



Interoffice Communication

To Robert L. Lembke, M.D.
From Oran D. Steffey
Date January 22, 1975
Subject TRIP TO ABERDEEN CHEMICAL PLANT

During the week of January 12, 1975, Andy Longoria, M.T., and I visited the Aberdeen Chemical Plant for the purpose of taking biological samples and checking the installation from the standpoint of OSHA Standards which cover General Environmental Control-Sanitation.

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

Main Offices	West Warehouse
Color Weigh Area	Manual Bagging Area
Automatic Bagging Area	Hog Area
Old Hose Line Area	New Warehouse
Line III	Dry Blend Control Room
Lines I and II	Laboratory
Plasticizer Building	Main Change Room
Central Break Room	Shop
Storeroom	V-10 Reactor Building
Dryer Building	Vinyl Break Area
V-11 Switch Gear Room	V-11 Reactor Building
D 300-400 Reactor Area	Steam Generation Plant
Compressor Building	Dry Chemical Storage
Treating Ponds	Blending Silos
Drum-Material Storage	Empty Drum Storage
Lupersol Storage	Federal Compress Storage
Prairie Storage	VCM Unloading

The following comments are made relative to the above areas:

Main Offices - This area was found to be in good shape. Discrepancies which were reported as a result of the June 23, 1974, inspection have been corrected.

Warehouse-West - The storeroom over the Purchasing and Accounting offices is in very poor condition. Floors were dirty and needed cleaning. Insulation material, which appeared to be, ~~asbestos~~ type insulation, had been torn from lines and left laying on the floor. Precautions should be taken when removing asbestos type insulation and it should be placed in plastic bags, marked and disposed of immediately. Materials need to be sorted out and should be stored in an orderly manner. Containers of chemicals

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were found stored in this area. All chemicals should be in an area used for normal safe storage of such materials. The platform area just outside this storeroom should be cleaned up and materials should be stored in an orderly manner. Railings have been installed around this area.

In the warehouse proper, materials were found to be stacked unsafely. Some containers had been left stacked precariously, some boxed materials were crushed on the side. Contents of some containers were spilled onto floors and onto pallets. All spilled materials should be cleaned up, dust should be vacuumed from all stored materials and floors in general should be kept free of dust and trash. There is still the very unsanitary condition, which existed during the last inspection of this area, where people walk along the fence and spit tobacco onto the floors and onto the fence. This practice creates a very unsightly and most unsanitary condition.

Color Weigh Area - The area next to the color weigh room used for storage of materials needs to be cleaned up. Floors are dusty, some bags are broken and materials have spilled onto the floor and other stored materials. Some of these materials contain lead. This entire storage area has been in need of better maintenance for some time, especially since materials which contain lead are stored here.

The weight room is dusty throughout. The hood exhaust system still appears not to be efficient in removing dust. Again the recommendation is made for cleaning of filters and maintenance of this equipment. If this equipment is not found to be efficient due to needed engineering changes, these changes should be made without delay.

Manual Bagging Area - This area has been improved, however, dust is still prevalent to the extent that better attention should be given to use of vacuum cleaning.

Automatic Bagging Area - Excessive noise is caused in this area from compressors. These units should be sound proofed or moved to an area which would eliminate the noise in the bagging areas. If moving is chosen for alleviating this problem, relocation should be in an area where other persons are not effected by the same problem. The floors need to be cleaned. Dust and various incidental materials have been left laying about the area.

Hog Area - This area in general is very discouraging. Much fine dust covers parts of equipment and floor in thick layers. Water lays about the equipment and especially around electrical switch gear boxes along the east wall. Poor lighting, which has been an item of past industrial hygiene inspections, has not been improved. With no more light than is provided in this area and with the poor housekeeping condition now prevalent, this area is very unsafe and unhealthy.

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Old Hose Line Area - This entire area needs to be cleaned up. Materials should be stored in an orderly manner, space should be left between items to allow for cleaning and sweeping and trash and dust should be kept cleaned from the stored materials and from the area in general. Various odds and ends such as hose spools and other materials are stored in an unorganized manner. Floors are dusty and dirty.

New Warehouse - The floors around the shrink-wrap machine should be cleaned and swept. Trash and odd items need to be picked up and removed from this area. The drinking fountain near the south wall next to the office and loading dock doors needs to be replaced. This fountain appears to be plumbed directly to the sanitary waste line. A trap should be placed in the drain line between the fountain and the sanitary waste line.

Compound Line III - Materials on the floor around the equipment need to be picked up and the floors should be swept and kept cleaned.

The room adjacent to and just south of Line III, needs to be cleaned up. Materials stored in the south east corner of this room should be stored in an orderly manner, dust should be vacuumed from items and broken bags of materials should be cleaned up.

In the Line III compound mixer area, the floors are dusty, materials need to be stored more orderly, dust should be vacuumed from floors and stored materials. It was observed that a compressed air hose was being used to remove dry blend mix from equipment. Blowing of materials by an air hose should be prohibited. Various materials were stacked around the door exit near the master batch blender. All exits should remain clear at all times. The master blender is very dusty. It is recommended that engineering attention be given to provide for a more efficient and less dusty operation.

Dry Blend Control Room - The drinking fountain drain line appears to be plumbed directly to the sanitary waste line. A trap should be installed between the fountain and the sanitary line. It was observed that fresh air masks were not being kept clean. These were being taken into dirty areas for use and left hanging or laying around to collect dust and dirt in these areas.

Compound Lines I and II - These lines were not in operation at the time of this inspection. Most of the area was in good condition, however, dust needed to be cleaned from the equipment and from the floors around the equipment.

Laboratory Area - The ladies restroom needed to be cleaned. Materials and various items were stored haphazardly on the floor and on a small shelf. All items should be kept stored neatly on this shelf and nothing should be left on the floor. The floor needed to be cleaned and especially around the toilet stool and at the junction of floor and wall. Tiles should

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be cleaned and the lavatory needed to be cleaned. The drain from the drinking fountain in the main part of the laboratory appeared to be connected directly to the sanitary waste line. This drain should have a trap installed between the fountain and the waste line.

Storage shelving in the storage area in the southeast part of the laboratory should have protective lips installed on those being used for bottles and glass containers of chemicals and samples. The aisle in this storage area was cluttered with boxes and dolly carts. Laboratory benches along the north wall of the development laboratory need to be cleared of stored materials. All benches should be kept clean and free from storage items.

Plasticizer Building - The ground level floors need to be swept and cleaned. Drums containing Formic Acid are corroded along sides and some have sides near the bottom ends crushed in. These should be tested for soundness and those not safe should have the contents transferred to a new drum.

On the second floor, p-Toluenesulfonic Acid, which is contained in drums, is being heated by steam strap heaters and the material is being transferred to the reactors by use of a bucket. A safer method and one less likely to cause exposure should be devised for handling this chemical. Floors need to be cleaned, especially around the reactors.

In the storage area, workers were at work re-bagging Isophthalic Acid without the use of dust masks or gloves. Floors in this area need to be cleaned and dust should be vacuumed from floors and stored materials. Bisphenol bagged materials need to be re-stacked and re-bagged since some stacks are tilted and some bags are split open. Trimetallic Anhydride bags are broken and contents should be re-bagged. Powdered Activated Carbon bags are broken and materials need to be re-bagged. This storage area in general needs to be cleaned, materials re-bagged, and all items re-stacked in an orderly manner.

Change Room - For the most part this area was found to be in good shape.

Central Break Area - Lunch pails are being left on the tables and in window sills. All lunch pails should be stored on shelves which have been provided, thus making it easier for those doing janitorial work to clean and maintain the rooms. Used paper cups and refuse had been left on tables, this should be placed in receptacles provided. Trash and dirt has been allowed to accumulate under and behind vending machines. This same condition existed during the last inspection. These machines should be moved out from the walls at least once a month and the floors cleaned in order for sanitary conditions to exist. With the conditions as they are, there was evidence of cockroaches and one does not need to look very far to see the reason for the presence of such disease bearing insects. These same vending machines were found to be dirty and needed cleaning. Some of these were out of order and appeared to not be of much use. If these

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are to remain in this room, they should be serviced and maintained in workable condition or they should be removed so as not to contribute to catching of dust and trash and to prevent problems for those charged with cleaning the room. The microwave oven is still sitting on an inverted metal trash can. This same condition has existed during past inspections. The inside of this oven is dirty and needs to be cleaned. A table should be provided without any more delay. A wood panel below one of the windows in the west wall has a hole in it and needs to be replaced with a new painted panel. The drinking fountain needs to be cleaned and should be checked to be sure it has a trap in the drain pipe. Floors in this lunch room need to be scrubbed, mopped and cleaned, especially around the edges at the floor-wall juncture and in the corners. The windows are dirty and need to be cleaned. Water was running and dripping from the roof over the east entrance and water was standing all along this area in the approach to the laboratory-warehouse area. The drainage should be improved to eliminate this standing water and the source of the dripping water should be eliminated.

Shops - This area has improved in housekeeping but much is yet to be desired. Floors beneath and behind workbenches need to be cleaned and in general the entire area requires a constant effort to maintain cleanliness and for the storage of materials in an orderly fashion.

Storeroom - Personnel are trying hard to maintain good housekeeping in this area. Space is at a premium. Aisles are cluttered with materials and by necessity items must be stacked outside needed storage shelving. An electrical line leading from an outlet on the south wall into the office in the west side of the storeroom should be replaced with a permanent line. The panels on the main electrical duct work have been left open and electrical lines, some of which are bare and possibly live, have been left dangling in the open and unprotected from being touched. The roof above this office and where electrical switch gear boxes are installed leaks. This condition should be corrected as soon as possible.

V-10 Reactor Building - This building is being cleaned and straightened. Even though this building is no longer a production area, it should be maintained in an orderly and clean condition. All drums and containers being stored in this building should be properly labeled as to correct contents.

Dryer Building - Fresh air masks are stored in a mask cabinet which is blocked by steel cabinets. Masks have also been stored dirty and dusty. A new drinking fountain appears to be plumbed directly to the sanitary waste pipe. A trap should be installed in the drain pipe between the fountain and the sanitary line. The dryer building was found to be in good shape throughout its entirety.

Vinyl Break Area - The refrigerator needed to be cleaned, especially the freezing compartment. The inside of the microwave oven needs to be cleaned. The drinking fountain should be checked for installation of a trap in the

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drain pipe between the fountain and the sanitary waste line. The rest-room was much improved, however, the floors should be cleaned and scrubbed in the corners and at the juncture of floor and wall. Wall tiles need to be scrubbed and cleaned.

V-11 Switch Gear Room - Some of the control boxes were open. These should be kept closed. One control was tagged to indicate work being done on a unit controlled by this box. A lock out should be used under these conditions to assure that the system is not actuated.

V-11 Reactor Building - This building is not being used. It was found to be clean and in good condition.

D 300-400 Reactor Area - The small refrigerator needs to be defrosted and cleaned. The drawers in the metal cabinet behind the consol and which is being used in conjunction with food preparation and lunches need to be cleaned. These drawers are cluttered with trash, they are dirty and should be maintained in a clean, sanitary condition. The control room in general was found to be in good shape.

Steam Generation Plant - This area has been improved, however, much needs to be done in the way of sorting and storing of materials. Items stored in shelving and on benches should be cleaned up and stored in an orderly manner. Preformed insulation materials are stored on the metal walk way along the east wall of the building. Some of this has been broken. This should be cleaned up and a check should be made to assure that there is no asbestos type of insulation stored here. Materials above the office and storage should be sorted and stored orderly. Shelving being used, in the office or test room, for storage of chemicals should have protective lips installed. The drinking fountain appears to be connected directly to the sanitary waste line. This should have a trap installed in the drain line between the fountain and the sanitary line. There is some question as to whether untested well water used for boiler feed is being used through this drinking fountain. The water being supplied to this fountain should be city water only.

Compressor Building - Water was covering part of the floor in the west part of this building. Drain channels should be cut into the floor leading to the floor drains in order to alleviate this condition. Covers to electrical ducts located in the northwest part of this building were open and electrical wires were exposed and draping out. These wires should be tucked inside the ducts and the covers should be closed and secured.

The cooling water reservoir beneath the floor of this building does not appear to have sufficient overflow relief which could result in flooding of the entire building floor surface. If this happens a very dangerous condition would exist since banks of switch gear boxes are installed along the south side of the room in a recessed portion of the floor.

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A sufficient overflow relief should be provided in order to prevent such condition. Trash should be cleaned from behind the most southwest located bank of switch gear boxes.

Dry Chemical Storage - The enclosed part of this area should be cleaned, floors should be swept and all materials should be stored in an orderly manner.

Treating Ponds - Sulfuric Acid is used in this area to adjust the pH of the water in the ponds. This requires the presence of a safety shower which has been installed but it has been located in a very poor location. It is somewhat hidden behind buildings and associated equipment, it is not well marked, it is some distance from where the acid is being added to the ponds and it was not in working order due to being frozen on the day it was inspected. This shower should be relocated to an area which would make it more accessible, it should be marked and painted a bright contrasting color, and it should be kept in usable condition in any kind of weather. The acid drums should be kept stored together in an orderly manner. These were scattered over the general area and not stacked together very neatly.

Blending Silos - These silos continue to be a very dusty area. Resin was found to be laying about the area in very thick layers. This material should be kept cleaned up and the general area should be kept clear of all products.

The area along the east side of the building and just to the north of these silos was stacked with all sorts of trash and various materials. This should be cleaned up and the entire area along the building should be kept clear of materials. This area has been one which has indicated a problem during every inspection which has been made.

Drum-Material Storage - The fenced storage area located at the southeast corner of the new warehouse needs to be cleaned up. Drums should be stacked with more care. Some of these are stored so that they overhang pallets and present a dangerous unbalanced condition. Room needs to be left between rows of stacked drums so that access can safely be gained and so that housekeeping can be done.

It was noticed that a fire extinguisher located at the southwest corner of the fence of this area was completely blocked by material which had been left stored around it.

Empty Drum Storage - This area located just south of the plasticizer building is greatly improved. Drums are still being stored haphazardly near the southeast corner of this building. Pallets have been left laying around in disarray. These should be stacked in an orderly manner and out of the way in order to give safe passage through the area. Various products are allowed to run from the supposedly empty drums stored here.

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This causes a very undesirable condition not only on the cement pad along the building but along the entire graveled area along the south of this cement pad. Some method should be devised to safely drain products left in the drums and maintain a clean sanitary condition in this area. This condition has been reported before.

Lupersol Storage - A new storage area has been constructed for lupersol. This was found to be in good condition.

Federal Compress Storage - For the most part this area was found to be in good shape. Bags of PVC resin should be stacked with greater care. Some of these were stacked with questionable stabelness. A small mobile trailer which affords a clean lunch area and which has restroom facilities has been provided for those working in the area.

Prairie Storage - Warehouses being used for storage were found to be in good shape in most respects. The restroom would still be considered make-shift. It was not clean. An electric heater was being used to reduce the chill in the toilet area and this required plugging in the heater to a wall outlet outside the toilet and draping the electric cord across the entrance way. The facility consists of walls constructed around a stool and lavatory with no roof or ceiling provided. Lighting is still quite inadequate throughout these warehouses.

VCM Rail Unloading - This area was found to be in good shape. A periodic inspection needs to be made to assure that all grounding lines are in good shape throughout their full lengths.

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

The area just south of the shops and west of the Central Break Room needs to be cleaned up. All materials which are placed in this area should be stored in an orderly manner and the area should be maintained clean and neat.

Near the southwest outside corner of the shop and storeroom, sulfuric acid is being used at a treating pit. No safety shower was in evidence. A safety shower and eyewash fountain should be provided for this area. They should be located so that easy access will be assured, they should be painted a bright contrasting color and be marked with proper signs.

All drinking fountains throughout the plant should be checked for installation of drain line traps between the fountain and sanitary waste lines. These should also be checked to assure that city water is provided at the fountain.

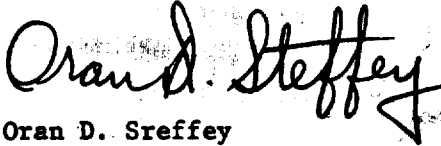
A clear answer did not appear available as to frequency of sampling of breathing air provided by the compressor unit near the west property line.

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Concern for this was shown during the last inspection. The OSHA regulations concerning breathing air was pointed out in specific terms in the last industrial hygiene trip report. A program for sampling this air should be instituted which would give unquestionable information as to the quality as specified for breathing air.

Indications were quite obvious that much improvement is being made at this plant. A greater effort is being made to clean up most areas. Much is to be done but with a progressive effort to attain a clean, safe plant and with the institution of a program which would maintain good, clean hygienic conditions once these are attained will give desired qualities to working conditions in the plant. Management is to be commended for this effort shown.



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