Jon S.

CHEMICALS PPG **CONFIDENTIAL** INTEROFFICE / LAKE CHARLES

TO Distribution DATE June 16, 1987

FROM R. J. McCorquodale SUBJECT Blood QAT

Minutes: 6/11/87

Attendance:
Murry Davis Jon Shepherd
J. C. Delgado R. J. McCorquodale
Lamar White

ITEMS:

1.) Monitoring Activity -
As soon as possible - Jon Shepherd will coordinate with Jim Rock and Lamar White to determine the specific jobs of the 42 employees identified under the current study as having abnormal enzymes. (6/26/87)
Once the job identification is complete, McCorquodale will request from the lab that 10 eight hour TWA samples be obtained per job. A minimum of 5 to be "off hours" (evenings - graveyards - weekends). This activity to be complete by end of July. Data to be sent to J. C. Delgado in G.O.

2.) Control Group -
To commence after beginning of Plant Communication. (Item 3).
Murry Davis to coordinate with Field Supervision the determination of 100 employees to serve as a "control group" for liver enzyme study.
A.) Must have never worked in Derivatives (assignment).
B.) Ratio of Operations, Maintenance, Shipping and Supervision to match ratio in the original 42.
C.) Questionnaire to be completed when sample drawn.

J.C. & Murry to determine ratio.
J.C. & Murry to draft questionnaire with input from Dr. Looney.

3.) Communication -
The use of a video tape as a communication tool in attempting to relieve hourly (and salary) concerns regarding liver enzymes was accepted. Video tape to have four components:
A.) Introduction - John Fike
B.) Question Answer Session - McCorquodale - Looney
C.) Procedure Discussion - McCorquodale
D.) Labor Policy - Chuck Bellon

Via brainstorming, a list of questions for Dr. Looney was prepared. McCorquodale to work up a consolidation for review by QAT. June 26th. (Original list attached)

McCorquodale to arrange video-tape session once questions (and answers) are reviewed and accepted. This project has a must do priority.

4.) Vinyl Institute -
Members were given a draft of questions to be posed to Vinyl Institute. Comments, revisions, etc., to be in Lamar White's hand by June 18th. Lamar to handle all VI activity.

5.) Policy -
Lamar prepared a guide broken into 3 parts for the QAT to work from -
A.) Basis of Policy
B.) Goals of New Policy
C.) Elements of New Policy

A.) Basis - General consensus reached in this area. McCorquodale to rewrite and distribute for review.

B.) Goals - Same as A Above.

C.) Elements - This item had several areas which require input and review. General agreement reached.
1.) Policy statement - McCorquodale to draft as a composite of items A & B above.
2.) Protocol - Agreement that no action or policy would be effective unless a health consideration protocol be drafted which specifically directs the plant physician in dealing with "abnormal" blood enzyme results. A meeting will be scheduled with Drs. Looney, Meyers, and Hollinger plus J. C. Delgado and as many QAT members as feasible. J. C. will draft a guideline for development of the protocol and distribute it in advance of the meeting. J. C. will also coordinate scheduling of the meeting.
3.) Once the Protocol is finalized, it will be utilized to prepare a proposal for treatment of employees relative to job assignments and other labor concerns.

RJM/fb

Attachments:

1. Basis of New Policy
2. Concerns With Current Policy
3. Goals of New Policy

Distribution:

QAT Members
John Fike
Chuck Bellon
J. C. Delgado
Dr. R. C. Looney

GOALS OF NEW POLICY

1. Protect employee health.

2. Establish a consistent and equitable procedure that meets the prime goal and minimizes corporate liability.

3. Assures open communication.

4. Incorporates all monitoring results.

5. Addresses employees' economic concerns in conjunction with conservative medical objectives.

BASIS OF POLICY

1. Employee health is the prime concern and objective.

2. Federal regulations will be met.

3. Corporate liability will be minimized.

4. A protocol directing action will be adhered to which assures consistent application of sound medical judgement.

5. Management will apply equitable treatment to employees based on the best medical guidelines available.

PROBLEMS WITH OUR CURRENT POLICY

1. USES NON-SPECIFIC SCREENING TEST TO MAKE PASS/FAIL DECISIONS.
2. THERE HAS BEEN ESSENTIALLY NO FOLLOW-UP ON CASES WHERE SCREENING TEST INDICATED A PROBLEM.
3. DOES NOT CORRELATE PERSONNEL MONITORING HISTORY WITH INSTANTS OF ABNORMALITY.
4. DOES NOT INSTITUTE PERSONNEL MONITORING TO DETERMINE IF EXPOSURE IS A POSSIBLE CAUSE OF ABNORMAL CASES.
5. NO EVALUATION IS MADE OF NUMEROUS POSSIBLE OTHER CAUSES OF ABNORMALITIES.
6. DOES NOT ALLOW MEDICAL JUDGEMENT, BUT INSTEAD PLAYS A NUMBERS GAME.
7. MAKES THE MOST INCRIMINATING AND MOST COSTLY COURSE OF ACTION THE FIRST CHOICE OF IN CASES OF ABNORMALITY.
8. DOES NOT ALLOW FOR THE EXPECTED VARIATION IN THE TEST RESULTS DUE TO ANALYTICAL VARIATION NOR INDIVIDUAL DIFFERENCES.
9. DOES NOT REALLY CONSIDER WORKER HEALTH AS THE PRIMARY OBJECTIVE.
10. PUTS THE CORPORATION IN THE WORST POSSIBLE SITUATION FROM A LIABILITY VIEWPOINT.
11. DOES NOT PROVIDE A MEANS OF DEALING WITH REOCCURRENCES OF ABNORMALITIES.
12. DOES NOT UTILIZE A DOCTOR'S JUDGEMENT AND COLLECTION OF ALL NECESSARY FACTS TO MAKE DIAGNOSIS AND RECOMMENDATION ON CONTINUED WORK ASSIGNMENT.
13. DOES NOT PROVIDE A FAIR TREATMENT OF OUR #1 ASSET.

QUESTIONS

1. What are we "looking" for when we draw blood? (i.e., not VCM, EDC, etc.)
2. What is an enzyme?
3. How often are blood tests done?
4. What enzymes do you look for?
5. What role do enzymes play in the body?
6. Are these enzymes normally monitored by private physicians when treating patients?
7. Who do you run these blood tests on - A, B, C, or all?
8. How do we tell when and how much exposure an employee gets?
9. Can I see my medical records and/or get a copy?
10. Why do we wait 3 weeks/3 months before retesting an employee?
11. Why do laboratories have different "normal" ranges?
12. Why does PPG use different labs?
13. Does the government know about this?
14. Have we talked with "experts" about our "problem" (concerns)?
15. Has anyone checked the validity of the lab results from the 3 different labs used (PPG, National Health, Path Lab)?
16. After years of working in Plant B - with possible liver enzyme elevations - what <u>is</u> going to happen to me?
17. Can a person's enzymes be caused by household cleaner, aerosols, etc., that contain ClCH.
18. Why did we start running these tests?
19. Why do we restrict people from working in Plant B?

20. When did we begin monitoring employee's blood?

21. Has anyone at Lake Charles ever developed a disease due to organics exposure?

22. Is there any correlation between air monitoring and blood monitoring?

23. What does "exposure" mean (how can you get exposed) (breathing, ingestion, skin)?

24. What is the treatment, if any, for diseases caused by toxic chemicals?

25. Here lately, more people are being restricted from Plant B than in the past. Why, what has changed?

26. Is it effecting my health to work in Plant B?

27. What is the experience in other plants (local and PPG) - do they have this problem?

28. Some of the people that have been removed and returned to Plant B have been told to stop drinking, lose weight, and other things - they did this and cleared up. Were you able to decide if that is what caused their enzyme changes?

29. What other things besides organics in Plant B can cause these changes?

30. Why have some people been taken out of B immediately and some haven't?

31. Is there a level above the "normal" that is considered "room for analytical error" and/or do these normal ranges apply to everybody?

32. Do some people normally have slightly "elevated/abnormal" enzyme levels?

33. If I am taking medication that is suspected to cause liver effects, should I stop taking it before I am tested?

34. Where do "normal" values for enzymes come from?

35. What do elevations in enzyme levels mean?

36. What is the function of the liver?

37. What causes enzyme levels to be elevated?

38. Do we have vinyl, EDC, etc., in our blood?

39. If I have a "high" enzyme - am I sick, i.e., cancer, AIDS, other?

40. If a person is exposed to "organics", how long does it tak to affect the liver, or show up in enzyme tests?

This group would like to develop a "layman's" language educational presentation for our employees on the use of blood enzyme levels as a medical surveillance method. The five enzymes currently used are:

- Alanine Aminotransferase (ALT (or) SGPT)
- Alkaline Phosphatase (ALK P.)
- Aspartate Aminotransferase (AST (or) SGOT)
- Gamma-glutamyl transpeptidase (GGTP)
- Lactate Dehydrogenase (LDH)

After some preliminary discussions, we came up with seven questions we would like input on.

1. What function or role do these enzymes play in the body? (i.e., How do they work?)

2. What does the level of the enzyme(s) indicate?

3. What are the "normal" levels of these enzymes in the general population?

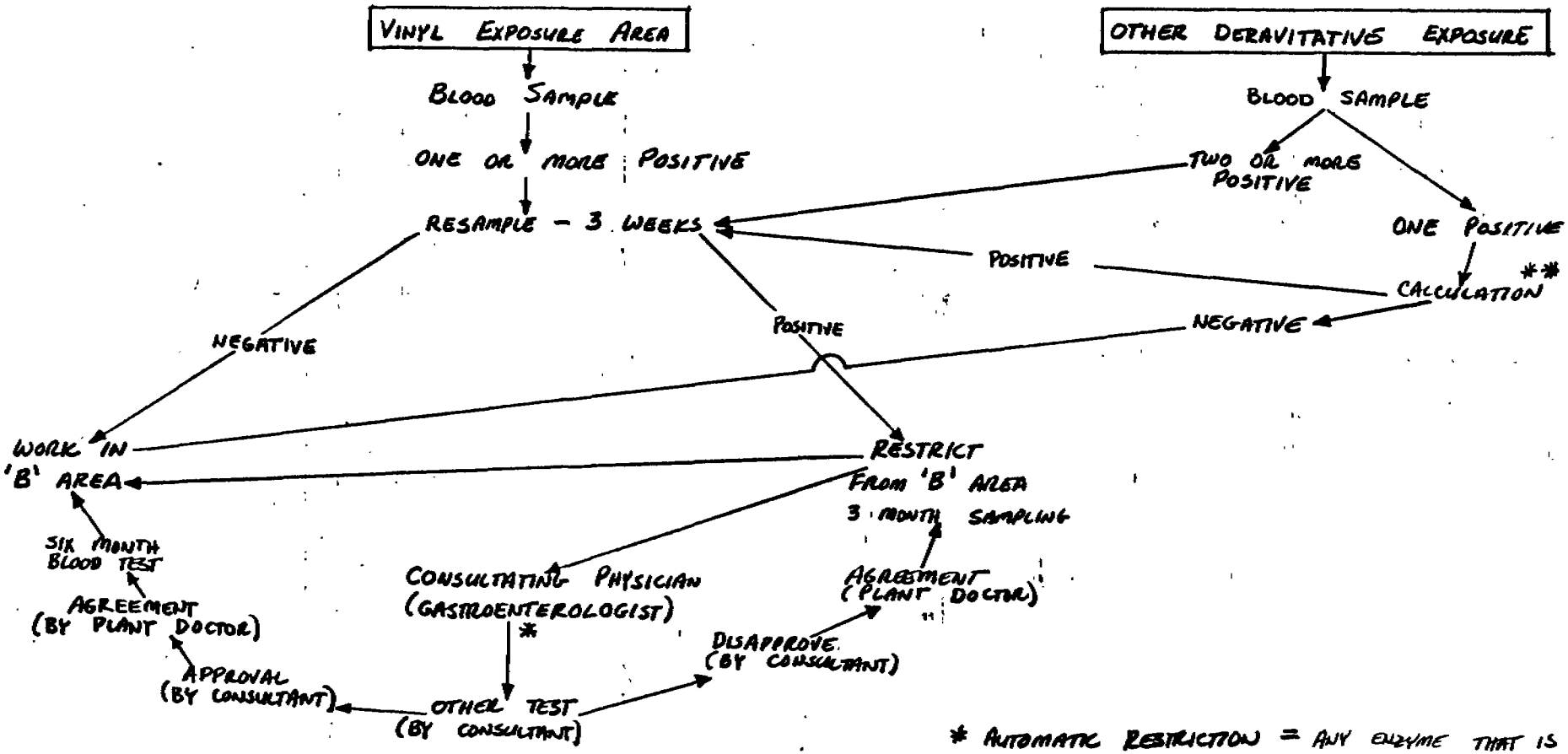
4. What are the possible causes for elevated enzyme levels besides excessive chemical (hepatotoxin) exposure?

5. We refer to these as "liver enzymes" - Can elevated levels indicate abnormality or problems with other organ systems?

6. If an individual has enzyme levels elevated above the "normal" range - does he/she truly have a "health" problem"?

7. What is the rate of elevated enzyme levels (i.e., levels above the "normal" range) in the general population?

LIVER FUNCTION DECESION DIAGRAM



* AUTOMATIC RESTRICTION = ANY ENZYME THAT IS 2 OR MORE TIMES NORMAL (CASE DEFINITION OF TOXIC HEPATITIS.

** NEGATIVE = WITHIN NORMAL VALUE + 10% (OF NORMAL VALUE) + ONE S.D.

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CONTROL GROUP ENZYME QUESTIONNAIRE

1. What is your age? _____
2. What area of the plant do you work in? _____
3. What is your job title? _____
4. How much alcohol do you consume daily? _____ Weekly? _____
5. Are you on any medication? _____
6. Have you ever been hospitalized? _____
7. What were you hospitalized for? _____
8. Have you ever received a blood transfusion? _____
9. If you have received a transfusion, when did you receive it? _____
10. Have you ever had Hepatitis? _____
11. If you had Hepatitis, when did you have it? _____
12. Have you ever had any other liver disease? If so, when? _____
13. Do you routinely take Tylenol for aches, fever, etc.? _____
14. Have you ever worked in Plant B? If so, when? _____
15. Do you work with any chemical solvent in your job? If so, which ones? _____
16. Have you frequently taken antibiotics for recurring illnesses? If so, how frequently? _____
17. Where were you employed before PPG? _____
18. Did you work with chemicals when you were working for your previous employer? If so, which ones? _____
19. Do you have any chronic illnesses? If so, what are they? _____

NAME _____

I. D. NUMBER _____

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Brainstorm Questions From Blood QAT Meeting - 4/23/87

Item 6 - Do we have an "abnormal" situation?

1. Do you have a health problem when you are "abnormal" per established ranges?

2. What is "normal"?

3. What time interval for retesting is appropriate to allow minor variations to return (i.e. - what is the "biological half-life" of an enzyme once present?)?

4. Are we seeing an increase in the rate of "abnormals" since 1975?

5. What is the rate of "abnormals" in the general population (non-PPG)?

6. (a) What do "enzymes" indicate?

   (b) How do they work?

   (c) Do these 5 (SGOT, SGPT, Alk. Phosphotase, LDH & GGTP) indicate problems for organs other than the liver?

   (d) What are other (non-industrial related) possible causes for elevation of levels?

PLAN

I. Send questionnaire to all VI members.

II. Have results compiled by VI (or counsel).

III. Review results at next VI health, safety, and environmental committee meeting.

QUESTIONNAIRE

OSHA 1910.1017 PART K - MEDICAL SURVEILLANCE

I. APPLICATION OF REGULATIONS

1. Does your company have a policy regarding the medical surveillance requirements of 1910.1017 ?

1.a. If the answer to 1 is "yes" please :

- briefly describe the policy
- attach a copy of the policy
- policy is confidential

1.b. If the answer to 1 is "no" please :

- describe how your company meets the requirements of 1910.1017

2. Do you have a company doctor ?

2.a. Is the doctor full time or part-time?

2.b. If you don't have a company doctor, please describe how your medical work is handled.

3. Would your doctor, medical personnel or those who handle your medical surveillance be interested in consulting with others regarding 1019.1017 medical surveillance.

4. Please describe how and by whom the testing required by 1019.1017 is done.

4.a. Please give the name of the laboratory you use, if it is outside your company.

5. Please give the name of your company doctor or other persons directly responsible for administering the medical surveillance requirements of 1019.1017.

6. Do you have other chemical production or use besides VCM or PVC ?

6.a. If the answer to 6 is "yes" , do you include the workers in any other operations under the medical surveillance requirements of 1019.1017 or do you

have similar surveillance requirements for them ?

7. Who makes the final decision and/or recommendation on the suitability of a worker for potential exposure to VCM ?

8. Are any tests other than those described by the regulation used to make the decision on the suitability of a worker for potential exposure to VCM ?

8.a. If the answer to 8 is "yes", please list and/or describe the other test.

9. What are the trigger levels, on the five enzyme tests required by the regulation, at which some action is required ?

9.a. What is the action that occurs when a trigger level is exceeded ?

9.b. How were the trigger levels employed by your company determined ?

10. Has any worker at your plant ever been restricted or removed from continued potential exposure to VCM ?

10.a. If the answer to 10 is "yes", are the restrictions temporary or permanent ?

10.b. Are workers allowed to return to potential exposure to VCM if their test results return to normal ? (or if they no longer exceed a trigger level)

11. Please describe the method by which an individual is/would be/has been removed from potential exposure.

12. Do you perform the five test required by 1019.1017 when a worker is known to have been over-exposed (exposed in excess of the maximum levels set forth in 1019.1017 par.) as a result of a) personnel monitoring; b) an operational upset where there was a release and a worker is "believed" to have been over-exposed ?

13. Are individual personnel air monitoring (IPAM) results used in any stage of your medical surveillance program (i.e. if enzyme test results exceed a trigger level would IPAM be used to determine if the individual were having a problem with over-exposure?) ?

14. Are there cases where a worker has been/would be removed immediately from potential exposure as a result of exceeding trigger levels for the enzyme test required by 1019.1017 , before the actual cause of the exceedances were determined ?

15. Are the tests required by 1019.1017 considered sufficient to determine if a worker cannot continue on a job with potential exposure to VCM ?

16. Should other follow-up testing be employed whenever test results for the five enzymes required by 1019.1017 exceed a predetermined trigger level ?

II. HISTORICAL RESULTS

1. Has a worker ever been removed temporarily or permanently from potential exposure to VCM ?

2. If the answer to 1 is " yes ", a) please give the number removed temporarily; b) please give the number that were removed permanently; c) for both types of removal please give the number that were determined to be due to work-related or exposure problems; d) please give the number that were determined to be due to non work-related causes; e) for the work related cases please indicate what the chemical or medical cause was.

3. Have you ever had any cases where trigger levels were exceeded but the worker was not removed from potential exposure ?

3.a. If the answer to 3 is " yes ", please describe the number and reasons for not removing the worker (i.e. the cause was not job related , no cause could be determined , the cause was job related but it was corrected in lieu of removing the worker).

4. Please give the total population which has been tested and the number of years that the testing has been carried-out.

OSHA 1910.1017 PART - FIXED POINT AND INDIVIDUAL PERSONNEL AIR MONITORING

1. Please describe how the alarm levels are set on your fixed point air monitoring system.

2. Please describe what action is taken, especially what respiratory measures are used when an air monitor alarm occurs.

3. How often are individual personnel monitored ?

4. What device is used for personnel air monitoring ?

5. What action is taken if a worker experiences an over-exposure ?