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**Human Health Risk Assessment**

**Appendix 1**

**Environmental Monitoring of Metals  
in the Rodney Street Community and Port Colborne**

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**List of Tables**

**Human Health Risk Assessment - Appendix 1**

**Environmental Monitoring of Metals in the Rodney Street Community and Port Colborne**

Table A1-1: Summary of Port Colborne Municipal Drinking Water Data, 1996 -1999  
..... Page 1 of 18

Table A1-2a: MOE TSP (Total Suspended Particulate) Nickel Annual Air Monitoring Data  
(1992-1995) from Monitoring Station 27047 at Davis and Fraser and Summer 2001  
Monitoring at Rodney Street ..... Page 2 of 18

Table A1-2b: Comparison of PM<sub>10</sub> (Particulate Matter ≤10 µm) Nickel-In-Air Concentrations in  
Port Colborne With Other Areas in Southern Ontario Based on the Most Recently  
Available Results ..... Page 2 of 18

Table A1-3: Summary of Annual Air Monitoring Data for Port Colborne ..... Page 3 of 18

Table A1-4: Summary of Soil Data (All Depths Combined) ..... Page 4 of 18

Table A1-5: Levels of Antimony in Produce from Rodney Street Residences ... Page 5 of 18

Table A1-6: Levels of Beryllium in Produce from Rodney Street Residences ..... Page 6 of 18

Table A1-7: Levels of Cadmium in Produce from Rodney Street Residences ..... Page 7 of 18

Table A1-8: Levels of Cobalt in Produce from Rodney Street Residences ..... Page 8 of 18

Table A1-9: Levels of Arsenic in Produce from Rodney Street Residences ..... Page 9 of 18

Table A1-10: Levels of Copper in Produce from Rodney Street Residences ..... Page 10 of 18

Table A1-11: Levels of Lead in Produce from Rodney Street Residences ..... Page 11 of 18

Table A1-12a: Levels of Nickel in Produce from Rodney Street Residences  
(JWEL & MOE 2000 Samples) ..... Page 12 of 18

Table A1-12b: Levels of Nickel in Produce from Port Colborne Residences ..... Page 14 of 18

Table A1-12c: Summary of Nickel in Produce from Rodney Street Residences  
(2000 and 2001 Samples Combined) ..... Page 18 of 18

### Drinking Water Monitoring Data

**Table A1-1: Summary of Port Colborne Municipal Drinking Water Data, 1996 -1999  
(Number of Samples = 8)**

Element	Range of Drinking Water Concentrations (µg/L)	Average Drinking Water Concentrations (µg/L)	MOE Drinking Water Standard (µg/L)	World Health Organization Drinking Water Guidelines (µg/L)	EPA Maximum Contaminant Levels (µg/L)
<b><i>Treated Drinking Water</i></b>					
Antimony	0.31 - 0.96	0.60	none	5 (provisional)	6
Arsenic	0.2 - 0.6	0.34	25	10 (provisional)	5
Beryllium	0.11 - 0.2	0.16	none	none	4
Cadmium	0.0041 - 0.051	0.02	5	3	5
Cobalt	0.025 - 0.054	0.03	none	none	none
Copper	0.33 - 1	0.65	none	2,000 (provisional)	1,300 (aesthetics)
Lead	0.05 - 1.9	0.37	10	10	15
Nickel	0.4 - 1.1	0.77	none	20 (provisional)	none
<b><i>Distributed Water at Charlotte Street</i></b>					
Antimony	0.45 - 0.97	0.64	none	5 (provisional)	6
Arsenic	0.14 - 0.40	0.28	25	10 (provisional)	5
Beryllium	0.03 - 0.2	0.11	none	none	4
Cadmium	0.022 - 0.083	0.06	5	3	5
Cobalt	0.026 - 0.04	0.03	none	none	none
Copper	5 - 44.1	14.50	none	2,000 (provisional)	1,300 (aesthetics)
Lead	0.067 - 0.71	0.38	10	10	15
Nickel	0.6 - 1.3	0.94	none	20 (provisional)	none

\* EPA Region III Risk Based Concentrations are not standards or guidelines and were used for comparison purpose only when the MOE or EPA did not have a standard/guideline for a particular substance.

### Air Monitoring Data

**Table A1-2a: MOE TSP (Total Suspended Particulate) Nickel Annual Air Monitoring Data (1992-1995) from Monitoring Station 27047 at Davis and Fraser and Summer 2001 Monitoring at Rodney Street**

Year (# of Samples)	Percentiles						Maximum µg/m <sup>3</sup>	Mean µg/m <sup>3</sup>	Geom. Mean µg/m <sup>3</sup>
	10%	30%	50%	70%	90%	99%			
1992 (54)	0.005	0.005	0.020	0.038	0.130	0.496	0.690	0.053	0.020
1993 (49)	0.002	0.006	0.010	0.020	0.090	0.302	0.390	0.034	0.013
1994 (48)	0.004	0.007	0.011	0.021	0.067	0.141	0.160	0.025	0.014
1995 (55)	0.003	0.008	0.011	0.019	0.049	0.135	0.140	0.023	0.011
2001 (22)	INS	INS	INS	INS	INS	INS	0.12	0.013	INS

INS = insufficient data

**Table A1-2b: Comparison of PM<sub>10</sub> (Particulate Matter ≤ 10 µm) Nickel-In-Air Concentrations in Port Colborne With Other Areas in Southern Ontario Based on the Most Recently Available Results**

Location	Start	End	Number of Samples	Number Below Detection Limit	Mean µg/m <sup>3</sup>	Maximum µg/m <sup>3</sup>	Minimum µg/m <sup>3</sup>
Ottawa	03-Jan-95	25-Dec-98	217	104	0.0030	0.0351	0.0008
Point Petre	25-Aug-96	31-Dec-98	117	64	0.0018	0.0068	0.0009
Windsor	03-Jan-95	31-Dec-98	181	38	0.0043	0.0226	0.0010
Toronto	03-Jan-95	06-Sep-95	37	10	0.0036	0.0088	0.0010
Toronto	21-Feb-97	31-Dec-98	93	25	0.0030	0.0084	0.0009
Toronto	02-Jun-95	31-Dec-98	179	27	0.0041	0.0109	0.0010
Hamilton	03-Jan-95	25-Dec-98	193	45	0.0034	0.0133	0.0007
Walpole Island	03-Jan-95	04-Mar-95	8	4	0.0018	0.0036	0.0010
Egbert	10-Mar-95	31-Dec-98	179	93	0.0023	0.0109	0.0009
Port Colborne	Summer 2001		21	9	0.0059	0.0260	0.0010*

\*The minimum value for nickel-in-air represents ½ detection limit and was used in the calculation of the average value.

**Table A1-3: Summary of Annual Air Monitoring Data for Port Colborne**

<b>Metal</b>	<b>Minimum Air Concentration (µg/m<sup>3</sup>)</b>	<b>Maximum Air Concentration (µg/m<sup>3</sup>)</b>	<b>Average Air Concentration (µg/m<sup>3</sup>)</b>	<b>MOE Air Standard (24 hour) (µg/m<sup>3</sup>)</b>
<b><i>Ministry of the Environment - Davis and Fraser, Port Colborne Air Monitoring Data - 1992 - 1995</i></b>				
Copper (TSP)	0.058	0.56	0.112	50
Lead (TSP)	0.01	0.06	0.02	2
Total Suspended Particulate	9	222	51.7	120
<b><i>Ministry of the Environment - Rodney Street, Port Colborne Air Monitoring Data - Summer 2001</i></b>				
Antimony (TSP)	0.0004	0.0026	0.0011	25
Antimony (PM <sub>10</sub> )	0.0001	0.0025	0.0007	25
Arsenic (TSP)	0.0006	0.0116	0.0043	0.30
Arsenic (P Beryllium (TSP) M <sub>10</sub> )	0.0006	0.0120	0.0040	0.30
	0.00001	0.0004	0.0002	0.01
Beryllium (PM <sub>10</sub> )	0.00001	0.0006	0.0001	0.01
Cadmium (TSP)	0.05	0.3	0.086	2
Cadmium (PM <sub>10</sub> )	0.00003	0.0005	0.0002	2
Copper (TSP)	.0005	0.0800	0.0193	50
Copper (PM <sub>10</sub> )	.0003	0.4700	0.1124	50
Lead (TSP)	.005	0.0500	0.014	2
Lead (PM <sub>10</sub> )	.005	0.0700	0.014	2
Total Suspended Particulate	20	100	46.1	100
PM <sub>10</sub>	8	66	21.9	50
<b><i>Jacques Whitford Environmental - Air Monitoring Data for Port Colborne Schools - Summer 2000</i></b>				
Arsenic (TSP)	0.001	0.005	0.002	0.3
Cobalt (TSP)	0.004	0.01	0.0075	0.1
Copper (TSP)	0.01	0.08	0.035	50
Nickel (TSP)	0.01	0.11	0.05	2
Total Suspended Particulate	24	63	48.7	120
PM <sub>10</sub>	21	44	34	50
<b><i>Environment Canada Air Monitoring Program - Typical Ontario Air Concentrations - 1995 - 1999</i></b>				
Antimony (PM <sub>10</sub> )	0.0001	0.0115	0.0011	25
Arsenic (PM <sub>10</sub> )	0.0003	0.016	0.0016	0.3
Beryllium (PM <sub>10</sub> )	No data available			0.01
Cadmium (PM <sub>10</sub> )	0.0001	0.0067	0.0007	2
Cobalt (PM <sub>10</sub> )	0.001	0.017	0.002	0.1
Copper (PM <sub>10</sub> )	0.001	0.101	0.018	50
Lead (PM <sub>10</sub> )	0.0005	0.13	0.0077	2
Nickel (PM <sub>10</sub> )	0.0007	0.035	0.003	2

**Soil Monitoring Data**

**Table A1-4: Summary of Soil Data (All Depths Combined)**

Element	Concentration (µg/g)											
	Minimum	Maximum	Mean	10 <sup>th</sup> Percentile	20 <sup>th</sup> Percentile	30 <sup>th</sup> Percentile	40 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile (Median)	60 <sup>th</sup> Percentile	70 <sup>th</sup> Percentile	80 <sup>th</sup> Percentile	90 <sup>th</sup> Percentile
Aluminum	2200	47300	17346	8700	11300	13500	15300	17300	19030	20600	22520	26300
Antimony	0.1	91.1	2.2	0.4	0.5	0.7	0.9	1.2	1.5	1.9	2.9	5.5
Arsenic	0	350	16	6	8	9	11	13	15	18	21	29
Barium	19	956	169	88	101	122	139	154	169	188	211	266
Beryllium	0.2	4.6	1.0	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
Cadmium	0.0	35.3	1.2	0.4	0.6	0.8	0.9	1.1	1.2	1.5	1.7	2.2
Calcium	1920	93400	20543	10620	13300	15000	17000	19000	21200	23900	26300	32000
Chromium	7	245	30	19	22	25	27	29	31	33	36	40
Cobalt	5	262	51	20	24	30	34	39	47	55	70	95
Copper	4	2720	246	70	106	134	161	196	230	284	360	471
Iron	8820	140000	29706	18030	20900	23020	25200	27000	29200	31900	35500	42600
Lead	6	1800	217	74	96	120	148	173	202	244	299	406
Magnesium	990	31900	7903	4500	5600	6220	6726	7320	8000	8800	9950	11900
Manganese	131	5620	506	340	389	425	453	478	500	540	588	671
Molybdenum	0.2	12.1	3.7	0.9	1.7	2.8	3.6	3.9	4.2	4.4	4.8	5.8
Nickel	19	17000	2508	518	800	1070	1400	1730	2200	2810	3784	5592
Selenium	0.1	19.4	2.4	0.4	0.7	1.0	1.3	1.8	2.3	2.9	3.9	5.2
Strontium	14	690	78	40	49	56	62	68	76	87	99	121
Vanadium	10	75	37	25	28	31	34	37	39	42	45	50
Zinc	23	1750	365	140	187	223	260	305	356	418	520	665

Data are µg/g dry weight.

N.B. Does not include the 2000 trench samples.

### Backyard Garden Produce Monitoring Data

**Table A1-5: Levels of Antimony in Produce from Rodney Street Residences**

Location	Antimony Soil Concentration (µg/g)	Produce Type	Dry Weight Antimony Concentration in Produce (µg/g)	Conversion Factor* (Dry to Fresh Weight)	Fresh Weight Antimony Concentration in Produce <sup>1</sup> (µg/g)
JWEL 2000 Samples					
3	<0.5	Beet Root	0.06	0.13	0.0078
		Celery	<0.05	0.059	-
		Tomato	<0.1	0.065	-
9	Not analyzed	Tomato	<0.1	0.065	-
25	1.1	Pepper	<0.1	0.066	-
		Lettuce	0.46	0.045	0.021
		Beet Root	<0.1	0.13	-
33	Not analyzed	Lettuce	<0.1	0.045	-
		Pepper	<0.05	0.066	-
34	Not analyzed	Radish	<0.05	0.0516	-
		Pepper	0.27	0.066	0.018
41	Not analyzed	Tomato	<0.1	0.065	-
Control Samples					
Food Store Control	n/a	Beet	<0.05	0.13	-
		Pepper	<0.1	0.066	-
		Lettuce	<0.15	0.045	-
Wainfleet Bog (Background Control)	n/a	Beet Root	<0.05	0.13	-
		Pepper	<0.1	0.066	0.0066
		Beet Top	<0.1	0.091	-

<sup>1</sup> Fresh weight concentrations were not calculated when dry weight values were below the detection limit.

<sup>2</sup> n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-6: Levels of Beryllium in Produce from Rodney Street Residences**

Location	Beryllium Soil Concentration (µg/g)	Produce Type	Dry Weight Beryllium Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Beryllium Concentration in Produce (µg/g)
JWEL 2000 Samples					
3	0.7	Beet Root	<0.1	0.13	0.0065
		Celery	<0.1	0.059	0.00295
		Tomato	<0.1	0.065	0.00325
9	Not Analyzed	Tomato	<0.2	0.065	0.0065
25	0.5	Pepper	<0.2	0.066	0.0066
		Lettuce	<0.2	0.045	0.0045
		Beet Root	<0.1	0.13	0.0065
33	Not Analyzed	Lettuce	<0.2	0.045	0.0045
		Pepper	<0.1	0.066	0.0033
34	Not Analyzed	Radish	<0.1	0.0516	0.00258
		Pepper	<0.3	0.066	0.0099
41	Not Analyzed	Tomato	<0.2	0.065	0.0065
MOE Samples					
Sample #1	0.75	Tomato	0.1	0.065	0.0065
		Green Pepper	0.1	0.066	0.0066
Sample #2	0.425	Pepper	0.1	0.066	0.0066
		Tomato	0.1	0.065	0.0065
Control Samples					
Food Store Control	n/a	Beet	<0.1	0.13	0.0065
		Pepper	<0.2	0.066	0.0066
		Lettuce	<0.3	0.045	0.00675
Wainfleet Bog (Background Control)	0.5	Beet Root	<0.1	0.13	0.0065
		Pepper	<0.2	0.066	0.0066
		Beet Top	<0.2	0.091	0.0091

One half the detection limit used for values reported as <detection limit.

n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-7: Levels of Cadmium in Produce from Rodney Street Residences**

Location	Cadmium Soil Concentration (µg/g)	Produce Type	Dry Weight Cadmium Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Cadmium Concentration in Produce (µg/g)
<b>JWEL 2000 Samples</b>					
3	<0.5	Beet Root	0.38	0.13	0.049
		Celery	0.85	0.059	0.05
		Tomato	0.23	0.065	0.015
9	Not Analyzed	Tomato	0.13	0.065	0.0085
25	1.1	Pepper	0.15	0.066	0.0099
		Lettuce	0.34	0.045	0.015
		Beet Root	0.24	0.13	0.031
33	Not Analyzed	Lettuce	0.45	0.045	0.02
		Pepper	0.22	0.066	0.015
34	Not Analyzed	Radish	0.16	0.0516	0.0083
		Pepper	0.28	0.066	0.018
41	Not Analyzed	Tomato	0.13	0.065	0.0085
<b>MOE Samples</b>					
Sample #1	0.8	Tomato	0.2	0.065	0.013
		Green Pepper	0.05	0.066	0.0033
Sample #2	0.1	Pepper	0.2	0.066	0.013
		Tomato	0.2	0.065	0.013
<b>Control Samples</b>					
Food Store Control	n/a	Beet	0.21	0.13	0.027
		Pepper	0.17	0.066	0.011
		Lettuce	1.06	0.045	0.048
Wainfleet Bog (Background Control)	0.3 - 0.4	Beet Root	0.31	0.13	0.04
		Pepper	0.89	0.066	0.059
		Beet Top	0.69	0.091	0.063

n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-8: Levels of Cobalt in Produce from Rodney Street Residences**

Location	Cobalt Soil Concentration (µg/g)	Produce Type	Dry Weight Cobalt Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Cobalt Concentration in Produce <sup>1</sup> (µg/g)
<b>JWEL 2000 Samples</b>					
3	20.1	Beet Root	0.37	0.13	0.048
		Celery	0.14	0.059	0.0083
		Tomato	0.09	0.065	0.0059
9	Not Analyzed	Tomato	0.06	0.065	0.0039
25	28.6	Pepper	0.05	0.066	0.0033
		Lettuce	0.1	0.045	0.0045
		Beet Root	0.11	0.13	0.014
33	Not Analyzed	Lettuce	0.33	0.045	0.015
		Pepper	0.04	0.066	0.0026
34	Not Analyzed	Radish	0.13	0.0516	0.0067
		Pepper	<0.03	0.066	-
41	Not Analyzed	Tomato	0.04	0.065	0.0026
<b>MOE Samples</b>					
Sample #1	44.5	Tomato	0.1	0.065	0.0065
		Green Pepper	0.1	0.066	0.0066
Sample #2	58	Pepper	0.1	0.066	0.0066
		Tomato	0.1	0.065	0.0065
<b>Control Samples</b>					
Food Store	n/a <sup>2</sup>	Beet	0.02	0.13	0.0026
		Pepper	0.05	0.066	0.0033
		Lettuce	0.28	0.045	0.013
Wainfleet Bog (Background Control)	4.5	Beet Root	0.11	0.13	0.014
		Pepper	0.56	0.066	0.037
		Beet Top	0.22	0.091	0.02

<sup>1</sup> Fresh weight concentrations were not calculated when dry weight values were below the detection limit.

<sup>2</sup> n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-9: Levels of Arsenic in Produce from Rodney Street Residences**

Location	Arsenic Soil Concentration (µg/g)	Produce Type	Dry Weight Arsenic Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Arsenic Concentration in Produce <sup>1</sup> (µg/g)
<b>JWEL 2000 Samples</b>					
3	<0.2	Beet Root	<0.2	0.13	-
		Celery	<0.2	0.059	-
		Tomato	<0.4	0.065	-
9	Not Analyzed	Tomato	<0.4	0.065	-
25	18.6	Pepper	<0.4	0.066	-
		Lettuce	<0.4	0.045	-
		Beet Root	<0.4	0.13	-
33	Not Analyzed	Lettuce	<0.4	0.045	-
		Pepper	<0.2	0.066	-
34	Not Analyzed	Radish	0.2	0.0516	0.01
		Pepper	<0.6	0.066	-
41	Not Analyzed	Tomato	<0.4	0.065	-
<b>MOE Samples</b>					
Sample #1	13	Tomato	0.1	0.065	0.0065
		Green Pepper	0.1	0.066	0.0066
Sample #2	17.5	Pepper	0.1	0.066	0.0066
		Tomato	0.1	0.065	0.0065
<b>Control Samples</b>					
Food Store (Control)	n/a <sup>2</sup>	Beet	<0.2	0.13	-
		Pepper	<0.4	0.066	-
		Lettuce	<0.6	0.045	-
Wainfleet Bog (Background Control)	1.3 - 1.4	Beet Root	<0.2	0.13	-
		Pepper	<0.4	0.066	-
		Beet Top	<0.4	0.091	-

<sup>1</sup> Fresh weight concentrations were not calculated when dry weight values were below the detection limit.

<sup>2</sup> n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-10: Levels of Copper in Produce from Rodney Street Residences**

Location	Copper Soil Concentration (µg/g)	Produce Type	Dry Weight Copper Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Copper Concentration in Produce (µg/g)
<b>JWEL 2000 Samples</b>					
3	134	Beet Root	14.8	0.13	1.92
		Celery	5.14	0.059	0.3
		Tomato	10.1	0.065	0.66
9	Not Analyzed	Tomato	11.3	0.065	0.73
25	194	Pepper	10.4	0.066	0.69
		Lettuce	11.8	0.045	0.53
		Beet Root	9.71	0.13	1.26
33	Not Analyzed	Lettuce	8.81	0.045	0.4
		Pepper	7.09	0.066	0.47
34	Not Analyzed	Radish	5.2	0.0516	0.27
		Pepper	1.6	0.066	0.106
41	Not Analyzed	Tomato	7.93	0.065	0.52
<b>MOE Samples</b>					
Sample #1	220	Tomato	4.9	0.065	0.32
		Green Pepper	5.9	0.066	0.39
Sample #2	325	Pepper	9.4	0.066	0.62
		Tomato	4.6	0.065	0.3
<b>Control Samples</b>					
Food Store (Control)	n/a	Beet	7.78	0.13	1.01
		Pepper	18.7	0.066	1.23
		Lettuce	6.54	0.045	0.29
Wainfleet Bog (Background Control)	14.9 - 22.2	Beet Root	7.93	0.13	1.03
		Pepper	14.9	0.066	0.98
		Beet Top	7.21	0.091	0.66

n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-11: Levels of Lead in Produce from Rodney Street Residences**

Location	Lead Soil Concentration (µg/g)	Produce Type	Dry Weight Lead Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Lead Concentration in Produce (µg/g)
<b>JWEL 2000 Samples</b>					
3	379	Beet Root	6.26	0.13	0.81
		Celery	4.16	0.059	0.25
		Tomato	0.1	0.065	0.0065
9	Not Analyzed	Tomato	0.12	0.065	0.0078
25	371	Pepper	0.15	0.066	0.0099
		Lettuce	0.93	0.045	0.042
		Beet Root	8.11	0.13	1.05
33	Not Analyzed	Lettuce	2.43	0.045	0.11
		Pepper	2.55	0.066	0.17
34	Not Analyzed	Radish	2.55	0.0516	0.13
		Pepper	0.58	0.066	0.038
41	Not Analyzed	Tomato	<0.1	0.065	-
<b>MOE Samples</b>					
Sample #1	91.5	Tomato	0.25	0.065	0.016
		Green Pepper	0.25	0.066	0.017
Sample #2	88	Pepper	0.6	0.066	0.04
		Tomato	1.9	0.065	0.12
<b>Control Samples</b>					
Food Store Control	n/a <sup>2</sup>	Beet	0.17	0.13	0.022
		Pepper	0.13	0.066	0.0086
		Lettuce	0.23	0.045	0.01
Wainfleet Bog (Background Control)	10.9 - 11	Beet Root	0.1	0.13	0.013
		Pepper	0.15	0.066	0.0099
		Beet Top	0.35	0.091	0.032

<sup>1</sup> Fresh weight concentrations were not calculated when dry weight values were below the detection limit.

<sup>2</sup> n/a - not available.

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-12a: Levels of Nickel in Produce from Rodney Street Residences  
(JWEL & MOE 2000 Samples)**

Location	Nickel Soil Concentration (µg/g)	Produce Type	Dry Weight Nickel Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Nickel Concentration in Produce (µg/g)
JWEL 2000 Samples					
3	764	Beet	14	0.13	1.82
		Celery	4.2	0.059	0.248
		Tomato	3.2	0.065	0.208
6	99.5	Onion	0.3	0.11	0.033
		Pear	0.6	0.17	0.102
		Pepper	2.7	0.066	0.178
8	188	Apple	0.05**	0.15	0.0075
		Lettuce	5.7	0.045	0.257
		Pepper	6	0.066	0.396
17	157	Beet	1	0.13	0.13
		Pepper	1.3	0.066	0.0858
19	380	Apple	0.2	0.15	0.03
		Beet	1.1	0.13	0.143
		Cantaloupe	3.3	0.1	0.33
		Peach	2.8	0.11	0.308
		Pear	3.2	0.17	0.544
		Pepper	4.1	0.066	0.271
		Plum	1.6	0.21	0.336
		Tomato	2.5	0.065	0.163
20	333	Beet	1.9	0.13	0.247
		Pepper	6.1	0.066	0.403
23	472	Grapes	0.2	0.19	0.038
		Pepper	8.3	0.066	0.548
24	296	Apple	0.2	0.15	0.03
		Lettuce	4.2	0.045	0.189
		Pepper	4.9	0.066	0.323
25	1570	Pepper	7.9	0.066	0.521
		Lettuce	7	0.045	0.315
		Beet	10.5	0.13	1.365
26	516	Rhubarb	1.2	0.052	0.0624
		Squash	1.5	0.057	0.0855

Location	Nickel Soil Concentration (µg/g)	Produce Type	Dry Weight Nickel Concentration in Produce (µg/g)	Conversion Factor* (Dry Weight to Fresh Weight)	Fresh Weight Nickel Concentration in Produce (µg/g)
		Tomato	1.2	0.065	0.078
37	293	Celery	1.5	0.059	0.0885
		Pepper	10.4	0.066	0.686
42	302	Leeks	1.9	0.124	0.236
		Pepper	12.2	0.066	0.805
43	135	Carrot	0.7	0.12	0.084
		Pepper	2.9	0.066	0.191
<b>MOE Samples</b>					
MOE Sample	2750	Pepper	14	0.066	0.924
		Tomato	5.3	0.065	0.345
<b>Control Samples</b>					
Food Store Control	n/a	Beet	0.1	0.13	0.013
		Pepper	0.2	0.066	0.013
		Lettuce	0.6	0.045	0.027
Wainfleet Bog (Background Control)	15.4 - 15.8	Beet Root	0.3	0.13	0.039
		Pepper	4.8	0.066	0.317
		Beet Top	0.6	0.091	0.055

\* refer to Table A3-6 for dry weight to wet weight conversion factors

\*\* This value is one half the detection limit.

**Table A1-12b: Levels of Nickel in Produce from Port Colborne Residences  
(Data Provided by JWEL at Time of Report Finalization)**

Date Collected	JWEL Sample #	Produce Sampled	Dry Weight Nickel Concentration (µg/g)	Dry to Wet Conversion Factor*	Wet Weight Concentration (µg/g)
Sept. 5	FBS5S32B	apples	0.2	0.15	0.03
Sept. 7	FBS7S62B	apples	0.4	0.15	0.06
Sept. 5	FBS5S25B	apples	0.5	0.15	0.075
Sept. 6	FBS6S48A	apples	6.7	0.15	1.005
Sept. 7	FBS7S63A	apples	0.3	0.15	0.045
Sept. 7	FBS7S64E	apples	0.5	0.15	0.075
Sept. 7	FBS7S62G	basil	32.7	0.045	1.472
Sept. 5	FBS5S15A	beans	11.3	0.099	1.119
Sept. 7	FBS7S53D	beans	9	0.099	0.513
Sept. 7	FBS7S61B	beans	5.8	0.099	0.891
Sept. 5	FBS5S16A	beets	4.2	0.13	0.546
Sept. 5	FBS5S26A	beets	2.1	0.13	0.273
Sept. 5	FBS5S28B	beets	0.7	0.13	0.091
Sept. 6	FBS6S42B	beets	14.6	0.13	1.898
Sept. 7	FBS6S51A	beets	2.1	0.13	2.73
Sept. 7	FBS7S61C	beets	38.4	0.13	4.992
Sept. 7	FBS7S64D	beets	9.4	0.13	1.222
Sept. 11	FBS11S68A	beets	5.9	0.13	0.767
Sept. 11	FBS11S70A	beets	1.8	0.13	0.234
Sept. 11	FBS12S72A	beets	3.1	0.13	0.403
Sept. 7	FBS7S62I	broccoli	30.9	0.093	2.874
Sept. 6	FBS6S36B	cabbage	9.6	0.0468	0.449
Sept. 5	FBS5S22C	carrots	3.2	0.12	0.384
Sept. 5	FBS5S28A	carrots	0.6	0.12	0.072
Sept. 5	FBS5S30C	carrots	0.7	0.12	0.084
Sept. 6	FBS6S34A	carrots	1.2	0.12	0.144
Sept. 6	FBS6S40A	carrots	0.4	0.12	0.048
Sept. 6	FBS6S42A	carrots	9.2	0.12	1.104
Sept. 6	FBS6S49D	carrots	2.6	0.12	0.312
Sept. 7	FBS6S51B	carrots	3.4	0.12	0.408
Sept. 7	FBS7S59B	carrots	19.6	0.12	2.352
Sept. 7	FBS7S63C	carrots	3.6	0.12	0.432
Sept. 7	FBS7S64B	carrots	9.4	0.12	1.128
Sept. 11	FBS11S69A	carrots	6.6	0.12	0.792
Sept. 11	FBS11S70B	carrots	2.9	0.12	0.348
Sept. 11	FBS11S71A	carrots	3.3	0.12	0.396
Sept. 12	FBS12S74A	carrots	22.2	0.12	2.664
Sept. 5	FBS5S21B	celery	0.8	0.059	0.0472
Sept. 5	FBS5S33A	celery	19.4	0.059	1.145
Sept. 6	FBS6S36C	celery	0.5	0.059	0.0295
Sept. 6	FBS6S49B	celery	30.9	0.059	1.823
Sept. 5	FBS5S17B	cucumber	4.3	0.05	0.215
Sept. 5	FBS5S26C	cucumber	2.7	0.05	0.135

Date Collected	JWEL Sample #	Produce Sampled	Dry Weight Nickel Concentration (µg/g)	Dry to Wet Conversion Factor*	Wet Weight Concentration (µg/g)
Sept. 7	FBS7S52C	cucumber	2.7	0.05	0.135
Sept. 7	FBS7S53B	cucumber	7.6	0.05	0.38
Sept. 7	FBS7S55C	cucumber	14.7	0.05	0.735
Sept. 7	FBS7SS60B	cucumber	4	0.05	0.2
Sept. 5	FBS5S19B	eggplant	3.1	0.093	0.288
Sept. 6	FBS6S49C	eggplant	1.3	0.093	0.121
Sept. 7	FBS7S62F	fennel	7.8	0.0121	0.0944
Sept. 7	FBS7S62A	grapes	0.8	0.19	0.152
Sept. 12	FBS12S73A	horseradish	9.2	0.0516	0.475
Sept. 11	FBS11S66C	Jerusalem potato	13.5	0.133	1.796
Sept. 5	FBS5S22A	leeks	3.5	0.124	0.434
Sept. 5	FBS5S29B	leeks	2.4	0.124	0.298
Sept. 7	FBS7S62H	leeks	6.4	0.124	0.794
Sept. 7	FBS7S64C	leeks	11.6	0.124	1.438
Sept. 5	FBS5S23B	leeks	1.9	0.124	0.236
Sept. 5	FBS5S19A	lettuce	8.1	0.045	0.365
Sept. 5	FBS5S26B	lettuce	2.8	0.045	0.126
Sept. 5	FBS5S33C	lettuce	15.9	0.045	0.716
Sept. 6	FBS6S36A	lettuce	8	0.045	0.36
Sept. 6	FBS6S49A	lettuce	1.9	0.045	0.0855
Sept. 11	FBS11S65B	muskmelon	2	0.1	0.2
Sept. 5	FBS5S20C	onion	0.6	0.11	0.066
Sept. 5	FBS5S21A	onion	4.5	0.11	0.495
Sept. 5	FBS5S30B	onion	4.8	0.11	0.528
Sept. 6	FBS6S47A	onion	1.6	0.11	0.176
Sept. 7	FBS7S55D	onion	2.6	0.11	0.286
Sept. 7	FBS7SS60C	onion	4.6	0.11	0.506
Sept. 7	FBS7S61D	onion	15.6	0.11	1.716
Sept. 7	FBS7S62E	onion	9.5	0.11	1.045
Sept. 11	FBS11S67A	onion	1.4	0.11	0.154
Sept. 6	FBS6S43B	parsnip	7.2	0.21	1.512
Sept. 7	FBS7S64A	parsnip	14.1	0.21	2.961
Sept. 5	FBS5S19C	peach	4.8	0.11	0.528
Sept. 5	FBS5S32A	peach	1	0.11	0.11
Sept. 5	FBS5S33D	peach	2.7	0.11	0.297
Sept. 7	FBS7S62C	peach	9.7	0.11	1.067
Sept. 5	FBS5S19D	pears	2.6	0.17	0.442
Sept. 5	FBS5S31A	pears	0.7	0.17	0.119
Sept. 6	FBS5S31B	pears	1	0.17	0.17
Sept. 5	FBS5S25A	pears	1.7	0.17	0.289
Sept. 5	FBS5S23C	pears	1.1	0.17	0.187
Sept. 6	FBS6S35A	pears	0.8	0.17	0.136
Sept. 6	FBS6S36E	pears	5.4	0.17	0.918
Sept. 6	FBS6S45B	pears	0.3	0.17	0.051
Sept. 7	FBS7S62D	pears	2.1	0.17	0.357

Date Collected	JWEL Sample #	Produce Sampled	Dry Weight Nickel Concentration (µg/g)	Dry to Wet Conversion Factor*	Wet Weight Concentration (µg/g)
Sept. 7	FBS7S64F	pears	1.6	0.17	0.272
Sept. 6	FBS6S48B	pears	0.3	0.17	0.051
Sept. 6	FBS6S49E	pears	1.9	0.17	0.323
Sept. 6	FBS7S63B	pears	4.7	0.17	0.799
Sept. 5	FBS5S17C	peppers	11.1	0.066	0.733
Sept. 5	FBS5S22D	peppers	15.3	0.066	1.01
Sept. 5	FBS5S33B	peppers	8.6	0.066	0.568
Sept. 6	FBS6S34B	peppers	3.5	0.066	0.231
Sept. 6	FBS6S42D	peppers	16.5	0.066	1.089
Sept. 6	FBS6S44B	peppers	5.5	0.066	0.363
Sept. 6	FBS6S50A	peppers	41.5	0.066	0.957
Sept. 7	FBS7S52A	peppers	19.9	0.066	1.313
Sept. 7	FBS7S55B	peppers	26.9	0.066	1.775
Sept. 7	FBS7S59C	peppers	40.2	0.066	2.653
Sept. 11	FBS11S67B	peppers	11.9	0.066	0.785
Sept. 5	FBS5S28E	plum	0.3	0.21	0.063
Sept. 7	FBS6S40B	plum	0.3	0.21	0.063
Sept. 6	FBS6S43C	plum	0.4	0.21	0.084
Sept. 5	FBS5S21C	potato	2.9	0.133	0.386
Sept. 5	FBS5S28D	potato	0.5	0.133	0.0665
Sept. 5	FBS5S29A	potato	1	0.133	0.133
Sept. 5	FBS5S23A	potato	0.5	0.133	0.067
Sept. 6	FBS6S43A	potato	0.7	0.133	0.093
Sept. 11	FBS11S66B	potato	1.8	0.133	0.239
Sept. 7	FBS7S62J	radicchio	14.1	0.045	0.635
Sept. 7	FBS7S59A	radish	10.8	0.0516	0.557
Sept. 7	FBS7S51C	rhubarb	2.4	0.052	0.125
Sept. 7	FBS7S53C	rhubarb	2.1	0.052	0.109
Sept. 5	FBS5S17A	squash	13.6	0.057	0.775
Sept. 5	FBS5S30A	squash	2.3	0.057	0.131
Sept. 11	FBS11S65A	squash	1.4	0.057	0.0798
Sept. 11	FBS11S66A	squash	5.2	0.057	0.296
Sept. 5	FBS5S15C	Swiss chard	35.9	0.089	3.195
Sept. 5	FBS5S28C	swiss chard	0.8	0.089	0.0712
Sept. 5	FBS5S15B	tomato	6.1	0.065	0.397
Sept. 5	FBS5S16B	tomato	0.9	0.065	0.0585
Sept. 5	FBS5S18A	tomato	6	0.065	0.39
Sept. 5	FBS5S20B	tomato	0.5	0.065	0.0325
Sept. 5	FBS5S22B	tomato	2.6	0.065	0.169
Sept. 5	FBS5S24A	tomato	0.8	0.065	0.052
Sept. 5	FBS5S27A	tomato	0.5	0.065	0.0325
Sept. 6	FBS6S38A	tomato	0.6	0.065	0.039
Sept. 6	FBS6S39A	tomato	1.3	0.065	0.0845
Sept. 6	FBS6S42C	tomato	5.1	0.065	0.332
Sept. 6	FBS6S44A	tomato	6.9	0.065	0.449
Sept. 6	FBS6S45A	tomato	1	0.065	0.065

<b>Date Collected</b>	<b>JWEL Sample #</b>	<b>Produce Sampled</b>	<b>Dry Weight Nickel Concentration (µg/g)</b>	<b>Dry to Wet Conversion Factor*</b>	<b>Wet Weight Concentration (µg/g)</b>
Sept. 6	FBS6S46A	tomato	23.1	0.065	1.502
Sept. 7	FBS7S52B	tomato	0.9	0.065	0.0585
Sept. 7	FBS7S53A	tomato	1.4	0.065	0.091
Sept. 7	FBS7S55A	tomato	2.9	0.065	0.189
Sept. 7	FBS7S59D	tomato	28	0.065	1.82
Sept. 7	FBS7SS60A	tomato	31.1	0.052	2.022
Sept. 7	FBS7S61S	tomato	8.3	0.065	0.54
Sept. 5	FBS5S20A	watermelon	1.1	0.1	0.11
Sept. 5	FBS5S24B	zucchini	1.6	0.054	0.0864

\* refer to Table A3-6 for dry weight to wet weight conversion factors.

**Table A1-12c: Summary of Nickel in Produce from Rodney Street Residences  
(2000 and 2001 Samples Combined)**

<b>Summary Statistic</b>	<b>Wet Weight Nickel Concentration (µg/g)</b>
average	0.62
95 <sup>th</sup> percentile	2.32
maximum	4.99
median	0.33