



DOW CHEMICAL U.S.A.

MAR 14 1990

MICHIGAN DIVISION
March 14, 1990

MIDLAND MICHIGAN 48667

PLAINTIFF'S EXHIBIT

DOW-1295

Paul Brownson, 607
Wilma Delaney, 2030
Sherry Heins, 47
Jerry Klinefelter, 1261
Fred Kloepfer, 575, Bay City Plant
Denny Naberhaus
Alex Pollock, 258
Fred Sabel, 258
Jerry Schaar, 1050
Bill Shelburg, 566
X Mike Skalski, 821
Fran Solano, 47
Tom Sponseller, 572

cc: Ron Agin, 47
John Billingsley, 47
Janet Dencen, 47
John Gledhill, 49
Pete Lehman, 47
Larry Meier, 47
Stan Nelson, 47
Mike Rio, 566

Please review the attached Building Operations & Maintenance Program for Asbestos and Potential for Asbestos Exposure and bring your comments to the Final Asbestos Task Force Meeting on March 27, 1990, in the 572 Building Conference Room A, at 10:00 A.M.

Thanks for your cooperation.

John Sharp
Chairman
Asbestos Task Force
636-0077

Attachments (3)

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY
RESTRICTED FOR USE WITHIN THE DOW CHEMICAL COMPANY

Quality
Performance
Means More At Dow

ST0076985

BUILDING OPERATIONS & MAINTENANCE PROGRAM FOR ASBESTOS

1. Develop an inventory of all visible asbestos-containing material in the facility:
 - A. The insulation on piping and equipment is being done through the Insulation Identification Program. All equipment and piping will be identified with labels as being asbestos or non asbestos containing materials in buildings constructed prior to 1972. All newly installed insulation will be labeled as non asbestos.
 - B. Building materials will be identified before each project is initiated such as(drywall, floor tile, ceiling and insulating material.)
 - C. Acid proof grouts and structural steel ^{with} sprayed-on fire retardant will be identified before maintenance activities are required.
 2. Periodic examination of all ^tidentified asbestos-containing materials to detect deterioration.
 - A. Building inspections will be required every six months on all existing asbestos containing material. Should deterioration or damage be found appropriate action will be initiated through the Industrial Hygiene contact, who will maintain piping and equipment identification records for that building.
 3. Written procedures for handling asbestos-containing materials during the performance of small scale, short duration maintenance and renovation activity.
 - A. Refer to standard I.H. 140 (paragraph VIII and IX attached)
 4. Written procedures for asbestos disposal.
 - A. Refer to standard I.H. 140 (paragraph VIII D)
 5. Written procedures for dealing with asbestos-related emergencies.
 - A. Refer to standard I.H. 140 (paragraph X)
 6. Members of the building's maintenance engineering staff (electricians, heating and air conditioning engineers, plumbers, janitorial staff, etc.) who may be required to handle asbestos-containing materials shall be trained in safe handling procedures. Such training should include as a minimum:
 - A. All maintenance personal entering Michigan Division shall be required to complete the Two Hour Asbestos Awareness Training as per Act 147 Bill No.770 sec. 59e.
 7. Prohibited activities during maintenance:
 - A. Drilling holes in asbestos-containing materials.
 - B. Hanging plants or pictures on structures covered with asbestos-containing materials.
 - C. Sanding asbestos-containing floor tile.
 - D. Damaging asbestos-containing material while moving furniture or other objects.
- Handwritten notes:*
- deterioration
- Does this include change-out of asbestos gaskets?
- Requires full disposal suit, head covering, gloves, and foot covering?
- personnel

ST0076986

- E. Installing curtains, drapes or dividers in such a way that damage is caused to asbestos-containing materials.
- F. Dusting floors, ceilings, moldings or other surfaces in asbestos-contaminated environments with dry brushes or sweeping with a dry broom.
- G. Using an ordinary vacuum to clean up asbestos-containing debris.
- H. Removing ceiling tile below asbestos-containing materials without wearing the proper respiratory protection, clearing the area of other people, and observing asbestos removal disposal procedures. ?
- I. Removing ventilation system filters dry.
- J. Shaking ventilation system filters.

O.K.
2+2
distance 8.

OR
With
proper
respiratory
protection?

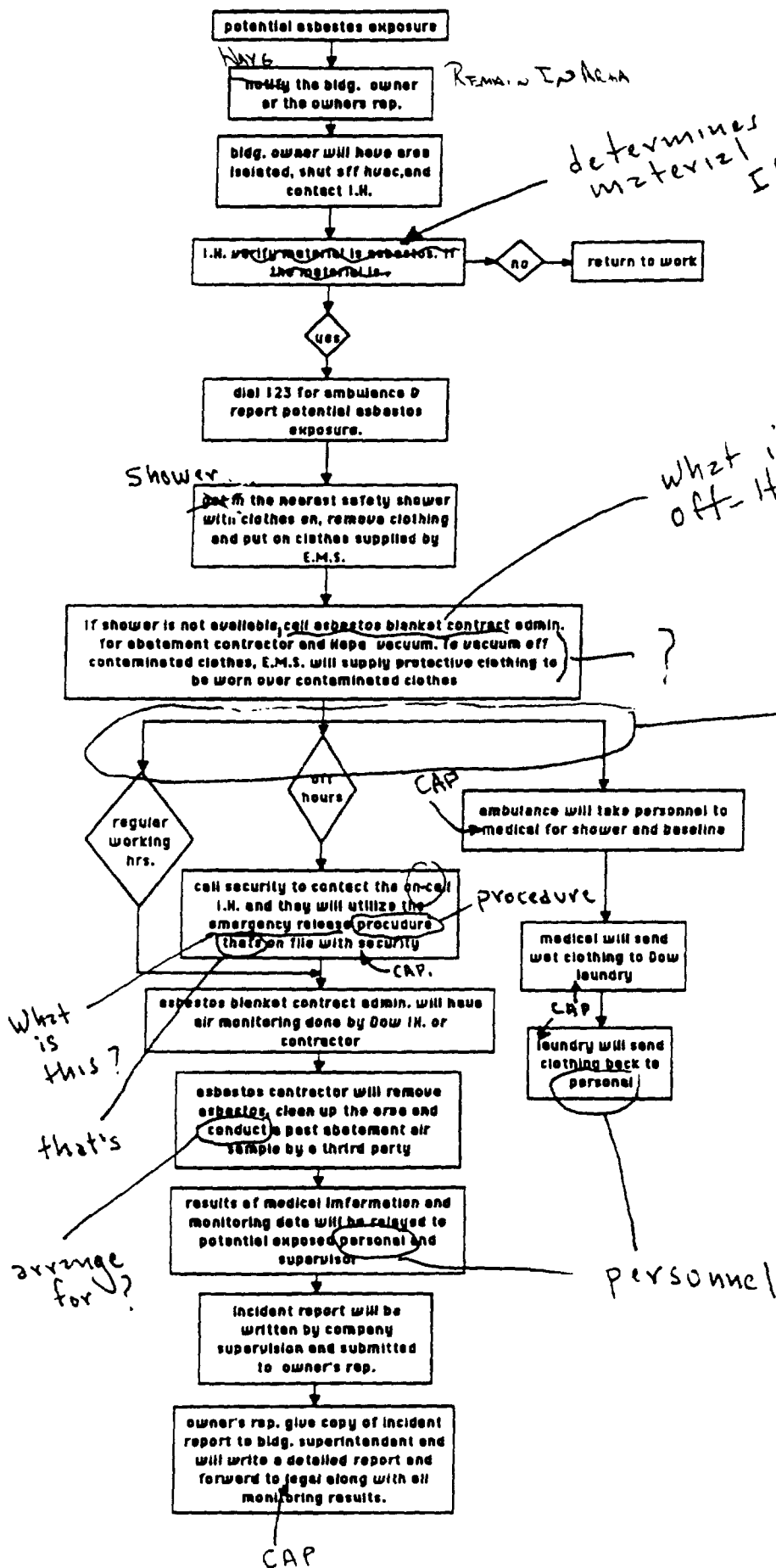
Proper identification of and warning labels for asbestos-containing materials:
A. As per CFR 1910.1200 (f) of OSHA's Hazard communication standard.

tlis. 3/8/90

ST0076987

What is policy or procedure for:

- 1) Removing pipe (flanged) during demolition — gaskets may be asbestos. If pipe flange is separated, gasket residue will remain on gasket surface of flange.
- 2) Removing unknown gasket material and replacing with new gasket. Gasket surface must be cleaned before installation of new gasket.
- 3) Disposal of asbestos gaskets — now thrown on ground, in dumpster boxes, etc. NOTE: Spiral wound gaskets with asbestos filler will probably "throw" some asbestos around when/if spiral winding comes apart (2 likely occurrence)



REMA. IN AREA

determines whether material is asbestos. If:

what if off-hrs.?

confusing here — who is doing what during

- 1) reg. hrs.
- 2) off-hrs.

What is this?

that's

arrange for?

personnel

ST0076988

3. The requirement that notification be made shall be made a part of all contracts the Michigan Division lets for demolition or renovation where asbestos is involved.

B. Notification Criteria

1. All demolition jobs involving friable asbestos.
 - a) Demolition jobs involving friable asbestos in less than 260 lineal feet of covered pipe or less than 160 square feet of insulation require notification of the proper agencies at least 20 days prior to the start of the removal.
 - b) Demolition jobs involving friable asbestos in greater than 260 lineal feet of covered pipe or more than 160 square feet of insulation require notification at least 10 days prior to the start of the removal. (Note that the bigger asbestos removal demolition jobs require less lead time in notification under the current rule.)
2. All renovation jobs involving friable asbestos.

Renovation jobs involving >260 lineal feet of friable asbestos covered pipe or >160 square feet of friable asbestos insulation require notification as soon as possible prior to the start of the removal.

VIII. SAFE HANDLING PRACTICES

The primary concern in handling asbestos-containing materials is the danger of inhaling airborne fibers. The following procedures shall be carried out to reduce the potential for generating and/or exposing personnel to airborne levels of asbestos fibers.



Indicates change or addition from previous issue

Reviewed/Revised Date: 3/89

Page: Page 6 of 12



INDUSTRIAL HYGIENE SERVICES

Tricia,

Focus should be on preventing release of ACM.
Samples should be acquired prior to beginning work.

- If there is ^{indirect} contact with ^{potential} ACM, I would prepare:
- isolate area (barricades turn-off HVAC)
 - bulk sample to IH for ID
 - there is no reason to treat as an acute or contact hazard. Therefore no showers, no ambulance, no medical exam
 - if sample is positive, document ^{potential} by incident report
 - get the mess cleaned-up per standard requirements
 - there is no need to do air monitoring prior to clean-up. It provides no useful info
 - unless the person is a "snowman", there is not a exposure problem to others

MIKE DUPUIS
FROM: Michigan Division Industrial Hygiene Services
258 Building
(517) 636-5864

Mike

ST0076970

11/14/90
and

Pg 1

Their comment

Bradley

Makes a single exposure look like
an IDLH

Positive ID of ACM is a must.

Dupuis

Focus on preventing release
of ACM

"Inadvertent Contact with
Potential ACM"

"Snowman" etc.

My Response

How do we reword this
so the average employee
can decide if ~~it has~~
it was/was not an IDLH?

Agree - we should
id this procedure to
address the unknowns
& that it is not just for
ACM removal operations.

Agree!

I like these words

How do we address
pot. exposure to this
person? What
do we do for this person?

ST0076971

... Martin ??

... Focus notes -

... Pre job reviews

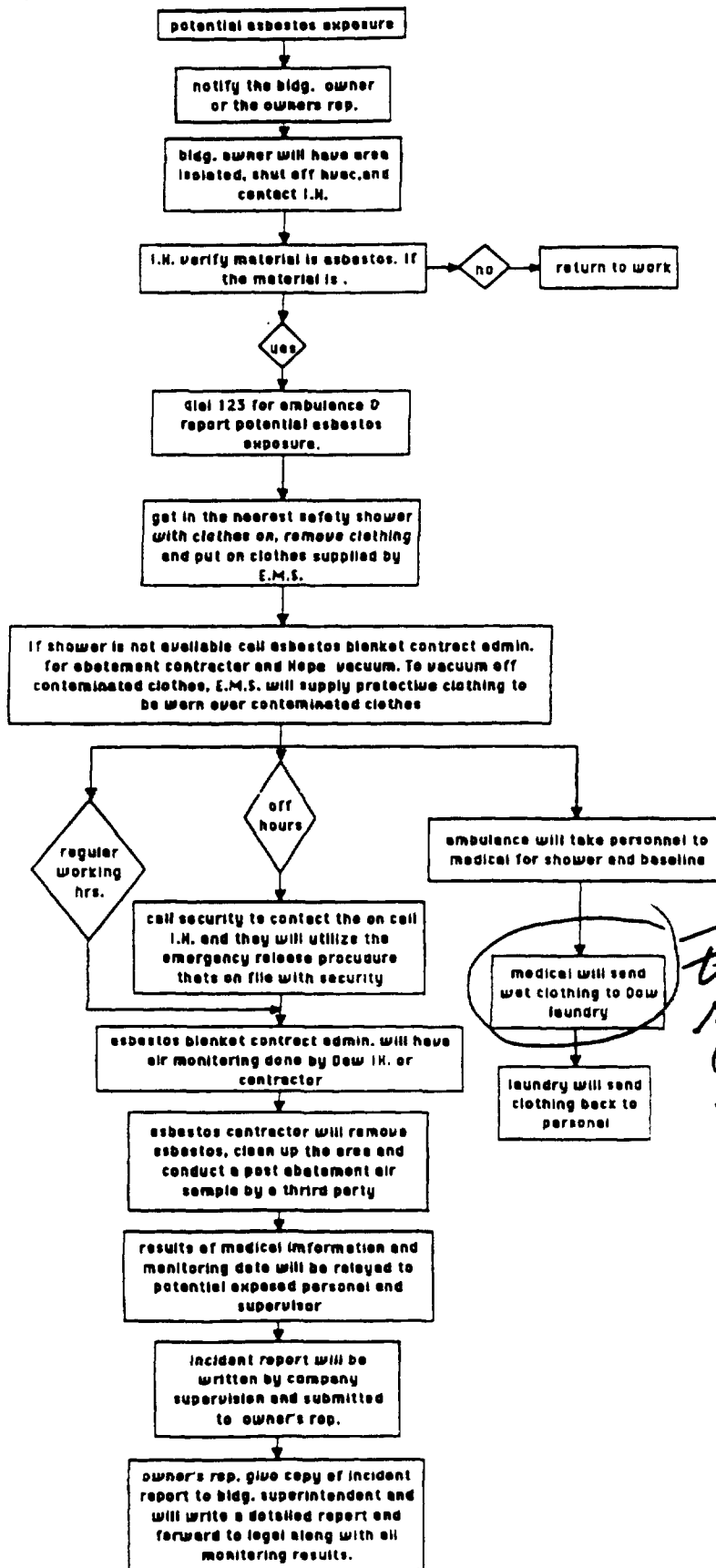
... Asb awareness try focus on
... resp. of employee if ACM contacted

... Focus on basic steps

- Don't cover everything

- What is employees
responsibility? This
flowchart (or a version of
it) can show this well.
What are the basic
steps?

ST0076972



ST0076973

Would it be better to dispose of clothing rather than take a chance on possibly finding that washing doesn't really remove all fibers

TO: ALL IH(ers)

Please review the two items and return
comments to me before March 27th.

Item #1 Asbestos Maintenance Program
for Division.

Item #2 Procedure for Personnel Exposed
to Asbestos.

Fred

*A few comments
Mike D*

ST0076974

Michigan Division 1052

BUILDING OPERATIONS & MAINTENANCE PROGRAM FOR ASBESTOS

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- B. Building materials will be identified before each project is initiated such as(drywall, floor tile, ceiling and insulating material.)

- C. Acid proof grouts and structural steel sprayed on fire retardant will be identified before maintenance activities are required.

I think we need to be more specific about how these materials are identified. Maybe like

2. Periodic examination of all identified asbestos-containing materials to detect deterioration.

- A. Building inspections will be required every six months on all existing asbestos containing material. Should ^{deterioration} or damage be found appropriate action will be initiated through the industrial hygiene contact, who will maintain piping and equipment identification records for that building.

Before each project is initiated, is initiated, represent this sample of building material (drywall, floor, etc) shall be submitted to

3. Written procedures for handling asbestos-containing materials during the performance of small scale, short duration maintenance and renovation activity.

- A. Refer to standard I.H. 140 (paragraph VIII and IX attached)

IHS, 258 Bldg to determine if the materials contain asbestos - or the like

4. Written procedures for asbestos disposal.

- A. Refer to standard I.H. 140 (paragraph VIII D)

5. Written procedures for dealing with asbestos-related emergencies.

- A. Refer to standard I.H. 140 (paragraph X)

6. Members of the building's maintenance engineering staff (electricians, heating and air conditioning engineers, plumbers, janitorial staff, etc.) who may be required to handle asbestos-containing materials shall be trained in safe handling procedures. Such training should include as a minimum:

- A. All maintenance personnel entering Michigan Division shall be required to complete the Two Hour Asbestos Awareness Training as per act 147 bill No.770 sec. 59e.

7. Prohibited activities during maintenance:

- A. Drilling holes in asbestos-containing materials.
B. Hanging plants or pictures on structures covered with asbestos-containing materials.
C. Sanding asbestos-containing floor tile.
D. Damaging asbestos-containing material while moving furniture or other objects.

This has the potential for "head-in-the-sand" mentality to get around this. I didn't think we had any asbestos so we didn't look, etc. Maybe we need to be more specific with other building materials other than the pipe insulation. Also - if somebody fails to identify and it results in an exposure, there should be some type of disciplinary action taken & feel.

ST0076975

Do we need to have specific labeling to prevent this from happening? How can we know if there are ACM also in their office?

- E. Installing curtains, drapes or dividers in such a way that damage is caused to asbestos-containing materials.
- F. Dusting floors, ceilings, moldings or other surfaces in asbestos-contaminated environments with dry brushes or sweeping with a dry broom.
- G. Using an ordinary vacuum to clean up asbestos-containing debris.
- H. Removing ceiling tile below asbestos-containing materials without wearing the proper respiratory protection, clearing the area of other people, and observing asbestos removal disposal procedures.
- I. Removing ventilation system filters dry.
- J. Shaking ventilation system filters.

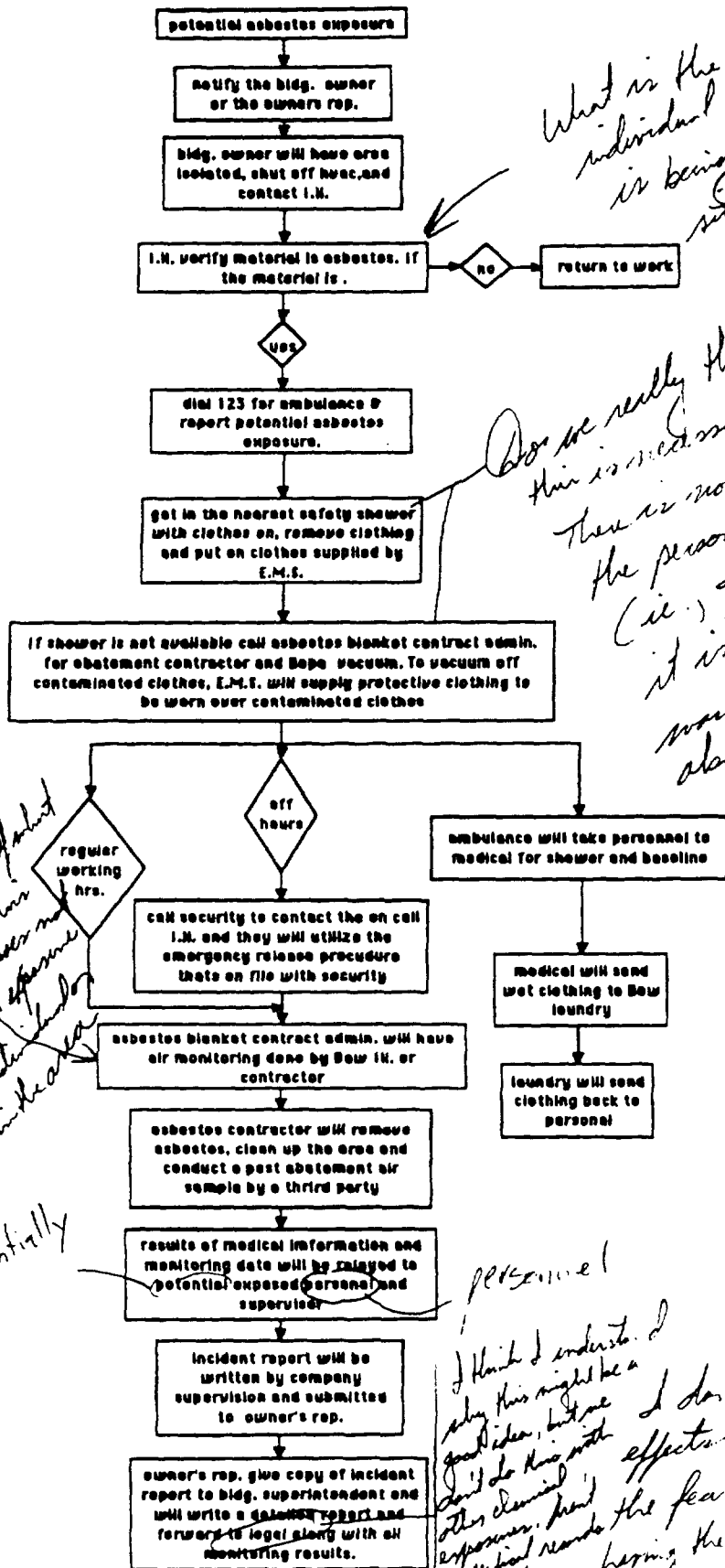
Any and all filters?
Do we need to treat these as ACM?

- 8. Proper identification of and warning labels for asbestos-containing materials:
 - A. As per CFR 1910.1200 (f) of OSHA's Hazard communication standard.

And also
29CFR1926.58 - (Asbestos language)
part
11s. 3/8/90

ST0076976

ST0076977



What is the potentially exposed individual doing before this is being recognized? I hope he's not sitting in the lunchroom having a donut and a cigarette!

Do we really think this is necessary?

There is no acute health hazard and unless the person is white from head to toe (i.e., gross visible contamination) it is very unlikely that the material would pose an exposure risk above the 1/100 STEL to the affected individual or to those treating him/her. I think it would be better to have the person sit still until EMS arrives, give the person carefully don a Tyvek suit and then shower at Medical.

If the person is grossly contaminated (I mean really dirty!), then ~~the~~ showering/vacuuming should be done.

I don't think that the health effects now and needlessly increasing the fear level of other people by having the person jump into the shower. I can't tell wouldn't do it!

personnel

I think I understand why this might be a good idea, but I don't do this with other chemical exposures. I don't think the fear level of other people by having the person jump into the shower. I can't tell wouldn't do it!

Why? Of what use is this data? It does not rule out exposure to the individual or others in the area.

potentially

Focus

Owner's Representatives must conduct adequate pre-job reviews to address possible ACM contact.

Asbestos Awareness training must continue to focus on responsibilities of employees if ACM contacted, for any reason, as part of their normal job activity.

Individual judgements will continue to vary regarding appropriate actions that should be taken. The procedures need to focus on the basic steps to be followed regardless of the amount of potential contamination.

~~Communication between owners and employees~~

ST0076978

1) On-going asbestos work at DOW.

A) Focus - remediate friable material

B) Demolition $\Rightarrow$ handle ACM in a correct manner

C) Identification $\Rightarrow$ Determine presence of ACM in
Dow buildings

1) Intact ACM $\Rightarrow$ do nothing but ID + document location

2) Friable, $\Rightarrow$ determine schedule for abatement

a) Encapsulate

b) Remove

2) Asbestos was & still is an excellent, natural fiber.

It had widespread use up to about 1975.

Most of the buildings on this site will contain asbestos in some form.

Because the use of asbestos was so widespread, the potential exists for a Dow employee or contractor to contact asbestos containing material (ACM).

~~The~~ Federal and State regulations have been in existence for some time and have numerous provisions that govern the handling, disposal and use of ACM.

The Michigan Division safety standard 1H-140 addresses the requirements of the State regulations and explains the necessary and required steps that must be followed when conducting work with ACM.

The critical responsibility will rest with each employee whose job requirements are such that they have potential for exposure to ACM. Almost all M. D. V. employees have the potential to accidentally come in contact with ACM.

~~The two hour awareness training is provided to give employees basic information that must be available.~~

If an employee thinks they have contacted asbestos, the following actions should occur.

- 1) Contact the building owner, owner's representative or foreman by phone, pager or ~~any~~ any other means possible
- 2) Do not continue working until a sample of the material has been analyzed by industrial hygiene.
- 3) Do nothing to further spread possible contamination
- 4) Notify your foreman that you may have possibly contacted ACM.

The ~~Building~~ Building Owner, Owner Rep, or foreman will do the following.

§10076980

- 1) Turn off HVAC for the building
- 2) Contact industrial hygiene and have samples of the material analyzed.
- 3) Limit access to ~~the~~ area where work is being conducted
- 4) Notify ~~Bldg. Owner, if owner rep, person that responds~~

Person that responds notifies others.

e.g. Owner Rep responds to call, notify

Bldg. Owner, Foreman

If sample test negative —
Continue work

If sample test positive —

- 1) Abatement Contractor
- 2) a) Air Monitoring
b) Cleanup
- 2) 3rd Party Clearance
- 3) Communication - followup with involved employers conducted by Owner Rep, Foreman.
- 4) Records & documentation of incident to legal.

ST0076981



INDUSTRIAL HYGIENE SERVICES

Staff - ^{10/9/90} Comments by Oct 31
Please

Tom Sponseller has asked
me to pass this letter and
flow chart on. He would
like our comments -
Not just "good" or "bad"
maybe we need to
take an entirely different
approach. He is
asking for our involvement
and I think "we (IH)
play an integral part in
the process" I think.

His intentions are right
but the process needs to
be evaluated. ???

TRICIA DeLONG
FROM: Michigan Division Industrial Hygiene Services
258 Building
(517) 636-5389
Help
What can we do!!

510076982

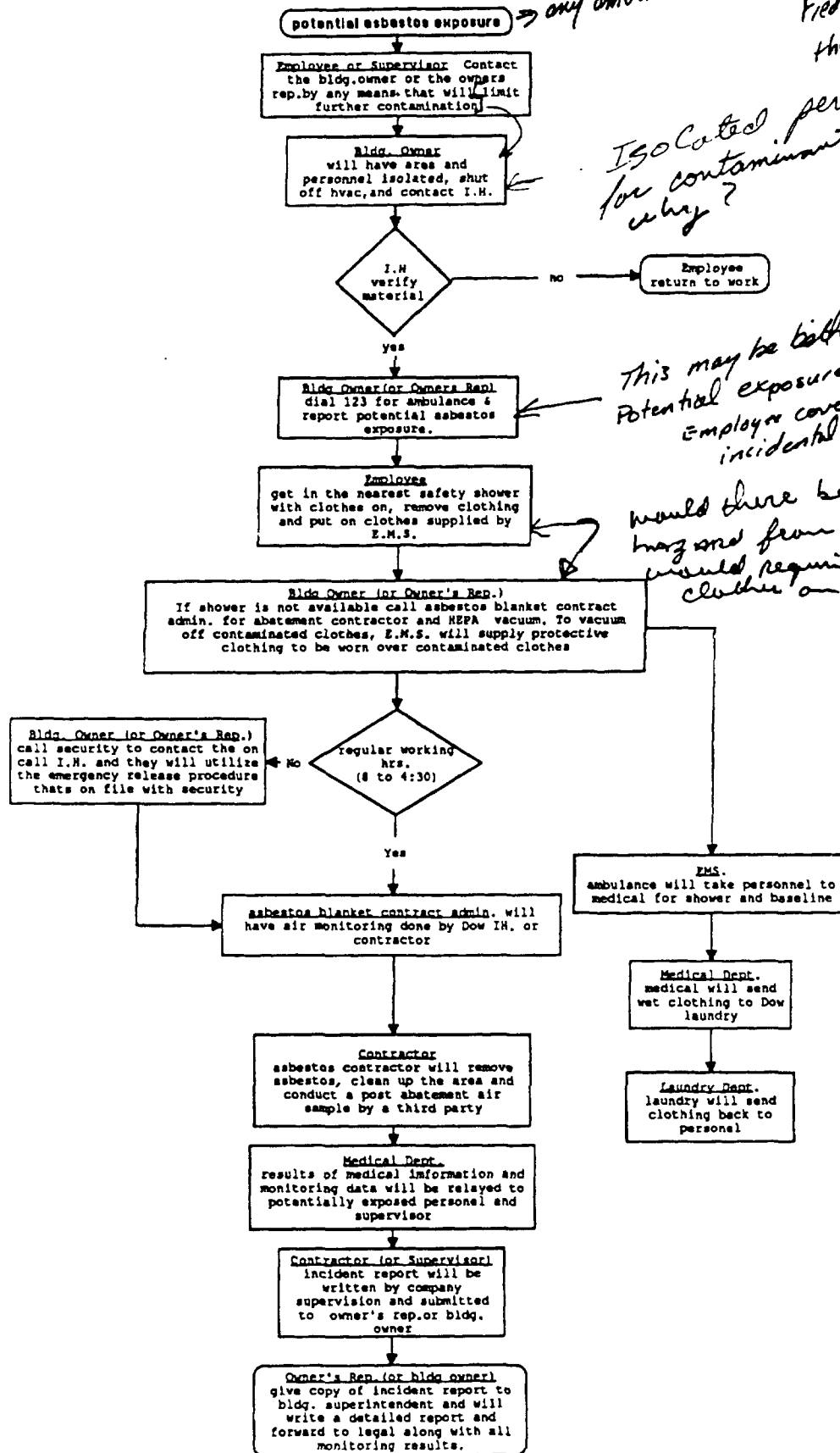
With the large amounts of pipe insulation and building materials that contain asbestos, there is a chance that a Contractor or Dow employee may come in contact with asbestos for this reason we are writing these procedures, even as the MIOASH^A regulation have required that all persons involved with maintenance be required to have a minimum of two hours asbestos awareness training, as a person working may come in contact with asbestos. As the regulation states the (PEL) which is 2 tenths fiber per cubic Centimeter, before protective clothing is required, this is very difficult to determine so as a safe guard Dow has taken a safe employee stand point. the only way to identify the exposure is by air monitoring, the Dow Chemical Company Has adopted these procedures.

During the process or your work you think you may have come in contact with asbestos you must contact your building manager, Owner's repersentitive, or foreman by the best available means so as not spread any asbestos fibers to other areas and advise them of the possible asbestos exposure and advise him or her that you may have come in contact with asbestos.

The Owner's Representative, Foreman or Building Manager will shut down the hvac and contact the Industrial Hygienist for that building . If the material is asbestos and the Industrial Hygienist believes there is a possible exposure at the pel. or above you will be advised to get into nearest safety shower and sent to medical for base line fiscal.

If I.H. determines there has been a possible exposure a Asbestos Abatement Contractor will be called into do air monitoring and clean up any asbestos contamination. Then a neutral third party will annualize all monitoring and perform a post abatement air clearance, with results of monitoring and air clearance discussed with effected employee's and send monitoring to Legal department

ST0076983



any amount

I think Fred/TAP should re-visit this. w/ help from group

ISO Cated. personnel? for contaminant control? why?

This may be better as Potential exposure - Employee covered - incidental - pipe insulation

would there be immediate (acute) hazard from asbestos that would require a shower with clothes on?

ST0076984