

US EPA ARCHIVE DOCUMENT

**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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	0.01120	0.00002	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.21000	0.00378	0.00178	0	0.00384	0.00311	0	0.00020	0.00003	0.00001	0	0.00040	0.00100	0	NA	0.00144
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.39600	0.00071	0.00034	0	0.00070	0.00056	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00052	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00076	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.74000	0.00310	0.00146	0	0.00309	0.00249	0	0.00020	0.00003	0.00001	0	0.00030	0.00090	0	NA	0.00124
	NPK for P2O5	0.88700	0.00158	0.00074	0	0.00155	0.00125	0	0.00009	0.00001	0.00001	0	0.00020	0.00050	0	NA	0.00072
	P2O5 - 1	1.06000	0.00192	0.00090	0	0.00184	0.00149	0	0.00010	0.00002	0.00001	0	0.00020	0.00060	0	NA	0.00083
	Potash	0.00333	0.00001	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00181	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Albuquerque, NM	Boron	0.01220	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.41000	0.00148	0.00070	0	0.00367	0.00272	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.42900	0.00027	0.00013	0	0.00066	0.00048	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00040
Micronutrients		0.00057	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00082	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.92000	0.00125	0.00059	0	0.00293	0.00215	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
NPK for P2O5		0.96800	0.00059	0.00028	0	0.00148	0.00109	0	0.00010	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
P2O5 - 1		1.15000	0.00072	0.00034	0	0.00176	0.00131	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
Potash		0.00360	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00199	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Atlanta, GA		Boron	0.01060	0.00002	0.00001	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.11000	0.00282	0.00133	0	0.00362	0.00287	0	0.00020	0.00002	0.00001	0	0.00030	0.00090	0	NA	0.00123
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.37900	0.00057	0.00027	0	0.00065	0.00051	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00049	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00072	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.67000	0.00242	0.00114	0	0.00285	0.00224	0	0.00020	0.00002	0.00001	0	0.00030	0.00080	0	NA	0.00113
	NPK for P2O5	0.84600	0.00116	0.00055	0	0.00145	0.00115	0	0.00009	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	0.99300	0.00144	0.00068	0	0.00170	0.00134	0	0.00010	0.00001	0.00001	0	0.00020	0.00060	0	NA	0.00082
	Potash	0.00318	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00025	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00174	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

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Bismarck, ND	Boron	0.01180	0.00000	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.32000	0.00067	0.00032	0	0.00339	0.00245	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.41700	0.00012	0.00006	0	0.00061	0.00044	0	0.00004	0.00000	0.00000	0	0.00008	0.00020	0	NA	0.00028
	Micronutrients	0.00055	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00079	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.86000	0.00054	0.00026	0	0.00268	0.00192	0	0.00020	0.00000	0.00000	0	0.00030	0.00070	0	NA	0.00101
	NPK for P2O5	0.93900	0.00027	0.00013	0	0.00135	0.00097	0	0.00010	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
	P2O5 - 1	1.11000	0.00033	0.00016	0	0.00164	0.00118	0	0.00010	0.00000	0.00000	0	0.00020	0.00050	0	NA	0.00070
	Potash	0.00350	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00028	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00187	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Boise, ID	Boron	0.01250	0.00001	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.45000	0.00215	0.00101	0	0.00390	0.00297	0	0.00020	0.00002	0.00001	0	0.00040	0.00090	0	NA	0.00133
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.44300	0.00041	0.00019	0	0.00071	0.00053	0	0.00004	0.00001	0.00000	0	0.00010	0.00030	0	NA	0.00041
Micronutrients		0.00059	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00084	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.95000	0.00182	0.00086	0	0.00310	0.00233	0	0.00020	0.00001	0.00001	0	0.00030	0.00090	0	NA	0.00122
NPK for P2O5		1.00000	0.00089	0.00042	0	0.00158	0.00120	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
P2O5 - 1		1.18000	0.00104	0.00049	0	0.00186	0.00143	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
Potash		0.00368	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00030	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00214	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Boulder, CO		Boron	0.01230	0.00001	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.41000	0.00217	0.00102	0	0.00385	0.00289	0	0.00020	0.00002	0.00001	0	0.00040	0.00090	0	NA	0.00133
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.42600	0.00041	0.00019	0	0.00068	0.00051	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00057	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00082	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.91000	0.00186	0.00088	0	0.00306	0.00232	0	0.00020	0.00001	0.00001	0	0.00030	0.00090	0	NA	0.00122
	NPK for P2O5	0.97400	0.00093	0.00044	0	0.00155	0.00117	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	1.16000	0.00109	0.00051	0	0.00184	0.00140	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
	Potash	0.00363	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00202	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

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Casper, WY	Boron	0.01200	0.00000	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.35000	0.00077	0.00036	0	0.00345	0.00248	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.42700	0.00015	0.00007	0	0.00062	0.00045	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00039
	Micronutrients	0.00055	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00081	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.86000	0.00064	0.00030	0	0.00272	0.00193	0	0.00020	0.00001	0.00000	0	0.00030	0.00070	0	NA	0.00101
	NPK for P2O5	0.94600	0.00032	0.00015	0	0.00138	0.00100	0	0.00010	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
	P2O5 - 1	1.12000	0.00037	0.00018	0	0.00164	0.00118	0	0.00010	0.00000	0.00000	0	0.00020	0.00050	0	NA	0.00070
	Potash	0.00349	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00202	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Charleston, SC	Boron	0.01080	0.00001	0.00001	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.14000	0.00201	0.00095	0	0.00344	0.00267	0	0.00020	0.00002	0.00001	0	0.00030	0.00080	0	NA	0.00113
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.38400	0.00040	0.00019	0	0.00060	0.00046	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00039
Micronutrients		0.00050	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00073	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.70000	0.00180	0.00085	0	0.00272	0.00210	0	0.00020	0.00001	0.00001	0	0.00030	0.00080	0	NA	0.00112
NPK for P2O5		0.85700	0.00088	0.00042	0	0.00138	0.00106	0	0.00009	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
P2O5 - 1		1.02000	0.00101	0.00048	0	0.00167	0.00128	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
Potash		0.00321	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00176	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Chicago, IL		Boron	0.01150	0.00002	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.28000	0.00379	0.00179	0	0.00405	0.00327	0	0.00020	0.00003	0.00001	0	0.00040	0.00100	0	NA	0.00144
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.41000	0.00072	0.00034	0	0.00071	0.00058	0	0.00004	0.00001	0.00000	0	0.00010	0.00030	0	NA	0.00041
	Micronutrients	0.00053	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00078	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.78000	0.00312	0.00147	0	0.00322	0.00260	0	0.00020	0.00002	0.00001	0	0.00040	0.00100	0	NA	0.00143
	NPK for P2O5	0.91700	0.00157	0.00074	0	0.00164	0.00133	0	0.00009	0.00001	0.00001	0	0.00020	0.00050	0	NA	0.00072
	P2O5 - 1	1.09000	0.00189	0.00089	0	0.00188	0.00153	0	0.00010	0.00002	0.00001	0	0.00020	0.00070	0	NA	0.00093
	Potash	0.00341	0.00001	0.00000	0	0.00001	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00027	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00189	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

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Cleveland, OH	Boron	0.01160	0.00002	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.28000	0.00437	0.00206	0	0.00412	0.00334	0	0.00020	0.00003	0.00001	0	0.00040	0.00100	0	NA	0.00144
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.40600	0.00077	0.00036	0	0.00072	0.00058	0	0.00004	0.00001	0.00000	0	0.00010	0.00030	0	NA	0.00041
	Micronutrients	0.00054	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00077	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.82000	0.00362	0.00171	0	0.00328	0.00268	0	0.00020	0.00003	0.00001	0	0.00035	0.00090	0	NA	0.00129
	NPK for P2O5	0.91800	0.00181	0.00085	0	0.00166	0.00136	0	0.00010	0.00002	0.00001	0	0.00020	0.00050	0	NA	0.00073
	P2O5 - 1	1.09000	0.00210	0.00099	0	0.00197	0.00159	0	0.00010	0.00002	0.00001	0	0.00020	0.00070	0	NA	0.00093
	Potash	0.00339	0.00001	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00027	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00194	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Fresno, CA	Boron	0.01210	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.38000	0.00178	0.00084	0	0.00371	0.00274	0	0.00020	0.00001	0.00000	0	0.00030	0.00090	0	NA	0.00121
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.42300	0.00033	0.00016	0	0.00066	0.00050	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00040
Micronutrients		0.00057	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00082	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.89000	0.00147	0.00069	0	0.00291	0.00218	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
NPK for P2O5		0.96100	0.00072	0.00034	0	0.00149	0.00111	0	0.00010	0.00001	0.00000	0	0.00020	0.00045	0	NA	0.00066
P2O5 - 1		1.14000	0.00087	0.00041	0	0.00177	0.00133	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
Potash		0.00363	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00199	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Grand Island, NE		Boron	0.01210	0.00000	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.39000	0.00093	0.00044	0	0.00353	0.00256	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.42300	0.00017	0.00008	0	0.00062	0.00045	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00039
	Micronutrients	0.00057	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00082	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.90000	0.00071	0.00034	0	0.00277	0.00200	0	0.00020	0.00001	0.00000	0	0.00030	0.00075	0	NA	0.00106
	NPK for P2O5	0.95900	0.00037	0.00018	0	0.00141	0.00103	0	0.00010	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
	P2O5 - 1	1.13000	0.00043	0.00020	0	0.00167	0.00123	0	0.00010	0.00000	0.00000	0	0.00020	0.00050	0	NA	0.00071
	Potash	0.00360	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00028	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00202	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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>
Harrisburg, PA	Boron	0.01130	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.24000	0.00186	0.00088	0	0.00350	0.00265	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.40300	0.00033	0.00016	0	0.00063	0.00048	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00053	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00077	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.77000	0.00146	0.00069	0	0.00277	0.00207	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	NPK for P2O5	0.90600	0.00073	0.00035	0	0.00141	0.00107	0	0.00009	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
	P2O5 - 1	1.06000	0.00087	0.00041	0	0.00165	0.00125	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	Potash	0.00336	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00027	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00191	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Hartford, CT	Boron	0.01090	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.15000	0.00139	0.00066	0	0.00331	0.00245	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.39600	0.00025	0.00012	0	0.00059	0.00043	0	0.00004	0.00000	0.00000	0	0.00008	0.00030	0	NA	0.00038
Micronutrients		0.00051	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00074	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.70000	0.00115	0.00054	0	0.00260	0.00196	0	0.00020	0.00001	0.00000	0	0.00030	0.00070	0	NA	0.00101
NPK for P2O5		0.87700	0.00054	0.00026	0	0.00135	0.00100	0	0.00009	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
P2O5 - 1		1.03000	0.00068	0.00032	0	0.00160	0.00118	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
Potash		0.00326	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00186	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Houston, TX		Boron	0.01090	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.18000	0.00105	0.00050	0	0.00329	0.00243	0	0.00020	0.00001	0.00000	0	0.00030	0.00070	0	NA	0.00101
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.39200	0.00022	0.00011	0	0.00059	0.00044	0	0.00004	0.00000	0.00000	0	0.00008	0.00020	0	NA	0.00028
	Micronutrients	0.00050	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00074	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.70000	0.00089	0.00042	0	0.00253	0.00187	0	0.00020	0.00001	0.00000	0	0.00030	0.00070	0	NA	0.00101
	NPK for P2O5	0.87100	0.00044	0.00021	0	0.00131	0.00096	0	0.00009	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00061
	P2O5 - 1	1.04000	0.00052	0.00025	0	0.00155	0.00115	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	Potash	0.00325	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00189	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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	0.01140	0.00001	0.00001	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.23000	0.00245	0.00116	0	0.00357	0.00276	0	0.00020	0.00002	0.00001	0	0.00030	0.00085	0	NA	0.00118
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.40200	0.00045	0.00021	0	0.00065	0.00050	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00052	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00077	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.79000	0.00199	0.00094	0	0.00283	0.00219	0	0.00020	0.00001	0.00001	0	0.00030	0.00080	0	NA	0.00112
	NPK for P2O5	0.91000	0.00098	0.00046	0	0.00145	0.00112	0	0.00009	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	1.07000	0.00119	0.00056	0	0.00176	0.00135	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
	Potash	0.00335	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00027	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00190	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Las Vegas, NV	Boron	0.01210	0.00000	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.37000	0.00074	0.00035	0	0.00347	0.00249	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.43100	0.00014	0.00006	0	0.00062	0.00045	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00039
Micronutrients		0.00056	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00082	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.87000	0.00059	0.00028	0	0.00275	0.00197	0	0.00020	0.00001	0.00000	0	0.00030	0.00075	0	NA	0.00106
NPK for P2O5		0.96100	0.00031	0.00014	0	0.00140	0.00101	0	0.00010	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
P2O5 - 1		1.14000	0.00036	0.00017	0	0.00167	0.00121	0	0.00010	0.00000	0.00000	0	0.00020	0.00050	0	NA	0.00070
Potash		0.00354	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00028	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00194	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Los Angeles, CA		Boron	0.01190	0.00001	0.00001	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.35000	0.00211	0.00100	0	0.00368	0.00277	0	0.00020	0.00002	0.00001	0	0.00040	0.00090	0	NA	0.00133
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.42100	0.00038	0.00018	0	0.00067	0.00051	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00055	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00081	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.87000	0.00174	0.00082	0	0.00295	0.00225	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	NPK for P2O5	0.94800	0.00088	0.00042	0	0.00151	0.00115	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	1.12000	0.00104	0.00049	0	0.00178	0.00138	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
	Potash	0.00353	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00028	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00199	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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	0.01070	0.00002	0.00001	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.07000	0.00339	0.00160	0	0.00357	0.00285	0	0.00020	0.00002	0.00001	0	0.00030	0.00090	0	NA	0.00123
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.38000	0.00062	0.00029	0	0.00065	0.00052	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00050	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00071	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.63000	0.00275	0.00130	0	0.00279	0.00222	0	0.00020	0.00002	0.00001	0	0.00030	0.00080	0	NA	0.00113
	NPK for P2O5	0.84500	0.00136	0.00064	0	0.00148	0.00117	0	0.00009	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	0.99700	0.00157	0.00074	0	0.00173	0.00137	0	0.00010	0.00001	0.00001	0	0.00020	0.00060	0	NA	0.00082
	Potash	0.00310	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00024	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00173	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Miami, FL	Boron	0.00995	0.00000	0.00000	0	0.00001	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		1.88000	0.00041	0.00019	0	0.00275	0.00198	0	0.00020	0.00000	0.00000	0	0.00030	0.00060	0	NA	0.00090
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.34900	0.00008	0.00004	0	0.00051	0.00036	0	0.00004	0.00000	0.00000	0	0.00007	0.00020	0	NA	0.00027
Micronutrients		0.00047	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00066	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.54000	0.00033	0.00015	0	0.00225	0.00163	0	0.00020	0.00000	0.00000	0	0.00020	0.00060	0	NA	0.00080
NPK for P2O5		0.76000	0.00021	0.00010	0	0.00112	0.00081	0	0.00008	0.00000	0.00000	0	0.00010	0.00030	0	NA	0.00040
P2O5 - 1		0.91400	0.00028	0.00013	0	0.00135	0.00098	0	0.00009	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
Potash		0.00294	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00024	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00177	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Minneapolis, MN		Boron	0.01190	0.00002	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.34000	0.00316	0.00149	0	0.00399	0.00312	0	0.00020	0.00002	0.00001	0	0.00040	0.00100	0	NA	0.00143
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.41400	0.00059	0.00028	0	0.00069	0.00056	0	0.00004	0.00001	0.00000	0	0.00010	0.00030	0	NA	0.00041
	Micronutrients	0.00056	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00080	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.84000	0.00273	0.00129	0	0.00314	0.00250	0	0.00020	0.00002	0.00001	0	0.00030	0.00090	0	NA	0.00123
	NPK for P2O5	0.92900	0.00129	0.00061	0	0.00158	0.00123	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	1.12000	0.00159	0.00075	0	0.00190	0.00150	0	0.00010	0.00001	0.00001	0	0.00020	0.00060	0	NA	0.00082
	Potash	0.00353	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00028	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00200	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000



**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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	0.01110	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.18000	0.00161	0.00076	0	0.00339	0.00257	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.38800	0.00030	0.00014	0	0.00060	0.00046	0	0.00004	0.00000	0.00000	0	0.00008	0.00030	0	NA	0.00039
	Micronutrients	0.00051	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00075	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.74000	0.00134	0.00063	0	0.00269	0.00203	0	0.00020	0.00001	0.00000	0	0.00030	0.00070	0	NA	0.00101
	NPK for P2O5	0.88800	0.00067	0.00032	0	0.00140	0.00104	0	0.00009	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
	P2O5 - 1	1.05000	0.00079	0.00037	0	0.00161	0.00121	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	Potash	0.00328	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00183	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Phoenix, AZ	Boron	0.01220	0.00000	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.36000	0.00088	0.00042	0	0.00349	0.00256	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.42200	0.00017	0.00008	0	0.00063	0.00046	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00039
Micronutrients		0.00057	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00083	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.90000	0.00074	0.00035	0	0.00278	0.00200	0	0.00020	0.00001	0.00000	0	0.00030	0.00075	0	NA	0.00106
NPK for P2O5		0.97500	0.00037	0.00018	0	0.00143	0.00103	0	0.00010	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
P2O5 - 1		1.15000	0.00046	0.00022	0	0.00170	0.00125	0	0.00010	0.00000	0.00000	0	0.00020	0.00050	0	NA	0.00071
Potash		0.00355	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00200	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Portland, ME		Boron	0.01050	0.00001	0.00001	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.07000	0.00285	0.00135	0	0.00348	0.00274	0	0.00020	0.00002	0.00001	0	0.00030	0.00080	0	NA	0.00113
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.36400	0.00050	0.00023	0	0.00062	0.00048	0	0.00004	0.00001	0.00000	0	0.00009	0.00030	0	NA	0.00040
	Micronutrients	0.00048	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00071	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.65000	0.00230	0.00108	0	0.00274	0.00215	0	0.00020	0.00002	0.00001	0	0.00030	0.00080	0	NA	0.00113
	NPK for P2O5	0.83500	0.00115	0.00054	0	0.00140	0.00111	0	0.00009	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
	P2O5 - 1	0.98600	0.00134	0.00063	0	0.00168	0.00132	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
	Potash	0.00314	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00025	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00171	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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	0.01100	0.00002	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.16000	0.00349	0.00165	0	0.00382	0.00302	0	0.00020	0.00003	0.00001	0	0.00040	0.00090	0	NA	0.00134
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.38900	0.00069	0.00033	0	0.00069	0.00055	0	0.00004	0.00001	0.00000	0	0.00010	0.00030	0	NA	0.00041
	Micronutrients	0.00051	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00074	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.71000	0.00308	0.00145	0	0.00301	0.00241	0	0.00020	0.00002	0.00001	0	0.00030	0.00090	0	NA	0.00123
	NPK for P2O5	0.87200	0.00148	0.00070	0	0.00152	0.00122	0	0.00009	0.00001	0.00001	0	0.00020	0.00050	0	NA	0.00072
	P2O5 - 1	1.04000	0.00180	0.00085	0	0.00186	0.00148	0	0.00010	0.00002	0.00001	0	0.00020	0.00060	0	NA	0.00083
	Potash	0.00318	0.00001	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00184	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Salem, OR	Boron	0.01110	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.20000	0.00151	0.00071	0	0.00339	0.00254	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.39100	0.00030	0.00014	0	0.00061	0.00046	0	0.00004	0.00000	0.00000	0	0.00008	0.00030	0	NA	0.00038
Micronutrients		0.00052	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00075	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.74000	0.00129	0.00061	0	0.00270	0.00204	0	0.00020	0.00001	0.00000	0	0.00030	0.00070	0	NA	0.00101
NPK for P2O5		0.88500	0.00065	0.00031	0	0.00135	0.00102	0	0.00009	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
P2O5 - 1		1.04000	0.00075	0.00035	0	0.00159	0.00120	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
Potash		0.00324	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00026	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00189	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Salt Lake City, UT		Boron	0.01230	0.00001	0.00001	0	0.00002	0.00002	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
	Gypsum Products	2.44000	0.00262	0.00123	0	0.00396	0.00303	0	0.00020	0.00002	0.00001	0	0.00040	0.00090	0	NA	0.00133
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.44300	0.00049	0.00023	0	0.00072	0.00056	0	0.00004	0.00001	0.00000	0	0.00010	0.00030	0	NA	0.00041
	Micronutrients	0.00058	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00084	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.93000	0.00212	0.00100	0	0.00308	0.00236	0	0.00020	0.00002	0.00001	0	0.00030	0.00090	0	NA	0.00123
	NPK for P2O5	0.96700	0.00104	0.00049	0	0.00155	0.00120	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	P2O5 - 1	1.17000	0.00125	0.00059	0	0.00187	0.00145	0	0.00010	0.00001	0.00000	0	0.00020	0.00060	0	NA	0.00081
	Potash	0.00360	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00030	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00210	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

**50th Percentile Media Concentrations and Risks from Application of Fertilizer Products  
Vanadium (Adult)**

Climate Region	Product	soil conc (mg/kg)	fruit conc (mg/kg-DW)	above-ground vegetable conc (mg/kg-DW)	below-ground veg conc (mg/kg)	beef conc (mg/kg)	milk conc (mg/kg)	fish conc (mg/kg)	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	0.01190	0.00001	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA	0.00001
	Gypsum Products	2.35000	0.00133	0.00063	0	0.00352	0.00261	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	Iron	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Liming Materials	0.41700	0.00023	0.00011	0	0.00064	0.00047	0	0.00004	0.00000	0.00000	0	0.00009	0.00030	0	NA	0.00039
	Micronutrients	0.00055	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Mn	0.00079	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	NPK as N	1.83000	0.00104	0.00049	0	0.00277	0.00204	0	0.00020	0.00001	0.00000	0	0.00030	0.00080	0	NA	0.00111
	NPK for P2O5	0.94900	0.00055	0.00026	0	0.00144	0.00106	0	0.00010	0.00001	0.00000	0	0.00020	0.00040	0	NA	0.00061
	P2O5 - 1	1.12000	0.00066	0.00031	0	0.00170	0.00126	0	0.00010	0.00001	0.00000	0	0.00020	0.00050	0	NA	0.00071
	Potash	0.00355	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Nutrient	0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	S as Ph	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
	Zinc	0.00204	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
	Winnemucca, NV	Boron	0.01210	0.00000	0.00000	0	0.00002	0.00001	0	0.00000	0.00000	0.00000	0	0.00000	0.00001	0	NA
Gypsum Products		2.38000	0.00035	0.00017	0	0.00342	0.00242	0	0.00020	0.00000	0.00000	0	0.00030	0.00075	0	NA	0.00105
Iron		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Liming Materials		0.42600	0.00006	0.00003	0	0.00061	0.00043	0	0.00004	0.00000	0.00000	0	0.00008	0.00025	0	NA	0.00033
Micronutrients		0.00056	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
Mn		0.00083	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
NPK as N		1.89000	0.00028	0.00013	0	0.00268	0.00189	0	0.00020	0.00000	0.00000	0	0.00030	0.00070	0	NA	0.00100
NPK for P2O5		0.95500	0.00014	0.00007	0	0.00135	0.00095	0	0.00010	0.00000	0.00000	0	0.00020	0.00040	0	NA	0.00060
P2O5 - 1		1.13000	0.00017	0.00008	0	0.00161	0.00115	0	0.00010	0.00000	0.00000	0	0.00020	0.00050	0	NA	0.00070
Potash		0.00356	0.00000	0.00000	0	0.00001	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Nutrient		0.00029	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000
S as Ph		NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	0	NA	NA
Zinc		0.00200	0.00000	0.00000	0	0.00000	0.00000	0	0.00000	0.00000	0.00000	0	0.00000	0.00000	0	NA	0.00000

<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.