNDERSTAND THAT.

16 "A -- HEARD WHILE I
17 WAS THERE.

18 "Q WHAT YOU ARE SAYING
19 IS, TO YOUR KNOWLEDGE, IT DIDN'T OCCUR
20 WHILE YOU WERE THERE; RIGHT?

21 "A NOT ONLY DIDN'T IT
22 OCCUR, IT WAS SOMETHING YOU WOULD NOT
23 DO NORMALLY.

24 "Q BUT YOU WEREN'T
25 PRIVY TO EVERY TIME THAT DR. DUNN AND
26 DR. DENOBLE HAD A CONVERSATION, OF
27 COURSE, WERE YOU?

28 "A NO, I WAS NOT.

1 "Q ALL RIGHT.

2 "SO YOU CAN'T TESTIFY OF
3 PERSONAL KNOWLEDGE, CAN YOU, SIR, THAT
4 DR. DUNN AND DR. DENOBLE DIDN'T USE
5 THE TERM 'ADDICTION,' DISCUSS
6 ADDICTION, DISCUSS WHAT IT MEANT?

7 "A OH, I AM SURE THEY
8 MAY HAVE DONE THAT. I JUST, IN
9 SPEAKING ABOUT THAT TOPIC, MENTIONED
10 IT IS NOT NORMALLY SOMETHING YOU WOULD
11 DO PUBLICLY WITHIN PHILIP MORRIS.

12 "Q OKAY.

13 "A AND YOU DIDN'T WALK
14 AROUND THE HALLS MENTIONING THE WORD
15 'ADDICTION' OR 'ADDICTIVE' OR
16 'NICOTINE' WITH THOSE TWO OTHER WORDS,
17 NO MORE THAN YOU WOULD 'CANCER' AND
18 'CARCINOGEN.'

19 "Q SO YOU DIDN'T MEAN
20 TO SUGGEST THAT WHEN DR. DUNN AND
21 DR. OSDENE OR DR. DENOBLE OR DR. RYAN
22 WERE DISCUSSING THEIR WORK THAT THEY
23 WEREN'T USING THE WORDS 'ADDICTION'
24 AMONG THEMSELVES?

25 "A NO, BECAUSE IT WOULD
26 HAVE BEEN VERY APPROPRIATE FOR THEM TO
27 HAVE USED THAT WORD WITH REGARD TO
28 SOMEBODY THAT WORKED ON NICOTINE.

1 "Q ALL RIGHT. AND I
2 THINK YOU JUST SAID THAT, WITHOUT
3 LOOKING AT ALL OF THEIR MEMDRANDA, YOU
4 COULDN' T TELL WHETHER THEY WERE
5 WRITING THE WORD 'ADDICTION' AND
6 DISCUSSING IT IN THEIR PAPERS;
7 CORRECT?

8 "A IN SOME OF THEIR
9 PAPERS, NO.

10 "Q OKAY. NOW, IN
11 FACT --

12 "A EXCUSE ME. ARE WE
13 GOING TO REFER TO THIS ANY MDRE?

14 "Q I DON' T THINK SO.
15 YOU CAN SET IT DOWN.

16 "A I DIDN' T KNOW IF I
17 WOULD HAVE TO REFER BACK TO IT.

18 "Q NOW, THE WORD, THE
19 WORD 'ADDICTION,' THAT WAS A WORD THAT
20 HAD LOTS OF DIFFERENT MEANINGS, DID IT
21 NOT, AS YOU UNDERSTOOD IT?

22 "A PEOPLE USED IT WTH
23 DIFFERENT CONTEXTS, ITS ACTUAL
24 DEFINITION IS FAIRLY COMPLEX. IT' S
25 NOT A SIMPLE SENTENCE, WHICH IS PART
26 OF THE REASON WE ALL ARGUE ABOUT THE
27 WORD.

28 "Q SO DIFFERENT PEOPLE

1 CAN MEAN DIFFERENT THINGS WHEN THEY
2 USE THE WORD 'ADDICTION,' YOU WOULD
3 AGREE WITH THAT?

4 "A SOMETIMES.

5 "Q SOMETIMES PEOPLE USE
6 IT STRICTLY IN A CONFINED WAY AND
7 SOMETIMES THEY DON'T?

8 "A YES, OR GENERALLY TO
9 DISCUSS A TOPIC.

10 "Q AND ARE YOU AWARE
11 THAT DIFFERENT ORGANIZATIONS HAVE
12 CHANGED THEIR DEFINITION OF ADDICTION,
13 OVER TIME?

14 "A I UNDERSTAND THAT
15 SOME OF THAT HAS OCCURRED. ALTHOUGH I
16 DON'T KNOW THE EXACT CHANGES THAT WERE
17 MADE EACH TIME.

18 "Q OKAY.

19 "AND YOU ARE NOT AN EXPERT
20 ON THIS SUBJECT OF THE CHANGING
21 DEFINITIONS OF ADDICTION?

22 "A NOT ON THAT
23 PARTICULAR SUBJECT. NO.

24 "Q BUT YOU DO KNOW THAT
25 THERE'S A CLASSIC DEFINITION OF
26 ADDICTION THAT'S BEEN USED IN THE
27 LITERATURE?

28 "A I UNDERSTAND THERE

1 IS A --

2 "Q OKAY.

3 "A -- A HISTORIC
4 CLASSIC DEFINITION THAT'S QUITE OLD, I
5 UNDERSTAND.

6 "Q ALL RIGHT. AND THAT
7 CLASSIC DEFINITION IS DIFFERENT, AND I
8 AM NOT TRYING TO MAKE YOU AN EXPERT ON
9 THIS SUBJECT, DOCTOR, BUT IT IS
10 DIFFERENT THAN THE MORE, WHAT, WE CALL
11 IT, BROADER, NON-CLASSICAL DEFINITION;
12 RIGHT?

13 "A IT HAS DIFFERENT
14 CRITERIA.

15 "Q THE QUESTION WAS, IT
16 HAS DIFFERENT CRITERIA?

17 "A THANK YOU. YES,
18 SOMETIMES WE USE THE WORD MORE
19 GENERALLY THAN MORE STRICTLY, YES.

20 "Q OH. SO YOU WOULD
21 AGREE THAT CERTAIN THINGS THAT ARE
22 CONSIDERED ADDICTIVE UNDER THE
23 CLASSICAL DEFINITION MIGHT NOT BE
24 ADDICTIVE UNDER THE NON-CLASSICAL
25 DEFINITION OR VICE-VERSA; RIGHT?

26 "A YES, AGAIN, WE ARE
27 USING THE WORD CASUALLY, LIKE, I AM
28 ADDICTED TO CHOCOLATE, WHICH WE DON'T

1 MEAN YOU ARE ADDICTED TO CHOCOLATE,
2 YOU JUST LIKE IT A LOT AND EAT IT A
3 LOT BUT IT DOESN'T NECESSARILY MEAN
4 YOU ARE ADDICTED TO IT, YES.

5 "Q WHAT YOU ARE
6 REFERRING TO IS PEOPLE JUST GENERALLY
7 USE 'ADDICTIVE' IN A, IN A VERNACULAR
8 SENSE, 'I AM ADDICTED TO --'

9 "A LOVE OR SOMETHING.

10 "Q -- TO LOVE

11 "A TO SONG.

12 "Q OR TO --

13 "A I DIDN'T MEAN YOU
14 PERSONALLY, SORRY.

15 "Q YOU'RE PRODDED BY
16 TOO MANY ILLUSTRATIONS OF WHAT PEOPLE
17 SAY THEY ARE ADDICTED TO IN PUBLIC
18 LIFE; RIGHT?

19 "A YES.

20 "Q SO IT IS A LOOSE
21 TERM IN THE PUBLIC LIFE, AND EVEN IN
22 THE SCIENTIFIC LITERATURE, ADDICTION
23 HAS HAD DIFFERENT MEETINGS DEPENDING
24 ON THE CRITERIA THAT ARE USED TO
25 DEFINE IT; RIGHT?

26 "A SOMETIMES.

27 "Q YOU ARE AWARE, FOR
28 EXAMPLE, THAT ONE DEFINITION OF

1 ADDICTION REQUIRES AN INTOXICATION
2 ASPECT TO IT?

3 "A YES, I UNDERSTAND
4 THAT WORD IS USED, AND AGAIN, IT GUESS
5 BACK MANY, MANY YEARS BEFORE WE HAD
6 THE UNDERSTANDING WE HAVE TODAY ABOUT
7 WHAT ADDICTION REALLY IS. THE
8 MOLECULAR MECHANISMS INVOLVED. SO,
9 YES, THAT TERM WAS IN THE ORIGINAL
10 DEFINITION.

11 "Q OKAY. AND WOULD YOU
12 CONSIDER THAT TERM PART OF WHAT IS
13 KNOWN AS THE CLASSICAL DEFINITION?

14 "A THE ORIGINAL OLDER
15 DEFINITION THAT SOME PEOPLE LIKE TO,
16 YOU KNOW, ADHERE TO, YES.

17 "Q OKAY. NOW, THERE
18 ARE OTHER WORDS THAT PEOPLE USE AS
19 WELL LIKE HABITUATING; RIGHT?

20 "A YES.

21 "Q THAT'S ANOTHER TERM
22 YOU HAVE HEARD THE TERM 'REINFORCING'
23 USED?

24 "A YES.

25 "Q OKAY. AND YOU WOULD
26 AGREE, BASED ON YOUR EXPERIENCE, THAT
27 REINFORCING IS NOT THE SAME AS
28 ADDICTIVE?

1 "A NOT EXACTLY. NO.

2 "Q SO SOMETHING CAN BE
3 REINFORCING AND NOT BE ADDICTIVE?

4 "A YES, ALTHOUGH WHEN
5 SOMETHING IS ADDICTIVE IT USUALLY HAS
6 A REINFORCING COMPONENT TO IT.

7 "Q SO IT WORKS ONE WAY
8 BUT NOT NECESSARILY THE OTHER WAY?

9 "A NOT NECESSARILY.

10 "Q OKAY. THE FACT THAT
11 SOMETHING IS PHARMACOLOGICALLY ACTIVE
12 DOESN'T MEAN IT IS ADDICTIVE; CORRECT?

13 "A CORRECT.

14 "Q OKAY. AND DO YOU
15 THINK THAT THE FACT THAT SOMETHING IS
16 HABITUATING WOULD NECESSARILY EQUATE
17 IT WITH BEING ADDICTIVE?

18 "A IT DEPENDS ON WHAT
19 OTHER WORDS YOU ARE COMPARING IT TO.

20 "AND AGAIN, IF YOU ARE GOING
21 BACK TO THE OLD CLASSIC DEFINITION OF
22 ADDICTION, IT MAY NOT BE EQUIVALENT.
23 BUT IS A LOT CLOSER THAN JUST, YOU
24 KNOW, SOME OF THE OTHER WORDS LIKE WE
25 WERE TALKING ABOUT.

26 "Q ALL RIGHT. SO THIS
27 IS, THIS WHOLE AREA OF HABITUATION,
28 REINFORCEMENT, INTOXICATION CRITERIA

1 IS ONE THAT REALLY, IT'S, IN THE
2 SCIENTIFIC COMMUNITY, IT IS SOMETHING
3 THAT YOU HAVE TO KNOW WHAT SOMEBODY
4 REALLY MEANS BY IT WHEN YOU, WHEN YOU
5 HEAR THE TERM IN ORDER TO UNDERSTAND
6 WHAT THEY ARE TALKING ABOUT; RIGHT?

7 "A YES. AS YOU BECOME
8 MORE SPECIFIC ABOUT WHAT YOU ARE
9 TALKING ABOUT, YOU NEED TO MAKE SURE
10 YOU ARE USING THE APPROPRIATE TERMS,
11 TERMS TO DESCRIBE THAT WITHIN THE
12 CONTEXT OF WHATEVER YOU ARE
13 DISCUSSING, YES.

14 "Q OKAY. NOW I WANT
15 TO GO TO -- I WANT TO MOVE TO A
16 DIFFERENT AREA NOW AND I WANT TO GO
17 TO AN AREA THAT I BELIEVE YOU SAID YOU
18 SPENT A LOT OF TIME ON AND THAT'S IN
19 YOUR OWN WORK AT THE COMPANY AND
20 THAT'S THIS AREA OF NATURALLY
21 OCCURRING DENITRIFICATION.

22 "SINCE I DON'T WANT TO SAY
23 'NATURALLY OCCURRING DENITRIFICATION'
24 ALL THE TIME, CAN WE CALL IT NODS?

25 "A YES, THAT'S WHY WE
26 CALL IT NOD, BECAUSE NOBODY WANTS TO
27 SAY 'DENITRIFICATION.'

28 "Q OKAY. I WANT TO

1 MAKE SURE THE JURY UNDERSTANDS WHAT
2 THIS NOD PROCESS WAS. AND LET ME ASK
3 YOU THIS AS A START. HOW MUCH OF YOUR
4 TIME DO YOU THINK WAS SPENT ON THE NOD
5 PROJECT?

6 "A WELL, IN THE
7 BEGINNING, AS I MENTIONED BEFORE, I
8 LEFT THE FIRST TIME, I WAS KIND OF A
9 CONSULTANT TO IT, I WAS KIND OF
10 KEEPING IN TOUCH WITH IT BUT NOT
11 PARTICIPATING DIRECTLY, BECAUSE IT WAS
12 A MICROBIOLOGY PROJECT.

13 "Q SURE.

14 "A IN THAT POINT IN MY
15 CAREER AT PHILIP MORRIS, THE LAST YEAR
16 BEFORE I LEFT THE FIRST TIME, A FEW
17 HOURS A WEEK. WHEN I CAME BACK,
18 FAIRLY SOON AFTER I CAME BACK, BECAUSE
19 THAT PROGRAM WAS NOT DOING WELL, I
20 STARTED TO DO SOME SIDE EXPERIMENTS
21 AND GOT MORE INVOLVED, EVEN THOUGH I
22 REALLY SHOULDN'T HAVE DONE THEM, BUT
23 THEN SHOWED THAT DATA TO MY MANAGER
24 AND DIRECTOR, DR. FARONE. A DECISION
25 WAS MADE, BASED UPON THAT WORK, THAT
26 THAT PROGRAM NEEDED TO CHANGE AND I
27 WAS ACTUALLY ASSIGNED TO TAKE OVER
28 THAT PROJECT.

1 "SO FOR THE NEXT COUPLE OF
2 YEARS, OR WHATEVER IT WAS, I SPENT
3 FULL TIME, ALMOST FULL TIME EVERY DAY
4 ON THAT PROJECT.

5 "Q SO IT WAS AN
6 IMPORTANT PROJECT FOR YOU?

7 "A NOT JUST FOR ME, FOR
8 THE CORPORATION.

9 "Q ALL RIGHT.

10 "A THE PHILIP MORRIS
11 PROJECT, IT WAS IMPORTANT TO THE
12 CORPORATE ENTITY.

13 "Q WHAT I MEAN IS YOU
14 WERE REALLY VESTED IN THE PROJECT
15 PERSONALLY?

16 "A PERSONAL TIME IS,
17 WAS ONE OF THE JOBS I HAD AT PHILIP
18 MORRIS.

19 "Q YOU CARED ABOUT IT,
20 DIDN'T YOU, YOU CARED ABOUT YOUR WORK?

21 "A WELL, WE ALL CARED,
22 I HOPE, ABOUT OUR WORK.

23 "Q ALL RIGHT. SO IF
24 YOU WERE SPENDING ALMOST FULL TIME ON
25 IT, YOU WOULD, YOU OBVIOUSLY WANTED IT
26 TO SUCCEED, DID YOU NOT?

27 "A I WANTED IT TO
28 SUCCEED AND IT DID SUCCEED.

1 SCIENTIFICALLY, TECHNICALLY IT WAS A
2 SUCCESS

3 "Q WE ARE GOING TO GET
4 TO THAT, BUT I WANT TO MAKE SURE FIRST
5 THAT THE JURY UNDERSTANDS WHAT IT WAS.
6 AND I AM GOING TO TRY TO DESCRIBE IT
7 AND IF I FAIL IN MY SIMPLE WAY OF
8 TRYING TO DESCRIBE IT MAYBE YOU WILL
9 HELP ME OUT, OKAY.

10 "NOW, WHAT IT WAS IS, THERE
11 ARE MICROBIAL AGENTS -- DID I SAY
12 MICROBIAL RIGHT?

13 "A THAT'S GOOD.

14 "Q THAT'S A GOOD START,
15 THAT NATURALLY OCCUR IN TOBACCO,
16 RIGHT?

17 "A BECAUSE THEY'RE IN
18 THE GROUND, THEY'RE SOIL
19 MICRO-ORGANISMS, THEY ARE IN THE DIRT
20 AND THEY WIND UP ON THE PLANT.

21 "Q AND DESPITE ALL THAT
22 WE HAVE BEEN TALKING ABOUT FOR MANY
23 WEEKS, EVEN MONTHS NOW TOBACCO IS
24 STILL JUST A PLANT THAT GROWS FROM THE
25 SOIL; RIGHT?

26 "A THE TOBACCO PLANT
27 ITSELF, BEFORE ANYBODY TOUCHES IT,
28 YES.

1 "Q THAT IS RIGHT.

2 "A YES.

3 "Q SO WHEN IT GOES FROM

4 THE SOIL IT ABSORBS THINGS FROM THE

5 SOIL.

6 "A YES.

7 "Q SO THESE MICROBES,

8 THE IDEA BEYOND USING THE MICROBES, AS

9 I UNDERSTAND IT, IS THAT MICROBES --

10 DO YOU REMEMBER WHEN THE COMPUTERS

11 FIRST CAME OUT AND THEY HAD LIKE PAC

12 MEN?

13 A. YES.

14 Q. DO YOU REMEMBER THAT?

15 A. YES.

16 Q. MICROBES ARE LIKE PAC MEN, RIGHT;

17 THEY WOULD EAT THE NITRATES?

18 A. RIGHT.

19 Q. I WOULD DRAW THIS, IF I COULD.

20 A. NO, I UNDERSTAND IT. YES. THEY

21 UTILIZED NITRATE AS PART OF THEIR ENERGY SYSTEM

22 "Q OKAY. AND THE

23 EVOLUTION HERE IS THAT -- THAT THE

24 PROCESS THAT YOU SCIENTISTS WERE

25 INVOLVED WITH WAS TO EVOLVE THE

26 NITRATES, WITH AN A-T-E-S ON THE END,

27 INTO NITRITES, RIGHT? I MEAN, THIS IS

28 A SUCCESSIVE PROCESS; RIGHT?

1 "A IT' S A CASCADE OF
2 EVENTS.

3 "Q CASCADE OF EVENTS IS
4 A GOOD WORD.

5 "SO THE FIRST PART OF THAT
6 CASCADE OF EVENTS WAS TO TAKE THE
7 NITRATES AND THEN THEY WOULD GO INTO
8 NITRITES AND THEN IT WOULD CASCADE
9 FURTHER INTO NITROGEN OXIDES; RIGHT?
10 AND THEN THE LAST EVENT WOULD BE INTO
11 NITROGEN GAS, WHICH JUST KIND OF,
12 WHAT, WOULD BE A GOOD WORD, VAPORIZE?

13 "A BASICALLY, JUST GO
14 OFF AS GAS.

15 "Q OKAY. SO IF THE
16 SYSTEM WORKS, IF THE SYSTEM WORKS, THE
17 GREAT THING ABOUT IT IS THAT YOU GET
18 THE LITTLE MICROBES WHO WORK AND
19 DIGEST THE NITRATES AND START THIS
20 CASCADE OF EVENTS GOING INTO PLACE.
21 SO THAT AT THE END, YOU KIND OF TURN
22 EVERYTHING INTO NITROGEN GAS WHICH
23 BLOWS OFF AND IT IS A GREAT SUCCESS;
24 RIGHT?

25 "A YES.

26 "Q NOW, PRIOR TO THE
27 TIME THAT YOU BEGAN WORK ON THIS
28 PROCESS, PHILIP MORRIS ACTUALLY DID

1 HAVE A PROCESS FOR REMOVING NITRATES;
2 RIGHT?

3 "A YES.

4 "Q AND THAT WOULD BE
5 THE CRYSTALLIZATION PROCESS?

6 "A YES. AT PARK 500.

7 "Q AND THE CONCERN, AND
8 PHILIP MORRIS' S CONCERN WAS THAT WHILE
9 CRYSTALLIZATION, AND YOU DESCRIBED IT
10 EARLIER THIS MORNING, DOCTOR, WHILE
11 CRYSTALLIZATION DID GET RID OF A FAIR
12 NUMBER OF NITRATES, IT DIDN' T GET RID
13 OF THEM ALL; RIGHT?

14 "A CORRECT.

15 "Q AND WHAT PERCENTAGE
16 DO YOU THINK THAT THEY --

17 "A I HONESTLY DON' T
18 REMEMBER, AND I THINK IT VARIES QUITE
19 A BIT, WHICH I THINK IS ANOTHER THING
20 THEY DIDN' T LIKE. BECAUSE IT WASN' T
21 CONSISTENT. IT ALSO DIDN' T GET RID OF
22 THE NITRATE IN BETWEEN ONE OF THE
23 OTHER THINGS THEY WANTED TO IMPROVE
24 IT.

25 "Q THEY WANTED TO
26 IMPROVE IT?

27 "A YES.

28 "Q BECAUSE THEY WERE

1 TRYING TO GET RID OF THE NITRITES AND
2 THIS PROCESS THAT YOU WORKED ON VERY
3 HARD AND VERY WELL, I AM CERTAIN, WAS
4 INTENDED TO DO THAT, IT WAS TO DO A
5 BETTER JOB?

6 "A YES, IT WAS ONE OF
7 THE SEVERAL ATTEMPTS THAT WERE BEING
8 EVALUATED BY THE COMPANY TO DO THIS.

9 "Q OKAY, THAT'S FAIR
10 ENOUGH.

11 "SO NOW THIS, THE INTENT
12 HERE WAS TO HAVE A COMMERCIAL PROCESS,
13 AND WHAT I MEAN BY COMMERCIAL PROCESS
14 IS ONE THAT YOU COULD PUT AND WORK ON
15 THE PRODUCTION LINE IN THE FACTORIES
16 SO THAT IT WOULD, IT WOULD WORK IN THE
17 ACTUAL PRODUCTION OF COMMERCIAL
18 CIGARETTES; RIGHT?

19 "A YES.

20 "Q AND FOR SOMETHING TO
21 BE USED IN THAT KIND OF AN
22 APPLICATION, WHERE YOU ARE GOING TO
23 ACTUALLY TAKE IT AND PUT IT ON THE
24 PRODUCTION LINE, THE PROCESS DOES HAVE
25 TO BE CONTROLLABLE, DOES IT NOT?

26 "A YES. AND, AGAIN,
27 THE PRODUCTION LINE, IN THIS INSTANCE,
28 WAS AT PARK 500.

1 MASTER INDEX

2

3 DAY DATE PAGE VOLUME

4 THURSDAY APRIL 5TH, 2001 1737 11B

5

6

7

8

W I T N E S S E S

9

10 WITNESS DIRECT CROSS REDIRECT RECROSS

11 MELE, 1742 1783

PAUL C

12 (TESTIMONY READ)

13

UYDESS, 1790 1842

14 IAN (TESTIMONY READ)

15

16

17

18

19

20

21

22

23

24

25

26

27

28