



INTERNAL CORRESPONDENCE

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CHEMICALS AND PLASTICS

P. O. BOX 471, TEXAS CITY, TEXAS 77390

TO (NAME) Shift Production Supervisors
COMPANY Solvent Vinyl Resins Chief Operators
LOCATION Solvent Vinyl Resins Operators

DATE April 22, 1974

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SUBJECT Standard Operating Procedure
Solvent Vinyl/Phenolic Resins
Procedures To Minimize Personnel
Vinyl Chloride Exposure

GOVERNMENT REGULATION

In response to a possible link between vinyl chloride exposure and angiosarcoma (a tumor) of the liver, OSHA has passed an emergency six-months standard on vinyl chloride exposure. This standard requires that a ceiling exposure limit of 50 ppm be established to replace the former limit of 500 ppm. (Vinyl chloride can be detected by smell at 250 ppm.) During the maximum six-month life span of this emergency standard, OSHA and NIOSH will be reviewing the available data in order to develop the final permanent standards. The procedures listed below apply only during the life span of the current OSHA emergency regulation.

The OSHA emergency regulations require that any routine work which would cause an employee to be exposed to vinyl chloride in concentrations in excess of 50 ppm be accomplished only by employees wearing fresh air masks or self-contained air packs. Also in the event of an accident such as a leak, line rupture, spillage, etc. which could cause exposure in excess of 50 ppm, employees shall be withdrawn to a safe area and shall not be permitted to return to the affected area unless they wear fresh air masks or self-contained air packs.

UCC 092943

Potential Areas of Vinyl Chloride Exposure in the Solvent Unit

1. Refined and recovered vinyl chloride tanks, pumps and lines (T. A. No. 1 and 72 tank).
2. Diverted acetone tanks, pumps and lines.
3. Mixed vinyl acetate tanks, pumps and lines.
4. Feed system tanks, pumps and lines (T. A. No. 1).
5. B-autoclaves (Building 115).
6. Dilution tanks (Building 117).
7. Stripping Stills (Building 117).
8. Vinyl chloride recovery system (Building 117).

These areas will require extra attention and efforts to assure that vinyl chloride releases are kept to an absolute minimum and that any problems are corrected as soon as possible.

Areas Unaffected (Under Normal Conditions) By Standards on Vinyl Chloride Exposure - No significant Vinyl Chloride Exposure Anticipated

1. All process streams beginning with the base of the stripping stills (Building 117).
2. Buildings 122 and T. A. No. 2.
3. VYDS system (Building 117).
4. Building 121 and Bin Buildings.
5. Building 114 and T. A. No. 3.
6. Building 116 and Phenolic Tank Area.
7. Phenolic Reactor Area.

Generally speaking these areas should not have any routine concern with vinyl chloride. Current data shows that once the varnish has been stripped it has less residual vinyl chloride than the current standards for maximum exposure and thus should not present a problem.

UCC 092944

Routine Solvent Vinyl Area Jobs Requiring Personnel Protection (Fresh Air Mask) From Vinyl Chloride Exposure

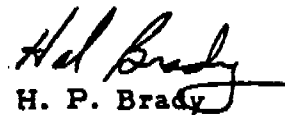
1. B-autoclave sampling - Sampling intervals will be reduced to twice per shift to help to reduce the problems created by the extra precautions required. The samples should be run at 12:00 midnight, 4:00 a.m., 8:00 a.m., 11:30 a.m., 4:00 p.m., and 8:00 p.m. Please note that the samples taken during the day shift interval should be given special attention to assure that they are taken at the times specified. This will help to minimize problems associated with maintenance people wandering into the affected area while sampling is in progress. Any person within eight feet of the sample tap must also wear a fresh air mask while the sampling is in progress. This is our primary motivation for insisting upon a rigid sampling schedule for day shift. (Lab personnel will also have to come equipped with a fresh air mask when they want to sample an autoclave.)
2. Running B-autoclave samples - This can be corrected much more quickly than the above problem by the installation of a properly designed laboratory hood. Until this hood can be installed at Building 115, it will be necessary for the operator and anyone within eight feet of him to wear a fresh air mask while the gravity samples are being run.
3. Feed sampling - Lab personnel will come equipped with a fresh air mask when they come to T. A. No. 1 for the routine daily feed samples. The mask should be worn continuously until all feed samples have been taken. The lab man should take extra time to check that all sample valves are closed tightly before removing his fresh air mask. Also he should shut off the fresh air bottles after sampling is complete to minimize air loss due to leakage.

NOTE: Current regulations do not make it necessary to wear a fresh air mask for taking stripping still or VYDS still samples.

UCC 092945

Common Non-Routine Solvent Vinyl Area Jobs Requiring Personnel Protection
(Fresh Air Mask) From Vinyl Chloride Exposure

1. Priming vinyl chloride pumps - Fresh air masks are required for this operation until a closed system can be provided to contain the vinyl chloride.
2. Changing vinyl chloride (including feed) filters - Fresh air masks will be required to prepare these for maintenance and also for the maintenance personnel involved in changing these filters.
3. Unplugging varnish lines - Fresh air masks will be required for personnel involved in unplugging these lines if it is necessary to release the contents to the atmosphere or if it is probable that a release will occur.
4. General maintenance of vinyl chloride containing equipment -
The only general guideline we can provide here is that if maintenance is required and vinyl chloride exposure is suspected or could possibly occur during the job, then fresh air masks should be used if it is not possible to reduce the vinyl chloride below the 50 ppm level. In actual practice this is going to require the use of common sense as the primary guideline until more solid data can be collected and better practices developed. If vinyl chloride can be detected by smell, the level is too high and either further purging or fresh air protection is required. Unit supervisory personnel will try to handle as many of these maintenance items as possible on an individual basis until long term rules and procedures can be developed.


H. P. Brady

HPB/st

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