

below the Agency's level of concern (<100% aPAD) at the 95th exposure percentile for the general U.S. population and all population subgroups. The acute dietary risk estimate for the highest exposed population subgroup, children 1–6 years of age, is <1% of the aPAD. Acute dietary risk estimates are not of concern. Results of the acute dietary risk assessment are presented in Table 3 below.

ii. *Chronic exposure.* In conducting this chronic dietary risk assessment the

Dietary Exposure Evaluation Model (DEEM®) analysis evaluated the individual food consumption as reported by respondents in the USDA 1989–1992 nationwide CSFII and accumulated exposure to the chemical for each commodity. The following assumptions were made for the chronic exposure assessments: A conservative Tier I chronic dietary exposure assessment was conducted for all supported metolachlor and S-metolachlor food uses. For all supported

registered commodities, the chronic dietary exposure estimates are below the Agency's level of concern (<100% cPAD) for the general U.S. population and all population subgroups. The chronic dietary risk estimate for the highest exposed population subgroup, children 1–6 years of age, is 4% of the cPAD. Chronic dietary risk estimates are not of concern. Results of the chronic dietary risk assessment are presented in Table 3 below.

TABLE 3.—SUMMARY OF DIETARY EXPOSURE ESTIMATES FOR METOLACHLOR AND S-METOLACHLOR

Population Subgroup	Acute Dietary		Chronic Dietary		Cancer Risk
	Dietary Exposure (mg/kg/day)	% aPAD	Dietary Exposure (mg/kg/day)	% cPAD	
General U.S. Population	0.004111	<1	0.001643	2	NA
All Infants (<1 year old)	0.006855	<1	0.002280	2	N/A
Children 1–2 years old	0.008224	<1	0.004025	4	NA
Children 3–5 years old	0.006965	<1	0.003510	4	NA
Children 6–12 years old	0.005003	<1	0.002412	2	NA
Youth 13–19 years old	0.003309	<1	0.001515	2	NA
Adults 20–49 years old	0.002815	<1	0.001263	1	NA
Females 13–49 years old	0.002965	<1	0.001349	1	NA
Adults 50+ years old	0.002839	<1	0.001226	1	NA

NA = not applicable

The Agency notes that the conservative Tier I dietary assessments for metolachlor and S-metolachlor could be refined for more realistic dietary exposure estimates by using available percent crop treated estimates, field trial and monitoring data, and processing factors; however, the estimated dietary risk to metolachlor and S-metolachlor is not of concern for all populations in both the acute and chronic assessments. Further refinements are not warranted at this time.

2. *Dietary exposure from drinking water.* A drinking water assessment for metolachlor and S-metolachlor involved the analysis of surface and ground water monitoring data, prospective ground water study data, and Tier I (FIRST and screening concentration in ground water (SCI-GROW)) and Tier II (pesticide root zone modeling/exposure analysis modeling system (PRZM/EXAMS)) modeling results. This assessment includes concentrations of parent metolachlor/S-metolachlor and the degradates metolachlor ethanesulfonic acid (ESA) and metolachlor oxanilic

acid (OA). Although it was determined by the Metabolism Assessment Review Committee that the ESA and OA metabolites appear to be less toxic than parent metolachlor/S-metolachlor, they are included in this risk assessment since they were found in greater abundance than the parent in water monitoring studies.

The Agency notes that a key assumption of the drinking water assessment is that reported monitoring data represent both racemic metolachlor and S-metolachlor. The analytical methods for surface and ground water monitoring data used in this assessment were unable to distinguish between metolachlor and S-metolachlor at the time monitoring was conducted. However, the Agency believes that the fate properties of racemic metolachlor and S-metolachlor are similar. Therefore, the EECs used in this risk assessment are representative of both racemic metolachlor and S-metolachlor.

The environmental fate data base is complete for metolachlor. Parent metolachlor/S-metolachlor appear to be moderately persistent to persistent, and

range from mobile to highly mobile in different soils. Metolachlor/S-metolachlor have reportedly been detected as deep as the 36 to 48 inch soil layer (maximum sampled soil depth) in some studies. Degradation appears to be dependent on microbially mediated and abiotic processes. The frequency of detection of metolachlor/S-metolachlor from evaluated monitoring data suggest that contamination in drinking water sources may be widespread.

Environmental fate data comparing metolachlor and S-metolachlor indicate that both are expected to have similar degradation pathways and rates in soil and water environments, and both are expected to be mobile to highly mobile in soil and water environments.

i. *EECs for parent metolachlor/S-metolachlor.* No single surface or ground water monitoring study that was representative of the entire metolachlor/S-metolachlor use area was available for the drinking water assessment. As a result, the drinking water assessment for parent metolachlor/S-metolachlor is based primarily on monitoring data