

APPENDIX C-1

SUMMARY OF WATER AND SEDIMENT MONITORING DATA

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TABLE C - 1.1
TOTAL RADIOACTIVITY OF LIQUID EFFLUENTS RELEASED
FROM WVDP LAGOON 3 IN 1985* (CURIES)

	ALPHA	BETA	H-3	CS-137	SR-90	I-129
1ST QTR.	6.87 ± 1.1 E-03	1.07 ± 0.1 E-02	2.20 ± .04 E+00	4.75 ± 1.3 E-03	2.28 ± 0.1 E-03	3.24 ± 0.7 E-04
2ND QTR.	1.25 ± 0.5 E-03	7.43 ± 1.3 E-03	5.99 ± 0.2 E-01	2.55 ± 1.6 E-03	2.03 ± 0.1 E-03	7.55 ± 0.9 E-05
3RD QTR.	1.59 ± 0.5 E-03	5.23 ± 0.9 E-03	3.36 ± 0.1 E-01	1.78 ± 0.9 E-03	1.43 ± 0.1 E-03	6.73 ± 0.7 E-05
4TH QTR.	2.40 ± 0.7 E-03	9.83 ± 1.6 E-03	3.08 ± 0.1 E-01	9.26 ± 1.6 E-03	1.26 ± 0.1 E-03	8.22 ± 0.8 E-05
1985 TOTALS	1.21 ± 0.3 E-02	3.32 ± 0.5 E-02	3.44 ± 0.8	1.93 ± 0.5 E-02	7.00 ± 0.4 E-03	5.49 ± 0.9 E-04
AVERAGE(uCi/ml) CONCENTRATION	3.47 E-07	9.57 E-07	9.88 E-05	5.54 E-07	2.01 E-07	1.58 E-08
PERCENT OF RCG**	NOT APPLICABLE	ISOTOPES IDENTIFIED	3.3%	2.8%	67.0%	26.3%
	U-238	U-234	U-235	PU-238	PU-239	
1ST QTR.	7.22 ± 2.3 E-04	3.60 ± 1.1 E-03	7.19 ± 3.8 E-05	6.25 ± 1.6 E-06	5.81 ± 1.5 E-06	
2ND QTR.	1.05 ± 0.3 E-04	5.14 ± 1.5 E-04	9.44 ± 4.4 E-06	1.46 ± 0.2 E-05	1.71 ± 0.6 E-06	
3RD QTR.	2.46 ± 0.4 E-04	1.09 ± 0.2 E-03	3.24 ± 0.6 E-05	2.68 ± 1.6 E-05	4.24 ± 2.8 E-07	
4TH QTR.	6.07 ± 2.4 E-04	2.55 ± 1.0 E-03	5.98 ± 2.5 E-05	4.26 ± 1.0 E-06	4.04 ± 1.0 E-06	
1985 TOTALS	1.68 ± 0.5 E-03	7.75 ± 2.5 E-03	1.74 ± 0.7 E-04	5.19 ± 2.1 E-05	1.20 ± 0.3 E-05	
AVERAGE(uCi/ml) CONCENTRATION	4.82 E-08	2.22 E-07	5.00 E-09	1.49 E-09	3.44 E-10	
PERCENT OF RCG**	8.0 %	5.6%	0.1%	0.03%	0.01%	

*Includes radioactivity from New York State low level waste disposal area (Table C - 1.11)
Total volume released as treated effluent - 3.5 E7 litres.

**Recommended Concentration Guides per DOE Order 5480.1, Attachment XI-1, for uncontrolled releases at site boundary.
Concentrations listed above for Lagoon 3 effluents are substantially higher than concentrations at boundary where RCGs actually apply.

TABLE C - 1.2
 RADIOACTIVITY CONCENTRATIONS
 IN SURFACE WATER UPSTREAM OF WVDP
 AT FOX VALLEY (WFBCBKG) $\mu\text{Ci}/\text{ml}$

1985	ALPHA	BETA	H-3	SR-90	CS-137
JAN	5.15 \pm 3.5 E-10	2.10 \pm 0.9 E-09	< 1.62 E-07		
FEB	4.83 \pm 3.5 E-10	5.85 \pm 1.2 E-09	2.14 \pm 1.1 E-07		
MAR	3.90 \pm 3.1 E-10	6.30 \pm 1.2 E-09	< 1.08 E-07		
1ST QTR				5.18 \pm 2.2 E-09	< 7.0 E-08
APR	< 1.94 E-10	2.72 \pm 0.9 E-09	9.80 \pm 9.7 E-08		
MAY	< 1.69 E-10	2.15 \pm 0.9 E-09	1.34 \pm 1.0 E-07		
JUN	< 4.68 E-10	3.53 \pm 1.1 E-09	< 1.01 E-07		
2ND QTR				4.68 \pm 2.1 E-09	< 2.1 E-08
JUL	< 5.43 E-10	2.91 \pm 1.0 E-09	< 1.00 E-07		
AUG	< 8.45 E-10	3.78 \pm 1.1 E-09	< 1.00 E-07		
SEP	< 9.63 E-10	3.92 \pm 1.1 E-09	< 1.00 E-07		
3RD QTR				4.48 \pm 2.2 E-09	< 2.1 E-08
OCT	< 6.17 E-10	< 9.43 E-10	< 1.00 E-07		
NOV	< 7.00 E-10	3.25 \pm 1.1 E-09	2.27 \pm 0.9 E-07		
DEC	< 4.38 E-10	1.77 \pm 1.0 E-09	< 1.00 E-07		
4TH QTR				4.03 \pm 2.2 E-09	< 2.1 E-08

TABLE C - 1.3
 RADIOACTIVITY CONCENTRATIONS
 IN SURFACE WATER DOWNSTREAM OF WVDP
 AT THOMAS CORNERS (WFBCTCB) $\mu\text{Ci}/\text{ml}$

1985	ALPHA	BETA	H-3	SR-90	CS-137
JAN	1.02 \pm 0.5 E-09	6.80 \pm 1.3 E-09	1.23 \pm 0.1 E-06		
FEB	5.93 \pm 3.8 E-10	1.56 \pm 0.2 E-08	3.05 \pm 1.1 E-07		
MAR	4.45 \pm 4.2 E-10	1.24 \pm 0.2 E-08	4.22 \pm 1.1 E-07		
1ST QTR				2.24 \pm 1.6 E-09	< 7.0 E-08
APR	1.16 \pm 0.5 E-09	1.06 \pm 0.2 E-08	6.10 \pm 1.1 E-07		
MAY	4.39 \pm 3.3 E-10	7.81 \pm 1.4 E-09	1.16 \pm 1.0 E-07		
JUN	3.48 \pm 2.3 E-09	1.29 \pm 0.2 E-08	1.60 \pm 1.1 E-07		
2ND QTR				5.47 \pm 1.9 E-09	< 2.1 E-08
JUL	< 6.3 E-10	6.49 \pm 1.3 E-09	< 1.0 E-07		
AUG	< 6.8 E-10	7.13 \pm 1.4 E-09	< 1.0 E-07		
SEP	< 1.1 E-09	1.32 \pm 0.2 E-08	1.05 \pm 1.0 E-07		
3RD QTR				5.75 \pm 2.2 E-09	< 2.1 E-08
OCT	1.23 \pm 1.2 E-09	7.79 \pm 1.5 E-09	1.80 \pm 0.9 E-07		
NOV	6.84 \pm 3.5 E-09	1.69 \pm 0.2 E-08	2.41 \pm 0.9 E-07		
DEC	< 8.2 E-10	4.26 \pm 1.2 E-09	< 1.0 E-07		
4TH QTR				4.30 \pm 2.1 E-09	< 2.1 E-08

TABLE C - 1.4
 RADIOACTIVITY CONCENTRATIONS
 IN SURFACE WATER DOWNSTREAM OF WVPD
 AT FRANKS CREEK (WNSP006) $\mu\text{Ci/ml}$

1985	ALPHA	BETA	H-3	SR-90	CS-137
JAN	1.13 \pm 0.2 E-08	9.81 \pm 0.4 E-08	3.33 \pm 0.1 E-05		
FEB	3.72 \pm 0.9 E-09	4.13 \pm 0.3 E-08	2.57 \pm 0.1 E-06		
MAR	8.28 \pm 4.4 E-10	2.34 \pm 0.2 E-08	6.40 \pm 1.2 E-07		
1ST QTR				1.70 \pm 0.3 E-08	< 7.0 E-08
APR	1.05 \pm 0.5 E-09	4.84 \pm 0.3 E-08	3.97 \pm 0.2 E-06		
MAY	3.26 \pm 3.0 E-10	3.98 \pm 0.3 E-08	8.85 \pm 1.1 E-07		
JUN	2.42 \pm 1.8 E-09	4.39 \pm 0.3 E-08	4.77 \pm 1.1 E-07		
2ND QTR				1.86 \pm 0.3 E-08	< 2.1 E-08
JUL	< 1.4 E-09	4.12 \pm 0.3 E-08	4.16 \pm 1.1 E-07		
AUG	2.10 \pm 0.7 E-08	8.76 \pm 0.5 E-08	6.20 \pm 0.3 E-06		
SEP	7.23 \pm 2.8 E-09	5.81 \pm 0.4 E-08	1.75 \pm 0.1 E-06		
3RD QTR				3.48 \pm 0.5 E-08	< 2.1 E-08
OCT	3.18 \pm 2.0 E-09	4.19 \pm 0.3 E-08	5.07 \pm 1.0 E-07		
NOV	8.87 \pm 3.3 E-09	4.15 \pm 0.3 E-08	8.47 \pm 1.1 E-07		
DEC	< 7.2 E-10	2.02 \pm 0.2 E-08	1.63 \pm 0.9 E-07		
4TH QTR				2.00 \pm 0.4 E-08	< 2.1 E-08

TABLE C - 1.5
 RADIOACTIVITY CONCENTRATIONS
 IN SURFACE WATER UPSTREAM OF BUTTERMILK
 CREEK AT BIGELOW BRIDGE (WFBIGBR) uCi/ml

1985	ALPHA	BETA	TRITIUM
JAN	<2.6 E-10	3.81 ± 1.1 E-09	<1.7 E-07
FEB	3.28 ± 3.0 E-10	3.30 ± 1.0 E-09	3.86 ± 1.1 E-07
MAR	7.96 ± 4.4 E-10	8.55 ± 1.4 E-09	3.22 ± 1.0 E-07
APR	2.80 ± 2.7 E-10	2.49 ± 0.9 E-09	<1.0 E-07
MAY	<2.3 E-10	3.29 ± 1.0 E-09	1.86 ± 1.0 E-07
JUN	<7.3 E-10	2.95 ± 1.0 E-09	1.91 ± 1.0 E-07
JUL	<1.2 E-09	4.23 ± 1.2 E-09	1.11 ± 1.0 E-07
AUG	<8.9 E-10	2.78 ± 1.0 E-09	<1.0 E-07
SEP	<7.7 E-10	4.29 ± 1.2 E-09	<1.0 E-07
OCT	<5.4 E-10	4.09 ± 1.2 E-09	<1.0 E-07
NOV	<6.0 E-10	2.32 ± 1.1 E-09	<1.0 E-07
DEC	<1.3 E-09	4.15 ± 1.2 E-09	1.76 ± 0.9 E-07

TABLE C - 1.6
 RADIOACTIVITY CONCENTRATIONS
 IN SURFACE WATER DOWNSTREAM OF
 BUTTERMILK CREEK AT FELTON BRIDGE (WFELBR) uCi/ml

1985	ALPHA	BETA	TRITIUM	SR-90	CS-137
JAN	<2.8	4.34 ± 1.1 E-09	5.33 ± 1.1 E-07	5.59 ± 2.0 E-09	<7.0 E-08
FEB	3.18 ± 2.9 E-10	4.62 ± 1.1 E-09	1.07 ± 1.1 E-07	2.62 ± 1.6 E-09	1.56 ± 1.1 E-07
MAR	8.28 ± 4.4 E-10	1.24 ± 0.2 E-08	<1.0	2.46 ± 1.7 E-09	<2.1 E-08
APR	3.34 ± 2.9 E-10	5.63 ± 1.2 E-09	<1.3	3.64 ± 1.8 E-09	<2.1 E-08
MAY	<5.6	2.84 ± 1.0 E-09	<1.0	4.68 ± 2.0 E-09	<2.1 E-08
JUN	<6.1	4.66 ± 1.2 E-09	<1.0	3.09 ± 1.9 E-09	<2.1 E-08
JUL	<7.0	8.85 ± 1.5 E-09	<1.1	3.83 ± 1.8 E-09	<2.1 E-08
AUG	<8.2	5.05 ± 1.2 E-09	<1.0	7.15 ± 2.3 E-09	<2.1 E-08
SEP	<9.8	6.03 ± 1.3 E-09	<1.0	2.63 ± 1.8 E-09	<2.1 E-08
OCT	1.68 ± 1.6 E-09	7.68 ± 1.6 E-09	<1.0	2.94 ± 1.8 E-09	<2.1 E-08
NOV	4.69 ± 3.3 E-09	1.64 ± 0.2 E-08	1.52 ± 0.9 E-07	5.25 ± 2.1 E-09	<2.1 E-08
DEC	<7.3	3.94 ± 1.2 E-09	1.59 ± 0.9 E-07	2.92 ± 1.8 E-09	<2.1 E-08

TABLE C - 1.7
 RADIOACTIVITY CONCENTRATIONS IN SHALLOW WELLS
 NEAR SITE FACILITIES

LOCATION CODE	SPRING 1985 (uCi/ml)			FALL 1985 (uCi/ml)		
	ALPHA	BETA	TRITIUM	ALPHA	BETA	TRITIUM
WNWFBS	6.60 ± 1.2 E-08	9.38 ± 0.1 E-06	6.83 ± 0.3 E-06	6.85 ± 1.0 E-08	1.55 ± .01 E-05	9.85 ± 0.4 E-06
WNWFSD	3.63 ± 0.8 E-08	5.72 ± .04 E-06	1.35 ± .04 E-04	4.55 ± 1.1 E-08	2.00 ± .01 E-05	1.06 ± .03 E-04
WNWFSG	1.66 ± 0.6 E-08	1.66 ± .01 E-05	9.35 ± 0.3 E-05	4.75 ± 1.0 E-08	2.86 ± .01 E-05	6.51 ± 0.2 E-05
WNWFSH	1.95 ± 1.8 E-09	6.58 ± 0.1 E-07	9.42 ± 1.2 E-07	<1.9	E-09	1.15 ± .02 E-06
WNWFSL	<1.6	3.24 ± 0.3 E-08	1.69 ± 0.1 E-05	<1.8	E-09	6.46 ± 0.4 E-08
WNWFMS*	<9.7	5.68 ± 0.1 E-07	1.99 ± 0.1 E-06	2.98 ± 2.5 E-09	2.14 ± .02 E-06	2.37 ± 0.1 E-06
WNWFJ2	<2.1	1.89 ± 0.2 E-08	3.28 ± 1.1 E-07	<1.4	E-09	1.90 ± 0.2 E-08
WNWFJ5	<6.3	1.11 ± 0.2 E-08	7.52 ± 1.1 E-07	2.01 ± 1.6 E-09	1.74 ± 0.2 E-08	2.56 ± 0.9 E-07
WNWFJ8	<9.8	7.34 ± 1.4 E-09	1.64 ± 0.1 E-05	<9.8	E-10	1.00 ± 0.2 E-08
WNW80 2	<5.9	3.57 ± 1.1 E-09	1.83 ± 1.0 E-07	<1.3	E-09	7.40 ± 1.5 E-09
WNW80 3	1.80 ± 0.7 E-08	2.69 ± 0.2 E-07	4.24 ± 1.1 E-07	2.54 ± 1.8 E-09	3.50 ± 0.1 E-07	2.03 ± 0.9 E-07
WNW80 4	<7.5	2.41 ± 1.0 E-09	5.18 ± 1.1 E-07	<1.5	E-09	3.28 ± 0.2 E-08
WNW80 5	<6.3	4.08 ± 1.1 E-09	7.53 ± 1.1 E-07	<1.1	E-09	1.31 ± 1.0 E-09
WNW80 6	<2.3	1.15 ± 0.6 E-08	4.63 ± 0.2 E-06	<3.1	E-09	5.09 ± 1.5 E-09
WNW80 7	1.37 ± 1.1 E-09	5.99 ± 1.3 E-09	2.80 ± 1.0 E-07	1.36 ± 0.7 E-08	5.10 ± 0.5 E-08	<1.0

*Returned to service in 1985.

Note: See Figure A-3 for well locations.

TABLE C - 1.8
 RADIOACTIVITY CONCENTRATIONS IN SHALLOW WELLS
 NEAR THE NRC DISPOSAL AREA

LOCATION CODE	SPRING 1985 (uCi/ml)			FALL 1985 (uCi/ml)		
	ALPHA	BETA	TRITIUM	ALPHA	BETA	TRITIUM
WNW75G1	<5.3	2.98 ± 0.3 E-08	<1.1 E-07	<2.0 E-09	3.90 ± 1.1 E-08	3.36 ± 0.9 E-07
WNW75G2	<9.1	8.36 ± 2.9 E-09	<1.0 E-07	<7.3 E-09	9.21 ± 2.4 E-09	1.45 ± 0.9 E-07
WNW75G3	<2.2	1.58 ± 0.6 E-08	<1.0 E-07	<2.6 E-09	<7.8 E-09	<1.0 E-07
WNW75 H	NOT SAMPLED			<1.1 E-09	4.23 ± 2.0 E-09	5.51 ± 0.2 E-06
WNW75J1	NOT SAMPLED			<3.5 E-09	1.33 ± 0.1 E-07	5.13 ± 1.0 E-07
WNW821A	<2.2	4.77 ± 1.3 E-09	1.79 ± 1.0 E-07	<2.8 E-09	1.19 ± 0.2 E-08	5.92 ± 1.0 E-07
WNW821B	<1.0	1.00 ± 0.2 E-08	1.03 ± 1.0 E-07	5.4 ± 5.2 E-09	1.92 ± 0.2 E-08	6.06 ± 1.0 E-07
WNW821C	<2.2	7.57 ± 2.5 E-09	1.96 ± 1.0 E-07	<1.7 E-09	7.96 ± 3.0 E-09	<1.0 E-07
WNW822A	6.68 ± 4.1 E-09	9.47 ± 2.8 E-09	<1.0 E-07	<2.4 E-09	6.51 ± 1.5 E-09	1.40 ± 0.9 E-07
WNW822B	<2.0	1.90 ± 0.3 E-08	<1.0 E-07	1.34 ± 0.7 E-08	1.38 ± 0.4 E-08	2.16 ± 0.9 E-07
WNW822C	DRY			DRY		
WNW823A	DRY			<1.8 E-09	6.88 ± 1.5 E-09	2.00 ± 0.9 E-07
WNW823B	DRY			DRY		
WNW823C	DRY			DRY		
WNW823D	DRY			DRY		
WNW824A1	<1.6	5.76 ± 1.4 E-09	4.10 ± 0.1 E-05	5.02 ± 4.3 E-09	7.23 ± 1.7 E-09	1.27 ± .04 E-04
WNW824A2	6.48 ± 3.6 E-09	1.14 ± 0.2 E-08	4.36 ± 1.1 E-07	<1.5 E-09	2.98 ± 2.1 E-09	8.55 ± 1.1 E-07
WNW824A3	<8.6	2.16 ± 1.0 E-09	4.47 ± 1.1 E-07	<2.6 E-09	2.20 ± 1.7 E-09	6.62 ± 1.0 E-07
WNW824B	DRY			DRY		
WNW824C	DRY			DRY		
WNW825A	NOT ACCESSIBLE			NOT ACCESSIBLE		
WNW825B	8.92 ± 7.4 E-09	5.77 ± 1.0 E-08	1.03 ± 1.0 E-07	NOT ACCESSIBLE		
WNW825C	<1.3	2.20 ± 0.7 E-08	<1.0 E-07	NOT ACCESSIBLE		

Note: See Figure A-3 for well locations.

TABLE C - 1.9
 RADIOACTIVITY CONCENTRATIONS IN POTABLE WELL WATER AROUND THE WVDP SITE - 1985
 (uCi/ml)

SAMPLE I.D.	ALPHA	BETA	TRITIUM	CS-137
WFWEL02	<8.5	<8.7	<1.0	<2.1
WFWEL05	<5.7	2.58 ± 1.1	<1.0	<2.1
WFWEL06	<7.0	1.39 ± 1.0	1.22 ± 1.0	<2.1
WFWEL08	<1.4	<1.1	<1.0	<2.1
WFWEL09	<1.2	2.46 ± 1.2	1.90 ± 1.0	<2.1
WFWEL10	<9.0	<9.4	1.79 ± 1.0	<2.1

Note: See Figures A-5 and A-6 for well locations.

TABLE C - 1.10

Radioactivity of Stream Sediment Around WVDP Site in 1985

	Gross Alpha	Concentration (uCi/g) (dry weight from upper 6 inches)				Cs-137
		Gross Beta	K-40	Sr-90		
SFBCSED	June 1985	8.8 ± 7.9 E-06	5.33 ± 0.8 E-05	1.50 ± 0.1 E-05	<5.9 E-08	9.06 ± 6.4 E-08
SFTCSED	June 1985	1.2 ± 0.7 E-05	6.38 ± 1.0 E-05	1.94 ± 0.2 E-05	3.76 ± 3.8 E-08	1.54 ± 0.1 E-06
SFBISED	June 1985	<1.6 E-05	3.20 ± 0.4 E-05	1.39 ± 0.1 E-05	<5.9 E-08	4.73 ± 6.4 E-08
SFCCSED	June 1985	<3.1 E-05	<1.2 E-05	1.18 ± 0.1 E-05	1.12 ± 1.1 E-08	8.99 ± 0.9 E-07
SFSDSED	June 1985	<2.7 E-05	7.11 ± 2.4 E-05	1.60 ± 0.2 E-05	1.93 ± 1.5 E-08	3.12 ± 0.8 E-07
SFBCSED	Oct. 1985	9.9 ± 7.8 E-06	2.91 ± 0.6 E-05	2.00 ± 0.2 E-05	3.0 ± 5.4 E-08	1.28 ± 1.2 E-07
SFTCSED	Oct. 1985	0.7 ± 1.1 E-05	2.55 ± 0.7 E-05	1.43 ± 0.1 E-05	3.21 ± 0.5 E-07	2.53 ± 0.1 E-06
SFBISED	Oct. 1985	2.4 ± 3.4 E-06	1.62 ± 0.5 E-05	1.13 ± 0.1 E-05	<7.8 E-08	<1.2 E-07
SFCCSED	Oct. 1985	3.9 ± 4.3 E-06	2.44 ± 0.7 E-05	1.11 ± 0.1 E-05	2.42 ± 1.6 E-08	7.51 ± 0.6 E-07
SFSDSED	Oct. 1985	1.4 ± 0.9 E-05	2.99 ± 0.9 E-05	1.16 ± 0.1 E-05	1.41 ± 1.7 E-08	3.59 ± 0.7 E-07

TABLE C - 1.11
1985 Contribution by New York State Low Level Waste Disposal Area to Radioactivity in WVDP Liquid Effluents (Ci)

	Gross Alpha	Gross Beta	Tritium	Sr-90	I-129	Cs-137
1985 Totals	1.13 ± 1.2 E-06	1.92 ± 0.04 E-03	1.25 ± 0.03 E-01	1.21 ± 0.02 E-03	1.52 ± 0.3 E-06	2.10 ± 2.5 E-05

FIGURE C-1.1
 GROSS BETA CONCENTRATION IN
 SURFACE WATER DOWNSTREAM OF WVDP-1985

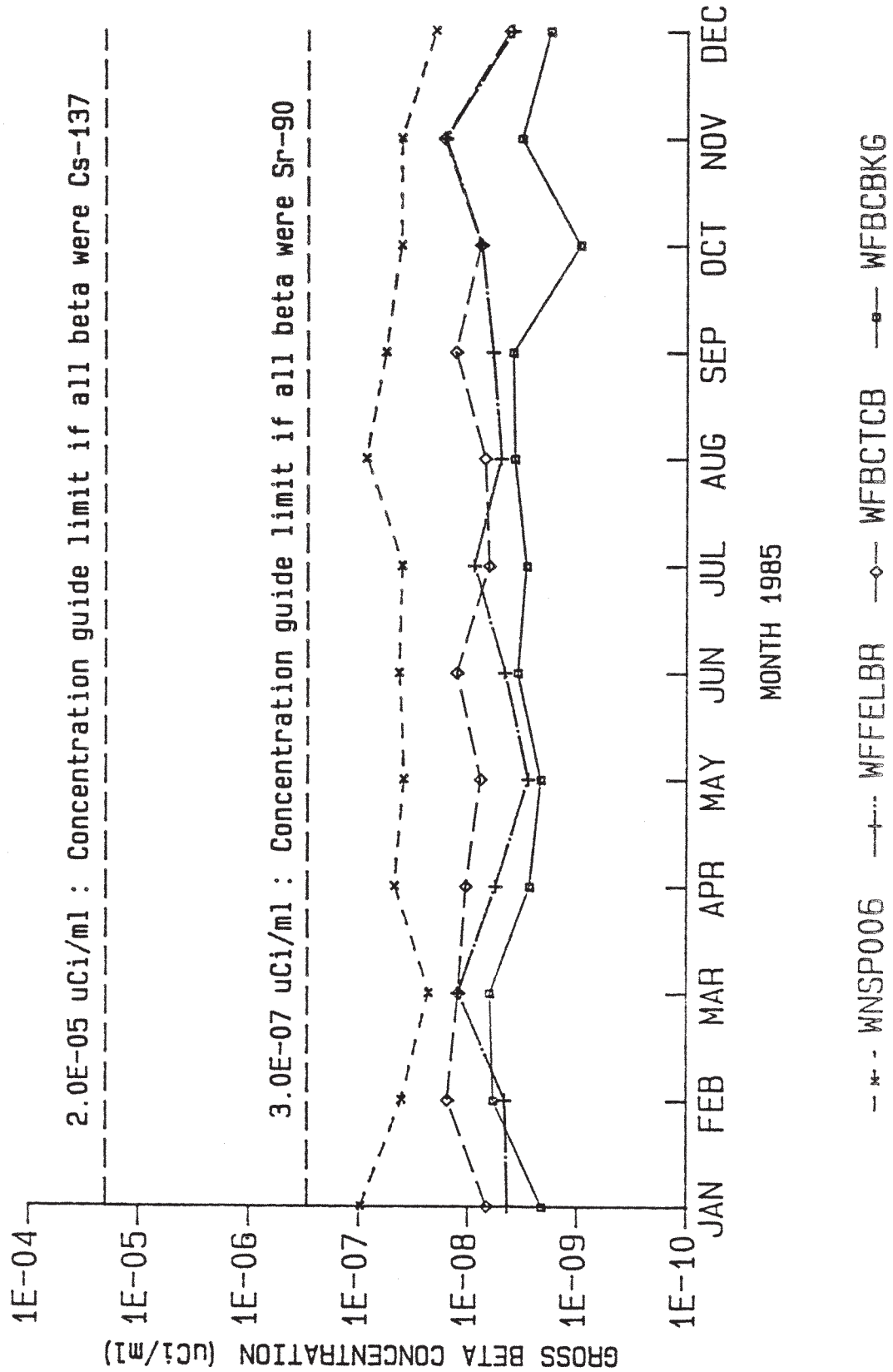


FIGURE C-1.2
 TRENDS OF GROSS BETA ACTIVITY IN SURFACE WATER FROM
 CATTARAUGUS CREEK (WFFELBR) 1983-1985

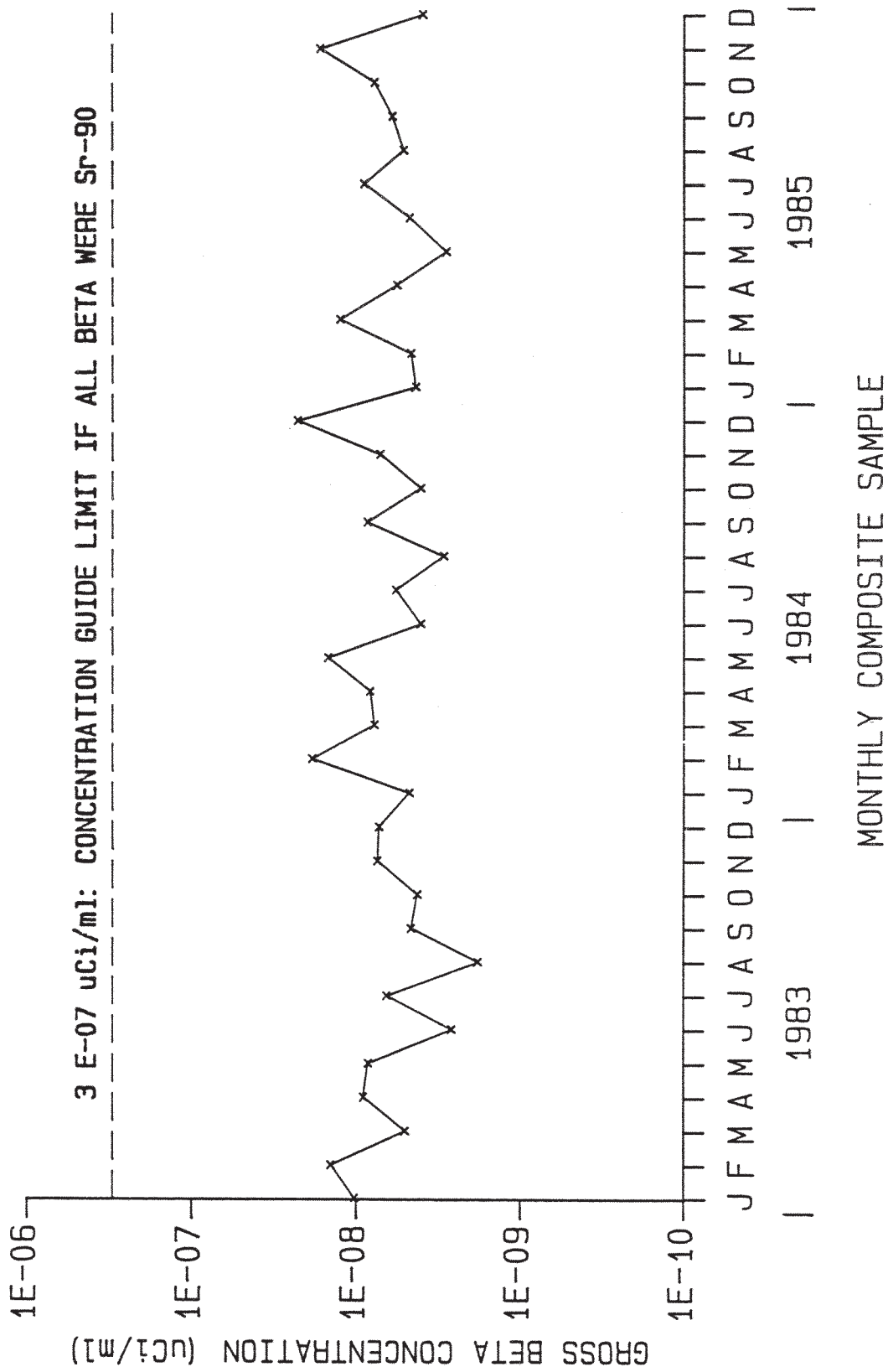
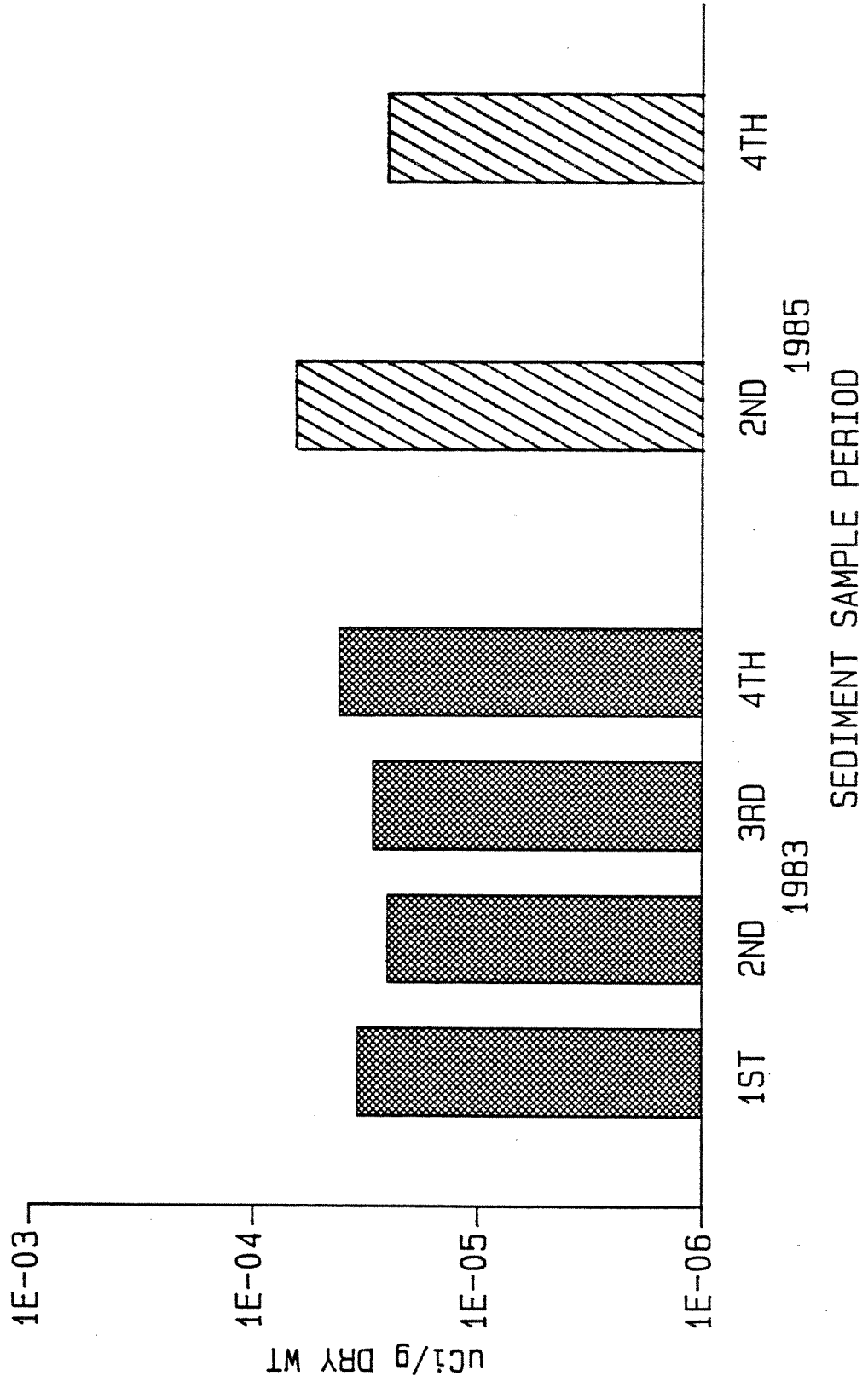


FIGURE C-1.3
 TRENDS OF GROSS BETA ACTIVITY IN SEDIMENT FROM
 BUTTERMILK CREEK (SFTCSED) 1983 & 1985



APPENDIX C-2

SUMMARY OF AIR MONITORING DATA

TABLE C - 2.1
 1985 AIRBORNE RADIOACTIVE EFFLUENT ACTIVITY TOTALS
 FROM MAIN VENTILATION STACK (ANSTACK) CURIES

	ALPHA	BETA	SR-90	I-129	CS-134	CS-137
JAN	1.16+/-0.05 E-07	3.56+/-0.14 E-06				
FEB	2.35+/-0.09 E-07	1.10+/-0.04 E-05				
MAR	1.81+/-0.05 E-05	6.30+/-0.25 E-04	1.50+/-0.3 E-04	4.81+/-0.7 E-06	1.35+/-0.3 E-06	2.40+/-0.1 E-04
1st QTR.						
APR	3.06+/-0.12 E-07	1.08+/-0.04 E-05				
MAY	1.92+/-0.08 E-07	1.01+/-0.04 E-05				
JUN	2.00+/-0.08 E-07	5.88+/-0.24 E-05	7.72+/-0.9 E-06	2.10+/-0.3 E-05	1.81+/-1.4 E-07	6.18+/-0.3 E-05
2nd QTR.						
JUL	2.23+/-0.09 E-07	7.16+/-0.29 E-06				
AUG	4.01+/-0.16 E-07	9.08+/-0.36 E-06				
SEP	1.21+/-0.05 E-07	2.16+/-0.09 E-05	2.59+/-0.4 E-06	1.70+/-0.2 E-05	1.02+/-0.7 E-07	2.80+/-0.1 E-05
3rd QTR.						
OCT	1.37+/-0.05 E-06	2.70+/-0.11 E-05				
NOV	6.69+/-0.27 E-07	2.58+/-0.10 E-05				
DEC	6.42+/-0.27 E-07	5.21+/-0.21 E-05	3.09+/-0.4 E-05	1.42+/-0.1 E-05	1.43+/-0.7 E-07	4.19+/-0.1 E-05
4th QTR.						
Total for 1985	2.26 E-05	8.67 E-04	1.91 E-04	5.70 E-05	1.78 E-06	3.72 E-04

Note: Total volume of air discharged at point ANSTACK in 1985 equals 8.9 E+08 cubic metres @ 28.3 cubic metres per second

TABLE C - 2.2.1
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT FOX VALLEY (AFFXVRD)

μCi/ml

	ALPHA =====	BETA =====	SR-90 =====	CS-137 =====
JAN	8.12 ± 6.7 E-16	1.77 ± 0.4 E-14		
FEB	1.25 ± 0.9 E-15	1.88 ± 0.4 E-14		
MAR	1.01 ± 0.7 E-15	2.05 ± 0.4 E-14		
1ST QTR			2.28 ± 7.0 E-17	< 9.8 E-16
APR	1.24 ± 0.8 E-15	1.75 ± 0.4 E-14		
MAY	5.87 ± 9.3 E-16	1.85 ± 0.6 E-14		
JUN	6.24 ± 6.7 E-16	1.02 ± 0.3 E-14		
2ND QTR			5.84 ± 1.1 E-16	9.73 ± 4.3 E-16
JUL	4.49 ± 5.5 E-16	1.37 ± 0.4 E-14		
AUG	1.17 ± 1.0 E-15	2.25 ± 0.5 E-14		
SEP	5.48 ± 7.1 E-16	2.07 ± 0.5 E-14		
3RD QTR			1.38 ± 0.7 E-16	< 9.6 E-16
OCT	9.30 ± 8.4 E-16	1.37 ± 0.4 E-14		
NOV	5.22 ± 6.7 E-16	1.20 ± 0.3 E-14		
DEC	1.50 ± 1.3 E-15	2.36 ± 0.5 E-14		
4TH QTR			3.87 ± 0.7 E-16	< 1.3 E-15

TABLE C - 2.2.2
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT ROCK SPRINGS ROAD (AFRSPRD)

µCi/ml

	ALPHA	BETA	SR-90	CS-137
JAN	1.28 ± 1.0 E-15	1.89 ± 0.6 E-14		
FEB	1.56 ± 1.2 E-15	2.30 ± 0.5 E-14		
MAR	9.31 ± 7.5 E-16	2.24 ± 0.4 E-14		
1ST QTR			< 2.0 E-16	< 1.2 E-15
APR	1.32 ± 0.8 E-15	2.02 ± 0.4 E-14		
MAY	8.42 ± 7.0 E-16	1.72 ± 0.4 E-14		
JUN	6.25 ± 6.3 E-16	1.31 ± 0.3 E-14		
2ND QTR			2.75 ± 0.5 E-16	5.23 ± 3.6 E-16
JUL	5.32 ± 5.4 E-16	1.74 ± 0.4 E-14		
AUG	1.10 ± 0.9 E-15	2.07 ± 0.5 E-14		
SEP	6.41 ± 5.9 E-16	1.86 ± 0.4 E-14		
3RD QTR			< 1.1 E-16	< 1.0 E-15
OCT	5.53 ± 6.5 E-16	1.29 ± 0.3 E-14		
NOV	3.80 ± 5.3 E-16	1.48 ± 0.4 E-14		
DEC	1.07 ± 0.9 E-15	2.15 ± 0.5 E-14		
4TH QTR			2.31 ± 0.9 E-16	< 8.4 E-16

TABLE C - 2.2.3
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT ROUTE 240 (AFRT240)
 µCi/ml

	ALPHA	BETA	SR-90	CS-137
JAN	1.03 ± 0.9 E-15	1.90 ± 0.4 E-14		
FEB	8.87 ± 9.2 E-16	2.00 ± 0.5 E-14		
MAR	8.95 ± 9.2 E-16	1.91 ± 0.5 E-14		
1ST QTR			2.22 ± 0.5 E-16	< 1.5 E-15
APR	1.32 ± 1.1 E-15	2.19 ± 0.5 E-14		
MAY	1.04 ± 1.0 E-15	1.85 ± 0.5 E-14		
JUN	7.70 ± 9.2 E-16	1.54 ± 0.5 E-14		
2ND QTR			7.77 ± 6.4 E-17	< 1.4 E-15
JUL	1.15 ± 1.1 E-15	1.88 ± 0.5 E-14		
AUG	9.68 ± 9.1 E-16	2.10 ± 0.5 E-14		
SEP	1.35 ± 1.1 E-15	1.84 ± 0.5 E-14		
3RD QTR			< 1.1 E-16	< 1.3 E-15
OCT	1.06 ± 1.0 E-15	1.28 ± 0.4 E-14		
NOV	9.07 ± 9.7 E-16	1.24 ± 0.4 E-14		
DEC	1.24 ± 1.2 E-15	1.91 ± 0.6 E-14		
4TH QTR			9.75 ± 8.4 E-17	< 9.6 E-16

TABLE C - 2.2.4
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT SPRINGVILLE (AFSPRVL)

µCi/ml

	ALPHA	BETA	SR-90	CS-137
JAN	1.01 ± 0.6 E-15	1.84 ± 0.3 E-14		
FEB	1.31 ± 0.8 E-15	1.90 ± 0.4 E-14		
MAR	1.09 ± 0.7 E-15	1.67 ± 0.4 E-14		
1ST QTR			4.17 ± 1.8 E-17	< 8.6 E-16
APR	6.91 ± 5.8 E-16	2.01 ± 0.4 E-14		
MAY	6.19 ± 5.5 E-16	1.64 ± 0.4 E-14		
JUN	6.59 ± 5.7 E-16	1.32 ± 0.2 E-14		
2ND QTR			3.86 ± 2.1 E-17	< 5.2 E-16
JUL	8.01 ± 6.3 E-16	1.74 ± 0.4 E-14		
AUG	6.78 ± 6.9 E-16	2.07 ± 0.4 E-14		
SEP	5.53 ± 5.8 E-16	2.08 ± 0.4 E-14		
3RD QTR			2.24 ± 4.8 E-17	< 7.1 E-16
OCT	5.75 ± 6.2 E-16	1.49 ± 0.4 E-14		
NOV	5.26 ± 6.1 E-16	1.37 ± 0.4 E-14		
DEC	1.19 ± 0.9 E-15	2.12 ± 0.5 E-14		
4TH QTR			2.47 ± 1.7 E-17	< 4.2 E-16

TABLE C - 2.2.5
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT THOMAS CORNERS (AFTCORD)

µCi/ml

	ALPHA	BETA	SR-90	CS-137
JAN *	3.22 ± 7.7 E-15	5.93 ± 3.7 E-14		
FEB	9.19 ± 9.3 E-16	2.27 ± 0.5 E-14		
MAR	6.87 ± 7.9 E-16	1.60 ± 0.4 E-14		
1ST QTR			5.12 ± 3.9 E-17	< 1.1 E-15
APR	1.32 ± 1.1 E-15	1.93 ± 0.5 E-14		
MAY	1.21 ± 1.0 E-15	1.48 ± 0.4 E-14		
JUN	9.05 ± 8.6 E-16	1.40 ± 0.4 E-14		
2ND QTR			2.35 ± 3.1 E-17	< 1.4 E-15
JUL	5.60 ± 7.7 E-16	1.67 ± 0.5 E-14		
AUG	9.43 ± 9.2 E-16	2.01 ± 0.5 E-14		
SEP	8.33 ± 7.7 E-16	1.50 ± 0.4 E-14		
3RD QTR			< 9.0 E-17	< 9.9 E-16
OCT	5.23 ± 7.1 E-16	9.83 ± 3.7 E-15		
NOV	6.86 ± 7.0 E-16	9.07 ± 3.2 E-15		
DEC	8.18 ± 9.3 E-16	1.99 ± 0.5 E-14		
4TH QTR			1.60 ± 0.4 E-16	2.82 ± 2.6 E-16

* Poor sensitivity due to low sample volume.

TABLE C - 2.2.6
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT WEST VALLEY (AFWEVAL)
 µCi/ml

	ALPHA	BETA	SR-90	CS-137
JAN				
FEB				
MAR				
1ST QTR	9.27 ± 6.9 E-16	1.67 ± 0.4 E-14	< 1.0 E-16	< 1.6 E-15
APR	6.45 ± 6.3 E-16	1.87 ± 0.4 E-14		
MAY	1.09 ± 0.7 E-15	1.77 ± 0.4 E-14		
JUN	1.15 ± 1.3 E-15	2.36 ± 0.8 E-14		
2ND QTR			< 9.3 E-17	< 1.0 E-15
JUL	8.73 ± 6.6 E-16	1.71 ± 0.4 E-14		
AUG	9.51 ± 7.7 E-16	2.01 ± 0.4 E-14		
SEP	1.17 ± 0.8 E-15	1.99 ± 0.4 E-14		
3RD QTR			< 6.3 E-17	2.51 ± 2.8 E-16
OCT	5.92 ± 6.5 E-16	1.61 ± 0.4 E-14		
NOV	6.97 ± 6.7 E-16	1.26 ± 0.3 E-14		
DEC	1.13 ± 0.9 E-15	2.09 ± 0.4 E-14		
4TH QTR			5.17 ± 2.0 E-17	< 1.1 E-15

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TABLE C - 2.2.7
 RADIOACTIVITY CONCENTRATIONS IN AIRBORNE PARTICULATE
 AROUND WVDP ENVIRONS - 1985

AIR SAMPLER AT GREAT VALLEY (AFGRVAL)
 $\mu\text{Ci}/\text{ml}$

	ALPHA =====	BETA =====	SR-90 =====	CS-137 =====
JAN	1.28 \pm 0.8 E-15	2.05 \pm 0.4 E-14		
FEB	Sampler Not Operating			
MAR	1.37 \pm 0.9 E-15	2.27 \pm 0.4 E-14		
1ST QTR			1.96 \pm 0.8 E-16	3.31 \pm 4.5 E-16
APR	1.28 \pm 0.8 E-15	2.83 \pm 0.5 E-14		
MAY	1.12 \pm 1.0 E-15	2.35 \pm 0.7 E-14		
JUN	1.18 \pm 0.8 E-15	1.78 \pm 0.4 E-14		
2ND QTR			< 6.7 E-17	< 9.2 E-16
JUL	1.40 \pm 1.0 E-15	2.22 \pm 0.5 E-14		
AUG	7.85 \pm 7.1 E-16	2.11 \pm 0.4 E-14		
SEP	6.22 \pm 5.3 E-16	1.81 \pm 0.4 E-14		
3RD QTR			< 6.7 E-17	< 8.7 E-16
OCT	4.93 \pm 4.9 E-16	1.22 \pm 0.2 E-14		
NOV	4.87 \pm 4.8 E-16	1.10 \pm 0.2 E-14		
DEC	1.11 \pm 0.6 E-15	1.52 \pm 0.3 E-14		
4TH QTR			5.89 \pm 1.7 E-17	3.31 \pm 2.3 E-16

TABLE C - 2.3
RADIOACTIVITY IN FALLOUT (nCi/square metre/mo)

MONTH - 1985	DUTCH HILL (AFDHFOF)			FOX VALLEY ROAD (AFFXFOP)		
	GROSS ALPHA	GROSS BETA	H-3 (uCi/ml)	GROSS ALPHA	GROSS BETA	H-3 (uCi/ml)
JANUARY	2.26 E-02	0.10 ± 0.02	2.14 ± 0.9 E-07	3.59 E-02	0.26 ± 0.03	4.26 ± 0.9 E-07
FEBRUARY	9.63 E-03	0.08 ± 0.02	1.11 ± 1.0 E-07	1.04 E-02	0.15 ± 0.02	2.26 ± 1.1 E-07
MARCH	2.48 E-02	0.35 ± 0.03	<1.0 E-07	2.48 E-02	0.48 ± 0.04	<1.0 E-07
APRIL	5.34 E-02	0.41 ± 0.03	<1.0 E-07	4.15 E-02	0.50 ± 0.04	<1.0 E-07
MAY	SAMPLE	CONTAINER	MISSING	1.29 E-02	0.34 ± 0.03	1.28 ± 1.0 E-07
JUNE	4.22 E-02	0.29 ± 0.03	<1.0 E-07	2.30 E-02	0.27 ± 0.03	<1.0 E-07
JULY	2.18 E-02	0.20 ± 0.02	<1.0 E-07	2.42 E-02	0.24 ± 0.03	<1.0 E-07
AUGUST	1.53 E-02	0.24 ± 0.03	<1.0 E-07	1.02 E-02	0.21 ± 0.03	<1.0 E-07
SEPTEMBER	2.38 E-02	0.18 ± 0.02	<1.0 E-07	3.08 E-02	0.21 ± 0.02	<1.0 E-07
OCTOBER	2.45 E-02	0.61 ± 0.04	1.28 ± 0.9 E-07	9.30 E-03	0.27 ± 0.03	1.93 ± 0.9 E-07
NOVEMBER	3.16 E-02	0.37 ± 0.03	<1.0 E-07	3.15 E-02	0.39 ± 0.03	<1.0 E-07
DECEMBER	2.99 E-02	0.31 ± 0.03	<1.0 E-07	5.71 E-02	0.38 ± 0.03	2.59 ± 0.9 E-07

MONTH - 1985	ROUTE 240 (AF24FOP)			THOMAS CORNERS ROAD (AFTCFOP)		
	GROSS ALPHA	GROSS BETA	H-3 (uCi/ml)	GROSS ALPHA	GROSS BETA	H-3 (uCi/ml)
JANUARY	2.10 E-02	0.13 ± 0.02	4.15 ± 0.9 E-07	2.89 E-02	0.22 ± 0.02	5.26 ± 0.9 E-07
FEBRUARY	5.86 E-03	0.10 ± 0.02	1.69 ± 1.1 E-07	1.26 E-02	0.16 ± 0.02	1.16 ± 1.1 E-07
MARCH	2.58 E-02	0.42 ± 0.03	<1.0 E-07	2.19 E-02	0.48 ± 0.04	3.24 ± 1.1 E-07
APRIL	3.93 E-02	0.45 ± 0.03	<1.0 E-07	2.48 E-02	0.48 ± 0.04	<1.0 E-07
MAY	1.69 E-02	0.35 ± 0.03	<1.0 E-07	1.69 E-02	0.38 ± 0.03	<1.0 E-07
JUNE	1.62 E-02	0.29 ± 0.03	<1.0 E-07	8.89 E-02	0.38 ± 0.04	<1.0 E-07
JULY	3.16 E-02	0.21 ± 0.02	1.08 ± 1.0 E-07	5.32 E-02	0.43 ± 0.04	<1.0 E-07
AUGUST	1.95 E-02	0.29 ± 0.03	<1.0 E-07	2.67 E-02	0.24 ± 0.02	<1.0 E-07
SEPTEMBER	4.49 E-02	0.22 ± 0.03	1.20 ± 1.0 E-07	4.06 E-02	0.30 ± 0.03	<1.0 E-07
OCTOBER	1.75 E-02	0.70 ± 0.05	<1.0 E-07	3.97 E-02	0.39 ± 0.03	1.04 ± 0.9 E-07
NOVEMBER	2.88 E-02	0.43 ± 0.03	1.60 ± 0.9 E-07	3.25 E-02	0.36 ± 0.03	1.53 ± 0.9 E-07
DECEMBER	5.03 E-02	0.33 ± 0.03	3.28 ± 0.9 E-07	2.51 E-02	0.24 ± 0.03	1.47 ± 0.9 E-07

TABLE C - 2.4

TOTAL PRECIPITATION AT WVDP - 1985

<u>1985</u>	<u>‡</u> <u>RAINFALL</u>	<u>CUMULATIVE TOTAL</u>
*JAN	0.98 INCHES	0.98 INCHES
*FEB	0.50 INCHES	1.48 INCHES
*MAR	1.79 INCHES	3.27 INCHES
APR	1.12 INCHES	4.39 INCHES
MAY	2.01 INCHES	6.40 INCHES
JUN	3.73 inches	10.13 inches
JUL	3.61 inches	13.74 inches
AUG	2.98 inches	16.72 inches
SEP	2.54 inches	19.26 inches
OCT	5.21 inches	24.47 inches
NOV	7.72 inches	32.21 inches
DEC	2.81 inches	35.02 inches

‡ Includes snow as equivalent rainfall

* Incomplete record

FIGURE C-2.1
 1985 SAMPLING DATA FOR STATION ANSTACK
 CURIES RELEASED PER MONTH

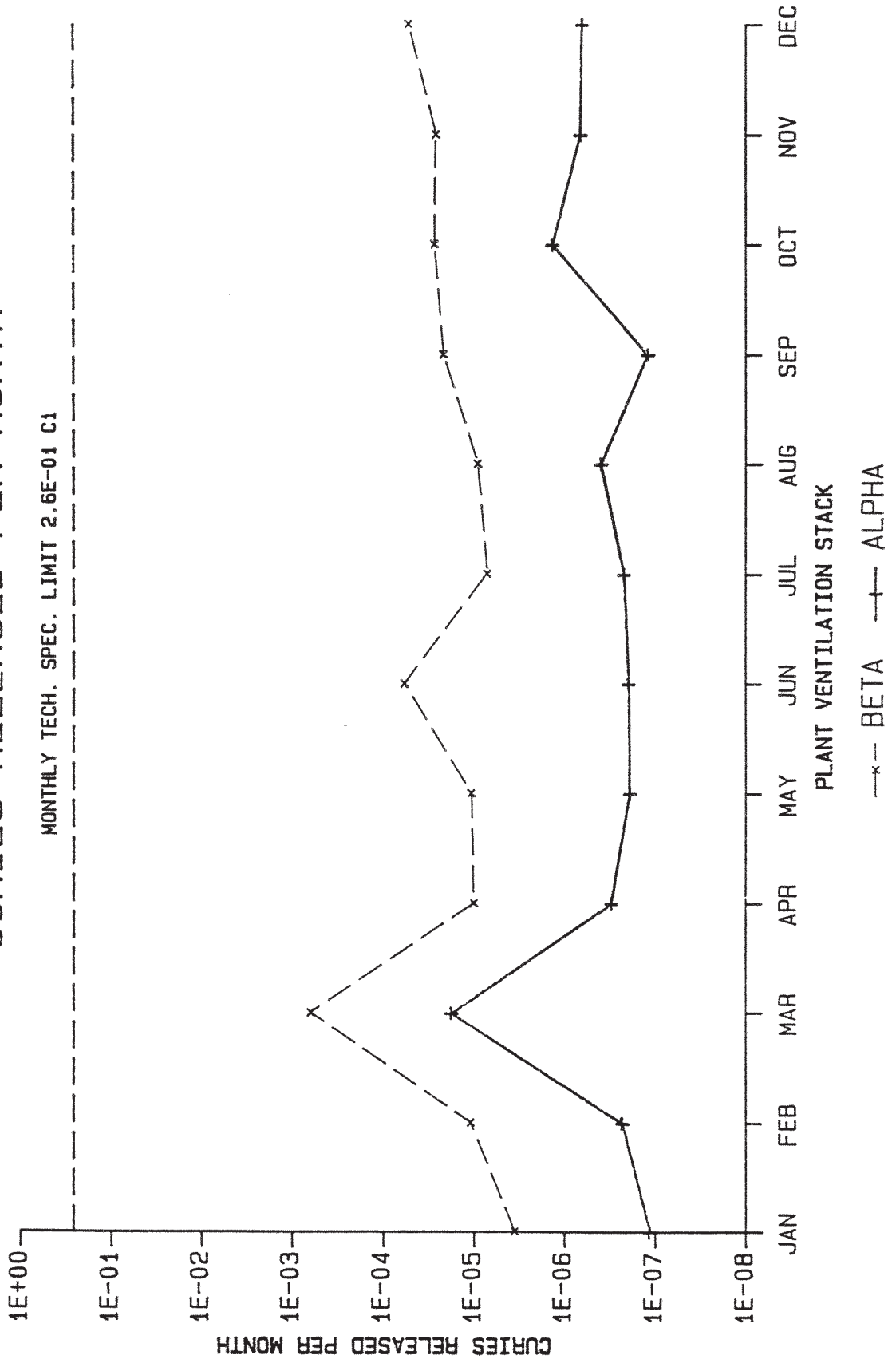
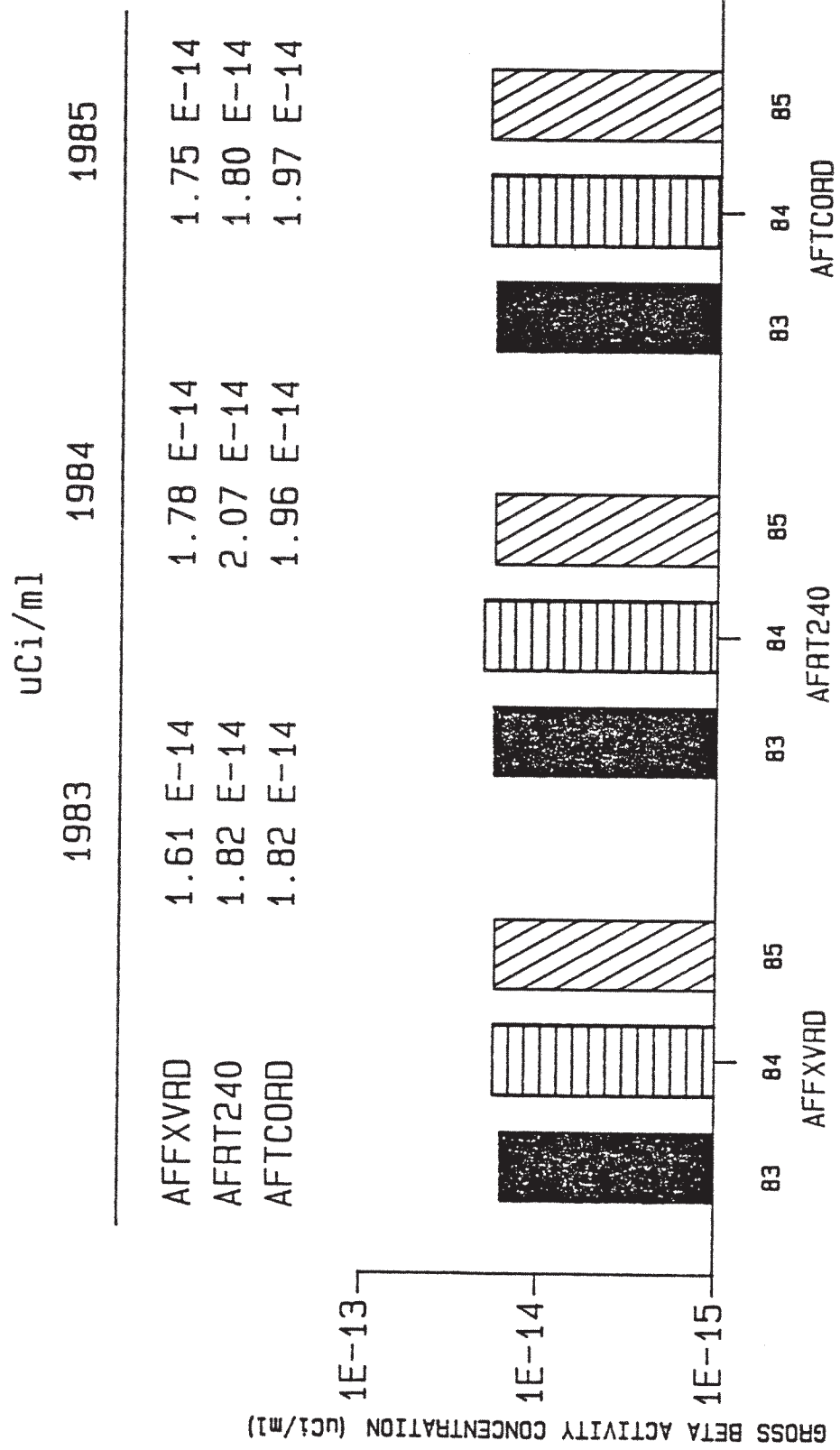


FIGURE C-2.2
 TRENDS OF GROSS BETA ACTIVITY IN PERIMETER AIR SAMPLERS
 (AFFXVRD, AFRT240, AFTCORD) 1983-1985



PARTICULATE AIR SAMPLE ANNUAL AVERAGES

APPENDIX C-3

SUMMARY OF BIOLOGICAL SAMPLE DATA

TABLE C - 3.1
 RADIOACTIVITY CONCENTRATIONS IN MILK - 1985
 (uCi/ml)

	SR-90 *****	I-129 *****	CS-134 *****	CS-137 *****
NNW Farm (BFMREED) 1st Quarter 1985	3.32 ± 0.5 E-09	<1.8 E-09	<2.3 E-08	<1.8 E-08
NNW Farm (BFMREED) 2nd Quarter 1985	2.30 ± 0.5 E-09	<2.2 E-09	<2.0 E-08	<2.3 E-08
NNW Farm (BFMREED) 3rd Quarter 1985	2.25 ± 0.6 E-09	<1.3 E-09	<2.1 E-08	<2.5 E-08
ENE Farm (BFMZIMM) August 1985	4.35 ± 0.7 E-09	<1.4 E-08*	<2.1 E-08	<2.2 E-08
MNW Farm (BFMCOBO) 3rd Quarter 1985	3.19 ± 0.6 E-09	<1.5 E-09	<1.9 E-08	<1.7 E-08
NNW Farm (BFMREED) 4th Quarter 1985	1.74 ± 0.2 E-09	<7.8 E-10	<1.6 E-08	<1.7 E-08
Control (BFMCTRL) 4th Quarter 1985	6.63 ± 3.2 E-10	<1.4 E-09	<1.7 E-08	<2.0 E-08

*Laboratory accident caused loss of sample and decreased sensitivity.

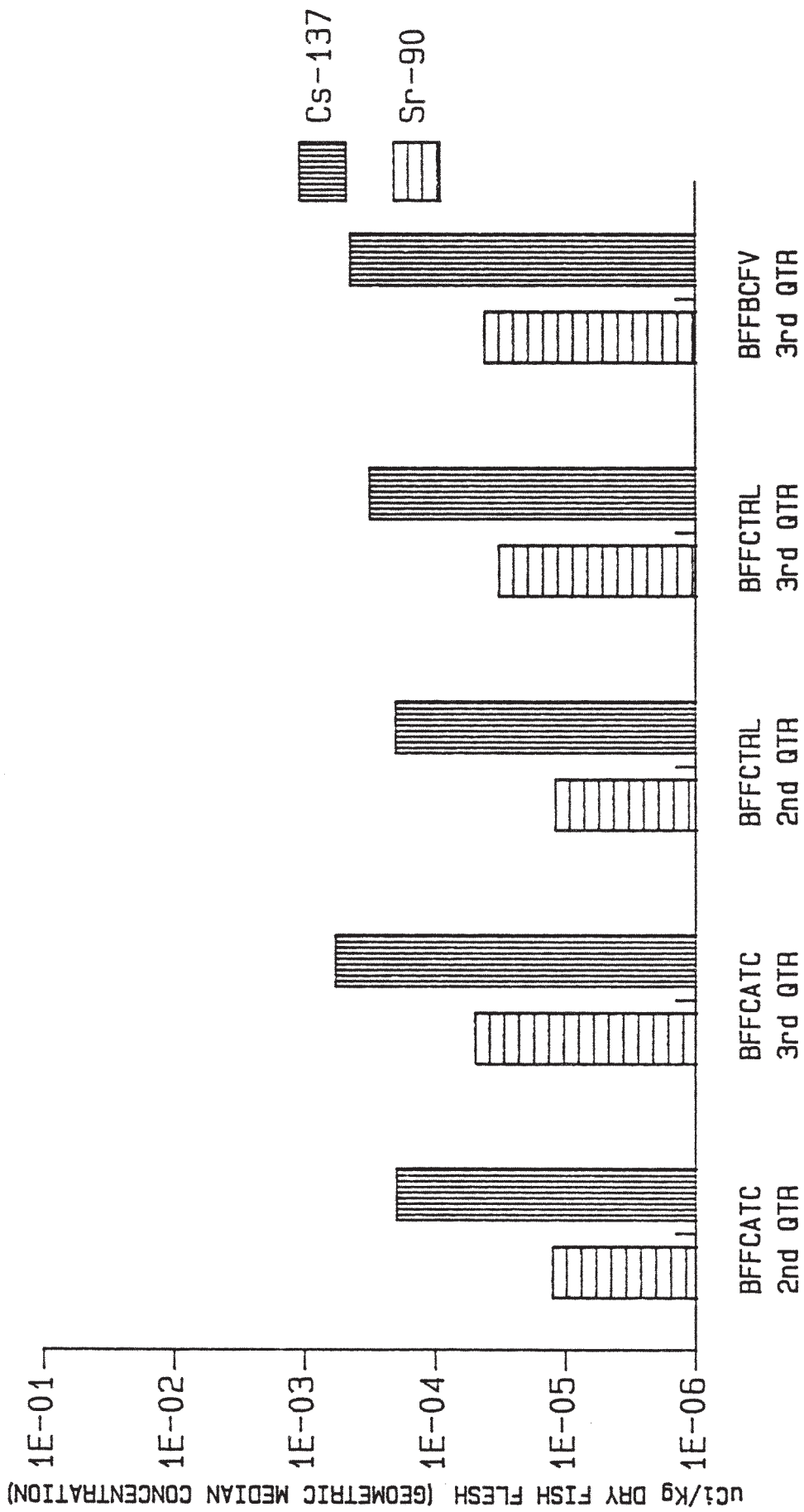
TABLE C - 3.2
 RADIOACTIVITY CONCENTRATIONS IN MEAT - 1985
 (uCi/kg)

	Sr-89	Sr-90	Cs-134	Cs-137
Deer Flesh - Near site (BFDNEAR) December 1985	<1.6 E-03	2.62 ± 0.4 E-06	<4.0 E-05	1.75 ± 0.3 E-04
Deer Skeleton - Near site (BFDNEAR) December 1985	<1.6 E-03	3.54 ± 0.4 E-03	-----	-----
Deer Flesh - Background (BFDCTRL) December 1985	-----	6.16 ± 1.6 E-06	<4.9 E-05	1.08 ± 0.3 E-04
Beef Flesh - Near site (BFBNEAR) June 1985	-----	-----	<2.7 E-05	1.44 ± 1.4 E-05
Beef Flesh - Background (BFBCTRL) June 1985	-----	-----	<1.7 E-05	<1.8 E-05
Beef Flesh - Near site (BFBNEAR) December 1985	-----	-----	<4.5 E-05	<5.9 E-05
Beef Flesh - Background (BFBCTRL) August 1985	-----	-----	<5.8 E-05	2.66 ± 2.7 E-05

TABLE C - 3.3
 RADIOACTIVITY CONCENTRATIONS IN FOOD CROPS - 1985
 (uci/g) DRY

	SR-90	K-40	CO-60	CS-137
CORN - BACKGROUND (BFVCTRL) AUG. 1985	6.25 ± 1.7 E-09	1.10 ± 0.1 E-05	<6.5 E-08	<5.7 E-08
CORN - NEAR SITE (BFVNEAR) OCT. 1985	1.67 ± 0.5 E-09	5.53 ± 0.6 E-06	<5.0 E-08	<5.0 E-08
APPLES - NEAR SITE (BFVNEAR) OCT. 1985	3.96 ± 0.9 E-09	1.05 ± 0.1 E-05	<6.3 E-08	2.03 ± 2.0 E-08
POTATOES - NEAR SITE (BFVNEAR) OCT. 1985	1.09 ± 0.2 E-08	1.76 ± 0.1 E-05	<5.7 E-08	<4.3 E-08

FIGURE C-3.1
 COMPARISON OF RADIOACTIVITY IN FISH
 SAMPLES FROM AROUND WVDP-1985



SAMPLE LOCATION

FIGURE C-3.2
 TRENDS OF Sr-90 CONCENTRATIONS IN FISH FROM
 CATTARAUGUS CREEK (BFFCATC) 1982-1985

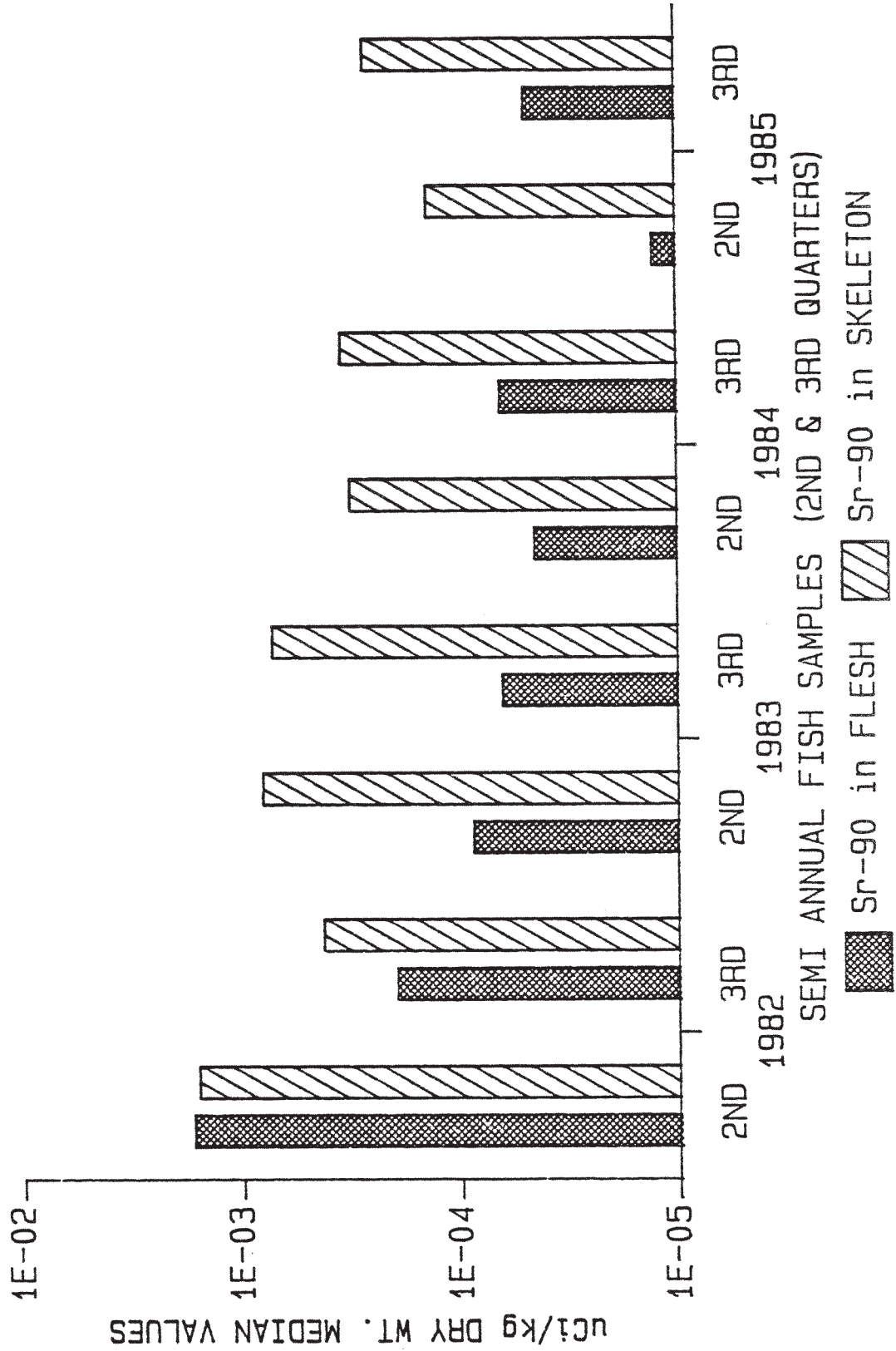
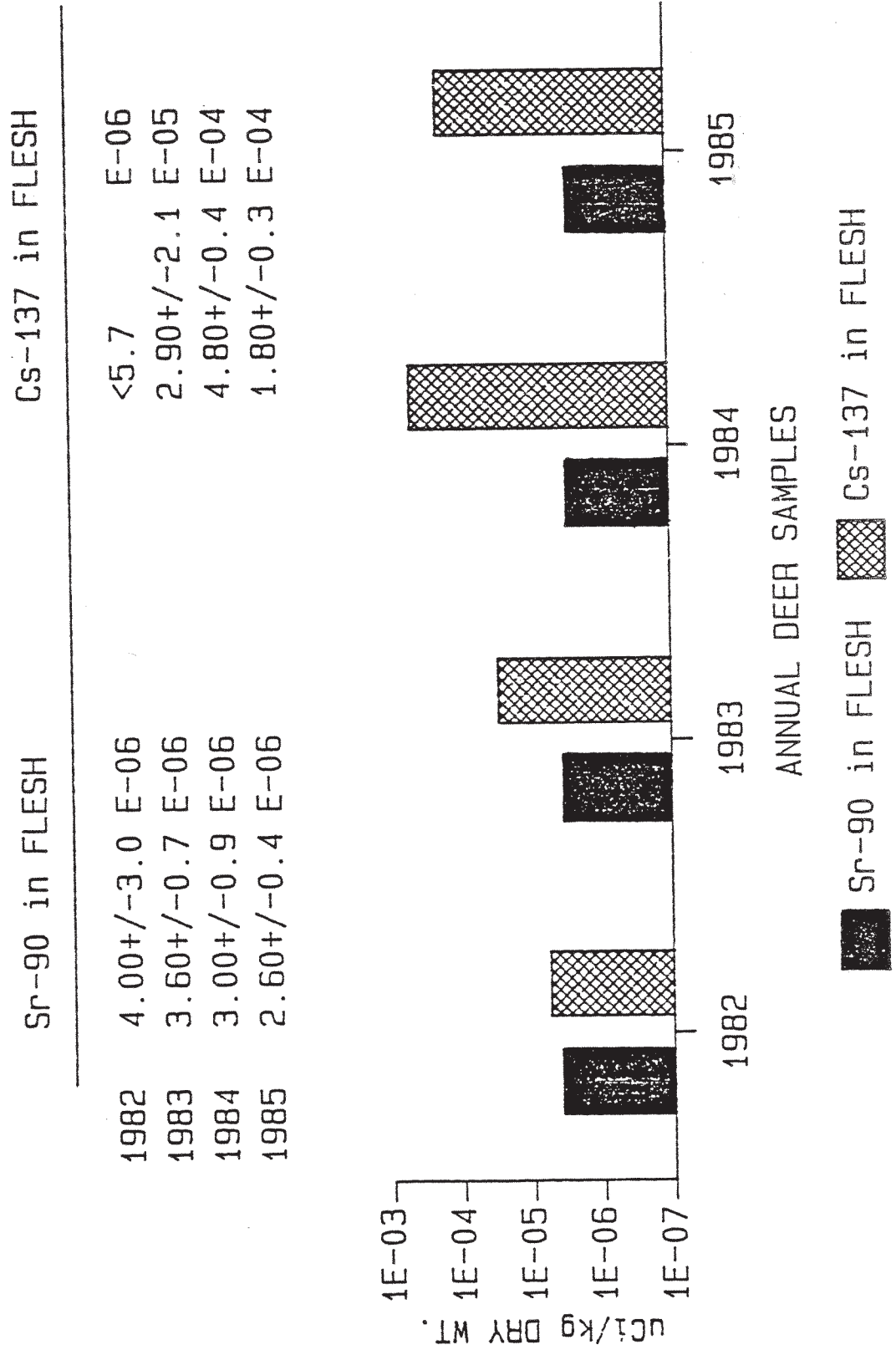


FIGURE C-3.3
 TRENDS OF RADIONUCLIDES IN VENISON FROM NEAR WVDP SITE
 (BFDNEAR) 1982-1985



APPENDIX C-4

SUMMARY OF DIRECT RADIATION MONITORING

TABLE C-4.1
 SUMMARY OF TLD MEASUREMENTS - 1985
 (Roentgen ± 3SD)

Location #	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Location Average
1	0.017 ± 0.004	0.021 ± 0.004	0.023 ± 0.005	0.023 ± 0.012	0.021 ± 0.006
2	0.017 ± 0.002	0.019 ± 0.001	0.021 ± 0.006	0.019 ± 0.012	0.019 ± 0.005
3	0.015 ± 0.001	0.019 ± 0.005	0.021 ± 0.004	0.017 ± 0.005	0.018 ± 0.004
4	0.016 ± 0.004	0.019 ± 0.004	0.021 ± 0.006	0.018 ± 0.009	0.019 ± 0.006
5	0.016 ± 0.002	0.019 ± 0.003	0.022 ± 0.007	0.020 ± 0.011	0.019 ± 0.006
6	0.016 ± 0.004	0.019 ± 0.005	0.019 ± 0.006	0.020 ± 0.009	0.019 ± 0.006
7	0.016 ± 0.001	0.020 ± 0.007	0.019 ± 0.009	0.020 ± 0.015	0.019 ± 0.005
8	0.016 ± 0.002	0.019 ± 0.003	0.021 ± 0.005	0.018 ± 0.009	0.019 ± 0.005
9	0.016 ± 0.002	0.018 ± 0.001	0.020 ± 0.005	0.018 ± 0.010	0.018 ± 0.005
10	0.015 ± 0.003	*	0.020 ± 0.009	0.019 ± 0.010	0.018 ± 0.007
11	0.018 ± 0.004	0.021 ± 0.005	0.021 ± 0.010	0.021 ± 0.009	0.020 ± 0.007
12	0.016 ± 0.001	0.019 ± 0.002	0.021 ± 0.002	0.018 ± 0.010	0.019 ± 0.004
13	0.017 ± 0.003	0.022 ± 0.004	0.024 ± 0.006	0.020 ± 0.006	0.021 ± 0.005
14	0.017 ± 0.002	0.023 ± 0.008	0.023 ± 0.007	0.021 ± 0.014	0.021 ± 0.008
15	0.015 ± 0.003	0.021 ± 0.004	0.022 ± 0.007	0.020 ± 0.013	0.020 ± 0.007
16	0.014 ± 0.001	*	0.020 ± 0.004	0.018 ± 0.004	0.017 ± 0.003
17	0.017 ± 0.002	0.020 ± 0.003	0.020 ± 0.003	0.022 ± 0.015	0.020 ± 0.006
†18	0.019 ± 0.002	0.027 ± 0.004	0.030 ± 0.010	0.025 ± 0.012	0.025 ± 0.007
†19	0.017 ± 0.003	0.023 ± 0.005	0.023 ± 0.008	0.020 ± 0.003	0.021 ± 0.005
20	0.016 ± 0.002	0.019 ± 0.005	0.020 ± 0.005	0.017 ± 0.010	0.018 ± 0.006
21	0.018 ± 0.001	0.019 ± 0.005	0.019 ± 0.003	0.018 ± 0.010	0.019 ± 0.005
22	0.018 ± 0.002	0.019 ± 0.002	0.021 ± 0.005	0.016 ± 0.003	0.019 ± 0.003
23	0.018 ± 0.002	0.020 ± 0.005	0.018 ± 0.006	0.017 ± 0.009	0.018 ± 0.006
†24	**	**	0.331 ± 0.084	1.638 ± 0.677	0.985 ± 0.381
25	**	**	0.026 ± 0.007	0.033 ± 0.015	0.030 ± 0.011
Quarterly Average	0.016 ± 0.002	0.020 ± 0.004	0.021 ± 0.006	0.020 ± 0.010	0.020 ± 0.006

* - TLD Package Missing
 ** - TLD Package Not Placed Until Third Quarter
 † - See Figures A-4 and A-6 For Locations
 ‡ - TLDs 18, 19 and 24 are on-site at locations which are not accessible to the public.
 They are not part of the off-site monitoring program and are not included in the Quarterly Averages.

FIGURE C-4.1
 AVERAGE QUARTERLY GAMMA EXPOSURE RATES
 AROUND WVDP - 1985

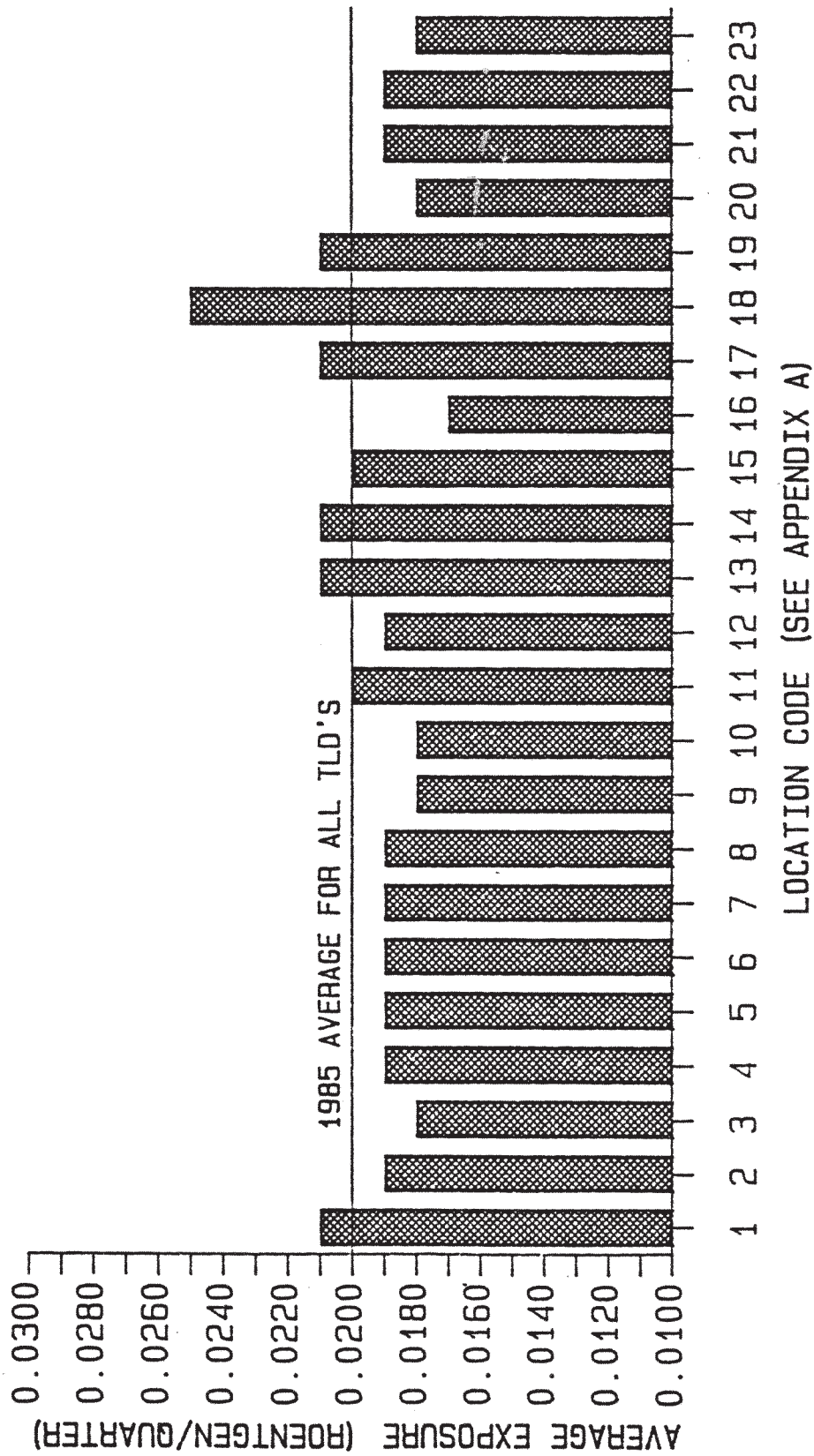


FIG C-4.2
 COMPARISON OF TLD AND HPIC MEASUREMENTS OF EXPOSURE RATES
 3RD QUARTER 1985

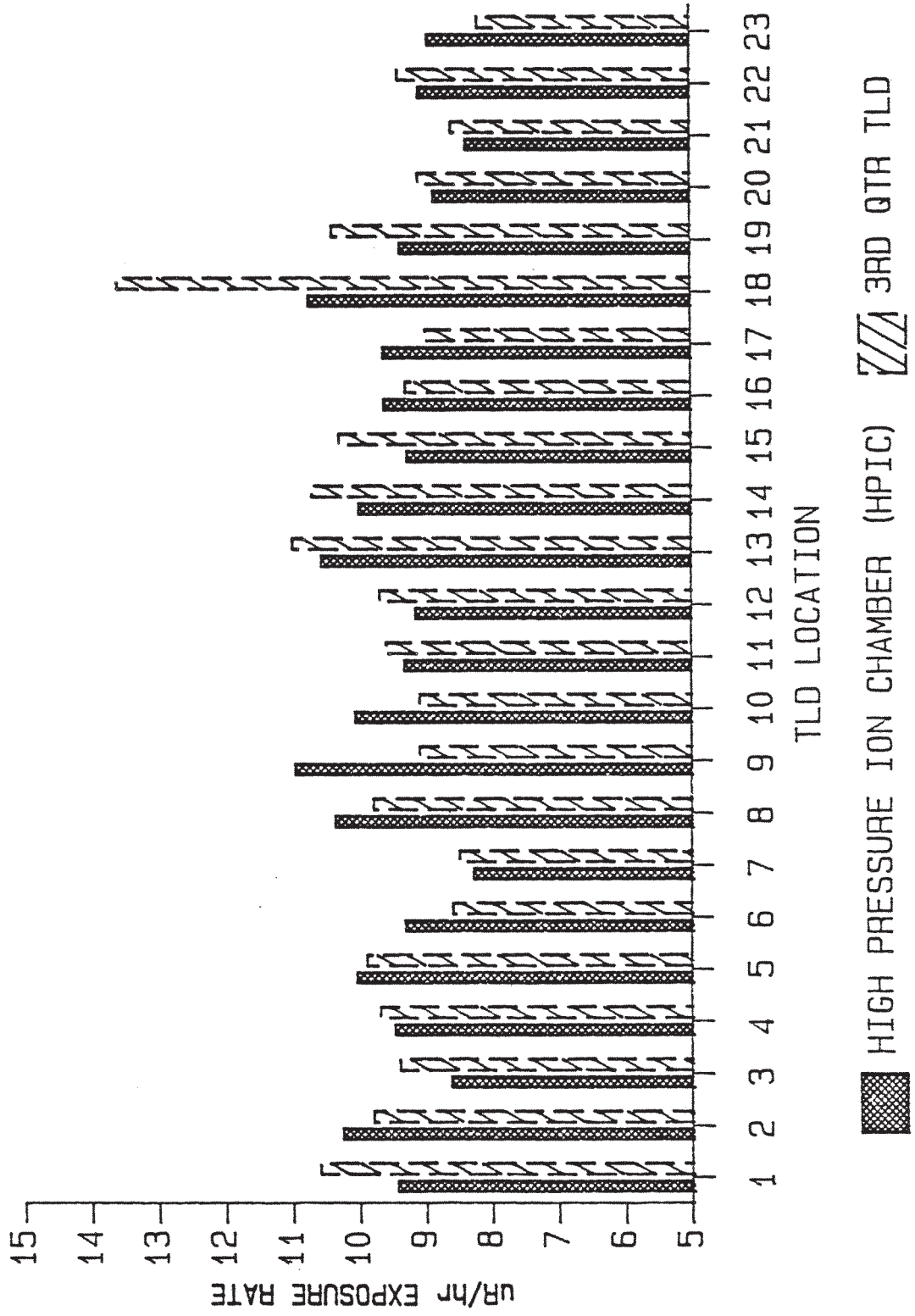


FIGURE C-4.3
 TRENDS OF ENVIRONMENTAL GAMMA RADIATION LEVELS
 QUARTERLY AVERAGES OF 16 PERIMETER TLD'S

