

exposure data are complete or are estimated based on data that reasonably accounts for potential exposures. EPA determined that the 10X safety factor to protect infants and children should be reduced to 1X for the following reasons:

1. There are no residual uncertainties for prenatal and/or postnatal toxicities via the oral route since the doses selected for overall risk assessments would address the concerns for the developmental and offspring toxicities seen in the above mentioned studies.
2. There are no residual uncertainties for prenatal and/or postnatal toxicities via the dermal route since the dose/endpoint/study/species of concern was used for dermal-risk assessment.
3. The toxicology data base is complete.
4. The dietary (food) exposure assessment utilizes existing and proposed tolerance level residues and assumes 100% of crops treated with sulfentrazone. The assessment is based on reliable data and is not expected to underestimate exposure/risk.
5. Conservative assumptions are used in the drinking water models. The drinking water exposure assessment is not expected to underestimate exposure/risk.
6. The residential exposure assessment is based on conservative assumptions and is not expected to underestimate risk.

E. Aggregate Risks and Determination of Safety

To estimate total aggregate exposure to a pesticide from food, drinking water, and residential uses, the Agency calculates DWLOCs which are used as a point of comparison against the model estimates of a pesticide's concentration in water (EECs). DWLOC values are not regulatory standards for drinking water. DWLOCs are theoretical upper limits on a pesticide's concentration in drinking water in light of total aggregate exposure to a pesticide in food and residential uses. In calculating a DWLOC, the Agency determines how much of the acceptable exposure (i.e., the PAD) is available for exposure through drinking water e.g., allowable chronic water exposure (mg/kg/day) = cPAD - (average food + residential exposure). This allowable exposure through drinking water is used to calculate a DWLOC.

A DWLOC will vary depending on the toxic endpoint, drinking water consumption, and body weights. Default body weights and consumption values as used by the USEPA Office of Water are used to calculate DWLOCs: 2 liter (L)/70 kg (adult male), 2L/60 kg (adult female), and 1L/10 kg (child). Default body weights and drinking water consumption values vary on an individual basis. This variation will be taken into account in more refined screening-level and quantitative drinking water exposure assessments. Different populations will have different DWLOCs. Generally, a DWLOC is calculated for each type of risk

assessment used: Acute, short-term, intermediate-term, chronic, and cancer.

When EECs for surface water and ground water are less than the calculated DWLOCs, EPA concludes with reasonable certainty that exposures to the pesticide in drinking water (when considered along with other sources of exposure for which EPA has reliable data) would not result in unacceptable levels of aggregate human health risk at this time. Because EPA considers the aggregate risk resulting from multiple exposure pathways associated with a pesticide's uses, levels of comparison in drinking water may vary as those uses change. If new uses are added in the future, EPA will reassess the potential impacts of residues of the pesticide in drinking water as a part of the aggregate risk assessment process.

1. *Acute risk.* Using the exposure assumptions discussed in this unit for acute exposure, the acute dietary exposure from food to sulfentrazone will occupy <1% of the aPAD for the U.S. population, <1% of the aPAD for females 13 years and older, and <1% of the aPAD for children 1 to 2 years old, the population at greatest exposure. In addition, there is potential for acute dietary exposure to sulfentrazone in drinking water. After calculating DWLOCs and comparing them to the EECs for surface water and ground water, EPA does not expect the aggregate exposure to exceed 100% of the aPAD, as shown in Table 3 of this unit:

TABLE 3.—AGGREGATE RISK ASSESSMENT FOR ACUTE EXPOSURE TO SULFENTRAZONE

Population Subgroup	aPAD (mg/kg)	% aPAD (Food)	Surface Water EEC (ppb)	Ground Water EEC (ppb)	Acute DWLOC (ppb)
U.S. population	2.5	<1	35.8	26	87,000
Children (1 to 2 years old)	2.5	<1	35.8	26	25,000
Females (13 to 49 years old)	2.5	<1	35.8	26	75,000

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that exposure to sulfentrazone from food will utilize 1% of the cPAD for the U.S. population, 1% of the cPAD for females 13 to 49 years old and 1 % of the cPAD for children, 3 to 5 years old, the

population at greatest exposure. Based on the proposed use pattern for turf grass, chronic residential exposure to residues of sulfentrazone is not expected. In addition, there is potential for chronic dietary exposure to sulfentrazone and its degraded, 3-carboxylic acid sulfentrazone, in

drinking water. After calculating DWLOCs and comparing them to the EECs for surface and ground water, EPA does not expect the aggregate exposure to exceed 100% of the cPAD, as shown in Table 4 of this unit: