

US EPA ARCHIVE DOCUMENT

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Seattle, WA	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00105	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07405
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00011	0.00400	0.00400	0.00000	0.00000	0.00841
	NPK for P2O5	0.00020	0.00002	0.00005	0.00003	0.00100	0.00100	0.00000	0.00000	0.00210
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00105	0.00000	0.00000	0.00328
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
	Albuquerque, NM	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00030	0.00003	0.00004	0.00006	0.00100	0.00100	0.00000	0.00000	0.00213
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
Mn		0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
NPK for P2O5		0.00020	0.00002	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
P2O5 - 1		0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
S as Nutrient		0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
Atlanta, GA		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00100	0.00200	0.00100	0.03000	0.03000	0.00000	0.00000	0.06400
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00003	0.00000	0.00000	0.00007
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00010	0.00305	0.00400	0.00000	0.00000	0.00745
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00010	0.00006	0.00200	0.00100	0.00000	0.00000	0.00322
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00100	0.00200	0.00000	0.00000	0.00320

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Bismarck, ND	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00105	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07405
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00421
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
	Boise, ID	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00030	0.00004	0.00004	0.00006	0.00100	0.00100	0.00000	0.00000	0.00214
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
Mn		0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
NPK for P2O5		0.00020	0.00003	0.00005	0.00004	0.00105	0.00100	0.00000	0.00000	0.00217
P2O5 - 1		0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
Potash		0.00001	0.00000	0.00000	0.00000	0.00006	0.00005	0.00000	0.00000	0.00012
S as Nutrient		0.00041	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00050	0.00005	0.00010	0.00007	0.00200	0.00200	0.00000	0.00000	0.00422
Boulder, CO		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00030	0.00004	0.00004	0.00006	0.00100	0.00100	0.00000	0.00000	0.00214
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00003	0.00004	0.00004	0.00105	0.00100	0.00000	0.00000	0.00216
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Casper, WY	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00100	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07400
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00002	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	P2O5 - 1	0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00105	0.00000	0.00000	0.00326
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
	Charleston, SC	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00800	0.00100	0.00200	0.00100	0.03000	0.03050	0.00000	0.00000	0.06450
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00003	0.00000	0.00000	0.00007
Mn		0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00080	0.00010	0.00020	0.00010	0.00305	0.00400	0.00000	0.00000	0.00745
NPK for P2O5		0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
P2O5 - 1		0.00020	0.00003	0.00004	0.00004	0.00091	0.00100	0.00000	0.00000	0.00202
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
S as Nutrient		0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00008	0.00006	0.00100	0.00200	0.00000	0.00000	0.00319
Chicago, IL		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00020	0.00003	0.00005	0.00005	0.00100	0.00100	0.00000	0.00000	0.00213
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00003	0.00005	0.00003	0.00100	0.00100	0.00000	0.00000	0.00211
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00421

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Cleveland, OH	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00004	0.00005	0.00005	0.00100	0.00100	0.00000	0.00000	0.00214
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00105	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07405
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00003	0.00005	0.00003	0.00100	0.00100	0.00000	0.00000	0.00211
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
	Fresno, CA	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
Mn		0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
NPK for P2O5		0.00020	0.00003	0.00005	0.00004	0.00100	0.00100	0.00000	0.00000	0.00212
P2O5 - 1		0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
S as Nutrient		0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00009	0.00007	0.00200	0.00200	0.00000	0.00000	0.00421
Grand Island, NE		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00002	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	P2O5 - 1	0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00006	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00422
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00007	0.00200	0.00200	0.00000	0.00000	0.00421

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Harrisburg, PA	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00100	0.00200	0.00100	0.03000	0.03050	0.00000	0.00000	0.06450
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00020	0.00305	0.00400	0.00000	0.00000	0.00755
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00008	0.00006	0.00105	0.00200	0.00000	0.00000	0.00324
	Hartford, CT	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00800	0.00100	0.00200	0.00100	0.03000	0.03050	0.00000	0.00000	0.06450
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
Mn		0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00080	0.00010	0.00020	0.00010	0.00400	0.00400	0.00000	0.00000	0.00840
NPK for P2O5		0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
P2O5 - 1		0.00020	0.00003	0.00003	0.00004	0.00091	0.00100	0.00000	0.00000	0.00201
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
S as Nutrient		0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00008	0.00006	0.00100	0.00200	0.00000	0.00000	0.00319
Houston, TX		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00100	0.00200	0.00100	0.03000	0.03000	0.00000	0.00000	0.06400
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00011	0.00000	0.00000	0.00032
	NPK as N	0.00080	0.00010	0.00020	0.00020	0.00305	0.00305	0.00000	0.00000	0.00660
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00003	0.00004	0.00091	0.00100	0.00000	0.00000	0.00201
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00008	0.00006	0.00100	0.00200	0.00000	0.00000	0.00319

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Huntington, WV	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00105	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07405
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00002	0.00005	0.00003	0.00100	0.00100	0.00000	0.00000	0.00210
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00006	0.00010	0.00006	0.00200	0.00100	0.00000	0.00000	0.00322
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00008	0.00006	0.00200	0.00200	0.00000	0.00000	0.00419
	Las Vegas, NV	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
Mn		0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
NPK for P2O5		0.00020	0.00002	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
P2O5 - 1		0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
S as Nutrient		0.00040	0.00006	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00422
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
Los Angeles, CA		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00030	0.00003	0.00004	0.00006	0.00100	0.00100	0.00000	0.00000	0.00213
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Memphis, TN	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00100	0.00200	0.00100	0.03000	0.03050	0.00000	0.00000	0.06450
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00010	0.00000	0.00000	0.00032
	NPK as N	0.00080	0.00010	0.00020	0.00010	0.00305	0.00400	0.00000	0.00000	0.00745
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00008	0.00006	0.00100	0.00200	0.00000	0.00000	0.00319
	Miami, FL	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00020	0.00003	0.00004	0.00005	0.00100	0.00091	0.00000	0.00000	0.00203
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00800	0.00100	0.00100	0.00100	0.02050	0.03000	0.00000	0.00000	0.05350
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00003	0.00000	0.00000	0.00007
Mn		0.00003	0.00000	0.00001	0.00001	0.00010	0.00010	0.00000	0.00000	0.00022
NPK as N		0.00070	0.00010	0.00010	0.00010	0.00300	0.00305	0.00000	0.00000	0.00635
NPK for P2O5		0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
P2O5 - 1		0.00020	0.00003	0.00003	0.00003	0.00081	0.00080	0.00000	0.00000	0.00170
Potash		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
S as Nutrient		0.00040	0.00006	0.00008	0.00005	0.00200	0.00100	0.00000	0.00000	0.00319
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00004	0.00007	0.00006	0.00100	0.00200	0.00000	0.00000	0.00317
Minneapolis, MN		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00030	0.00004	0.00005	0.00005	0.00100	0.00100	0.00000	0.00000	0.00214
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00805	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00003	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00210
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00010	0.00006	0.00200	0.00205	0.00000	0.00000	0.00426

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Philadelphia, PA	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00100	0.00105	0.00100	0.03000	0.03000	0.00000	0.00000	0.06305
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00010	0.00305	0.00400	0.00000	0.00000	0.00745
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00008	0.00006	0.00105	0.00200	0.00000	0.00000	0.00324
	Phoenix, AZ	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00030	0.00003	0.00004	0.00006	0.00100	0.00100	0.00000	0.00000	0.00213
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
Mn		0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
NPK for P2O5		0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
P2O5 - 1		0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
S as Nutrient		0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
Portland, ME		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00100	0.00200	0.00100	0.03000	0.03050	0.00000	0.00000	0.06450
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00003	0.00000	0.00000	0.00007
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00010	0.00000	0.00000	0.00032
	NPK as N	0.00080	0.00010	0.00020	0.00010	0.00305	0.00400	0.00000	0.00000	0.00745
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00091	0.00100	0.00000	0.00000	0.00202
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00008	0.00006	0.00100	0.00200	0.00000	0.00000	0.00319

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
Raleigh-Durham, NC	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00800	0.00105	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07405
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00009
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00080	0.00010	0.00020	0.00011	0.00305	0.00400	0.00000	0.00000	0.00746
	NPK for P2O5	0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	S as Nutrient	0.00040	0.00006	0.00010	0.00006	0.00200	0.00100	0.00000	0.00000	0.00322
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
	Salem, OR	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00020	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00800	0.00100	0.00200	0.00100	0.03000	0.03050	0.00000	0.00000	0.06450
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
Mn		0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00080	0.00010	0.00020	0.00020	0.00305	0.00300	0.00000	0.00000	0.00655
NPK for P2O5		0.00020	0.00002	0.00004	0.00003	0.00100	0.00100	0.00000	0.00000	0.00209
P2O5 - 1		0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
S as Nutrient		0.00040	0.00006	0.00009	0.00006	0.00200	0.00100	0.00000	0.00000	0.00321
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00004	0.00008	0.00006	0.00105	0.00200	0.00000	0.00000	0.00323
Salt Lake City, UT		Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00030	0.00004	0.00005	0.00006	0.00100	0.00100	0.00000	0.00000	0.00215
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00905	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00005	0.00004	0.00000	0.00000	0.00010
	Mn	0.00003	0.00001	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00003	0.00005	0.00004	0.00100	0.00100	0.00000	0.00000	0.00212
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00007	0.00200	0.00200	0.00000	0.00000	0.00421

95th Percentile Risks from Application of Fertilizer Products
Nickel (Child)

Climate Region	Product	Soil Ingestion	Fruit Ingestion	Vegetable Ingestion	Below-ground Vegetable Ingestion	Beef Ingestion	Milk Ingestion	Fish Ingestion	Direct Inhalation	All Indirect Pathways Combined ¹
San Francisco, CA	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	Gypsum Products	0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
	Micronutrients	0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	Mn	0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
	NPK as N	0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
	NPK for P2O5	0.00020	0.00002	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
	P2O5 - 1	0.00020	0.00003	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00211
	Potash	0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	S as Nutrient	0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420
	Winnemucca, NV	Boron	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
Gypsum Products		0.00030	0.00003	0.00004	0.00005	0.00100	0.00100	0.00000	0.00000	0.00212
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00200	0.00200	0.00100	0.03000	0.04000	0.00000	0.00000	0.07500
Micronutrients		0.00001	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
Mn		0.00003	0.00000	0.00001	0.00001	0.00020	0.00020	0.00000	0.00000	0.00042
NPK as N		0.00090	0.00010	0.00020	0.00020	0.00400	0.00400	0.00000	0.00000	0.00850
NPK for P2O5		0.00020	0.00002	0.00004	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
P2O5 - 1		0.00020	0.00003	0.00003	0.00004	0.00100	0.00100	0.00000	0.00000	0.00210
Potash		0.00001	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
S as Nutrient		0.00040	0.00007	0.00010	0.00006	0.00200	0.00200	0.00000	0.00000	0.00423
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00040	0.00005	0.00009	0.00006	0.00200	0.00200	0.00000	0.00000	0.00420

¹ All Indirect Pathways Combined includes Fruit, Vegetable, Below-ground Vegetable, Beef, and Milk Ingestion. Numbers less than 0.00001 appear as a default of 0.00000.