Appendix F

Summary of Biological Data

Milk and Meat Samples are Collected from Local Bovine Herds

The following tables contain a bolding convention devised to help the reader, when viewing the data, to quickly see the range of detectable measurements within a data series. A data series is a set of chemical or radionuclide measurements (e.g., gross alpha, gross beta, tritium) from a single location or from similar locations. Note that some tables contain data that should not be technically evaluated under this convention.

Key to bolding convention:

Results for each constituent constitute a single data series. If a radiological result is larger than the uncertainty term, the measurement is considered positive. Otherwise, a result is considered non-detectable.

If all results in a data series are positive, the lowest and highest values are bolded.
If a data series contains some positive results, the highest value is bolded.
If all values in a data series are nondetectable, no values are bolded.

Table F-1
2003 Radioactivity Concentrations (µCi/mL) in Milk

Location	H-3	K-40	Sr-90	I-129	Cs-137
BFMCTLN (Control)					
1st Quarter	1.70±1.10E-07	1.51±0.19E-06	3.75±5.11E-10	0.70±1.64E-10	2.06±2.36E-09
BFMCTLS (Control)					
1st Quarter	1.34±1.04E-07	1.47±0.18E-06	5.60±5.50E-10	-0.36±1.81E-10	-1.28±2.77E-09
2nd Quarter	0.32±1.04E-07	**1.32±0.16E-06**	2.54±2.43E-10	-0.22±3.16E-10	0.18±1.95E-09
3rd Quarter	-0.45±1.07E-07	**1.49±0.18E-06**	2.30±4.63E-10	-0.05±1.45E-10	1.55±3.44E-09
4th Quarter	**1.39±1.16E-07**	1.41±0.11E-06	**9.33±5.85E-10**	0.26±3.00E-10	-0.05±1.49E-09
BFMREED (NNW Farm)					
1st Quarter	0.49±1.02E-07	**1.35±0.17E-06**	9.46±5.34E-10	0.72±2.76E-10	1.94±4.18E-09
2nd Quarter	2.11±8.76E-08	1.45±0.18E-06	1.25±0.27E-09	1.35±2.46E-10	0.64±2.04E-09
3rd Quarter	4.15±9.64E-08	1.44±0.17E-06	-0.17±4.33E-10	**3.19±2.85E-10**	1.79±2.20E-09
4th Quarter	0.39±1.08E-07	**1.46±0.12E-06**	**1.36±0.63E-09**	0.16±2.55E-10	**2.42±2.31E-09**
BFMSCHT (S Farm)					
Annual	-1.28±1.08E-07	1.11±0.10E-06	1.41±0.34E-09	4.70±4.35E-10	1.28±1.63E-09
BFMWIDR (SE Farm)					
Annual	1.28±1.20E-07	1.06±0.07E-06	7.71±2.93E-10	-0.85±4.31E-10	-0.01±1.44E-09

*Note: Bolding convention applied to these data. See page F-2*C.

Table F-2
2003 Radioactivity Concentrations (µCi/g - dry) in Meat

2003 Radioactivity Concentrations in Beef

Location	% Moisture	H-3 (µCi/mL)	K-40	Sr-90	Cs-137
Beef Flesh Background (BFBCTRL 03/03)	70.4	0.50±1.05E-07	9.95±1.21E-06	1.23±1.53E-09	2.91±2.75E-08
Beef Flesh Background (BFBCTRL 10/03)	75.8	0.05±1.09E-07	9.53±1.47E-06	1.14±0.65E-09	1.44±3.94E-08
Beef Flesh Near-Site (BFBNEAR 02/03)	75.3	3.84±8.58E-08	1.11±0.12E-05	0.86±1.63E-09	1.01±1.21E-08
Beef Flesh Near-Site (BFBNEAR 10/03)	71.0	1.07±1.12E-07	9.96±1.14E-06	5.48±1.47E-09	0.80±2.12E-08

2003 Radioactivity Concentrations in Venison

Location	% Moisture	H-3 (µCi/mL)	K-40	Sr-90	Cs-137
Deer Flesh Background (BFDCTRL 12/03)	76.4	**3.11±1.22E-07**	**1.01±0.09E-05**	**1.74±1.29E-09**	**1.06±0.25E-07**
Deer Flesh Background (BFDCTRL 12/03)	71.4	2.81±1.20E-07	9.58±0.80E-06	-1.14±1.22E-09	2.55±2.05E-08
Deer Flesh Background (BFDCTRL 12/03)	73.4	0.99±1.13E-07	**8.84±0.97E-06**	-1.01±1.36E-09	3.13±3.39E-08
Deer Flesh Near-Site (BFDNEAR 10/03)	70.6	0.98±1.14E-07	9.24±0.84E-06	**1.53±1.23E-09**	**1.31±0.31E-07**
Deer Flesh Near-Site (BFDNEAR 10/03)	69.4	-0.24±1.08E-07	**8.81±0.86E-06**	1.28±0.58E-09	3.04±1.88E-08
Deer Flesh Near-Site (BFDNEAR 10/03)	71.5	0.83±1.13E-07	**1.09±0.11E-05**	**1.28±0.64E-09**	3.44±3.75E-08

*Note: Bolding convention applied to venison data. See page F-2*C.

Table F-3
2003 Radioactivity Concentrations (µCi/g - dry) in Food Crops

Location	% Moisture	H-3 (µCi/mL)	K-40	Co-60	Sr-90	Cs-137
CORN						
Background						
(BFVCTRC)	79.5	2.96±1.50E-07	1.16±0.09E-05	0.54±1.30E-08	5.52±1.81E-09	0.26±1.22E-08
Near-Site						
(BFVNEAC)	75.4	6.67±1.43E-07	1.12±0.10E-05	2.69±2.59E-08	5.11±2.19E-09	0.19±2.84E-08
BEANS						
Background						
(BFVCTRB)	90.9	1.33±1.11E-07	3.24±0.36E-05	-0.96±8.03E-08	4.25±0.31E-08	4.30±6.54E-08
Near-Site						
(BFVNEAB)	92.6	2.12±1.15E-07	1.77±0.33E-05	-2.65±8.09E-08	1.06±0.05E-07	1.54±6.32E-08
APPLES						
Background						
(BFVCTRA)	87.8	2.59±1.05E-07	5.23±0.73E-06	1.51±2.59E-08	2.95±1.26E-09	0.02±2.00E-08
Near-Site						
(BFVNEAAF)	81.0	3.29±1.15E-07	8.44±0.97E-06	1.44±2.05E-08	6.83±1.05E-09	6.86±3.13E-08

Note: Bolding convention not applicable to these data.

Table F-4
2003 Radioactivity Concentrations (µCi/g - dry) in Fish Flesh From Cattaraugus Creek

Cattaraugus Creek above the Springville Dam (BFFCATC)

Annual 2003

Species	% Moisture	Sr-90	Cs-137
Hog-nosed Sucker	74.9	6.82±0.37E-08	0.98±9.50E-08
Hog-nosed Sucker	78.8	5.47±0.26E-08	1.44±9.08E-08
Hog-nosed Sucker	80.1	2.23±0.14E-07	0.50±2.77E-07
Hog-nosed Sucker	76.5	6.22±0.32E-08	1.23±4.16E-07
Creek Chub	80.6	**3.40±0.18E-07**	1.04±1.36E-07
Hog-nosed Sucker	80.8	**1.04±0.56E-08**	7.04±8.17E-08
Hog-nosed Sucker	76.9	1.26±0.67E-08	4.43±8.88E-08
Hog-nosed Sucker	75.5	1.18±0.07E-07	0.39±1.06E-07
Hog-nosed Sucker	78.0	1.65±0.67E-08	2.25±6.88E-08
Hog-nosed Sucker	76.2	2.31±0.66E-08	5.19±5.81E-08
Average % Moisture	77.8		
Median		5.84E-08	<9.29E-08
Maximum		3.40E-07	<4.16E-07
Minimum		1.04E-08	<5.81E-08

Cattaraugus Creek below the Springville Dam (BFFCATD)

Annual 2003

Species	% Moisture	Sr-90	Cs-137
Steelhead Trout	77.9	**6.67±1.83E-09**	**3.08±1.47E-08**
Steelhead Trout	70.6	4.30±1.16E-09	0.30±2.33E-08
Steelhead Trout	70.7	3.46±9.00E-10	1.01±2.78E-08
Steelhead Trout	70.9	8.51±9.40E-10	1.08±2.41E-08
Steelhead Trout	76.6	1.85±0.93E-09	1.54±1.19E-08
Steelhead Trout	70.3	3.98±0.83E-09	2.21±2.08E-08
Steelhead Trout	75.8	3.77±0.93E-09	2.19±2.04E-08
Steelhead Trout	71.1	2.71±0.75E-09	2.89±2.63E-08
Steelhead Trout	70.7	1.81±0.72E-09	2.74±3.70E-08
Steelhead Trout	71.3	3.03±0.94E-09	0.00±3.00E-08
Average % Moisture	72.6		
Median		2.87E-09	2.60E-08
Maximum		6.67E-09	3.08E-08
Minimum		<9.00E-10	1.54E-08

*Note: Bolding convention applied to these data. See page F-2*C.

Table F-4 (concluded)
2003 Radioactivity Concentrations (µCi/g - dry) in Fish Flesh From Cattaraugus Creek

Cattaraugus Creek Background (BFFCTRL)

Annual 2003

Species	% Moisture	Sr-90	Cs-137
White Sucker	80.4	**3.90±0.30E-08**	4.43±7.53E-08
White Sucker	76.4	1.34±0.21E-08	-0.26±8.44E-08
Brown Trout	74.1	4.13±1.96E-09	-0.27±1.13E-07
White Sucker	77.3	1.34±0.17E-08	6.31±8.29E-08
White Sucker	77.6	1.37±0.27E-08	0.33±1.74E-07
White Sucker	78.6	1.02±0.31E-08	4.12±6.26E-08
White Sucker	80.4	1.89±0.63E-08	2.48±7.33E-08
Hog-nosed Sucker	75.4	2.31±0.56E-08	6.09±8.24E-08
Hog-nosed Sucker	76.4	1.94±0.41E-08	-0.75±6.39E-08
Hog-nosed Sucker	75.4	2.00±0.56E-08	0.03±1.11E-07
Average % Moisture	77.2		
Median		1.63E-08	<8.26E-08
Maximum		3.90E-08	<1.74E-07
Minimum		4.13E-09	<6.26E-08

*Note: Bolding convention applied to these data. See page F-2*C.

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