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ANNUAL INDUSTRIAL HYGIENE INSPECTION - ABERDEEN CHEMICAL PLANT

During the week of April 25, 1976, a trip was made to the Aberdeen Chemical Plant for the purpose of physically checking the various operations from the standpoint of OSHA standards which cover General Environmental Control - Sanitation, and general use of toxic and hazardous materials.

The following comments are made relative to specific areas of the Aberdeen plant:

Main Offices - The women's restroom should be supplied with a covered sanitary napkin disposal container. All oxalid and blueprint machines should be vented to remove ammonia vapors from the work areas.

Purchasing-Accounting Offices - The women's restroom should be supplied with a covered sanitary napkin disposal container. Conveniently and safely located electrical outlets should be provided for a number of electrical cords in various offices of this area. Phone cables and cords should be wired so as to be routed safely out of the way of normal movement.

Receiving Warehouse - Stacking of containers within parts of the warehouse should be done with more attention given to stability of cartons and materials, especially those which are stored at great heights. In the south part of this area along the wall, behind flat cardboard boxing materials, various parts of hopper rail cars and old wood crating materials should be cleaned up and removed from the area.

A large cardboard PVC box near the west wall of the warehouse, used for holding oiled sawdust sweeping compound, should be changed for an impervious container.

The storage area overhead the Transportation offices needs to be cleaned and materials stored in an orderly manner especially in the north end of this room. The air conditioning equipment room in this same overhead storage area needs to be cleaned, materials should be sorted and removed and floors should be swept and the area maintained in a clean orderly condition. A cylinder of freon gas should be secured with a safety strap or chain.

Line I - The floors should be swept and should be kept cleaner in this area.

Line III - The ventilation needs to be improved in this area. There is a tendency for vapors, fumes, and dust to be discharged in the area and these are drifting into other work areas as well. Engineering changes should be made which will remove these materials before they find their way into the immediate work air.

Dry Blend Control - The drinking fountain should be cleaned and maintained in a sanitary condition.

Dry Blend Area - This area is improved, however, much more is needed in the way of housekeeping and in the reduction of dust. The master mix equipment still does not function satisfactorily and it needs further engineering changes to reduce dusting.

Research Laboratory - It is recommended that corrosive substances which are routinely dispensed be handled from containers which are non-breakable and which can be secured on special shelves above the laboratory bench.

A drain pipe from the small sink located in the southeast part of this laboratory has been left protruding above the floor level. This creates a tripping hazard. The pipe should be re-plumbed level or below the floor level. There is no safety shower in this laboratory, however, the area is so small and congested that the question would be where to install one. This entire area needs to be expanded in order to provide necessary space for the safe performance of all the work which is required. It is recommended that immediate attention be given to alleviating these crowded and unsafe conditions.

Quality Control Laboratory - The safety shower in this laboratory is located in a corner and restricted behind storage shelving. The shower should be relocated to an area which will provide full open access.

The ladies' restroom located in the laboratory offices should be painted and more lighting should be provided.

Main Change and Restroom - This area was found to be in very good shape. The walls have been completely tiled, new ceiling has been installed and new toilet closets have been installed.

Main Lunch Room - The skylight needs to be cleaned. It is recommended that a ceiling be installed in this room and that recessed lighting be provided. This will prevent dirt from accumulating and dropping from the roof substructure supports and will provide a cleaner condition for the area.

The food and soft drink dispensing machines are not being kept clean and sanitary. They should be cleaned each time they are serviced.

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It is recommended that the plant nurse be informed when these are serviced and that she assures herself that sanitary conditions are maintained on the machines.

Shops - The welding area needs to be kept cleaner. Welding fume exhaust arms are badly needed in this area. Welding shields and curtains should be used when welding in this area or in other areas of the shops. Compressed gas cylinders now secured by wire should be secured by strong straps or chain.

A steel cabinet, located along the northwest wall of the shop, being used for coffee urn and cups should be cleaned and should be kept clean and sanitary.

Storage room - There has been no improvement in this area over the years. It is a very crowded area and there is insufficient space to store items.

The offices located in the west part of this area still are using cardboard as diverters and a temporary duct system is still installed. This should be corrected or satisfactory space should be provided for offices for these people.

V-10 Storage - This entire area needs to be cleaned and materials should be stored in an orderly manner.

Phthalic Anhydride Storage - This area is not improved over past year's conditions. Unloading of a truck was observed where a broken fitting was allowing the phthalic anhydride to be expelled into the area and onto the surrounding equipment and ground. Also at the end of loading the pressure remaining in the tank truck was allowed to vent into the air. There was no idea as to how much of the material was in the air. The TLV for phthalic anhydride is 2 ppm. in air with an intended change to 1 ppm. During past inspections we have been informed that engineering studies were in progress and that plans are to provide a safe transfer and storage for this material. It is urged that the necessary time be given to re-engineering plans which would make this system as safe as the present state of the art might be and that the plans be carried out to correct the undesirable and unsafe situation which now exists. We have knowledge of one worker who experienced an accident associated with his performance of duties at this area. This could have resulted in the man receiving a burned face and possible loss of eyesight. It is recommended that during the time studies are in progress and while plans are being made, proper safety and maintenance checks be made on the equipment for reassurance that all lines, pumps and transfer equipment be in proper working order and free from leaks and breaks.

An Industrial Hygiene position on this problem is one where correction should be immediately carried out on so obvious conditions which present health and safety problems.

Plasticizer Building - In the P-10 laboratory the laboratory bench drawers and cupboards need to be cleaned out and materials not needed should be disposed of. This bench should be kept clean and orderly.

The wooden shelving in the west downstairs area should be cleaned up, materials should be sorted and these should be stored in an orderly manner. In the upstairs area sections of the south wall need to be repaired and replaced.

A safety shower and eyewash fountain should be installed near the para-sulfonic acid handling system.

This entire area needs housekeeping attention.

API Separator - The safety shower in this area needs to be painted a bright contrasting color in accordance with the Corporate Safety Division Directive covering this item.

A hose installed across from the south end of the API separator and to the west of the rail spur, running beneath the spur and along the west side of the API separator, should be replaced with a permanent installation.

Power Plant - The water fountain is dirty and splattered with paint. This should be cleaned and kept sanitary. Openings in the west wall where lines pass through should be filled in so that vermin can be kept out of the building.

Treating Ponds - The area under the safety shower and eyewash fountain should have a cement pad provided. Water and mud collect in this area and create an unsanitary condition.

Vinyl Maintenance Shop - This area needs a great deal of housekeeping attention. The drinking fountain needs to have water leaks repaired. Dirty rags have been laid at the base to soak up moisture. The refrigerator is dirty and needs to be cleaned. The refuse barrel should be emptied. Compressed gas cylinders should be secured.

Dryer Building - The No. 4 and No. 5 bird located upstairs, west end, should have the flywheel belt guards extended to cover the backsides. Sprockets overhead the shakers in the east end upstairs need guards. Sections of the south wall in the downstairs area need replacing.

Old Vinyl Break Area - The entire area needs to be cleaned up and materials should be stored in an orderly manner. The old restroom should be cleaned and the room should be locked if it is not to be used. If it is to be used it should be routinely cleaned and maintained.

Compressor Building - The west end of this building needs to be cleaned and incidental materials should be removed. Equipment and floors should be kept clean in the entire area.

In addition to the above discrepancies found in the specific areas listed, the following comments are made relative to other areas:

The resin transfer lines which run atop the main building and to the edge of the roof should have special attention in some areas. Where these lines must be maintained or periodically broken for any reason, the roof edges should be provided with railings to protect workers from falling from the roof. The areas especially near the electric high tension lines running along sections of the roof and these transfer lines should have special protective railings with the areas posted with signs directing attention to potential danger due to the close proximity to high voltage lines.

A compressor near the south part of the old spray-dry area needs to have the belt-pulley guard extended to cover the back side. An extension has been on this guard at one time but has for some reason been removed and has not been replaced.

It is recommended that area monitoring results for the east warehouse be re-evaluated to be used for possibly relocating some of the monitoring heads in the warehouse area. If there is an empty spot on the recording console, the location of a monitoring head in the vicinity of the shrink-wrap machine would be advisable. If there is not an empty spot available on the recording console, serious thought should be given to relocating a monitoring head to the area of the shrink-wrap machine area.

Many improvements have been made in the Aberdeen plant from the standpoint of health, safety and housekeeping, but as this report can show, more needs to be done. Some of this can be done with ease and some will take expenditure of both time and money.

This report is not intended to leave the impression of inactivity in any way. The management and people of the Aberdeen Chemical Plant are to be commended on the progress made during the past year. Industrial Hygiene comments, recommendations, and statements relative to discrepancies as written in this report should be accepted from the standpoint of constructive interest for further improvements which should be carried out. In no way does this report reflect against the fine work accomplished and that which is in progress.

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