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TARCOM HEARING
APPEAL FROM MERIT SYSTEM
PROTECTION BOARD

IN THE MATTER OF:

LEROY J. PLETTEN,
Appellant,

-vs-

DEPARTMENT OF THE ARMY,
Appellee.

Transcript of the deposition of ROBERT J. LANG, a witness in the above-entitled cause, taken before Norma J. Yeager, Notary Public in and for the County of Oakland, State of Michigan, at 3000 Town Center, Suite 1150, Southfield, Michigan 48075, on Monday, April 26, 1982, commencing at or about the hour of 8:20 a.m.

APPEARANCES:

COOPER & COHEN, 3000 Town Center, Suite 1150, Southfield, Michigan 48075, Appearing on behalf of the Appellant.
BY: STEVEN Z. COHEN, ESQ.

EMILY SEVALD BACON, ESQ., United States Army Tank-Automotive Command, Detroit Arsenal, Warren, Michigan 48090, Appearing on behalf of the Appellee.

ALSO PRESENT:

Leroy J. Pletten, Appellant.

1 Southfield, Michigan

2 Monday, April 26, 1982

3 Approximately 8:20 a.m.

4 R O B E R T J . L A N G

5 being first duly sworn, was examined and testified on his
6 oath as follows:

7 EXAMINATION

8 BY MS. BACON:

9 Q Would you state your name again for the record, please?

10 A Robert J. Lang, L-a-n-g.

11 Q What is your position at TARCUM?

12 A I am the TACOM Facility Engineer.

13 Q How long have you held that position, approximately?

14 A Oh, roughly about 12 years.

15 Q Are you familiar with the appellant in this matter,
16 Mr. Leroy Pletten?

17 A Yes, I am.

18 Q How did you first become acquainted with Mr. Pletten?

19 A Through personnel actions at the installation.

20 Q Were you ever asked to check ventilation in Mr. Pletten's
21 working area?

22 A Yes, I was.

23 Q Why were you asked to check the ventilation?

24 A Because Leroy had indicated to the supervisor there was not
25 sufficient ventilation and the area was unhealthy.

1 Q Can you identify this document in Agency's Response Tab 4?

2 A Yes.

3 Q Could you identify that for the record, please?

4 A It is dated 24 July '79 and has my signature and deals with
5 ventilation in the Personnel Office in Building 230, the
6 area which Mr. Pletten occupied.

7 Q Now, that reflects that you did some testing. Correct?

8 A Yes.

9 Q What did you base your testing on, or what standards were you
10 using?

11 A AR 1-8, which requires a minimum of 10 cubic feet of fresh
12 air per person.

13 MS. BACON: I would submit Agency Exhibit 18,
14 a copy of AR 1-8 at this time.

15 MR. COHEN: No objection.

16 MS. BACON: I am providing two copies to the
17 court reporter. This is to be submitted along with the
18 deposition testimony, to the presiding official in Chicago.

19 Q (By Ms. Bacon) What was the result of your testing?

20 A Well, the results showed that there was a minimum of 10 cubic
21 feet of air per person being provided in the work area that
22 was occupied by Mr. Pletten.

23 Q To your knowledge, was Mr. Pletten satisfied with the results
24 of your testing?

25 MR. COHEN: I am objecting. The question

1 calls for present impression response by the witness as to
2 Mr. Pletten's state of mind, and Mr. Pletten will be a
3 witness. It is kind of irrelevant.

4 Q (By Ms. Bacon) Objection noted.

5 Please answer the question.

6 A I am sure he was satisfied with the information provided,
7 but he was not satisfied that it still was a healthy
8 atmosphere for him.

9 Q Did you, in your connection with your dealings with
10 Mr. Pletten, did you offer him anything else?

11 A Yes, I did. I offered to move his office to an outside wall
12 and put in a window air conditioner where fresh air could
13 be brought in and would not be recirculated from the central
14 system, which would be smoke-free, unless he was smoking in
15 the office he occupied, permanently. He refused that.

16 Q Did he say why he refused that?

17 A The best I recall he said he would be isolated and could not
18 function if he stayed in one office. He wanted freedom to
19 go throughout the installation in a smoke-free atmosphere.

20 MS. BACON: I have no further questions at
21 this time.

22 EXAMINATION

23 BY MR. COHEN:

24 Q Mr. Lang, if the studies you performed, as indicated by
25 Tab 4 of the record, indicates compliance with the 10 percent

1 requirement of AR 1-8, why is it that you offered
2 Mr. Pletten any type of accommodation?
3 A Well, because his supervisor said he particularly was not
4 satisfied with that condition.
5 Q But you felt confident your study showed compliance with the
6 regulation?
7 A Yes, that is true, it did.
8 Q The air conditioner was your idea or the supervisor's idea?
9 A No. The supervisor just asked what could be done in his
10 particular case because of Mr. Pletten's health condition.
11 Q When you wrote this disposition form, who is it in response
12 to? Reference is made to your DF, dated 19 June?
13 A I don't recall.
14 Q Who would be the author of the June '79 disposition form?
15 A I can't recall.
16 Q Look at this disposition form. Do you not respond to the
17 Legal Office?
18 A Yes -- well, perhaps it did come from them.
19 Q What do you discern from the notation on the memorandum that
20 says to Legal Office?
21 A That it was perhaps requested by the Legal Office.
22 Q Did you contact anybody from the Legal Office at the time
23 of your investigation of the ventilation of the Personnel
24 Office?
25 A Yes, I did.

1 Q Who did you talk to?

2 A I can't say for certain. It has been so long, I can't say
3 precisely who it might have been.

4 Q Over a period of time involving these studies, whom did you
5 talk to? Not necessarily at one period of time, but who from
6 the Legal Office did you have contact with?

7 A Mr. Ortisi.

8 Q Anybody else?

9 A I don't recall.

10 Q Do you recall any of the substance of your conversations with
11 Mr. Ortisi?

12 A It dealt with the ventilation problem and whether or not it
13 met the requirements of the regulations that govern ventila-
14 tion at Army facilities.

15 Q Maybe I am misreading you, sir. But in your earlier testimony
16 I thought you said that your contact with regard to studies
17 was with Mr. Pletten's supervisor.

18 A Yes.

19 Q Who initiated your study?

20 A As far as I can recall, the supervisor to back up the fact
21 that there was proper ventilation in the area.

22 Q But you agree with me that the conclusion one can draw from
23 the disposition form, you were directed and initiated by the
24 Legal Office --

25 A Could well be.

1 Q -- and your memory, or absence of memory in that regard,
2 would leave us with the conclusion drawn, not the DF itself,
3 is that correct?

4 A That is true.

5 Q What training do you have, sir?

6 A I am a graduate engineer, electrical engineer. I also had
7 training in civil and mechanical and structural engineering.

8 Q How much training?

9 A Well, I have been on the job for over 30 years.

10 Q But no formal training as to structural?

11 A Oh, yes, in college and special courses while I was on the
12 job.

13 Q When did you graduate and from what school?

14 A From Lawrence Tech in 1948.

15 Q You have a BS degree from that school?

16 A Yes, I do.

17 Q Do you have any postgraduate training?

18 A Not at Lawrence; at Wayne University I took some courses.

19 Q Do you have a Master's degree, sir?

20 A No, I don't.

21 Q Do you have any other higher degrees besides the Bachelor of
22 Science?

23 A No.

24 Q How many updating courses since 1948 have you taken, sir?

25 A Gosh, they are innumerable. Not only through local colleges,

1 but also through the Army.

2 Q When was the last time you took a course for training
3 purposes?

4 A In a technical field?

5 Q Yes.

6 A Oh, that has been probably four or five years, but we keep
7 up to date with periodicals that come through and all the
8 latest developments in my field.

9 Q How many periodicals do you receive on air control?

10 A Three or four.

11 Q Name them, please.

12 A ASME.

13 Q What is that?

14 A American Society of Mechanical Engineers, which deals with
15 heating and ventilating and air conditioning.

16 Q What else?

17 A Heating and Ventilating Magazine.

18 Q Is that the name of the magazine, sir?

19 A Yes.

20 Q What else?

21 A Architectural Record.

22 Q What else?

23 A Gee, I don't know. That is all I can recall right now, but
24 there is others.

25 Q How frequently do you read these magazines?

1 A Well, from time to time. Not daily, obviously. It depends
2 on time available.

3 Q Have you been sent for specific training with regard to air
4 intake by the Command at any time?

5 A Specifically for that area?

6 Q Yes.

7 A No, not that in itself, because with my background, really,
8 and keeping up to date, if we do any additional training, it
9 covers a broader area of engineering disciplines.

10 Q Would it be safe to state, Mr. Lang, you have never had
11 specific training with regard to this aspect of mechanical
12 engineering?

13 A No, it would not be.

14 Q Well, you have stated on the record that you have training
15 as an electrical engineer?

16 A Yes.

17 Q And a degree in that area?

18 A Yes.

19 Q You have stated all the rest of your experience, over 30
20 years, has provided you some input into general terms, and
21 you have kept up with various courses, but you said the
22 courses are never specifically addressed for air intake and
23 air studies, is that correct?

24 A But what I am trying to say -- what I am saying -- it is
25 part of the overall training itself, not one course or class

1 for that alone.

2 Q What type of instruments do you use in making air study
3 determinations?

4 A Amimatherm.

5 Q Spell that, please.

6 A A-m-i-m-a-t-h-e-r-m. Anyhow, it is an instrument that takes
7 velocity, temperature, static, pressure.

8 Q What other instruments are available?

9 A Thermostatic pressure glasses, velometers.

10 Q Does that round out the field of instruments?

11 A As far as strictly air, yes, pretty well.

12 Q Can you describe pollution control devices that the city,
13 for example, would use in terms of their pollution control
14 reports?

15 A Well, they run it through a screen and you are taking a
16 volume of air and it is --

17 Q Do you know how many feet it is?

18 A It varies with the type of test you are conducting.

19 Q Do you know about the standard surveys taken for the City of
20 Detroit? Did you research that and are you familiar with
21 that?

22 A I am familiar with that because we have the same thing at
23 the terminal. There is a Ringaman test.

24 Q What is a Ringaman test?

25 A A Ringaman test is a comparison of the density of the smoke

1 compared with a standard and it runs from Ringaman 1 up to
2 Ringaman 10.

3 Q Do you perform those tests also?

4 A No, but I know how to do them.

5 Q Who performs these?

6 A People in my office.

7 Q Specific people or everybody?

8 A Pretty well everybody in my engineering personnel are familiar
9 with them, primarily mechanical engineers. I have done it
10 before, but I don't run the tests.

11 Q As far as Building 230 -- well, do you know when Building 230
12 was built?

13 A 1961 -- '60 -- '61.

14 Q Were you with the Tank Command at the time?

15 A Yes, I was.

16 Q Did you supervise the ventilation process of the building?

17 A I was involved in the preliminary design of the building.

18 Can we go off the record for a second?

19 (Off the record.)

20 Q (By Mr. Cohen) You have reviewed and are familiar with
21 AR 1-8, which is in the record?

22 A Yes, I am.

23 Q Can you tell me the established smoking policy employed by
24 AR 1-8?

25 A It is indicated you must provide a minimum of 10 cubic feet

1 of fresh air per person that occupies a given area.

2 Q That is a firm commitment?

3 A Yes.

4 Q Or a general rule?

5 A Firm commitment as far as we are concerned.

6 Q Are you familiar with the other provisions and regulations?

7 A Generally, yes.

8 Q What are the specific rights contained therein?

9 A It indicates the area where there will be no smoking and
10 areas where it could be permitted.

11 Q Are you familiar with the following section which reads,
12 "DA recognizes the right of individuals working in DA
13 occupied buildings to an environment reasonably free of
14 contamination. DA also recognizes the right of individuals
15 to smoke in such buildings, provided such action does not
16 endanger life or property, cause discomfort or unreasonable
17 annoyance to non-smokers, or infringe upon their rights."
18 Are you familiar with that section?

19 A Yes.

20 Q Did you take that into consideration when making your
21 recommendations?

22 A Yes, I did.

23 Q Was it your responsibility to make a recommendation merely on
24 the basis of the amount of pollutants in the air, or waste,
25 is it your responsibility to make a determination as to what

1 is discomfort to Mr. Pletten?

2 A That is not my responsibility to make that determination.

3 Q It is not, or is?

4 A It is not.

5 Q So why did you take part of AR 1-8 into consideration if it

6 was not your responsibility?

7 A Because that portion of it is my responsibility.

8 Q How is it if your specific purpose is to provide the Legal

9 Office with a quantification of ventilation of the Personnel

10 Office?

11 A I don't understand.

12 Q As I understand this disposition form, Mr. Lang, you were

13 told to tell them how much air they had?

14 A Which I did.

15 Q Yet you say you took into account the section about dis-

16 comfort or unreasonable annoyance to non-smokers. Now, what

17 part did that play in this disposition form?

18 A The only part was to ask whether there was sufficient

19 ventilation as called for in this, which I verified.

20 Q Section 2a of the regulation you don't concur with?

21 A It is a general statement and it presumes that if you provide

22 10 cubic feet of air as minimum ventilation, that you are

23 providing a healthful environment.

24 Q Let me understand that. It is your position that as long as

25 there are 10 cubic feet of air, the substantive analysis of

1 an individual is irrelevant?

2 A That is not my responsibility for that part of it. We
3 provide the ventilation; if there is a problem, then we look
4 into it.

5 Q As in this case with Mr. Pletten, you gave him an air con-
6 ditioner?

7 A Right, which was more than what was called for in the
8 regulations.

9 Q Is that your interpretation of AR 1-8, or is it indicative of
10 the position of others that you answered to in the Command?
11 Was that enunciated to you by Mr. Ortisi, for example?

12 A Well, you know, being a mechanical engineer and responsible
13 for ventilation, they came to me to see whether we met the
14 regulations and which I indicated we did. Now, what -- I
15 don't know what they understood about it other than the
16 statement I made that it does meet the regulations.

17 Q I understand, but -- if this is 10 cubic feet, we presume on
18 its face that complies with the regulations regardless of
19 Section 2a. Was that the understanding of the regulations
20 that came to you on your own, or was it one that was for-
21 warded to you?

22 A Well, again, you know, back up again. We went -- the super-
23 visor complained about the conditions in the area per
24 Mr. Pletten and I went out to verify and found it met the
25 requirements.

1 Q Please get into specific requirements of this study. As I
2 understand it -- when was it undertaken, first of all?

3 A I think it was in June, June 1979, or some time about that
4 time; the latter part of June.

5 Q What portion of the air was circulated from outside?

6 A At that time?

7 Q Yes.

8 A Actually about 25 percent of it had come from the outside.

9 Q In the disposition form you state, "During winter months,
10 with the dampers closed, we are still bringing in 8 to 10%
11 of fresh air." If the study was performed in June, how is
12 it you could testify to what the winter months contained?

13 A Because we have taken studies on this before. This is not
14 the first study taken to check the system.

15 Q When was the study prior to this?

16 A I don't recall, but it is checked from time to time.

17 Q Do you remember how frequently those were performed?

18 A No, I don't because it is a matter of course.

19 Q On what regular basis are they done?

20 A First of all, it is done on a basis of complaint, and then
21 done on a regulatory basis probably once or twice during
22 winter months.

23 Q How many times during summer months?

24 A The ventilation can be 100 percent and we do take 100 percent
25 outside air during the summertime if the temperature outside

1 will not cause a problem with people inside. In other words,
2 as long as it is about 75 percent, we take 100 percent out-
3 side air.

4 Q You are Facilities Engineer?

5 A Yes.

6 Q You are in charge of all these people?

7 A Yes.

8 Q Did you institute proceedings, a program for doing these
9 tests?

10 A There is a regulation covering this.

11 Q What do the regulations say?

12 A I can't quote all the regulations verbatim.

13 Q How long have you been in this business, sir?

14 A Thirty years.

15 Q You cannot tell me how many times a year these studies are
16 done?

17 A I told you twice a year.

18 Q You stated once or twice a year in the winter months. Can
19 you tell me more specifically how frequently you do this?

20 Is it once or twice a year during winter months?

21 A I can't say.

22 Q How many times do you direct it be done?

23 A The Army requires it twice a year.

24 Q Have you always done it twice a year?

25 A To the best of my knowledge, yes.

1 Q What months of the year are they done?

2 A Well, there is no specific time, month or date that it is

3 done. It is just required it be done during midwinter.

4 Q In the year you wrote this DF we are discussing, the winter

5 study you refer to, was that done the year prior or the mid-

6 winter prior?

7 A The midwinter prior.

8 Q How do you know?

9 A Because when I wrote this I looked into that to make sure it

10 was done.

11 Q How come you didn't reference it in your disposition form?

12 A There was no need to.

13 Q Presume it is needed now. Do you have those documents

14 available?

15 A They may be in the shop. I don't maintain those files.

16 Q Who does?

17 A Ed, Ed Satalla. The man that was there has retired since.

18 Q What is his name?

19 A I can't recall. I just drew a blank, I don't remember.

20 Q If you happen to think of it later in the testimony, drop me

21 a note.

22 A Well, you know, you asked a name in the past.

23 Q How long did he work there?

24 A Oh, a number of years; 10, 15 years. This is just a mental

25 block.

1 Q The winter-month evaluation is based on an older study, in
2 this disposition form?
3 A The year just previous.
4 Q You testified earlier you were not sure of the time, it could
5 be once or twice a year, and you say you don't remember the
6 date or months or document regarding the winter, but you
7 prepared it from the study, the winter previous, is that
8 correct?
9 A Yes.
10 Q Could you be wrong?
11 A No, because at the time I wrote this, I did check the
12 records.
13 Q But you didn't reference it in your memo?
14 A No, I didn't.
15 Q You indicate here that the air circulating system of
16 Building 230 has the capability of recirculating approximately
17 90 percent of the air?
18 A Yes.
19 Q The capability of -- what were they actually providing?
20 A At what time?
21 Q At the time this was written.
22 A I did not check that particular aspect because I was concerned
23 about what air was getting into the room in the area that was
24 being occupied by Mr. Pletten, and that is what we checked.
25 Q Mr. Lang, these are very persuasive figures. It says 90

1 percent of the air, which would lead one to presume it is
2 an infinitesimal amount of air that does not get recirculated,
3 and now you are telling us you don't know how much air was
4 recirculated?

5 A At that particular time, 90 percent was the maximum amount.
6 We certainly would not be pulling in 90 percent of air in
7 the winter months.

8 Q How much would you be pulling in?

9 A As I said, eight to 10 percent.

10 Q Eight or 10 percent?

11 A We are talking about winter. Again, that is a general
12 statement.

13 Q How much was it?

14 A At what time?

15 Q The winter previous to this DF.

16 A At that particular -- it varies from day to day.

17 Q How many times do you take studies? You said only once or
18 twice a year.

19 A I know from experience it varies from day to day. It has to
20 do with air pressure and --

21 Q Well, how long a period of time are we talking about? You
22 said you looked at another study. Which was it, eight or
23 10 percent?

24 A I am not certain because each ventilator is a little
25 different.

1 Q Mr. Lang, I know, as an adversary, occasionally people are
2 reluctant to testify. They feel attorneys are trying to get
3 something out of them they don't want to give. I don't have
4 a problem with a facilities engineer, based on 30 years
5 experience, saying it was that --

6 A That is what it says, eight to 10.

7 Q Could it have been higher or lower by eight to 10 percent?

8 A It says even with the dampers closed in winter you still get
9 eight to 10 percent.

10 Q Assuming it was eight percent, does that meet regulations?

11 A That is the minimum with them closed. That is the statement
12 saying even with the dampers totally closed, you would still
13 get eight to 10 percent.

14 Q What would you ventilate eight to 10 percent with the dampers
15 closed?

16 A There is leakage through the dampers. They are not designed
17 to be 100 percent to close the air off. Just normal leakage
18 through a design.

19 Q That is not recirculated air?

20 A That is fresh air.

21 Q But not recirculated?

22 A Yes, it is.

23 Q How is it?

24 A Pulled in with the return air from the ventilating system
25 and fed into the area along with the recirculated air.

1 Q Mr. Lang, isn't it true, based on the figures that we have
2 now, a maximum recirculation capability of 90 percent and
3 for argument's sake, at least eight percent fresh air being
4 returned?

5 A I am not saying that you are misreading -- misquoting; it is
6 eight to 10 percent. Even with the dampers closed we would
7 get it. We are recirculating 18 percent.

8 Q During the study at the time you looked at it, was the
9 figure eight or 10 percent? Let's get to specifics on this.

10 A All I can say is it stands as quoted: Eight to 10 percent.

11 Q Did you do a study with the dampers closed and with the
12 dampers opened at that time?

13 A We did with them totally closed and that is the figure we
14 got there, but the figures are not precise as reflected by
15 your statement. That is correct. They are precise within
16 the eight to 10 percent.

17 Q If 10 is maximum, it could have been on eight percent, the
18 low side. Then there is a likelihood that the actual amount
19 of air was below the regulation?

20 A No, not true.

21 Q Why not?

22 A I said that is when the dampers were completely closed.

23 Q You also said you only did studies with the dampers closed.
24 Did you do studies with the dampers open?

25 A From zero to one completely open we --

1 Q Mr. Lang, you just told me studies were done with the dampers
2 tightly closed. Did you do studies with them open?
3 A Yes.
4 Q What were the results of those studies?
5 A I don't know because even with this, it provided fresh air
6 required up to 18 percent.
7 Q However, fresh air is introduced because of leakage?
8 A Approximately 18 percent.
9 Q Eighteen percent? You are sure?
10 A Sure as I can be.
11 Q How are you sure? What gives you that idea?
12 A Because of exhausting air out of the building on the
13 ventilation system.
14 Q Those are qualified by what tests?
15 A By the velometer.
16 Q In your form it says leakage around windows and doors con-
17 tributes another eight percent instead of 18.
18 A With the dampers closed you still get 18 percent.
19 Q That is not what I asked you. You said leakage is eight
20 percent.
21 A Yes.
22 Q Then plus what you are bringing in with the dampers closed
23 is a total between 16 and 18 percent, isn't that true?
24 A Yes, that is true.
25 Q Have you written a memo on this to the Command indicating the

1 excessive amount of leakage?

2 A No. That is normal in that type of building.

3 Q There is no way to lessen it? I presume Command pays for the
4 heat?

5 A Certainly there is some ways you could, but you have people
6 coming in and out and you can't do anything about that. That
7 is leakage as well and that is the main part of the leakage.

8 Q You indicated that the duct system in the Personnel Office
9 as what capacity?

10 A Forty-eight hundred cubic feet per minute.

11 Q What portion of that capacity was being used at the time of
12 this study?

13 A The total amount.

14 Q It was working at peak efficiency?

15 A Well, there is no efficiency. The fan runs and puts out so
16 much air and that is it.

17 Q You studied that?

18 A Yes.

19 Q Was the duct system working at the time of the study as well
20 as it was when it was installed?

21 A Yes, I'd say so.

22 Q Have you done studies to determine the variance of the system
23 over the years?

24 A The duct system itself does not vary.

25 Q At all?

1 A No.

2 Q The fan does not wear down, the motor does not become a
3 little slower?

4 A No.

5 Q It stays the same PMS?

6 A Yes.

7 Q Have you ever had maintenance on the duct system or fan
8 system?

9 A The only thing we ever do as far as the duct system is to
10 clean the defusers.

11 Q Why did you clean the defusers?

12 A To get rid of any accumulated dirt.

13 Q Would an accumulation of dirt lessen the efficiency of the
14 duct system?

15 A Inside the duct, no.

16 Q Would it affect the type of air that is put out if there is
17 dust in the duct system? When pumping air, wouldn't it
18 therefore pump the dust?

19 A If there is a large accumulation, yes.

20 Q That would affect the type of air that is coming out?

21 A It could, I suppose, if it was heating and there was dust all
22 over the defuser.

23 Q Instead of fresh air being pumped into the civilian personnel
24 office, there could be air that is dust-filled if it is not
25 cleaned?

1 A It is cleaned.

2 Q I didn't ask you that. I said if it is not cleaned.

3 A I suppose yes, hypothetically, sure.

4 Q So 4,800 cubic feet per minute capacity may not be fresh air
5 at all times? Occasionally it may be partially contaminated?

6 A Not in that building.

7 Q Why not?

8 A Because we clean them every year.

9 Q Every year?

10 A Every year we clean the defusers and it is done by contract.

11 Q To which company?

12 A Right now it is Master Housekeepers. They clean the defusers
13 and lighting fixtures once a year.

14 Q Do you supervise them?

15 A It is a contract under my responsibility. I don't supervise
16 them directly, I have people who do that.

17 Q Who are the people that supervise them?

18 A At this time now?

19 Q At that time.

20 A Another name. I can't recall his name either.

21 Q How about now?

22 A I can't remember him. He is on the afternoon shift.

23 Q What if they do the maintenance in the morning? Do you have
24 anybody looking it over in the morning?

25 A They do it on non-working time, which is after 4:30, 5:00.

1 Q Define fresh air for me.

2 A Fresh air is air that is brought from the outside that is
3 free of any heavy contamination, smoke and dust; reasonably
4 free of contaminants.

5 Q Of the outside air surrounding TACOM, how much of it is
6 fresh?

7 A I am not qualified -- I don't collect the air to see if it is
8 fresh. It is air drawn from the outside.

9 Q Are you using the terms "fresh air" and "outside air"
10 synonymously for the purpose of your disposition form?

11 A Yes, I am.

12 Q You are just saying to the Command that air from the outside
13 is getting into the building at around 18 percent?

14 A Yes.

15 Q You have no idea of the contents of the air? It could be
16 polluted?

17 A By what standard?

18 Q I am asking you what standard.

19 A What is polluted?

20 Q You have defined fresh air as something reasonably free of
21 contaminants. Now, you tell me. You have assumed fresh air
22 to be outside air. Now, outside air is not always free of
23 contaminants. So in other words, it is potentially the case
24 that the outside air might not be meeting regulations.

25 A The fresh air of the outside air is always filtered. The

1 return air itself goes through a filtering system.

2 Q What type of filtering system?

3 A Fiber-glass filters similar to what you have in a hot-air
4 furnace at home.

5 Q I am surprised that all the contents of this study, or this
6 report regarding the study, are all approximations. Did you
7 get any hard data from your June '79 research?

8 A Just what is contained on the memorandum.

9 Q Well, everything here is approximation.

10 A Yes.

11 Q Who prepared this report for you then, the study for you?

12 A People in my engineering office.

13 Q Whom?

14 A Mr. Novak.

15 Q Who is Mr. Novak?

16 A He is head of the Engineering Department.

17 Q Anybody else besides Mr. Novak?

18 A I don't recall who he used on that.

19 Q You must understand, Mr. Lang, I was under the impression
20 that Mr. Braun had done the pre --

21 A He had done some as well, yes.

22 Q But Mr. Novak would be a new person for us to consider.

23 A Well, the only thing he did was check the amount of fresh
24 air coming in.

25 Q I think that is a pretty important thing since the Army

1 obviously relies heavily on your construction of this.

2 A I was involved myself, he and I.

3 Q What studies did you do so personally?

4 A I checked the dampers and had Mr. Novak's people take the
5 readings and check them to verify them.

6 Q How many areas of the building did you check with these tests?

7 A All of the Personnel area.

8 Q How many other areas did you check?

9 A None.

10 Q None?

11 A None at that time I did not, no.

12 Q How many in your normal schedule of testing?

13 A They check the entire building when they check our outside
14 air, 250,000 square feet.

15 Q How many specific tests did you make in how many areas?

16 A We checked all the fan rooms.

17 Q How many fan rooms are there?

18 A I think there is four.

19 Q Let me understand that because I am not real familiar with
20 the tests. Does that mean some guy takes the instrument to
21 one position in four different places, stands in four
22 different places in a building of 250,000 square feet?

23 A Yes.

24 Q That constitutes compliance with the entire building?

25 A We are talking about air from the outside is what we are

1 talking about. I don't go around and check every defuser.
2 Q Why not?
3 A There is not a need to do it. With a closed system, it does
4 not vary. The only thing we may do is run partitions up to
5 the ceiling and close off an area. Then we check that.
6 Q You said you check four areas?
7 A I am talking about fan rooms themselves, not working areas.
8 Q These studies are not done in the working area at all?
9 A This one was.
10 Q Why this one and not others?
11 A Because we got complaints.
12 Q What were the standard studies, their results, outside
13 Mr. Pletten's area? You did normal studies?
14 A Yes, fan room.
15 Q What was the result?
16 A They met the standard.
17 Q Did Mr. Pletten's test for the Personnel Office meet AR
18 requirements, or the test overall in the fan room meet AR
19 standards, or both?
20 A Really both.
21 Q What were the quantifications of both tests? What were the
22 facts?
23 A We determined how much fresh air came in in Leroy's area; we
24 showed how much came out of each defuser and using a formula
25 we calculated that to see how much CFM was being pushed in

1 that room.

2 Q If there was an obstruction in the duct --

3 A There was none.

4 Q Let's assume hypothetically there was one. Would that limit

5 the amount of CFM?

6 A Yes, it would.

7 Q How do you know there was no obstruction?

8 A Because we found the violation site came up to what it should

9 show.

10 Q These studies are written up every year?

11 A I don't take those kinds of studies every year.

12 Q You stated you do air studies every year.

13 A Yes, in the fan rooms.

14 Q Are those quantifications written? Are there fan-room study

15 reports?

16 A No, there is not.

17 Q Nothing written?

18 A No, there is no need. A man checks it as part of the

19 maintenance procedure.

20 Q If there are no written studies and no written numbers other

21 than your word that it is between eight and 10 percent, isn't

22 that all approximation, Mr. Lang?

23 A No, because we did take a reading at that time.

24 Q Why didn't you write them down?

25 A They are written down.

1 Q No. These are your percentages of the numbers. I don't have
2 the actual study in front of me.
3 A I was not asked for that.
4 Q You knew there was a problem.
5 A We checked it and verified it was all right, according to
6 this.
7 Q Mr. Lang, from a layman's standpoint, wouldn't you agree this
8 is basically approximation?
9 A This may be. I don't know. Do you have a copy of these? I
10 don't know if it is this study.
11 Q You based your DF on that? Weren't they approximations?
12 A No, they were on actual tests.
13 Q What were the results of the tests?
14 A This is the result of those tests.
15 Q But these are not specific, sir. Would you agree your DF
16 is not specific?
17 A It is specific. It tells you the information that was
18 requested.
19 Q If you take your statement in Paragraph 2 at face value that,
20 "We are still bringing in eight to 10 percent of fresh air,"
21 and you presume eight is the minimum and 10 percent is the
22 maximum, with the dampers closed, admittedly, isn't it
23 possible that one could presume that you are not in
24 compliance with AR 1-8?
25 A Not at all.

1 Q Don't you say you have to have at least 10 percent?

2 A Yes.

3 Q Isn't the maximum number you allowed you could get in the
4 winter months with the dampers closed was 10 percent?

5 A The dampers are not closed.

6 Q If they were closed?

7 A No, you are still getting 18 percent. Because of all the
8 other leakage in the building, you are still getting 18
9 percent.

10 Q You are getting between 16 and 18 percent theoretically,
11 isn't that correct?

12 A That is true --

13 Q That is a requirement.

14 A -- people opening and shutting doors and there being leaks
15 in the walls, through windows. The condition that we are
16 stating here is if the outside dampers were 100 percent
17 closed, which they are not, that building, even if it is
18 wintertime, we take 25 percent outside air, but I had them
19 closed in the event there was a failure and those dampers
20 were closed, even under those circumstances we met the
21 standard.

22 Q How open do the dampers have to be to meet 25 percent?

23 A About a quarter, or a little less than a quarter, 25 percent
24 or less.

25 Q I don't understand. The dampers have to be 25 percent open

1 to receive 25 percent of air?

2 A Yes, or less. We are getting leakage.

3 Q Are they normally open 25 percent? Do you have a standard
4 damper opening?

5 A It depends on the temperature outside. In extremely cold
6 weather, we reduce it down, so we still get 18 percent.

7 Q That means you at least keep it at 18 percent level, is that
8 true?

9 A Yes, but we never close them completely.

10 Q The dampers are always open at 18 percent?

11 A No.

12 Q What is the least they are ever open?

13 A Ten percent. That is the minimum setting on the damper
14 control. If there was failure --

15 Q Wait a minute. Hold on. The minimum setting on the damper
16 control is 10 percent open?

17 A Yes.

18 Q I thought you told me you did the study with the damper
19 closed?

20 A Yes, I did.

21 Q Do you close dampers if they have to be open less than 10
22 percent?

23 A We overrode the control that makes the determination what
24 kind of -- what would happen and how much air we get in with
25 the dampers completely closed.

1 Q Did you ever do a study at normal?

2 A Yes.

3 Q What were the results of the study?

4 A That this far exceeded this.

5 Q How far?

6 A The minimum is 10 percent outside air setting and you can run
7 that up to 100 percent outside air, which, in effect, is the
8 10 percent of fresh air.

9 Q What is normal in the winter months at TACOM?

10 A Ten percent outside fresh air. That is where all the damper
11 settings are set.

12 Q But you don't have any numbers for that, do you?

13 A What numbers would you like?

14 Q Specific numbers from reading those instruments you told me
15 you operate.

16 A With me, no.

17 Q You testified before that they don't exist. Now you are
18 testifying that you don't have them with you. Do these
19 numbers exist, or don't they?

20 A Not that I know of. I have no idea. I would have to check.
21 They don't keep records like that.

22 Q You are the boss, Mr. Lang, you are the boss. You direct if
23 such studies are kept.

24 A Yes.

25 Q Do you direct your people to keep the numbers?

1 A No, just to do the checking.

2 Q So the numbers don't exist?

3 A Again, I don't know if the man keeps it. He is not required

4 to.

5 Q Do you have separate standards for smoke as opposed to other

6 pollutants?

7 A As far as ventilation is concerned?

8 Q Yes.

9 A No.

10 Q Define the contents of smoke for me, sir.

11 A I don't know. I am not qualified.

12 Q You told me you're qualified to take air studies.

13 A Yes.

14 Q You are saying you are only qualified to take air flow

15 studies, or air content studies?

16 A I don't take air content studies. That is not my responsi-

17 bility.

18 Q You indicated your people did and that is including the

19 boiler plant?

20 A Yes.

21 Q Do they take air content studies?

22 A Yes.

23 Q Now, part of your job is taking air content studies. Do you

24 take air content studies for the rest of the Command?

25 A No.

1 Q Why not?

2 A Because the Fire Department may take air content studies as
3 far as explosives, but as far as smoke, no.

4 Q What contents do you take?

5 A First, gas. If they get a report of gas, they go down and
6 take a sample of that.

7 Q That is all that is done other than pollution control on the
8 boiler?

9 A As far as I am responsible for.

10 Q Do you have any indications at all what the air contents of
11 the Command is? Are they -- you keep talking in this
12 disposition form about fresh air.

13 A Yes.

14 Q We have established you consider fresh air outside air,
15 correct?

16 A Yes.

17 Q But we don't know whether that air is clear, whether it is
18 reasonably free of contamination, do we?

19 A Well, no, I guess not.

20 Q You don't have any idea? Let's presume on the study which
21 was done as to the contents of the air. You have no
22 knowledge of them?

23 A I know the med tech takes studies of air from time to time.

24 Q Med tech?

25 A Yeah.

1 Q Is that under your control?

2 A No.

3 Q Whose control are these people under?

4 A The doctor.

5 Q Dr. Holt?

6 A Yes.

7 Q Does Dr. Holt direct air contents studies?

8 A I don't know. I imagine he does from time to time. I don't

9 know, he would have to answer that question.

10 Q Are you familiar with the USACARA report regarding

11 Mr. Pletten?

12 A Not thoroughly.

13 Q It appears at Tab 3, at least the conclusions do. Have you

14 ever read this before?

15 A I don't believe so. I don't recall.

16 MS. BACON: Objection. I would ask you

17 identify it a little more specifically.

18 Q (By Mr. Cohen) Identifying Tab 3, which states -- the

19 USACARA report -- which states at Section D of conclusions,

20 "While TARCOM ventilation system in the building occupied by

21 civilian personnel division may provide recommended minimum

22 of 10 cubic feet of fresh air per minute per person, there is

23 no evidence that an analysis of air content was made to show

24 that Mr. Pletten's work area is reasonably free of toxic

25 substances." Are you familiar with that?

1 A No.

2 Q Were you instructed at any time to perform air content
3 studies of that area?

4 A No, I wasn't.

5 Q Who does these studies besides the medics?

6 A That is not my responsibility.

7 Q You said you had the only air pollution or contamination
8 devices on the boiler system, isn't that true?

9 A I don't run the boiler plant. You asked me if there were
10 pollution control system devices, and there is, on the power-
11 house.

12 Q Let's face it, Mr. Lang, you testified earlier you are fairly
13 well trained in this area because of 30 years experience.
14 Why wouldn't they go to you for contamination studies?

15 A Because that is not my training or background or responsi-
16 bility.

17 Q All your training and background, then, is air flow?

18 A That is only a small part of my training.

19 Q I understand you have far more things, but you are trained
20 in air flow?

21 A Yes.

22 Q But not air content?

23 A No, I don't take air samples and determine what toxicants
24 were there. That is not my responsibility.

25 Q Do you know the name of the test you attempted that went from

1 one to 10?

2 A That is the Ringaman test.

3 Q What does that show?

4 A Quantity of smoke in the air coming out of the boiler plant.

5 Q That sounds like an air content study.

6 A No, air content is what is in that smoke. All the Ringaman
7 test shows is the density of the smoke, that is all. It does
8 not show what is in the smoke, what its contents are.

9 Q Did you do a Ringaman test in this area for Mr. Pletten?

10 A That Ringaman test is not applicable to that.

11 Q Why not?

12 A Because the Ringaman test is a smoke test from a boiler plant.
13 Ringaman would be zero in that area.

14 Q Without even testing you are sure of that?

15 A Yes, unless there is a fire over there.

16 Q I noted at the bottom of your disposition form comments
17 about areas where smoking had been banned; Paragraph 5: "One
18 of the reasons no smoking signs were posted in areas such as
19 conference rooms, auditorium and cafeterias, is that the
20 requirement could not normally be satisfied." Could it be
21 possible to do a Ringaman test in a wholly contained area to
22 determine smoke?

23 A I would not even want to go in the room to take the test.

24 Q Why?

25 A It would have to be so dense to apply a Ringaman to it.

1 Q You don't do any smoke studies at all at the Command? Are
2 there more sensitive studies than a Ringaman device available
3 for you?
4 A Not that I do other than for explosive mixtures.
5 Q Do you know any other test, even though you don't do them?
6 A There is a test for carbon monoxide for engine exhaust.
7 Q Do you do carbon monoxide tests?
8 A My firemen do.
9 Q Do you direct the firemen?
10 A Not necessarily, because it is done on an as-needed basis.
11 Q Isn't carbon monoxide odorless and colorless? How would you
12 know unless there is a tragedy?
13 A Usually it goes along with something else.
14 Q Are you familiar with cigarette smoke contents after it is
15 burned?
16 A No.
17 Q Did you know it was carbon monoxide?
18 A I do know that. What is left, I don't know.
19 Q Do you smoke, sir?
20 A I used to.
21 Q How much?
22 MS. BACON: I object to this testimony as
23 irrelevant.
24 Q (By Mr. Cohen) Mr. Lang, how much did you smoke?
25 A A pack a day.

1 Q You still smoke?

2 A No.

3 Q Did you quit?

4 A Yes.

5 Q How many years now?

6 A About five years.

7 Q Why did you quit?

8 A Because it became a nuisance.

9 Q How so?

10 A Fumbling for cigarettes and I just felt I could give it up,
11 and I gave it up.

12 Q Do you have any complaints from other people with regard to
13 cigarette smoke?

14 A No.

15 Q If somebody asked you to stop smoking, you would stop smoking
16 for the purposes of a meeting?

17 A In a conference room I would not smoke.

18 MR. COHEN: Let's take a little break.

19 (Recess taken.)

20 Q (By Mr. Cohen) Let me ask you a few questions more.
21 As Facilities Engineer, do you instruct your
22 people as to personal habits on the job?

23 MS. BACON: I would object as being irrelevant.

24 Q (By Mr. Cohen) Do you instruct your people as to personal
25 habits on the job?

1 A No, not personally.

2 Q If somebody came in dirty, for example, horribly dirty on a
3 continual basis, would you caution them?

4 A That would be because of job conditions, we would say you are
5 not very presentable. I have never done that, or had a need
6 to.

7 Q Do you have any rules with regard to smoking within your
8 section as Facilities Engineer?

9 A No.

10 Q You don't regulate smoking at all?

11 A Only in areas where it is prohibited. We put signs up, no
12 smoking, since I have the responsibility to provide those
13 for the Command.

14 Q You provide the no smoking signs?

15 A Yes.

16 Q But you have not sent out any memo to your employees regarding
17 no smoking?

18 A Other than coming through the normal government chain.

19 Q If higher command sent you one, you would send it out?

20 A Absolutely.

21 Q But you don't initiate them?

22 A No, I don't.

23 Q Do you have any knowledge or experience with regard to
24 hazard from fire retardant, or other materials of that sort?

25 A Yes, as part of my job, yes, I do.

1 Q Can you describe that part of that job and what the job
2 specifically is?

3 A CO2, fire extinguishers; Halon. Those are fire retardants
4 and extinguishers.

5 Q Have you been directed by Command there is a similarity
6 between the two?

7 A No.

8 Q If there is a hazard for an employee at TARCOM, is it your
9 position as Facilities Engineer you have to eliminate that
10 problem?

11 A You mean if I am notified by the medics or Safety there is a
12 problem someplace?

13 Q Yes.

14 A We look into it, yes.

15 Q You remedy the problems generally?

16 A Yes, generally, yes. I would say so.

17 Q Did you have any other contact with Mr. Pletten personally
18 besides the report that you responded to? Have you talked
19 to him about this?

20 A About that particular subject matter? Only when I came over
21 to see him, but other than that, I have talked to Leroy on
22 other matters, personal matters that had nothing to do with
23 that.

24 Q Did he make a complaint to you about smoking?

25 A Not until I was called by his supervisor.

1 Q Is smoking a hazard at the Tank Command?

2 A I can't make that judgment. As far as I know, for the people
3 working in the area, no.

4 Q Were you aware that Mr. Pletten was presented with a safety
5 hazard because of smoking?

6 MS. BACON: I would object to that question
7 couched in those terms.

8 Q (By Mr. Cohen) I am referring to the USACARA report, which
9 is exactly those terms. Are you aware Mr. Pletten was
10 subjected to a safety hazard?

11 A He allegedly thought that he was, I knew that. Whether he
12 was or not, I can't verify that.

13 Q Are you aware the USACARA report of Tab 8 -- excuse me. You
14 are not aware of any USACARA reports that indicate it was a
15 hazard?

16 A No.

17 Q Command never told you it was a hazard to Mr. Pletten?

18 A His supervisor said that Leroy said that it was, or
19 allegedly said it was unsafe.

20 Q Are you familiar with OSHA requirements, sir?

21 A As they apply to my area of responsibility, yes, I am.

22 Q Did you coordinate a review as regards those reports, a
23 review of air studies?

24 A I am not responsible for that.

25 Q So if you found the air flow meets AR regulations, they

1 would not necessarily meet OSHA regulations?

2 A I could not make that determination.

3 Q Mr. Lang, I am going to close the record as to my cross-
4 examination. I would ask, on behalf of Mr. Pletten and, I
5 believe, on behalf of the Command, to clarify a lot of
6 these. If there are any documents that reflect specific
7 findings that support your disposition form of July 24 to
8 the Legal Office, can you get them together so we can see
9 them because lots of the problems we are having -- at least
10 we have been having -- I am sure Mrs. Bacon would not
11 necessarily feel the same -- is lots of it is approximation.

12 One last question. Over the period of 30
13 years, then, you have only done 60 air flow studies at the
14 Command?

15 A I don't recall.

16 Q You testified you did at least two a year, so over 30 years
17 you have done these studies 60 times.

18 A There is areas we take studies in that does not involve the
19 whole Command, a DP areas.

20 Q That is what?

21 A Data Processing.

22 Q Computers again. Lots of testing?

23 A As far as humidity, yes.

24 Q If there is a hazard to the computer, they take care of it?

25 A Well, you said hazard. If they don't function, obviously you

1 have to make changes.

2 Q If a human being can't function in that atmosphere, what
3 kind of changes do they make?

4 A I can't answer that.

5 Q You make determinations as far as Data Processing?

6 A As far as humidity.

7 Q Do you have a directive to you, as far as to the computers,
8 they have to work, whatever is necessary for their atmosphere,
9 you keep them running?

10 A Yes, I would say so.

11 Q If computers were in danger, you would hear about it, I
12 presume?

13 A Oh, yes.

14 Q And if an individual, a human being is in a place of hazard,
15 it is not your decision?

16 A If I am informed there is a problem. Obviously, if there is
17 a fire.

18 Q You were informed Mr. Pletten had a problem.

19 A Yes, that is why I responded.

20 Q You responded to the Health Office?

21 A No, to his supervisor.

22 Q You indicate here to the Health Office.

23 A No, I responded to his supervisor.

24 Q Who is his supervisor?

25 A I don't remember who he was then.

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Q Mr. Kator?

A I am not sure. It could have been.

MR. COHEN: I have nothing further.

(9:35 a.m.)

STATE OF MICHIGAN)

SS

COUNTY OF OAKLAND)

I, Norma J. Yeager, Notary Public in and for the above county and state, do hereby certify that the foregoing deposition was taken before me at the time and place hereinbefore set forth; that the witness was duly sworn by me to testify to the truth, the whole truth and nothing but the truth; that the foregoing questions and answers were duly recorded by me in stenotype and later reduced to typewritten form under my supervision; and that the foregoing is a full, true and correct transcription of my stenotype notes.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal at Southfield, Michigan this 10th day of May 1982.

Norma J. Yeager (CSR0015)
Notary Public
Oakland County, Michigan
My Commission Expires: 7-19-83