

# *Appendix C - 3*

## *Summary of Biological Data*



*Milk and Meat Samples are Collected from Local Bovine Herds*

**Table C - 3.1**

**1992 Radioactivity Concentrations in Milk ( $\mu\text{Ci/mL}$ )**

Location	Date	H-3	Sr-90	I-129	Cs-134	Cs-137	K-40
<b>BFMCOBO</b> (WNW FARM)	<i>1st Qtr</i>	<7.43E-08	2.50±0.30E-09	<3.51E-10	<2.01E-09	<2.30E-09	9.08±0.91E-07
<b>BFMCOBO</b> (WNW FARM)	<i>2nd Qtr</i>	<9.37E-08	1.60±0.10E-08	<2.63E-10	<2.41E-09	<2.30E-09	1.05±0.11E-06
<b>BFMCOBO</b> (WNW FARM)	<i>3rd Qtr</i>	1.40±0.70E-07	1.50±0.20E-09	<3.50E-10	<2.60E-09	<2.39E-09	8.73±0.87E-07
<b>BFMCOBO</b> (WNW FARM)	<i>4th Qtr</i>	1.60±0.80E-07	2.20±0.30E-09	4.10±3.40E-10	<2.33E-09	<2.25E-09	1.17±0.12E-06
<b>BFMCTLN</b> (CONTROL)	<i>1st Qtr</i>	<7.90E-08	1.70±0.20E-09	<3.00E-10	<2.07E-09	<2.10E-09	1.04±0.10E-06
<b>BFMCTLN</b> (CONTROL)	<i>2nd Qtr</i>	<9.50E-08	2.20±0.40E-09	<2.50E-10	<2.40E-09	<2.72E-09	1.51±0.15E-06
<b>BFMCTLN</b> (CONTROL)	<i>3rd Qtr</i>	7.60±7.10E-07	9.20±1.50E-10	<2.68E-10	<3.02E-09	<2.50E-09	1.12±0.11E-06
<b>BFMCTLN</b> (CONTROL)	<i>4th Qtr</i>	1.10±0.80E-07	1.10±0.90E-09	3.70±2.90E-10	<3.10E-09	3.20±3.00E-09	1.51±0.15E-06
<b>BFMCTLS</b> (CONTROL)	<i>1st Qtr</i>	<7.90E-08	9.50±2.00E-10	<3.80E-10	<2.30E-09	<2.20E-09	7.03±0.70E-07
<b>BFMCTLS</b> (CONTROL)	<i>2nd Qtr</i>	<9.50E-08	9.90±0.60E-09	<3.93E-10	<2.55E-09	<2.56E-09	1.43±0.14E-06
<b>BFMCTLS</b> (CONTROL)	<i>3rd Qtr</i>	1.60±0.80E-07	8.20±1.50E-10	6.50±3.20E-10	<2.80E-09	2.80±2.50E-09	1.01±0.10E-06
<b>BFMCTLS</b> (CONTROL)	<i>4th Qtr</i>	8.60±7.40E-08	2.30±0.30E-09	<3.50E-10	<2.30E-09	<2.10E-09	1.39±0.14E-06
<b>BFMREED</b> (NNW FARM)	<i>1st Qtr</i>	<7.80E-08	9.80±2.50E-10	<3.00E-10	<2.64E-09	2.90±2.70E-09	1.03±0.10E-06
<b>BFMREED</b> (NNW FARM)	<i>2nd Qtr</i>	<9.60E-08	8.80±0.50E-09	<2.67E-10	<2.59E-09	<2.70E-09	1.40±0.14E-06
<b>BFMREED</b> (NNW FARM)	<i>3rd Qtr</i>	8.30±7.21E-08	1.30±0.20E-09	4.40±3.00E-10	<2.67E-09	<2.70E-09	1.21±0.12E-06
<b>BFMREED</b> (NNW FARM)	<i>4th Qtr</i>	<7.40E-08	2.40±0.30E-09	<2.90E-10	<2.60E-09	<2.50E-09	1.37±0.14E-06
<b>BFMHUR</b> (SE FARM)	<i>Annual</i>	1.08±0.08E-06	2.06±0.44E-09	<6.80E-10	<3.26E-09	<3.69E-09	1.57±0.17E-06
<b>BFMWIDR</b> (SSW FARM)	<i>Annual</i>	5.44±0.86E-07	1.62±0.42E-09	<6.99E-10	<3.77E-09	<4.45E-09	3.63±0.23E-06

**Table C - 3.2****1992 Radioactivity Concentrations in Meat ( $\mu\text{Ci/g Dry}$ )**

<b>Location</b>	<b>Moisture %</b>	<b>H-3</b> ( $\mu\text{Ci/mL}$ )	<b>Sr-90</b> ( $\mu\text{Ci/g}$ )	<b>Cs-134</b> ( $\mu\text{Ci/g}$ )	<b>Cs-137</b> ( $\mu\text{Ci/g}$ )	<b>K-40</b> ( $\mu\text{Ci/g}$ )
<b>DEER FLESH BACKGROUND</b> (BFDCTRL #1)	70.9	<1.90E-07	<1.80E-09	<1.96E-08	<2.10E-08	1.05 $\pm$ 0.11E-05
<b>DEER FLESH BACKGROUND</b> (BFDCTRL #2)	72.2	2.60 $\pm$ 2.10E-07	<3.26E-09	<1.60E-08	<1.45E-08	9.43 $\pm$ 0.94E-06
<b>DEER FLESH BACKGROUND</b> (BFDCTRL #3)	54.7	<2.00E-07	<2.80E-09	<1.20E-08	2.76 $\pm$ 0.28E-07	9.81 $\pm$ 0.98E-06
<b>DEER FLESH NEAR-SITE</b> (BFDNEAR #1)	74.4	1.83 $\pm$ 1.02E-07	<5.39E-09	<3.94E-08	1.99 $\pm$ 0.45E-07	1.66 $\pm$ 0.14E-05
<b>DEER FLESH NEAR-SITE</b> (BFDNEAR #2)	74.3	5.36 $\pm$ 0.91E-07	<9.30E-09	<5.35E-08	1.32 $\pm$ 0.43E-07	1.81 $\pm$ 0.38E-05
<b>DEER FLESH NEAR-SITE</b> (BFDNEAR #3)	73.5	6.26 $\pm$ 0.90E-07	<2.01E-08	<2.82E-08	1.30 $\pm$ 0.34E-07	3.08 $\pm$ 0.07E-05
<b>BEEF FLESH BACKGROUND</b> (BFBCTRL) 06/92	68.5	<1.07E-07	<2.62E-08	<3.96E-08	<4.13E-08	1.14 $\pm$ 1.05E-06
<b>BEEF FLESH BACKGROUND</b> (BFBCTRL) 10/92	71.2	1.10 $\pm$ 1.00E-07	<3.30E-09	<9.70E-09	1.20 $\pm$ 0.90E-08	9.11 $\pm$ 0.91E-06
<b>BEEF FLESH NEAR-SITE</b> (BFBNEAR) 07/92	70.2	<9.94E-08	<8.83E-09	<2.67E-08	<2.82E-08	1.98 $\pm$ 0.81E-06
<b>BEEF FLESH NEAR-SITE</b> (BFBNEAR) 12/92	59.5	4.50 $\pm$ 2.00E-07	<1.27E-09	<1.01E-08	2.20 $\pm$ 1.10E-08	1.02 $\pm$ 0.10E-05

**Table C - 3.3**

**1992 Radioactivity Concentrations in Food Crops ( $\mu\text{Ci/g Dry}$ )**

Location	Moisture %	H-3 ( $\mu\text{Ci/mL}$ )	Sr-90 ( $\mu\text{Ci/g}$ )	K-40 ( $\mu\text{Ci/g}$ )	Co-60 ( $\mu\text{Ci/g}$ )	Cs-137 ( $\mu\text{Ci/g}$ )
<b>BEANS BACKGROUND (BFVCTRL)</b>	91.3	1.48±0.99E-07	4.23±0.52E-08	4.50±0.13E-04	<6.67E-07	<6.15E-07
<b>BEANS NEAR-SITE (BFVNEAR)</b>	89.4	<1.08E-07	1.73±0.12E-07	7.38±2.22E-05	<3.74E-07	<3.67E-07
<b>APPLES BACKGROUND (BFVCTRL)</b>	86.6	<1.11E-07	1.95±0.30E-08	3.75±1.29E-05	<2.23E-07	<2.01E-07
<b>APPLES NEAR-SITE (BFVNEAR)</b>	83.9	<1.18E-07	2.21±0.20E-08	2.72±0.08E-04	<4.07E-07	<3.99E-07
<b>SWEET CORN BACKGROUND (BFVCTRL)</b>	78.7	2.22±1.04E-07	<3.12E-09	1.42±0.09E-04	<2.00E-07	<1.88E-07
<b>SWEET CORN NEAR-SITE (BFVNEAR)</b>	82.2	3.18±1.04E-07	1.87±0.72E-08	2.93±1.24E-05	<1.89E-07	<1.86E-07
<b>FIELD CORN BACKGROUND (BFVNRQC)</b>	53.9	<1.05E-07	<3.07E-09	8.71±3.94E-06	<6.05E-08	<5.83E-08
<b>FIELD CORN NEAR-SITE (BFVCTQC)</b>	57.5	<1.10E-07	<3.04E-09	5.11±1.48E-06	<4.75E-08	<4.28E-08
<b>HAY BACKGROUND (BFHCTLS)</b>	6.5	N/A	4.56±0.32E-08	2.58±0.72E-05	<2.77E-07	<2.22E-07
<b>HAY NEAR-SITE (BFHNEAR)</b>	11.9	N/A	9.72±0.32E-08	4.52±1.70E-05	<2.94E-07	<2.83E-07

N/A - Not available.

### Table C - 3.4

## 1992 Radioactivity Concentrations in Fish Flesh from Cattaraugus Creek

#### Cattaraugus Creek (BFFCATC) above Springville Dam

	1st Half ( $\mu\text{Ci/g dry}$ )			2nd Half ( $\mu\text{Ci/g dry}$ )		
	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>
<b>Median</b>	9.8E-08	-4.0E-09	4.6E-08	-8.4E-08	<8.5E-07	<9.3E-07
<b>Geometric Deviation (Avg)</b>	<i>Not appropriate</i>			<i>Not appropriate</i>		
<b>Maximum</b>	2.0E-06	2.2E-07	5.8E-07	1.1E-07	<1.5E-06	<1.7E-06
<b>Minimum</b>	-1.6E-08	-1.0E-07	-9.8E-08	-4.8E-07	<5.7E-07	<6.0E-07
<b>Moisture (Average %)</b>	75.5			78.2		

#### Cattaraugus Creek (BFFCTRL) Background

	1st Half ( $\mu\text{Ci/g dry}$ )			2nd Half ( $\mu\text{Ci/g dry}$ )		
	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>
<b>Median</b>	2.2E-07	2.4E-08	2.4E-09	-7.3E-08	<8.3E-07	<8.9E-07
<b>Geometric Deviation (Avg)</b>	<i>Not appropriate</i>			<i>Not appropriate</i>		
<b>Maximum</b>	2.3E-06	2.2E-07	1.4E-07	1.1E-07	<1.4E-06	<1.6E-06
<b>Minimum</b>	3.1E-09	-7.7E-08	-7.0E-08	-6.0E-07	<4.8E-07	<5.0E-07
<b>Moisture (Average %)</b>	76.2			79.3		

#### Cattaraugus Creek (BFFCATD) below the Springville Dam (Annual) \*

	( $\mu\text{Ci/g wet}$ )		
	<i>Sr-90</i>	<i>Cs-134</i>	<i>Cs-137</i>
<b>Median</b>	-4.2E-08	<4.9E-07	<5.5E-07
<b>Geometric Deviation (Avg)</b>	<i>Not appropriate</i>		
<b>Maximum</b>	2.0E-07	<2.6E-06	<2.9E-06
<b>Minimum</b>	-3.4E-06	<1.0E-07	<1.0E-07
<b>Moisture (Average %)</b>	76.0		

\* Sample not collected for the first half of 1992.