

Robert L. Lambke, M. D.

Oran D. Steffey

May 11, 1973

Trip to Lake Charles Chemical and VCM Plants

During the week of April 29, 1973, a trip was made to the Lake Charles Chemical and VCM Plants for the purpose of meeting personnel in management and in safety, for physically checking the installations from the standpoint of OSHA Standards which cover General Environmental Control - Sanitation, and for establishing a method for gathering information on toxic materials. In order to accomplish the latter, S. F. Pitts was asked to list on individual sheets all the chemicals and hazardous materials used in the plant. These sheets summarize the area in the plant where the material is used, how it is used, the number of people involved, control measures in use, and any helpful comments. It was also requested that Material Safety Data Sheets be prepared as supplemental information. This information will be forwarded to our offices as soon as it is completed.

The following twenty-four areas were covered from a general industrial hygiene standpoint:

- Main Office - Chemical Plant
- High Pressure Laboratory
- Chemical Store Room
- Wet Chemical Laboratory
- Bench Scale Laboratory
- Bench Scale Laboratory No. 1
- Distillation Laboratory
- Analytical Chemistry Laboratory
- Change Room
- Methyl Chloride Unit
- ETO Unit
- Normal Paraffins - Solvent Units
- Drum Loading Building
- 200 Control Building
- 300 Control Building
- 400 Control Building
- 500 and 600 Control Building
- Ethylene Control Building
- Ethylene Maintenance Shops
- Shops
- Main Office - VCM
- Control Building - VCM
- Laboratory - VCM
- Maintenance - VCM
- Control Building - VCM

CCR 000011669

Robert L. Lambke, M. D.

Page 2

The following comments are made relative to the above areas of the Chemical Plant:

Main Office - Chemical Plant - This building, in general, was in good shape in all areas.

High Pressure Laboratory - Items were stored atop wall cabinets. If this is necessary, a retaining bar should be installed so that items do not fall and injure persons. Laboratory benches throughout the laboratory need to be cleaned and straightened.

Laboratory Chemical Storeroom - Various items are being stored in the passageways. These should be stored in shelves, and all passageways should be kept completely open at all times. Sulfuric acid bottles are stored on an upper shelf with plywood beneath them. This plywood reduces the height of the protective lip, and this could allow these bottles to slide off the shelf. These acid bottles should be stored on lower shelves, and they should be protected from slippage from the shelf by sufficient shelf-lip protection. Items are being stored atop shelves with no securing bars. These shelves should be fitted with securing bars, lips or rails.

Wet Chemical Laboratory - Laboratory benches, in general, should be kept cleaner and more orderly. It was noticed that what appeared to be a can of food was being heated on a steam bath in one of the hoods. All food should be prepared and eaten in the lunch-lounge room, which is provided for this purpose.

Bench Scale Laboratory - Shelves in this laboratory are overloaded, and all need protective bars or protective lips installed on them. Laboratory benches need to be cleaned and straightened.

Bench Scale Laboratory No. 2 - Items are stored atop wall cabinets. If this is necessary, protective bars and lips should be provided. In general, all laboratory benches need to be cleaned and straightened.

Distillation Laboratory - Items are stored atop wall cabinets. Protective bars and lips should be provided. Laboratory benches need to be cleaned and straightened.

Analytical Chemistry Laboratory - Laboratory needs to be cleaned and straightened.

In addition to the above discrepancies found in the specific laboratories, the following comments are made relative to other areas of this building:

An ice chest located in the hallway just outside the Chemical Store Room had a large can of tomato juice stored in it. This chest should not be used for this purpose. All foods should be stored in a clean refrigerator in the lunch room.

CCR 000011670

The drinking fountain for this building was dirty and should be cleaned and sanitized.

The refrigerator in the lunch-lounge room needed to be defrosted, cleaned and sanitized.

An acetylene bottle was being stored in a hallway closet. All acetylene cylinders should be stored in an area outside the laboratory and piped into the area where it is needed.

Change Room - Toilet closets do not have clothes hangers provided. These should be installed to meet OSHA regulations. The drinking fountain in this area needs cleaning and sanitizing. It was noticed that maintenance people were eating lunches in the change room. If a lunch room is available, these men should be encouraged to use it. If a lunch room is not available, one should be provided for the use of these men.

Methyl Chloride Unit - Two vent pipes west of the unit and just north of the roadway appear to be much too short. These should be extended to a sufficient height to safely vent, and possibly they should be moved out a greater distance from the plant. A locker room in this unit should be cleaned and straightened. Various items are stored in the room without any order.

ETO UNIT - The control room for this unit is located atop the reactor system. This is not a good practice since it allows for the vaporization and fuming of materials into the area where the operators are located during their work shift. The area was found dirty; but under the conditions, it is doubtful that the desirable could be accomplished. Preparation of food was being allowed in the control room, and this should be prohibited under these conditions. The drinking fountain was filled with old rubber gloves and a discarded pipe fitting. Construction of the toilet facilities is not adequate and does not meet OSHA requirements.

Normal Paraffins Solvent Units - The toilet room needs cleaning, and the lavatory needs to be cleaned and sanitized. The refrigerator in this control room needs defrosting and cleaning.

Brom Loading Building - The floors need to be swept and cleaned. In order to reduce the amount of vaporization into the air from loaded materials being on the floors, a program of continual janitorial services should be considered. Extra ventilation should be provided for this building. A refrigerator needs to be defrosted, cleaned and sanitized.

200 Control Building - A refrigerator needs to be defrosted, cleaned and sanitized. The drinking fountain needs to be cleaned and sanitized.

Robert L. Lambke, M. D.

Page 4

The wash lavatory needs to be cleaned. The toilet closet does not have a clothes hanger.

300 Control Building - The drinking fountain needs to be cleaned. A refrigerator needs to be defrosted, cleaned and sanitized, and the wash lavatory needs to be cleaned.

400 Control Building - The floors need to be cleaned and scrubbed. A refrigerator needs to be defrosted, cleaned and sanitized. The toilet floors are dirty and need to be scrubbed and sanitized. The finish in the toilet is not one easily cleaned. The toilet construction does not meet OSHA regulations. The lavatory is dirty and should be cleaned and sanitized. A hot plate used for cooking is dirty and needs to be cleaned.

500 and 600 Control Building - The drinking fountain is dirty and needs to be cleaned and sanitized. A refrigerator needs to be defrosted, cleaned and sanitized. The toilet floors are dirty and need to be cleaned and mopped. The toilet closet has various items, such as a plywood sheet, used rubber gloves, a respirator and bundles of terry towels stacked, stored or thrown about. These should be removed from the room and stored in an appropriate place. The lavatory is dirty and needs cleaning. Toilet paper is not sufficiently supplied. More attention should be given to the entire toilet facility.

Ethylene Control Building - The drinking fountain needs to be cleaned and sanitized. A refrigerator needs to be cleaned and sanitized. A hot plate used for food preparation is dirty and needs to be cleaned.

Ethylene Maintenance Shop - The general housekeeping in this building needs to be improved. The upper floor storage area needs to be straightened, cleaned and materials stored in an orderly manner. The toilet room floors are of a material not easily cleaned. The outside storage area just north of the shops need to be cleaned up and all materials should be stored in an orderly manner.

Shops - In general the shops were in fairly good order.

In addition to the above noted discrepancies, the following comments are made:

The warehouse next to the Normal Paraffin Units is in very poor shape. This area needs to be cleaned up, and all stored items throughout the building should be stored in an orderly manner with materials separated into their respective categories. Sufficient aisles should be left between palletized materials so that removal can be done safely and cleaning can be effectively accomplished.

A storage building in the 700 area needs to be cleaned and items stored in an orderly manner. Insulation is being stored in this building.

CCR 000011672

All insulation should be stored in an area entirely free of all other stored items. Scraps of insulation, dusts from sawing and working should be picked up and disposed of in plastic bags. Insulation storage areas should be kept clean and orderly.

A storage area outside the above mentioned building needs to be cleaned up and all items arranged in an orderly manner.

The area 600 Distillation Units generally need maintenance attention. Lines are leaking, the pads under the units are dirty, and this adds to the possibility of materials becoming vaporized into the air. Housekeeping in this area needs to be improved.

The following comments are made relative to the areas of the VCM Plant:

Main Office - VCM - In general this area was found to be in good shape in all areas.

Control Building - VCM - Floors need to be swept and mopped. Waste disposal receptacles should be of a sanitary type. Charts are stacked in disarray behind the control panels. These should be placed in a cabinet or on shelves which are provided for such items. The utility room needs to be cleaned and straightened up. Toilet bowls, urinals and lavatories are dirty. These should be cleaned and sanitized. The kitchen facilities are dirty and need to be cleaned and sanitized. The shower area is being used for storage. If this is not going to be used for the purpose for which it was built, the entire area should be renovated and the items stored in an orderly and neat manner. A refrigerator needs to be defrosted, cleaned and sanitized. The Change Room has items stored atop lockers. These should be removed and stored inside locker spaces or stored in a more appropriate place.

Maintenance - VCM - Materials are stored atop cabinets. If it is necessary to store items in this manner, protective bars and lips should be provided in order to keep items from falling. The lunch room floors are dirty and need to be scrubbed and mopped. Waste disposal containers should be of the sanitary type in the lunch room. The refrigerator in this room needs to be cleaned, and it has a can of resin base cement stored. No type of chemicals or materials of this sort should be stored in refrigerators with food. The cabinets below the evens need to be cleaned. The toilet room floors are of a finish which is not easily cleaned. One toilet closet does not have a clothes hanger. This should be provided.

Laboratory - VCM - Items are stored atop cabinets. If this is necessary, protective bars and lips should be installed in order to keep them from falling. Shelving in the chemical storage should have retaining lips installed on all shelves. Aisles have containers stored which block the space. These items should be removed and stored in a more

Robert L. Lambke, M. D.

Page 6

appropriate place. A vacuum pump and motor beneath a laboratory bench does not have a belt guard. All equipment of this type should be belt-guarded.

In general the chemical plant shows an effort is being made to maintain the plant in acceptable condition. In those areas mentioned improvements and corrections should be made.

Gren D. Steffey
Industrial Hygienist
Medical Division

ens

CCR 000011674