Monsanto file copy

FROM (NAME & LOCATION): G. L. Gorbell - St. Louis

DATE: December 15, 1969

SUBJECT: Safety and Property Protection Survey - November 10-14, 1969

REFERENCE:

CC: C. L. Gilmore - Texas City
E. L. Hale - Texas City
S. L. Hunter
R. L. Miller

TO : R. V. Butz
Texas City

This is a report of my Safety and Property Protection survey of your plant. It was a pleasure to have this opportunity to visit Texas City again after an interval of three years. Many changes in the physical plant were noticed since my visit in 1966, but these will hardly compare with those which will take place in the next three years. This, of course, will add appreciably to employe and supervisor safety training program activities in this period of phasing out of operations and moving into new ones.

Your plant is to be congratulated for winning an Outstanding Award Pennant in the Annual Plant Inspection Program. Another achievement which deserves commendation is your plant's winning of the President's Safety Award in the Monsanto Safety Award Program for its operation without disabling injuries for 500 days. Based on the downward trend of your minor injury and serious injury frequency rates, it is apparent that your safety program is paying off. I say this despite your recent disabling injury which sets your record back, momentarily. It is unfortunate that this is not reflected in a reduction of Workmen's Compensation losses which have taken a decided increase in the past year. It is Gil's feeling that this increase in costs is due, in part, to the labor contract settlement which included a supplemental pay clause, guaranteeing an employe additional pay to bring his take-home to 100% regardless of whether or not he contributed to the cause of the injury. The increase is particularly noticeable in the rising frequency of back injuries, which are most difficult to classify as to origin.

Your plant's safety organization with its Plant Manager's Safety Board and Hourly Safety Committee appears to be operating effectively.

Another loss source which is being studied by your Safety Department is the costs from off-the-job injuries. Company-wide, these costs are 2-1/2 times higher than on-the-job injury losses; and since Monsanto will be assuming practically all of the costs from off-the-job accidents and illness in 1970, this is an area which will require attention. S&PP in 1970 is planning to provide information and resource material on off-the-job safety for use in plant safety programs.

Your safety indoctrination program, which integrates safety with operating instructions, is an effective way of handling this function. A common weakness in most safety indoctrination programs, including yours, is a failure to provide proper indoctrination to those who transfer to other duties. Gil has recognized this problem and plans to handle it as one of his department's objectives in 1970. Your plant's hourly worker participation in the safety program through refresher instruction in the use of respiratory protective equipment, first aid training, and service on hazard inspection and injury investigation committees are effective approaches to maintaining a high safety-awareness level.

I was impressed by the procedures which have been established to schedule and record testing, and maintaining control instrumentation, chain falls, hoists, and safety relief valves. Concerning chain fall and hoist testing programs, I am sending a copy of Springfield's program to Gil for transmittal to Jim Gatewood. Although this program could be improved, we thought that Jim would like to see how another plant sets up such a system.

I was glad that an opportunity arose to witness your Disaster Control Center group in action when a fire occurred in your alkylation plant. The practice of having this group take their stations when the fire siren sounds is an excellent training exercise. The emergency was handled expeditiously, although the tendency to place the telephones on "speaker" seemed to be a bit distracting. Since the radio-telephone system in the Disaster Control Center does rely on telephone lines, I understand that changes are being considered so that the loss of a line will not result in a loss of communication. When we discussed the location of an alternate control center, you indicated that tentative plans call for locating it at the nearby Holiday Inn. It is my understanding

that it would take at least one hour to get this center operating if your present center were isolated or rendered inoperable. Rather than lose one hour of valuable time, would it not be better to consider locating your alternate center somewnere on the west side of the plant area and still maintain arrangements with Holiday Inn in the event that the entire plant would be evacuated? When I visited the Pensacola Plant in September, I witnessed a simulated disaster exercise which was most dramatic and realistic. I would highly recommend that your plant conduct such a disaster simulation to test your plan's effectiveness under circumstances more nearly like the real thing. Pensacola found this to be an invaluable means of determining weaknesses in their plan. Attached to Gil's copy of this report is a copy of the simulation arrangements used at Pensacola.

During my tour of your plant, I made it a point to discuss with each department superintendent his progress on his 1969 safety objectives. I am pleased to report that they all were intimately knowledgeable of the status of their objectives and their department's safety program in general.

Since you have a few operations which generate noise levels which could cause hearing damage, I was pleased to learn that your safety department is aware of all hazardous noise sources and that John Fox has completed noise level charts for all problem areas. As I mentioned to you, Federal Legislation will undoubtedly be passed in 1970, which will require industry to furnish audiometric testing programs on all employes exposed to noise levels above certain specified minimums. Current occupational safety and health bills do not indicate a prescribed frequency for audiometric examinations; so I would suggest that no change be made in your present program which calls for examinations every eighteen months, until we know what the law will require.

Concerning disposition of past S&PP survey recommendations, these have been thoroughly covered in your February 9, 1968, letter commenting on our November 13-15, 1967 survey. Two recommendations are being resubmitted in this report along with those from this survey. A number of items of a minor nature will not appear in this report, which relate to conditions reported to department superintendents for their handling.

I enjoyed my visit to your plant and want to thank you for the courtesies extended to me. If you have any questions concerning the content of this report, please let me know.

Best regards.

George L. Gorbell
Safety & Property Protection

/pjl

Attachment

P.S.: The news of your plant's second disabling injury just reached us. I'm sorry to hear this disturbing news and hope, along with you I'm sure, that this is your last for 1969. December has been a bad month for the Company. Your accident is Number 6!

G.L.G.

TEXAS CITY PLANT

RESUBMITTED AND NEW RECOMMENDATIONS

December 10-14, 1969

65-4: Tank Car Unloading of Hexane

The tank car unloading practices for hexane should be reviewed and amended as needed to insure top unloading of this material.

Status: This recommendation has not been accepted by you or your predecessors, but in the light of your plant's new policy to load and unload flammable liquids through the dome, you may want to reconsider it. There is always a possibility, although remote, that a spill could ignite and the tank car explode, thus communicating the fire to nearby facilities. Of interest is that the Bastian-Blessing Company is designing a manually operated remote control shut-off device and a fusible link device which will actuate under spill fire conditions to shut off the valve when flammables are being unloaded from the bottom. Although the preferred method is by pumping over the top, bottom unloading will be acceptable provided remote and fusible link control devices are used.

66-3: Flammable Liquid Loading

Loading of flammables should be through closed connection dip tubes extended to near the bottom of the tank car. The tubes should extend through Protectoseal hatch covers to provide protection against exterior ignition sources.

Status: Six dip tubes have been provided for loading styrene tank cars and are being considered for other flammable liquid loading. Incidentally, the Protectoseal Company has designed a dome cover for 20" openings on tank cars which provide openings for fill pipes,

flame arrester and a 3-1/2" inspection port with a self-closing cover. The cover is not in production yet, but when it is you should give serious consideration to utilizing it in your top loading of flammable liquids. The inspection port will allow observation to determine liquid levels in the tank car. Until this cover becomes available, other means of covering open dome hatches should be utilized.

Some concern was expressed that the use of covers would prevent observance of the level of liquid in the tank car and therefore create an over-fill or overflow situation. Some locations use capacitances or photo-switch probes to alarm or shut down pumps when the desired liquid level is reached. The Queeny Plant has found to be dependable a solid state probe supplied by Trexel Brook Company, Tulsa, Oklahoma.

69-1: Machine and Equipment Guarding

Machine and equipment guarding throughout the plant is excellent with the exceptions of the lack of backguarding in some equipment in the high pressure, low density polyethylene solids area and in the Applications Laboratory.

69-2: Pilot Plant

A. From a housekeeping standpoint, I have never seen the Pilot Plant looking better. On the concrete pad outside the east door of the Pilot Plant, five full drums of Butyl Alcohol were noticed in a severely corroded condition. These should be removed to a location where accidental rupture of the drums from corrosion will not endanger surrounding facilities.

B. The valve between the pressure gauge and the spool-piece from the rupture disc to the safety relief valve in the EMA reactors should be car-sealed open. Generally it is not good practice to have a valve which could isolate a pressure gauge specifically installed to detect pressure buildup in the spool piece.

69-3: Unsafe Practices

A. When John Fox and I toured the laboratories, five instances were observed where eye protection was not being worn. A general assessment of housekeeping in the laboratories was that it was not up to past standards.

B. In the high pressure, low density compressor building, two mechanics were found working on a compressor which was found to be locked out according to procedure; however, the ethylene feed valve was not car-sealed in a closed position.

69-4: Laboratory Safety Objectives

The laboratories should establish annual safety objectives as do the Operating and Maintenance departments. They should be furnished monthly injury frequency trend charts indicating laboratory injury experience.

69-5: Asbestos Exposure

It was noticed in the Maintenance Department insulation area that a non-approved dust mask was being worn. Only U.S. Bureau of Mines approved masks are acceptable for protection against asbestos exposures. It is suggested that Liberty Mutual be requested to sample the air during asbestos cutting operations for the presence of hazardous concentrations.

69-6: Sulfuric Acid and Spent Acid Transferring

It is recommended that the preferred method of pumping acids rather than pressuring them be used for transferring sulfuric acid and spent acid. S&PP Tecfact #17 provides information on the types of pumps which have been found suitable by other locations for handling acids.