

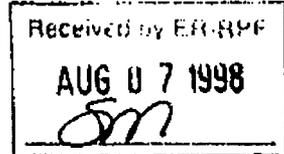


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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

**Subject:** Region 9 Preliminary Remediation Goals (PRGs) 1998

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Technical Support Team



**To:** PRG Table Mailing List

Please find the annual update to the Region 9 PRG table. Risk-based PRGs presented in the "lookup" table are useful tools for evaluating and cleaning up contaminated sites. They are being used to streamline and standardize all stages of the risk decision-making process. If you are not currently on the PRG table mailing list but would like to be, please call Lynn Trujillo (415.744.2419) or email her (Trujillo.Dianna@epamail.epa.gov) and leave your name, address, and phone number.

EPA Region 9 has established a homepage on the World Wide Web which you can find at <http://www.epa.gov/region09/>. Once you reach our website, simply scroll down to and click on "Solid and Hazardous Waste Programs" followed by "Preliminary Remediation Goals". You may want to set a bookmark to ease future access.

The PRG '98 table can be browsed online. It includes information not available in the hard copy sent out to folks on the mailing list. Additional information includes pathway specific PRGs, non-cancer PRGs for carcinogenic substances, and physical-chemical information used to estimate volatilization factors (VF). The table can also be downloaded for use with Lotus or Excel software. Please note that the downloadable files contain the same information as can be browsed online, though you will need to unzip the files and display the hidden columns to see all of the information.

Region 9 risk-based PRGs are "evergreen" and have evolved as new methodologies and parameters have been developed. Changes that have occurred from the 1996 table reflect one or more of the following: (1) updates in toxicity information, (2) revisions in dermal exposure factors, or (3) harmonization of physical-chemical information with *Soil Screening Guidance* issued by EPA's Office of Solid Waste and Emergency Response (OSWER), dated April 1996. These changes are described in the preamble (see below).

Updates to EPA toxicity values were obtained from IRIS, HEAST, or the National Center for Environmental Assessment (NCEA) through March 1998. To help users rapidly identify substances with new or revised toxicity values, the PRGs for these contaminants are printed in boldface type in the table.

Before relying on any number in the table, it is recommended that the user verify the numbers with an agency toxicologist or risk assessor because the toxicity / exposure information in the table may contain errors or default assumptions that need to be refined based on further evaluation. If you find an error please send me a note via email at [smucker.stan@epamail.epa.gov](mailto:smucker.stan@epamail.epa.gov) or fax at 415.744.1916.

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**EXHIBIT 1-1  
TYPICAL EXPOSURE PATHWAYS BY MEDIUM  
FOR RESIDENTIAL AND INDUSTRIAL LAND USES\***

EXPOSURE PATHWAYS, ASSUMING:		
MEDIUM	RESIDENTIAL LAND USE	INDUSTRIAL LAND USE
Ground Water	<i>Ingestion from drinking</i>	Ingestion from drinking
	<i>Inhalation of volatiles</i>	Inhalation of volatiles
	Dermal absorption from bathing	Dermal absorption
Surface Water	<i>Ingestion from drinking</i>	Ingestion from drinking
	<i>Inhalation of volatiles</i>	Inhalation of volatiles
	Dermal absorption from bathing	Dermal absorption
	Ingestion during swimming	
	Ingestion of contaminated fish	
Soil	<i>Ingestion</i>	<i>Ingestion</i>
	<i>Inhalation of particulates</i>	<i>Inhalation of particulates</i>
	<i>Inhalation of volatiles</i>	<i>Inhalation of volatiles</i>
	Exposure to indoor air from soil gas	Exposure to indoor air from soil gas
	Exposure to ground water contaminated by soil leachate	Exposure to ground water contaminated by soil leachate
	Ingestion via plant, meat, or dairy products	Inhalation of particulates from trucks and heavy equipment
	<i>Dermal absorption</i>	<i>Dermal absorption</i>

**Footnote:**

\*Exposure pathways considered in the PRG calculations are indicated in boldface italics.