

departure to exposure ( $MOE_{\text{cancer}}$  = point of departure/exposures) is calculated. A

summary of the toxicological endpoints for emamectin used for human risk

assessment is shown in the following Table 2:

TABLE 2.—SUMMARY OF TOXICOLOGICAL DOSE AND ENDPOINTS FOR EMAMECTIN FOR USE IN HUMAN RISK ASSESSMENT

Exposure Scenario	Dose Used in Risk Assessment, UF	Special FQPA SF* and Level of Concern for Risk Assessment	Study and Toxicological Effects
Acute Dietary (All populations)	NOAEL = 0.075 mg/kg/day UF = 300 Acute RfD = 0.00025 mg/kg/day	Special FQPA SF = 1 aPAD = acute RfD/ FQPA SF = 0.00025 mg/kg/day	15-day mouse LOAEL = 0.1 mg/kg/day based tremors on day 3 of dosing.
Chronic Dietary (All populations)	NOAEL= 0.075 mg/kg/day UF = 1,000 Chronic RfD = 0.000075 mg/kg/day	Special FQPA SF = 1 cPAD = chronic RfD/FQPA SF = 0.000075 mg/kg/day	15-day mouse LOAEL = 0.1 mg/kg/day based on moribund sacrifices, clinical signs of neurotoxicity, decreases in body weight and food consumption and histopathological lesions in the sciatic nerve.
Short-Term Incidental Oral (1–30 days)	Toxicological endpoints were not selected since there are no residential uses at the present time and thus no potential exposure via this scenario.		
Intermediate-Term Incidental Oral (1–6 months)	Toxicological endpoints were not selected since there are no residential uses at the present time and thus no potential exposure via this scenario		
Short-Term Dermal (1 to 30 days)	Oral study NOAEL= 0.075 mg/kg/day (dermal absorption rate = 1.8 %)	Occupational LOC for MOE = 300 Residential LOC for MOE: N/A	15-day mouse LOAEL = 0.1 mg/kg/day based on moribund sacrifices, clinical signs of neurotoxicity, decreases in body weight and food consumption and histopathological lesions in the sciatic nerve.
Intermediate-Term Dermal (1 to 6 months)	Oral study NOAEL= 0.075 mg/kg/day (dermal absorption rate = 1.8 %)	Occupational LOC for MOE = 1,000 Residential LOC for MOE: N/A	15-day mouse LOAEL = 0.1 mg/kg/day based on moribund sacrifices, clinical signs of neurotoxicity, decreases in body weight and food consumption and histopathological lesions in the sciatic nerve.
Long-Term Dermal (>6 months)	Long term dermal exposure is not expected and there are no residential uses at the present time. Therefore, quantification of risk is not required.		
Short-Term Inhalation (1 to 30 days)	Oral study NOAEL= 0.075 mg/kg/day (inhalation absorption rate = 100%)	Occupational LOC for MOE = 300 Residential LOC for MOE: N/A	15-day mouse LOAEL = 0.1 mg/kg/day based on moribund sacrifices, clinical signs of neurotoxicity, decreases in body weight and food consumption and histopathological lesions in the sciatic nerve.
Intermediate-Term Inhalation (1 to 6 months)	Oral study NOAEL= 0.075 mg/kg/day (inhalation absorption rate = 100%)	Occupational LOC for MOE = 1,000 Residential LOC for MOE: N/A	15-day mouse LOAEL = 0.1 mg/kg/day based on moribund sacrifices, clinical signs of neurotoxicity, decreases in body weight and food consumption and histopathological lesions in the sciatic nerve.
Long-Term Inhalation (>6 months)	Not required; long term occupational exposure is not expected and there are no residential uses at the present time. Therefore, quantification of risk is not required.		

\*The reference to the special FQPA SF refers to any additional SF retained due to concerns unique to the FQPA.

### C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* Tolerances have been established (40 CFR 180.505) for the combined residues of emamectin and its metabolites, in or on a variety of raw agricultural commodities and livestock. Tolerances range from 0.002 to 0.05. Risk assessments were conducted by EPA to assess dietary exposures from emamectin in food as follows:

i. *Acute exposure.* Acute dietary risk assessments are performed for a food-use pesticide if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a one day or single exposure. The Dietary Exposure Evaluation Model (DEEM®) analysis evaluated the individual food consumption as reported by respondents in the USDA 1994–1996 and 1998 nationwide Continuing

Surveys of Food Intake by Individuals (CSFII) and accumulated exposure to the chemical for each commodity. The following assumptions were made for the acute exposure assessments: A highly refined, Tier 3, acute dietary exposure assessment was conducted for the general U.S. population and various population subgroups. This was a probabilistic assessment using anticipated residue estimates from the