

Evergreen Pulp, Inc. (Evergreen), operates a kraft pulp mill in Samoa, California, in Humboldt County across Humboldt Bay from Eureka, California. The mill is one of the facilities in Humboldt County that is defined as a *major source* of air pollutants under the Clean Air Act. The mill's air emissions are regulated by federal, state, and local rules and regulations. The applicable regulations are enforced by the North Coast Unified Air Quality Management District (NCUAQMD) through a Clean Air Act Title V Operating Permit.

On January 21, 2006, the NCUAQMD Hearing Board approved a Stipulated Order of Abatement. In accordance with Paragraph 18 of the Stipulated Order of Abatement, Evergreen is required to perform and submit an updated human health risk assessment (HHRA) by August 25, 2006. The NCUAQMD authorized an extension of the deadline to October 24, 2006, because of prior unavoidable delays in collecting and processing required meteorological data and the complexities of incorporating the dispersion model AERMOD into existing modeling formats used to satisfy obligations under the California Air Toxics Hot Spots program.

The HHRA was conducted for Evergreen's maximum hourly and average annual emissions. The HHRA was performed following the latest guidance outlined in the *Air Toxics Hot Spots Program Risk Assessment Guidelines* (Office of Environmental Health Hazard Assessment [OEHHA], 2003), the U.S. Environmental Protection Agency's (EPA) *Guideline on Air Quality Models* (40 Code of Federal Regulations [CFR], Part 51, Appendix W, November 2005), and the California Air Resources Board's (CARB) *Recommended Interim Risk Management Policy for Inhalation-based Residential Cancer Risk* (CARB, 2003).

The health risk assessment is divided into four basic parts: hazard identification, exposure assessment, dose-response assessment, and risk characterization. This is a standard approach to risk assessments that was proposed by the National Academy of Sciences in 1983.

The hazard identification involves identifying the compounds of concern and determining whether a pollutant is a potential human carcinogen or associated with other types of adverse health effects. This HHRA addressed 40 toxic air contaminants (TAC), as defined by California Health and Safety Code, Section 39655(a), on the Assembly Bill 2588 list for the health risk evaluation. Of the 40 substances, 17 are considered carcinogenic and evaluated for cancer risks. The noncarcinogenic health risks evaluation addressed 38 TACs for chronic impacts and 21 for acute impacts.

The emission rates for the compounds of concern were based on source testing or published emissions factors and were entered into the Hot Spots Analysis and Reporting Program (HARP) for each emission source. For some compounds, the estimated emission rates are very conservative because of a lack of data from similar sources and the compressed