

US EPA ARCHIVE DOCUMENT

95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
Seattle, WA	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00008	0.00000	0.00000	0.00000	0.00007	0.00008	0.00000	0.00000	0.00016
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.01000	0.00030	0.00070	0.00006	0.01000	0.01000	0.00000	0.00000	0.02106
	Micronutrients	0.00010	0.00000	0.00001	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00006	0.00010	0.00001	0.00200	0.00200	0.00000	0.00000	0.00417
	NPK for P2O5	0.00050	0.00001	0.00003	0.00000	0.00060	0.00060	0.00000	0.00000	0.00124
	P2O5 - 1	0.00205	0.00007	0.00010	0.00001	0.00300	0.00300	0.00000	0.00000	0.00618
	Potash	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00001	0.00001	0.00000	0.00020	0.00030	0.00000	0.00000	0.00052
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00030	0.00001	0.00002	0.00000	0.00030	0.00030	0.00000	0.00000	0.00063
	Albuquerque, NM	Boron	0.00001	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00060	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.09000	0.00200	0.00300	0.00050	0.09000	0.09000	0.00000	0.00000	0.18550
Micronutrients		0.00080	0.00002	0.00003	0.00001	0.00080	0.00080	0.00000	0.00000	0.00166
Mn		0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
NPK as N		0.02000	0.00040	0.00060	0.00009	0.02000	0.02000	0.00000	0.00000	0.04109
NPK for P2O5		0.00400	0.00009	0.00020	0.00002	0.00400	0.00400	0.00000	0.00000	0.00831
P2O5 - 1		0.02000	0.00050	0.00060	0.00010	0.02000	0.02000	0.00000	0.00000	0.04120
Potash		0.00004	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
S as Nutrient		0.00200	0.00004	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00412
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00200	0.00005	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
Atlanta, GA		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00006	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00700	0.00020	0.00040	0.00004	0.01000	0.00900	0.00000	0.00000	0.01964
	Micronutrients	0.00007	0.00000	0.00000	0.00000	0.00008	0.00009	0.00000	0.00000	0.00018
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00100	0.00004	0.00008	0.00001	0.00100	0.00200	0.00000	0.00000	0.00313
	NPK for P2O5	0.00030	0.00001	0.00002	0.00000	0.00040	0.00040	0.00000	0.00000	0.00083
	P2O5 - 1	0.00200	0.00005	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042

95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
Bismarck, ND	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00020	0.00000	0.00001	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.02000	0.00040	0.00080	0.00010	0.03000	0.02000	0.00000	0.00000	0.05130
	Micronutrients	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Mn	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	NPK as N	0.00400	0.00010	0.00020	0.00003	0.00400	0.00400	0.00000	0.00000	0.00833
	NPK for P2O5	0.00100	0.00003	0.00004	0.00001	0.00100	0.00100	0.00000	0.00000	0.00208
	P2O5 - 1	0.00600	0.00010	0.00020	0.00003	0.00500	0.00600	0.00000	0.00000	0.01133
	Potash	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	S as Nutrient	0.00050	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00060	0.00002	0.00002	0.00000	0.00060	0.00060	0.00000	0.00000	0.00124
	Boise, ID	Boron	0.00001	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00060	0.00002	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00104
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.09000	0.00200	0.00400	0.00050	0.09000	0.09000	0.00000	0.00000	0.18650
Micronutrients		0.00080	0.00002	0.00004	0.00001	0.00090	0.00080	0.00000	0.00000	0.00177
Mn		0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
NPK as N		0.02000	0.00040	0.00070	0.00010	0.02000	0.02000	0.00000	0.00000	0.04120
NPK for P2O5		0.00400	0.00010	0.00020	0.00002	0.00405	0.00405	0.00000	0.00000	0.00842
P2O5 - 1		0.02000	0.00050	0.00070	0.00010	0.02000	0.02000	0.00000	0.00000	0.04130
Potash		0.00004	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
S as Nutrient		0.00200	0.00004	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00200	0.00006	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00415
Boulder, CO		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00050	0.00001	0.00002	0.00000	0.00040	0.00040	0.00000	0.00000	0.00083
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.06050	0.00105	0.00300	0.00031	0.07000	0.07000	0.00001	0.00001	0.14436
	Micronutrients	0.00060	0.00002	0.00003	0.00000	0.00060	0.00060	0.00000	0.00000	0.00125
	Mn	0.00002	0.00000	0.00000	0.00000	0.00002	0.00002	0.00000	0.00000	0.00004
	NPK as N	0.01000	0.00030	0.00050	0.00007	0.01000	0.01000	0.00000	0.00000	0.02087
	NPK for P2O5	0.00300	0.00007	0.00010	0.00001	0.00300	0.00300	0.00000	0.00000	0.00618
	P2O5 - 1	0.01000	0.00040	0.00050	0.00007	0.01000	0.01050	0.00000	0.00000	0.02147
	Potash	0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
	S as Nutrient	0.00100	0.00003	0.00006	0.00001	0.00100	0.00100	0.00000	0.00000	0.00210
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00105	0.00004	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00412

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Casper, WY	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00030	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.03000	0.00060	0.00100	0.00020	0.04000	0.03000	0.00000	0.00000	0.07180
	Micronutrients	0.00030	0.00001	0.00001	0.00000	0.00030	0.00030	0.00000	0.00000	0.00062
	Mn	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	NPK as N	0.00600	0.00010	0.00020	0.00004	0.00600	0.00600	0.00000	0.00000	0.01234
	NPK for P2O5	0.00200	0.00004	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00411
	P2O5 - 1	0.00800	0.00020	0.00020	0.00004	0.00800	0.00805	0.00000	0.00000	0.01649
	Potash	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	S as Nutrient	0.00080	0.00001	0.00002	0.00000	0.00070	0.00070	0.00000	0.00000	0.00143
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00090	0.00002	0.00003	0.00001	0.00080	0.00080	0.00000	0.00000	0.00166
	Charleston, SC	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00006	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00011
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00705	0.00020	0.00040	0.00004	0.00900	0.00900	0.00000	0.00000	0.01864
Micronutrients		0.00008	0.00000	0.00000	0.00000	0.00009	0.00009	0.00000	0.00000	0.00019
Mn		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
NPK as N		0.00100	0.00004	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
NPK for P2O5		0.00040	0.00001	0.00002	0.00000	0.00040	0.00040	0.00000	0.00000	0.00083
P2O5 - 1		0.00200	0.00005	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00412
Potash		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
S as Nutrient		0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
Chicago, IL		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00009	0.00000	0.00001	0.00000	0.00009	0.00009	0.00000	0.00000	0.00019
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.01000	0.00031	0.00080	0.00006	0.02000	0.02000	0.00000	0.00000	0.04117
	Micronutrients	0.00010	0.00000	0.00001	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00008	0.00020	0.00001	0.00200	0.00300	0.00000	0.00000	0.00529
	NPK for P2O5	0.00050	0.00002	0.00003	0.00000	0.00070	0.00080	0.00000	0.00000	0.00155
	P2O5 - 1	0.00300	0.00008	0.00010	0.00002	0.00300	0.00300	0.00000	0.00000	0.00620
	Potash	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00001
	S as Nutrient	0.00030	0.00001	0.00002	0.00000	0.00030	0.00040	0.00000	0.00000	0.00073
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00030	0.00001	0.00002	0.00000	0.00030	0.00040	0.00000	0.00000	0.00073

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Chromium (Child)

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Cleveland, OH	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00008	0.00000	0.00000	0.00000	0.00008	0.00009	0.00000	0.00000	0.00018
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.01000	0.00030	0.00080	0.00006	0.01050	0.01000	0.00000	0.00000	0.02166
	Micronutrients	0.00010	0.00000	0.00001	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00000	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00007	0.00010	0.00001	0.00200	0.00300	0.00000	0.00000	0.00518
	NPK for P2O5	0.00050	0.00002	0.00003	0.00000	0.00060	0.00061	0.00000	0.00000	0.00126
	P2O5 - 1	0.00300	0.00008	0.00010	0.00001	0.00300	0.00300	0.00000	0.00000	0.00619
	Potash	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00001	0.00001	0.00000	0.00030	0.00030	0.00000	0.00000	0.00062
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00030	0.00001	0.00002	0.00000	0.00030	0.00030	0.00000	0.00000	0.00063
	Fresno, CA	Boron	0.00001	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00060	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.09000	0.00200	0.00305	0.00050	0.09000	0.09000	0.00000	0.00000	0.18555
Micronutrients		0.00080	0.00002	0.00004	0.00001	0.00080	0.00080	0.00000	0.00000	0.00167
Mn		0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
NPK as N		0.01000	0.00040	0.00060	0.00009	0.02000	0.02000	0.00000	0.00000	0.04109
NPK for P2O5		0.00400	0.00010	0.00020	0.00002	0.00400	0.00400	0.00000	0.00000	0.00832
P2O5 - 1		0.02000	0.00050	0.00060	0.00010	0.02000	0.02000	0.00000	0.00000	0.04120
Potash		0.00004	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
S as Nutrient		0.00200	0.00004	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00200	0.00006	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00415
Grand Island, NE		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00020	0.00000	0.00001	0.00000	0.00011	0.00010	0.00000	0.00000	0.00022
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.02000	0.00040	0.00090	0.00010	0.03000	0.02050	0.00000	0.00000	0.05190
	Micronutrients	0.00021	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Mn	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	NPK as N	0.00405	0.00010	0.00020	0.00003	0.00400	0.00400	0.00000	0.00000	0.00833
	NPK for P2O5	0.00100	0.00002	0.00004	0.00001	0.00100	0.00100	0.00000	0.00000	0.00207
	P2O5 - 1	0.00600	0.00010	0.00020	0.00003	0.00500	0.00600	0.00000	0.00000	0.01133
	Potash	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	S as Nutrient	0.00050	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00060	0.00002	0.00002	0.00000	0.00060	0.00060	0.00000	0.00000	0.00124

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Harrisburg, PA	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00007	0.00000	0.00000	0.00000	0.00006	0.00006	0.00000	0.00000	0.00013
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00020	0.00040	0.00005	0.01000	0.01000	0.00000	0.00000	0.02065
	Micronutrients	0.00009	0.00000	0.00000	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00005	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00414
	NPK for P2O5	0.00040	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
	P2O5 - 1	0.00200	0.00006	0.00007	0.00001	0.00200	0.00205	0.00000	0.00000	0.00419
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Hartford, CT	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00006	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00010
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00800	0.00020	0.00030	0.00005	0.01000	0.00900	0.00000	0.00000	0.01955
Micronutrients		0.00008	0.00000	0.00000	0.00000	0.00009	0.00008	0.00000	0.00000	0.00018
Mn		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
NPK as N		0.00200	0.00004	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00412
NPK for P2O5		0.00040	0.00001	0.00001	0.00000	0.00040	0.00040	0.00000	0.00000	0.00082
P2O5 - 1		0.00200	0.00005	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00412
Potash		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
S as Nutrient		0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
Houston, TX		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00007	0.00000	0.00000	0.00000	0.00006	0.00006	0.00000	0.00000	0.00012
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00020	0.00040	0.00005	0.01000	0.01000	0.00000	0.00000	0.02065
	Micronutrients	0.00010	0.00000	0.00000	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00004	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00412
	NPK for P2O5	0.00040	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
	P2O5 - 1	0.00200	0.00006	0.00007	0.00001	0.00200	0.00205	0.00000	0.00000	0.00419
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00021	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042

95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
Huntington, WV	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00007	0.00000	0.00000	0.00000	0.00006	0.00006	0.00000	0.00000	0.00013
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00900	0.00020	0.00040	0.00005	0.01000	0.01000	0.00000	0.00000	0.02065
	Micronutrients	0.00009	0.00000	0.00000	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00005	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00414
	NPK for P2O5	0.00040	0.00001	0.00002	0.00000	0.00040	0.00050	0.00000	0.00000	0.00093
	P2O5 - 1	0.00200	0.00006	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00414
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Las Vegas, NV	Boron	0.00001	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00060	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.09000	0.00200	0.00300	0.00050	0.08050	0.08000	0.00000	0.00000	0.16600
Micronutrients		0.00080	0.00002	0.00003	0.00001	0.00080	0.00070	0.00000	0.00000	0.00156
Mn		0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
NPK as N		0.02000	0.00031	0.00051	0.00009	0.02000	0.01000	0.00000	0.00000	0.03090
NPK for P2O5		0.00400	0.00008	0.00010	0.00002	0.00400	0.00400	0.00000	0.00000	0.00820
P2O5 - 1		0.02000	0.00050	0.00050	0.00010	0.02000	0.02000	0.00000	0.00000	0.04110
Potash		0.00004	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
S as Nutrient		0.00200	0.00003	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00410
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00200	0.00005	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
Los Angeles, CA		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00030	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.04000	0.00080	0.00200	0.00020	0.05000	0.04000	0.00000	0.00000	0.09300
	Micronutrients	0.00040	0.00001	0.00002	0.00000	0.00040	0.00040	0.00000	0.00000	0.00083
	Mn	0.00001	0.00000	0.00000	0.00000	0.00002	0.00001	0.00000	0.00000	0.00003
	NPK as N	0.00605	0.00020	0.00030	0.00004	0.00700	0.00700	0.00000	0.00000	0.01454
	NPK for P2O5	0.00200	0.00005	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00414
	P2O5 - 1	0.00800	0.00030	0.00030	0.00005	0.00805	0.00810	0.00000	0.00000	0.01680
	Potash	0.00002	0.00000	0.00000	0.00000	0.00002	0.00002	0.00000	0.00000	0.00004
	S as Nutrient	0.00081	0.00002	0.00004	0.00000	0.00080	0.00090	0.00000	0.00000	0.00176
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00090	0.00003	0.00004	0.00001	0.00100	0.00100	0.00000	0.00000	0.00208

95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
Memphis, TN	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00005	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00010
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00600	0.00020	0.00040	0.00004	0.00900	0.00800	0.00000	0.00000	0.01764
	Micronutrients	0.00006	0.00000	0.00000	0.00000	0.00007	0.00008	0.00000	0.00000	0.00016
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00100	0.00004	0.00008	0.00001	0.00100	0.00100	0.00000	0.00000	0.00213
	NPK for P2O5	0.00030	0.00001	0.00002	0.00000	0.00030	0.00040	0.00000	0.00000	0.00073
	P2O5 - 1	0.00200	0.00004	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00411
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00010	0.00000	0.00001	0.00000	0.00011	0.00020	0.00000	0.00000	0.00032
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Miami, FL	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00006	0.00000	0.00000	0.00000	0.00005	0.00005	0.00000	0.00000	0.00010
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00800	0.00020	0.00030	0.00004	0.00900	0.00800	0.00000	0.00000	0.01754
Micronutrients		0.00008	0.00000	0.00000	0.00000	0.00008	0.00008	0.00000	0.00000	0.00017
Mn		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
NPK as N		0.00105	0.00003	0.00006	0.00001	0.00100	0.00100	0.00000	0.00000	0.00210
NPK for P2O5		0.00040	0.00001	0.00001	0.00000	0.00040	0.00040	0.00000	0.00000	0.00082
P2O5 - 1		0.00200	0.00004	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00411
Potash		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
S as Nutrient		0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
Minneapolis, MN		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00010	0.00000	0.00001	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.02000	0.00050	0.00100	0.00010	0.02050	0.02000	0.00000	0.00000	0.04210
	Micronutrients	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Mn	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	NPK as N	0.00400	0.00010	0.00020	0.00002	0.00400	0.00400	0.00000	0.00000	0.00832
	NPK for P2O5	0.00090	0.00003	0.00005	0.00001	0.00100	0.00100	0.00000	0.00000	0.00209
	P2O5 - 1	0.00500	0.00010	0.00020	0.00003	0.00500	0.00500	0.00000	0.00000	0.01033
	Potash	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000	0.00002
	S as Nutrient	0.00040	0.00001	0.00002	0.00000	0.00040	0.00050	0.00000	0.00000	0.00093
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00050	0.00002	0.00003	0.00000	0.00050	0.00060	0.00000	0.00000	0.00115



95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
Philadelphia, PA	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00007	0.00000	0.00000	0.00000	0.00006	0.00006	0.00000	0.00000	0.00012
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00805	0.00020	0.00040	0.00005	0.01000	0.01000	0.00000	0.00000	0.02065
	Micronutrients	0.00009	0.00000	0.00000	0.00000	0.00009	0.00009	0.00000	0.00000	0.00019
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00004	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
	NPK for P2O5	0.00040	0.00001	0.00002	0.00000	0.00040	0.00040	0.00000	0.00000	0.00083
	P2O5 - 1	0.00200	0.00005	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
	Phoenix, AZ	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00060	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.09000	0.00200	0.00300	0.00050	0.08000	0.08000	0.00000	0.00000	0.16550
Micronutrients		0.00080	0.00002	0.00003	0.00001	0.00080	0.00071	0.00000	0.00000	0.00156
Mn		0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
NPK as N		0.01000	0.00031	0.00060	0.00010	0.02000	0.01000	0.00000	0.00000	0.03101
NPK for P2O5		0.00400	0.00009	0.00020	0.00002	0.00400	0.00400	0.00000	0.00000	0.00831
P2O5 - 1		0.02000	0.00050	0.00051	0.00010	0.02000	0.02000	0.00000	0.00000	0.04111
Potash		0.00004	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
S as Nutrient		0.00200	0.00003	0.00006	0.00001	0.00200	0.00200	0.00000	0.00000	0.00410
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00200	0.00005	0.00007	0.00001	0.00200	0.00200	0.00000	0.00000	0.00413
Portland, ME		Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00005	0.00000	0.00000	0.00000	0.00004	0.00005	0.00000	0.00000	0.00009
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00600	0.00020	0.00040	0.00004	0.00800	0.00705	0.00000	0.00000	0.01569
	Micronutrients	0.00006	0.00000	0.00000	0.00000	0.00007	0.00008	0.00000	0.00000	0.00016
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00100	0.00004	0.00007	0.00001	0.00100	0.00100	0.00000	0.00000	0.00212
	NPK for P2O5	0.00030	0.00001	0.00001	0.00000	0.00030	0.00040	0.00000	0.00000	0.00072
	P2O5 - 1	0.00200	0.00004	0.00005	0.00001	0.00200	0.00200	0.00000	0.00000	0.00410
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00010	0.00000	0.00001	0.00000	0.00011	0.00020	0.00000	0.00000	0.00032
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042

95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
Raleigh-Durham, NC	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00007	0.00000	0.00000	0.00000	0.00007	0.00007	0.00000	0.00000	0.00015
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.00805	0.00020	0.00060	0.00005	0.01000	0.01000	0.00000	0.00000	0.02085
	Micronutrients	0.00009	0.00000	0.00001	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
	Mn	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	NPK as N	0.00200	0.00006	0.00010	0.00001	0.00200	0.00200	0.00000	0.00000	0.00417
	NPK for P2O5	0.00040	0.00001	0.00002	0.00000	0.00050	0.00051	0.00000	0.00000	0.00104
	P2O5 - 1	0.00200	0.00006	0.00009	0.00001	0.00200	0.00205	0.00000	0.00000	0.00421
	Potash	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
	S as Nutrient	0.00020	0.00001	0.00001	0.00000	0.00020	0.00030	0.00000	0.00000	0.00052
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00020	0.00001	0.00001	0.00000	0.00030	0.00030	0.00000	0.00000	0.00062
	Salem, OR	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00007	0.00000	0.00000	0.00000	0.00006	0.00006	0.00000	0.00000	0.00013
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.00900	0.00020	0.00040	0.00005	0.01000	0.01000	0.00000	0.00000	0.02065
Micronutrients		0.00009	0.00000	0.00000	0.00000	0.00010	0.00010	0.00000	0.00000	0.00021
Mn		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
NPK as N		0.00200	0.00005	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00414
NPK for P2O5		0.00040	0.00001	0.00002	0.00000	0.00050	0.00050	0.00000	0.00000	0.00103
P2O5 - 1		0.00200	0.00006	0.00007	0.00001	0.00200	0.00205	0.00000	0.00000	0.00419
Potash		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00001
S as Nutrient		0.00020	0.00000	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00041
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00020	0.00001	0.00001	0.00000	0.00020	0.00020	0.00000	0.00000	0.00042
Salt Lake City, UT		Boron	0.00001	0.00000	0.00000	0.00000	0.00001	0.00001	0.00000	0.00000
	Gypsum Products	0.00070	0.00002	0.00003	0.00000	0.00060	0.00060	0.00000	0.00000	0.00125
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.10000	0.00200	0.00500	0.00050	0.10000	0.10000	0.00000	0.00000	0.20750
	Micronutrients	0.00090	0.00002	0.00004	0.00001	0.00100	0.00090	0.00000	0.00000	0.00197
	Mn	0.00003	0.00000	0.00000	0.00000	0.00003	0.00003	0.00000	0.00000	0.00006
	NPK as N	0.02000	0.00050	0.00081	0.00010	0.02000	0.02000	0.00000	0.00000	0.04141
	NPK for P2O5	0.00400	0.00010	0.00020	0.00002	0.00500	0.00500	0.00000	0.00000	0.01032
	P2O5 - 1	0.02000	0.00060	0.00070	0.00010	0.02000	0.02000	0.00000	0.00000	0.04140
	Potash	0.00004	0.00000	0.00000	0.00000	0.00004	0.00004	0.00000	0.00000	0.00008
	S as Nutrient	0.00200	0.00005	0.00010	0.00001	0.00200	0.00200	0.00000	0.00000	0.00416
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00200	0.00007	0.00010	0.00002	0.00200	0.00200	0.00000	0.00000	0.00419

95th Percentile Risks from Application of Fertilizer Products  
Chromium (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 <sup>1</sup>
San Francisco, CA	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Gypsum Products	0.00030	0.00001	0.00001	0.00000	0.00030	0.00030	0.00000	0.00000	0.00062
	Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Liming Materials	0.04000	0.00080	0.00200	0.00030	0.05000	0.04000	0.00000	0.00000	0.09310
	Micronutrients	0.00040	0.00001	0.00002	0.00000	0.00040	0.00040	0.00000	0.00000	0.00083
	Mn	0.00002	0.00000	0.00000	0.00000	0.00002	0.00001	0.00000	0.00000	0.00003
	NPK as N	0.00800	0.00020	0.00030	0.00005	0.00800	0.00800	0.00000	0.00000	0.01655
	NPK for P2O5	0.00200	0.00005	0.00008	0.00001	0.00200	0.00200	0.00000	0.00000	0.00414
	P2O5 - 1	0.01000	0.00030	0.00030	0.00005	0.00900	0.00905	0.00000	0.00000	0.01870
	Potash	0.00002	0.00000	0.00000	0.00000	0.00002	0.00002	0.00000	0.00000	0.00004
	S as Nutrient	0.00090	0.00002	0.00003	0.00000	0.00090	0.00091	0.00000	0.00000	0.00186
	S as Ph	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Zinc	0.00100	0.00003	0.00004	0.00001	0.00100	0.00100	0.00000	0.00000	0.00208
	Winnemucca, NV	Boron	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Gypsum Products		0.00050	0.00001	0.00001	0.00000	0.00040	0.00040	0.00000	0.00000	0.00082
Iron		NA	NA	NA	NA	NA	NA	NA	NA	NA
Liming Materials		0.07000	0.00100	0.00200	0.00040	0.07000	0.06000	0.00000	0.00000	0.13340
Micronutrients		0.00060	0.00001	0.00002	0.00000	0.00060	0.00060	0.00000	0.00000	0.00123
Mn		0.00002	0.00000	0.00000	0.00000	0.00002	0.00002	0.00000	0.00000	0.00004
NPK as N		0.01000	0.00030	0.00040	0.00007	0.01000	0.01000	0.00000	0.00000	0.02077
NPK for P2O5		0.00300	0.00006	0.00009	0.00002	0.00300	0.00300	0.00000	0.00000	0.00617
P2O5 - 1		0.01000	0.00040	0.00040	0.00008	0.01000	0.01000	0.00000	0.00000	0.02088
Potash		0.00003	0.00000	0.00000	0.00000	0.00002	0.00002	0.00000	0.00000	0.00004
S as Nutrient		0.00100	0.00002	0.00004	0.00001	0.00105	0.00100	0.00000	0.00000	0.00212
S as Ph		NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc		0.00200	0.00004	0.00005	0.00001	0.00105	0.00100	0.00000	0.00000	0.00215

<sup>1</sup> 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.