

**INDUSTRIAL HYGIENE SURVEY
IHS 93-10
CERTAINTED CORPORATION
EPG-POLYMER PLANT
LAKE CHARLES, LA
May 11-14, 1993**

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**Industrial Hygiene Survey 93-10
CertainTeed Corporation
EPG-Polymer Plant
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An Industrial Hygiene survey was conducted at the CertainTeed's Lake Charles (LA) Polymer Plant by Thomas E. Case, CIH of Saint-Gobain Corporate Health, Safety and Environmental Affairs on May 11-14, 1993.

This survey was conducted to evaluate employee exposures to the following:

Vinyl Chloride
Total Dust
Respirable Dust
Noise

This report is an employee exposure record, as defined in Corporate Procedure GE003.02 and OSHA Standard 29 CFR 1910.20, and must be retained for thirty years. Upon request, this record must be made available to those Federal officials, employee designees or employees as provided for in Corporate Procedure AD0111, Paragraphs 7 and 8.

Appendix I to this report documents the air sampling and analytical methods and the current exposure standards used in evaluating the data. The field and in-house laboratory notes on this survey are on file with the Corporate Health, Safety and Environmental Affairs Department in Valley Forge, PA.

SUMMARY

Two major concerns were noted during this survey:

- 1) During the periodic clean-out of the Prepolymerizer ("Prepo"), it was determined that vinyl chloride monomer levels exceeded the recommended concentration limit for the type of respiratory protection being used by employees. Corporate Health, Safety and Environmental Affairs advised facility personnel of the measured overexposures and recommended implementation of administrative controls (more ventilation time) and upgraded respiratory protection for use during future Prepo clean-outs.
- 2) Sampling, analytical methodology and recordkeeping by the facility's analytical laboratory are in need of modification and improvement.

RECOMMENDATIONS

- IHS 93-10 1. Upgrade the respiratory protection currently being used during Prepo clean-outs (half-face supplied air, pressure-demand) to that required by the OSHA vinyl chloride standard for the concentrations measured during this survey (full-face supplied air, pressure-demand).
- IHS 93-10 2. The use of upgraded respiratory protection during all job tasks requiring use of the supplied air system is strongly recommended.
- IHS 93-10 3. Allow additional time for vinyl chloride concentrations within the Prepo to drop after opening the hatch for clean-out activities, or upgrade respiratory protection used during this activity.
- IHS 93-10 4. Use the Century Organic Vapor Analyzer to determine permitted vinyl chloride concentrations for respiratory protection being used prior to Prepo entry.
- IHS 93-10 5. Perform monthly Short-Term Exposure Limit (STEL) monitoring on all facility employees during peak exposure potential (such as Prepo clean-out and reactor clean-out), and report these results to Corporate Health, Safety and Environmental Affairs with monthly full-shift personal sampling results.
- IHS 93-10 6. Purchase and use a soap film buret for sampling pump calibration, and change the pump calibration procedure as detailed in this report.
- IHS 93-10 7. Change the sampling media currently used from one small charcoal tube to two large charcoal tubes in series, and modify the sampling and analytical procedure documents to reflect this change.
- IHS 93-10 8. Seal and refrigerate samples immediately after the conclusion of sampling.
- IHS 93-10 9. Strongly consider the use of an AIHA-accredited laboratory for all future analysis of personal vinyl chloride samples taken at the facility, or make changes to facility analytical procedures as detailed in this report.
- IHS 93-10 10. Provide the additional information requested in this report to Corporate Health, Safety and Environmental Affairs with future vinyl chloride monitoring results.
- IHS 93-10 11. Advise employees to better document activities during exposure monitoring, with personnel performing the monitoring to check this information for completeness at the conclusion of monitoring.

- IHS 93-10 12. Make changes to the sampling form used at the facility, as recommended in this report.
- IHS 93-10 13. Post the area bordered by the Cooling Tower, the Conveyor 4 Building, the Polymerization Building and the Control Room as a hearing protection area.
- IHS 93-10 14. Make changes to the facility's Respiratory Protection Program, as recommended in this report.
- IHS 93-10 15. Investigate the use of solvents for cleaning of respirators, as discussed in the facility's respirator maintenance document, and remove it from the program document if not recommended by the manufacturer.
- IHS 93-10 16. Perform periodic testing on breathing air produced at the facility, and on bottled back-up breathing air.
- IHS 93-10 17. Make changes to the facility's Hearing Conservation Program as recommended in this report.
- IHS 93-10 18. Send audiometric test results to IMPACT Hearing Conservation, Inc. for inclusion in the corporate audiometric test database.
- IHS 93-10 19. Combine the existing lockout and tagout documents into one facility policy document, and make changes to it to assure regulatory compliance.
- IHS 93-10 20. Remove material safety data sheets from MSDS books for those products no longer used at the facility.
- IHS 93-10 21. Secure the chain used at the Prepo to mark off the regulated area during clean-outs, so that it is available in the area when needed.
- IHS 93-10 22. Perform and maintain housekeeping in the Classification Building, to avoid the possibility of slipping injuries.
- IHS 93-10 23. Post noise maps provided with this report in Appendix III on an employee bulletin board or other suitable location.
- IHS 93-10 24. Inform employees of sampling/monitoring results by posting a copy of Appendix II on an employee bulletin board.