

US EPA ARCHIVE DOCUMENT

99th 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 | 0.00004 | 0.00003 | 0.00000 | 0.00000 | 0.00007 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00925 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00800 | 0.00701 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42101 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01139 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00801 | 0.00000 | 0.00000 | 0.01752 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00040 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01400 |
| | Albuquerque, NM | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00006 | 0.00007 | 0.00020 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01033 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00700 | 0.00800 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42300 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| NPK as N | | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02010 | 0.02000 | 0.00000 | 0.00000 | 0.04210 |
| NPK for P2O5 | | 0.00090 | 0.00010 | 0.00020 | 0.00010 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01241 |
| P2O5 - 1 | | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01031 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00701 | 0.00601 | 0.00000 | 0.00000 | 0.01402 |
| Atlanta, GA | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00040 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00300 | 0.00000 | 0.00000 | 0.00822 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00800 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42100 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00006 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00501 | 0.00401 | 0.00000 | 0.00000 | 0.00941 |
| | P2O5 - 1 | 0.00040 | 0.00008 | 0.00010 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00929 |
| | Potash | 0.00002 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00800 | 0.00000 | 0.00000 | 0.01751 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00030 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01281 |

99th 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 | 0.00005 | 0.00004 | 0.00000 | 0.00000 | 0.00009 |
| | Gypsum Products | 0.00050 | 0.00005 | 0.00007 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01022 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00701 | 0.00701 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42002 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00060 | 0.02010 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01139 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.00901 | 0.00801 | 0.00000 | 0.00000 | 0.01762 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01400 |
| | Boise, ID | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00401 | 0.00000 | 0.00000 | 0.01025 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00700 | 0.00900 | 0.00800 | 0.20100 | 0.20000 | 0.00000 | 0.00000 | 0.42500 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| NPK as N | | 0.00300 | 0.00070 | 0.00080 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04220 |
| NPK for P2O5 | | 0.00090 | 0.00010 | 0.00020 | 0.00010 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01241 |
| P2O5 - 1 | | 0.00050 | 0.00010 | 0.00010 | 0.00010 | 0.00601 | 0.00500 | 0.00000 | 0.00000 | 0.01131 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00030 | 0.00040 | 0.00040 | 0.00701 | 0.00700 | 0.00000 | 0.00000 | 0.01511 |
| Boulder, CO | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01024 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00601 | 0.00800 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42201 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04210 |
| | NPK for P2O5 | 0.00090 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00600 | 0.00000 | 0.00000 | 0.01240 |
| | P2O5 - 1 | 0.00050 | 0.00010 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01032 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00040 | 0.00040 | 0.00701 | 0.00601 | 0.00000 | 0.00000 | 0.01412 |

99th 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 | 0.00005 | 0.00004 | 0.00000 | 0.00000 | 0.00009 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01024 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00700 | 0.00800 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42200 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00010 | 0.00020 | 0.00010 | 0.00502 | 0.00501 | 0.00000 | 0.00000 | 0.01043 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.00901 | 0.00801 | 0.00000 | 0.00000 | 0.01762 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |
| | Charleston, SC | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00301 | 0.00000 | 0.00000 | 0.00823 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00600 | 0.00800 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42100 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| NPK as N | | 0.00300 | 0.00050 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04180 |
| NPK for P2O5 | | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00501 | 0.00500 | 0.00000 | 0.00000 | 0.01040 |
| P2O5 - 1 | | 0.00040 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00800 | 0.00000 | 0.00000 | 0.01751 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00020 | 0.00030 | 0.00030 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01281 |
| Chicago, IL | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00004 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00925 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00700 | 0.00801 | 0.00701 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42202 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01140 |
| | P2O5 - 1 | 0.00050 | 0.00010 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01032 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.00901 | 0.00800 | 0.00000 | 0.00000 | 0.01761 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00040 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01410 |

99th 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 | 0.00004 | 0.00004 | 0.00000 | 0.00000 | 0.00008 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00925 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00700 | 0.00900 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42300 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01141 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01031 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00800 | 0.00000 | 0.00000 | 0.01860 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00040 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01410 |
| | Fresno, CA | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01024 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00700 | 0.00800 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42300 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| NPK as N | | 0.00300 | 0.00060 | 0.00080 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| NPK for P2O5 | | 0.00080 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00600 | 0.00000 | 0.00000 | 0.01240 |
| P2O5 - 1 | | 0.00050 | 0.00010 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01032 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00700 | 0.00000 | 0.00000 | 0.01500 |
| Grand Island, NE | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00020 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01034 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00800 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42200 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00090 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01141 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01031 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |

99th 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 | 0.00004 | 0.00003 | 0.00000 | 0.00000 | 0.00007 |
| | Gypsum Products | 0.00050 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00400 | 0.00000 | 0.00000 | 0.00922 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00701 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42001 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01139 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.00901 | 0.00800 | 0.00000 | 0.00000 | 0.01761 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01390 |
| | Hartford, CT | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00040 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00400 | 0.00000 | 0.00000 | 0.00922 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00600 | 0.00701 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42001 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| NPK as N | | 0.00300 | 0.00050 | 0.00060 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04170 |
| NPK for P2O5 | | 0.00080 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01129 |
| P2O5 - 1 | | 0.00050 | 0.00008 | 0.00010 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00929 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00701 | 0.00000 | 0.00000 | 0.01652 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00020 | 0.00030 | 0.00040 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01291 |
| Houston, TX | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00040 | 0.00005 | 0.00007 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00923 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00602 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.41902 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00006 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| | NPK as N | 0.00300 | 0.00050 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04180 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00501 | 0.00500 | 0.00000 | 0.00000 | 0.01040 |
| | P2O5 - 1 | 0.00050 | 0.00008 | 0.00010 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00929 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.01000 | 0.00701 | 0.00000 | 0.00000 | 0.01751 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00030 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01281 |

99th 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 | 0.00004 | 0.00003 | 0.00000 | 0.00000 | 0.00007 |
| | Gypsum Products | 0.00050 | 0.00005 | 0.00007 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00923 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00701 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42001 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01140 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00930 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00801 | 0.00000 | 0.00000 | 0.01752 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01390 |
| | Las Vegas, NV | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01024 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00601 | 0.00701 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42102 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| NPK as N | | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| NPK for P2O5 | | 0.00090 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01140 |
| P2O5 - 1 | | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |
| Los Angeles, CA | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01024 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00700 | 0.00800 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42300 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01141 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00601 | 0.00400 | 0.00000 | 0.00000 | 0.01030 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |

99th 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 | 0.00004 | 0.00003 | 0.00000 | 0.00000 | 0.00007 |
| | Gypsum Products | 0.00040 | 0.00005 | 0.00007 | 0.00010 | 0.00501 | 0.00301 | 0.00000 | 0.00000 | 0.00824 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00702 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42002 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00006 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| | NPK as N | 0.00201 | 0.00060 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04190 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00501 | 0.00401 | 0.00000 | 0.00000 | 0.00941 |
| | P2O5 - 1 | 0.00040 | 0.00009 | 0.00010 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00930 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00700 | 0.00000 | 0.00000 | 0.01651 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01390 |
| | Miami, FL | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00040 | 0.00005 | 0.00006 | 0.00010 | 0.00500 | 0.00301 | 0.00000 | 0.00000 | 0.00822 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00600 | 0.00601 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.41901 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00006 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| NPK as N | | 0.00300 | 0.00050 | 0.00070 | 0.00050 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04170 |
| NPK for P2O5 | | 0.00080 | 0.00009 | 0.00010 | 0.00010 | 0.00401 | 0.00500 | 0.00000 | 0.00000 | 0.00930 |
| P2O5 - 1 | | 0.00040 | 0.00008 | 0.00008 | 0.00009 | 0.00500 | 0.00400 | 0.00000 | 0.00000 | 0.00925 |
| Potash | | 0.00002 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00010 | 0.00000 | 0.00000 | 0.00031 |
| S as Nutrient | | 0.00080 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00701 | 0.00000 | 0.00000 | 0.01652 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00101 | 0.00020 | 0.00030 | 0.00040 | 0.00502 | 0.00600 | 0.00000 | 0.00000 | 0.01192 |
| Minneapolis, MN | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00925 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00601 | 0.00801 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42102 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00080 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| | NPK for P2O5 | 0.00080 | 0.00010 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01141 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01031 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00040 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01411 |

99th 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 | 0.00004 | 0.00003 | 0.00000 | 0.00000 | 0.00007 |
| | Gypsum Products | 0.00050 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00400 | 0.00000 | 0.00000 | 0.00922 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00701 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42001 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00060 | 0.00000 | 0.00000 | 0.00134 |
| | NPK as N | 0.00300 | 0.00050 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04180 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00010 | 0.00010 | 0.00501 | 0.00500 | 0.00000 | 0.00000 | 0.01030 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00800 | 0.00000 | 0.00000 | 0.01751 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00040 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01390 |
| | Phoenix, AZ | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01024 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00700 | 0.00800 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42300 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| NPK as N | | 0.00300 | 0.00060 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04190 |
| NPK for P2O5 | | 0.00090 | 0.00009 | 0.00020 | 0.00010 | 0.00501 | 0.00501 | 0.00000 | 0.00000 | 0.01041 |
| P2O5 - 1 | | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00401 | 0.00000 | 0.00000 | 0.01030 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |
| Portland, ME | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00040 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00300 | 0.00000 | 0.00000 | 0.00822 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00701 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42001 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00006 | 0.00001 | 0.00001 | 0.00002 | 0.00070 | 0.00050 | 0.00000 | 0.00000 | 0.00124 |
| | NPK as N | 0.00300 | 0.00050 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04180 |
| | NPK for P2O5 | 0.00070 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01139 |
| | P2O5 - 1 | 0.00040 | 0.00009 | 0.00010 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00930 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00900 | 0.00701 | 0.00000 | 0.00000 | 0.01651 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00030 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01281 |

99th 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 | 0.00004 | 0.00003 | 0.00000 | 0.00000 | 0.00007 |
| | Gypsum Products | 0.00040 | 0.00006 | 0.00007 | 0.00010 | 0.00500 | 0.00400 | 0.00000 | 0.00000 | 0.00923 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00600 | 0.00800 | 0.00700 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42100 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00060 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04190 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01139 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00401 | 0.00000 | 0.00000 | 0.01030 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00020 | 0.00901 | 0.00800 | 0.00000 | 0.00000 | 0.01751 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00020 | 0.00030 | 0.00030 | 0.00700 | 0.00600 | 0.00000 | 0.00000 | 0.01380 |
| | Salem, OR | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00003 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00005 | 0.00007 | 0.00010 | 0.00500 | 0.00400 | 0.00000 | 0.00000 | 0.00922 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00600 | 0.00701 | 0.00701 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42002 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| NPK as N | | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| NPK for P2O5 | | 0.00080 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00500 | 0.00000 | 0.00000 | 0.01129 |
| P2O5 - 1 | | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01029 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.00901 | 0.00701 | 0.00000 | 0.00000 | 0.01662 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00020 | 0.00030 | 0.00040 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01291 |
| Salt Lake City, UT | | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00004 | 0.00004 | 0.00000 | 0.00000 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00009 | 0.00020 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01035 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00700 | 0.00801 | 0.00800 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42301 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00007 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| | NPK as N | 0.00300 | 0.00070 | 0.00080 | 0.00070 | 0.02010 | 0.02000 | 0.00000 | 0.00000 | 0.04230 |
| | NPK for P2O5 | 0.00090 | 0.00010 | 0.00020 | 0.00010 | 0.00601 | 0.00600 | 0.00000 | 0.00000 | 0.01241 |
| | P2O5 - 1 | 0.00050 | 0.00010 | 0.00010 | 0.00010 | 0.00600 | 0.00401 | 0.00000 | 0.00000 | 0.01031 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00040 | 0.00040 | 0.00700 | 0.00700 | 0.00000 | 0.00000 | 0.01510 |

99th 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 | 0.00005 | 0.00004 | 0.00000 | 0.00000 | 0.00009 |
| | Gypsum Products | 0.00050 | 0.00006 | 0.00008 | 0.00010 | 0.00501 | 0.00400 | 0.00000 | 0.00000 | 0.00925 |
| | Iron | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Liming Materials | 0.03000 | 0.00700 | 0.00800 | 0.00701 | 0.20000 | 0.20000 | 0.00000 | 0.00000 | 0.42201 |
| | Micronutrients | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | Mn | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00060 | 0.00000 | 0.00000 | 0.00144 |
| | NPK as N | 0.00300 | 0.00060 | 0.00070 | 0.00050 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04180 |
| | NPK for P2O5 | 0.00080 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00501 | 0.00000 | 0.00000 | 0.01140 |
| | P2O5 - 1 | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00502 | 0.00400 | 0.00000 | 0.00000 | 0.00931 |
| | Potash | 0.00003 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| | S as Nutrient | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| | S as Ph | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |
| | Winnemucca, NV | Boron | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00005 | 0.00004 | 0.00000 | 0.00000 |
| Gypsum Products | | 0.00050 | 0.00005 | 0.00008 | 0.00010 | 0.00600 | 0.00400 | 0.00000 | 0.00000 | 0.01023 |
| Iron | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Liming Materials | | 0.03000 | 0.00700 | 0.00800 | 0.00800 | 0.20100 | 0.20000 | 0.00000 | 0.00000 | 0.42400 |
| Micronutrients | | 0.00002 | 0.00000 | 0.00000 | 0.00001 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| Mn | | 0.00008 | 0.00001 | 0.00001 | 0.00002 | 0.00080 | 0.00070 | 0.00000 | 0.00000 | 0.00154 |
| NPK as N | | 0.00300 | 0.00060 | 0.00070 | 0.00070 | 0.02000 | 0.02000 | 0.00000 | 0.00000 | 0.04200 |
| NPK for P2O5 | | 0.00090 | 0.00009 | 0.00020 | 0.00010 | 0.00600 | 0.00600 | 0.00000 | 0.00000 | 0.01239 |
| P2O5 - 1 | | 0.00050 | 0.00009 | 0.00010 | 0.00010 | 0.00601 | 0.00401 | 0.00000 | 0.00000 | 0.01031 |
| Potash | | 0.00003 | 0.00000 | 0.00000 | 0.00000 | 0.00020 | 0.00020 | 0.00000 | 0.00000 | 0.00041 |
| S as Nutrient | | 0.00100 | 0.00010 | 0.00020 | 0.00030 | 0.01000 | 0.00801 | 0.00000 | 0.00000 | 0.01861 |
| S as Ph | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Zinc | | 0.00200 | 0.00030 | 0.00030 | 0.00040 | 0.00700 | 0.00601 | 0.00000 | 0.00000 | 0.01401 |

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.