

[The following was our response to an e-mail from an employee concerned about exposure to H₂S in a paper mill]

Ron,

The paper mill must provide you with a material safety data sheet (MSDS) for the sludge you are working with. This MSDS requirement is part of 1910.1200 Hazard Communication standard.

Hydrogen sulfide, H₂S can cause the type of symptom you are experiencing even at low concentrations depending on your sensitivity. Symptoms such as eye irritation, cough, sore throat, vague gastrointestinal symptoms have been reported. Persons with chronic conjunctivitis, asthma, or other chronic respiratory diseases may be more sensitive. Your physician should be consulted for chronic exposure long term effects applicable to your health status. The Department of Human Services also has a toxicologist on staff who could provide you with additional information (503 731-4012). I've also attached a link to NIOSH Pocket Guide which give a summary of H₂S.

<http://www.cdc.gov/niosh/npg/npqd0337.html>

The mill should have employee exposure data that they could share with you. However, there may not be exposure records that would reflect the type of work you are doing. The paper mill safety engineer or industrial hygienist should be consulted to discuss your concerns and they may be able to provide you with this information. You referenced the H₂S meter giving you readings less than 15 ppm. This gives you a basic idea what concentrations are present. I've attached a Federal OSHA link which discusses H₂S exposures and sampling.

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=21955&p_t ext_version=FALSE

I've attached a 1995 EPA publication, *Profile of the Pulp and Paper Industry* which give an overview of that industry process.

<http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/pulppasn.pdf>

Lastly, look at your work environment to see if you can reduce your exposure. Is your excavator cab enclosed and do you keep the windows up? Is the cab air tight, seals intact, etc? Have you tried goggles to minimize eye exposure? Is wearing a full face respirator an option as a last resort?

OSHA consultation resources are available to your employer to assist in addressing your concerns and could include monitoring. I've attached the web site link for phone contacts.

<http://www.cbs.state.or.us/external/osha/maps.htm>

If I can answer any other questions, please contact me at (503) 947-7446.

Peggy Munsell
Industrial Hygienist