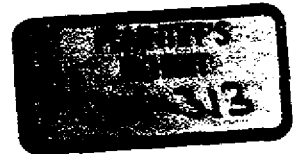


1 SUPERIOR COURT OF NEW JERSEY
2 LAW DIVISION: UNION COUNTY
3 DOCKET NO. UNN-8573-89
4

5 IN RE ENVIRONMENTAL :
6 INSURANCE DECLARATORY:
7 JUDGEMENT ACTIONS :
8
9



10 VOLUME II
11 DEPOSITION UPON
12 ORAL EXAMINATION
13 OF
14 C. WAYNE BICKERSTAFF
15
16

17 WEDNESDAY, APRIL 29, 1992
18
19
20

21 KABOT, BATTAGLIA & HAMMER/DE SIMONE
22 THE COURT REPORTERS
23 59 MAIN STREET
24 WEST ORANGE, N. J. 07052
25 (201) 669-3141

1 WESTINGHOUSE ELECTRIC :
2 CORPORATION, et al, :
3 Plaintiffs, : DOCKET NO.
4 vs. : L-069352-87
5 LIBERTY MUTUAL :
6 INSURANCE CO., et al, :
7 Defendants. :
8 - - - - -
9 WESTINGHOUSE ELECTRIC :
10 CORPORATION, et al, :
11 Plaintiffs, : DOCKET NO.
12 vs. : L-069351-87
13 AETNA CASUALTY & :
14 SURETY CO., et al, :
15 Defendants. :
16
17
18
19
20
21
22
23
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25

1 TRANSCRIPT of the deposition
2 of C. Wayne Bickerstaff, a witness,
3 called for Oral Examination by the
4 parties in the above-entitled action,
5 said deposition being taken pursuant to
6 Rules governing Civil Practice in the
7 Courts of New Jersey, by and before ANN
8 P. CONLON, a Notary Public and Certified
9 Shorthand Reporter of the State of New
10 Jersey, at the office of Connell, Foley
11 & Geiser, Esqs., 85 Livingston Avenue,
12 Roseland, New Jersey, on Wednesday,
13 April 29, 1992, commencing at 10:00 in
14 the forenoon.

15

16

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19 Birmingham Fire Insurance Company,

20 Lexington Insurance Company,

21 National Union Fire Insurance Company,

22 Ranger Insurance Company,

23 Royal Exchange Assurance Company.

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1 A P P E A R A N C E S: (continued)

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22 and London Market Companies.

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2

3 MEGHAN WISE, ESQ.,

4 Inhouse Counsel, Westinghouse.

5

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I N D E X

14

15 WITNESS

DIRECT

16 C. WAYNE BICKERSTAFF

17 By Mr. Cohen

239

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1	E X H I B I T S		
2	IDENT.	DESCRIPTION	PAGE
3			
4	26	Memo dated 11/8/77 from	239
5		Rudolph to ISD Locations	
6		(1 pg)	
7	27	1977 Annual Safety Report	244
8		(12 pgs)	
9	28	Industrial Hygiene	262
10		Newsletter of March 1988	
11		(7 pgs)	
12	29	Safety Committee Meeting	268
13		Report of August 1978	
14		(6 pgs)	
15	30	Memo dated 8/31/78 from	276
16		Whittier to Newark (1 pg)	
17	31	Safety Information Letter	277
18		(2 pgs)	
19	32	Memo dated 9/19/78 from	279
20		Kerns to Works Engineers	
21	33	Memo dated 6/19/79 from	284
22		Berquist to Bickerstaff	
23		(20 pgs)	
24	34	Memo dated 10/18/79 from	289
25		Aiken to Divisions (2 pgs)	

1		E X H I B I T S (continued)	
2			
3	35	Memo dated 10/79 from	295
4		Mangan to Safety (2 pgs)	
5	36	Memo dated 7/7/81 from	
6		Heasley to Bryant (18 pgs)	302
7	37	Toxic Substances List	307
8		(6 pgs)	
9	38	Memo dated 11/2/79 from	308
10		Conrads to Hamilton (2 pgs)	
11	39	Memo dated 11/9/79 from	317
12		Gormley to Divisions	
13		(6 pgs)	
14	40	Memo dated 7/31/81 from	324
15		Beal to Managers (1 pg)	
16	41	Corporate Procedure	326
17		Document dated August	
18		1982 (2 pgs)	
19			
20			
21			
22			
23			
24			
25			

1 C. W A Y N E B I C K E R S T A F F ,
2 having been previously sworn,
3 testified as follows:
4

5 CONTINUED DIRECT EXAMINATION
6 BY MR. COHEN:

7 Q. Good morning, Mr. Bickerstaff.

8 A. Good morning.

9 Q. I appreciate your coming back
10 for the continuation of your
11 deposition. You realize, sir, that you
12 are still under oath?

13 A. Yes.

14 Q. Let us mark as Exhibit 26 for
15 identification a one-page document
16 bearing Bates stamp number 132/4084649.

17 (Memo dated 11/8/77 is
18 marked as Exhibit Bickerstaff 26 for
19 Identification.)

20 Q. Mr. Bickerstaff, have you ever
21 seen this document before?

22 A. I saw it last week, yes.

23 Q. Aside from preparation for the
24 deposition.

25 A. I may have seen it. I don't

1 remember it offhand.

2 Q. Okay. First of all, what were
3 the ISD locations?

4 A. That was Industry Service
5 Division locations.

6 Q. And Mr. Rudolph, the
7 supervisor of safety and accident
8 prevention, what department did he work
9 with?

10 A. He was the supervisor of
11 safety and accident prevention for the
12 Industry Services Division.

13 Q. So that was a department
14 within the Industry Services Division.

15 A. Yes.

16 Q. Was the Industry Services
17 Division part of corporate headquarters?

18 A. No.

19 Q. Was Industry Services Division
20 located in Pittsburgh headquarters?

21 A. No.

22 Q. Where were they located?

23 A. They were located in a small
24 community on the outskirts of Pittsburgh
25 called Greentree.

1 Q. Were there any standard
2 practice, policies or procedures with
3 regard to communications between the
4 Industry Services Division and your
5 division, sir?

6 A. Yeah, there would be
7 correspondence back and forth, yes.

8 Q. And was that pursuant to a
9 formal policy or an informal practice?

10 A. More the latter, informal
11 practice.

12 Q. Now, this document concerns a
13 necessity to resort to a substitute
14 program for asbestos. Was your
15 division, the Industrial Hygiene
16 Division, involved with this substitute
17 program?

18 A. The Corporate Industrial
19 Hygiene Department. It was not a
20 division.

21 Q. Pardon me.

22 A. Yes, they were involved with
23 an initial meeting before I came into
24 the department in early 1976 I believe,
25 looking at the uses of asbestos in

1 Westinghouse and looking for possible
2 substitutions.

3 Q. Now, would you have expected
4 to be involved in a safety communication
5 concerning the use of substitute
6 products for asbestos because of
7 potential employee exposure?

8 A. We could have been. There was
9 no requirement that they had to.

10 Q. Generally speaking, were you
11 involved in matters concerning
12 compliance with OSHA standards?

13 A. Yes.

14 Q. And that is because OSHA was
15 particularly concerned with employee
16 exposure?

17 A. Correct.

18 Q. Now, this memo begins with a
19 reference to the OSHA standard for
20 asbestos. Am I correct that there is no
21 indication on this document of your
22 department being a copied recipient?

23 A. Not on this copy, I don't see
24 anything.

25 Q. Is there any indication on

1 this document of any division other than
2 the Industry Services Division being
3 involved in the dissemination of this
4 document?

5 A. No, I don't see anything.

6 Q. Did the Industry Services
7 Division provide services to the
8 manufacturing divisions of Westinghouse?

9 A. They could have, but in most
10 cases it was a repair plant division.
11 They repaired motors for their
12 customers. In most cases it was
13 utilities where a pump would go bad or a
14 motor would go bad. They would send it
15 back to them to repair.

16 Q. So a supervisor for safety and
17 accident prevention in the Industry
18 Services Division would not have any
19 reporting requirements with regard to
20 the Lamp Plant Division.

21 A. Correct.

22 Q. Or any other division for that
23 matter.

24 A. Correct.

25 MR. COHEN: Let us mark as

1 Exhibit 27 a document bearing Bates
2 stamp numbers 844/6017283 through
3 844/6017294.

4 (1977 Annual Safety Report is
5 marked as Exhibit Bickerstaff 27 for
6 Identification.)

7 Q. Have you ever seen this
8 document before?

9 A. Last week.

10 Q. Pardon me. Aside from
11 preparation for the deposition.

12 A. I may have, but that was 1977,
13 that was 15 years ago.

14 Q. What was the Advanced
15 Technology Laboratories?

16 A. That was one of the facilities
17 or plants which was part of the Defense
18 Division located near Baltimore,
19 Maryland.

20 Q. So the reporting requirements
21 with regard to the Advanced Technology
22 Laboratories were strictly within the
23 Defense Division?

24 A. Correct.

25 Q. Now, this document on the page

1 bearing Bates stamp number 6017287 at
2 the very top makes reference to the
3 Westinghouse six-point safety program.
4 Was that something within the Defense
5 Division or throughout the corporation?

6 A. Corporation.

7 Q. What was the six-point safety
8 program with regard to substances?

9 A. One was the administration,
10 making sure you have a safety
11 committee. We had the Westinghouse
12 safety observer program, which was
13 another function, controlling hazards in
14 the workplace, fire prevention. I
15 forget exactly, but that's kind of the
16 gist of it.

17 Q. Okay. If you would look at
18 page 6017292, which is about five or six
19 pages in?

20 A. Yes.

21 Q. At the top of the page, there
22 is a reference to point three,
23 industrial hygiene. Was that one of the
24 points in the six-point safety program?

25 A. Correct.

1 Q. Was your department
2 responsible for point three?

3 A. Our department was responsible
4 to develop that part of the six-point
5 program, yes.

6 Q. And then did you disseminate
7 whatever was developed throughout the
8 corporation?

9 A. Yes.

10 Q. And what practice or procedure
11 was followed with regard to the
12 dissemination of the industrial hygiene
13 aspect of the six-point safety program?

14 A. Once those were identified,
15 they were included and sent out as a
16 total package of the six points.

17 Q. It was first centralized I
18 take it?

19 A. Yes.

20 Q. Within the Defense Division?

21 A. No, it was centralized again
22 corporate. All locations, at all
23 locations, here's the six-point program
24 to administer an effective industrial
25 hygiene and safety program. It gave

1 them guidelines.

2 Q. At the bottom of page 6017292
3 there is a reference to safe practice
4 data sheets. Was that something created
5 by your division?

6 A. Yes. That was created by one
7 of my predecessors, yes.

8 Q. Could I have the gentleman's
9 name please?

10 A. Mr. Wilbur Speicher. He was
11 the administrator at the time.

12 Q. On the bottom of the page,
13 there is a reference to the safety
14 information letter.

15 A. Same page?

16 Q. Yes. It's at the very bottom,
17 last sentence, page 6017292.

18 A. I want to read the whole
19 thing.

20 Q. Sure, take your time.

21 A. Okay.

22 Q. What was the safety
23 information letter?

24 A. I don't know. That may have
25 been something that defense put

1 together. I don't recognize it.

2 Q. This is mentioned as a subpart
3 to part three, industrial hygiene.
4 Having pointed that out to you, does
5 that refresh your recollection as to
6 whether your department had anything to
7 do with the safety information letter?

8 A. I don't recognize the safety
9 information letter as something coming
10 out of our department.

11 Q. And I take it Exhibit 26,
12 which we marked just a moment ago, is
13 not an example of the safety information
14 letter, to your knowledge?

15 A. No. This again would be I
16 guess reference back to the Industrial
17 Services Division, not headquarters.

18 Q. I notice that Exhibit 26 is
19 entitled "safety." That's why I point
20 out the safety information letter. To
21 your knowledge that is not it?

22 A. No, that is not it. I don't
23 know for sure, but I doubt very
24 seriously.

25 Q. With regard to the safe

1 practice data sheet books, do you know
2 how they were disseminated throughout
3 the corporation, if at all?

4 A. The safe what data?

5 Q. The safe practice data sheet
6 books.

7 A. Oh, data sheets.

8 Q. Yes.

9 A. Those were distributed by the
10 Corporate Industrial Hygiene
11 Department.

12 Q. That's your department?

13 A. Yes.

14 Q. And to whom were they
15 distributed?

16 A. They were primarily
17 distributed to the industrial hygiene
18 and safety representatives or officers
19 at each of the facilities.

20 Q. So they were transmitted
21 directly from headquarters to plants?

22 A. Correct.

23 Q. Was the purpose of the data
24 sheets to obtain uniform practices with
25 regard to industrial hygiene?

1 A. Yes. They were guidance on
2 working with hazardous materials,
3 protective clothing to wear, you know,
4 just uniform guidance.

5 Q. On page 6017293, there is a
6 reference to inspection and a gentleman
7 or a woman by the name of J. Adams, now
8 on the staff of the Industrial Hygiene
9 and Safety Department at the Defense and
10 Space Center. Was the Defense and Space
11 Center part of the Defense Division?

12 A. Yes, correct.

13 Q. Was the Industrial Hygiene and
14 Safety Department at the Defense and
15 Space Center part of that division or
16 part of the Headquarters Division?

17 A. Well, at the time during this
18 inspection they're referring to, Mr.
19 John Adams was an industrial hygienist
20 from the corporate Industrial Hygiene
21 Department. Sometime in 1977, he was
22 offered a position, a promotion to go to
23 the Defense and Space Center in
24 Baltimore, and he chose to accept that
25 position.

1 Q. So he was promoted from his
2 headquarters position to a division
3 position?

4 A. From an engineer to a manager,
5 correct.

6 Q. And headquarters to division.

7 A. Yes.

8 Q. So the same page, that being
9 6017293, point four is training. Is
10 that one of the six points of the
11 Westinghouse training safety program?

12 A. Yes.

13 Q. Was that something within your
14 department's purview?

15 A. Well, it was both industrial
16 hygiene and safety. We all, both
17 organizations contributed information to
18 that. So it wasn't just safety or
19 industrial hygiene, it was both.

20 Q. The paragraph entitled
21 "employee indoctrination safety
22 training" makes reference to a "guide
23 for your safety," and it states that "it
24 is believed that all new hired employees
25 did not receive a copy of same, nor did

1 they receive employee safety
2 indoctrination in the safety slide
3 program. Improvements are perhaps in
4 order."

5 First, what was the safety
6 slide program?

7 A. I believe it was a defense
8 oriented safety slide training program.

9 Q. When you say defense oriented,
10 do you mean for the Defense Division?

11 A. Yes. It was developed by them
12 for their use internally.

13 Q. Do you know if it had anything
14 to do with the handling, use, disposal
15 or storage of substances?

16 A. It probably did.

17 Q. Do you recall any discussions
18 concerning what is referenced here, that
19 the program had not been fully
20 disseminated to all employees?

21 A. No.

22 Q. Do you recall any discussions
23 about making the safety slide program
24 available to Westinghouse employees
25 other than the Defense Division?

1 A. No, that was not a normal
2 practice. Especially the defense,
3 because their customer was the Air
4 Force, and they may have maybe some
5 sensitive information in there which
6 would not be allowed to be disseminated
7 to other Westinghouse locations.

8 Q. The decision whether Defense
9 Division information could or could not
10 be disseminated to other divisions was
11 made at what level, to your knowledge?

12 A. At the defense.

13 Q. On the last page of the
14 document, there is at the top of the
15 page a reference to the safety
16 committees and operational supervisors
17 and keeping them informed of OSHA and
18 MOSH safety information via Westinghouse
19 headquarters information letters.
20 First, what were the safety committees
21 and operational supervisors?

22 A. Again, that would be for just
23 the defense plant, and again going back
24 to our corporate guidance, each location
25 should have a safety committee, and they

1 did have active safety committees for
2 all the defense locations.

3 Q. And what was the Westinghouse
4 headquarters information letter?

5 A. Could be anything. Could be
6 new information from OSHA. One of the
7 letters that was put out at least
8 annually were where the plants would
9 send their injury/illness data into us.
10 We would then combine it and then have a
11 "Westinghouse injury/illness rate and
12 send it back, and they could see how
13 they compared themselves against the
14 year before and against other
15 divisions.

16 Q. Did the Westinghouse
17 headquarters information letters appear
18 on any periodic basis?

19 A. No.

20 Q. Did they have a particular
21 format?

22 A. That changed through the
23 years, the 15 years I had been there,
24 because our department had different
25 reporting functions. In the early years

1 it was basically just a letter, not even
2 a newsletter.

3 Q. And in the early years, would
4 it be entitled a headquarters
5 information letter or would it just be a
6 piece of correspondence from
7 headquarters?

8 A. It would in most cases be a
9 piece of correspondence with the title
10 of the subject at the top of the page
11 and sent to all the Westinghouse
12 locations.

13 Q. When you say the title or
14 subject at the top of the page, you mean
15 just as a reference, the subject matter
16 would be annunciated?

17 A. Right, OSHA new regulations on
18 whatever.

19 Q. Did there come a time when the
20 headquarters information letters became
21 more formalized and appeared on the same
22 type of memoranda heading or with a
23 formal letterhead such as with Exhibit
24 26, which is entitled "safety" at the
25 very top of the page?

1 A. Yes, we got to have later on
2 more formal newsletter letters.

3 Q. Do you know when that
4 occurred?

5 A. I think that occurred
6 primarily after the Environmental
7 Affairs Department was pulled together
8 in 1981.

9 Q. At the bottom of the last page
10 of the exhibit, there is a reference to
11 "miscellaneous training." There are
12 two columns. In the right-hand column,
13 the first three subjects are handling of
14 chemicals, handling and storing of
15 flammable liquids and shop safety. Who
16 attended these training sessions?

17 A. It would be the appropriate
18 individuals who would be either handling
19 the chemicals or -- this was inhouse
20 training that the defense department
21 again produced and then made available
22 or maybe purchased the film and made
23 available for use. But it was primarily
24 the people who received the exposure or
25 potential exposure got the training.

1 Q. And this would be done
2 strictly within the Defense Division?

3 A. In this case, yes.

4 Q. Were there any reports by the
5 Defense Division to headquarters of what
6 training sessions were being made
7 available to the division employees?

8 A. This letter here, which is an
9 annual report, came back to us again as
10 a voluntary gesture.

11 Q. And this would provide
12 historical information about what had
13 happened previously?

14 A. For that year.

15 Q. Was there any prospective
16 dissemination of information concerning
17 the training sessions such that
18 employees in other divisions handling
19 the same or similar chemicals would be
20 able to attend the Defense Division
21 training sessions?

22 A. No, that wasn't done.

23 Q. Were there ever any
24 discussions about whether that would
25 have been a good idea?

1 A. Not really, because to take an
2 employee from someplace in Pennsylvania
3 and move him down, pay for all their
4 expenses and everything else, or maybe
5 even 15 or 20 employees, why not, if you
6 see that they're using such and such
7 film and they purchased it from some
8 industrial firm, why not purchase the
9 film yourself. But there really was not
10 a lot of accident exchange back and
11 forth between divisions on this.

12 Q. Were there any practices,
13 policies or procedures that would have
14 enabled the plant in Pennsylvania, to
15 use your example, to learn what films
16 had been purchased by the Defense
17 Division?

18 A. If it was, it would be through
19 our department as a clearing house.
20 Somebody would call in from plant A and
21 say do you know what they're using, and
22 I would say I think plant B is using
23 this, but let me find out and I'll get
24 back to you.

25 Q. Again, this would be on an ad

1 hoc --

2 A. Ad hoc basis.

3 Q. And the impetus for the
4 exchange of information remained at the
5 plant level for it to make an inquiry?

6 A. Yes.

7 Q. Did other divisions aside from
8 the Safety Division have annual reports
9 of safety activities?

10 A. You say at the divisions?

11 Q. Let me rephrase that question,
12 if I may. Did the divisions other than
13 the Defense Division have the practice
14 of creating annual reports of safety
15 activities?

16 A. There were certain
17 Westinghouse plants. I don't know about
18 divisions, but some of our nuclear
19 operations tend to have annual reports.
20 I don't know if they put it together as
21 a division. See, now, this here is not
22 a division but this is just the one
23 location. This is their annual report,
24 Advanced Technology Laboratories.

25 Q. This is simply an operation

1 within that division and this report
2 only speaks as to that operation?

3 A. Correct.

4 Q. On the page Bates stamped
5 6017288, the third delineated paragraph
6 makes reference to Westinghouse
7 Gettysburg. Was that a Defense Division
8 plant?

9 A. No, Gettysburg was not
10 defense.

11 Q. What type of plant was it,
12 sir?

13 A. Let me think about that. That
14 was I believe elevator.

15 Q. Was there any practice or
16 procedure pursuant to which the Advanced
17 Technology Laboratories, which were part
18 of the Defense Division, visited plants
19 within other divisions to conduct OSHA
20 inspections and submit safety
21 recommendations?

22 A. I don't know.

23 Q. I recognize the document
24 indicates that happened.

25 A. Yes.

1 Q. Was that, to your knowledge,
2 part of a formal practice or procedure?

3 A. No, that was not normal
4 procedure.

5 Q. Do you know of any practices
6 or procedures pursuant to which the
7 Advanced Technology Laboratories could
8 disseminate to other divisions the
9 information they would learn when
10 conducting mock OSHA inspections and
11 submitting safety recommendations?

12 A. Normally they would only be
13 either back to other defense locations
14 or back to headquarters. This is a very
15 rare occasion, Westinghouse Gettysburg.
16 I have no idea why that took place.

17 Q. On page 6017289, the next to
18 last paragraph concerns federal, state
19 and local laws and regulations and makes
20 reference to keeping management and
21 supervision apprised of applicable
22 changes. Did the Advanced Technology
23 Laboratories keep corporate management
24 apprised of applicable changes?

25 A. They might keep us advised of

1 state changes, not so much federal,
2 because it was our responsibility to
3 stay abreast of the federal. But they
4 could have.

5 Q. I take it if they did,
6 however, it was not pursuant to a formal
7 policy or practice?

8 A. That's correct.

9 Q. On the next page there is a
10 reference to the management safety
11 committee. Was that something within
12 the Defense Division?

13 A. I believe that's -- again,
14 that's their style of letter. I believe
15 they're talking about their management
16 safety committee.

17 MR. COHEN: Let us mark as Mr.
18 Bickerstaff Exhibit 28 a document
19 bearing Bates stamp numbers 144/0080532
20 through 0080538.

21 (Industrial Hygiene Newsletter
22 is marked as Exhibit Bickerstaff 28 for
23 Identification.)

24 Q. When did the Industrial
25 Hygiene Department begin the practice of

1 publishing an industrial hygiene
2 newsletter or report?

3 A. Again, I'm trying to recall.
4 It was sometime in the 1980s. I don't
5 know exactly when it started.

6 Q. What was the purpose of it?

7 A. Well, the purpose was to
8 inform the Westinghouse locations of
9 pending regulations, advise them of our
10 training courses, just keeping them
11 abreast of new regulations, changes,
12 whatever, good work practices, things
13 like that.

14 Q. I take it that a subject which
15 was treated in the regular course of
16 these hygiene newsletters was the
17 handling, use, storage and disposal of
18 various substances?

19 A. Well, it could. If we've
20 learned a new practice or procedure or
21 something like this, we could mention
22 that in here.

23 Q. If you became aware of new
24 OSHA regulations, would that be
25 included?

1 A. That would be included too.

2 Q. If a particular plant had
3 advised corporate headquarters of a
4 practice it had found to be a good one
5 for the purpose of protecting employees,
6 would that be disseminated through this
7 letter?

8 A. That could be.

9 Q. If a particular practice had
10 been determined to be dangerous or
11 unacceptable to corporate headquarters,
12 would that be --

13 A. That could also be in there
14 too.

15 Q. Who was the person responsible
16 for the creation of the industrial
17 hygiene newsletter?

18 A. Everybody in our department
19 contributed, and we had a training
20 communicator manager, who would then,
21 after we submitted articles, would put
22 it together so it would look like one
23 author writing the whole thing and she
24 would proof it. And everybody had an
25 opportunity to look at it before it went

1 out to make sure misspellings and
2 whatever were corrected.

3 Q. What was the title of that
4 person?

5 A. She's listed here, manager of
6 training communication.

7 Q. That would be Debbie
8 Rockovich?

9 A. Yes.

10 Q. And was she the first manager
11 of training and communications?

12 A. No, there was a predecessor to
13 her.

14 Q. Do you recall who the
15 predecessor was?

16 A. I knew you were going to ask
17 that. Oh, Norma -- I can't think of the
18 last name right now.

19 Q. We can leave a blank and
20 you'll have a chance to read the
21 transcript. Do you recall when Norma,
22 whatever her last name may have been,
23 first took the position of manager of
24 training and communication?

25 A. I'm guessing around 1984, '85,

1 something like that.

2 Q. And to your knowledge, was
3 that about the time the industrial
4 hygiene newsletter came into being or
5 did it precede that woman's taking
6 office as manager of training and
7 communication?

8 A. We had communications. I
9 don't know if it was officially called
10 the industrial hygiene news or
11 newsletter. We always had
12 communications telling them about new
13 regulations and things like that,
14 announcing our training courses and
15 things. I don't know when we officially
16 took on the form of a newsletter. I
17 can't say.

18 Q. Was the newsletter published
19 with any regularity?

20 A. Not really. We would just as
21 needed, as we got enough information
22 together to produce one, we would have a
23 newsletter.

24 Q. This particular one happens to
25 be dated March, 1988. That is not an

1 indication that the newsletter was
2 printed on a monthly basis?

3 A. That's correct.

4 Q. And I take it it was not
5 necessarily printed quarterly,
6 biannually or even annually?

7 A. That's correct.

8 Q. Can you estimate in anyway how
9 often a newsletter would appear?

10 A. It depends per year or
11 whatever. I would estimate we at least
12 had some sort of communication to the
13 Westinghouse plants maybe three times a
14 year.

15 Q. Were there any particular
16 communications directed to divisional
17 headquarters as opposed to the plants?

18 A. Not in the form of a
19 newsletter or anything like that, no.

20 Q. Were the divisional
21 headquarters included within the
22 dissemination of the hygiene newsletter
23 to the plants?

24 A. Yes.

25 MR. COHEN: Let us mark as Mr.

1 Bickerstaff Exhibit 29 a document
2 bearing Bates stamp numbers 844/6072269
3 through 6072274.

4 (Safety Committee Meeting
5 Report is marked as Exhibit Bickerstaff
6 29 for Identification.)

7 Q. Can you identify this
8 document, sir?

9 A. This appears to be a monthly
10 safety meeting, which was conducted at
11 one of the defense facilities near
12 Baltimore.

13 Q. To your knowledge, was it the
14 practice of the Aerospace and Systems
15 Development Divisions to have monthly
16 management safety committee meetings?

17 A. They would have pretty much
18 monthly meetings, yes.

19 Q. Was it also the practice of
20 the Aerospace and Systems Development
21 Divisions to record what had happened at
22 those meetings in this type of
23 memoranda?

24 A. That's correct, that's my
25 understanding.

1 Q. Was it also the practice that
2 you would be copied on the memoranda?

3 A. Yes, in most cases I got
4 copies, correct.

5 Q. Now, at the top of the first
6 page of the Exhibit there is a list of
7 names. Are those members of the
8 management safety committee?

9 A. I think I only attended one of
10 their monthly meetings in 15 years, so I
11 can't say for sure, but in looking at
12 this document, they look like they are
13 members of this local safety committee,
14 yes.

15 Q. Now, first off, most of the
16 names there at the top of the page with
17 the exception of one have a letter code
18 and then a number code following them,
19 and all of them have the prefix MS. Do
20 you know what that prefix meant?

21 A. I think that means mail stop.

22 Q. Was it the practice within the
23 Aerospace and Systems Development
24 Divisions to use the mail stop when
25 communicating within the division?

1 A. I believe so.

2 Q. So for the cc's, when there
3 are, for the first six people, the MS
4 prefix, those are people also within the
5 division?

6 A. Yes.

7 Q. And is it your understanding
8 that all of these people were located at
9 the same plant?

10 A. Yes.

11 Q. And that was somewhere outside
12 Baltimore you had said?

13 A. Yes.

14 Q. Now, was that plant in the
15 Aerospace and Safety Development
16 Division?

17 A. It was part of the Defense and
18 Electronic Systems Division, yes.

19 Q. And that is the same division
20 we were talking about earlier with
21 regard to the Defense Division for the
22 Advanced Technology Laboratories?

23 A. Yes, the Advanced Technology
24 Laboratories is one of the facilities in
25 the Defense Division, yes.

1 Q. The last three copy recipients
2 of Exhibit 29 are the administrator of
3 safety at headquarters, a Mr. Ziefel,
4 the manager of industrial hygiene and
5 safety, and you, sir, at the industrial
6 hygiene laboratory. Why were those
7 three people copied on this?

8 A. Their prerogative from the
9 defense to just copy us on the
10 information on the safety committee.

11 Q. Were the manager of industrial
12 hygiene and safety and the administrator
13 of safety for headquarters regularly
14 copied on these monthly meeting reports
15 as you were?

16 A. I believe so.

17 Q. On the page bearing Bates
18 stamp number 6072272, the third to last
19 page, there is a reference to a
20 directive from Westinghouse safety
21 headquarters. Do you see that under
22 "OSHA update"?

23 A. Yes.

24 Q. Where were Westinghouse safety
25 headquarters located?

1 A. It was located in Pittsburgh.

2 Q. And what division was that
3 part of?

4 A. That's part of the
5 Headquarters Division.

6 Q. Am I correct that your
7 department was within the Westinghouse
8 safety headquarters?

9 A. Yes.

10 Q. Could this be a reference to a
11 directive from the Industrial Hygiene
12 Department of the Westinghouse safety
13 headquarters?

14 A. Well, it could be that or part
15 of our industrial hygiene safety
16 program. I had the industrial hygiene
17 part.

18 Q. Right, and I understand you
19 had a colleague who had the safety
20 aspect.

21 A. Right.

22 Q. Now, it is extremely difficult
23 to read that paragraph, I recognize
24 that. But I would ask you to take a
25 good look at the underscored language,

1 which I believe reads, "on advice of our
2 labor law section, these records should
3 not be made available to the above," and
4 then the memoranda continues until it
5 reads, "locations should decline
6 compliance with revised regulation
7 pending court tests of its validity."
8 And the paragraph concerns OSHA or NIOSH
9 requests for employee individual
10 exposure and medical records.

11 Do you recall any
12 communications by safety headquarters
13 directing plants not to comply with OSHA
14 or NIOSH requests for individual
15 employee and medical records?

16 A. I remember something coming
17 out, yes.

18 Q. Could you tell me what your
19 recollection is please, sir?

20 A. We were advised by our Law
21 Department to put this communique out
22 because there was a new regulation and
23 it was being challenged. Until that
24 challenge was determined for or against,
25 we were told to comply with this order

1 from the Law Department.

2 Q. Was the regulation that was
3 being challenged focused upon a
4 particular substance?

5 A. No. I think it was just the
6 challenge of this new regulation.

7 Q. Do you know what the outcome
8 of the challenge was?

9 A. The new regulation was upheld.

10 Q. Do you recall if there were
11 any further directives from safety
12 headquarters regarding the regulation?

13 A. I believe there was a
14 communique sent out that from now on you
15 will now comply with the regulation.

16 Q. And do you recall
17 approximately when that occurred?

18 A. No. It was after this, but
19 I'm not sure when.

20 Q. Do you know if it was before
21 1981, for example?

22 A. I think it was, but I'm not
23 sure. It was not long after this. I
24 think it was a matter of six months or a
25 year that the challenge was finally

1 decided.

2 Q. Do you know if the types of
3 records which are the subject matter of
4 this paragraph were ever centralized at
5 Westinghouse headquarters?

6 A. No, I don't think they were.

7 Q. When the new directive came
8 out ordering compliance with the
9 requests by government agencies, were
10 there any directives concerning
11 notification to Westinghouse
12 headquarters?

13 A. I can't remember exactly what
14 the communique said. I don't know.

15 Q. Do you know which departments
16 sent the communique out?

17 A. I believe it was the Corporate
18 Safety Department.

19 Q. That was your --

20 A. Well, it was --

21 Q. Your division?

22 A. Yes.

23 MR. COHEN: Let us mark as Mr.
24 Bickerstaff Exhibit 30 a one-page
25 document bearing Bates stamp number

1 833/0004533.

2 (Memo dated 8/31/78 is
3 marked as Exhibit Bickerstaff 30 for
4 Identification.)

5 Q. Have you previously seen this
6 document, sir, aside from preparation
7 for the deposition?

8 A. I probably did, because I was
9 advised of anything going out of our
10 department. I don't see a cc to me, but
11 I was advised.

12 Q. Was Diane Whittier a member of
13 your staff?

14 A. Yes.

15 Q. The document is from your
16 office I take it?

17 A. Yes.

18 Q. And it is to Westinghouse
19 Newark, New Jersey, attention Charles
20 Burger. Who was Mr. Burger?

21 A. Charles Burger was the
22 industrial hygiene and safety officer
23 for that location.

24 Q. And what was that location?

25 A. Newark. I think they made

1 relays, electrical relays.

2 Q. Do you recall what division
3 the plant belonged to?

4 A. I think it was the Instrument
5 and Control Division.

6 Q. Now, the memo makes reference
7 to certain charcoal tube samples taken
8 by you, sir, and specifically mentions
9 the trichloroethylene sample. Do you
10 recall any advice given to Newark
11 concerning information received from
12 other plants or locations regarding
13 trichloroethylene?

14 A. Not offhand.

15 MR. COHEN: Let us mark as Mr.
16 Bickerstaff Exhibit 31 a two-page
17 document bearing Bates stamp numbers
18 eight 844/6072275 through 6072276.

19 (Safety Information Letter
20 is marked as Exhibit Bickerstaff 31 for
21 Identification.)

22 Q. Can you identify this
23 document, sir?

24 A. No, I don't know where it came
25 from.

1 Q. The document has in the upper
2 left-hand corner what appears to my eye
3 at least to be the Westinghouse logo.
4 And the last page has the sign-off of
5 "Safety Department." Have you ever
6 seen a similar type of safety
7 information letter during your
8 employment at Westinghouse, if not this
9 particular document?

10 A. I don't remember this logo in
11 this style, no.

12 Q. Was it a practice of
13 Westinghouse to obtain safety
14 information letters from other
15 corporations?

16 A. We belonged to certain
17 committees and professional
18 organizations that other companies
19 belonged to and we did get together and
20 share information. This to me looks
21 like it's probably a plant or division
22 or something, because the corporation
23 would not send something out like this
24 unless there was a cover letter to it.
25 But by itself, you don't know who it

1 went to or whatever, and you certainly
2 wouldn't put Safety Department, you
3 would put the author who sent it.

4 Q. Have you ever seen such a
5 safety information letter attached to
6 the memoranda concerning the monthly
7 management safety committee meetings of
8 the Defense Division?

9 A. It could have been. I can't
10 say.

11 Q. You can't say one way or the
12 other?

13 A. No.

14 MR. COHEN: Let us mark as Mr.
15 Bickerstaff Exhibit 32 a document
16 bearing Bates stamp numbers 132/4079541
17 through 4079542.

18 (Memo dated 9/19/78 is
19 marked as Exhibit Bickerstaff 32 for
20 Identification.)

21 Q. First of all, sir, Gateway
22 Pittsburgh is a heading seen on many
23 documents. I take it that's a reference
24 to headquarters?

25 A. That's right.

1 Q. And the "to" here is works
2 engineers. Would that be a memo
3 therefore directed to plants or
4 divisions?

5 A. Plants and could be divisions
6 too.

7 Q. The document concerns a system
8 proposed by Chemical Waste Management,
9 whereby various PCB-contaminated
10 materials can be disposed of in five
11 regions of the United States. Was there
12 any practice concerning communicating
13 with the Industrial Hygiene Department
14 by the environmental control and
15 construction technology group headed by
16 Mr. Kerns with regard to PCB disposal
17 practices?

18 A. We could have shared the same
19 person at a location. In other words,
20 that person who works in works
21 engineering could possibly have also
22 been the industrial hygiene safety
23 officer. But unless they were on his
24 official distribution, they did not get
25 copies.

1 Q. And unless you were sharing
2 the same person with Mr. Kerns, the
3 person to whom you communicated would
4 not necessarily know about this
5 communication?

6 A. That's correct.

7 Q. And I take it this
8 communication in no way was directed to
9 you as a direct or copy recipient?

10 A. No.

11 Q. Were there any formal or
12 informal practices, policies or
13 procedures followed by the Industrial
14 Hygiene Department with regard to
15 communicating with the corporate
16 headquarters Insurance Department at
17 Westinghouse?

18 A. Not any formal. Informal, as
19 we had a need to, but nothing formal.

20 Q. If a loss had occurred at a
21 plant, would you be involved in the
22 reporting of that loss?

23 A. What kind of loss?

24 MR. BRENDAL: I'm going to
25 object on the grounds that this is

1 paragraph six information, and this
2 witness hasn't been designated or
3 offered or prepared for paragraph six
4 information. And it's out of scope. We
5 have a witness here today who is going
6 to address that subject, so I would
7 request that you direct your questions
8 to that witness.

9 MR. COHEN: I will direct many
10 questions to that witness. If the
11 witness now testifying understood my
12 question, I would like an answer or an
13 explanation as to whether you are
14 directing him not to answer, and
15 certainly if he cannot answer my
16 question as phrased, I need to know
17 that.

18 MR. BRENDDEL: Why don't you
19 read the question back, and I'll respond
20 accordingly.

21 MR. COHEN: Fair enough.
22 (The question is read by the reporter.)

23 MR. BRENDDEL: I object to that
24 question. I'm directing the witness to
25 the extent that that question

1 contemplates information relating to the
2 reporting requirements of Westinghouse
3 divisions and plants concerning property
4 loss procedures for insurance claims
5 generally and that arising out of the
6 presence of any substance, as I am
7 quoting verbatim from paragraph six of
8 the notice for which this witness is not
9 designated, if it involves that subject
10 matter, then the witness should not
11 respond. If you have information other
12 than something that involves the
13 reporting practices or requirements of
14 the divisions and plants concerning
15 property loss procedures for insurance
16 claims -- actually, as the question is
17 phrased, it's clear that it's directed
18 to paragraph six. So I'll make the
19 decision simple. Do not respond.

20 MR. COHEN: I disagree
21 vehemently and strenuously, but I will
22 not belabor the record.

23 Q. Were there any formal
24 policies, practices or procedures within
25 your division concerning communications

1 with the Insurance Department?

2 A. There was nothing formal.

3 MR. COHEN: Let's mark as
4 Exhibit 33 a document bearing Bates
5 stamp numbers 844/6073989 through
6 6074020.

7 (Memo dated 6/19/79 is
8 marked as Exhibit Bickerstaff 33 for
9 Identification.)

10 Q. Have you had a chance to
11 review the exhibit?

12 A. Yes.

13 Q. Can you identify it please?

14 A. It's a letter to me from Mr.
15 Bob Bergquist, who was with the Power
16 Generation Service Division facility in
17 San Francisco.

18 Q. Now, the letter forwards to
19 you three reports submitted by a James
20 Jackson to the Tucson Electric Power
21 Company concerning asbestos insulation
22 removal at the customer's North Loop
23 station. Were there any formal
24 practices, policies or procedures which
25 you followed concerning asbestos

1 remediation at a customer's operation or
2 plant in 1979?

3 MR. BRENDDEL: Could you read
4 the question back?

5 (The question is read by the reporter.)

6 MR. COHEN: I'll rephrase the
7 question.

8 Q. Were there any guidelines
9 governing you when advised of a plant's
10 involvement with the use of various
11 substances such as asbestos?

12 A. You're going to have to read
13 that back too.

14 (The question is read by the reporter.)

15 MR. BRENDDEL: I don't think
16 it's very well focused. I'm not sure if
17 the witness understands it.

18 MR. COHEN: I'll try again.

19 Q. When you received a document
20 such as this, were there any practices,
21 policies or procedures which you were
22 required to follow concerning this
23 communication and to whom you should
24 communicate with?

25 A. Well, in this particular

1 document here, it was pretty much the
2 Power Generation Service Division.
3 Everybody was copied. The San Francisco
4 office, Phoenix where the project went
5 on, and Broomall, which was the
6 headquarters at that time for the Power
7 Generation Service Division. So he not
8 only copied me, he copied them too.

9 Q. Did you have any requirements
10 to inform your superiors of these
11 circumstances?

12 A. No.

13 Q. Do you remember the subject
14 matter of this communication?

15 A. Yes.

16 Q. Do you recall communicating
17 back to the San Francisco plant?

18 A. I may have. I don't remember
19 offhand.

20 Q. On page 6074005, there is an
21 introduction to the report by Dr.
22 Jackson dated April 30 of 1979, which
23 indicates the involvement of
24 Westinghouse health and safety
25 representatives at both the corporate

1 and divisional levels. Would that have
2 involved people on your staff or Mr.
3 Kerns' staff?

4 A. It would involve people on my
5 staff.

6 Q. When your staff was involved
7 in the evaluation of asbestos exposure
8 at customer sites, were there any
9 particular practices, guidelines or
10 requirements about communicating the
11 involvement to corporate headquarters?

12 A. I don't know if there was a
13 policy. We worked very closely with the
14 Power Generation Service Division on
15 this project, because asbestos was
16 becoming a concern. We wanted to do
17 this one literally by the book, do
18 everything proper, and I was the one who
19 recommended Dr. Jackson. I knew him
20 from the American Industrial Hygiene
21 Association. And he was actually I
22 believe employed by Tucson Electric, but
23 it was the Westinghouse people who
24 actually performed the job and it was to
25 protect our Westinghouse people.

1 Q. Was there any discussion about
2 implementing the procedures used for
3 non-Westinghouse plants for Westinghouse
4 plants?

5 A. No. This kind of work, this
6 was a utility, and we don't operate
7 utilities.

8 Q. At the same time, however,
9 there was some discussion within
10 Westinghouse about Westinghouse employee
11 exposure to asbestos within Westinghouse
12 plants?

13 A. Right, that's correct.

14 Q. Given that circumstance, was
15 there any thought given to tying the two
16 types of situations together?

17 A. I'm not saying that it wasn't
18 totally excluded. I'm sure we gleaned
19 information from this that we would then
20 pass on to other Westinghouse locations
21 if they got involved in an "asbestos"
22 abatement or removal project, whatever.

23 Q. Do you recall any formal
24 method of disseminating that
25 information, such as a periodic report

1 or a practice which was implemented?

2 A. It may have been put in one of
3 our "newsletters" or updates, included
4 in our training programs. We had a
5 formal Westinghouse asbestos abatement
6 training course we put on in, let me
7 think about that, oh, 1984, '85,
8 something like that.

9 Q. Prior to that, was all the
10 communications regarding asbestos
11 abatement whether at Westinghouse plants
12 or non-Westinghouse plants such as
13 customer plants on an ad hoc basis?

14 A. Correct.

15 MR. COHEN: Let us mark as Mr.
16 Bickerstaff Exhibit 34 a two-page
17 document bearing Bates stamp numbers
18 132/4429767 through 4429768.

19 (Memo dated 10/18/79 is
20 marked as Exhibit Bickerstaff 34 for
21 Identification.)

22 Q. Have you ever seen Exhibit 34
23 prior to today aside from preparation
24 for the deposition?

25 A. I don't remember it, no.

1 Q. Is there any indication that
2 it went to your department or division?

3 A. No, I don't see any indication
4 on the letter.

5 Q. Now, the author is a Mary Jo
6 Aiken, supervisor, accident prevention
7 and industrial hygiene. Was that within
8 the Motor Division?

9 A. Correct.

10 Q. And she therefore was not
11 within your division?

12 A. That's correct.

13 Q. Am I correct that Exhibit 34
14 is directed to four different divisions?

15 A. I think it's four different
16 divisions within the same division.

17 Q. So that the Large Motor
18 Division, Medium Motor Division, Power
19 Electronic and Drive System Division and
20 Technical Services are all part of the
21 Motor Division?

22 A. Correct.

23 Q. Now, Ms. Aiken speaks about
24 until such a viable computer tracing
25 program is developed, there needs to be

1 a manual collection of names and
2 individuals within the division who have
3 been directly exposed to asbestos during
4 the course of their work in 1979. Would
5 employees in the Motor Division be
6 people who would ordinarily work within
7 Westinghouse plants or in sites of
8 clients?

9 A. In this case here, these were
10 primarily people who worked in
11 Westinghouse plants.

12 Q. Do you recall any
13 communications with the Motor Division
14 regarding Dr. Jackson's monitoring of
15 asbestos exposure during the course of
16 work done for the Tucson Power Electric
17 Company?

18 A. Any correspondence between
19 them you say? I guess I'm --

20 Q. Any correspondence from your
21 office, sir, to the Motor Division about
22 what Dr. Jackson was doing for the
23 Westinghouse client.

24 A. I don't remember any offhand.

25 Q. Were there any formal

1 practices, policies or procedures that
2 required you to inform the Motor
3 Division about the experience of the
4 Westinghouse health and safety
5 representatives at both the corporate
6 and divisional level who were working on
7 the Tucson Electric Power Company
8 project?

9 A. No, there was no formal
10 reporting information.

11 Q. Now, the letter to you which
12 we've marked as Exhibit 33 from the San
13 Francisco Power Generation Division I
14 believe it was?

15 A. Yes.

16 Q. Concerning forwarding Dr.
17 Jackson's report is dated about four or
18 five months before Ms. Aiken is
19 providing a list of individuals known to
20 have been exposed to asbestos during
21 1978. Do you recall any advice by the
22 Motor Division concerning its employees
23 who had been exposed to asbestos and
24 requests for assistance?

25 MR. BRENDAL: Any advice from

1 the Motor Division to?

2 MR. COHEN: To industrial
3 hygiene, correct, to his department or
4 division.

5 A. There may have been inquiries
6 for information, but let me clarify
7 something.

8 Q. Certainly.

9 A. This project here on the
10 abatement was taking it primarily off of
11 insulation. The exposure in Buffalo, if
12 there was any at all to asbestos, was
13 employees putting asbestos products,
14 asbestos-containing materials into
15 products. Totally different in scope of
16 work. See, here when you take it off
17 you wet it down, control it. If you wet
18 it down here, you would ruin the
19 product.

20 Q. Let me make sure I understand
21 your answer, sir. You were referring to
22 Exhibit 33 and the Tucson Electric Power
23 Company abatement program when you made
24 reference to controlling asbestos and
25 wetting it down.

1 A. Correct.

2 Q. With regard to Exhibit 34 and
3 the Motor Division employees, those
4 people would be using asbestos products
5 in such a manner that wetting down the
6 asbestos would prevent the use of it for
7 the product?

8 A. You might ruin the product
9 then, correct.

10 Q. Exhibit 34 concerns employees
11 who have been directly exposed to
12 asbestos during the course of their work
13 in 1979 and attaches a list of
14 individuals who had been exposed in
15 1978. Is it your understanding of this
16 document that these people in 1978 and
17 the people whose names are sought for
18 1979 were exposed to asbestos in a
19 non-wetting situation?

20 MR. BRENDDEL: I'm going to
21 object.

22 A. I don't know.

23 MR. BRENDDEL: We're getting
24 into the substantive areas of what
25 happened with respect to the actual

1 underlying matters as opposed to line of
2 communication. The witness has
3 indicated that in any event, he doesn't
4 have any knowledge on the question. For
5 the record, I make the objection.

6 MR. COHEN: Your objection is
7 noted.

8 Let us mark as Exhibit 35 for
9 identification a document bearing Bates
10 stamp number 844/6072724 through
11 6072725.

12 Q. Have you had a chance to
13 review Exhibit 35, sir?

14 A. Yes.

15 Q. Have you ever seen this
16 document before aside from preparation
17 for the deposition?

18 A. Looking at the second page, I
19 was copied back in 1979. It must have
20 been in my department.

21 Q. Now, the document begins by
22 noting that the power generation
23 operations safety group meeting is
24 scheduled for October 24th through the
25 26th in Charlotte, North Carolina. Is

1 that group part of the same division to
2 which R. L. Bergquist of the PGSD San
3 Francisco office, who wrote Exhibit 35,
4 belonged?

5 A. I believe so.

6 Q. Excuse me, I misspoke. That
7 was Exhibit 33 and you understood me?

8 A. Yes.

9 Q. Now, did the San Francisco
10 operation of the Power Generation
11 Division receive a copy of Exhibit 35
12 according to the face of this document?

13 A. I don't see it on the front.
14 No, I don't see anything that indicates
15 they got copies of it.

16 Q. Now, this document is from a
17 Mike Mangan, manager, safety, wage and
18 salary administration. I take it that
19 was a department within the Power
20 Generation Division?

21 A. That was the Westinghouse
22 Charlotte plant, and Mike Mangan at the
23 time was the manager of safety and
24 welfare, yes.

25 Q. For that plant?

1 A. Yes.

2 Q. Not necessarily for that
3 division?

4 A. Correct.

5 Q. Am I correct then that this is
6 an example of plant-to-plant
7 communication?

8 A. This probably was plant to
9 plant within the same division at the
10 time. Westinghouse organizes and
11 reorganizes, and at that time this group
12 of plants were in the same division.

13 Q. Do you know if the San
14 Francisco plant was in the same
15 division? And I believe Exhibit 35 is
16 dated December of 1979.

17 A. I believe they were in the
18 same reporting division, correct.

19 Q. Now, Mr. Mangan is writing
20 directly to various people at the East
21 Pittsburgh, Lester, Broomall, Muncie and
22 Winston-Salem plants about a power
23 generation operations safety group
24 meeting. Do you know if those
25 particular plants had representatives

1 within that safety group?

2 A. Within what group?

3 Q. The power generation
4 operations safety group.

5 A. Yeah, the people they've
6 indicated here, Mr. Brady, Whittington,
7 Engle, O'Kora and Waters were the
8 industrial hygiene and safety
9 representatives for each of those
10 locations.

11 Q. So this division had an
12 operations safety group for its plants?

13 A. At that time, yes.

14 Q. Do you recall when that group
15 was first formed?

16 A. No, I don't know.

17 Q. Do you know if ever the group
18 was disbanded?

19 A. Well, we no longer have an
20 East Pittsburgh, Lester, Broomall,
21 Muncie was sold. Winston-Salem is still
22 Westinghouse.

23 Q. Perhaps I did not phrase my
24 question clearly. I'm not concerned
25 with whether the component members of

1 the group changed but rather whether the
2 group ever ceased to exist.

3 A. Yes, they did, because again,
4 we only have one of those plants. I'm
5 sorry, and Charlotte too. Winston-Salem
6 and Charlotte are still plants of
7 Westinghouse.

8 Q. The memo sets forth the agenda
9 for the meeting, and the last item on
10 the agenda, which is page two of the
11 exhibit, reads, "medical surveillance of
12 first-line supervisors exposed to
13 asbestos, weld fumes, toxic materials,
14 et cetera." Do you recall any
15 communications or guidelines concerning
16 communications with regard to the
17 results of the meeting on that subject
18 matter?

19 A. No, I don't.

20 Q. I notice that you, as you
21 pointed out, are a copy recipient and so
22 is a P. Palmieri, manager of corporate
23 safety, headquarters. Were you and Mr.
24 Palmieri the only two Headquarters
25 Division personnel that were copied on

1 this document?

2 A. That's all I see on the
3 document, that's correct.

4 Q. Do you recall communicating to
5 any member of the group any of the
6 information provided to you in Exhibit
7 33 concerning the San Francisco
8 operations and experience with asbestos
9 exposure?

10 A. You mean for this meeting?

11 Q. Yes, sir.

12 A. I don't remember offhand, but
13 one of the persons who was copied on
14 this attended the meeting.

15 Q. Okay, and who would that be?

16 A. Mr. Engle.

17 Q. Was Mr. Engle copied on
18 Exhibit 33 pursuant to any practice or
19 procedure?

20 A. I think it was more of a
21 practice that information like that was
22 from the San Francisco office back to
23 the Power Generation Service Division
24 headquarters, which at that time was
25 Broomall. That's why he was copied.

1 Q. So that the local San
2 Francisco plant would copy its
3 divisional headquarters in what
4 circumstances?

5 A. Well, in this case it was
6 because of the asbestos abatement
7 project that occurred there.

8 Q. I understand that. So was it
9 a significant fact that the substance
10 involved was asbestos?

11 A. Well, yes. It would probably
12 be a combination of asbestos, because
13 all power generation service offices,
14 plants, whatever, did the same thing.
15 They worked out at the customer
16 location. So anything that he learned
17 there in this job they were going to try
18 to put in practice for all other power
19 generation service operations.

20 Q. Do you recall any practices or
21 guidelines concerning the dissemination
22 of information obtained by the Power
23 Generation Division when working for
24 non-Westinghouse sites to Westinghouse
25 plants?

1 A. Nothing direct. Maybe through
2 us, if it was something we thought was
3 applicable. But I can't think of
4 anything direct.

5 Q. Do you recall any discussions
6 about whether it would be a good idea to
7 have the Power Generation Division
8 communicate with the Motors Division
9 concerning asbestos exposure to
10 employees?

11 A. No.

12 MR. BRENDAL: Why don't we
13 take a brief break here.

14 (There is a brief recess.)

15 MR. COHEN: Let us mark as Mr.
16 Bickerstaff Exhibit 36 a document
17 bearing Bates stamp number 132/4085146
18 through 132/4085146.

19 (Memo dated 7/7/81 is
20 marked as Exhibit Bickerstaff 36 for
21 Identification.)

22 Q. Have you had a chance to
23 review the exhibit, sir?

24 A. Yes.

25 Q. Is this a document you have

1 seen previously outside of preparation
2 for the deposition?

3 A. Although I may not be copied
4 directly on it, I remember this. This
5 was about eleven years ago though.

6 Q. Am I incorrect that this was a
7 response to a request made to you by Mr.
8 Bryant?

9 A. That's what it appears to be,
10 yes.

11 Q. And that request in this
12 response would be an example of an
13 informal communication between you and
14 your department and the Insurance
15 Department?

16 A. Yes. This was apparently a
17 specific request.

18 Q. And aside from those occasions
19 when a specific request would be made,
20 were there any formal practices
21 concerning communications between the
22 Safety Division and the Insurance
23 Division?

24 A. None that I'm aware of.

25 Q. Do you recall the reason, if

1 you were told any reason, why the
2 request for this information was being
3 made?

4 A. I don't remember.

5 Q. Do you recall any further
6 requests for information after this
7 response was made?

8 A. There may have been more
9 updates, but I can't say for sure.

10 Q. The first attachment to the
11 exhibit is a letter sent to all
12 industrial hygiene and safety
13 coordinators informing them of a one-day
14 seminar on asbestos and a questionnaire
15 that was sent with that letter to survey
16 the use of asbestos in each location.
17 The second attachment is a roster of
18 those who attended. When this seminar
19 took place in March of 1976, do you
20 recall what criteria was used for
21 determining who would attend this
22 seminar?

23 A. Well, I think it was really at
24 the discretion -- if there was use of
25 asbestos in your facility, this was

1 meaning to look at potential
2 substitutes. And the concern basically
3 was asbestos used in manufacturing
4 either parts or whatever, not so much
5 asbestos like power generation, removing
6 it for a customer. This was primarily
7 in Westinghouse plants.

8 Q. The second delineated subject
9 matter of the memo is "employee exposure
10 to asbestos, current and historical."
11 The document appears to focus upon
12 employee exposure within Westinghouse
13 plants, as you have just pointed out,
14 and not outside of Westinghouse worked
15 on say by the Power Generation
16 Department. Was there any reason that
17 type of exposure was excluded from this
18 communication?

19 MR. BRENDAL: I'm going to
20 object on the grounds that it's beyond
21 the scope. It's asking substantive
22 questions about substantive subject
23 matters as opposed to reporting lines
24 and lines of communication.

25 MR. COHEN: I understand your

1 objection. I believe that my question
2 falls within the scope of the
3 deposition. My purpose is to find out
4 if there was some other type of
5 communication with regard to the power
6 generation employees or a rationale
7 regarding or a practice governing this
8 type of communication such that those
9 employees would not be within the scope
10 of this communication.

11 A. I don't know.

12 MR. COHEN: With all those
13 caviats, may I have an answer?

14 MR. BRENDDEL: You may answer
15 to the extent that you can.

16 A. I don't know why they were not
17 included. I don't know.

18 Q. Do you know if that was part
19 of the requested information?

20 A. Again, I don't remember.

21 MR. COHEN: Let us mark as Mr.
22 Bickerstaff Exhibit 37 a document
23 bearing Bates stamp numbers 003/13736
24 through 13741.

25 (List of Toxic Substances is

1 marked as Exhibit Bickerstaff 37 for
2 Identification.)

3 Q. Sir, have you ever seen this
4 document before?

5 A. Last week.

6 Q. Aside from that?

7 A. I don't remember it, no.

8 Q. Do you have any idea what it
9 is?

10 A. Well, I see several Lamp
11 Division plants and different sections
12 within those plants and a list of what
13 they call toxic substances. I don't
14 know who put it together or why.

15 Q. Focusing on why, are you aware
16 of any practice, policy or procedure in
17 or about October of 1979 concerning the
18 centralization of information regarding
19 toxic substances at various Lamp
20 Division plants?

21 A. Nothing from our office, no.

22 Q. And aside from your office,
23 are you aware of anything?

24 A. No.

25 MR. COHEN: Let us mark as

1 Bickerstaff Exhibit 38 a document
2 bearing Bates stamp numbers 844/6073140
3 through 6073141.

4 (Memo dated 11/2/79 is
5 marked as Exhibit Bickerstaff 38 for
6 Identification.)

7 A. The name of the first training
8 communicator in our department, her name
9 was Norma Stamford, spelled just like
10 the university. I knew it would come to
11 me.

12 Q. Thank you, sir. Let me know
13 when you have had an opportunity to
14 review Exhibit 38.

15 A. Okay.

16 Q. Aside from preparation for the
17 deposition, sir, have you ever seen this
18 document before?

19 A. I may have. I don't see that
20 I was copied on it, but I may have. Oh,
21 I'm sorry, yes, I am copied on the
22 front.

23 Q. This particular copy of the
24 document has a checkmark next to your
25 name. Does that checkmark signify

1 anything to you?

2 A. That that copy was to come to
3 me.

4 Q. Now, the document in the first
5 sentence refers to something known as
6 "Westinghouse considerations." Do you
7 recall a communication with that title?
8 That apparently was written by W. H.
9 Hamilton, senior consultant.

10 A. No, I don't.

11 Q. Exhibit 38 was authored by E.
12 A. Conrads, director of resources loss
13 prevention. Was he within the
14 Headquarters Division?

15 A. Yes.

16 Q. And what department was loss
17 prevention?

18 A. That was in the human
19 resources. He was my boss at the time.

20 Q. Mr. Conrads notes that the
21 Corporate Industrial Hygiene Department,
22 which I take it was part of human
23 resources, has been involved in
24 assisting the Corporate Law Department
25 prepare for the various litigation and

1 workers' compensation cases. Were there
2 any practices or procedures followed
3 regarding communications between the
4 Corporate Industrial Hygiene Department
5 and the Corporate Law Department with
6 regard to litigation or workers'
7 compensation cases involving exposure to
8 substances, human exposure to
9 substances?

10 A. It wasn't anything formal.
11 They would tend to take the lead and
12 involved us if they felt we could help
13 them prepare for these.

14 Q. Now, the first delineated item
15 concerning the litigation is 180
16 lawsuits concerning asbestos. Were
17 there any discussions concerning
18 communicating information regarding
19 exposure to asbestos by various
20 divisions with regard to these lawsuits
21 or because of these lawsuits?

22 A. There could have been. I
23 can't say for sure.

24 Q. Was any formal practice or
25 policy implemented about disseminating

1 asbestos information?

2 A. Not that I remember.

3 Q. Was there any discussion about
4 not disseminating information because of
5 concern of potential litigation
6 regarding human exposure to asbestos?

7 A. Not that I remember.

8 Q. The third item is beryllium
9 exposure to employees at Bloomfield, New
10 Jersey and Fairmont, West Virginia
11 plants. Do you recall any
12 communications or procedures regarding
13 communications with regard to beryllium
14 exposure?

15 A. I remember some workers' comp
16 cases at Bloomfield. I don't remember
17 the ones at Fairmont offhand, but we may
18 have put information together on the
19 workers' comp cases looking at our own
20 safe practice data sheets, things like
21 this, working with beryllium. But
22 that's the best I remember.

23 Q. And the purpose in putting
24 that information together was what?

25 A. To help our defense on what

1 our practices were for whatever
2 information we had on the use of
3 beryllium at that plant.

4 Q. And from where did you draw
5 your information that was put together
6 to help the defense?

7 A. I would just go back through
8 what information we had in our files on
9 the use of beryllium.

10 Q. And would that include
11 information derived from local plants?

12 A. It could. We would probably
13 again, if it was Bloomfield, go back
14 through our records, what information we
15 had on the Bloomfield file.

16 Q. Did you cross-reference to
17 other plants that might have employee
18 exposure or human exposure to beryllium?

19 A. We could have. I don't know.

20 Q. Was there anything preventing
21 you from doing so?

22 A. No.

23 Q. Would the decision to do so or
24 not to do so be based upon any criteria?

25 A. No, not really. I can't think

1 of anything that would prevent us.

2 Q. The fourth item refers to lead
3 exposure to employees at, correct me if
4 I'm wrong, two different plants?

5 A. Two different plants.

6 Q. Did the Industrial Hygiene
7 Department again gather information for
8 the purpose of defending the litigation
9 or workers' compensation claims?

10 A. I think these were workers'
11 compensation claims, because it talks
12 about employee exposures. Again, we
13 would, yeah, what information do we have
14 on use of lead or whatever at these two
15 locations. We would just pull
16 information from our files.

17 Q. And again, what files were you
18 pulling information from?

19 A. The plant file for KW Battery
20 and also for the Baltimore defense.

21 Q. Someone from industrial
22 corporate headquarters would obtain that
23 information from the plants?

24 A. What information we would have
25 from the plants, either through

1 correspondence or if we had any air
2 sample records or things taken at that
3 plant or even general information on
4 lead.

5 Q. What I am unclear about, sir,
6 is whether your search for information
7 would be limited to the Industrial
8 Hygiene Department's files, which I take
9 it at that time were kept at East
10 Pittsburgh?

11 A. At this time period, no, we
12 were at the Science and Technology
13 Center.

14 Q. Pardon me. Whether you would
15 search only the files at the Science and
16 Technology Center or whether you would
17 search files somewhere else.

18 A. We would primarily search our
19 files.

20 Q. Science and Technology?

21 A. Yes, our files in that plant.
22 We kept our own files, yes.

23 Q. Did you cross-reference to
24 other plant files?

25 A. Probably not.

1 Q. Was there any effort to gather
2 information from the particular plants
3 at issue in the various cases?

4 A. I don't know. I can't say for
5 sure. I don't know if we did or not.

6 Q. Would that have been something
7 that may have been handled by the
8 Corporate Law Department?

9 A. They may have.

10 Q. Do you know if they did?

11 A. I don't know.

12 Q. Do you know if the Corporate
13 Law Department cross-referenced to other
14 plants handling the same substances that
15 may have been involved in any particular
16 litigation or case?

17 A. I don't know.

18 Q. Now, your superior, Mr.
19 Conrads, suggests that the Corporate
20 Industrial Hygiene Department should be
21 used on a task force to respond to
22 litigation brought against Westinghouse
23 arising out of exposure to hazardous or
24 toxic materials. Was that suggestion
25 ever implemented?

1 A. I don't know if there was a
2 task force, but in the future, anytime
3 there was either workers' compensation
4 or anything involving toxic materials
5 and either employee exposures or
6 whatever, we would be contacted by
7 somebody from the Law Department to
8 somebody maybe from the Workers'
9 Compensation Department to assist him in
10 preparing for the defense. I don't
11 think that there was a specific task
12 force really put together.

13 Q. If I understand you, sir, what
14 you are saying is that the procedure was
15 implemented without the formality of
16 calling it a task force?

17 A. I believe so, yes.

18 Q. Once that procedure was
19 implemented, were all plant records
20 concerning hazardous materials
21 centralized at industrial hygiene?

22 A. No.

23 Q. The assistance that industrial
24 hygiene lent in the event of workers'
25 compensation cases or litigation arising

1 out of exposure to substances would be
2 limited to a search of the documents
3 already on file at industrial hygiene
4 headquarters?

5 A. Pretty much, yes. We didn't
6 have all records, you know, for
7 everything sent to our department, no.

8 Q. Was there ever any discussion
9 as to whether that would aid the
10 defense?

11 A. I'm sure the centralization of
12 records, but, you know, there was no
13 system to put it onto a computer. You
14 would just have hard copies, and a
15 search of that would be endless.

16 Q. Was there ever any discussion
17 about not centralizing the records?

18 A. I don't remember something
19 either for or against really.

20 Q. Let us mark as Mr. Bickerstaff
21 Exhibit 39 a document bearing Bates
22 stamp numbers 132/4085266 through
23 132/4085271.

24 (Memo dated 11/9/79 is
25 marked as Exhibit Bickerstaff 39 for

1 Identification.)

2 Q. Aside from preparing for
3 today's deposition, have you ever seen
4 this document before?

5 A. I may have. I don't remember.

6 Q. Were you one of the designated
7 addressees?

8 A. No. It says division and
9 division general managers.

10 Q. Who would get a document
11 directed to division and division
12 general managers?

13 A. All the general managers and
14 division managers.

15 Q. That would be at divisional
16 headquarters?

17 A. Yes.

18 Q. So for example, with regard to
19 lamp plants, this would go to the
20 operations manager at Bloomfield for the
21 division?

22 A. It could. Again, I don't
23 know. I don't know who John Gormley had
24 on his distribution.

25 Q. I take it your understanding,

1 and I understand it's strictly your
2 understanding based upon your employment
3 at Westinghouse, is that this document
4 would not directly go to a Lamp Division
5 plant somewhere other than Bloomfield?

6 A. Say that again.

7 Q. Let me give you a concrete
8 example.

9 A. Okay.

10 Q. Would this document go
11 directly from the Design and
12 Manufacturing Center to a Lamp Division
13 plant site in Mexico?

14 A. Oh, I doubt it. I doubt it.
15 I don't know for sure.

16 Q. Would it go to any particular
17 plant which was not a divisional
18 headquarters in the ordinary course of
19 business?

20 A. I don't know.

21 Q. Now, the document I had
22 indicates that there will be new
23 regulations restricting the use of
24 asbestos, and the penultimate sentence
25 of the first page of the document reads,

1 "this is our opportunity to influence
2 the direction of the government policies
3 before they become fixed."

4 Do you recall any other times
5 when information was solicited in an
6 effort to influence the direction of
7 government policies with regard to
8 substances?

9 A. Oh, yeah.

10 Q. What other occasions do you
11 recall?

12 A. Just recently, OSHA was asking
13 again for comments in the Federal
14 Register --

15 MR. BRENDDEL: You should limit
16 yourself to the time frame at issue,
17 from '75 to '82.

18 A. Then we could have. Again, I
19 can't say specifically we asked for it.

20 Q. Let me ask this. Generally
21 was it a practice within Westinghouse
22 when regulations of substances were
23 being proposed to solicit information
24 from various divisions?

25 A. If we felt that there was a

1 use of that product or that material in
2 Westinghouse and we could add comments
3 to the agency, because they're asking
4 for comments, we would on occasion
5 solicit comments from plants and then
6 send them into the agency.

7 Q. And was it a practice in
8 soliciting comments that the responses
9 would be centralized for compilation,
10 reviewed for consistency and clearing
11 with the Law Department as indicated in
12 Exhibit 39?

13 A. In most cases I would guess
14 that happened, yes.

15 Q. Do you recall if a similar
16 circumstance took place with regard to
17 regulation, for example, of PCBs?

18 A. I don't know.

19 Q. Do you recall any other
20 substances where this occurred offhand?

21 A. Again, to that time period,
22 '75 to '81, I'm just trying to think
23 what regulations were coming in at that
24 time. I can't think of any specific
25 ones right now. But again, the intent

1 for the agency was they want comments,
2 how is this going to impact you, are
3 there substitutes. So if we could, we
4 would try to comment, provide that, give
5 them alternatives.

6 Q. Was one of the reasons for
7 which this practice was followed was to
8 attempt to lessen the economic impact
9 upon Westinghouse?

10 A. It could be.

11 MR. BRENDDEL: Objection. Out
12 of scope. Answer only if you have
13 personal knowledge.

14 A. It could have been.

15 Q. Was the Safety Division one of
16 the divisions being solicited for
17 comments by Exhibit 39?

18 A. I don't see anybody -- I don't
19 see any indication that we were copied
20 on this.

21 Q. So that something that is to
22 all division and division general
23 managers would not include industrial
24 hygiene and safety at headquarters?

25 A. It may not have.

1 Q. So whatever information was
2 centralized at your division would not
3 be provided to the Corporate Law
4 Department in response to this?

5 A. This wasn't my division. I
6 don't know -- I guess I don't follow
7 you.

8 Q. Perhaps I misspoke. You were
9 with the industrial hygiene --

10 A. Safety Department.

11 Q. Department, which was part of
12 the --

13 A. Headquarters Division.

14 Q. Of?

15 A. Westinghouse.

16 Q. Was the Headquarters Division
17 intended, to your knowledge, to be a
18 recipient of this document?

19 MR. BRENDDEL: I'm going to
20 object to the extent you're asking what
21 was intended.

22 MR. COHEN: I'll rephrase the
23 question.

24 Q. Is it your understanding that
25 a document addressed like this would go

1 to the Headquarters Division?

2 A. I don't know for sure. I
3 would suspect that somebody at
4 headquarters would have gotten a copy,
5 but I don't know for sure.

6 Q. Do you recall if you were ever
7 asked for information regarding the
8 contemplated asbestos regulations, the
9 subject matter of Exhibit 39?

10 A. We may have been. I can't say
11 for sure.

12 Q. You don't know one way or the
13 other?

14 A. I don't know honestly.

15 Q. Let us mark as Exhibit 40 a
16 document bearing Bates stamp number
17 132/4079652.

18 (Memo dated 7/31/81 is
19 marked as Exhibit Bickerstaff 40 for
20 Identification.)

21 Q. Have you ever seen this
22 document, aside from preparation for the
23 deposition?

24 A. Again, I may have. This is
25 again eleven years ago.

1 Q. Is there anything on the face
2 of the document indicating that it went
3 to your department at headquarters?

4 A. No.

5 Q. In the second paragraph there
6 is a reference to Westinghouse policy
7 requiring the disposal of PCB-filled
8 capacitors that are no longer in use.
9 Do you know when that policy was first
10 promulgated?

11 A. No, I don't.

12 Q. Do you know if that was
13 something within the purview of the
14 environmental affairs group?

15 A. In looking at the date here,
16 July of '81, our "Environmental Affairs
17 Department" was formed in I think April
18 of that year. So if it was a directive
19 in the policy saying -- I don't know. I
20 don't know what it was for.

21 Q. Now, the last paragraph
22 concerns a form to be filled out by all
23 plants which have PCB capacitors in
24 storage for disposal. Was your
25 department provided with the completed

1 forms for potential employee exposure to
2 PCBs?

3 A. No.

4 Q. Do you recall if your
5 department was asked about any
6 information it had regarding PCBs at
7 various plants?

8 A. Not that I remember, no.

9 Q. The addressees are business
10 unit and division general managers,
11 plant managers, work engineers,
12 TSCA/RCRA representatives. Do you see
13 that?

14 A. Yes.

15 Q. Does that include the
16 Insurance Department or risk management
17 unit of Westinghouse?

18 A. I don't know.

19 (There is a discussion off the record.)

20 MR. COHEN: Let us mark as
21 Exhibit 41 a two-page document bearing
22 Bates stamp number 144/0045951 through
23 0045952.

24 (Corporate Procedure Document
25 is marked as Exhibit Bickerstaff 41 for

1 Identification.)

2 Q. Can you identify that
3 document, sir?

4 A. Yes, it's a corporate
5 procedure on reporting substantial risk
6 to health or the environment, and the
7 date is August, 1982.

8 Q. Do you recall when that or a
9 similar corporate procedure regarding
10 risk to health or the environment or
11 personnel was first promulgated within
12 Westinghouse?

13 A. I think this was the initial
14 procedure on the subject.

15 Q. Who created that procedure or
16 what department or division?

17 A. This was created in the
18 Environmental Affairs Department.

19 Q. And that would be something
20 within the purview of Mr. Kerns'
21 knowledge?

22 A. Yes, Mr. Kerns' knowledge and
23 the rest of the department, yes.

24 Q. And not something that you had
25 anything to do with?

1 A. I believe we also assisted in
2 helping put this together.

3 Q. Could you tell me your
4 recollections regarding what your
5 department did to help put it together?

6 A. I can't say for sure. I know
7 we were copied a draft copy just for our
8 comments and whatever, but I think there
9 were three or four people from the
10 Environmental Affairs Department who,
11 again, put this together, because it was
12 the first time.

13 Q. When you say three or four
14 people from the Environmental Affairs
15 Department, did that include industrial
16 hygiene?

17 A. I think we were one of the
18 members, yes.

19 Q. What considerations led to
20 this policy being created?

21 A. It's a requirement in the TSCA
22 that this information has to be made
23 available to the Westinghouse
24 employees. So that's the reason for
25 putting the corporate procedure

1 together, to comply.

2 Q. Anything else?

3 A. Just as a good business
4 practice too to have this procedure in
5 place.

6 Q. Was there any discussion about
7 having such a procedure, that such a
8 procedure should have been created and
9 implemented before required by law?

10 A. I don't remember that part. I
11 don't know.

12 Q. Just so the record is clear,
13 what does your reference to TSCA mean?

14 A. That's the Toxic Substances
15 Control Act.

16 (There is a discussion off the record.)

17 (There is a brief recess.)

18 MR. COHEN: I have no further
19 questions for this witness with regard
20 to the particular deposition notice for
21 which he has been produced subject to my
22 previous reservation of all rights to
23 conduct a full substantive deposition.
24 I do recognize that with regard to
25 paragraph six of the deposition notice,

1 Westinghouse has designated another
2 witness, Mr. Michael Bryant.

3 On the other hand, however, it
4 is also apparent that this witness, Mr.
5 Bickerstaff, is not fully knowledgeable
6 with regard to all subject matters other
7 than paragraph six encompassed in the
8 deposition notice, and for the purposes
9 of the motion practice concerning the
10 scope of discovery and the deposition on
11 the subject matters annunciated by
12 Special Master McDonough, we reserve our
13 rights to complete the scope of the area
14 of inquiry directed by the special
15 master.

16 MR. BRENDEL: If counsel has
17 specific areas that he wants to pursue
18 further, as we've discussed, we have had
19 discussions regarding making an
20 additional person available, and I'll
21 just await some discussions with you on
22 that. Maybe after today we can talk
23 about it and the necessity for that and
24 exchange some dates.

25 MR. COHEN: Right. Certainly

1 if the decision made is that another
2 deposition is not necessary for that
3 purpose of the pending motion, then we
4 will not take it simply to take one. We
5 will depose Mr. Kerns or whatever the
6 appropriate person may be in the regular
7 course of discovery.

8 MR. O'NEIL: I have no
9 questions.

10 MR. MASON: I have no
11 questions.

12 MS. HERMIDA: I have no
13 questions.

14 MR. BRENDAL: We will reserve
15 signature and read the transcript.

16 MR. COHEN: I want to thank
17 you very much for your time, sir.

18 (The deposition is adjourned.)

19 * * * * *

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1

2

I have read the foregoing

3

transcript and it is true

4

and correct to the best of

5

my knowledge and belief.

6

7

8

9

C. WAYNE BICKERSTAFF

10

11

12

13

14

15 Sworn and subscribed to

16 before me this day

17 of

18

19

20

21 Notary Public of the

22 State of

23

24

25

1 CERTIFICATE OF OFFICER
2

3 I, ANN P. CONLON, a Notary Public
4 and Certified Shorthand Reporter of the
5 State of New Jersey, do hereby certify
6 that prior to the commencement of the
7 examination the witness was duly sworn.

8 I DO FURTHER CERTIFY that the
9 foregoing is a true and accurate
10 transcript of the testimony as taken
11 stenographically by and before me at the
12 time, place and on the date hereinbefore
13 set forth.

14 I DO FURTHER CERTIFY that I am
15 neither a relative nor employee, nor
16 attorney or counsel to any of the
17 parties involved; that I am neither
18 related to nor employed by such attorney
19 or counsel, and that I am not
20 financially interested in the outcome of
21 the action.

22 
23 NOTARY PUBLIC OF THE STATE OF NEW JERSEY
24 My Commission Expires: June 28, 1994.
25 C.S.R. License No. 999

1 LITIGATION SUPPORT INDEX

2

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4 DIRECTION TO WITNESS NOT TO ANSWER

5

6 Page-Line

7 283-19

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12 REQUEST FOR PRODUCTION OF DOCUMENTS

13

14 Page-Line

15 None

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20 MOTIONS TO STRIKE

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22 Page-Line

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safety



Industrial
Service
Division

ALL I.S.D. LOCATIONS

CONFIDENTIAL

From : Greentree
WIN : 228-4679
Date : November 8, 1977
Subject: SUBSTITUTION FOR
ASBESTOS

The federal OSHA standard for asbestos now imposes stringent requirements for limiting airborne asbestos fibers. If an employer chooses to use asbestos or asbestos-containing products, elaborate controls must be maintained to avoid employee exposure, not to mention other requirements such as separate locker room facilities, providing change of clothing, monitoring of the working environment, periodic medical examinations, retention of records for exposed employees, etc.

We cannot expect to economically meet these legal requirements regardless of how limited our use of asbestos may be. In addition, we can expect a progressive reduction in the number of asbestos vendors and an accompanying increase in costs. Therefore, it is necessary to resort to a substitute program.

The Standardization Committee has identified replacements for major asbestos-containing materials presently used and suitable substitutes are listed in Standardization Letter #77-9.

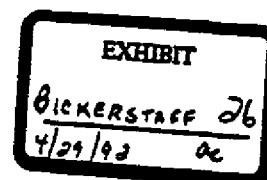
While it is our position to not handle asbestos, thereby eliminating the need to comply with the OSHA standard, there may be occasions where we will be confronted with the removal or demolition of asbestos from existing equipment such as motors, magnets or insulated piping. Under these circumstances, we are advised via the attached Westinghouse Safe Practice Data Sheet to provide respiratory equipment, the type of which is dictated by the amount of airborne concentration of asbestos fibers.

Obviously we cannot monitor each job and in consideration of infrequent and short duration exposures, practical steps should be taken such as stripping asbestos near a ventilated booth if possible, avoid excessive air turbulence such as fans in the area and have employees wear air purifying type respirators with the proper cartridge filter.

L. G. Rudolph, Supervisor
Safety & Accident Prevention

LGR:pad

Attachment



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JAN 30 1978

ADVANCED TECHNOLOGY LABORATORIES *felt.*

AIRTEL SAFETY REPORT

1977

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1.

SAFETY AT WESTINGHOUSE

Our PRODUCT is safety,

Our PROCESS'S are

- ... Engineering
- ... Education, and
- ... Enthusiasm

Our PROFIT is measured in

- ... The reduction of human suffering,
- ... An increase in production, and
- ... The preservation of lives and equipment.

Bert W. Behringer, C.S.P.
Safety Department

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Advanced Technology Laboratories

January 4, 1978
ANNUAL SAFETY REPORT - 1977

Dr. G. Strull, Manager
Science and Technology

cc: ATL - Safety Policy Committee
ATL - Management Safety Committee
J. W. Strutz, General Manager, AESD - MS 224
E. B. Crehan, Manager, Operations - MS 124
B. C. Bishop, Manager, Manufacturing Operations - MS 124
J. G. Murphy, Manager, Labor Relations - MS 1156
E. W. Wood, Supervisor, Safety Department - MS G12A
W. Ziefel, Administrator, Accident Prevention, Pittsburgh
W. Bickerstaff, Administrator, Industrial Hygiene, Pittsburgh

Attached is a copy of the 1977 Annual Report of Safety
Activities, Accident Injury Statistics and Headquarters Plant
Safety Program Evaluation for 1977.

Only one Lost Workday Injury occurred during the year
(with 2 days lost), and only one Non-Lost Day case was re-
ported. This compares with no Lost Workdays and three Non-
Lost Workday cases in 1976.

The last Lost-Workday case (or Disabling Injury) occurred
on May 13, 1977. From May 13, 1977 thru December 31, 1977,
569,701 hours (or 232 workdays) were recorded without a
Reportable Lost Workday case. Such is indeed a fine accomplish-
ment.

The Safety Program and Performance Evaluation rating proved
to be the best-ever. A rating of 83.05 was obtained. This
compares with 76.50 for 1976. The 1978 Management Safety
Committee, all Supervision, and Management certainly have their
work cut-out for them if they are to equal or better the 1977
performance evaluation.

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3.
The safety record established in the past year can be
equalled or improved in 1978 only if the fine cooperation
of Management continues and a complete Safety Awareness
continues to be practiced by all supervisors and employees.

Have A Safety Day ... Every Day.

Bert W. Behringer
Bert W. Behringer, C.S.P.
Industrial Hygiene and
Safety Supervisor

BWB/ss

844/607286

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WESTINGHOUSE ELECTRIC CORPORATION
ADVANCED TECHNOLOGY LABORATORIES
1977 ANNUAL REPORT OF SAFETY ACTIVITIES

The major safety activities engaged in during 1977 are reported in accordance with the Westinghouse Six-Point Safety Program.

POINT I - ORGANIZATION AND ADMINISTRATION

Safety Policy Committee

The Safety Policy Committee was chaired by G. Strull, A.T.L. Manager. This committee established, implemented the Westinghouse Six-Point Safety Program and approved the Safety Objectives for 1977, reviewed progress of the Management Safety Committee, special Task Force Committees, and provided guidance to these committees.

Management Safety Committee

The members of this committee were appointed by the A.T.L. Manager. Supervisory engineer L. P. Copper was the Chairman. This committee was held responsible to implement the plant safety program and provide support to all plant safety activities, objectives and procedures. This committee met monthly.

Have A Safety Day ... Every Day

Members of the Safety Policy Committee and Management Safety Committee attended the 1977 safety program kick-off meeting at Friendship. Mr. E. B. Smith, Executive Vice President, Defense, made the address.

Safety Supervision

The Safety Supervisor provided Safety Service for the Advanced Technology Laboratories (A.T.L.), as well as the Oceanic Division at Annapolis, Maryland.

The Safety Supervisor was secretary to the Safety Policy and Management Safety Committees.

The following activities were participated in during the ----- of the year:

- .. Lectured and instructed at several educational institutes, i.e., University of Maryland (College Park, Maryland); DePaul University (Chicago, Illinois); and Catonsville Community College (Catonsville, Maryland). Topics included: Machinery and Machine Guarding; Personal Protective Equipment; Industrial Hygiene; Electrical Hazards; Portable

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Powered Tools and others.

- .. Developed and lectured three-credit advanced safety course, OST-236, "Recognition and Control of Physical and Health Hazards," at Catonsville Community College.
- .. Safety Council of Maryland - made talk-slide presentations, "Electrical Safety At W", at 2 Electrical Safety Seminars, Towson, Maryland.
- .. W Gettysburg - visited 2 days at such facility. Conducted a Mock OSHA Inspection and submitted safety recommendations.
- .. American Society of Safety Engineers, Chesapeake Chapter - Member of Seminar Committee; Moderator for 1978 seminar; also, luncheon speaker, topic, "Functioning thru Safety Committees at W".
- .. 65th National Safety Congress - Chicago, Illinois.
- .. 21st Annual Baltimore Safety Seminar - Attended each of the 21 years; speaker at many of these annual seminars. Scheduled to speak at the 22nd Annual Seminar in 1978.
- .. 10th Annual Maryland Hunter Safety Instructor Workshop - Remington Farms, Chestertown, Maryland - Presented program, "Archery and Bow-Hunting Safety."
- .. American Society of Safety Engineers - As a Certified Safety Professional, attended executive committee and general membership meetings. As delegate for the Chesapeake Chapter, attended the National A.S.S.E. Meeting and Professional Development Conference in Kansas City.
- .. 6th Annual National Hunting and Fishing Day - Remington Farms, Chestertown, Maryland - Archery and bowhunting safety, exhibition.
- .. Maryland Hunter Safety - Conducted 7 hour State Course. 345 persons (many of whom were Westinghouse employees and their families) completed course and so certified as Safe Hunters. Have trained more than 2,000 students in Hunter Safety.
- .. National Safety Council - Instructor for several "Key Man Development" and "Fundamentals of Industrial Safety" Courses conducted throughout the State of Maryland.

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- .. National Rifle Association - As a certified N.R.A. and State of Maryland Firearms and Hunter Safety Instructor, presented numerous talks, slide presentations and demonstrations on firearms in the home and Hunter Safety to Civic Organizations, Lions Club, Optimist, P.T.A., Rifle and Pistol Clubs, etc.
 - .. Boy Scouts of America - Conducted Safety Merit Badge for Scouts, sons of M employees.
 - .. Catonsville Community College safety students - Arranged for plant tour of East Building. S. C. Bishop made a slide presentation of what is developed and manufactured at the Defense and Space Center.
 - .. Maryland Youth Safety Conference, Lansdowne High School, Baltimore County, Maryland - Lectured on Home Firearm Safety.

Safety Observer Program

Eighteen newly appointed Safety Observers (members of the non-supervisory work force) received Safety Training from the Safety Supervisor and regular monthly meetings were held. The outgoing group of Safety Observers attended a recognition banquet (along with observers from East & West Building) and were presented with a token gift in appreciation and recognition of their fine work and cooperation.

Federal (O.S.H.A.), State (M.O.S.E.A.) and Local Laws and Regulations

Continued effort made to keep abreast of new and revised laws and regulations. Management and supervision apprised of applicable changes. Copies of the revised O.S.H.A. Standards, distributed to all responsible members of management and supervision. O.S.H.A. Standards were stressed in Accident Prevention for Management Training Program conducted by the Safety Supervisor.

Safety Standards and Reference Materials

A complete and up-to-date library is maintained (and so utilized) of Safety Standards and Reference Materials.

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Safety Program Appraisal

Members of the Management Safety Committee participated in the Headquarters Plant Safety Program Evaluation for 1977. Such evaluation pointed out some areas of weakness in the Safety Program. These weak areas will be incorporated as Objectives for 1978. Following are the evaluation results for 1971 thru 1977. As reflected below, the 1977 rating proves to be the best to date. The Management Safety Committee will have their work cut out for them in order to improve on this rating in 1978.

Advanced Technology Laboratories

<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
69.50	76.90	78.50	80.65	82.95	76.50	83.05

Attached is a copy of the complete Westinghouse Safety Program and Performance Evaluation for 1977.

POINT II - HAZARD CONTROL

New Equipment and Plant Layout

New equipment and plant layouts, in most cases, were approved by the Safety Supervisor.

Headquarters Caution and Warning Tag-Out System is in limited use. Improvement is desired in both of these areas.

Safety Inspection

The facilities were inspected several times by the Maryland Department of Health, Radiation Division for X-Radiation as well as isotopes. Only minor discrepancies were noted and so corrected.

Safety and housekeeping inspections of the entire facility were conducted each month by members of the Management Safety Committee. 198 items were reported for corrective action - all but a few have been so corrected. The few remaining are in progress. Improvement was made for expeditious corrective action on repeated items.

The boilers were inspected by the Maryland Boiler Inspectors. No infractions were observed.

The facilities were inspected by Factory Mutual Representatives and the Anne Arundel County Fire Department. Some minor violations were reported and so corrected.

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A Mock-MOSH type inspection was conducted by F. Weber, Safety Supervisor at Hunt Valley. Eighteen items were reported and so corrected. A detailed O.S.H.A. type compliance inspection was also conducted by the A.T.L. Safety Supervisor. Necessary corrective actions were taken.

Safety Recommendations

The Safety Observers submitted numerous recommendations to their supervisors for the correction of unsafe conditions and practices. All such recommendations were complied with or acted upon.

Personnel Protective Equipment

The necessary personal protective equipment (Flame Safety Spectacles, Prescription Safety Eye Wear, Face Shields, various types of gloves, sleeves, spats, aprons, ear muffs, and miscellaneous) was purchased for issuance to employees. Safety shoe service was made available to employees for purchase. A concerted effort was made by Management and supervision to enforce the use of required personal protective equipment.

Disaster Control

The Disaster Control Committee was active. New team captains were assigned to each area. An emergency telephone system is in use. Decals with emergency telephone number are on all phones. However, a joint meeting with the other Defense & Space Center Disaster Control meetings was not held. A fire drill was not held.

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POINT III - INDUSTRIAL HYGIENE

Radiation Control

Film badges are in use where potential radiation exposures exist. To detect and prevent employees from obtaining high radiation exposures, periodic smears were made and urinalysis taken.

Radioactive materials, handling, storage and record keeping procedures were inspected by the Maryland Health Department, Radiation Division. The materials, handling and storage of such were found to be in order. However, some discrepancies were reported in the corrective measures and record keeping procedures. Such procedures were promptly corrected, and a continuing auditing system was established.

The radiation equipment is registered with the State of Maryland (which is an agreement state with the Nuclear Regulatory Commission).

Ventilation

All new exhausted or vented equipment was checked. Appropriate recommendations were submitted. Some minor as well as major changes were made to improve some of the exhausted chemical booths and hoods. Improvement is still needed in the frequency of inspections and maintaining of records. Arrangements are in process for Industrial Hygiene and Works Engineering to check all ventilation systems and to establish a procedure.

Noise

Spot check surveys were made to determine whether or not employees were exposed to excessive noise. As a result of these surveys, and existing survey results, no operations were found to emit noise levels in excess of the O.S.N.A. or M.O.S.N. standards.

Safe Practice Data Sheets (S.P.D.S.)

All five Safe Practice Data Sheet books were maintained up-to-date. Program instituted to encourage greater use of same by supervisors and referenced in process specifications. Some evidence of increased use of SPDS's was noted. Greater utilization is still needed. An applicable Safety Information Letter was prepared and distributed to all members of management and certain other employees.

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Emergency Showers and Eye Wash Fountains

Inspection tag program for the inspection of emergency showers and eye wash fountains was continued. Some of these facilities still require more personal attention by the respective area supervisors. The procedure has been established whereby these units are checked daily and so recorded weekly on the inspection tags.

Inspection

The facilities were visited by an Industrial Hygienist, J. Adams, now on the staff of the Industrial Hygiene & Safety Department at the Defense & Space Center. More in-depth inspections will be conducted.

POINT IV - TRAINING

Employee Indoctrination Safety Training

"A Guide For Your Safety" (Plant General Safety Rules) was updated and printed. It is believed that all new hired employees did not receive a copy of same, nor did they receive employee safety indoctrination in the safety-slide program. Improvements are perhaps in order.

Acids, Chemicals, Solvents and Miscellaneous Safety

The safe use of acids, chemicals, solvents and miscellaneous safety topics were stressed in the safety observers training. Film, slides, exhibits, lecture-demonstration used.

O.S.H.A. Safety and Health Standards Checklist or Digest

An "O.S.H.A. Safety and Health Standards Checklist" was distributed to all supervisors and management members. A copy was issued to each of those who attended the "Accident Prevention for Management" training course.

Radiation

No need was recognized for a radiation-safety course. Such a course will perhaps be needed in 1978.

Emergency Rescue Breathing Apparatus - Maintenance

All Emergency Breathing Apparatus were inspected and so properly recorded by the fire inspector. The Fire Marshall conducted classes on the use of such equipment. 26 employees attended these classes.

Mr. 844 6017293

Information to Supervisors

Members of the Safety Committees and Operational Supervisors were kept informed of O.S.E.A. and M.O.S.E. and other important safety information via H Headquarters Information Letters, O.S.E.A. Directives, National Safety News, A.S.S.E., excerpts from the Bureau of National Affairs, "Occupational Hazards" magazines, and other information sources. Much of such information was suitable for supervisor-employee workplace meetings.

Fire Drill

No fire drill was conducted. Arrangements will be made to have such a drill in 1978.

First Aid

Members of the Plant Protection Guard Force received first aid training from Plant Protection First Aid Instructors.

Safety Observer Training

Eighteen newly appointed non-supervisory employees were given four hours training in the Headquarters Safety Observers Training Course. In addition, each month the Safety Observers met with the Safety Supervisor for 1 hour for additional training and to discuss problems.

Safety Seminar

A few supervisors and professional personnel attended the 21st Annual Baltimore Safety Seminar on their own time. The Safety Supervisor was one of the speakers.

Miscellaneous Training

Various short training sessions were presented to appropriate groups. Such sessions included:

Personal Protective Equipment	Handling Chemicals
Electrical Safety	Handling and Storing Flammable
Fire Safety	Liquids
Highway Safety	Shop Safety
Rescue Breathing	Compressed Gas Handling
Boating Safety	Fire Arms Safety in the Home
Office Safety	

POINT V - MOTIVATION

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INDUSTRIAL HYGIENE NEWS



Published by Westinghouse Corporate Industrial Hygiene R&D Center,
1310 Beulah Road, Pittsburgh, PA 15235

March, 1988

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IS CONTINUING EDUCATION

Internal Training

This year Environmental Affairs will offer two educational programs to train division personnel in the Industrial Hygiene and Safety areas.

• Fundamentals

On March 15-18, 1988, Corporate Industrial Hygiene joined forces with Corporate Safety to offer a combined introductory course on industrial hygiene and safety. The course provided introductory material to site industrial hygiene and safety representatives who had not yet received corporate sponsored training in these areas. This will be the only fundamentals course offered this year by either group.

• I.H. & Safety Workshop and Train the Trainer: Emergency Response

On May 16, 17, and 18, we will present the Corporate Industrial Hygiene and Safety Spring Workshop. This workshop is geared toward the senior Industrial Hygiene and Safety representative with more than two years' experience. Following the Spring Workshop, on May 19 and 20, a 'Train the Trainer' session on Emergency Response will be held. This course is designed for individuals responsible for compliance with the new OSHA Emergency Response standard mandated by the Superfund Amendment and Reauthorization Act (SARA). The course will provide site representatives with the skills and background necessary to assure that their emergency response/HAZMAT teams meet the requirements of this new regulation.

Environmental Affairs continually strives to provide you with an education program that offers current information to assist you in performing your duties. If you have any suggestions please contact Debbie Rockovich, Manager, Training & Communication, 8-272-5961.

External Training

• Ventilation

Annual industrial ventilation conferences will be held at three major universities. These conferences are designed for persons responsible for industrial hygiene programs and system maintenance programs. These courses can be presented at three levels. The first level is intended for persons who have to design ventilation systems infrequently and for persons with no prior experience or education in ventilation system design. The second and third levels are intended for persons who are more experienced in ventilation system design and have responsibility in a broader range of industrial

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4/29/92 ac

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processes with non-standard air design requirements such as elevated air temperatures. Courses at all levels are excellent. Westinghouse Corporate Industrial Hygiene personnel and many site facilities personnel have attended these conferences and highly recommend participation. If you have any responsibility for designing or selecting ventilation systems, hoods, fans, etc., or responsibility for measuring the effectiveness of ventilation control systems, this is the type of course for you. The three locations and dates are:

North Carolina State University April 18-22, 1988
Raleigh, North Carolina

University of Alabama October 10-14, 1988
Birmingham, Alabama

Michigan State University February, 1988
East Lansing, Michigan

For more information call Corporate Industrial Hygiene,
WIN 238-1364.

INADEQUATE MSDSs

Corporate Industrial Hygiene frequently is asked "How do I determine the adequacy of a supplier's MSDS?" When Westinghouse receives an MSDS from a chemical manufacturer, we accept it on good faith, that is, we expect our suppliers to provide a document that accurately reflects data on any hazards or potential hazards that their chemical product may pose under normal conditions of use. The chemical user still must review the data sheet for obvious errors or blank sections and if found, contact the supplier for clarification or a corrected MSDS.

Close examination of MSDSs is necessary for determining adequacy. A guide to follow when screening your MSDSs for adequacy is the date of preparation. Data sheets prepared prior to November 25, 1983, are normally inadequate because requirements of the Hazard Communication Standard were not published until this date. Data sheets using the OSHA Form 20 should be questioned also. This form was phased out May 25, 1986, because it was not identical to the Hazard Communication Standard MSDS requirements. Therefore, if you have MSDSs on the old OSHA Form 20 or MSDSs dated prior to November 25, 1983, request new ones from your supplier.

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Another way to determine MSDS adequacy is to look for inconsistencies on the data sheet. For example, an MSDS that lists "none" in the hazardous ingredients section while containing "may cause lung damage" in the health hazard data section is inconsistent and a new one should be requested. Also, generic ingredients such as "pigment" should be specified under chemical identity unless the ingredients are protected by the trade secret exclusion. Other examples of generic terms that must be specified under chemical identity are: catalyst, aromatic hydrocarbons, binders, and fillers.

Recent data released by OSHA for Hazard Communication violations revealed over 2300 industry citations for inadequate MSDSs. Examples of these citations are as follows:

1. Failure to include OSHA permissible exposure limits, ACGIH Threshold Limit Values (TLVs[®]), and any other exposure limit used or recommended by the preparer of the MSDS.
2. Failure to include the health hazards of the hazardous chemical, including signs and symptoms of exposure and any medical conditions which are generally recognized as being aggravated by exposure.
3. Failure to include the date of preparation or the last revision of the MSDS.
4. Failure to include the chemical's primary route of entry into the body on the MSDS.
5. Failure to include the chemical identity and hazard warning as it appears on the package label.
6. Failure to complete the MSDS. An MSDS may not contain any blank sections.

Remember, it is the responsibility of the site rep to read and evaluate the MSDS, then prescribe employee protection measures as are appropriate.

RESPIRATOR TIME
LIMITATIONS

In many situations, employees are required to wear respirators for extended periods of time during a work shift. These situations should be reviewed periodically to assure that such usage of respirators is appropriate and reasonable.

From a regulatory standpoint, there are currently no general requirements that limit the amount of time that a respirator may be worn during a work shift. The only specific reference to respirator use time limitations that we are aware of is contained in the OSHA Lead Standard [29 CFR 1910.1025 (f)(1)(i)]. However, it should be noted that this requirement limiting respirator usage to a maximum of 4.4 hours per day was included in the Lead Standard because the use of respirators was determined by OSHA to be an unacceptable method of compliance with this Standard. The use of respirators was intentionally limited in this case as one means to force the installation of engineering controls. From our review, this requirement was not based on medical or industrial hygiene practice, but was an administrative decision by OSHA.

Assuming that the individual has been found to be physically able to wear a respirator, as determined through an adequate medical examination, the amount of time that an individual should wear a respirator for a continuous period depends primarily upon the following factors:

1. *Perception of comfort while wearing the respirator.* This would include physical comfort, such as the absence of skin irritation, as well as the actual fit of the respirator on the face.
2. *Work activity and stress.* Heavy work that is physically draining may affect an employee's capability of wearing certain types of respirators. Temperature and humidity conditions present in the work area may affect the physical or psychological stress level associated with wearing a respirator as well as the effectiveness of certain respirator filters and cartridges.
3. *The type of respirator worn and the airborne concentration of the contaminant present in the work area.* For example, the breakthrough time for an organic vapor cartridge respirator is dependent upon the airborne concentration of a specific contaminant and the length of time it is used. A low molecular weight organic vapor may have a very low breakthrough time at high

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airborne concentrations, thereby limiting the
time of continuous usage before replacement of
the cartridge is needed.

With consideration to the factors influencing respirator
usage, the establishment of a time limitation on continuous
usage must be made on a job-specific basis. From experience,
a reasonable and practical approach is to limit respirator
usage to no more than two hours at any one time, with no
fixed time limitation for total use during a work shift.
However, employees should be able to take a periodic break
from respirator usage in a clean area at any time as long as
is reasonably required.

In addition to the two-hour limitation, the following
provisions should apply, as a minimum:

1. Employees should be permitted, as their specific
job allows, a reasonable opportunity to leave
the work area to wash their faces and respirator
face pieces as necessary to prevent skin
irritation that may be related to respirator
use.
2. Employees must be permitted to change the filter
elements or cartridges of air-purifying
respirators whenever they detect an increase in
breathing resistance or detect an odor or taste
that may be caused by breakthrough of the
respirator by contaminants present in the work
area.

The final area that should be given consideration is the
selection of an appropriate type, style, and size of
respirator to be used in a particular situation. Diligence
is required in determining the appropriate type of respirator
for protection against a specific hazard. This selection
process should also consider ease of use or comfort. It is
possible to select a respirator that is over-protective for a
specific task and not worn by employees because it is
cumbersome and uncomfortable, thereby defeating the
respirator's purpose. An example of this would be the
selection of a full-face piece respirator for protection
against a nuisance particulate.

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**LABORATORY SERVICES
UPDATE**

The newest Clayton Environmental Consultant Laboratory, located at Pleasanton, California was recently accredited by the American Industrial Hygiene Association for industrial hygiene analyses. Westinghouse sites wanting to use this West Coast laboratory will receive the same corporate discount and services as from the other Clayton Laboratories. The following is the contact list for all five Clayton Environmental Consultant Laboratories:

1252 Quarry Lane
Pleasanton, CA 94566
(415)-428-2600

22345 Roethal Drive (main office and laboratory)
Novi, MI 48050
(313)-344-1770

Raritan Center
180 Fieldcrest Avenue
Edison, NJ 08837
(201)-225-6040

2141 Kingston Court, S.E.
Suite 116
Marietta, GA 30067
(404)-952-3064

400 Huron Church Road
Windsor, Ontario N9C 2J9
(519)-255-9797

**SITE REPS LOG
ACCOMPLISHMENTS**

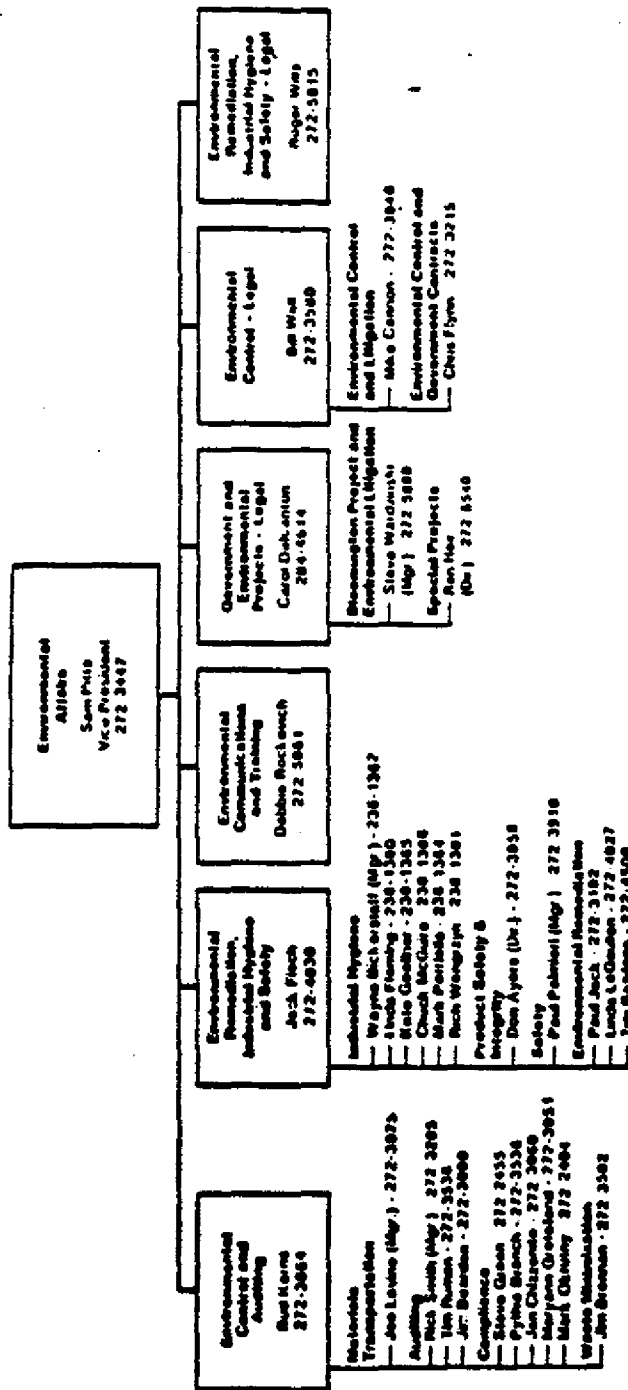
A special note of recognition goes to John Spicher, the Industrial Hygiene Representative at the R&D Center, Pittsburgh, PA. John recently became a Certified Safety Professional.

Special recognition goes to Robert L. Bergquist, the Industrial Hygiene Representative at Power Generator Service Division (PGSD) in Lafayette, CA. Bob recently was named Safety Professional of the Year by the San Francisco chapter of the American Society of Safety Engineers.

IN MEMORIAM

We are saddened to report on the recent death of Mr. Edgar C. Barnes. Mr. Barnes started his career with Westinghouse in the 1930's as the corporate Industrial Hygienist. He was a pioneer in the industry and served as President of the national American Industrial Hygiene Association. Previous to his retirement from Westinghouse in 1971, he had served as Manager of Corporate Industrial Hygiene, Director of Radiation Protection at Bettis Laboratory, and Corporate Director of Radiation Protection and Nuclear Licensing.

Get and Save



* When numbers are listed
Outside phone numbers
for Industrial Hygiene group are 412-258 2222
and for remainder of Environmental
Affairs are 412 842 2222

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WESTINGHOUSE ELECTRIC CORPORATION
DEFENSE & ELECTRONIC SYSTEMS CENTER
AEROSPACE & SYSTEMS DEVELOPMENT DIVISIONS
MANAGEMENT SAFETY COMMITTEE MEETING
AUGUST 1978

*E. C. Bishop, Chairman	MS 124	*J. E. LeBrell	MS 1152
J. P. Adams	MS G12A	*C. H. Maddox	MS 125
*G. L. Bauer	MS 164	*M. E. McElvany	MS 714
E. Briganti	MS 134	*D. C. Nelson	MS 108
(Sub P. Polakowski)		*M. K. Perry	MS 127
*E. T. Burns	MS 713	E. G. Peters	MS 504
*J. P. Caldwell	MS 1116	D. L. Rollette	MS 7-100
*M. M. Butler	MS 500	*L. K. Russo	MS 513
*W. A. Ernst	MS 127	*E. E. Skowronski	MS G12
*E. P. Ferguson	MS F13	J. C. Smith	MS 150
*E. D. Fielder	MS F13	E. S. Toles	MS 149
*J. M. Gervig, M.D.	MS 1178	*E. Z. Wood	MS G12A
A. J. Lavoie	MS 504	D. Sizemore	MS 131
*J. S. Gurecki	SEAP	E. K. Bahringer	MS 767

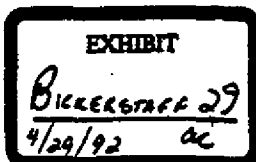
(*...Committee members not present)

cc: J. G. Murphy - MS 1156
M. E. Jones - MS 1116
J. S. Dollard - MS 134
E. E. Graham - MS 122
J. M. Sturtis - MS 1276
P. J. Miller - MS 1701
G. L. Aronson, Administrator, Safety, Hqts. Room 2044
W. R. Ziafel, Manager, Industrial Hygiene & Safety, Room 2265
V. Bickertoff, Industrial Hygiene Lab. Lab Center

A meeting of the Management Safety Committee was held in the P. & Conference Room, East Building, on Wednesday, August 9, 1978 at 10:00 A.M. Chairman E. C. Bishop presided.

The following topics were discussed.

SOURCE 844 6872269



ACCIDENT-INJURY EXPERIENCE

On-Job

The accident experience was reviewed for both divisions (See attached report 1)

AEROSPACE OPERATIONS

	<u>July 1978</u>	<u>Year To Date</u>
Lost Workday Cases	3	13
Work Days Lost	63	142
Serious Non-Lost Workday Cases	7	37
First Aid Treatment Injuries	72	381

S.D.S. OPERATIONS

Lost Workday Cases	0	1
Work Days Lost	0	11
Serious Non-Lost Workday Cases	0	2
First Aid Treatment Injuries	0	17

Off-Job

The off-job statistics for July 1978 (as reported to Medical) were reviewed. (See attached report 3).

The Safety Department still requests of Medical that such reporting be broken-down by reporting location or Division, i.e., ASD (East Bldg.), CSD (West Bldg.) and Administrative Services. (Such is in keeping with the reporting system and the objectives).

USE OF PERSONAL PROTECTIVE EQUIPMENT

Chairman Bishop stressed the need for all Management and Supervision to emphasize the importance for all employees to wear the prescribed safety equipment—glasses, shoes, respirators, etc.

The Safety Supervisor described 8 reportable cases which occurred in July in which employees were apparently not wearing the necessary personal protective equipment.

To aide in communicating this message are 2 attachments.

See 1 - OSHA Places the Responsibility on Employers to Make Certain Proper Eye Protection is Worn on the Job by Employees; and

2 - Some assessed penalties by OSHA for failure to provide personal protective equipment, etc.- from July 20, 1978 O.S.A. R. Reporter.

SOURCE 844 6072270

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KEY POINT CARDS

Chairman Bishop mentioned the fact that the Key Point Cards are good tools to use to convey the safety message to the employees. An instruction sheet, How To Prepare Key Point Cards, was distributed. Blank Key Point cards are available thru the Safety Office.

DISASTER CONTROL - POSTERS OF FIRE DRILL

The Chairman reported that Disaster Control Coordinator, B. Wilson, is putting together a workplace meeting script for Disaster Control.

Fire Marshal B. Macmore, reporting on the recent fire drill, stated that on 7-26-78, Fire Alarm #11 (East Bldg., Shop Area, Bay J, Column 8) was sounded for a practice fire drill. The fire brigade responded well, but with the following problems:

1. Problem of getting a fire cart thru an aisle
2. Three (3) bells failed to operate and will be repaired
3. One area was found to need an alarm and will be so installed
4. The Disaster Control team should look into re-routing some areas as some "bunching-up" did occur at some exits, i.e., the new employee center exit to the main parking lot
5. New panic-type emergency locks will be installed to replace the "glass-break" type, as some employees were reluctant to push this type during the drill.

SAFETY DISPLAY

A. Lavie reported that the July theme - Boating Safety, an eye-catching display with a full size sail boat, was exhibited by J. Banning and the safety supervisor. J. E. LeBreun will be responsible for the August theme - Highway Safety, to be exhibited by August 15 - for the greatest impact immediately prior to the Labor Day Holiday.

NEW SIGNAGE

Working Along Policy

A. Lavie asked some questions relative to "working along restrictions." The Safety Supervisor discussed the policy and cited examples. A copy of the policy will be (one) sent to A. Lavie.

Walk-Off Rugs

P. Holmbeck mentioned the need for improved maintenance of "walk-off rugs" at the entrances to prevent slipping and falling accidents inside the entrances, particularly during rain and snow. B. C. Bishop stated that perhaps longer rugs are needed, such as the new employee entrance-exit to the main parking lot across Ft. Meade Bldg., the Services Bldg. entrance and others. B. Hollette was assigned to look into this matter.

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SOURCE 844 6072271

Outside Storage and Salvage Storage - Salvage Area

It is more pointed out the fact that thru the efforts of members of this committee the old solder pot stacks were ordered to be cleaned before being broken-up and utilized for a new process—such stacks had been the source of several fires in the past. Prompt attention should be given to the outside storage—salvage area in area which contains leaking acid containers, HF acid adjacent to Nitric, etc.

A Safety and Housekeeping problem existed in the outside storage/salvage area, located in the rear of the West Building. Various acid containers and drums were leaking, caused by expansion due to exposure to the sun. Mr. Bishop contacted the responsible manager, R. Townsend, and the condition has been corrected.

OSHA-Training

The Safety Supervisor reported that if Safety Headquarters has directed—that is the OSHA or the OSHA requests employee individual exposure and medical records. On advice of the OSHA by function, there records should not be made available to the OSHA. The OSHA is concerned with a "Health Hazard" and that incident is related to the employee's log of the related injuries—caused by employee, former employee and their representatives. "...Records should comply with the revised regulation regarding court order of the OSHA."

(Underlining added)

MEETING DATE

Safety Committee Meeting

(Note date change, due to being "ramped" from Auditorium)

September 5, 1978 - Auditorium
1st Shift - 1:00 PM
2nd Shift - 3:45 PM

Management Safety Committee

September 13, 1978 - Wednesday
P. R. Conference Room - 13:00 AM



R. W. Bishop, Chairman
Management Safety Committee

R. W. Springer, U.S.P., Secretary
Management Safety Committee

SOURCE 844 6872272

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ACCIDENT EXPERIENCE DATA AFM - 600

(A)

Division/Department/Section: Systems Development Division
Personnel Number (Date & Page and/or)

Total No. of Initial Medical Visits: 72 PERIOD July 1978
Lost Workday Accidents: 4
Non-Lost Workday Accidents: 6

Occupations having highest No. of Accidents:

Occupation	No.	Occupation	No.	Occupation	No.	Occupation	No.
Assembler	29	Cold Winder	1	Drills	1	Grinder	2
Inspector	2	Father	2	Maintenance	2	Mach. Handler	2
Mills	3	Welder	2	Office	6	Packer	1
Painter	2	Plaster	1	Polisher	1	Receiver	1
Sheet Metal	1	Stamps	1	Technician	1	Tester	1
Toolbox	1	Welder	1	Tractor	1	Unknown Exposure	1

Supervisor with highest No. of Accidents:

Name	Occupation	No.	Name	Occupation	No.	Name	Occupation	No.
D. Daniels	MT	3	J. Smith	MT, MD	2			
C. Smith	AS, AT	2	V. Soggett	MT	2			
B. Shams	MT	3	P. Winder	MT	2			
A. Serrano	MTL	3	M. Gordon	MT	3			

Number of Accidents by Type:

Type	No.	Type	No.	Type	No.	Type	No.
Struck By	23	Contacted By	7	Contact With	7	Caught On	2
Caught Between	1	Fall To Below	2	Fall Foot Level	6	Exposures	2
Other Trauma	2					Other	2

Number of Accidents by Agency (Agency: Object or substance most closely associated with accident)

Agency	No.	Agency	No.	Agency	No.	Agency	No.
Hand Tools	4	Machine Tools	1	Electric Apparatus	2		
Working Surfaces	6	Machines	1	Chemical	1		
Materials/Products	12	Vehicles	1	Edg., Scors, Stairs	1		
Radiation Instruments	1	Dirt, Gas, Temperature	1	Free Particles	1		
Plant Grounds	2	Flammables	1	Boiler-Pressure Vessels	1		
Weld Apparatus	1	Plant Equip. Structures	3	Office Equip. & Equip.	3		
Compressors	1	Hot substances & object	9	Trans. Transmission	1		
Leads	1	Radiation	1	IF-Radiation	1		
Isotopes/Source	1	Explosion	1	Other	1		

Summary - Parts of Body Injured:

Body Part	No.	Body Part	No.	Body Part	No.	Body Part	No.
Scalp	1	Face	2	Neck	1	Eye	7
Shoulder	1	Hand	4	Chest	1	Abdomen	1
Arm	12	Hand	4	Finger	15	Leg	1
Foot	1	Toe	2			Other	1

Were there Key Point Cards for the Jobs? 35 YES 9 NO

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SOURCE 844 6872273

OFF JOB ACCIDENT REPORT

AISD-SDO

Period: July, 1973

Total # of accidents 19

Lost working days 202.

Type of Injury	Home	Other	Days Lost
Fracture - foot		X	20, still out
Injured back - swimming		X	20, still out
Lacerated tendon, hand - camping		X	20, still out
Fracture - left arm - fell off kitchen chair		X	19, still out
Sprain - ankle - camping		X	20, still out
Neck injury - auto accident		X	4
Neck injury - auto accident		X	9
Motorcycle accident		X	7
Sprained ankle	X		15, still out
Arm injury - auto accident	X		17, still out
Fracture - both feet - swimming pool	X		10
Auto accident - neck problems	X		11
Sprained wrist	X		8
Injured back	X		8, still out
Fractured leg - motorcycle accident		X	9, still out
Auto accident - neck injuries		X	3, still out
Muscle spasms - slipped at home	X		2, still out
Auto accident - neck injuries		X	4, still out
Auto accident - hip injury		X	3, still out

John H. Glavin
 John H. Glavin, D.O., M.D.
 Plant Physician
 Ext. 8214

SOURCE 844 6872274

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TO: INDUSTRIAL HYGIENE LABORATORY
FROM: 236-3841
DATE: August 31, 1978
SUBJECT: RESULTS OF AIR SAMPLES

RE: NEWARK, NJ
ATTN: Charles Burger

The results of the area samples that were taken at Newark are all well below the OSHA Time Weighted Average for 8 hours. Since your samples were taken for less than 8 hours they were Time Weighted for the time that they were taken and one could assume that the concentration given would remain somewhat constant over the rest of the shift.

However, I would caution against assuming that these area samples represent the concentrations that would be obtained in the breathing zone of a particular employee. Past experience has shown us that area samples usually show lower concentrations than personal samples.

Some of the charcoal tube samples taken by Wayne Bickerstaff last September have been analyzed. The trichloroethylene sample is well under the TWA. The results of the other samples are not in yet. As soon as they come in, a full report will be sent to you.

Diane Whittier
Diane Whittier, Industrial Hygiene Engineer
Corporate Industrial Hygiene Laboratory

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EXHIBIT

BICKERSTAFF 30
4/29/92 ac



Safety Information

LETTER

OSHA PLACES THE RESPONSIBILITY ON EMPLOYERS TO
MAKE CERTAIN PROPER EYE PROTECTION IS WORN ON THE JOB BY EMPLOYEES

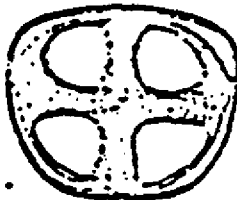
Safety glasses as a term has been around for many years to designate eye protection used in industry for occupational eye-injury protection. Unfortunately, the very term "safety glasses" can now be confusing. A Food and Drug Administration (FDA) ruling, which became effective January 1, 1972 requires that all prescription eyeglass lenses (for non-industrial use) be "Impact resistant". However, such lenses are not the equivalent of industrial-quality safety lenses (as is available thru the Tool Crib or Surcracon for "Plane" or prescription-free safety glasses, or thru Medical for prescription-type safety glasses) and should not be used if your job or operation requires "safety glasses".

Only safety eyewear that meets or exceeds all the requirements of American National Standard Z87.1 Practice for Occupational and Educational Eye and Face Protection (referenced to OSHA Regulations) is approved for full-time use by industrial workers. The ANSI Z87.1 Standard includes specifications for eye and face protection of many types, including spectacles (safety glasses), cover or nose-goggles, face shields, welding goggles and etc. The Occupational Safety and Health Act (OSHA) places the responsibility on the employer to make certain that proper eye protection is worn, where necessary, on the job.

The Z87 Standard (referenced by OSHA) specifies that industrial safety lenses be at least 3mm in thickness, be individually identified by Manufacturer, and capable of withstanding an impact from a one-inch-diameter steel ball dropped 50 inches. The FDA ruling regarding minimum thickness of lens was eliminated (Federal Register Vol. 36, No. 93, May 15, 1971), each lens need not be identified as to Manufacturer, and a smaller, 3/8 inch diameter steel ball is used to verify impact resistance. Prior to the FDA ruling the Maltese-cross heat stress pattern seen in industrial safety lenses with the aid of a Polaroscope, was a sure way of determining whether the lenses were heat treated.

No such pattern could be seen in street or dress glasses (unless specially ordered as "safety glasses"). However, such a pattern may be seen in glasses manufactured to the FDA requirements.

Stress pattern (Maltese-cross) seen in heat treated lens placed between two polarizing plates. Now may be seen in FDA "Impact-resistant" glasses as well as in Z87.1 (OSHA required) industrial glasses.



The ANSI Z87 also specifies that safety frames be identified as to manufacturer, must be made of slow-burning materials, and designed to retain lenses under impact. The FDA ruling mentions neither of these important safety features.

Some sections of the optometric community apparently regard the FDA order as complying with the term "safety glasses" used by the industrial community. IT DOES NOT.

(over)

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SOURCE 844 6872275

EXHIBIT

BICKERSHAFF 31
4/29/92 ac

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If your job or particular operation requires eye protection and you do not wear corrective glasses, "plane" or non-prescription glasses are available thru the Tool Crib or Storeroom; if you wear corrective glasses, each will be made available to you through your supervisor. All glasses issued ("plane", or corrective) must meet the ANSI (Z87.1 required) Standards.

SAFETY DEPARTMENT

SOURCE 844 6872276

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RE WILLS TR
FHE
BAK



to Gateway, Pittsburgh, PA
235-3616
on September 19, 1978
and Proposal for PCB Disposal

77-1-60-4201

Works Engineers
(PMC-3-)

Subsequent to my letter of September 8, 1978 listing the four approved disposal sites for PCB filled capacitors, properly drained transformers, contaminated soil, dirt, rags and other debris, we have received from one of the landfill sites' parent company a corporate-wide proposal for the disposal of PCBs. The Chemical Waste Management Division of Waste Management, Inc., 900 Jorie Boulevard, Oak Brook, IL 60521, has outlined to Westinghouse a system whereby various PCB contaminated materials can be disposed of in five regions of the country. These regions are:

<u>NORTHWEST REGION</u>		<u>WESTERN REGION</u>	
Illinois	Minnesota	N. Dakota	Colorado
Indiana	Iowa	S. Dakota	New Mexico
Michigan	Missouri	Nebraska	Arizona
Wisconsin		Kansas	Utah
		Montana	Idaho
		Wyoming	Nevada
		Washington	Oregon
		California	
<u>EAST CENTRAL REGION</u>		<u>EAST REGION</u>	
Ohio	Pennsylvania	New Jersey	Vermont
West Virginia	New York	Connecticut	New Hampshire
		Rhode Island	Maine
		Massachusetts	Delaware
		Maryland	
<u>SOUTHERN REGION</u>			
Georgia	Florida		
Virginia	Kentucky		
N. Carolina	Tennessee		
Mississippi	Alabama		
Louisiana	Arkansas		
Texas			

In each of the five regions Waste Management, Inc. maintains an existing Waste Management Company which will receive the PCB contaminated materials and arrange for shipment to the Alabama landfill site.

Dated January 1, 1980

132/4079541

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EXHIBIT

BICKERSTAFF 30
4/29/82

MIDWEST REGION

Chemical Waste Management
138th St. & Calumet Expressway
P. O. Box 214
Calumet City, IL 60409

Contact: Paul Koruba
Len Lindeman
Phone: (800) 323-4422

EAST REGION

Hoff Brothers Refuse Corp.
101 Ontario Street
East Rochester, NY 14445

Contact: Jack Hoff
Phone: (716) 381-2937

EAST CENTRAL REGION

Ohio Liquid Disposal, Inc.
504 Liberty Street
Fremont, OH 43420

Contact: Don Eckhardt
Phone: (419) 332-2688

WESTERN REGION

Chemical Waste Management, Inc.
900 Jorie Boulevard
Oak Brook, IL 60521

Contact: Ray Bock
Phone: (312) 654-8600 Ext. 373

SOUTHERN REGION

Chemical Waste Management
2131 Kingston Court S.W.
Suite 112
Marietta, GA 30067

Contact: Ken Johnson
Phone: (404) 952-0444

In accordance with this corporate-wide proposal, the following PCB disposal prices have been offered:

55 gallon drum = \$59.98
40 gallon drum = \$43.62
30 gallon drum = \$32.72
5 gallon drum = \$5.18
Cubic foot disposal price = \$5.16

Note that the prices listed are for disposal only. Transportation pricing will be provided by the individual divisions of Waste Management, Inc. on a case by case basis.

Waste Management, Inc. has proposed a manifest system and a labeling system which must be used for the shipment of PCBs. Information on this system can be obtained from any of the Waste Management, Inc. regional representatives or by calling us for a copy of the complete Waste Management proposal.

B.A. Kerns
B. A. Kerns, Manager
Environmental Control
Construction Technology

PC



San Francisco
777-2231
June 19th, 1979
TUCSON ELECTRIC POWER COMPANY
INDUSTRIAL INSPECTOR'S REPORT

C. W. BICKERSTAFF/TUCSON Electric Power Co.

cc: E. C. Barnett - San Francisco PCD
J. D. Mathis - Phoenix PCD
A. H. Dyer - Bismarck PCD

Enclosed is a copy of each of three reports submitted by Mr. James C. Jackson to the Tucson Electric Power Company concerning asbestos abatement removal at the customer North Loop Station. Because of the peculiarities, the customer engaged the services of Mr. Jackson although the actual personnel working in the exposed area were Westinghouse personnel. Mr. Mathis of our Phoenix District office obtained a copy of the report to complete the Westinghouse records of this operation.

The first report concerns the removal and reinstallation of asbestos-containing materials, principally blankets, from the customer North Loop Gas Turbine No. 1 from March 27th through April 11th, 1979.

The second report, for the period April 12th through April 17th, 1979, evaluates asbestos exposure to employees during the removal of asbestos-containing blanket and block installation material from the customer North Loop Gas Turbine No. 2.

The third report is basically a tabulation of laboratory analysis performed by Mr. Jackson of samples collected by the Westinghouse supervising engineer, Mr. G. L. Thratt. Mr. Jackson had a previous commitment for the period of April 17th through the 27th and in his absence Mr. Thratt collected the samples and transmitted them to Mr. Jackson for analysis.

Obviously, the monitoring operation at the customer's work sites are being conducted at great expense both in direct monitoring costs as well as loss of productivity. Therefore, I request that you review the enclosed reports, as well as my report of April 17th concerning the monitoring conducted at the customer Irvington Station gas turbine No. 2, to determine if we have sufficient monitoring data to establish standardized work rules and procedures to accomplish similar work without performing the monitoring operation.

cc: BIC

SOURCE 644

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EXHIBIT

BICKERSTAFF 33
4/29/92 AC

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LC

Tucson Electric Power Company
June 1970, 1970
Page Two

My review of the accumulated data indicates the most likely procedure that could be accomplished without further monitoring is that of removing and re-insulating asbestos-containing blanket insulation. My report of April 1970 as well as Mr. Jackson's report for North Loop No. 1 from March 1970 through April 1970 include the data for consideration. It is intended that this type of work would be done while personnel are wearing disposable protective clothing and either disposable respirators or MSA Cordo II respirators equipped with particulate filter T type F. In addition, it is assured that the personnel would be advised in a safety meeting prior to start of the work of the handling procedures required to keep the dust level to a minimum.

After evaluating Mr. Jackson's report for North Loop No. 1 as well as the laboratory analysis of data for the period April 1970 through 1970, I doubt that there is sufficient data to further proceed with removal of asbestos-containing insulation block without further monitoring. However, I request your comments after your review of the subject material.

One additional consideration was injected into the insulation material consideration by Mr. Jackson's comment in item 1 of the Recommendations portion of his report for North Loop No. 1. His statement that fiberglass is not without some health hazard of its own, as well as his attaching an article concerning fiberglass to the subject report, indicates that perhaps more attention should be paid to the replacement material by the customers. Therefore, I contacted a representative of FACOR Inc., who supplied the replacement insulation material, and was advised that the fiberglass material was manufactured by J.P. Stevens Company who designates the material as TOWHEED. Their literature indicates the average fiber diameter is .00015 inches. No fiber length was given in the descriptive information and the material was further described as batting type, four one quarter inch layers needed together. The FACOR representative will forward a copy of the J.P. Stevens descriptive literature which I will forward when received.

I request that you review the fiberglass information provided by Mr. Jackson and advise me if the field handling of this material requires protective measures other than that used during the installation of the first blanket material supplied. For your information, workers handling the fiberglass replacement materials were equipped with disposable protective clothing as well as disposable respirator masks.

Should you require further information to help in your evaluation, please contact me.


R. L. Bergman
FOO-San Francisco

RATj

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Future investigations should evaluate the ceiling enclosure level of clinging blankets underneath the turbine to assure that excessive exposures are not encountered in that situation.

Subsequently, the blankets were removed from the building for storage outside where they were wrapped in plastic and tarped. Due caution should be exercised in handling the blankets inside the turbine building. Dust can be generated in this activity although the asbestos levels did not seem of concern.

March 23, 1979: Employees J. Gale and M. Millisap continued to wear protective clothing and air-supplied respirators as described for March 21st. Samples were again collected on both workers and at the area monitoring location. Painting activities centered on cleaning the turbine building as a result of the previous day's work. J. Gale and M. Millisap spent the majority of their time vacuuming the floor, pipes, and turbine surfaces that were dust-laden from the blanket removal efforts. No visible dust particles were generated or disturbed during this activity.

A Portsmouth Ward, 12-gallon wet and dry vacuum cleaner was used for the clean-up. Mr. Jerry Truett, a Westinghouse employee, had modified the vacuum cleaner by adding a water trap at the exhaust end of the vacuum. He also taped all hose connections. The end of the 5-gallon can water trap was also covered with another vacuum cleaner bag. An aliquot of the water-cleaned vacuum exhaust was collected to determine whether asbestos fibers were being captured or not.

A fourth sampler was placed in the building housing turbine #4 and located in an area similar to the one sampled for turbine #1. This fourth sampler, in effect, was monitoring background asbestos concentrations within the turbine building.

Mr. Leonard Nava, a T&E electrician was also sampled for 91 minutes during his work on turbine #1. He was supplied with a Cofco 12 to wear while in the turbine building.

During the afternoon, J. Gale and M. Millisap painted the surfaces of any other asbestos-containing material that was not being removed from the turbine. The white, rubber-based coating and the aluminum latex paint both seemed to accomplish their stated purpose and seal the various surfaces.

March 24, 1979: J. Gale and M. Millisap were wearing air-supplied respirators and protective clothing. The two personal samplers and the one area monitor were in place and collecting particulates from the workroom air.

Visual inspection of the surfaces painted on March 23th showed no dustiness. Scraping with a screwdriver and slight indentations caused by hammering did not seem to disturb or invade the painted surface. Thus it appears that painting of asbestos-containing surfaces is highly desirable.

In order to assess the immediate needs for continuation of the extensive personal protection procedures employed since the 27th, four filters were selected for analysis at the University of Arizona Industrial Hygiene Laboratory. Results from these samples were discussed with both T&E personnel (G. Ninn and J. Bontal

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SOURCE 844

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and Washington employee (B. Berquist and J. Truitt). Mr. Berquist agreed that the personal protection could be removed when the painting and any subsequent clean-up was completed. Also, he recommended that area sampling be continued for a few days and that sampling be performed during blanket replacement. I concurred in Mr. Berquist's recommendations as did TGA representatives.

March 22 and April 2, 1978: Area sampling continued for the day-shift hours at the same location as previously described.

April 11, 1978: Personal sampling and area sampling was performed during blanket replacement. J. Gale and R. Nesbitt began moving blankets into the turbine building about 1245. J. Gale then handed blankets up to R. Nesbitt who was replacing the top blankets while J. Gale worked on the side and end blankets. Dust particles were evident during this activity where the roof was closed and the ventilation was off. The blanket replacement was completed about 1515 and sampling was terminated.

CONCLUSION

A study has been performed on the asbestos exposure to working during the stripping and refitting of a gas turbine of asbestos-containing materials, principally blankets. Based on the sampling data and on-site observations, the following conclusions are presented:

1. Employees are exposed to asbestos fibers to the extent that medical monitoring is required as defined by the October 1978 OSHA Program Directive 100-16. This directive states that medical monitoring is to be instituted when employee exposure exceeds 0.1 fibers/cc.
2. While the OSHA 8-hour TWA permissible exposure limit of 2 fibers/cc was not exceeded in this study, a relaxation of the observed employee work practices could result in exposures exceeding the standard.
3. Likewise, the OSHA ceiling limit of 10 fibers/cc was not exceeded with any sample collected in this study, although careless handling of blankets and/or blocks could result in exposures above this ceiling value.
4. Surface painting of asbestos-containing materials appear to substantially reduce the possibility of exposure.
5. Protective clothing and air-supplied respirators are not required at the levels of asbestos found in this study. Air purifying respirators are required if the 8-hour TWA permissible exposure (2 fibers/cc) or the ceiling or maximum (10 fibers/cc) level "are reasonably expected to exceed no more than 10 times these limits" according to 29 CFR 1910.1001. Similarly, special clothing, such as coveralls, head coverings, gloves etc. are not required unless ceiling levels are exceeded.

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6. It is not necessary for security personnel to wear air-purifying respirators when making their evening rounds during turbine overhaul activities similar to those described in this report. Machine rooms should also not require respiratory equipment unless work practices deteriorate or future air sampling results indicate the contrary.

RECOMMENDATIONS

Based on the findings of this study and as a result of discussions with Tucson Electric Power Company and Westinghouse employees, the following recommendations are offered:

1. Asbestos-containing materials such as blankets and blocks that are used as insulation on the gas turbines should be replaced with asbestos-free materials. Fiberglass is used as a replacement by both Westinghouse and Arizona Power for example. Unfortunately, fiberglass is not without some health hazard of its own. Attached as Appendix V is a recent review article on fiberglass that should give you some insight into current thinking on this material. Also, a section of the NIOSH Criteria Document on fiberglass is enclosed.
2. A medical monitoring program as described in 29 CFR 1910.1001 should be established. A copy of the OSHA regulation on asbestos is enclosed for your reference as Appendix VI.
3. An asbestos monitoring program should be instituted to ensure that employee work practices are equal to or hopefully exceed those observed in this study. It is encouraging that the TEP Safety Department has just purchased three MSA Model 9 personal sampling pumps and this action certainly constitutes a commitment to begin the monitoring plan. Periodic personal sampling should emphasize the blanket stripping and refitting tasks as well as any removal of block material. Short-term exposure levels of approximately 15-minute duration collected at perhaps 2 lpm or greater, should be acquired also to ensure that asbestos ceiling value is not exceeded.
4. All blankets, blocks and any other asbestos-containing materials that are removed and to be refitted, should be painted as described earlier in this report. This activity, while time-consuming, appears to cut down dust generation.
5. An asbestos respiratory and protective clothing program should continue to be available to employees until such time as a sufficient data base and good work practices show that asbestos exposures are minimized.
6. Employee work practices must be re-evaluated in light of these findings. Specific stripping and removal procedures should be studied and bagging of materials, wet clean-up methods and any other effective dust suppression techniques implemented.

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TABLE I

Summary of Daily Time-Weighted Average Asbestos Exposure

<u>Date</u>	<u>Sampling Location</u>	<u>Ambient Fibers/cc</u>	<u>Comments</u>
March 27, 1979	J. Gale	0.07	-
	J. Sandoval	0.33	-
	Area-turbine no. 1	0.043	-
March 28, 1979	J. Gale	0.093	-
	R. Millard	0.12	-
	L. Love**	~0.1	24 hours
	Area-turbine no. 1	0.019	-
	Area-turbine no. 4***	<0.01	-
March 29, 1979	J. Gale	0.16	24 hours
	R. Millard	0.096	24 hours
	Area-turbine no. 1	<0.01	-
March 30, 1979	Area-turbine no. 1	<0.01	-
April 2, 1979	Area-turbine no. 1	<0.01	-
April 11, 1979	J. Gale	0.37	24 hours
	R. Needitt	0.048	24 hours
	Area-turbine no. 1	0.027	-

- * Comments indicate exceptions
- ** Tucson General Electric Company employee
- *** Background sample - no activity occurred in this area

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TABLE 11

Asbestos Exposure as a Function of Task performed

<u>Task Performed</u>	<u>Sampling Location</u>	<u>Estimated Asbestos Exposure Fibers/cc</u>	<u>Sampling Date</u>	<u>Sample Number</u>
Monthly Maintenance	J. Gale J. Sandoval Area	0.2 0.046 40.015	3/27/79	J-1 S-1 A-1
Blanket Stripping for Overhaul	J. Gale J. Sandoval Area	0.4 0.3 40.015	3/27/79	J-1, J-2 S-1, S-2 A-1
Blanket Stripping Cleanup	J. Gale J. Sandoval/ H. Phillips Area	0.24 0.26 0.04	3/27-28/79	J-3, J-4 S-3, S-1 A-2, A-3
Blanket Painting	J. Gale H. Phillips Area	0.13 0.11 40.015	3/28-29/79	J-5, J-6, J-7 S-2, S-3, S-4 A-4, A-5
Electrician	L. Nava	~0.1	3/28/79	S-1, S-2
Turbine Overhaul	Area	<0.01	3/29/79 and 4/2/79	A-6, A-7
Blanket Painting	J. Gale H. Phillips Area	0.37 0.096 0.027	4/11/79	J-8 S-1 A-8

Personal Sampling Procedures

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1. Personal sampling Pump
2. Filter cassette (3-piece) containing 0.8 µm mixed cellulose ester (membrane) filter
3. Tubing and label clips
4. Data Summary Sheet
5. Sample ID labels

Collection Procedure

1. To insure sufficient battery charge during sample acquisition, the personal pump should be charged overnight before use. If necessary, the Li-Cd battery memory can be discharged first to guarantee a full charge.
2. Attach the sampling pump to the worker with the belt provided or fasten the pump securely to the worker's belt. If an area sample is being collected, affix the pump to a rigid support at approximately nose level with packing tape or a belt.
3. Remove both plugs from the filter cassette. Insert the needle adapter into the cassette exit side.
4. Connect tubing to the needle adapter and attach the label clip to employee's collar. Make sure that the tubing is sufficiently long so that it does not restrict employee's movements or interfere with work performance. Also, the filter placement should be located as close as possible to the mouth and nose so as to approximate the breathing zone. When area sampling is being performed, the filter face should be vertical or slightly angled with the face downward, so that particulate will not fall onto the filter.
5. Remove the face cap of the 3-piece cassette so that sampling will be performed open-faced. Turn the personal sampling pump on and record the initial flow rate, time and pump and cassette numbers on the Field Battery Sheet. The flow rate may drop somewhat after 4 to 1 hour of sampling, depending upon the pump/battery status. After 4 hours of sampling, the pump should be checked hourly frequently and changed after approximately 8 hours of use.
6. When terminating sampling, record the time and final flow rate and replace the cassette face cap and plug.
7. Detach the label clip, remove the needle adapter and insert the end plug. Note, the filter should be handled very carefully. It must be completely enclosed and not open in any manner whatsoever; therefore,

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1. Sampling should be observed at frequent and periodic intervals to insure sample integrity.
2. The cellulose-bands around the filter holder are NOT TO BE REMOVED. If this situation occurs before sampling, do not use the cassette. However, if the band breaks or becomes disconnected after sampling, tape up the cassette and designate this situation on the proper consideration may be given when the results are evaluated.
3. As a guideline, if the person is right-handed, attach the cassette vertically to the left side of the label. If the person is left-handed, attach the cassette to the right side.
4. Depending on condition and age, personal pumps may not operate for a full 8 hours. Therefore, the characteristics and individuality of each pump should be considered with sampling errors. Discontinuing the device before starting can remove any primary characteristics and allow for longer sampling times.
5. Visible particulate collection of the filter surface may make the microscopic evaluation for asbestos fibers more difficult. Therefore, avoid excessive buildup of particulates.

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APPENDIX II

Exposures and Activities of Mr. Sandval

2. Sandval: March 27, 1979

Calculation of time weighted average (TWA) exposure:

1. Actual sampling showed: 0.044 fibers/cc for 145 minutes (S-1)
0.04 fibers/cc for 36 minutes (S-2)
0.66 fibers/cc for 59 minutes (S-3)
2. Assume sample S-1 not 145 minutes but 240 minutes as Mr. Sandval requested pump removal to enter and inspect combustion chamber. Pump remained off for nearly two hours as he was in and out of the chamber; however, he usually remained at the chamber entrance unless not inside the chamber.
3. Assume Mr. Sandval working in an atmosphere averaging 0.75 fibers/cc ($0.04 + 0.66/2 = 0.35$) for an additional unsampled 42 minutes. This is based on my observations of his activities including clipping off blankets under the turbine. He again requested removal of the pump for this activity as he feared that he might break the pump under those circumstances.
4. Therefore, using the formula:

$$TWA = \frac{Conc._1 \times Time_1 + Conc._2 \times Time_2 + \dots + Conc._n \times Time_n}{Total Time}$$

The following TWA calculation is made:

$$TWA = \frac{0.044/cc \times 145min + 0.04/cc \times 36min + 0.66/cc \times 59min + 0.35/cc \times 42min}{377 min}$$

TWA = 0.32 fibers/cc for 6 hours and 17 minutes.

This TWA would be 0.26 fibers/cc if a full eight-hour workshift 480 minutes were calculated. However, Mr. Sandval may well have been in the asbestos environment longer under more routine circumstances. Therefore I feel that the value of 0.32 fibers/cc is preferred although statistically there is probably no real difference between 0.32 and 0.26.

3. Spie: March 27, 1979

Calculation of time-weighted average (TWA) exposure:

1. Actual sampling showed: 0.30 fibers/cc for 112 minutes (J-1)
1.2 fibers/cc for 37 minutes (J-2)
0.69 fibers/cc for 40 minutes (J-3)

Appendix II
Page 2

2. Assume sample J-1.24 minutes instead of 112 minutes. (See J. Sandoval comments for justification).
3. Assume Mr. Gale working in an atmosphere averaging 0.95 fibers/cc ($1.2 + 0.69/2 = 0.95$) for an additional 60 minutes.
4. Therefore, using the formula described previously, Mr. Gale's TWA exposure was:

$$TWA = \frac{0.27/\text{cc} \times 240\text{min} + 1.27/\text{cc} \times 17\text{min} + 0.69/\text{cc} \times 40\text{min} + 0.95/\text{cc} \times 60\text{min}}{377\text{min}}$$

TWA = 0.47 fibers/cc for 6 hours and 17 minutes.

If calculated in an eight-hour basis, then the TWA would be 0.37 fibers/cc.

Area Sampler: March 27, 1979

Calculation of time-weighted average (TWA)

1. Actual sampling showed: ≤ 0.015 fibers/cc for 280 min (A-1)
0.11 fibers/cc for 115 min (A-2)
2. Assume that sample A-1 is 0.015 rather than ≤ 0.015 . This indeed represents a maximum value but it at least permits a point of reference for calculating the TWA.
3. Therefore, using the formula described previously, the area sampler TWA was:

$$TWA = \frac{0.015/\text{cc} \times 280\text{min} + 0.11/\text{cc} \times 115\text{min}}{395\text{min}}$$

TWA = 0.041 fibers/cc and again this probably represents a maximum TWA.

2. Gale: March 28, 1979

Calculation of TWA exposure:

1. Actual sampling showed: 0.093 fibers/cc for 196 minutes (J-4)
 ≤ 0.042 fibers/cc for 64 minutes (J-5)
0.12 fibers/cc for 84 minutes (J-6)
2. Assume ≤ 0.042 fibers/cc for 260 minutes.
3. Assume an additional 0.091 fibers/cc for 75 minutes ($\frac{0.093 + 0.12}{2} = 0.091$).
4. TWA calculation:

$$TWA = \frac{0.093/\text{cc} \times 196\text{min} + 0.042/\text{cc} \times 64\text{min} + 0.12/\text{cc} \times 84\text{min} + 0.091/\text{cc} \times 75\text{min}}{460\text{min}}$$

TWA = 0.093 fibers/cc

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Appendix II
Page 3

H. Wilson: March 28, 1979

Calculation of TWA exposure:

1. Actual sampling showed: 0.12 fibers/cc for 153 minutes (B-1)
0.066 fibers/cc for 67 minutes (B-2)
0.15 fibers/cc for 86 minutes (B-3)
2. Assume A-1 is 0.12 fibers/cc for 153 minutes.
3. Assume an additional 0.11 fibers/cc for 77 minutes $\frac{0.066 + 0.15}{2} = 0.11$
4. TWA calculation:
$$TWA = \frac{0.12 \text{ f/cc} \times 153 \text{ min} + 0.066 \text{ f/cc} \times 67 \text{ min} + 0.15 \text{ f/cc} \times 86 \text{ min} + 0.11 \text{ f/cc} \times 77 \text{ min}}{483 \text{ min.}}$$

TWA = 0.11 fibers/cc

Area Sample: March 28, 1979

Calculation of TWA exposure:

1. Actual sampling showed: 40.016 fibers/cc for 349 minutes (A-3)
40.022 fibers/cc for 187 minutes (A-4)
2. Assume A-4 is 40.022 fibers/cc for 331 minutes.
3. TWA calculation:
$$TWA = \frac{0.016 \text{ f/cc} \times 349 \text{ min} + 0.022 \text{ f/cc} \times 331 \text{ min}}{480 \text{ min.}}$$

TWA = 0.019 fibers/cc

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APPENDIX II:

Explanations and Examples of Test-Tube Calculations

Blacket Stripping for Overhaul: March 27, 1979

J. Gale:

Measured..... 0.3 fibers/cc for 112 minutes (J-1)
1.2 fibers/cc for 37 minutes (J-2)
Assume..... J-1 is 240 minutes and J-2 is 60 minutes
Calculation.. $\frac{0.3 \text{ f/cc} \times 240 \text{ min} + 1.2 \text{ f/cc} \times 60 \text{ min}}{300 \text{ min}} = 0.4 \text{ fibers/cc}$

J. Sandoval:

Measured..... 0.044 fibers/cc for 145 minutes (S-1)
0.04 fibers/cc for 36 minutes (S-2)
Assume..... S-1 is 240 minutes and S-2 is 60 minutes
Calculation.. $\frac{0.044 \text{ f/cc} \times 240 \text{ min} + 0.04 \text{ f/cc} \times 60 \text{ min}}{300 \text{ min}} = 0.2 \text{ fibers/cc}$

Blacket Stripping - Clean-up Phase: March 27, and 28, 1979

J. Gale:

Measured..... 0.09 fibers/cc for 40 minutes (J-3)
0.092 fibers/cc for 156 minutes (J-4)
Assume..... J-3 is 60 minutes and J-4 is 180 minutes
Calculation.. $\frac{0.09 \text{ f/cc} \times 60 \text{ min} + 0.092 \text{ f/cc} \times 180 \text{ min}}{240 \text{ min}} = 0.74 \text{ fibers/cc}$

J. Sandoval/M. Milligan:

Measured..... 0.06 fibers/cc for 59 minutes (S-3)
0.12 fibers/cc for 133 minutes (S-1)
Assume..... S-3 is 60 minutes and S-1 is 180 minutes
Calculation.. $\frac{0.06 \text{ f/cc} \times 60 \text{ min} + 0.12 \text{ f/cc} \times 180 \text{ min}}{240 \text{ min}} = 0.20 \text{ fibers/cc}$

Blacket Painting: March 28 and 29, 1979

J. Gale:

Measured..... 40.063 fibers/cc for 66 minutes (J-5)
0.13 fibers/cc for 84 minutes (J-6)
0.16 fibers/cc for 123 minutes (J-7)

4-24-68

daily PA of 2.5 miles

Circulation, 8:1) 1381/67

$$\frac{0.2677/\text{cc} \times 16.11 + 0.277/\text{cc} \times 94.13 + 0.165/\text{cc} \times 219.14 + 0.0911/\text{cc} \times 79.14}{415 \text{ mg}}$$

8. Address:

measured..... 0.046 sigma/cc for 45 minutes (H=23)

图 1-1 是《上海市城市总体规划（1999-2010）》中上海市城市总体规划图（第一版）。

6.074 1:20:15/55 for 1:22 minutes (1:22)

ALBINO..... N-4 in 210 minutes; 0.11 fibers/cf for 77 minutes (see 2/18/79)

daily Fed for M. Fall 1942/3. Sandoval)

Calculation: 6.11 g/lars/cc

$$\frac{0.044/\text{cc} \times 62.1 + 0.19/\text{cc} \times 81.1 + 0.234/\text{cc} \times 212.1 + 0.11/\text{cc} \times 97.1}{413.3}$$

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APPENDIX IV

Raw Sampling and Analytical Data

Sample Number	Sampling Date	Sampling Time	Sample Volume cc	Fibers/Falser	Fibers/cc	Comments
A-1	3/27/79	0921-1431	108,000	<4,500	<0.015	
A-2	3/27/79	1402-1537	126,000	15,600	0.11	
A-3	3/28/79	0830-1239	274,000	<4,500	<0.016	
A-4	3/28/79	1239-1546	306,000	<4,500	<0.022	
A-5	3/26/79	0811-1745	631,000	4,900	<0.01	
A-6	3/30/79	0751-1647	592,000	41,500**	<0.01	
A-7	4/2/79	0747-1706	549,000	2,140**	<0.01	
A-8	4/11/79	1230-1550	132,000	3,560**	0.027	
J-1	3/27/79	0927-1009 1034-1107 1317-1354	123,000	35,000	0.30	
J-2	3/27/79	1403-1455	41,000	47,700	1.2	
J-3	3/27/79	1900-1946	44,000	10,300	0.23	
J-4	3/28/79	0833-0957 1023-1137	172,000	13,900	0.092	
J-5	3/28/79	1246-1332	73,000	<4,500	<0.042	
J-6	3/28/79	1418-1542	93,000	11,400	0.12	
J-7	3/29/79	0839-0957 1035-1119 1343-1415	134,000	22,000	0.16	
J-8	4/11/79	1422-1538	172,000	64,100**	0.37	
B-1	3/27/79	0930-1009 1034-1142 1343-1531 1333-1556	165,000	6,100 7,040**	0.038 0.049	Avg=0.041
B-2	3/27/79	1404-1437	26,000	20,300	0.84	
B-3	3/27/79	1543-1547	90,000	47,400*** 35,300**	0.50 0.42	Avg=0.46

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Appendix IV
Page 2

Sample Number	Sampling Date	Sampling Time	Volume cc*	Fibers/Filter	Fibers/cc	Comments
B-1	3/28/79	0837-0958 1025-1137	168,000	19,000 20,000**	0.11 0.12	Avg=0.12
B-2	3/28/79	1250-1352	68,000	<4,500	<0.066	
B-2	3/28/79	1416-1542	95,000	13,900 11,400**	0.17 0.12	Avg=0.15
B-4	3/29/79	0838-0957 1016-1119	134,000	12,900	0.096	
B-1	3/28/79	1044-1139	61,000	6,100	0.10	
B-2	3/28/79	1204-1342	42,000	<4,500	<0.11	
B-1	4/11/79	1245-1415 1432-1535	108,000	16,400**	0.098	
B-1	3/28/79	0852-1043	463,000	<4,500	<0.01	
Vapor Exhaust	3/28/79	0847-0954	134,000	9,100	---	
Blank	2/27/79	---	---	<4,500	---	
Blank	3/16/79	---	---	<4,500	---	
Blank	3/29/79	---	---	<4,500	---	
Blank	4/11/79	---	---	<1,500*	---	

* Sampling rate of 1.1 liters per minute

** Analyzed by C-1000; remainder analyzed by C-100 in Salt Lake City

*** As the attached ALMA PAT round 52 data indicates, 95% of the asbestos data points fall within ±7% of the mean. Using this as a yardstick, the two values are within prescribed ALMA limits.

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10/10/79
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Westinghouse Motor Division
Electric Corporation



631-2616

18 October 1979

- Recipients:
- B. F. Atchinger - General Manager Large Motor Division
 - D. L. Hoover - General Manager Medium Motor & Gearring Division
 - G. C. Hoover - General Manager Power Electronic & Drive Sys. Div.
 - F. A. List - Division Manager Technical Services

Until a viable computer tracing program is developed, we must depend upon the manual collection of the names of individuals in your division who have been directly exposed to asbestos during the course of their work in 1979.

Attached is a list of the names and sections of those individuals who are known to have been exposed to and examined for exposure to asbestos during 1978. Please route this list to all supervisors for addition, deletion, or correction of names of individuals with respect to their asbestos exposure beginning January 1, 1979.

Please direct all salaried or supervisory personnel who have experienced exposure to asbestos to be included on the revised list of 1979 exposures. "Exempt" employees are not necessarily exempt from the adverse effects of asbestos exposures.

I would appreciate in your revised list the section, name, occupation number and job number of all known individuals who are directly exposed to asbestos in their work during 1979.

Many thanks for your cooperation.

mja
Mary Jo Allen
Supt., Accident Prevention
and Industrial Hygiene

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attach.

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EXHIBIT

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Mike W. Hagan
422-2123
October 24, 1979

- 6 C. T. Brady - Mgr., Accident Prevention, E. Pitts.
N. Whittington - Mgr., Accident Prevention, Lester
R. M. Eagle - Division Safety Coordinator, Broomall
E. O'Kern - Supervisor, Safety, Wamsin
T. Waters - Safety Coordinator, Winston-Salem

The Power Generation Operations Safety Group meeting is scheduled for October 24 through October 26, 1979 in Charlotte, North Carolina. The meeting should start at 12 noon on Wednesday and conclude around 3:00 p.m. on Friday. Reservations have been made at the Holiday Inn, Little Rock Road and I-85. I will provide ground transportation for the group. Listed below are the topics we had previously planned to discuss at the meeting.

- Wednesday-PM - Plant safety inspection of the Charlotte Steam Turbine Plant.
- Thursday & Friday - Summary of plant safety inspection.
- Safety Observer programs (What are you doing at your location? - Bring materials).
- Follow-up discussion on Workers Comp. program (Lester - Charlotte)
- Use and control of toxic chemicals in the workplace (FOS numbering system).
- Accident cost analysis.
- New facility safety program planning.
- Safety awareness programs - types and effectiveness.
- Return of nuclear materials (Lester - Broomall - E. Pitts).
- Use of warning labels for incoming materials.
- Warning labels on product for customers' use.
- Confined space procedure.
- Sub-contractor safety & third party suits.
- Job safety analysis program.
- Safety consultation & review program.
- Corporate material code system.

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EXHIBIT

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Page 2
October 10, 1979

- Eye protection program - control - eyelen.
- Lifting - types of cranes
 - instruction & training
 - lift controls
- Safety Observer recommendation submitted response.
- Discipline procedure for safety violators.
- Medical surveillance of first line supervisors exposed to asbestos, weld fumes, toxic materials, etc.

If we can cover the above topics in the two days allotted, we will have accomplished something. Looking forward to seeing you on October 24th.

Mike

M. W. Mangan, Manager
Safety/Regs & Salary Admin.

/jm

cc: J. E. Jacoby, Mgr., P.R., E. Pitts.
J. Towars, Asst. Mgr., P.R. Lester
H. Carney, Mgr., P.R., Broomall
A. D. Hoagland, Asst. Mgr., P.R., Muncie
C. Jennings, Mgr., P.R. Winston-Salem
G. Dunn, Mgr., P.R. Charlotte
P. Palmieri, Mgr., Corporate Safety, Headquarters
W. Richertstaff, Mgr., Industrial Hygiene, R&D Center, Pitts.

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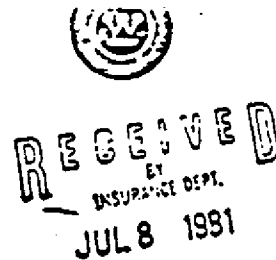
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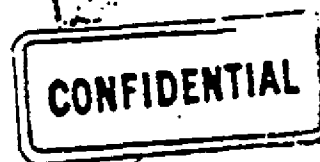
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TO: CORPORATE INDUSTRIAL HYGIENE
236-5848
DATE: July 7, 1981
FROM: ASBESTOS PRODUCTS &
EMPLOYEE EXPOSURE TO ASBESTOS



TO: WESTINGHOUSE BUILDING - 2016
W. M. Bryant, Director
Property & Casualty Insurance



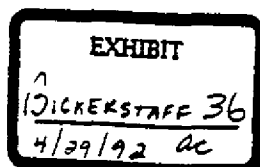
The attached information is provided in an attempt to comply with the following request that you made to C. W. Bickerstaff, Manager, Industrial Hygiene several weeks ago.

1. List of products manufactured or supplied by (W) which contain asbestos. If possible, please indicate which of these products are no longer manufactured or supplied by (W).
2. Employee exposure to asbestos--current and historical.

At the outset I want to mention that this data is by no means complete, but we are hopeful it will provide some background information.

During the early to mid 1960's, Industrial Hygiene was encouraging the divisions to eliminate the use of asbestos and find suitable substitutes. In February, 1976 an effort was made to gather specific data on the use of asbestos within the corporation, and to alert the divisions to the significance of its continued usage and the problems of compliance with OSHA Regulations. Attachment I is a copy of the letter sent to all Industrial Hygiene and Safety Coordinators, informing them of a one-day seminar on asbestos. A questionnaire was sent with this letter to survey the use of asbestos at each location. Attachment II is a roster of those attending the seminar.

Attachment III lists (W) locations that at one time or another used material containing asbestos. In Attachment IV we have summarized the data supplied on the returned questionnaires to indicate some of the Westinghouse products that contain some form of asbestos.



132/4085146

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Since 1976 most of these asbestos products have been replaced with another type of material. Attachment V is a list of some of these substitute materials. We are aware that Trafford PCB has had some difficulty in finding a replacement for the asbestos-neoprene stop gasket material for bushings. At the seminar, the Hampton people announced that a decision was made to stop production on asbestos containing micartas. However, because of the special need at other divisions, they may have some limited production. Bedford does have some limited production of coated asbestos paper.

We cannot answer to which (W) products, that contained asbestos are no longer manufactured or supplied, except to note that the Consumer Products group is no longer part of Westinghouse.

In regards to employee exposure, no monitoring was done prior to 1973. Attachment VI is a summary of asbestos monitoring done from 1973 to 1979, which we prepared for the Legal Department. We can bring it up to date if you need this information. I have also included Attachment VII summarizing data from the questionnaires to show asbestos products, used during plant operations, that are not included in a (W) product.

Hopefully this data will be helpful, and if we can be of any further assistance give us a call.

Zella R. Heasley
Zella R. Heasley
Sr. Industrial Hygiene Engineer

/jme

132/4085147

QUESTIONNAIRE - ASBESTOS* PRODUCTS

1. Which of the following asbestos containing products are used in your operations:

☐ Block	☐ Filter Media	☐ Rope Packing
☐ Board	☐ Laminated Compositions	☐ Sheet Packing
☐ Brake Lining	☐ Micarta Bars	☐ Sheet (Asbestos
☐ Cable & Wire	☐ Micarta Sheet	☐ bonded with rubber)
☐ (Asbestos Insul.)	☐ Molding Mixtures	☐ Sheet (Mill Board)
☐ Cement Sheet	☐ Molding Compositions	☐ Sleevings
☐ Cloth-Treated	☐ Paper-Treated	☐ Tape
☐ Cloth-Untreated	☐ Paper-Untreated	☐ Transite
☐ Fibers (Air Floats)	☐ Powder	☐ Yarn
☐ Fiber Powder	☐ Pulverized Asbestos	
☐ (Resin Grade)		

List any others not mentioned above.

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- If possible bring to the seminar or send in advance a small sample of each product used at your plant. Place each sample in a plastic bag identified by a Westinghouse Material Code Number and/or Supplier and Tradename.

2. Describe application (if more space is needed, use other side).

3. List products that have been investigated and found satisfactory as substitutes for asbestos.

Application

Tradename & Supplier

- Bring or send a small sample of each. Package and mark the same as requested for the asbestos product.

- * If you need a copy of the proposed asbestos standard, call Zella Heasley-Industrial Hygiene, WEN: 236-5847. 132/4065149

RETURN TO: Zella Heasley, Westinghouse R&D Center, by February 27, 1976

ATTACHMENT 11

ROSTER
⊗ ASBESTOS SEMINAR
MARRIOTT MOTOR INN
PITTSBURGH (GREENTREE), PA.
MARCH 5, 1976

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Raymond A. Bleeker
Design Engrg.
Architectural Systems Div.
Grand Rapids, Michigan
WIN: 523-7277

Needham Holden
Accident Prevention
Charlotte Nuclear Turbine Plant
WIN: 422-2454

Edward S. Bober
Safety Administrator
Accident Prevention
⊗ R&D Center
WIN: 236-7272

W. A. Itzel, Staff Asst. Engr.
Industrial Services Division
Greentree, Pa.
412-928-4768

J. C. Botts, Manager
Insulation Design Engrg.
East Pittsburgh-LRA
WIN: 236-2823

B. A. Kerns, Manager
Environmental Control
Construction Technology, ⊗ Bldg.
WIN: 235-3616

Phil Chekanski, Safety Engr.
Water Reactors Division
NES Building-Monroeville
412-373-4651

George E. Lavery, Safety Supvr.
Accident Prevention
Sharon Transf. Divs.
WIN: 224-5316

Denese A. Deeds
Industrial Hygienist
Accident Prevention
Buffalo Divisions
WIN: 245-2616

Norman E. Martello, Engr.
PCB - Trafford
WIN: 236-5316

Carol W. Erdley, Engr.
LRAD
Irwin Mica Plant
412-863-7000

Gene Martinella, Supvr.
Manufacturing Planning
PCB - Trafford
WIN: 236-5221

Smith Gause
Engineering Manager
Hampton Micarta Divs.
WIN: 422-6343

Paul Palmieri, Supvr.
Accident Prevention
Control Equipment Group-Beaver
WIN: 222-1371

M. A. Gipko, Envir. Engr.
Plant Services
East Pittsburgh
WIN: 236-2454

Larry Rudolph, Manager
Accident Prevention
Industry Services Division
Greentree, Pa.
412-928-4679

John Harrington
General Manager
Hampton Micarta Divs.
WIN: 422-6320

C. R. Ruffing, Engrg.
Insulation Development
East Pittsburgh-LRA
WIN: 236-2771

Andy Salc, Director
List., Safeguards & Safety
Nuclear Energy Systems
Monroeville, Pa.
412-373-4645

G. H. Schilling
Accident Prevention
Derry, IMD-Bedford, Manor;
West Mifflin Plants
WIN: 222-7263

R. M. Sexton, Manager
Insulation Development
East Pittsburgh-LRA
WIN: 236-2774

Dr. A. A. Spritzer
Medical Director
⊙ Nuclear Center
Monroeville, Pa.
412-373-4649

C. W. Waltz
OSHA Administrator
East Pittsburgh-LRA
WIN: 236-2192

James R. Welshons
Corporate Standards
⊙ R&D Center
WIN: 236-7232

Paul Wike, Buyer
East Pittsburgh-LRA
WIN: 236-2234

Richard T. Williams
Division Admin.
Accident Prevention
Bloomfield Lamp Div.
WIN: 326-3338

Eugene W. Wood
Accident Prevention
Baltimore Defense Div.
WIN: 234-2007

C. R. Zitterman
IMD - Bedford
WIN: 222-6125

Gerald T. Brady, Manager
Accident Prevention
East Pittsburgh
WIN: 236-2823

Industrial Hygiene & Safety Staff

John Adams, Engineer
George Arensman, Administrator
Keith Bodden, Administrator
Zella Heasley, Engineer
William Ziefel, Manager

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ATTACHMENT III

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In March 1976, the Corporate Standards Department informed Industrial Hygiene of 42 Westinghouse Manufacturing locations that were using at the time, or were known to have used, asbestos or asbestos containing materials in their operations.

This information was available, because these divisions were participating in the Corporate Standards Material Code System. Following is a list of these locations.

Athens, GA - Overhead Dist. Transformers

Baltimore, MD - Systems Development

Beaver, PA - Control Products

Bedford, PA - Treated Materials

Bloomfield, NJ - Lamp

Bloomington, IN - Dist. Apparatus

Bridgeport, CT - Bryant Electric

Buffalo, NY - General Control

Buffalo, NY - Large Motor

Buffalo, NY - Medium Motor and Gearing

Buffalo, NY - Industrial Equipment

Cheswick, PA - Electro-Mech

Cleveland, OH - Outdoor Lighting

Derry, PA - Industrial Ceramics

East Pittsburgh, PA - LRA & Switchgear

Greenville, PA - Specialty Transformers

Greentree (Pgh), PA - Industry Services

Hampton, SC - Micarta

Horseheads, NY - Electronic Tube

Hunt Valley, MD - Electronics System Supports

Hyde Park (Boston, MA) - Sturtevant

Jefferson City, MO - Underground Dist.
Transformers

Lester, PA - Steam Turbine, Gas Turbine

Lima, OH - Appliance Motors

Lima, OH - Aerospace Electrical

Lima, OH - Small Motors

Muncie, IN - Larger Power Transformers

Newark, NJ - Relay Instruments

Norman, OK - Residential Air Conditioning

Raleigh, NC - Meter

Randolph, NJ - Elevators

Roundrock, TX - Heavy Industries Motor

Sharon, PA - Transformers

South Boston, VA - Small Power Transformers

Staunton, VA - Commercial & Ind. Air Conditioning

Sunnyvale, CA - Marine

Sykesville, MD - Industrial Equipment

Sykesville, MD - Welding

Trafford, PA - Power Circuit Breaker

Vicksburg, MS - Interior Lighting

West Mifflin, PA - Transportation

Youngwood, PA - Semiconductor

132/4085152

ATTACHMENT IV

(W) PRODUCTS CONTAINING ASBESTOS**CONFIDENTIAL**

<u>PLANT</u>	<u>FORM OF ASBESTOS</u>	<u>APPLICATION</u>
Buffalo	Treated and untreated cloth and paper.	Insulation in motors
	Micarta sheet and bars	Wedges in motors
	Cement - filled with asbestos fibers	Baked on wound resistor tubes to keep wires properly spaced
Consumer Products Division	Paper, Cloth	Insulation
East Pittsburgh	Micarta Sheet	Stator slot wedges
	Asbestos paper - treated	Turn insulation on edge wound field coils for large hydro-generators
	Sheet - asbestos bonded	Gasket material
	Cable & wire - asbestos insulation	--
East Pittsburgh --Irwin--	Cloth, Paper	Molded "U" channels and molded shields for insulation
	Powdered asbestos	Filler in resin mixtures supplied to other (W) locations
Grand Rapids	Board and Sheet	Fire retardant office divider panels

132/4085153

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ATTACHMENT IV
Page 2

<u>PLANT</u>	<u>FORM OF ASBESTOS</u>	<u>APPLICATION</u>
Greenville	Resin filled with asbestos	Caulking for metal transformer case seams
	Laminated compositions	Insulation
	Micarta sheet	Terminal boards
	Paper (silicone resin treated)	Coils
IMD (Sedford)	Paper	Coat and laminate the paper for electrical insulation for (W) divisions
IMD (Hampton)	Paper	Asbestos filled micartas
IMD (Manor)	Powdered asbestos	Filler in their B-7-365 which is used at Sharon as wet winding resin. Filler in epoxy resin (W) M53533FD used at Trafford PCB as track resistant coating
IMD (West Mifflin)	Treated paper	Molded part (not certain as to ultimate usage)
Lester	Block	Insulation in turbines
	Asbestos sheet packing	Gasket material
Muncie	Tape	Barrier on shell of transformer gasket material

132/4085154

CONFIDENTIAL

ATTACHMENT IV
Page 3

<u>PLANT</u>	<u>FORM OF ASBESTOS</u>	<u>APPLICATION</u>
Sharon	Micarta sheet	Terminal boards and core-coil spacers
	Varnished asbestos paper	Wound into coils as fillers
	Transite	Duct spacers and fillers plus reactor disks
South Boston	Rope packing	Used as barrier during welding of covers on top of transformers. Material is caught between top flange of tank and bottom of cover. Transformer is shipped with asbestos packing in position.
Staunton	Micarta sheet (Hampton product)	Terminal supports for CE terminals
Trafford PCB	Micarta sheet	Core washers for current transformers.
	Asbestos-neoprene sheet	Stop gaskets for bushings and EHV columns.
	Asbestos filled epoxy resin (W) M53533FD	Tract resistant coating

132/4085155

ATTACHMENT V

SUMMARY

ASBESTOS SUBSTITUTES PRESENTLY USED 1976

<u>PLANT</u>	<u>APPLICATION</u>	<u>SUBSTITUTE MATERIAL</u>
<u>Bloomfield</u>	Curtains-glare and heat shield	Fiberglass Cloth (Pais Mfg. Co.)
<u>Buffalo</u>	Insulation	Nomex (DuPont) Micarta Silicone Sheet Glass Doryl Glass Melamine } (M)
<u>E. Pgh.</u>	Protective Blankets for Soldering	Nomex (DuPont)
	Blankets	Refrasil (Hitco) (M) M 41514GC
<u>Lester</u>	Insulating Blanket Filler	Kaowool (Babcock & Wilcox) (M) M 41414AD Temp Mat (Pgh. Corning) (M) M 41414AD
	Pipe Insulation	Flame Safe (Johns-Manville) (M) M 41424JC (fiberglass)
	Block Insulation and Pipe	Thermo 12 (Johns-Manville) (M) M 46102BB
	Cement for Block	Super Power House Cement (Keene Ind. Insulation Corp.)
	Insulating Blanket Cover	Textoglass 1925/9383 Glass Cloth (Pocar, Philadelphia, Pa.)
<u>Sharon</u>	Tank Cover Gaskets	Fiberfrax Rope (Carborundum) Glass Sleaving
	Heat Trap for Brazing	Wet Cheese Cloth Fiberfrax Rope (Carborundum)
	Stop Gasket for Bushings	Duroid 900 (Rogers Corp.)
	Shielding for Weld-Braze	Aluminum Sheet Nomex (DuPont) Fiberfrax (Carborundum)
<u>South Eastern</u>	Weld Barrier (Blankets)	Textoglass S/192-/9383 (J.P.Stevens)
	Weld Barrier (Sheet)	Textoglass S/84205/9383 (J.P.Stevens)

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ATTACHMENT VI

ASBESTOS AIR SAMPLE RESULTS 1973-1979**CONFIDENTIAL**

PLANT	YEAR SAMPLES WERE TAKEN	NUMBER TAKEN THAT YEAR	RANGE OF RESULTS (FIBERS/cc)	NUMBER ABOVE PEL
Asheville	1979	3	< 0.01 to 0.013	0
Baltimore	1976 (Before July)	3	< 0.2 to 2.0	0
Bedford	1976 (Before July)	15	< 0.02 to 0.04	0
	1978	3	0.04	0
Bertis (West Mifflin)	1979	2	0.02 to 0.33	0
Bloomington	1976 (After July)	3	< 0.01 to 0.04	0
Buffalo	1975	3	< 0.5	0
	1977	19	< 0.01 to 0.22	0
	1978	3	0.06 to 0.09	0
Canada LTD Burlington	1979	14	< 0.01 to 0.2	0

132/4085157

ASBESTOS AIR SAMPLE RESULTS 1973-1979

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PLANT	YEAR SAMPLES WERE TAKEN	NUMBER TAKEN THAT YEAR	RANGE OF RESULTS (FIBERS/cc)	NUMBER ABOVE PEL
Cheswick	1976 (After July)	2	6.2 to 9.4	2
Derry	1976 (Before July)	2	< 0.1 to 0.2	0
East Pittsburgh	1973	20	< 0.1 to 110	4
	1974	3	< 0.1 to 1.4	0
	1975	10	< 0.3 to 0.48	0
	1976 (After July)	18	< 0.01 to 3.8	2
	1977	2	0.5 to 2.1	1
	1978	3	< 0.01 to 0.16	0
	1979	23	< 0.01 to 1.5	0
Elmira	1976 (After July)	2	0.7 to 1.7	0
	1978	26	< 0.01 to 0.18	0
Fairmont	1978	2	0.09 to 0.11	0
Forest Hills	1978	2	< 0.01	0

132/4085158

ASBESTOS AIR SAMPLE RESULTS 1973-1979

CONFIDENTIAL

(S) PLANT	YEAR SAMPLES WERE TAKEN	NUMBER TAKEN THAT YEAR	RANGE OF RESULTS (FIBERS/cc)	NUMBER ABOVE PEL
Greentree	1975	2	0.12 to 0.22	0
Lester	1977	8	0.9 to 6.3	3
	1979	6	< 0.01 to 0.53	0
Manor	1977	6	< 0.01 to 95	0*
Newark	1978	6	< 0.01	0
Norman	1979	2	< 0.01	0
O'Hara Township	1977	5	< 0.01	0
Pittsburgh KDKA-TV	1979	5	< 0.01	0
Puerto Rico	1979	1	< 0.01	0

* Two air samples taken for a short time period along with OSHA Industrial Hygienist resulted in high concentrations of Asbestos-like fibers. Over an 8-hour period the results did not exceed the PEL.

132/4085159

ASBESTOS AIR SAMPLE RESULTS 1973-1979

CONFIDENTIAL

⑤ PLANT	YEAR SAMPLES WERE TAKEN	NUMBER TAKEN THAT YEAR	RANGE OF RESULTS (FIBERS/cc)	NUMBER ABOVE PEL
Research & Development Center Churchill	1974	2	0.07 to 0.14	0
	1976 (Before July)	6	< 0.03 to 123	3
Richmond Kentucky	1979	2	< 0.01	0
Salina	1978	6	< 0.01 to 0.03	0
Haron	1975	4	< 0.5 to 8.0	1
	1976 (After July)	8	< 0.02 to 0.06	0
	1977	2	< 0.03	0
	1978	4	< 0.01	0
South Boston	1979	2	< 0.01	0
Sunnyvale	1976 (After July)	4	< 0.01	0
	1977	20	< 0.01 to 1.7	0
	1978	6	< 0.01 to 20	1

132/4085160

ASBESTOS AIR SAMPLE RESULTS 1973-1979

CONFIDENTIAL

⑤ PLANT	YEAR SAMPLES WERE TAKEN	NUMBER TAKEN THAT YEAR	RANGE OF RESULTS (FIBERS/cc)	NUMBER ABOVE PEL
Sykesville	1978	2	0.02 to 0.09	0
Trafford	1975	3	< 0.03 to 3.0	0
	1976 (After July)	1	0.05	0
	1978	1	< 0.01	0
West Mifflin LMD	1976 (Before July)	3	0.2 to 21	1
West Mifflin Transportation	1976 (Before July)	3	0.1 to 0.2	0
	1976 (After July)	2	0.02 to 0.06	0

132/4085161

ATTACHMENT VII

CONFIDENTIALASBESTOS USED IN PLANT OPERATIONS

<u>PLANT</u>	<u>FORM OF ASBESTOS</u>	<u>USAGE</u>
Baltimore Divs.	Board, pipe covering micarta, rope packing, cable and wire, sheet packing, transite sheet, caulking compound	Insulation Weld curtains Gasket material Electrical tape
Buffalo	Untreated paper	Used as a liner in die cast and to catch drippings of varnish in ovens
Derry	Sheet	Place unfired ware on it until it cures or sets
	Cloth untreated	Used when annealing machine parts
	Rope packing and transite Tape	Making arc stacks ---
East Pittsburgh	Blanket	Blanket for soldering, brazing or cutting
	Cloth, tape, yarn, sleeving, paper untreated board	(no specific operation mentioned)
Greenville	Sheet packing	Oven lining
Greentree	Micarta Paper Rope packing Cable	Motor slot wedges General use Packing --
IMD (Manor)	Asbestos fibers	Mixed into resins for B-7-365 and (W) M53533FD

132/4085162

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Attachment VII
Page 2

<u>PLANT</u>	<u>FORM OF ASBESTOS</u>	<u>USAGE</u>
Lamp Divisions	Board, block, transite	Insulation on furnaces, ovens and lamp making equipment
	Treated cloth	Curtains for glare and heat shielding
	Pulverized	Used to make furnace cement for heat insulation
Lester	Cloth, sheet packing, sleeving, tape, flex tubing	Induction heating and stress relieving
	Paper, rope, packing, sleeving tape	Babbitting
	Rope packing	Submerged arc welding
Muncie	Rope packing, sheet packing	Heat barriers on brazing and/or welding operations
Reform	Sleeving, transite, yarn	Insulation
Sharon	Cloth or paper	Heat trap for brazing. Shielding for welding or brazing
South Boston	Blanket, sheet	Weld barrier

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CPSC LIST (Cont.)

Asbestos cement products
Water, sewer & septic drain field pipe
Air duct pipe
Sheet products
Roofing clapboard
Siding
Shingles
Interior walls
Boiler & furnace baffles
Bulk sheeting
Welding shields
Baking sheets
Blackboards
Laboratory table tops
Linings for vaults, safes,
humidifiers & filing cabinets
Viscous Matrix Products
Adhesives (glues & epoxies)
Air duct cement for asbestos-cement
air duct
Buffing & polishing compounds
Caulks and putties
Floor tile cement & mastic
Auto body filler
Flashing cement
Furnace cement
Glazing compound for ceramics
Pipe and boiler coverings
Roof and driveway coatings
Stains and varnishes
Automotive metal deadener
Automotive undercoating
Refrigerator cements
Automotive muffler repair compounds
Products subject to inadvertent
asbestos contamination
Driveway gravel
Fertilizer & lawn care products
Potting materials (vermiculite)
Talc for noncosmetic or food
use applications
Acoustical & thermal insulation
material sprayed
Ammunition shell wadding

EPA LIST (Cont.)

Aluminum roof coating
Roof patch
Roofing felts
Roof preservative
Sealants & mastics for Consumer
& commercial use
A/C pipe joint sealant
Adhesives
Caulking compounds and putty
Furnace cement
Glazing compound
Radiator sealant
Varnish

CPSC LIST (Cont.)

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Automotive mufflers
Barbecue firebed materials in gas
barbecue grills
Boat hull repair kits
Flower pots
Friction materials
Clutch plates
Brake linings
Potters kilns (home hobby)
Pottery clay
Powder (asbestos)
Bulk fiber
Reinforcement in molded plastics
and rubber
Automotive radiator sealant
Vinyl asbestos floor tiles
Abrasive wheels
Aerial distress flares
Molded plastics and Phenolic laminates
Paint
Textured paint
Cement, drywall & plaster patching
compounds
Artificial gas fireplace emberizing
material
Phonograph records
Consumer products possibly con-
taining asbestos
Air conditioners
Dishwashers
Hand-held mixers
Portable electric heaters
Popcorn poppers
Refrigerators
Vacuum cleaners
Waffle makers
Carpet padding
Fireplaces
Instant
Light fixtures on railroad
passenger cars
Welding masks
File cabinets

X

CH. GATEWAY LAB DEPT. JNL-65
R. E. WILLS, JR.



77-100-111

to: Chatham Center Office Building
235-4241
on: July 31, 1981
from: Disposal of PCB-Filled Capacitors

to: Business Unit and Division General Managers
Plant Managers
Works Engineers
TOSCA/RCRA Representatives

(PCE 3, 4A and 5A; PCE-34-PCE-65)

Westinghouse has signed an agreement with ENSCO, Incorporated, of El Dorado, Arkansas, for the disposal of PCB-filled capacitors. ENSCO has equipment for crushing and chopping the metallic parts of the capacitor and for destroying the PCB liquids by means of extremely high temperatures. This incinerator operation at El Dorado is the only PCB-filled capacitor disposal source presently available.

It is Westinghouse policy that PCB-filled capacitors that are no longer in use be disposed of. Incineration is the only permissible disposal method. Headquarters Environmental Affairs, utilizing the corporate contract with ENSCO, will oversee the disposal program. To accomplish this we must establish an up-to-date inventory of all PCB capacitors which are in storage for disposal. On the basis of this inventory, arrangements will be made to collect all capacitors and transport them via the most economical route to ENSCO for destruction.

Attached to this letter is a form which must be filled out by all plants which have PCB capacitors in storage for disposal. Please return the form to Mr. B. A. Kerne, Chatham Center Office Building, Box 1017, Pittsburgh, PA 15230, by August 21, 1981. Discussions will then be held with ENSCO to determine the schedule and vehicle routing to achieve the lowest possible cost for disposal of these capacitors. At that time, cost figures will be discussed with each plant responding to this survey. Disposal costs will be handled through Westinghouse Headquarters using the corporate contract and will then be billed to each division based on the actual cost to the division.

Frank S. Beal
Frank S. Beal, Director
Environmental Affairs

FSS/mj

Attachment

132/4079652

132/4079652

IF THE FILM IMAGE IS LESS CLEAR THAN THIS NOTICE, IT IS DUE TO THE QUALITY OF THE ORIGINAL DOCUMENT.

W 0029

11 11 7 3

EXHIBIT

40
BICKERSTAFF
4/29/92 OC



Corporate Procedure

CP - R45

August 1982

Westinghouse Electric Corporation

Reporting Substantial Risks To Health Or The Environment

Background

Section 8 (e) of the Toxic Substances Control Act provides that any person who manufactures, processes or distributes a chemical and who obtains information which supports the conclusion that the chemical presents a substantial risk of injury to health or the environment must inform the Administrator of the Environmental Protection Agency (EPA).

Failure to promptly inform the EPA may subject Westinghouse and its employees to civil or criminal penalties. It is important, therefore, that all Westinghouse employees know of this reporting requirement and that responsibilities and procedures for compliance are clearly established and widely disseminated.

Purpose

The purpose of this procedure is to:

- Describe what information must be reported.
- Identify possible sources of information.
- Establish responsibilities and procedures for evaluating information and for reporting to EPA.
- Detail the penalties for failure to report information.

Policy

It is Westinghouse policy to comply fully with the requirements of Section 8 (e) of the Toxic Substances Control Act and supporting regulations.

Information That Must Be Reported

The Act requires that the following information must be reported:

- Human health effects, including:
 1. Any instances of cancer, birth defects, mutagenicity, death, or serious or prolonged incapacitation, if one or more chemicals is strongly implicated.
 2. Any pattern of effects which supports the conclusion that the chemical can produce cancer, mutation, birth defects or toxic effects resulting in death or serious or prolonged incapacitation.

3. The results of any study which supports the conclusion that the chemical can have an adverse effect on human health.

- Environmental effects, including:

1. Widespread and previously unsuspected distribution of the chemical in the environment.
 2. Pronounced bioaccumulation of the chemical.
 3. Any adverse effects associated with such widespread accumulation or bioaccumulation.
- Emergency incidents of environmental contamination that threaten humans or threaten non-human organisms with large-scale or ecologically significant population destruction.

Sources of Reportable Information

Sources of reportable information include:

- Reports or other evidence of adverse effects on employees, consumers or the environment.
- Health studies on humans or animals.
- Medical and health surveys.
- Environmental studies.
- Other designed and controlled ecological experiments and studies.

Responsibilities

All Employees

All Westinghouse employees capable of appreciating the significance of substantial risk information are subject to the reporting requirement. An employee who has submitted information in accordance with this procedure will have discharged his or her Section 8 (e) obligation.

Facility Manager

The manager of each Westinghouse facility governed by the laws of the United States will:

- Inform all employees of the contents of this Corporate Procedure and of their obligations to report information about risks that comes to their attention.

EXHIBIT

BICKERSTAFF 41
4/29/92 ac

SOURCE 144

0045951



R & D CENTER - #601
DESIGN AND MANUFACTURING CENTER
236-5435
November 9, 1979
LGM

CONFIDENTIAL

10 ALL DIVISION AND DIVISION'S GENERAL MANAGERS

There is an announced intention by several government agencies, primarily the Consumer Products Safety Commission (CPSC) and the Environmental Protection Agency (EPA) to restrict the use of asbestos in "non-essential" applications. They have published an extensive list of products containing asbestos on which they are beginning a formal investigation in order to determine if this asbestos presents a substantial product hazard.

At present, the CPSC and EPA are soliciting comments by means of an Advance Notice of Proposed Rule Making. The EPA is considering either:

- 1) The traditional regulatory approach restricting the manufacture of asbestos by product categories, or
- 2) limiting the amount of asbestos available and allowing the marketplace to determine the use and application of asbestos.

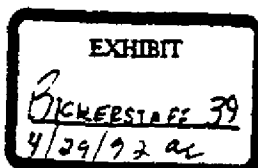
The two agencies are combining forces on this issue in order to coordinate their actions and not duplicate efforts. This letter is written to accomplish the following:

- 1) Let you be aware of the situation, if you are not already, in order that you may evaluate the impact on your division.
- 2) Request your review for additional products which are not included in the attached lists. These lists were supplied as part of the CPSC's and EPA's Advance Notice of Proposed Rule Making.
- 3) To solicit your comments on this proposed rule. Comments should be sent to me for compilation, review for consistency and for clearing with the law department.

Further details on the areas in which they are soliciting comments are given in the attachment. This is our opportunity to influence the direction of the government policies before they become fixed. Therefore it is imperative that you make comments that will help us influence the government agencies and that these comments be sent to me by December 3, 1979.

John F. Gormley
John F. Gormley, Director
Product Safety & Integrity

Enc:
Date: Dec
Attachment



132/4085266

CONFIDENTIAL

CPSC LIST

Asbestos paper products
Acoustical ceiling tile
Lamp sockets
Burner mats for gas stoves
Roofing felts (outer layers)
Pipe and boiler covering
Vinyl sheet flooring backing
Radiator top insulation
Appliance heating shielding (paper)
Slow cookers
Hair dryers
Paper sheets for heat insulation
Millboard
TV & other electronic switch plates
Electric switch boxes
Metal reinforced gaskets (for air-cooled engines)
Electrical washers
Linings for ovens, kilns, safes, safety boxes, incinerators
Millboard sheet
Wall protection behind heat-generating products
Floor protection under wood and coal stoves
Soldering and welding blocks
Iron rests
Appliance heat shielding (millboard)
Toasters
Rotisserie broilers
Fireproof wallboard
Metal-clad fire doors & partitions
Tent grommets
Stove pipe rings
Cloth and woven products
Flexible air conductor for heating, cooling & ventilating equipment
Appliance wiring
Barbecue fire starters
Broilers
Curling irons
Electric blankets
Hair dryers
Heating pads
Ranges
Toasters
Irons
Deep fat fryers

EPA LIST

Automotive Repair
Mufflers
Brake linings
Clutch facings
Custom auto body filler
Metal deadener
Household Materials
Appliance wiring
Counter surfaces
Electrical cord
Filler for shoe soles
Floor tile
Hair dryers
Heat protective mats
Ironing board pads & covers
Lamp mantles
Lamp sockets
Potters kilns
Slow cookers
Toasters
Safety Equipment
Aprons
Arm protectors
Blankets
Boots
Caps
Clothing
Curtains
Draperies
Gloves
Hats
Helmets
Hoods
Mittens
Overgaiters
Sleeves
Suits
Umbrellas
Aerial distress flares
Ammunition shell wadding
Catalytic heater mantles
Tent grommets
TV sets & projector equipment
Home Building repairs
Latex paints
Texture paints
Commercial applications

CPSC LIST (Cont.)

CONFIDENTIAL

EPA LIST (Cont.)

Electric fry pans
Awnings
Candlesticks
Catalytic heater mantles
Cigarette lighter wicks
Cord
Seals for high temperature gaskets
Valve steam packings
Insulation for glass handling tools
Reinforcing for braided wall stem hose
Theater curtains
Felt
Reinforcements in plastics
Gaskets
Reinforcement in asbestos tapes
Secondary insulation in high temperature wire and cable
Asphalt impregnated roofing felts
Piano & organ felts
Heating pads (element insulation)
Ironing board pads and covers
Lamp and lantern mantles
Pipe and boiler covering
Pot holders and oven mitts
Flame resistant garments
Gloves
Hats
Helmets
Hoods
Mittens
Overgaiters
Sleeves
Suits
Umbrellas
Aprons
Arm protectors
Flame-resistant blankets
Boots
Caps
Smokers bibs
Stoves - Coal & wood burning
Tape for pipe insulation
Braid and rope for packing
Motion picture screens
Tent grommets

Aluminized cloth
Bags
Bearings
Belting
Blocks
Boards
Braid
Buffing & polishing compounds
Cloth
Cord
Diaphragms
Drier felt
Drilling fluids
Fabrics
Felt
Filtering material
Metallic cloth
Millboard
Paper
Pipe & boiler covers
Pottery Clay
Plywood patch
Sheet flooring
Table tops
Tape
Textiles
Welding electrodes
Asbestos cement products
A/C air duct
A/C pipe
A/C sheet
Baking sheets
Cement boards
Clapboard
Roofing
Shingles
Siding
Tile
Molded products
Gun grips
Filler & reinforcement in plastic
Pond liners
Phenolic laminates
Resins
Rheostat backing
Roofing Materials

Toxic Substances

October 23, 1979

Location

Bloomfield - Sect. 8003.03
E. P. Murphy

Toxic Substance

Acetylene
Dibutyl phthalate
Benzene, Chloro-
Copper & Copper Compounds
Ethylene, Trichloro
Ethylene glycol
Hydrazine
Hydrogen sulfide
2-Butanone (MEK)
Methane, Dibromo-
Nickel and Nickel compounds
Soaps, (fatty acid salts)
Titanium dioxide
Toluene
Tungsten
Xylene (mixed isomers)
Zinc (metal)

Paris, Texas
A.C. Carter/C.O. Smith

Copper metal
Nickel metal
Tungsten
Tungsten carbide

Bloomfield, Section 715
Joe E. Reynolds

Acetylene
Carbon black
Chromium compounds
Copper and Copper compounds
Cyanamide, calcium salt
Ethane, Chloro-
Nickel and Nickel compounds
Tungsten
Tungsten carbide
Nitric Acid
Hydrochloric acid
Sulfuric Acid
Phosphoric Acid
Sodium Cyanide
Chromic Acid
Caustic Soda
Oakite #32-#90
Sodium Chromate
Ammonium Phosphate
Oakite 32 & 90 are commercial acids with several
acids mixed.

EXHIBIT

3RRERSTAFF 37
4/24/92 ac

SOURCE 003

13736

<u>Location</u>	<u>Toxic Substance</u>
Bloomfield, Section 715 Cont'd. Joe E. Reynolds	Tri-Ethane Trichloroethane Degreasing Sol. Micromask - Laquer Microstrip Sol.
Bloomfield - 143 Phosphor & Chemicals J. P. Olatte	Wire - Tungsten Ethane, 1,1,1, Trichloro- Phosphors - Antimony Trioxide Manganese (Carbonate) Vanadium Pentoxide Chemicals - Titanium Dioxide Bismuth Chloride Ethylene Glycol Toluene Turpentine Ethane, 1,1,1, Trichloro- Xylene
Fairmont E. E. Parrish 205 Gene Matthews	Acetylene Copper and Copper compounds Copper (metal) Ethane, 1, 1, 2, 2-Tetrabromo- Ethylene, Bromo- Nickel and Nickel compounds Nickel (metal) Tungsten Tungsten carbide
Fairmont - 309 S.B. O. V. Pedley	Acetylene Ammonium, Alkyl (C8-C18) diethyl 3,4- dichlorobenzyl-, chloride Chromium compounds e.g. Chromic acid, calcium salt (1:1), dihydrate Chromic acid, dipotassium salt Chromium(III)oxide (2:3) Chromium (VI) oxide (1:3) Copper and Copper compounds

Location

Toxic Substances

Fairmont - 309 Sealed Beam Cont'd.
O. W. Pedley

Ethane, 1,1,1-Trichloro-
Ethylene, Tetrachloro-

e.g. Ethane, 1-Chloro-1, 1-difluoro-
Methane, Chlorodifluoro-
Methane, Dichlorofluoro-
Mercaptans
Nickel and Nickel compounds
e.g. Nickel (metal)
Nickel (II) oxide (1:1)
Soaps (fatty acid salts)
Tungsten
Tungsten carbide
Xylenes
e.g. Xylene (mixed isomers)

Fairmont - 204
C. S. Miller

Acetylene - Shop
Dibutyl phthalate coating
Antimony trioxide coating
Copper (metal) Lead Wires
Ethane, 1,1,1-Trichloro
Ethane, 1,1,2-Trichloro Degreaser
Manganese - trace in phosphors (activator)
Nickel and Nickel compounds - Lead Wires
Petroleum distillates - cleaning
Titanium dioxide - reflector coating
Tungsten Lamp Coils
Tungsten Carbide Tool's shop
Turpentine paint
Xylenes
e.g. Xylene (mixed isomers) coating
"Mixed Xylene"

Fairmont 208 - Bldgs. & Grounds

Turpentine

Richmond - 310
Drangoid

Acetylene - welding
Antimony (III) chloride - etching solution
Benzene, Chloro- Polariscopes
Glycols
e.g. Ethylene glycol
Hydrazine - solder flux
Petroleum distillates - mineral spirits
Titanium dioxide - shellac coating 10%
Tungsten Wire

Location

Bloomfield - 154
James W. Herbert

Toxic Substances

Acetylene
Dibutyl Phthalate
Benzene, Chloro-
Copper (metal)
Ethane, 1,1,1-Trichloro-
Ethylene glycol
Hydrazine
2-Butanone MEK
Methane, Dibromo-
Nickel (metal)
Titanium dioxide
Toluene
Tungsten
Xylene (mixed isomers)
Zinc (metal)
Acetylene - welding
Dibutylphthalate - oils
Benzene chloro-glass strain inspection
Copper (metal) leads
Ethane 1,1,1-Trichloro - cleaning room
Ethylene glycol - solder flux
Hydrazine - solder flux
2-Butanone MEK paint solvent
Methane dibromo-halogen fill gas
Nickel (metal) - leads
Titanium Dioxide - ceramic paint
Toluene - coating and basing cement solvent
Tungsten - filaments
Xylene - coating & basing cement solvents
Zinc metal - solder

Owensboro
E. T. Adams

Dibutyl phthalate
Benzene, Chloro-
Copper and Copper compounds
e.g. Copper (metal)
Nickel (metal)
Propane, 1-Chloro-2,3,-epoxy-
Propane, 1,2-Dichloro-
Propane, 1,2-Epoxy-
Propane, 1-Nitro-
Propane, 2-Nitro-
Propane, 2,2'-Oxybis-
Propane, 1,2,3-Trichloro-

<u>Location</u>	<u>Toxic Substances</u>
Owensboro - Cont'd E. T. Adams	Soaps (fatty acid salts) Tungsten Tungsten carbide Turpentine Zinc (metal)
Bloomfield - 144 W. E. Horton	Sodium Lauryl Sulfate - Insol? Chromic acid Copper and Copper compounds Ethane, 1,1,1-Trichloro- Nickel (metal) NiCl ₂ NiSO ₄ Petroleum distillates Varsol? Soaps (fatty acid salts) Toluene (thinner for epoxy paint) Tungsten Tungsten carbide Vanadium compounds Ammonium meta vanadate
Little Rock J. Womack	Acetylene Dibutyl phthalate Benzene, Chloro- Copper (metal) Ethane, Bromo- Ethane, 1,1,2,2,-Tetrabromo Ethane 1,1,1-Trichloro- Ethylene, Bromo- Hydrazine Nickel (metal) Soaps (fatty acid salts) Tungsten Zinc (metal)
Salina C. E. Nass	Copper and Copper compounds Ethane, 1,1,2,2-Tetrabromo- Tungsten

Location

Bloomfield 116/126
A. V. Bilotta

Toxic Substances

Acetylene
Fluorocarbons - Methane, Chloro difluoro - Freon 12
Methane, Dichloro difluoro - Freon 22
Glycols - Ethylene Glycol
Octane
Petroleum Distillates - Solvent Naphtha
Ethane - 1,1,1-Trichloro
Toluene - solvent in paint shop
Titanium Dioxide - paints
Turpentine

cc: Wayne Bickerstaff ✓

(4) Building - 2037
235-3075
November 2, 1979

WESTINGHOUSE BUILDING - 1028
W. H. Hamilton, Sr. Consultant

In response to your document, "Westinghouse Considerations," establishing a task force to respond to litigation brought against the corporation is imperative in protecting the corporate assets. More important, this task force should also consider what future litigation is possible from employee exposure to radiation and other hazardous or toxic material and the possible release of such material to the environment.

The Corporate Industrial Hygiene Department has been involved in assisting the Corporate Law Department prepare for the following recent litigation and workers' compensation cases:

1. Currently Westinghouse is the defendant in more than 180 law suits concerning asbestos.
2. A construction welder exposed to welding fumes. (See additional details in attachment).
3. Beryllium exposure to employees at Bloomfield, New Jersey and Fairmont, West Virginia plants.
4. Lead exposure to employees at EM Battery, Skokie, Illinois and Baltimore Defense Center.
5. Horseheads, New York where a former employee was alleging her cancer was induced from occupational exposure to radium.

Based on the assistance the group has been able to lend in these and other cases, the department should be considered for membership on this important task force and should have a significant role in meeting the Corporate responsibility in this regard. Use of the Corporate Industrial Hygiene Department in this program brings to bear those resources the Resources Loss Prevention Department was established.

1. Single department accountability.
2. Single point of contact.

EXHIBIT

BICKERSTAFF 38
4/29/02 ac

SOURCE 844

6073140

J. M. Hamilton, Sr. Consultant
November 3, 1979 - Page 2

3. Enhance the use of resources and enhance corporate preparedness.

4. Provide and improve basis of determining relative benefits and cost effectiveness.

Attached are specific responses to your document, "Meetinghouse Considerations."

E. A. Conrads
Director, Resources Loss Prevention

ZAC/as
Attachment