

# **APPENDIX A**

## **Human Receptor Characteristics**

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Health Canada, 2004 - Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	8.2	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	8.83	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.39E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	2.25E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	2.59E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.21E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	3.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	0.00E+00	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	1.15E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	7.72E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	5.14E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	2.39E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	6.69E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	6.49E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	3620	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	0.50	years	Health Canada, 2004
BW	Body Weight	8.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.06	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	0.50	years	Health Canada, 2004
BW	Body Weight	8.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	8.83	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	8.83	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	1	years	Health Canada, 2004
BW	Body Weight	8	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	--	kg/day	--
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	--	kg/day	--
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Belowground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	--	kg/day	--
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Garden Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	--	kg/day	--
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	--	L/day	--
F <sub>water</sub>	Fraction of Water Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.1 Intake Parameters for the Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	0.74	L/day	US EPA Exposure Factors Handbook: Table 14-16
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	0.04	unitless	US EPA Exposure Factors Handbook: Table 14-16
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
BW <sub>mother</sub>	Body Weight - mother	62.2	kg	Richardson, 1997 (geometric mean - females)

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	1643	days	Based on 7 months to 4.99 years of age
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	16.5	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	80	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	24.70	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	5.24E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.14E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	6.73E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.50E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	6.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	1.14E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	4.29E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	2.41E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	4.33E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	8.12E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	1.91E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.36E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	6130	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.06	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	5	years	Health Canada, 2004
BW	Body Weight	17	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.005	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	0.233	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.003	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	0.178	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.007	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	0.106	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	0.116	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.01	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	0.325	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	0.60	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.2 Intake Parameters for the Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	27740	days	Based on a 75 year lifetime
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	27740	days	Based on a 75 year lifetime
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	62.4	kg	Calculated
IR <sub>soil</sub>	Soil Ingestion Rate	24	mg/d	Calculated
IR <sub>dust</sub>	Dust Ingestion Rate	4.41	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.35E-02	kg/day	Calculated
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.90E-03	kg/day	Calculated
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.21E-02	kg/day	Calculated
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.74E-03	kg/day	Calculated
IR <sub>wat</sub>	Water Ingestion Rate	1.32E+00	L/day	Calculated
IR <sub>fish</sub>	Fish Ingestion Rate	2.48E-02	kg/day	Calculated
IR <sub>wgame</sub>	Wild Game Ingestion Rate	6.89E-04	kg/day	Calculated
IR <sub>beef</sub>	Beef Ingestion Rate	5.11E-02	kg/day	Calculated
IR <sub>milk</sub>	Milk Ingestion Rate	2.97E-01	L/day	Calculated
IR <sub>pork</sub>	Pork Ingestion Rate	1.52E-02	kg/day	Calculated
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.49E-02	kg/day	Calculated
IR <sub>egg</sub>	Egg Ingestion Rate	1.78E-02	kg/day	Calculated
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup> /day	Calculated
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup> /day	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup> /day	Calculated
SA <sub>water</sub>	Exposed Surface Area - Water	15969	cm <sup>2</sup> /day	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.44	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.06	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.44	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	24	mg-soil/day	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	24	mg-soil/day	Calculated
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	4.41	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	4.41	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	62	kg	Calculated
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.013	kg/day	Calculated
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	0.233	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.004	kg/day	Calculated
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	0.178	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.012	kg/day	Calculated
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	0.106	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	Calculated
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	0.116	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.02	kg/day	Calculated
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	0.325	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.32	L/day	Calculated
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.3 Intake Parameters for the Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	20440	days	Based on the 56-year duration of adulthood
AT <sub>nc</sub>	Non Carcinogenic Effects	12775	days	Equal to Exposure Duration
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	12775	days	Equal to Exposure Duration
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	12775	days	Equal to Exposure Duration
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	62.2	kg	Richardson, 1997 Geomean Female Table 2.2
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	0.00	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Richardson, 1997 Geomean Female Table 4.1
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.55E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	4.06E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.27E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.10E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	1.50E+00	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	2.93E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	8.48E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	5.58E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	2.56E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	1.63E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.75E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.92E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	17670	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.06	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.063	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.938	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	62	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.016	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	0.233	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.004	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	0.178	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.013	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	0.106	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	0.116	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	0.325	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.50	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.4 Intake Parameters for the Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Health Canada, 2004 - Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.417	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	8.2	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	8.83	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.39E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	2.25E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	2.59E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.21E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	3.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	0.00E+00	kg/day	Health Canada, 2004
IR <sub>wgame</sub>	Wild Game Ingestion Rate	0.00E+00	kg/day	Health Canada, 2004
IR <sub>beef</sub>	Beef Ingestion Rate	7.72E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	5.14E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	2.39E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	6.69E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	6.49E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	3620	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	0.50	years	Health Canada, 2004
BW	Body Weight	8.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.42	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	0.50	years	Health Canada, 2004
BW	Body Weight	8.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	8.83	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	8.83	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	1	years	Health Canada, 2004
BW	Body Weight	8	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	--	kg/day	--
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	--	kg/day	--
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Belowground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	--	kg/day	--
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Garden Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	--	kg/day	--
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	--	L/day	--
F <sub>water</sub>	Fraction of Water Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.5 Intake Parameters for the First Nations Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	0.74	L/day	US EPA Exposure Factors Handbook: Table 14-16
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	0.04	unitless	US EPA Exposure Factors Handbook: Table 14-16
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
BW <sub>mother</sub>	Body Weight - mother	62.2	kg	Richardson, 1997 (geometric mean - females)

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	1643	days	Based on 7 months to 4.99 years of age
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.417	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	16.5	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	80	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	24.70	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	5.24E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.14E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	6.73E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.50E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	6.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	9.50E-02	kg/day	Health Canada, 2004
IR <sub>wgame</sub>	Wild Game Ingestion Rate	8.50E-02	kg/day	Health Canada, 2004
IR <sub>beef</sub>	Beef Ingestion Rate	2.41E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	4.33E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	8.12E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	1.91E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.36E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	6130	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.42	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	5	years	Health Canada, 2004
BW	Body Weight	17	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.005	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	0.233	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.003	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	0.178	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.007	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	0.106	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	0.116	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>1</b>	<b>Valid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	0.1	kg/day	Health Canada, 2004
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.10	kg/day	Health Canada, 2004
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	0.60	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.6 Intake Parameters for the First Nations Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	27740	days	Based on a 75 year lifetime
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	27740	days	Based on a 75 year lifetime
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.417	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	62.4	kg	Calculated
IR <sub>soil</sub>	Soil Ingestion Rate	24	mg/d	Calculated
IR <sub>dust</sub>	Dust Ingestion Rate	4.41	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.35E-02	kg/day	Calculated
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.90E-03	kg/day	Calculated
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.21E-02	kg/day	Calculated
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.74E-03	kg/day	Calculated
IR <sub>wat</sub>	Water Ingestion Rate	1.32E+00	L/day	Calculated
IR <sub>fish</sub>	Fish Ingestion Rate	2.04E-01	kg/day	Calculated
IR <sub>wgame</sub>	Wild Game Ingestion Rate	2.35E-01	kg/day	Calculated
IR <sub>beef</sub>	Beef Ingestion Rate	5.11E-02	kg/day	Calculated
IR <sub>milk</sub>	Milk Ingestion Rate	2.97E-01	L/day	Calculated
IR <sub>pork</sub>	Pork Ingestion Rate	1.52E-02	kg/day	Calculated
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.49E-02	kg/day	Calculated
IR <sub>egg</sub>	Egg Ingestion Rate	1.78E-02	kg/day	Calculated
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup> /day	Calculated
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup> /day	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup> /day	Calculated
SA <sub>water</sub>	Exposed Surface Area - Water	15969	cm <sup>2</sup> /day	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.44	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.42	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.44	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	24	mg-soil/day	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	24	mg-soil/day	Calculated
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	4.41	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	4.41	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	62	kg	Calculated
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.013	kg/day	Calculated
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	0.233	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.004	kg/day	Calculated
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	0.178	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.012	kg/day	Calculated
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	0.106	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	Calculated
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	0.116	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>1</b>	<b>Valid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	0.2	kg/day	Calculated
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.20	kg/day	Calculated
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.32	L/day	Calculated
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.7 Intake Parameters for the First Nations Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	20440	days	Based on the 56-year duration of adulthood
AT <sub>nc</sub>	Non Carcinogenic Effects	12775	days	Equal to Exposure Duration
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	12775	days	Equal to Exposure Duration
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	12775	days	Equal to Exposure Duration
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.417	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	62.2	kg	Richardson, 1997 Geomean Female Table 2.2
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	0.00	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Richardson, 1997 Geomean Female Table 4.1
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.55E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	4.06E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.27E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.10E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	1.50E+00	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	2.20E-01	kg/day	Health Canada, 2004
IR <sub>wgame</sub>	Wild Game Ingestion Rate	2.70E-01	kg/day	Health Canada, 2004
IR <sub>beef</sub>	Beef Ingestion Rate	5.58E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	2.56E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	1.63E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.75E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.92E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	17670	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.42	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.583	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	62	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.016	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	0.233	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.004	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	0.178	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.013	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	0.106	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	0.116	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>1</b>	<b>Valid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	0.3	kg/day	Health Canada, 2004
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.22	kg/day	Health Canada, 2004
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.50	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.8 Intake Parameters for the First Nations Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Health Canada, 2004 - Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	183	days	Health Canada, 2004 - Based on 0 - 6 months of age
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.333	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	8.2	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	8.83	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.39E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	2.25E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	2.59E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.21E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	3.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	0.00E+00	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	1.15E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	7.72E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	5.14E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	2.39E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	6.69E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	6.49E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	3620	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	0.50	years	Health Canada, 2004
BW	Body Weight	8.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.33	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	0.50	years	Health Canada, 2004
BW	Body Weight	8.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	2.10	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	8.83	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	8.83	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	1	years	Health Canada, 2004
BW	Body Weight	8	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	2112	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	652	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	320	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	--	kg/day	--
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	--	kg/day	--
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Belowground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	--	kg/day	--
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Garden Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	--	kg/day	--
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	--	L/day	--
F <sub>water</sub>	Fraction of Water Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.9 Intake Parameters for the Subsistence Farmer Resident Infant Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	0.74	L/day	US EPA Exposure Factors Handbook: Table 14-16
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	0.04	unitless	US EPA Exposure Factors Handbook: Table 14-16
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	8.2	kg	Health Canada, 2004
BW <sub>mother</sub>	Body Weight - mother	62.2	kg	Richardson, 1997 (geometric mean - females)

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	1643	days	Based on 7 months to 4.99 years of age
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.333	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	16.5	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	80	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	24.70	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	5.24E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.14E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	6.73E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.50E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	6.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	1.14E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	4.29E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	2.41E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	4.33E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	8.12E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	1.91E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.36E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	6130	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.33	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	5	years	Health Canada, 2004
BW	Body Weight	17	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.005	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.003	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.007	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.01	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	0.60	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.10 Intake Parameters for the Subsistence Farmer Resident Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	0.02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
F <sub>beef</sub>	Fraction of Beef Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Milk</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	0.43	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
F <sub>milk</sub>	Fraction of Milk Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Pork</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	0.01	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
F <sub>pork</sub>	Fraction of Pork Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Poultry</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	0.02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Egg</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	0.01	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Breast Milk</b>				
		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	27740	days	Based on a 75 year lifetime
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	27740	days	Based on a 75 year lifetime
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.333	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	62.4	kg	Calculated
IR <sub>soil</sub>	Soil Ingestion Rate	24	mg/d	Calculated
IR <sub>dust</sub>	Dust Ingestion Rate	4.41	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.35E-02	kg/day	Calculated
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.90E-03	kg/day	Calculated
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.21E-02	kg/day	Calculated
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.74E-03	kg/day	Calculated
IR <sub>wat</sub>	Water Ingestion Rate	1.32E+00	L/day	Calculated
IR <sub>fish</sub>	Fish Ingestion Rate	2.48E-02	kg/day	Calculated
IR <sub>wgame</sub>	Wild Game Ingestion Rate	6.89E-04	kg/day	Calculated
IR <sub>beef</sub>	Beef Ingestion Rate	5.11E-02	kg/day	Calculated
IR <sub>milk</sub>	Milk Ingestion Rate	2.97E-01	L/day	Calculated
IR <sub>pork</sub>	Pork Ingestion Rate	1.52E-02	kg/day	Calculated
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.49E-02	kg/day	Calculated
IR <sub>egg</sub>	Egg Ingestion Rate	1.78E-02	kg/day	Calculated
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup> /day	Calculated
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup> /day	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup> /day	Calculated
SA <sub>water</sub>	Exposed Surface Area - Water	15969	cm <sup>2</sup> /day	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.44	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.33	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.44	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.21	m <sup>3</sup> /d	Calculated
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	24	mg-soil/day	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	24	mg-soil/day	Calculated
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	4.41	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	4.41	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	62	kg	Calculated
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	8759	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1355	cm <sup>2</sup>	Calculated
SA <sub>hand</sub>	Exposed Surface Area - hand	822	cm <sup>2</sup>	Calculated
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.013	kg/day	Calculated
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.004	kg/day	Calculated
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.012	kg/day	Calculated
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	Calculated
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.02	kg/day	Calculated
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.32	L/day	Calculated
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated

**Table A.11 Intake Parameters for the Subsistence Farmer Resident Composite Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	0.05	kg/day	Calculated
F <sub>beef</sub>	Fraction of Beef Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Milk</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	0.30	L/day	Calculated
F <sub>milk</sub>	Fraction of Milk Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Pork</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	0.02	kg/day	Calculated
F <sub>pork</sub>	Fraction of Pork Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Poultry</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	0.03	kg/day	Calculated
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Egg</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	0.02	kg/day	Calculated
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Operating Life of Facility
BW	Body Weight	62.4	kg	Calculated
<b>Ingestion of Breast Milk</b>				
		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	20440	days	Based on the 56-year duration of adulthood
AT <sub>nc</sub>	Non Carcinogenic Effects	12775	days	Equal to Exposure Duration
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	12775	days	Equal to Exposure Duration
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	12775	days	Equal to Exposure Duration
<b>Exposure Times</b>				
ET	Exposure Time	1	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.333	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	62.2	kg	Richardson, 1997 Geomean Female Table 2.2
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	0.00	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Richardson, 1997 Geomean Female Table 4.1
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.55E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	4.06E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.27E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.10E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	1.50E+00	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	2.93E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	8.48E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	5.58E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	2.56E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	1.63E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.75E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.92E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	17670	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1.00	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.33	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	62.20	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.667	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.250	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	7.60E-07	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.750	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	14.59	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	62	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	0.016	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	0.004	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Belowground Garden Produce</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	0.013	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
WP	Washing / Peeling Factor	1	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Garden Fruit</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	0.0	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	0.03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.50	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004

**Table A.12 Intake Parameters for the Subsistence Farmer Resident Mother Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	0.06	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
F <sub>beef</sub>	Fraction of Beef Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Milk</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	0.26	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
F <sub>milk</sub>	Fraction of Milk Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Pork</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	0.02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
F <sub>pork</sub>	Fraction of Pork Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Poultry</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	0.04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Egg</b>				
		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	0.02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	1	unitless	US EPA Exp. Factors Handbook - Table 13-71
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	0.5	years	Operating Life of Facility
BW	Body Weight	62.2	kg	Health Canada, 2004
<b>Ingestion of Breast Milk</b>				
		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	27740	days	Based on a 75 year lifetime
AT <sub>nc</sub>	Non Carcinogenic Effects	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	1643	days	Based on 7 months to 4.99 years of age
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	1643	days	Based on 7 months to 4.99 years of age
<b>Exposure Times</b>				
ET	Exposure Time	0.416666667	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.292	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.042	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.313	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.021	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
<b>General Parameters</b>				
BW	Body Weight	16.5	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	80	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	24.70	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	5.24E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	3.14E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	6.73E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	1.50E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	6.00E-01	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	1.14E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	4.29E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	2.41E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	4.33E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	8.12E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	1.91E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.36E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	6130	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	0.42	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.04	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	4.50	years	Health Canada, 2004
BW	Body Weight	16.50	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	2.50E-04	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.292	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	2.50E-04	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.021	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	2.50E-04	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.313	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	9.30	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	0.416666667	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	80	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	24.70	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	5	years	Health Canada, 2004
BW	Body Weight	17	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	3470	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	890	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	430	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	--	kg/day	--
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	--	kg/day	--
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Belowground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	--	kg/day	--
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Garden Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	--	kg/day	--
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	0.60	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	4.5	years	Health Canada, 2004
BW	Body Weight	16.5	kg	Health Canada, 2004

**Table A.13 Intake Parameters for the Commercial Toddler Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Averaging Times</b>				
AT <sub>c</sub>	Carcinogenic Effects	20440	days	Based on the 56-year duration of adulthood
AT <sub>nc</sub>	Non Carcinogenic Effects	12775	days	Equal to Exposure Duration
AT <sub>nc-s</sub>	Non Carcinogenic Effects - Summer	12775	days	Equal to Exposure Duration
AT <sub>nc-w</sub>	Non Carcinogenic Effects - Winter	12775	days	Equal to Exposure Duration
<b>Exposure Times</b>				
ET	Exposure Time	0.416666667	unitless	Assumed
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.292	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.042	unitless	Health Canada, 2004 or Assumed
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.313	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.021	unitless	Health Canada, 2004 or Assumed
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF	Exposure Frequency	365	days/year	Calculated
EF <sub>Summer</sub>	Exposure Frequency - Summer	214	days/year	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency - Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
<b>General Parameters</b>				
BW	Body Weight	70.7	kg	Health Canada, 2004
IR <sub>soil</sub>	Soil Ingestion Rate	20	mg/d	Health Canada, 2004
IR <sub>dust</sub>	Dust Ingestion Rate	0.00	mg/d	Calculated - OMOE Rationale, Appendix B.5
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
IR <sub>ap</sub>	Ingestion Rate of Aboveground Exposed Produce	1.55E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-9
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	4.06E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-10
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	1.27E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-11
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	8.10E-03	kg/day	US EPA Exposure Factors Handbook, 1999: Table 9-7
IR <sub>wat</sub>	Water Ingestion Rate	1.50E+00	L/day	Health Canada, 2004
IR <sub>fish</sub>	Fish Ingestion Rate	2.93E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 10-61
IR <sub>wgame</sub>	Wild Game Ingestion Rate	8.48E-04	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-6
IR <sub>beef</sub>	Beef Ingestion Rate	5.58E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-3
IR <sub>milk</sub>	Milk Ingestion Rate	2.56E-01	L/day	US EPA Exposure Factors Handbook, 1999: Table 11-2
IR <sub>pork</sub>	Pork Ingestion Rate	1.63E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-4
IR <sub>poultry</sub>	Poultry Ingestion Rate	3.75E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-5
IR <sub>egg</sub>	Egg Ingestion Rate	1.92E-02	kg/day	US EPA Exposure Factors Handbook, 1999: Table 11-7
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup> /day	Richardson, 1997
SA <sub>water</sub>	Exposed Surface Area - Water	17670	cm <sup>2</sup> /day	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>INHALATION</b>				
<b>Inhalation of Constituents through Direct Inhalation - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	0.42	unitless	Assumed
EF	Exposure Frequency	365.00	days/year	Calculated
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	70.70	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	0.00	kg/m <sup>3</sup>	Health Canada, 2004
ET <sub>Sum-Out-Inh</sub>	Exposure Time - Summer - Outdoor - Inhalation	0.04	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214.00	days/year	Environment Canada, 2007
ED	Exposure Duration	35.00	years	Operating Life of Facility
BW	Body Weight	70.70	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	2.50E-04	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Inh</sub>	Exposure Time - Summer - Indoor - Inhalation	0.292	unitless	Health Canada, 2004 or Assumed
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	2.50E-04	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Inh</sub>	Exposure Time - Winter - Outdoor - Inhalation	0.021	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Inhalation of Constituents through Resuspended Soil/Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
TSP	Total Suspended Particulate	2.50E-04	kg/m <sup>3</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Inh</sub>	Exposure Time - Winter - Indoor - Inhalation	0.313	unitless	Health Canada, 2004 or Assumed
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Inhalation of Constituents through Soil Vapours - All Year</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>inh</sub>	Inhalation Rate	15.80	m <sup>3</sup> /d	Health Canada, 2004
ET	Exposure Time	0.416666667	unitless	Assumed
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>SOIL INGESTION</b>				
<b>Ingestion of Constituents via Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Ingestion of Constituents via Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>soil</sub>	Incidental Ingestion Rate-Soil	20	mg-soil/day	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.80	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Ingestion of Constituents via Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>dust</sub>	Incidental Ingestion Rate-Dust	0.00	mg-soil/day	Calculated - OMOE Rationale, Appendix B.5
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>DERMAL CONTACT</b>				
<b>Dermal Contact with Soil/Dust - Summer - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Dermal Contact with Soil/Dust - Winter - Outdoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>body</sub>	Soil Adherence Rate - body	0.01	mg-soil/cm <sup>2</sup>	Health Canada, 2004
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Dermal Contact with Dust - Summer - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.1	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.8	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
ET <sub>Sum-Ind-Ing</sub>	Exposure Time - Summer - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35	years	Operating Life of Facility
BW	Body Weight	71	kg	Health Canada, 2004
<b>Dermal Contact with Dust - Winter - Indoor</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
SAF <sub>hand</sub>	Soil Adherence Rate - hand	0.10	mg-soil/cm <sup>2</sup>	Health Canada, 2004
FR <sub>soili</sub>	Fraction of Dust from Soil - indoor	0.800	unitless	Hawley, 1985 (Risk Analysis, V3, No. 4)
FR <sub>snow</sub>	Fraction of Winter that Site is not Snow Covered	0.61	unitless	Environment Canada, 2007
ET <sub>Winter-Ind-Ing</sub>	Exposure Time - Winter - Indoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Direct Dermal Contact - Vapour &amp; Particulate - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Summer</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>summer</sub>	Exposed Surface Area - Summer	9661	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Sum-Out-Ing</sub>	Exposure Time - Summer - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Summer</sub>	Exposure Frequency-Summer	214	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004
<b>Direct Dermal Contact - Soil Vapours - Winter</b>		<b>1</b>	<b>Valid Pathway</b>	
SA <sub>winter</sub>	Exposed Surface Area - Winter	1431	cm <sup>2</sup>	Richardson, 1997
SA <sub>hand</sub>	Exposed Surface Area - hand	890	cm <sup>2</sup>	Richardson, 1997
ET <sub>Winter-Out-Ing</sub>	Exposure Time - Winter - Outdoor - Ingestion & Dermal Contact	1	unitless	Health Canada, 2004
EF <sub>Winter</sub>	Exposure Frequency-Winter	151	days/year	Environment Canada, 2007
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>FOOD INGESTION</b>				
<b>Ingestion of Aboveground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>ap</sub>	Ingestion Rate of Aboveground Produce	--	kg/day	--
F <sub>ap</sub>	Fraction of Aboveground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>app</sub>	Ingestion Rate of Aboveground Protected Produce	--	kg/day	--
F <sub>app</sub>	Fraction of Aboveground Protected Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Belowground Garden Produce</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bp</sub>	Ingestion Rate of Belowground Produce	--	kg/day	--
F <sub>bp</sub>	Fraction of Belowground Produce Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Garden Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fr</sub>	Ingestion Rate of Garden Fruit	--	kg/day	--
F <sub>fr</sub>	Fraction of Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>atp</sub>	Ingestion Rate of Aboveground Traditional Plants	--	kg/day	--
F <sub>atp</sub>	Fraction of Aboveground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Aboveground Protected Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>aptp</sub>	Ingestion Rate of Aboveground Protected Traditional Plants	--	kg/day	--
F <sub>aptp</sub>	Fraction of Aboveground Protected Traditional Plants Consumed from	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Belowground Traditional Plants</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>btp</sub>	Ingestion Rate of Belowground Traditional Plants	--	kg/day	--
F <sub>btp</sub>	Fraction of Belowground Traditional Plants Consumed from Site	--	unitless	--
WP	Washing / Peeling Factor	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Fruit</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>wf</sub>	Ingestion Rate of Wild Fruit	--	kg/day	--
F <sub>wfr</sub>	Fraction of Wild Fruit Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Wild Game</b>		<b>0</b>	<b>Invalid Pathway</b>	
Ir <sub>wg</sub>	Ingestion Rate of Wild Game	--	kg/day	--
F <sub>game</sub>	Fraction of Wild Game Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - Lake</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_lake</sub>	Fraction of Total Fish Ingestion from Lake	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Fish - River</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>fish</sub>	Ingestion Rate of Fish	--	kg/day	--
F <sub>fish</sub>	Fraction of Total Fish Consumed that is Caught by Receptor	--	unitless	--
F <sub>fish_cont</sub>	Fraction of Caught Fish from Site	--	unitless	--
F <sub>fish_river</sub>	Fraction of Total Fish Ingestion from River	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Surface Water</b>		<b>1</b>	<b>Valid Pathway</b>	
IR <sub>water</sub>	Ingestion Rate of Water	1.50	L/day	Health Canada, 2004
F <sub>water</sub>	Fraction of Water Consumed from Site	1	unitless	Site Specific
EF	Exposure Frequency	365	days/year	Calculated
ED	Exposure Duration	35.0	years	Operating Life of Facility
BW	Body Weight	70.7	kg	Health Canada, 2004

**Table A.14 Intake Parameters for the Commercial Adult Receptor for the Durham-York Region**

Parameter	Description	Value	Units	Source
<b>Ingestion of Beef</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>beef</sub>	Ingestion Rate of Beef	--	kg/day	--
F <sub>beef</sub>	Fraction of Beef Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>milk</sub>	Ingestion Rate of Milk	--	L/day	--
F <sub>milk</sub>	Fraction of Milk Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Pork</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>pork</sub>	Ingestion Rate of Pork	--	kg/day	--
F <sub>pork</sub>	Fraction of Pork Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Poultry</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>poultry</sub>	Ingestion Rate of Poultry	--	kg/day	--
F <sub>poultry</sub>	Fraction of Poultry Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Egg</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>egg</sub>	Ingestion Rate of Eggs	--	kg/day	--
F <sub>egg</sub>	Fraction of Eggs Consumed from Site	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
<b>Ingestion of Breast Milk</b>		<b>0</b>	<b>Invalid Pathway</b>	
IR <sub>bmilk</sub>	Ingestion Rate of Breast Milk	--	L/day	--
F <sub>bmfat</sub>	Fraction of Breast Milk that is Fat	--	unitless	--
EF	Exposure Frequency	--	days/year	--
ED	Exposure Duration	--	years	--
BW	Body Weight	--	kg	--
BW <sub>mother</sub>	Body Weight - mother	--	kg	--