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MONTHLY PROGRESS REPORT
TO
COMMONWEALTH EDISON COMPANY

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM
FOR
BYRON NUCLEAR POWER STATION
BYRON, ILLINOIS

PREPARED AND SUBMITTED
BY
TELEDYNE ISOTOPE'S MIDWEST LABORATORY

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Reporting Period: January - December, 1986

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1.0 INTRODUCTION

The following constitutes the current Monthly Progress Report for the Environmental Radiological Monitoring Program conducted at the Byron Nuclear Power Station, Byron, Illinois. Results of completed analyses are presented in the attached tables. Missing entries indicate analyses that are not completed and the results will appear in subsequent reports.

Data obtained in the program are well within the ranges previously encountered in the program and to be expected in the environmental media sampled.

None of the media sampled this month contained radioactivity attributable to the construction of Byron Nuclear Power Station.

For all gamma isotopic analyses, spectrum is computer scanned from 80 to 2048 KeV. Specifically included are Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Nb-95, Ru-103, Ru-106, I-131, Ba-La-140, Cs-134, Cs-137, Ce-141, and Ce-144. Naturally occurring gamma-emitters, such as K-40 and Ra daughters, are frequently detected but not listed here. Data listed as "<" are at the 4.66 sigma level, others are 2 sigma. Cs-134 and Cs-137 are listed separately. All other gamma emitters are listed under "Other Gammas". Unless noted otherwise, the less than value ("<") reported under "Other Gammas" is for Co-60 and may be higher or lower for other radionuclides.

All concentrations, except gross beta, are decay corrected to the time of collection.

Deviations from Scheduled Sampling and Corrective Actions Taken

All samples were collected within the scheduled period unless noted otherwise in the Listing of Missed Samples.

2.0 LISTING OF MISSED SAMPLES

Sample Type	Location	Expected Collection Date	Reason
TLD	BY-213-2	2nd Qtr.	Lost in the field.

NOTE: Page 3 is intentionally left out.

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Table 1. Airborne Particulates and Iodine-131^a
 Collection: Weekly
 Units: 10⁻² pCi/m³

Week Ending	Byron BY-01		Stillman Valley BY-02 (C)		Near Site E BY-03		Paynes Point BY-04	
	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta
01-06-86	285	2.6±0.4	274	2.8±0.4	274	2.7±0.4	287	2.4±0.4
01-13-86	282	2.0±0.4	284	2.6±0.4	284	2.1±0.4	285	2.3±0.4
01-20-86	284	3.8±0.4	285	3.2±0.4	285	3.2±0.4	285	3.5±0.4
01-27-86	288	2.8±0.4	284	2.7±0.4	284	2.7±0.4	284	2.8±0.4
02-03-86	289	2.8±0.4	287	2.1±0.3	287	2.4±0.3	285	2.3±0.3
02-10-86	281	1.4±0.3	284	1.5±0.3	285	1.7±0.3	285	<0.4
02-17-86	286	2.4±0.4	287	3.3±0.4	287	3.2±0.4	287	2.6±0.4
02-24-86	285	2.7±0.4	285	2.5±0.4	285	2.5±0.4	285	2.2±0.4
03-03-86	290	2.6±0.4	286	2.5±0.4	286	2.5±0.4	285	2.3±0.3
03-10-86	279	2.7±0.4	283	2.6±0.4	284	2.2±0.4	285	2.0±0.3
03-17-86	285	1.6±0.4	285	1.9±0.6	285	1.4±0.3	285	1.8±0.4
03-24-86	289	2.3±0.4	288	2.3±0.4	288	2.0±0.4	286	1.7±0.4
03-31-86	290	2.5±0.4	285	2.2±0.4	285	2.5±0.4	286	1.3±0.3
1st Q mean ± s.d.		2.5±0.6		2.5±0.5		2.4±0.5		2.3±0.6
04-07-86	278	2.2±0.4	284	1.6±0.4	284	1.7±0.4	284	1.7±0.4
04-14-86	284	1.6±0.3	284	2.0±0.4	285	2.1±0.4	285	1.9±0.4
04-21-86	286	1.4±0.3	285	1.6±0.3	285	1.3±0.3	285	1.7±0.3
04-28-86	283	3.4±0.4	288	3.8±0.4	283	2.9±0.4	284	3.1±0.4
05-05-86	293	1.8±0.3	282	1.9±0.3	287	1.5±0.3	285	1.7±0.3
05-12-86	279	4.5±0.4 ^b	285	4.3±0.4 ^b	285	4.0±0.4 ^b	286	4.7±0.5 ^b
05-19-86	287	23.8±0.9 ^b	286	23.2±0.9 ^b	286	21.2±0.8 ^b	285	19.8±0.8 ^b
05-26-86	284	21.1±0.8 ^b	285	19.8±0.8 ^b	285	20.2±0.8 ^b	286	25.7±0.9 ^b
06-02-86	290	8.7±0.6 ^b	286	9.4±0.6 ^b	286	4.4±0.4 ^b	285	5.2±0.5 ^b
06-09-86	282	13.2±0.8 ^b	285	14.2±0.8 ^b	285	12.5±0.7 ^b	285	12.5±0.7 ^b
06-16-86	288	2.2±0.4	286	2.2±0.4	281	2.4±0.4	285	2.0±0.4
06-23-86	283	2.9±0.4	284	3.2±0.4	284	3.2±0.4	285	2.8±0.4
06-30-86	293	1.8±0.3	286	2.3±0.4	286	2.5±0.4	286	2.0±0.3
2nd Q mean ± s.d.		6.8±7.7		6.9±7.5		6.1±7.1		6.5±7.9

^a Iodine-131 concentrations are <0.07 pCi/m³ unless noted otherwise in Appendix C.

^b Elevated gross beta activity is due to fallout from the Chernobyl Nuclear Plant (USSR) accident on April 26, 1986.

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Table 1. Airborne Particulates and Iodine-131^a (continued)

Week Ending	Byron BY-01		Stillman Valley BY-02 (C)		Near Si' E BY-03		Paynes Point BY-04	
	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta
07-07-86	283	2.5±0.4	286	2.2±0.4	286	2.0±0.4	273	2.4±0.4
07-14-86	281	1.7±0.3	283	1.8±0.3	284	1.6±0.3	285	1.9±0.3
07-21-86	284	2.1±0.4	284	2.7±0.4	284	2.4±0.4	284	2.2±0.4
07-28-86	282	2.6±0.4	283	2.9±0.4	283	2.7±0.4	284	3.0±0.4
08-04-86	292	2.3±0.3	287	2.6±0.4	287	2.4±0.4	286	1.8±0.3
08-11-86	281	3.0±0.4	283	3.2±0.4	284	2.7±0.4	286	2.7±0.4
08-18-86	292	3.1±0.4	290	3.0±0.4	289	2.4±0.4	288	2.4±0.4
08-25-86	283	3.2±0.4	284	3.4±0.4	285	3.0±0.4	286	2.5±0.4
09-01-86	289	2.9±0.4	286	2.8±0.4	286	2.9±0.4	285	2.8±0.4
09-08-86	281	3.0±0.4	284	3.6±0.4	285	3.2±0.4	285	2.9±0.4
09-15-86	289	3.2±0.4	286	2.5±0.4	286	2.2±0.4	285	2.7±0.4
09-22-86	283	2.5±0.4	284	2.6±0.4	285	2.5±0.4	285	2.1±0.4
09-29-86	290	1.9±0.3	286	2.1±0.3	286	1.8±0.3	283	1.7±0.3
3rd Q mean ± s.d.		2.6±0.5		2.7±0.5		2.4±0.5		2.4±0.4
10-06-86	284	1.8±0.3	286	1.8±0.3	287	1.8±0.3	285	1.0±0.3
10-13-86	282	2.2±0.4	283	2.6±0.4	283	2.2±0.4	285	2.2±0.4
10-20-86	287	2.8±0.4	286	2.3±0.4	286	2.5±0.4	285	1.6±0.3
10-27-86	284	4.9±0.5	286	5.0±0.5	286	4.8±0.5	287	4.9±0.5
11-03-86	291	3.7±0.4	286	3.4±0.4	286	3.1±0.4	285	2.9±0.4
11-10-86	283	2.6±0.4	286	2.6±0.4	286	2.5±0.4	287	2.4±0.4
11-17-86	285	3.3±0.4	285	4.3±0.4	285	3.5±0.4	285	3.4±0.4
11-24-86	286	3.6±0.4	286	2.9±0.4	286	3.6±0.4	286	3.0±0.4
12-01-86	287	2.6±0.4	283	3.1±0.4	283	3.2±0.4	281	2.6±0.4
12-08-86	284	2.7±0.4	287	2.8±0.4	287	2.8±0.4	288	2.4±0.4
12-15-86	284	2.3±0.4	284	4.1±0.4	284	3.3±0.4	284	3.2±0.4
12-22-86	285	4.2±0.4	285	3.8±0.4	285	3.9±0.4	285	2.6±0.4
12-29-86	292	6.3±0.5	286	6.3±0.5	286	5.5±0.5	286	5.6±0.5
4th Q mean ± s.d.		3.3±1.2		3.5±1.2		3.3±1.0		2.9±1.2

^a Iodine-131 concentrations are <0.07 pCi/m³ unless noted otherwise.

BYRON

Table 2. Airborne Particulates and Iodine-131^a
 Collection: Weekly
 Units: 10⁻² pCi/m³

Week Ending	Near Site S BY-05		Oregon BY-06		Mt. Morris BY-07 (C)		Leaf Riv BY-08 (C)	
	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta
01-06-86	294	2.6±0.4	289	2.9±0.4	286	2.9±0.4	285	2.6±0.4
01-13-86	283	2.7±0.4	284	3.3±0.4	284	3.4±0.4	282	2.8±0.4
01-20-86	284	3.4±0.4	285	3.2±0.4	285	3.2±0.4	285	3.0±0.4
01-27-86	287	2.6±0.4	288	2.2±0.3	288	2.9±0.4	284	2.8±0.4
02-03-86	286	2.5±0.4	288	2.4±0.3	288	1.6±0.3	288	2.3±0.3
02-10-86	284	1.9±0.3	282	1.7±0.3	282	2.0±0.4	.32	1.8±0.3
02-17-86	287	3.2±0.4	287	3.1±0.4	287	3.6±0.4	287	3.5±0.4
02-24-86	285	2.5±0.4	285	2.5±0.4	285	3.2±0.4	285	2.7±0.4
03-03-86	231	3.4±0.4	288	2.9±0.4	288	2.8±0.4	287	3.2±0.4
03-10-86	292	1.8±0.3	281	2.4±0.4	282	2.6±0.4	282	2.6±0.4
03-17-86	285	1.7±0.4	285	1.6±0.4	285	1.6±0.4	285	1.7±0.4
03-24-86	290	2.3±0.4	289	2.2±0.4	289	1.9±0.4	289	2.2±0.4
03-31-86	284	<u>2.2±0.4</u>	285	<u>2.7±0.4</u>	285	<u>2.2±0.4</u>	285	<u>2.3±0.4</u>
1st Q mean ± s.d.		2.5±0.6		2.5±0.5		2.6±0.7		2.6±0.5
04-07-86	283	2.2±0.4	283	1.6±0.4	283	1.5±0.4	284	2.1±0.4
04-14-86	284	1.6±0.3	284	2.0±0.4	284	2.1±0.4	284	1.9±0.4
04-21-86	286	1.8±0.3	286	1.4±0.3	286	1.1±0.3	285	1.3±0.3
04-28-86	279	3.6±0.4	282	3.4±0.4	283	3.2±0.4	284	3.2±0.4
05-05-86	294	1.9±0.3	291	2.0±0.3	289	1.7±0.3	289	1.4±0.3
05-12-86	282	4.3±0.4 ^b	282	4.1±0.4 ^b	282	3.7±0.4 ^b	283	3.8±0.4 ^b
05-19-86	287	19.9±0.8 ^b	287	26.5±0.9 ^b	287	20.1±0.8 ^b	287	22.9±0.9 ^b
05-26-86	284	22.7±0.9 ^b	284	19.3±0.8 ^b	287	18.7±0.8 ^b	284	24.2±0.9 ^b
06-02-86	287	9.5±0.6 ^b	288	9.9±0.6 ^b	288	9.0±0.6 ^b	288	10.1±0.6 ^b
06-09-86	284	13.7±0.8 ^b	283	10.3±0.7 ^b	283	11.6±0.7 ^b	284	4.4±0.5 ^b
06-16-86	277	2.0±0.4	287	2.3±0.4	288	2.3±0.4	288	2.0±0.3
06-23-86	292	3.3±0.4	282	2.9±0.4	282	2.5±0.4	283	3.1±0.4
06-30-86	289	<u>2.3±0.4</u>	290	<u>2.4±0.4</u>	290	<u>2.2±0.4</u>	288	<u>2.4±0.4</u>
2nd Q mean ± s.d.		6.8±7.4		6.8±7.9		6.1±6.7		6.4±8.0

^a Iodine-131 concentrations are <0.07 pCi/m³ unless noted otherwise in Appendix C.

^b Elevated gross beta activity is due to fallout from the Chernobyl Nuclear Plant (USSR) accident on April 26, 1986.

BYRON

Table 2. Airborne Particulates and Iodine-131^a (continued)

Week Ending	Nea site S BY-05		Oregon BY-06		Mt. Morris BY-07 (C)		Leaf River BY-08 (C)	
	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta
07-07-86	288	2.2±0.4	285	2.1±0.4	285	2.0±0.3	286	1.8±0.3
07-14-86	280	2.0±0.4	282	1.9±0.3	282	1.6±0.3	282	1.8±0.3
07-21-86	283	2.3±0.4	283	2.0±0.3	283	2.7±0.4	284	2.2±0.4
07-28-86	282	2.8±0.4	283	2.8±0.4	283	0.6±0.2	282	2.7±0.4
08-04-86	289	2.5±0.4	290	2.3±0.3	290	2.4±0.3	284	2.0±0.3
08-11-86	282	2.5±0.4	281	2.7±0.4	281	2.8±0.4	282	2.0±0.4
08-18-86	294	2.6±0.4	292	3.1±0.4	292	2.6±0.4	292	2.6±0.4
08-25-86	281	3.3±0.4	283	2.7±0.4	283	2.9±0.4	283	2.4±0.4
09-01-86	286	2.9±0.4	288	3.0±0.4	288	2.5±0.4	287	2.9±0.4
09-08-86	286	3.0±0.4	282	3.3±0.4	283	3.2±0.4	283	3.4±0.4
09-15-86	288	2.7±0.4	288	3.2±0.4	288	3.2±0.4	287	2.9±0.4
09-22-86	283	2.1±0.4	283	1.2±0.3	284	2.4±0.4	284	1.3±0.3
09-29-86	282	1.9±0.3	285	1.5±0.3	287	1.8±0.3	287	1.4±0.3
3rd Q mean ± s.d.		2.5±0.4		2.4±0.7		2.4±0.7		2.3±0.6
10-06-86	278	1.3±0.3	286	1.7±0.3	286	1.4±0.3	286	1.0±0.3
10-13-86	293	2.3±0.4	282	1.8±0.3	283	1.8±0.3	283	1.8±0.3
10-20-86	287	2.6±0.4	287	1.9±0.3	286	2.2±0.3	285	2.0±0.3
10-27-86	283	4.3±0.4	284	3.7±0.4	286	5.4±0.5	286	3.6±0.4
11-03-86	288	3.5±0.4	290	2.5±0.4	288	3.6±0.4	288	2.7±0.4
11-10-86	286	2.5±0.4	283	3.0±0.4	284	2.5±0.4	285	2.2±0.4
11-17-86	285	3.3±0.4	285	4.0±0.4	286	3.5±0.4	286	3.4±0.4
11-24-86	286	3.8±0.4	286	3.8±0.4	286	3.6±0.4	286	3.4±0.4
12-01-86	284	3.0±0.4	285	3.3±0.4	285	2.3±0.4	284	1.9±0.3
12-08-86	287	2.6±0.4	285	1.4±0.3	285	2.9±0.4	286	2.5±0.4
12-15-86	284	2.9±0.4	284	3.8±0.4	285	3.7±0.4	285	3.8±0.4
12-22-86	285	3.5±0.4	285	3.9±0.4	285	3.6±0.4	285	4.1±0.4
12-29-86	288	4.7±0.5	287	6.1±0.5	287	6.0±0.5	287	5.9±0.5
4th Q. mean ± s.d.		3.1±0.9		3.1±1.3		3.3±1.3		2.9±1.3

^a Iodine-131 concentrations are <0.07 pCi/m³ unless noted otherwise.

Table 3. Airborne Particulates and Iodine-131^a
 Collection: Weekly
 Units: 10⁻² pCi/m³

Week Ending	BY-21		BY-22		BY-23		BY-24	
	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta
01-06-86	283	3.0±0.4	283	2.9±0.4	283	2.8±0.4	284	2.4±0.4
01-13-86	284	2.5±0.4	284	2.8±0.4	284	2.7±0.4	284	2.7±0.4
01-20-86	284	3.3±0.4	284	3.0±0.4	284	3.5±0.4	284	3.2±0.4
01-27-86	287	2.4±0.3	287	2.6±0.4	287	2.5±0.4	288	2.7±0.4
02-03-86	289	2.3±0.3	289	2.3±0.4	287	2.3±0.3	287	2.2±0.3
02-10-86	281	2.2±0.4	282	1.7±0.3	282	1.7±0.3	282	2.0±0.4
02-17-86	286	3.7±0.4	287	3.5±0.4	287	3.2±0.4	287	3.5±0.4
02-24-86	285	2.8±0.4	285	2.5±0.4	285	2.8±0.4	285	2.7±0.4
03-03-86	290	2.6±0.4	289	2.4±0.4	288	2.9±0.4	288	2.8±0.4
03-10-86	279	2.5±0.4	280	2.8±0.4	281	2.7±0.4	281	2.7±0.4
03-17-86	285	1.5±0.3	285	2.0±0.4	285	1.3±0.3	285	1.9±0.4
03-24-86	290	1.8±0.4	290	2.2±0.4	290	2.2±0.4	290	2.1±0.4
03-31-86	279	1.2±0.3	290	2.5±0.4	289	2.8±0.4	289	2.6±0.4
1st Q mean ± s.d.		2.4±0.7		2.6±0.5		2.6±0.6		2.6±0.5
04-07-86	273	1.2±0.4	277	2.0±0.4	277	1.8±0.4	278	1.6±0.4
04-14-86	284	1.6±0.3	284	1.7±0.3	284	2.0±0.4	284	1.7±0.3
04-21-86	286	1.6±0.3	286	1.5±0.3	286	1.4±0.3	286	1.3±0.3
04-28-86	284	3.2±0.4	283	3.8±0.4	283	3.0±0.4	283	3.2±0.4
05-05-86	291	1.6±0.3	291	1.7±0.3	292	1.7±0.3	290	1.6±0.3
05-12-86	278	4.5±0.4 ^b	281	4.6±0.5 ^b	281	4.0±0.4 ^b	281	4.3±0.4 ^b
05-19-86	270	22.6±0.9 ^b	287	15.5±0.7 ^b	287	16.4±0.8 ^b	286	20.3±0.8 ^b
05-26-86	283	18.7±0.8 ^b	284	21.3±0.9 ^b	284	19.7±0.8 ^b	285	21.8±0.9 ^b
06-02-86	220	6.7±0.6 ^b	288	9.6±0.6 ^b	288	9.4±0.6 ^b	288	8.7±0.6 ^b
06-09-86	263	10.7±0.7 ^b	281	12.5±0.7 ^b	283	12.9±0.7 ^b	283	12.2±0.7 ^b
06-16-86	286	2.3±0.4	287	2.7±0.4	286	2.6±0.4	286	2.3±0.4
06-23-86	283	2.9±0.4	283	3.0±0.4	283	2.7±0.4	283	2.7±0.4
06-30-86	293	2.2±0.3	293	2.3±0.4	291	2.3±0.4	291	2.2±0.4
2nd Q mean ± s.d.		6.1±7.0		6.3±6.4		6.1±6.3		6.5±7.2

^a Iodine-131 concentrations are <0.07 pCi/m³ unless noted otherwise in Appendix C.

^b Elevated gross beta activity is due to fallout from the Chernobyl Nuclear Plant (USSR) accident on April 26, 1986.

BYRON

Table 3. Airborne Particulates and Iodine-131^a (continued)

Week Ending	BY-21		BY-22		BY-23		BY-24	
	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta	Volume (m ³)	Gross Beta
07-07-86	283	2.0±0.4	283	2.8±0.4	286	2.2±0.4	286	2.5±0.4
07-14-86	279	1.8±0.3	279	1.9±0.4	280	1.8±0.3	279	1.6±0.3
07-21-86	284	2.0±0.3	284	2.2±0.4	284	2.3±0.4	283	2.2±0.4
07-28-86	282	2.6±0.4	282	2.9±0.4	282	3.0±0.4	282	2.4±0.4
08-04-86	292	1.9±0.3	294	2.2±0.3	290	2.4±0.4	290	1.9±0.3
08-11-86	279	2.3±0.4	278	2.0±0.4	281	2.4±0.4	281	1.7±0.3
08-18-86	294	2.6±0.4	294	2.5±0.4	294	2.7±0.4	294	1.9±0.4
08-25-86	282	2.8±0.4	282	3.2±0.4	282	2.9±0.4	282	2.9±0.4
09-01-86	290	2.5±0.4	290	2.8±0.4	287	2.7±0.4	287	2.7±0.4
09-08-86	280	3.4±0.4	279	3.2±0.4	284	3.1±0.4	285	3.0±0.4
09-15-86	290	2.5±0.4	289	1.6±0.3	289	2.7±0.4	288	2.7±0.4
09-22-86	283	2.5±0.4	283	2.5±0.4	283	2.4±0.4	283	2.4±0.4
09-29-86	291	1.8±0.3	287	2.0±0.3	282	1.7±0.3	284	1.2±0.3
3rd Q mean ± s.d.		2.4±0.5		2.4±0.5		2.5±0.4		2.2±0.5
10-06-86	284	1.7±0.3	278	1.6±0.3	287	1.6±0.3	287	1.8±0.3
10-13-86	282	2.3±0.4	282	2.3±0.4	281	2.5±0.4	282	2.3±0.4
10-20-86	288	2.6±0.4	288	2.4±0.4	288	2.4±0.4	288	2.4±0.4
10-27-86	283	4.4±0.4	283	4.8±0.5	283	4.8±0.5	283	5.2±0.5
11-03-86	292	3.8±0.4	291	3.1±0.4	290	3.6±0.4	290	3.9±0.4
11-10-86	282	2.8±0.4	282	2.9±0.4	285	2.5±0.4	285	2.4±0.4
11-17-86	285	4.0±0.4	285	3.8±0.4	285	3.8±0.4	285	4.0±0.4
11-24-86	286	3.8±0.4	286	3.7±0.4	286	3.6±0.4	286	4.0±0.4
12-01-86	287	2.5±0.4	287	2.8±0.4	286	2.9±0.4	286	2.8±0.4
12-08-86	284	2.1±0.4	284	2.4±0.4	286	2.4±0.4	286	2.5±0.4
12-15-86	284	3.9±0.4	284	3.4±0.4	284	3.4±0.4	284	3.6±0.4
12-22-86	285	4.1±0.4	285	4.0±0.4	285	4.0±0.4	285	3.9±0.4
12-29-86	293	6.5±0.5	293	5.9±0.5	288	6.3±0.5	292	6.6±0.5
4th Q mean ± s.d.		3.4±1.3		3.3±1.2		3.4±1.2		3.5±1.3

^a Iodine-131 concentrations are <0.07 pCi/m³ unless noted otherwise.

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Table 4. Airborne Particulates
Collection: Quarterly composites of weekly collections
Units: pCi/m³

Location	Lab Code	Volume (m ³)	Sr-89	Sr-90	Cs-134	Cs-137	Other Gammas
BY-01	BYAP-29	3713	<0.01	<0.01	<0.01	<0.01	<0.01
BY-02	30	3697	<0.01	<0.01	<0.01	<0.01	<0.01
BY-03	31	3699	<0.01	<0.01	<0.01	<0.01	<0.01
BY-04	32	3710	<0.01	<0.01	<0.01	<0.01	<0.01
BY-05	33	3672	<0.01	<0.01	<0.01	<0.01	<0.01
BY-06	34	3716	<0.01	<0.01	<0.01	<0.01	<0.01
BY-07	35	3714	<0.01	<0.01	<0.01	<0.01	<0.01
BY-08	36	3706	<0.01	<0.01	<0.01	<0.01	<0.01
BY-21	37	3702	<0.01	<0.01	<0.01	<0.01	<0.01
BY-22	38	3715	<0.01	<0.01	<0.01	<0.01	<0.01
BY-23	39	3712	<0.01	<0.01	<0.01	<0.01	<0.01
BY-24	40	3714	<0.01	<0.01	<0.01	<0.01	<0.01
<u>1st Quarter</u>							
BY-01	BYAP-182	3709	<0.01	<0.01	<0.01	0.015±0.002	0.017±0.002 ^c
BY-02	183	3706	<0.01	<0.01	<0.01	0.014±0.001	0.013±0.002 ^c
BY-03	184	3702	<0.01	<0.01	<0.01	0.018±0.002	0.011±0.002 ^c
BY-04	185	3706	<0.01	<0.01	<0.01	0.013±0.003	0.012±0.003 ^c
BY-05	186	3708	<0.01	<0.01	0.020±0.004	0.043±0.004	0.026±0.005 ^c
BY-06	187	3709	<0.01	<0.01	<0.01	0.014±0.002	<0.01
BY-07	188	3712	<0.01	<0.01	<0.01	0.014±0.002	0.011±0.002 ^c
BY-08	189	3711	<0.01	<0.01	<0.01	0.014±0.002	<0.01
BY-21	190	3594	<0.01	<0.01	<0.01	0.012±0.001	0.011±0.002 ^c
BY-22	191	3705	<0.01	<0.01	<0.01	0.013±0.001	0.010±0.002 ^c
BY-23	192	3705	<0.01	<0.01	<0.01	0.012±0.002	0.012±0.002 ^c
BY-24	193	3704	<0.01	<0.01	<0.01	0.011±0.001	<0.01
<u>2nd Quarter</u>							

^a See Introduction.

^b Elevated Cs-134, Cs-137, and Ru-103 activities are due to fallout from the Chernobyl Nuclear Plant (USSR) accident on April 26, 1986.

^c Ru-103.

BYRON

Table 4. Airborne Particulates (continued)

Location	Lab Code	Volume (m ³)	Sr-89	Sr-90	Gamma Isotopic ^a
<u>3rd Quarter</u>					
BY-01	BYAP-289	3710	<0.01	<0.01	<0.01
BY-02	290	3706	<0.01	<0.01	<0.01
BY-03	291	3710	<0.01	<0.01	<0.01
BY-04	292	3695	<0.01	<0.01	<0.01
BY-05	293	3704	<0.01	<0.01	<0.01
BY-06	294	3705	<0.01	<0.01	<0.01
BY-07	295	3709	<0.01	<0.01	<0.01
BY-08	296	3703	<0.01	<0.01	<0.01
BY-21	297	3709	<0.01	<0.01	<0.01
BY-22	298	3704	<0.01	<0.01	<0.01
BY-23	299	3704	<0.01	<0.01	<0.01
BY-24	300	3704	<0.01	<0.01	<0.01
<u>4th Quarter</u>					
BY-01	BYAP-394	3714	<0.01	<0.01	<0.01
BY-02	395	3709	<0.01	<0.01	<0.01
BY-03	396	3710	<0.01	<0.01	<0.01
BY-04	397	3709	<0.01	<0.01	<0.01
BY-05	398	3714	<0.01	<0.01	<0.01
BY-06	399	3709	<0.01	<0.01	<0.01
BY-07	400	3712	<0.01	<0.01	<0.01
BY-08	401	3712	<0.01	<0.01	<0.01
BY-21	402	3715	<0.01	<0.01	<0.01
BY-22	403	3708	<0.01	<0.01	<0.01
BY-23	404	3714	<0.01	<0.01	<0.01
BY-24	405	3719	<0.01	<0.01	<0.01

^a See Introduction.

BYRON

Table 5. Gamma Radiation, as Measured by Thermoluminescent Dosimeters (TLDs)

STANDARD RADIOLOGICAL MONITORING PROGRAM				
	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
Date Placed:	12-30-85	03-31-86	06-30-86	09-29-86
Date Removed:	03-31-86	06-30-86	09-29-86	12-29-86
Days in the Field:	91	91	91	91
Location	Average mR/Qtr.			
<u>Offsite Indicator Locations</u>				
BY-01 Byron	16.7±1.8	11.1±1.6	7.0±1.6	14.7±0.8
BY-03 - Nearsite East	14.6±1.1	14.7±2.3	13.3±2.3	19.9±0.9
BY-04 - Paynes Point	13.4±1.6	17.9±2.2	20.1±2.4	20.7±0.9
BY-05 - Nearsite South	15.9±1.6	14.8±3.9	14.1±1.6	21.3±1.2
BY-06 - Oregon	12.5±2.9	11.7±2.4	8.8±2.3	15.1±0.8
Mean ± s.d.	14.6±1.7	14.0±2.7	12.7±5.1	18.3±3.2
<u>Onsite Indicator Locations</u>				
BY-21 - Onsite North	11.8±1.0	12.0±5.4	13.0±1.9	11.9±0.8
BY-22 - Onsite ESE	17.7±1.5	13.4±2.6	17.1±2.5	20.3±1.1
BY-23 - Onsite South	18.6±0.7	19.1±3.7	13.7±1.2	19.3±0.9
BY-24 - Met. Tower	16.0±1.1	12.4±2.2	9.2±1.7	18.2±1.1
2nd Qtr mean ± s.d.	16.0±3.0	14.2±3.3	13.2±3.2	17.4±3.8
<u>Background Locations</u>				
BY-02 - Stillman Valley	11.2±1.1	13.8±3.6	19.6±2.3	15.8±0.8
BY-07 - Mt. Morris	12.1±1.3	12.1±1.8	22.5±2.5	18.0±0.8
BY-08 - Leaf River	11.2±0.9	10.4±2.9	9.8±1.6	17.8±1.1
Mean ± s.d.	11.5±0.5	12.1±1.7	17.3±6.7	17.2±1.2

BYRON

Table 5. Gamma Radiation, as Measured by TLDs (continued)

SPECIAL PROGRAM				
Inner Ring, Near Site Boundary, Indicator Locations				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Date Placed:	12-30-85	03-31-86	06-30-86	09-29-86
Date Removed:	03-31-86	06-30-86	09-29-86	12-29-86
Days in the Field:	91	91	91	91
Location	Average mR/Qtr.			
BY-101-1	20.1±1.4	17.0±1.6	33.0±1.9	15.0±1.0
BY-101-2	19.8±1.7	19.1±1.4	34.9±3.4	16.0±0.9
BY-102-1	15.7±1.4	20.9±1.8	22.0±2.6	17.1±3.4
BY-102-2	22.1±1.8	20.1±1.7	22.8±2.3	15.5±0.9
BY-103-1	16.8±0.9	14.8±1.8	13.4±2.0	12.9±1.0
BY-103-2	16.9±1.2	15.1±5.0	34.6±2.6 ^C	14.6±1.5
BY-104-1	16.2±0.9	14.9±1.6	26.4±1.5	22.9±3.7
BY-104-2	21.6±1.7	22.2±2.0	35.1±11.5	17.6±2.0
BY-105-1	14.6±1.1	12.4±2.1	81.2±0.0 ^C	17.9±1.1
BY-105-2	16.6±1.7	15.9±1.8	27.7±4.1	16.3±1.8
BY-106-1	14.5±0.8	12.2±3.8	35.9±1.4	16.2±1.9
BY-106-2	14.9±1.4	14.8±1.2	30.9±2.0	20.3±2.1
BY-107-1	16.0±0.9	20.3±3.8	15.4±2.4	17.9±1.4
BY-107-2	14.8±1.2	17.1±2.2	18.5±2.2	15.7±2.0
BY-108-1	19.1±1.5 ^a	21.3±1.2	20.1±1.6	15.2±4.2
BY-108-2	13.7±1.4	13.0±2.8	18.4±2.0	16.7±1.6
BY-109-1	25.2±4.6	22.2±2.1	35.0±4.8 ^C	15.1±1.6
BY-109-2	13.8±1.4	20.4±2.0	42.2±1.2	42.4±2.7 ^C
BY-110-1	15.6±1.6	14.2±2.2	12.6±2.0	18.1±2.0
BY-110-2	16.3±1.0	8.1±1.4	37.5±2.9	18.1±2.2
BY-111-1	16.9±1.9	19.0±8.5	16.6±1.4	14.7±2.4
BY-111-2	16.0±1.4	16.8±5.0	8.0±2.5	18.8±1.1
BY-112-1	20.8±6.5	20.8±1.8	58.9±3.6 ^C	19.9±1.2
BY-112-2	46.4±0.7 ^b	13.3±1.5	17.4±1.3	13.0±1.0
BY-113-1	16.5±1.0	20.2±1.7	29.3±2.8	11.7±2.0
BY-113-2	8.1±2.4	10.3±1.4	39.1±3.3	19.7±4.2
BY-114-1	14.6±1.4	10.7±2.2	13.5±1.3	19.6±1.8
BY-114-2	15.5±1.7	11.8±3.2	25.2±3.3	21.0±1.4
BY-115-1	14.6±1.7	13.0±1.9	11.7±2.2	10.2±2.0
BY-115-2	12.8±1.0	13.0±1.9	21.9±1.8	22.7±3.8
BY-116-1	15.0±1.5	11.0±1.5	8.9±1.3	13.4±1.7
BY-116-2	14.0±1.0	7.9±1.3	15.0±2.7	20.3±1.6
Mean ± s.d.	16.4±3.2	15.7±4.2	22.8±9.5	16.9±3.1

^a One chip damaged.

^b Bag of chips received open, containing only one damaged (white) chip; entry is excluded from mean.

^c White, damaged chips; entry is excluded from the mean.

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Table 5. Gamma Radiation, as Measured by TLDs (continued)

SPECIAL PROGRAM				
Outer Ring, Near 5 Mile Radius, Indicator Locations				
	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
Date Placed:	12-30-85	03-31-86	06-30-86	09-29-86
Date Removed:	03-31-86	06-30-86	09-29-86	12-29-86
Days in the Field:	91	91	91	91
Location	Average mR/Qtr.			
BY-201-1	20.2±2.8	12.9±1.4	22.2±1.6	10.8±1.7
BY-201-2	19.1±0.7	11.0±1.3	24.6±3.2	12.2±0.9
BY-202-1	16.7±0.9 ^a	14.3±1.2	20.9±1.4	17.1±1.3
BY-202-2	19.5±0.8	11.6±1.3	19.0±1.4	18.7±1.4
BY-203-1	19.0±0.9	17.7±1.9	15.1±2.5	14.5±1.2
BY-203-2	12.2±1.1 ^a	16.7±2.0	28.3±3.2	13.5±1.1
BY-204-1	13.8±1.3	12.4±1.9	23.9±3.1	19.3±6.8
BY-204-2	17.1±1.6	7.4±1.5	26.9±1.5	15.3±1.5
BY-205-1	16.0±1.5	19.3±2.5	17.8±2.0	18.5±4.5
BY-205-2	15.1±4.6 ^a	10.0±2.3	13.2±2.3	16.5±1.8
BY-206-1	13.9±1.2	12.4±1.3	24.4±3.9	18.2±1.4
BY-206-2	14.1±1.4 ^a	12.9±1.5	63.7±4.7 ^c	12.8±1.6
BY-207-1	15.6±1.4	15.2±1.9	17.1±2.3	17.2±2.1
BY-207-2	17.8±3.0	17.3±2.1	40.0±6.1	17.6±1.8
BY-208-1	17.3±1.2	17.6±2.1	19.0±2.2	18.2±4.4
BY-208-2	14.6±1.9	12.4±1.5	18.5±2.3	19.1±1.4
BY-209-1	16.9±1.7	13.8±2.0	26.7±2.0	16.8±1.8
BY-209-2	28.3±2.4	13.8±1.8	16.9±1.8	16.4±1.8
BY-210-1	17.0±1.2	20.1±2.3	51.0±4.5 ^c	16.4±1.9
BY-210-2	15.2±1.6	14.4±2.0	40.7±2.2	23.8±2.8
BY-211-1	14.7±1.4	30.5±1.3	29.0±2.5	17.0±0.9
BY-211-2	16.4±0.7	15.4±1.8	17.8±2.6	15.6±1.4
BY-212-1	17.8±1.2 ^a	18.9±2.0	29.4±2.8	19.6±1.9
BY-212-2	18.8±0.8	11.5±1.5	18.8±2.9	22.4±5.7
BY-213-1	9.2±0.7	19.9±1.4	26.2±2.3	16.7±0.9
BY-213-2	14.7±1.4 ^a	ND ^b	14.1±1.4	19.0±1.9
BY-214-1	15.8±2.0	15.7±1.5	14.2±2.7	16.4±1.9
BY-214-2	28.3±4.8	35.3±2.7	21.3±2.1	16.6±2.0
BY-215-1	14.5±0.9	21.4±1.5	22.1±2.5	20.1±1.8
BY-215-2	33.7±2.3	32.2±2.2	17.0±1.7	11.8±0.9
BY-216-1	18.0±0.9	15.0±1.2	19.3±2.6	16.4±2.5
BY-216-2	36.2±1.6	15.8±1.6	18.5±1.9	19.1±1.1
Mean ± s.d.	18.0±5.8	16.6±6.2	22.1±6.7	17.0±2.8

^a One chip damaged or broken.

^b ND = No data; TLD lost in the field.

^c White or damaged chips; entry excluded from the mean.

BYRON

Table 6. Precipitation
Units: (pCi/l)

MONTHLY COLLECTIONS				
Collection Period	Lab Code	Gross Beta	Lab Code	Gross Beta
	Reeverts Pine Hill Dairy Farm		Kenneth Druien Farm	
		BY-15		BY-16
January, 86	BYP-9	NA ^a	BYP-10	NA
February, 86	18	<13.1	19	<13.1
March, 86	45	NA	46	NA
April, 86	67	NA	68	NA
May, 86	73	<11.8	74	24.3±7.9
June, 86	90	4.4±1.3	91	9.7±1.5
July, 86	123	<5.8	124	<5.8
August, 86	130	17.5±6.9	131	36.5±8.1
September, 86	156	23.9±2.8	157	13.8±2.4
October, 86	166,7	<5.2	168	5.6±3.1
November, 86	180	<8.3	181	<8.4
December, 86	206	12.8±7.3	207	<12.2
	Bosecker/Lingel Dairy Farm ^b		Ed Seabold Farm	
		BY-17		BY-20
January, 86	BYP-11	NA	BYP-12	NA
February, 86	20	<13.1	21	<13.1
March, 86	47	31.9±8.3	48	NA
April, 86	69	30.2±8.0	70	98.9±11.6
May, 86	75	25.3±8.0	76,7	35.8±4.4
June, 86	92	7.1±1.4	93	12.7±1.7
July, 86	125	5.8±3.3	126	25.6±4.6
August, 86	132	49.3±8.9	133	NA
September, 86	158	9.4±2.1	159	8.6±2.1
October, 86	169	<5.2	170	12.0±3.6
November, 86	182	<8.3	183	<8.3
December, 86	208	<12.2	209	<12.2

^a NA = Not analyzed; not enough sample for analysis. Sample was reserved for quarterly composite.

^b Effective October 6, 1986, BY-17 was changed from Bosecker/Lingel Dairy Farm to Whitten Holsteins.

BYRON

Table 6. Precipitation (continued)

QUARTERLY COMPOSITES OF MONTHLY COLLECTIONS					
Composite Period	Lab Code	Sr-89	Sr-90	Tritium	Gamma Isotopic ^a
<u>J. A. Reeverts Dairy Farm BY-15</u>					
1st Quarter, 86	BYP-49	<10	<2	<200	<20
2nd Quarter, 86	101	<10	<2	<200	<20
3rd Quarter, 86	160	<10	<2	<200	<20
4th Quarter, 86	216	<10	<2	<200	<20
<u>K. Druien Dairy Farm BY-16</u>					
1st Quarter, 86	BYP-50	<10	<2	<200	<20
2nd Quarter, 86	102	<10	<2	<200	<20
3rd Quarter, 86	161	<10	<2	<200	<20
4th Quarter, 86	217	<10	<2	<200	<20
<u>Bosecker/Lingel Dairy Farm^b BY-17</u>					
1st Quarter, 86	BYP-51	<10	<2	<200	<20
2nd Quarter, 86	103	<10	<2	<200	<20
3rd Quarter, 86	162	<10	<2	<200	<20
4th Quarter, 86	218	<10	<2	<200	<20
<u>E. Seabold Dairy Farm BY-20</u>					
1st Quarter, 86	BYP-52	<10	<2	<200	<20
2nd Quarter, 86	104	<10	<2	<200	<20
3rd Quarter, 86	163	<10	<2	<200	<20
4th Quarter, 86	219	<10	<2	<200	<20

^a See Introduction.

^b Effective October 6, 1986, BY-17 was changed to Whitten Holsteins.

BYRON

Table 7. Milk
 Collection: Monthly; semimonthly during grazing season (May - October)
 Units: pCi/l

Collection Date	Lab Code	I-131	Sr-89	Sr-90	Cs-134	Cs-137	Other Gamma ^a
<u>J. A. Reeves Dairy Farm BY-15</u>							
01-06-86	BYMI-1893	<0.5	<10	2.2±0.5	<5	<5	<10
02-03-86	1978	<0.5	<10	3.2±0.7	<5	<5	<10
03-03-86	2032	<0.5	<10	2.8±0.6	<5	<5	<10
04-07-86	2145	<0.5	<10	3.1±0.6	<5	<5	<10
05-05-86	2205	<0.5	<10	3.3±0.5	<5	<5	<10
05-19-86	2300	36.3±9.3 ^b	<10	2.3±0.6	<5	5.3±2.6 ^c	<10
06-02-86	2393	8.7±0.5 ^b	<10	3.3±0.7	<5	<5	<10
06-16-86	2491	10.5±0.9 ^b	<10	3.0±0.6	<5	11.3±2.6 ^b	<10
07-07-86	2635,6	0.9±0.2 ^d	<10	3.5±0.4	<5	8.8±3.7 ^b	<10
07-21-86	2721	<0.5	<10	3.7±0.7	<5	6.7±2.5 ^b	<10
08-04-86	2788,9	<0.5	<10	3.5±0.5	<5	<5	<10
08-18-86	2885	<0.5	<10	3.6±0.7	<5	<5	<10
09-01-86	2958	<0.5	<10	3.3±0.6	<5	<5	<10
09-15-86	3055,6	<0.5	<10	2.4±0.5	<5	<5	<10
10-06-86	3177	<0.5	<10	4.0±0.8	6.9±1.8 ^b	14.0±2.5 ^b	<10
10-20-86	3273	<0.5	<10	2.1±0.5	10.6±3.9 ^b	17.8±3.6 ^b	<10
11-03-86	3336	<0.5	<10	2.2±0.5	<5	12.0±2.6 ^b	<10
12-01-86	3415	<0.5	<10	3.4±0.5	<5	<5	<10
<u>Druien Dairy Farm BY-16</u>							
01-06-86	BYMI-1894	<0.5	<10	2.5±0.7	<5	<5	<10
02-03-86	1979	<0.5	<10	3.2±0.7	<5	<5	<10
03-03-86	2033	<0.5	<10	2.9±0.6	<5	<5	<10
04-07-86	2146	<0.5	<10	2.6±0.6	<5	<5	<10
05-05-86	2206	<0.5	<10	4.1±0.7	<5	<5	<10
05-19-86	2301	58.6±5.6 ^b	<10	4.0±0.6	10.7±2.3 ^b	18.8±2.0 ^b	<10
06-02-86	2394	22.1±0.8 ^b	<10	2.8±0.6	<5	9.3±1.6 ^b	<10
06-16-86	2492	8.1±0.6 ^b	<10	3.1±0.6	<5	<5	<10
07-07-86	2637	1.2±0.4 ^b	<10	3.2±0.7	<5	<5	<10
07-21-86	2722	<0.5	<10	2.2±0.6	<5	<5	<10
08-04-86	2790	<0.5	<10	3.4±0.7	<5	<5	<10
08-18-86	2886	<0.5	<10	2.5±0.5	<5	<5	<10
09-01-86	2959	<0.5	<10	3.2±0.7	<5	<5	<10
09-15-86	3057	<0.5	<10	3.5±0.7	<5	<5	<10
10-06-86	3178,9	<0.5	<10	2.4±0.4	<5	<5	<10
10-20-86	3274	<0.5	<10	2.4±0.5	<5	<5	<10
11-03-86	3337	<0.5	<10	2.4±0.5	<5	<5	<10
12-01-86	3416	<0.5	<10	2.3±0.4	<5	<5	<10

^a See Introduction.

^b Elevated I-131, Cs-134, and Cs-137 activity is due to fallout from the Chernobyl Nuclear Plant (USSR) accident on April 26, 1986.

BYRON

Table 7 Milk (continued)

Collection Date	Lab Code	I-131	Sr-89	Sr-90	Cs-134	Cs-137	Other Gammas ^a
<u>Bosecker/Lingel Dairy Farm^b BY-17</u>							
01-06-86	BYMI-1895	<0.5	<10	2.6±0.8	<5	<5	<10
02-03-86	1980	<0.5	<10	3.2±0.7	<5	<5	<10
03-03-86	2034	<0.5	<10	3.4±0.6	<5	<5	<10
04-07-86	2147,8	<0.5	<10	2.8±0.4	<5	<5	<10
05-05-86	2207	<0.5	<10	3.7±0.7	<5	<5	<10
05-19-86	3202	22.1±14.9 ^c	<10	2.6±0.7	<5	<5	<10
06-02-86	2395	36.9±1.3 ^c	<10	3.5±0.7	<5	12.2±2.3 ^c	<10
06-16-86	2493	7.6±0.5 ^c	<10	3.2±0.6	<5	7.9±2.0 ^c	<10
07-07-86	2638	1.3±0.4 ^c	<10	2.5±0.6	<5	<5	<10
07-21-86	2723	<0.5	<10	2.1±0.5	<5	<5	<10
08-04-86	2791	<0.5	<10	3.2±0.6	<5	<5	<10
08-18-86	2887	<0.5	<10	2.8±0.6	<5	<5	<10
09-01-86	2960	<0.5	<10	4.2±0.7	<5	7.7±1.3 ^c	<10
09-15-86	3051	<0.5	<10	2.0±0.6	<5	<5	<10
10-06-86	3181	<0.5	<10	2.2±0.5	<5	<5	<10
10-20-86	3271,6	<0.5	<10	3.0±0.4	<5	<5	<10
11-03-86	3338	<0.5	<10	2.5±0.6	<5	<5	<10
12-01-86	3417	<0.5	<10	2.6±0.5	<5	<5	<10
<u>E. Seabold Dairy Farm BY-20</u>							
01-06-86	BYMI-1896	<0.5	<10	<2	<5	<5	<10
02-03-86	1981,2	<0.5	<10	2.4±0.5	<5	<5	<10
03-03-86	2035	<0.5	<10	2.1±0.5	<5	<5	<10
04-07-86	2149	<0.5	<10	2.7±0.5	<5	<5	<10
05-05-86	2208,9	<0.5	<10	3.1±0.4	<5	<5	<10
05-19-86	2303,4	35.0±3.9 ^c	<10	3.0±1.1	<5	6.9±1.2 ^c	<10
06-02-86	2396	15.4±0.6 ^c	<10	2.8±0.6	5.8±1.2 ^c	8.2±1.1 ^c	<10
06-16-86	2494,5	6.0±0.3 ^c	<10	3.1±0.4	<5	10.0±3.0 ^c	<10
07-07-86	2639	2.7±0.5 ^c	<10	2.7±0.6	6.3±2.2 ^c	10.0±2.4 ^c	<10
07-21-86	2724,5	<0.5	<10	2.2±0.4	<5	<5	<10
08-04-86	2792	<0.5	<10	3.4±0.7	8.7±3.6 ^c	17.1±3.2 ^c	<10
08-18-86	2888	<0.5	<10	3.5±0.6	<5	<5	<10
09-01-86	2961,2	<0.5	<10	3.9±0.5	<5	8.7±1.4 ^c	<10
09-15-86	3059	<0.5	<10	2.6±0.6	<5	<5	<10
10-06-86	3181	<0.5	<10	3.1±0.6	<5	<5	<10
10-20-86	3277	<0.5	<10	2.6±0.5	<5	<5	<10
11-03-86	3339	<0.5	<10	2.3±0.5	<5	<5	<10
12-01-86	3418,9	<0.5	<10	2.0±0.3	<5	<5	<10

^a See Introduction.

^b Effective October 6, 1986, BY-17 was changed from Bosecker/Lingel Dairy Farm to Whitten Holsteins.

^c Elevated I-131, Cs-134, and Cs-137 activity is due to fallout from the Chernobyl Nuclear Plant (USSR) accident on April 26, 1986.

BYRON

Table 8. Fish, Edible Portions.
 Collection: 3 times per year
 Unit: pCi/g wet weight

Collection Date	Lab Code	Type	Gross Beta	Sr-89	Sr-90	Cs-134	Cs-137	Other Gammas ^a
<u>Oregon Pool of Rock River BY-12</u>								
05-19-86	BYF-60	Catfish (1)	2.2±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
05-19-86	61	Drum (1)	2.9±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
07-07-86	81	Sucker (1)	2.4±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
07-07-86	82	Drum (7)	2.8±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
10-06-86	118	Carp (1), Catfish (1)	2.5±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
<u>Upstream BY-13^a</u>								
05-05-86	BYF-5	Carp (1)	2.7±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
05-05-86	6	Sucker (1)	3.0±0.2	<0.1	<0.1	<0.10	<0.10	<0.13
08-01-86	96	Carp (1)	3.2±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
08-01-86	97	Carp (1)	2.8±0.1	<0.1	<0.1	<0.10	<0.10	<0.13
08-01-86	98	Catfish (1)	2.1±0.1	<0.1	<0.1	<0.10	<0.10	<0.13

^a No third collection due to high water in the Rock River.

BYRON

Table 9. Vegetables
Collection: Annually
Units: pCi/g wet weight

Collection Date	Lab Code	Type	Gross Beta	Sr-89	Sr-90	I-131 ^a	Cs-134	Cs-137	Other Gammas ^b
<u>BY-19-1 966 East Weld Bark Road</u>									
08-18-86	BYVe-85,6	Cabbage	5.4±0.1	<0.1	<0.1	<0.06	<0.1	<0.1	<0.2
08-18-86	87	Broccoli	5.6±0.2	<0.1	<0.1	--	<0.1	<0.1	<0.2
08-18-86	88	Potatoes	4.3±0.1	<0.1	<0.1	--	<0.1	<0.1	<0.2
08-18-86	89	Carrots	5.6±0.2	<0.1	<0.1	--	<0.1	<0.1	<0.2
<u>BY-19-2 6993 North River Road</u>									
08-18-86	BYVe-90	Onions	1.3±0.1	<0.1	<0.1	--	<0.1	<0.1	<0.2
08-18-86	91	Carrots	2.3±0.1	<0.1	<0.1	--	<0.1	<0.1	<0.2
08-18-86	92	Beets	2.6±0.1	<0.1	<0.1	--	<0.1	<0.1	<0.2
08-18-86	93	Squash	2.9±0.1	<0.1	<0.1	--	<0.1	<0.1	<0.2

^a Analysis for I-131 required for cabbage and lettuce only.

^b See Introduction.

BYRON

Table 10. Grass and Cattlefeed
Collection: Quarterly^a
Units: pCi/g wet weight

Collection Date	Type	Lab Code	Gross Beta	Sr-89	Sr-90	Cs-134	Cs-137	Other Gammas ^b
<u>J. A. Reeverts Dairy Farm BY-15</u>								
02-03-86	Ground Corn	BYCF-243	2.9±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
02-03-86	Silage	248	6.8±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
02-03-86	Hay	252	9.2±0.2 ^c	<1.0	<1.0	<0.1	<0.1	<0.2
05-05-86	Grass	BYG-700	5.5±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
07-07-86	Grass	757	4.1±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
10-06-86	Grass	831,2	4.3±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
<u>K. Durien Dairy Farm BY-16</u>								
02-03-86	Ground Corn	BYCF-244,5	4.4±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
02-03-86	Silage	249	3.3±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
05-05-86	Grass	BYG-701	6.1±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
07-07-86	Grass	758	4.9±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
10-06-86	Grass	833	4.5±0.2	<1.0	<1.0	<0.1	<0.1	<0.2

^a Grass is collected during summer. Cattlefeed is collected during winter.

^b See Introduction.

^c Sample was recounted to confirm result; entry is an average of two results.

BYRON

Table 10. Grass and Cattlefeed (continued)

Collection Date	Type	Lab Code	Gross Beta	Sr-89	Sr-90	Cs-134	Cs-137	Other Gammas ^b
<u>Bosecker/Lingel Dairy Farm^c BY-17</u>								
02-03-86	Ground Corn	BYCF-246	5.6±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
02-03-86	Silage	250	3.3±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
05-05-86	Grass	BYG-702	3.9±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
07-07-86	Grass	759	3.0±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
10-06-86	Grass	834	7.9±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
<u>E. Seabolt Dairy Farm BY-20</u>								
02-03-86	Ground Corn	BYCF-247	2.7±0.1	<1.0	<1.0	<0.1	<0.1	<0.2
02-03-86	Silage	251	16.2±0.3 ^d	<1.0	<1.0	<0.1	<0.1	<0.2
05-05-86	Grass	BYG-703	6.0±0.2	<1.0	<1.0	<0.1	<0.1	<0.2
07-07-86	Grass	760,1	11.6±0.3	<1.0	<1.0	<0.1	<0.1	<0.2
10-06-86	Grass	835	9.3±0.3	<1.0	<1.0	<0.1	<0.1	<0.2

^a Grass is collected during summer. Cattlefeed is collected during winter.

^b See Introduction.

^c Effective October 6, 1986, BY-17 was changed from Bosecker/Lingel Dairy Farm to Whitten Holsteins.

^d Sample was recounted to confirm result; entry is an average of two results.

BYRON

Table 11. Cooling water
Units: pCi/l

WEEKLY COLLECTIONS					
Collection Date	Lab Code	Gross Beta	Collection Date	Lab Code	Gross Beta
<u>Intake Pipe BY-10</u>					
01-03-86	BYCW-5015	3.1±1.1	07-04-86	BYCW-7285	3.5±1.1
01-10-86	5073	2.6±1.0	07-11-86	7362	3.0±1.0
01-17-86	5145	3.2±0.8	07-18-86	7430	3.4±1.1
01-25-86	5214	3.5±0.8	07-24-86	7489	2.6±1.0
01-31-86	5346	4.4±1.1	08-01-86	7611	2.6±0.9
02-08-86	5415	7.0±1.1	08-08-86	7702	3.2±1.0
02-14-86	5481	2.9±0.9	08-15-86	7743	2.9±1.0
02-21-86	5540	4.7±1.1	08-22-86	7786	3.0±1.0
02-28-86	5662	2.9±1.1	09-01-86	7886	2.9±1.1
03-07-86	5744	5.8±1.2	09-05-86	7987	3.3±1.0
03-14-86	5827	4.4±1.1	09-15-86	8091	3.7±1.0
03-21-86	5856	3.8±1.1	09-19-86	8193,4	3.8±0.7
03-28-86	6061	4.2±1.1	09-29-86	8390	5.2±1.1
1st Qtr. mean ± s.d.		4.0±1.3	3rd Qtr. mean ± s.d.		3.3±0.7
04-04-86	BYCW-6179	3.7±1.0	10-06-86	BYCW-8475	4.4±1.0
04-11-86	6241	2.2±0.9	10-10-86	8547	4.1±1.3
04-18-86	6304	5.0±1.0	10-17-86	8593	4.1±1.3
04-25-86	6371	2.1±0.9	10-24-86	8658	2.8±0.9
05-05-86	6499,500	3.6±0.7	10-31-86	8766	2.6±0.9
05-09-86	6570	3.0±1.0	11-07-86	8849	3.8±1.0
05-16-86	6628	4.2±1.1	11-14-86	8910,1	6.4±0.9
05-23-86	6681	3.2±1.0	11-21-86	8954	3.7±1.1
05-30-86	6795	2.0±1.0	11-28-86	9057	2.2±1.0
06-06-86	6873	2.5±1.0	12-05-86	9155,6	3.1±0.7
06-13-86	6933	2.5±1.0	12-12-86	9223	8.0±1.5
06-20-86	7117	2.5±1.0	12-19-86	9270	2.1±1.0
06-27-86	7177	1.9±0.9	12-26-86	9321	3.1±1.0
2nd Qtr. mean ± s.d.		3.0±0.9	4th Qtr. mean ± s.d.		3.9±1.7

BYRON

Table 11. Cooling Water (continued)

WEEKLY COLLECTIONS					
Collection Date	Lab Code	Gross Beta	Collection Date	Lab Code	Gross Beta
<u>Discharge Pipe BY-11</u>					
01-03-86	BYCW-5016	25.1±1.9	07-04-86	BYCW-7286	7.0±1.4
01-10-86	5074	17.5±1.7	07-11-86	NS ^a	--
01-17-86	5146	24.0±1.9	07-18-86	7431	3.6±1.1
01-25-86	5215	24.8±1.9	07-25-86	7490	21.7±1.9
01-31-86	5347,8	10.8±1.0	08-01-86	7612,3	36.2±1.7 ^b
02-08-86	5416	36.4±2.2	08-08-86	7703	23.2±1.4 ^b
02-14-86	5482	19.6±1.8	08-15-86	7744	17.1±1.8
02-21-86	5541	3.4±0.6	08-22-86	7787,8	46.6±1.9 ^b
02-28-86	5663	6.0±1.3	09-01-86	7887	32.1±2.3
03-07-86	5745	13.0±1.5	09-05-86	7988,9	25.1±3.7
03-14-86	5828	14.3±1.5	09-15-86	8092	28.7±2.1
03-21-86	5857	6.6±1.2	09-19-86	8195	12.0±1.4
03-28-86	6062	9.9±1.4	09-29-86	8391,2	11.4±1.0
1st Qtr. mean ± s.d.		16.3±9.5	3rd Qtr. mean ± s.d.		22.1±12.7
04-04-86	BYCW-6180	9.4±1.3	10-06-86	BYCW-8476,7	34.0±1.5
04-11-86	6242	8.1±1.2	10-10-86	8548,9	15.7±1.5
04-18-86	6305	6.7±1.	10-17-86	8594	12.9±2.0
04-25-86	6372	7.3±1.2	10-24-86	8659	10.8±1.9
05-05-86	6501	12.1±1.6	10-31-86	8767	10.3±2.0
05-09-86	6571	7.0±1.3	11-07-86	8850	24.9±2.7
05-16-86	6629	6.5±1.4	11-14-86	8912	14.2±2.2
05-23-86	6682	9.0±1.4	11-21-86	8955	16.1±2.3
05-30-86	6796	5.3±1.3	11-28-86	9058	11.9±2.0
06-06-86	6874	6.1±1.3	12-05-86	9157	11.8±1.9
06-13-86	6934	12.9±1.7	12-12-86	9224	11.9±2.0
06-20-86	7118	5.7±1.3	12-19-86	9271,2	5.7±1.1
06-27-86	7178	7.1±1.4	12-26-86	9322	13.8±2.2
2nd Qtr. mean ± s.d.		7.9±2.3	4th Qtr. mean ± s.d.		14.9±7.2

^a NS = No sample; reactor down.

^b Sample was reanalyzed to confirm activity. Entry is an average of two results.

BYRON

Table 11. Cooling Water (continued)

MONTHLY COMPOSITES OF WEEKLY COLLECTIONS							
Composite Period	Lab Code	Sr-89	Sr-90	Cs-134	Cs-137	Other Gammas ^a	Tritium
<u>Intake Pipe BY-10</u>							
January, 86	BYCW-5270	<10	<2	<10	<10	<20	<200
February, 86	5578	<10	<2	<10	<10	<20	<200
March, 86	5882	<10	<2	<10	<10	<20	<200
April, 86	6397	<10	<2	<10	<10	<20	<200
May, 86	6723	<10	<2	<10	<10	<20	<200
June, 86	6973	<10	<2	<10	<10	<20	<200
July, 86	7500	<10	<2	<10	<10	<20	<200
August, 86	7818	<10	<2	<10	<10	<20	<200
September, 86	8142	<10	<2	<10	<10	<20	<200
October, 86	8683	<10	<2	<10	<10	<20	<200
November, 86	9006	<10	<2	<10	<10	<20	<200
December, 86	9438	<10	<2	<10	<10	<20	<200
<u>Discharge Pipe BY-11</u>							
January, 86	BYCW-5271,2	<10	<2	<10	<10	<20 ^b	10,100±170
February, 86	5579,80	<10	<2	<10	<10	c	9,400±210
March, 86	5883	<10	<2	<10	<10	<20	3,030±360
April, 86	6398	<10	<2	<10	<10	<20	14,110±320
May, 86	6724	<10	<2	<10	<10	<20	36,620±260
June, 86	6974	<10	<2	<10	<10	<20	32,620±340
July, 86	7501	<10	<2	<10	<10	<20	92,430±550
August, 86	7819	<10	<2	11.5±3.8	20.0±4.3	d	900±120
September, 86	8143	<10	<2	<10	<10	<20	6,990±160
October, 86	8684	<10	<2	<10	<10	<20	860±90
November, 86	9007	<10	<2	<10	<10	<20	14,560±200
December, 86	9439	<10	<2	<10	<10	<20	20,080±260

^a See Introduction.

^b Co-58: 74±4.

^c Co-58: 40±4; Co-60: 18±3.

^d Co-58: 52±7.

BYRON

Table 12. Surface Water
Units: pCi/l

WEEKLY COLLECTION						
Collection Date	Woodland Creek BY-09		Downstream BY-12		Upstream BY-13 (C)	
	Lab Code	Gross Beta	Lab Code	Gross Beta	Lab Code	Gross Beta
01-06-86	BYSW-5011,2	<1.9	BYSW-5013	3.4±1.2	BYSW-5014	<1.9
01-13-86	5070	<1.9	5071	2.1±1.0	5072	2.0±1.1
01-20-86	5142	9.8±1.0 ^a	5143	3.4±1.1	5144	5.3±1.2
01-27-86	5210	<1.9	5211,2	2.2±0.7	5213	1.7±1.0
02-03-86	5343	4.9±1.1	5344	2.3±1.0	5345	2.7±1.0
02-10-86	5412	2.6±1.0	5413	5.1±1.1	5414	2.5±1.2
02-17-86	5477	2.0±1.0	5478	2.4±1.0	5479,80	2.1±0.8
02-24-86	5536	4.3±1.1	5537,8	3.2±0.7	5539	5.1±1.3
03-03-86	5658	5.9±1.1	5659,60	3.1±0.8	5661	5.0±1.2
03-10-86	5741	9.7±1.3	5742	4.9±1.2	5743	11.2±1.0 ^a
03-17-86	5829,30	4.4±0.8	5831	3.6±1.2	5832	2.7±1.1
03-24-86	5852	3.5±1.0	5853,4	4.4±0.8	5855	3.0±1.1
03-31-86	6057	2.3±1.0	6058	3.2±1.1	6059,60	2.7±0.8
1st Qtr. mean ± s.d.		4.9±2.8		3.3±1.0		3.8±2.6
04-07-86	BYSW-6176	3.0±1.0	BYSW-6177	3.1±1.0	BYSW-6178	2.0±0.9
04-14-86	6238	2.6±0.9	6239	4.4±1.0	6240	2.3±0.9
04-21-86	6301	1.8±0.9	6302	2.8±0.9	6303	4.3±1.0
04-28-86	6368	1.3±0.8	6369	2.6±0.9	6370	2.0±0.9
05-05-86	6496	3.0±1.0	6497	3.6±1.1	6498	3.0±1.1
05-12-86	6567	2.8±1.0	6568	2.8±1.1	6569	3.6±1.1
05-19-86	6624	4.0±1.0	6625	4.6±1.2	6626,7	6.4±0.9
05-26-86	6678	2.1±0.9	6679	4.2±1.2	6680	3.2±1.1
06-02-86	6792	1.7±0.9	6793	3.2±1.0	6794	3.2±1.0
06-09-86	6869,70	1.6±0.7	6871	2.1±0.7	6872	1.3±0.7
06-16-86	6930	7.0±1.2	6931	2.3±1.0	6932	4.2±1.1
06-23-86	7114	2.1±1.0	7115	3.2±1.0	7116	2.8±1.0
06-30-86	7173	2.4±1.0	7174	2.9±1.0	7175,6	1.7±0.7
2nd Qtr. mean ± s.d.		2.7±1.5		3.2±0.8		3.1±1.4

^a Sample was reanalyzed to confirm result; entry is the average of two results.

BYRON

Table 12. Surface Water (continued)

Collection Date	WEEKLY COLLECTION					
	Woodland Creek BY-09		Downstream BY-12		Upstream BY-13 (C)	
	Lab Code	Gross Beta	Lab Code	Gross Beta	Lab Code	Gross Beta
07-07-86	BYSW-7281	2.4±1.0	BYSW-7282	3.1±1.0	BYSW-7283,4	2.0±0.7
07-14-86	7359	2.2±1.0	7360	2.9±1.0	7361	2.4±1.0
07-21-86	7426	2.6±1.0	7427	2.5±1.0	7428,9	2.0±0.7
07-28-86	7485,6	2.4±0.7	7487	2.4±1.0	7488	3.3±1.0
08-04-86	7608	2.9±1.0	7609	2.7±0.9	7610	2.0±0.9
08-11-86	7699	2.9±1.1	7700	3.2±1.1	7701	2.5±1.1
08-18-86	7740	<1.7	7741	2.7±1.1	7742	2.0±1.0
08-25-86	7783	1.6±0.9	7784	1.8±1.0	7785	<1.7
09-01-86	7883	3.5±1.0	7884	3.1±1.0	7885	2.5±0.9
09-08-86	7984	2.6±0.9	7985	3.5±1.2	7986	1.7±0.9
09-15-86	8088	2.5±0.9	8089	3.2±1.0	8090	2.5±0.9
09-22-86	8190	2.5±0.9	8191	4.1±1.2	8192	2.7±1.1
09-29-86	8387	4.3±1.2	8388	4.6±1.2	8389	5.5±1.2
3rd Qtr. mean ± s.d.		2.7±0.7		3.1±0.7		2.6±1.0
10-06-86	8472	3.7±1.0	8473	4.4±1.2	8474	3.3±0.9
10-13-86	8544	3.2±0.9	8545	4.7±1.0	8546	3.0±0.9
10-20-86	8590	3.0±0.9	8591	3.9±1.0	8592	3.8±1.0
10-27-86	8654	2.7±0.9	8655	3.6±1.0	8656,7	3.6±0.7
11-03-86	8763	3.0±1.0	8764	4.1±1.2	8765	3.6±1.0
11-10-86	8846	2.3±0.9	8847	3.2±1.2	8848	1.8±1.1
11-17-86	8907	1.9±0.9	8908	3.1±1.2	8909	3.2±1.2
11-24-86	8951	1.2±0.8	8952	4.1±1.2	8953	3.0±1.2
12-01-86	9054	<1.6	9055	3.2±1.0	9056	2.8±0.9
12-08-86	9152	2.8±1.0	9153	3.1±1.0	9154	2.3±1.0
12-15-86	9219,20	2.2±0.7	9221	2.3±0.9	9222	2.3±1.1
12-22-86	9273	<1.4	9274	2.2±0.8	9275	<1.4
12-29-86	9317,8	<1.5	9319	2.3±0.9	9320	1.8±0.8
4th Qtr. mean ± s.d.		2.6±0.7		3.4±0.8		2.9±0.7

BYRON

Table 12. Surface Water (continued)

MONTHLY COMPOSITES OF WEEKLY COLLECTIONS				
Composite Period	Lab Code	Cs-134	Cs-137	Other Gammas ^a
<u>Woodland Creek BY-09</u>				
January, 86	BYSW-5267	<10	<10	<15
February, 86	5575	<10	<10	<15
March, 86	5879	<10	<10	<15
April, 86	6393,4	<10	<10	<15
May, 86	6720	<10	<10	<15
June, 86	6968	<10	<10	<15
July, 86	7527	<10	<10	<15
August, 86	7814	<10	<10	<15
September, 86	8139	<10	<10	<15
October, 86	8679,80	<10	<10	<15
November, 86	9003	<10	<10	<15
December, 86	9434	<10	<10	<15
<u>Downstream BY-12</u>				
January, 86	BYSW-5268	<10	<10	<15
February, 86	5576	<10	<10	<15
March, 86	5880	<10	<10	<15
April, 86	6395	<10	<10	<15
May, 86	6721	<10	<10	<15
June, 86	6970	<10	<10	<15
July, 86	7528	<10	<10	<15
August, 86	7815	<10	<10	<15
September, 86	8140	<10	<10	<15
October, 86	8681	<10	<10	<15
November, 86	9004	<10	<10	<15
December, 86	9435	<10	<10	<15
<u>Upstream BY-13</u>				
January, 86	BYSW-5269	<10	<10	<15
February, 86	5577	<10	<10	<15
March, 86	5881	<10	<10	<15
April, 86	6396	<10	<10	<15
May, 86	6722	<10	<10	<15
June, 86	6971,2	<10	<10	<15
July, 86	7529,30	<10	<10	<15
August, 86	7816,7	<10	<10	<15
September, 86	8141	<10	<10	<15
October, 86	8682	<10	<10	<15
November, 86	9005	<10	<10	<15
December, 86	9436,7	<10	<10	<15

^a See Introduction.

BYRON

Table 12. Surface Water (continued)

QUARTERLY COMPOSITES OF WEEKLY COLLECTIONS				
Composite Period	Lab Code	Concentration (pCi/l)		
		Sr-89	Sr-90	Tritium
<u>Woodland Creek BY-09</u>				
1st Quarter, 1986	BYSW-5925,6	<10	<2	<200
2nd Quarter, 1986	7011	<10	<2	<200
3rd Quarter, 1986	8010	<10	<2	<200
4th Quarter, 1986	9530	<10	<2	<200
<u>Downstream BY-12</u>				
1st Quarter, 1986	BYSW-5927	<10	<2	<200
2nd Quarter, 1986	7012	<10	<2	<200
3rd Quarter, 1986	8011	<10	<2	<200
4th Quarter, 1986	9531	<10	<2	<200
<u>Upstream BY-13(C)</u>				
1st Quarter, 1986	BYSW-5928	<10	<2	<200
2nd Quarter, 1986	7013	<10	<2	<200
3rd Quarter, 1986	8011	<10	<2	<200
4th Quarter, 1986	9532	<10	<2	<200

BYRON

Table 13. Well Water
Units: pCi/l

QUARTERLY GRAB SAMPLES								
Collection Period	Lab Code	Gross Beta	Sr-89	Sr-90	Tritium	Cs-134	Cs-137	Other gammas ^a
<u>Off-Site Well BY-14</u>								
1st Quarter, 86	BYWW-5017	<2.2	<10	<2	<200	<10	<10	<15
2nd Quarter, 86	6181	<1.2	<10	<2	<200	<10	<10	<15
3rd Quarter, 86	7363	<2.4	<10	<2	<200	<10	<10	<15
4th Quarter, 86	8550	2.2±1.2	<10	<2	<200	<10	<10	<15
<u>McCoy Farmstead Well BY-18</u>								
1st Quarter, 86	BYWW-5018	9.8±1.3	<10	<2	<200	<10	<10	<15
2nd Quarter, 86	6182	7.7±1.0	<10	<2	<200	<10	<10	<15
3rd Quarter, 86	7364	7.4±0.9	<10	<2	<200	<10	<10	<15
4th Quarter, 86	8551	10.2±1.3	<10	<2	<200	<10	<10	<15

^a See Introduction.

BYRON

Table 14. Aquatic Vegetation
 Collections: 3 times per year
 Units: pCi/g wet weight

Date Collected	Lab Code	Gross Beta	Cs-134	Cs-137	Other Gammas ^a
<u>Oregon Pool of Rock River BY-12</u>					
05-05-86	BYSL-2	3.7±0.2	<0.1	<0.1	<0.2
07-07-86	20	6.1±0.3	<0.1	<0.1	<0.2
10-20-86	38	2.9±0.2	<0.1	<0.1	<0.2
<u>Upstream BY-13</u>					
05-05-86	BYSL-3	4.7±0.3	<0.1	<0.1	<0.2
07-07-86	21	1.5±0.2	<0.1	<0.1	<0.2
10-20-86	39,40	1.8±0.1	<0.1	<0.1	<0.2

^a See Introduction.

BYRON

Table 15. Bottom Sediments
 Collection: 3 times per year
 Units: pCi/g dry weight.

Date Collected	Lab Code	Gross Beta	Cs-134	Cs-137	Other Gammas ^a
<u>Oregon Pool of Rock River BY-12</u>					
05-05-86	BYBS-24	13.1±3.0	<0.1	0.31±0.02	<0.2 ^b
07-07-86	79	6.3±2.7	<0.1	<0.1	<0.2
10-06-86	111	21.8±3.5	1.21±0.03	2.43±0.06	c
<u>Upstream BY-13</u>					
05-05-86	BYBS-25	21.4±3.4	<0.1	0.12±0.02	<0.2
07-07-86	80	8.7±2.5	<0.1	<0.1	<0.2
10-13-86	136	23.3±3.3	<0.1	0.41±0.03	<0.2

^a See Introduction.

^b Co-58: 0.55±0.02.

^c Mn-54: 0.14±0.03; Co-58: 0.51±0.04; Co-60: 0.39±0.04.

BYRON

MILCH ANIMALS AND NEAREST RESIDENCE CENSUS

BYRON DAIRY CENSUS 1986

Site Boundary to 2 mi.

Lambs Tail Acres; Hugh McKiski, owner
 762 East Spring Creek Road
 Route 2
 Oregon, Illinois

1.9 miles @ 250°

Milks 19 Cows

2 mi to 5 mi.

Kenneth Reeverts Dairy Farm
 5674 N. German Church Road
 Route 1
 Byron, Illinois

2.1 miles @ 37°

Milks 19 Cows

Ed Seabold Dairy Farm (By-20)^a
 6021 North German Church Road
 Route 1
 Bryon, Illinois

2.8 miles @ 40°

Milks 99 Cows

J. A. Reeverts Pine Hill Dairy (By-15)
 5728 E. Holcomb Road
 Route 1
 Oregon, Illinois

3.2 miles @ 108°

Milks 54 Cows

^a Presently operated by Mike Lookinglong, 6354 Brick Road, Route 1, Oregon, Illinois.

BYRON DAIRY CENSUS 1986 (continued)

Warren Danakas
5845 East Holcomb Road
Route 1
Oregon, Illinois

3.3 miles @ 110°

Milks 13 Cows

Kenneth Druen (Ey-16)
1725 N. Marril Road
Route 1
Oregon, Illinois

3.3 miles @ 134°

Milks 32 Cows

Richard Oltmann Dairy Farm
1858 N. German Church Road
Route 1
Oregon, Illinois

2.2 miles @ 180°

Milks 15 Cows

Bill Luepkes
2887 Brick Road
Route 1
Oregon, Illinois

3.7 miles @ 190°

Milks 45 cows

Ashelford Dairy Farm
4210 IL Route 2
Route 3
Oregon, Illinois

2.6 miles @ 275°

Milks 20 Cows

BYRON DAIRY CENSUS 1986 (continued)

CAM-DEE Farms, Gerald DeVries, Owner
5213 N. Town Hall Road
Route 3
Oregon, Illinois
3.3 miles @ 290*
Milks 37 Cows

Allen Camling, Jr.
285 West Camling Road
Route 3
Oregon, Illinois
3.4 miles @ 299*
Milks 36 Cows

Duane Camling
50 East Camling Road
Route 3
Oregon, Illinois
3.2 miles @ 305*
Milks 30 Cows

Sampling Locations

BY-15 J.A. Reeverts Pine Hill Dairy
Milks 54 Cows

Diet:

May-September: Pasture 27 acres. Haylage, high-moisture corn,
protein/mineral supplement.

October-April: Feedlot less than 2 acres. Corn silage, high-mois-
ture corn, and protein/mineral supplement.

BY-16 Kenneth Druien Farm
Milks 32 Cows

Diet:

May-September: Pasture 28 acres. Hay, ground corn, protein/mineral
supplement.

October-April: Feedlot less than 2 acres. Hay, corn silage, corn,
protein/mineral supplement.

BYRON DAIRY CENSUS 1986 (continued)

BY-17 Bosecker/Lingel Farm

Milks 25 Cows

Diet:

May-September: Feedlot less than 2 acres. Green chop, corn, silage.

October-April: Feedlot less than 2 acres. Dry chop, corn, corn silage.

BY-20 Ed Seabold Farm

Milks 99 Cows

Diet:

May-September: Feedlot less than 2 acres. Green chop, haylage, high-moisture corn, protein/mineral supplement.

October-April: Feedlot less than 2 acres. Haylage, silage, high-moisture corn, and mineral supplement.

Census conducted by P. Coulter on August 18, 1986.

BYRON

NEAREST RESIDENCE CENSUS, 1986

Nearest resident of the Byron Station with a five (5) mile radius.

N	1.4 miles
NNE	1.8 miles
NE	1.4 miles
ENE	1.3 miles
E	1.2 miles
ESE	1.6 miles
SE	1.3 miles
SSE	0.8 miles
S	0.7 miles
SSW	0.6 miles
SW	0.8 miles
WSW	1.7 miles
W	1.9 miles
WNW	2.1 miles
NW	9.8 miles
NNW	1.2 miles

Census conducted by P. Coulter on August 18, 1986.

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 1st Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results
				Location	Mean Range		
Air Particulates (pCi/m ³)	Gross Beta 156	0.01	0.025 (116/117) (0.012-0.038)	By-22, Onsite 0.3 mi @ 101*	0.026 (13/13) (0.017-0.035)	0.026 (39/39) (0.015-0.036)	0
	Gamma Spec. 12	0.01	<LLD	By-23, Onsite 0.6 mi @ 182*	0.026 (13/13) (0.013-0.035)	<LLD	0
	Sr-89 12	0.01	<LLD	By-24, Onsite 0.6 mi @ 229*	0.026 (13/13) (0.019-0.035)	<LLD	0
	Sr-90 12	0.01	<LLD	-	-	<LLD	0
Airborne Iodine (pCi/m ³)	I-131 156	0.07	<LLD	-	-	<LLD	0
Gamma Background (TLDs) (mR/Qttr.)	Gamma Dose 12	3.0	15.2 (9/9) (11.8-18.6)	By-23, Onsite 0.6 mi @ 182*	18.6 (1/1) -	11.5 (3/3) (11.2-12.1)	0
Milk (pCi/l)	I-131 12	0.5	<LLD	-	-	<LLD	0
	Gamma Spec. 12			-	-	<LLD	0
	Cs-134 5.0		<LLD	-	-	<LLD	0
	Cs-137 5.0		<LLD	-	-	<LLD	0
	Other Gammas 10.0		<LLD	-	-	<LLD	0
	Sr-89 12	10	<LLD	-	-	<LLD	0
	Sr-90 12	2	2.6 (8/9) (2.1-3.2)	By-17, Bosecker/ Eingei Farm 7.0 mi @ 53*	3.1 (3/3) (2.6-3.4)	3.1 (3/3) (2.6-3.4)	0
Precipitation	Gross Beta 5	13.1 ^b	<LLD	By-17, Bosecker/ Eingei Farm 7.0 mi @ 53*	31.9 (1/2) -	31.9 (1/2)	0
	Gamma Spec. 4	20	<LLD	-	-	<LLD	0
	Tritium 4	200	<LLD	-	-	<LLD	0
	Sr-89 4	10	<LLD	-	-	<LLD	0
	Sr-90 4	2	<LLD	-	-	<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 1st Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results
				Location	Mean Range		
Cooling Water (pCi/l)	Gross Beta 26	1.0	16.3 (13/13) (3.4-36.4)	By-11, Discharge 2.3 mi @ 283*	16.3 (13/13) (3.4-36.4)	4.0 (13/13) (2.6-7.0)	0
	Gamma Spec. 6						
	Cs-134 10		<LLD	-	-	<LLD	0
	Cs-137 10		<LLD	-	-	<LLD	0
	Other Gammas 20		<LLD	-	-	<LLD	0
	Tritium 6	200	7510 (3/3) (3,030-10,100)	By-11, Discharge 2.3 mi @ 283*	7510 (3/3) (3,030-10,100)	<LLD	0
	Sr-89 6	10	<LLD	-	-	<LLD	0
	Sr-90 6	2	<LLD	-	-	<LLD	0
Surface Water (pCi/l)	Gross Beta 39	1.9	4.1 (23/26) (2.0-9.7)	By-9, Woodland Creek 2.3 mi @ 270*	4.9 (10/13) (2.0-9.7)	3.8 (12/13) (2.1-11.2)	0
	Gamma Spec. 9						
	Cs-134 10		<LLD	-	-	<LLD	0
	Cs-137 10		<LLD	-	-	<LLD	0
	Other Gammas 20		<LLD	-	-	<LLD	0
	Tritium 3	200	<LLD	-	-	<LLD	0
	Sr-89 3	10	<LLD	-	-	<LLD	0
	Sr-90 3	2	<LLD	-	-	<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 1st Quarter 1985
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Well Water (pCi/l)	Gross Beta 2	2.2	9.8 (1/2)	By-18, McCoy Farmstead 1.0 mi @ 235°	9.8 (1/2)	None	0	
	Gamma Spec. 2		-		-	None	0	
	Cs-134 10	<LLD	-		-	None	0	
	Cs-137 10	<LLD	-		-	None	0	
	Other Gammas 20	<LLD	-		-	None	0	
	Tritium 2	200	<LLD		-	-	None	0
	Sr-89 2	10	<LLD		-	-	None	0
	Sr-90 2	2	<LLD		-	-	None	0
Cattlefeed & Grass (pCi/g wet)	Gross Beta 9	1.0	6.5 (7/7) (2.8-16.2)	By-20, Seabold Dairy Farm, 2.5 mi @ 41°	9.4 (2/2) (2.7-16.2)	4.4 (2/2) (3.3-5.6)	0	
	Gamma Spec. 8							
	Cs-134 0.1	<LLD	-		-	<LLD	0	
	Cs-137 0.1	<LLD	-		-	<LLD	0	
	Other Gammas 0.2	<LLD	-		-	<LLD	0	
	Sr-89 8	1.0	<LLD		-	-	<LLD	0
	Sr-90 8	1.0	<LLD		-	-	<LLD	0

^a Mean and range based on detectable measurements only. Fraction indicated in parenthesis.
^b LLD value dependent on volume of sample available for analysis.

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 2nd Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Con. of Locations Mean ^d Range	Number of Non-routine Results
				Location	Mean Range		
Air Particulates (pCi/m ³)	Gross Beta 156	0.01	0.064 (117/117) (0.013-0.265)	By-02, Stillman Valley 6.2 mi @ 56*	0.069 (13/13) (0.016-0.232)	0.065 (39/39) (0.011-0.242)	-
	Gamma Spec Cs-134 12	0.01	0.02 (1/9) -	By-05, Near Site S 3.6 mi @ 180*	0.02 (1/1) -	<LLD	0
	Cs-137 12	0.01	0.02 (9/9) (0.01-0.04)	By-05, Near Site S 3.6 mi @ 180*	0.04 (1/1) -	0.01 (3/3) (0.01-0.01)	0
	Other Gammas 12	0.01	0.01 (7/9) (0.01-0.03)	By-05, Near Site S 3.6 mi @ 180*	0.03 (1/1) -	0.01 (2/3) (0.01-0.01)	-
	Sr-89	0.01	<LLD	-	-	<LLD	-
	Sr-90	0.01	<LLD	-	-	<LLD	-
Airborne Iodine (pCi/m ³)	I-131 156	0.07	0.41 (25/156) (0.12-1.11)	By-04, Paynes Point 4.5 mi @ 140*	0.66 (2/13) (0.20-1.11)	0.31 (8/39) 0.10-0.63	33
Gamma Background (TLDs) (mR/Qtr.)	Gamma Dose	3.0	14.1 (9/9) (11.1-19.1)	By-04, Paynes Point 4.5 mi @ 140*	19.1 (1/1) -	12.1 (3/3) (10.4-13.8)	0
Milk (pCi/l)	I-131 20	1.0/0.5 ^b	22.3 (9/15)	By-16, Druien Dairy Farm, 3.3 mi @ 134*	29.6 (3/5) (8.1-58.6)	22.2 (3/5) (7.6-36.9)	12
	Gamma Spec. 20						
	Cs-134	5.0	8.2 (2/15) (5.8-20.7)	By-16, Druien Dairy Farm, 3.3 mi @ 134*	10.7 (1/5) -	<LLD	0
	Cs-137	5.0	10.0 (7/15) (5.3-18.8)	By-16, Druien Dairy Farm, 3.3 mi @ 134*	10.9 (2/5) (9.3-18.8)	10.0 (2/5) (7.9-12.2)	0
	Other Gammas	10.0	<LLD	-	-	<LLD	0
	Sr-89	10	<LLD	-	-	<LLD	0
Sr-90	2		3.1 (15/15) (2.3-4.1)	By-16, Druien Dairy Farm, 3.3 mi @ 134*	3.3 (5/5) (2.6-4.1)	3.2 (5/5) (2.6-3.7)	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 2nd Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results
				Location	Mean Range		
Precipitation	Gross Beta 10	11.8 ^c	27.6 (9/10) (4.4-98.9)	By-20, Ed Seabold Farm 2.5 mi @ 41°	49.1 (3/3) (12.7-98.9)	20.9 (3/3) (7.1-30.2)	0
	Gamma Spec. 4	20	<LLD	-	-	<LLD	0
	Tritium 4	200	<LLD	-	-	<LLD	0
	Sr-89 4	10	<LLD	-	-	<LLD	0
	Sr-90 4	2	<LLD	-	-	<LLD	0
Cooling Water (pCi/l)	Gross Beta 26	1.0	7.9 (13/13) (5.3-12.9)	By-11, Discharge 2.3 mi @ 283°	7.9 (13/13) (5.3-12.9)	3.0 (13/13) (1.9-5.0)	0
	Gamma Spec. 6						
	Cs-134 10		<LLD	-	-	<LLD	0
	Cs-137 10		<LLD	-	-	<LLD	0
	Other Gammas 20		<LLD	-	-	<LLD	0
	Tritium 6	200	<7,785 (3/3) (14,111-36,623)	By-11, Discharge 2.3 mi @ 283°	27,785 (3/3) (14,111-36,623)	<LLD	0
	Sr-89 6	10	<LLD	-	-	<LLD	0
	Sr-90 6	2	<LLD	-	-	<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 2nd quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results		
				Location	Mean Range				
Surface Water (pCi/l)	Gross Beta	39	2.0	3.0 (26/26) (1.3-7.0)	By-12, Oregon Pool of Rock River 4.5 mi @ 213*	3.1 (13/13) (2.1-4.6)	3.1 (13/13) (1.3-6.4)	0	
	Gamma Spec.	9							
	Cs-134	10	<LLD	-		-	<LLD	0	
	Cs-137	10	<LLD	-		-	<LLD	0	
	Other Gammas	15	<LLD	-		-	<LLD	0	
	Tritium	3	200	<LLD		-	-	<LLD	0
	Sr-89	3	10	<LLD		-	-	<LLD	0
	Sr-90	3	2	<LLD		-	-	<LLD	0
Well Water (pCi/l)	Gross Beta	2	1.2	7.7 (1/2)	By-18, McCoy Farmstead Well 1.0 mi @ 235*	7.7 (1/1)	None	0	
	Gamma Spec.	2							
	Cs-134	10	<LLD	-		-	None	0	
	Cs-137	10	<LLD	-		-	None	0	
	Other Gammas	20	<LLD	-		-	None	0	
	Tritium	2	200	<LLD		-	-	None	0
	Sr-89	2	10	<LLD		-	-	None	0
	Sr-90	2	2	<LLD		-	-	None	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 2nd Quarter 1966
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Fish (pCi/g wet)	Gross Beta 4	1.0	2.6 (2/2) (2.2-2.9)	By-13, Upstream of Intake 2.6 mi @ 302*	2.8 (2/2) (2.7-3.0)	2.8 (2/2) (2.7-3.0)	0	
	Gamma Spec. 4							
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	<LLD		-	-	<LLD	0
	Other Gammas	0.13	<LLD		-	-	<LLD	0
	Sr-89	4	1.0		<LLD	-	-	<LLD
Sr-90	4	1.0	<LLD	-	-	<LLD	0	
Cattlefeed & Grass (pCi/g wet)	Gross Beta 4	1.0	5.9 (3/3) (5.5-6.1)	By-20, Druien Dairy Farm, 3.3 mi @ 134*	6.1 (1/1)	5.9 (1/1)	0	
	Gamma Spec. 4							
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	<LLD		-	-	<LLD	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0
	Sr-89	4	1.0		<LLD	-	-	<LLD
Sr-90	4	1.0	<LLD	-	-	<LLD	0	

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM (QUARTERLY SUMMARY)

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ugle, Illinois Reporting Period 2nd Quarter 1986
 (County, State)

Sample Type (units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Aquatic Vegetation (pCi/g wet)	Gross Beta 2	1.0	3.7 (1/1)	By-13, Upstream of Intake 2.6 mi @ 302°	4.7 (1/1)	4.7 (1/1)	0	
	Gamma Spec. 2		-		-	-	0	
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	<LLD		-	-	<LLD	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0
Bottom Sediments (pCi/g dry)	Gross Beta 2	1.0	13.1 (1/1)	By-13, Upstream of Intake 2.6 mi @ 302°	21.4 (1/1)	21.4 (1.1)	0	
	Gamma Spec. 2		-		-	-	0	
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	0.3 (1/1)		By-12, Oregon Pool of Rock River 4.5 mi @ 213°	0.3 (1/1)	0.1 (1/1)	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0

^a Mean and range based on detectable measurements only. Fractions indicated in parentheses.

^b November - April LLD = 1.0; May - October LLD = 0.5 pCi/l.

^c LLD value dependent on volume of sample available for analysis.

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Pyron Nuclear Power Station Doc. # No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 3rd Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses		LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^d Range	Number of Non-routine Results
					Location	Mean Range		
Air - Particulates (pCi/m ³)	Gross Beta	156	0.01	0.024 (117/117) (0.012-0.034)	By-02, Stillman Valley 6.2 mi @ 56*	2.7 (13/13) (0.018-0.036)	0.025 (39/39) (0.006-0.036)	0
	Gamma Spec.	12	0.01	<LLD	-	-	<LLD	0
	Sr-89	12	0.01	<LLD	-	-	<LLD	0
	Sr-90	12	0.01	<LLD	-	-	<LLD	0
Airborne Iodine (pCi/m ³)	I-131	156	0.07	<LLD	-	-	<LLD	0
Gamma Background (TLDs) (mR/qr.)	Gamma Dose	12	3.0	12.9 (9/9) (7.0-20.1)	By-07, Mt. Morris 7.8 mi @ 240*	22.5 (1/1) -	17.3 (3/3) (9.8-22.5)	0
Milk (pCi/l)	I-131	24	0.5	1.6 (3/18) (0.9-2.7)	By-20, Seabold Farm 2.5 mi @ 41*	2.7 (1/6)	1.3 (1/6)	0
	Gamma Sp.	24						
	Cs-134		5.0	7.5 (2/18) (6.3-8.7)	By-20, Seabold Farm 2.5 mi @ 41*	7.5 (2/6) (6.3-8.7)	<LLD	0
	Cs-137		5.0	10.3 (5/18) (6.7-17.1)	By-20, Seabold Farm 2.5 mi @ 41*	11.9 (3/6) (8.7-17.1)	7.7 (1/1) -	0
	Other Gammas		10.0	<LLD	-	-	<LLD	0
	Sr-89	24	10	<LLD	-	-	<LLD	0
	Sr-90	24	2	3.1 (18/18) (2.2-3.9)	By-15, Reeverts Dry Farm, 3.2 mi @ 108*	3.3 (6/6) (2.4-3.7)	2.8 (6/6) (2.1-4.2)	0
Precipitation	Gross Beta	11	5.0 ^b	21.0 (6/9) (8.6-36.5)	By-16, Kenneth Druen Farm, 3.3 mi @ 134*	25.2 (2/3) (13.8-36.5)	21.5 (3/3) (5.8-39.3)	0
	Gamma Spec.	4	20	<LLD	-	-	<LLD	0
	Tritium	4	200	<LLD	-	-	<LLD	0
	Sr-89	4	10	<LLD	-	-	<LLD	0
	Sr-90	4	2	<LLD	-	-	<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 3rd Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^d Range	Number of Non-routine Results		
				Location	Mean Range				
Cooling Water (pCi/l)	Gross Beta 25	1.6	22.1 (12/12) (3.6-46.6)	By-11, Discharge at Station	22.1 (12/12) (3.6-46.6)	3.3 (17/13) (2.6-5.2)	0		
	Gamma Spec. 6								
	Cs-134 10	11.5 (1/3) -	11.5 (1/3) -		<LLD			0	
	Cs-137 10	20.3 (1/3) -	20.3 (1/3) -		<LLD			0	
	Co-58 10	52 (1/3) -	52 (1/3) -		<LLD			1	
	Other Gammas 20	<LLD	-		<LLD			0	
	Tritium 6	200	33,440 (3/3) (900-92,430)		33,440 (3/3) (900-92,430)			<LLD	3
	Sr-89 6	10	<LLD		-			<LLD	0
	Sr-90 6	2	<LLD		-			<LLD	0
Surface Water (pCi/l)	Gross Beta 39	1.7	2.8 (25/26) (1.6-4.6)	By-12, Downstream of Oregon Dam 4.6 mi @ 2.3"	3.1 (13/13) (1.8-4.6)	2.6 (12/12) (1.7-5.5)	0		
	Gamma Spec. 9								
	Cs-134 10	<LLD	-		<LLD			0	
	Cs-137 10	<LLD	-		<LLD			0	
	Other Gammas 20	<LLD	-		<LLD			0	
	Tritium 9	200	<LLD		-			<LLD	0
	Sr-89 9	10	<LLD		-			<LLD	0
	Sr-90 9	2	<LLD		-			<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 3rd Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Well Water (pCi/l)	Gross Beta 2	2.4	7.4 (1/2)	By-18, McCoy Farmstead 1.25 mi @ 235°	7.4 (1/1)	None	0	
	Gamma Spec. 2		-		-	None	0	
	Cs-134 10	10	<LLD		-	-	None	0
	Cs-137 10	10	<LLD		-	-	None	0
	Other Gammas 20	20	<LLD		-	-	None	0
	Tritium 2	200	<LLD		-	-	None	0
	Sr-89 2	10	<LLD		-	-	None	0
	Sr-90 2	2	<LLD		-	-	None	0
Fish (pCi/g wet)	Gross Beta 5	1.0	2.6 (2/2) (2.4-2.8)	By-13, Upstream of Oregon Dam 4.3 mi @ 213°	2.7 (3/3) (2.1-3.2)	2.7 (3/3) (2.1-3.2)	0	
	Gamma Spec. 5				-	-	<LLD	0
	Cs-134 0.10	0.10	<LLD		-	-	<LLD	0
	Cs-137 0.10	0.10	<LLD		-	-	<LLD	0
	Other Gammas 0.13	0.13	<LLD		-	-	<LLD	0
	Sr-89 5	0.1	<LLD		-	-	<LLD	0
	Sr-90 5	0.1	<LLD		-	-	<LLD	0
	Cattlefeed & Grass (pCi/g wet)	Gross Beta 4	1.0		6.9 (3/3) (4.1-11.9)	By-20, Seabold Farm 2.5 mi @ 41°	11.6 (1/1)	3.0 (1/1)
Gamma Spec. 4				-	-		<LLD	0
Cs-134 0.1		0.1	<LLD	-	-		<LLD	0
Cs-137 0.1		0.1	<LLD	-	-		<LLD	0
Other Gammas 0.2		0.2	<LLD	-	-		<LLD	0
Sr-89 4		1.0	<LLD	-	-		<LLD	0
Sr-90 4		1.0	<LLD	-	-		<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 3rd Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Aquatic Vegetation (pCi/g wet)	Gross Beta 2	1.0	6.1 (1/1)	By-12, Oregon Pool of Rock River 4.6 mi @ 213 ^a	6.1 (1/1)	1.5 (1/1)	0	
	Gamma Spec. 2		-		-	-	0	
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	<LLD		-	-	<LLD	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0
Bottom Sediments (pCi/g dry)	Gross Beta 2	1.0	6.3 (1/1)	By-13, Upstream of Oregon Dam 4.3 mi @ 213 ^a	8.7 (1/1)	8.7 (1/1)	0	
	Gamma Spec. 2		-		-	-	0	
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	<LLD		-	-	<LLD	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0
Vegetables	Gross Beta 8	1.0	3.8 (8/8) (1.3-5.6)	By-19-1, 966 East Weld Bark Road	5.2 (4/4) (5.3-5.6)	None	0	
	Gamma Spec. 8		-		-	-	0	
	Cs-134	0.1	<LLD		-	-	None	0
	Cs-137	0.1	<LLD		-	-	None	0
	Other Gammas	0.2	<LLD		-	-	None	0
	Sr-89 8	0.1	<LLD		-	-	None	0
	Sr-90 8	0.1	<LLD		-	-	None	0
	I-131 1	0.06	<LLD		-	-	None	0

^a Mean and range based on detectable measurements only. Fractions indicated in parentheses.
^b LLD value dependent on volume of sample available for analysis.

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM (QUARTERLY SUMMARY)

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 4th Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results
				Location	Mean Range		
Air Particulates (pCi/m ³)	Gross Beta 156	0.01	0.033 (117/117) (0.010-0.066)	By-24, Onsite 0.65 mi @ 229*	0.035 (13/13) (0.018-0.066)	0.032 (39/39) (0.010-0.063)	0
	Gamma Spec. 12	0.01	<LLD	-	-	<LLD	0
	Sr-89 12	0.01	<LLD	-	-	<LLD	0
	Sr-90 12	0.01	<LLD	-	-	<LLD	0
Airborne Iodine (pCi/m ³)	I-131 156	0.07	<LLD	-	-	<LLD	0
Gamma Background (TLDs) (mR/Qtr.)	Gamma Dose 12	3.0	17.9 (9/9) (11.9-20.7)	By-4, Paynes Point 4.5 mi @ 140*	20.7 (1/1) -	17.2 (3/3) (15.8-18.0)	0
Milk (pCi/l)	I-131 16	0.5	<LLD	-	-	<LLD	0
	Gamma Spec. 16						
	Cs-134	5.0	8.8 (2/16) (6.9-10.6)	By-15, J. A. Reeves Dairy Farm 3.2 mi @ 108*	8.8 (2/4) (6.9-10.6)	<LLD	0
	Cs-137	5.0	14.6 (3/16) (12.0-17.8)	By-15, J. A. Reeves Dairy Farm 3.2 mi @ 108*	14.6 (3/4) (12.0-17.8)	<LLD	0
	Other Gammas	10.0	<LLD	-	-	<LLD	0
	Sr-89 16	10	<LLD	-	-	<LLD	0
	Sr-90 16	2	2.6 (12/12) (2.0-4.0)	By-15, J. A. Reeves Dairy Farm 3.2 mi @ 108*	2.9 (4/4) (2.1-4.0)	2.6 (4/4) (2.2-3.0)	0
Precipitation	Gross Beta 12	12.2 ^b	8.8 (2/9) (5.6-12.0)	By-20, Ed Scabold Farm, 2.5 mi @ 41*	12.0 (1/3) -	<LLD	0
	Gamma Spec. 4	20	<LLD	-	-	<LLD	0
	Tritium 4	200	<LLD	-	-	<LLD	0
	Sr-89 4	10	<LLD	-	-	<LLD	0
	Sr-90 4	2	<LLD	-	-	<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 4th Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Cooling Water (pCi/l)	Gross Beta	26	1.6	14.9 (13/13) (5.7-34.0)	By-11, Discharge 2.3 mi @ 283 ¹	14.9 (13/13) (5.7-34.0)	3.9 (13/13) (2.1-8.0)	0
	Gamma Spec.	6						
	Cs-134	10		<LLD	-	-	<LLD	0
	Cs-137	10		<LLD	-	-	<LLD	0
	Other Gammas	20		<LLD	-	-	<LLD	0
	Tritium	6	200	11,830 (3/3) (860-20,080)	By-11, Discharge 2.3 mi @ 283 ¹	11,830 (3/3) (860-20,080)	<LLD	3
	Sr-89	6	10	<LLD	-	-	<LLD	0
	Sr-90	6	2	<LLD	-	-	<LLD	0
Surface Water (pCi/l)	Gross Beta	39	1.6	3.1 (23/26) (1.2-4.7)	By-12, Downstream of Oregon Dam 4.6 mi @ 213 ¹	3.4 (13/13) (2.2-4.7)	2.9 (12/13) (1.8-3.8)	0
	Gamma Spec.	9						
	Cs-134	10		<LLD	-	-	<LLD	0
	Cs-137	10		<LLD	-	-	<LLD	0
	Other Gammas	20		<LLD	-	-	<LLD	0
	Tritium	3	200	<LLD	-	-	<LLD	0
	Sr-89	3	10	<LLD	-	-	<LLD	0
	Sr-90	3	2	<LLD	-	-	<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 4th Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Well Water (pCi/l)	Gross Beta 2	1.0	6.2 (2/2)	By-18, McCoy Farmstead 1.0 mi @ 235°	10.2 (1/1)	None	0	
	Gamma Spec. 2		-		-			
	Cs-134 10		<LLD		-	-	None	0
	Cs-137 10		<LLD		-	-	None	0
	Other Gammas 20		<LLD		-	-	None	0
	Tritium 2	200	<LLD		-	-	None	0
	Sr-89 2	10	<LLD		-	-	None	0
	Sr-90 2	2	<LLD		-	-	None	0
Fish (pCi/g wet)	Gross Beta 1	1.0	2.5 (1/1)	By-12, Oregon Pool of Rock River 4.5 mi @ 213°	2.5 (1/1)	-	0	
	Gamma Spec. 1		-		-			
	Cs-134 0.1		<LLD		-	-	-	0
	Cs-137 0.1		<LLD		-	-	-	0
	Other Gammas 0.2		<LLD		-	-	-	0
	Sr-89 1	1.0	<LLD		-	-	-	0
	Sr-90 1	1.0	<LLD		-	-	-	0
	Cattlefeed & Grass (pCi/g wet)	Gross Beta 4	1.0		6.0 (3/3) (4.3-9.3)	By-20, Seabold Farm 2.5 mi @ 41°	9.3 (1/1)	7.0 (1/1)
Gamma Spec. 4			-	-				
Cs-134 0.1			<LLD	-	-		<LLD	0
Cs-137 0.1			<LLD	-	-		<LLD	0
Other Gammas 0.2			<LLD	-	-		<LLD	0
Sr-89 4		1.0	<LLD	-	-		<LLD	0
Sr-90 4		1.0	<LLD	-	-		<LLD	0

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM QUARTERLY SUMMARY

Name of Facility Byron Nuclear Power Station Docket No. 50-454, 50-455
 Location of Facility Ogle, Illinois Reporting Period 4th Quarter 1986
 (County, State)

Sample Type (Units)	Type and Number of Analyses	LLD	Indicator Locations Mean ^a Range	Location with Highest Quarterly Mean		Control Locations Mean ^a Range	Number of Non-routine Results	
				Location	Mean Range			
Aquatic Vegetation (pCi/g wet)	Gross Beta 2	1.0	2.9 (1/1)	By-12, Oregon Pool of Rock River 4.5 mi @ 213°	2.9 (1/1)	1.8 (1/1)	0	
	Gamma Spec. 2		-		-	-	0	
	Cs-134	0.1	<LLD		-	-	<LLD	0
	Cs-137	0.1	<LLD		-	-	<LLD	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0
Bottom Sediments (pCi/g dry)	Gross Beta 2	1.0	21.8 (1/1)	By-13, Upstream of Intake 2.6 mi @ 302°	23.3 (1/1)	23.3 (1/1)	0	
	Gamma Spec. 2		-		-	-	0	
	Co-58	0.2	0.51 (1/1)		By-12, Oregon Pool of Rock River 4.5 mi @ 213°	0.51 (1/1)	<LLD	1
	Co-60	0.2	0.39 (1/1)			0.39 (1/1)	<LLD	1
	Cs-134	0.1	2.21 (1/1)		By-12, Oregon Pool of Rock River 4.5 mi @ 213°	1.21 (1/1)	<LLD	0
	Cs-137	0.1	2.43 (1/1)			2.43 (1/1)	0.41 (1/1)	0
	Other Gammas	0.2	<LLD		-	-	<LLD	0

^a Mean and range based on detectable measurements only. Fractions indicated in parentheses.
^b LLD value dependent on volume of sample available for analysis.

Appendix A

Interlaboratory Comparison Program Results

NOTE: Appendix A will be updated twice a year and the complete Appendix will be included in January and July monthly reports only. Please refer to January and July Reports for information.

APPENDIX B
COLLECTION SCHEDULE

Quarter: 4th, 1986

Collection Schedule

Note: For samples scheduled for collection at intervals of one month or greater, "Date Scheduled" indicates the target date for obtaining the sample(s). Samples should be obtained as close to that date as possible, and in any event, before the next scheduled target collection. Dates of unsuccessful sampling attempts are to be noted on the weekly sample collection sheet.

Month:		OCTOBER				NOVEMBER				DECEMBER				Notes	
Date Scheduled:		6	13	20	27	3	10	17	24	1	8	15	22		29
Sample Type: Collection Freq.	Code	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	A ¹ / ₂	
Air Samplers	BY-01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Notes A=Air particulates I-Air iodine Frequencies of Collections: W=weekly M=monthly Q=quarterly 3x/yr.=three times a year (by quarter) A=annually
A: W	-02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
I: W	-03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Record & Adjust	-04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
FL ₁ & FL ₂ : W (See Appendix A-1)	-05	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lib. Air Samplers with Field Rota/Flowmeter: M		10/6 ✓				11/3 ✓				12/1 ✓					
Field Rota/Flowmeter Calibration: Q		10/6 ✓				Return to TIML for calibration January-April-July-October									
Surface Water: W	BY-09	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	-13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Well Water: Q	BY-14	10/6 ✓													
Well Water: Q	-18	10/6 ✓													
Cooling Water: W Intake	BY-10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Discharge	-11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Bottom Sediments: 3x/yr.	BY-12	10/6 ✓													May, July, and October
	-13	10/6 ✓													
Aquatic Plants: 3x/yr.	BY-12	10/6	(10/20) ✓												May, July, and October
	-13	10/6	(10/20) ✓												
Fish: 3x/yr.	BY-12	10/6 ✓													May, July, and October
	BY-13	10/6 ✓													
Vegetables: A* (as available at harvest)	BY-19-1	NOT SCHEDULED THIS QUARTER													August or September
	-19-2	" " " "													

* Four varieties from each location. Includes at least one (1) sample of green leafy vegetables per location. Two (2) if available.

Month:		OCTOBER	NOVEMBER	DECEMBER																						
Date Scheduled:		6	13	20	27	3	10	17	24	1	8	15	22	29												
Sample Type:	Code													Notes												
Grass or Cattlefeed: Q	BY-15	10/6 ✓												Grass: May, July, and October Cattlefeed: February												
	-16	10/6 ✓																								
	-17	10/6 ✓																								
	-20	10/6 ✓																								
Milk: SM/M	BY-15	✓	✓	✓	✓	11/3 ✓					12/1 ✓					SM: May thru October M: November thru April										
	-16	✓	✓	✓	✓	11/3 ✓					12/1 ✓															
	-17	✓	✓	✓	✓	11/3 ✓					12/1 ✓															
	-20	✓	✓	✓	✓	11/3 ✓					12/1 ✓															
Precipitation: M	BY-15	10/6 ✓				11/3 ✓					12/1 ✓															
	-16	10/6 ✓				11/3 ✓					12/1 ✓															
	-17	10/6 ✓				11/3 ✓					12/1 ✓															
	-20	10/6 ✓				11/3 ✓					12/1 ✓															
Air Sampler TLDs Visual Check: W	BY-01 thru BY-08	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									
	BY-21 thru BY-24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									
All Other TLDs Visual Check: M	BY-101-1,2 thru 116-1,2 -201-1,2 thru 216-1,2	9/29 ✓			11/3 ✓				12/1 ✓																	
TLD exchange (all): Q		9/29 ✓											12/29 ✓													
Dairy Census: A	a) Site boundary to 2 mi	NOT SCHEDULED THIS QUARTER												August												
	b) 2 miles to 5 miles	" " " "																								
	c) At Dairies: BY-15,16,17,20	" " " "																								
Nearest Residence Survey: A Check 16 meteorological sectors		" "			" "				" "				" "				August									

Draft: M. DiPonzio Date 9.15.86 cwc
 cc: P. Coulter Date 9.15.86 cwc
 Station

Distribution of the Collection Schedule will be by:

- November 30 for 1st Q.
- February 28 for 2nd Q.
- May 31 for 3rd Q.
- August 31 for 4th Q.

Appendix C

Elevated Airborne Iodine-131 Activity
Resulting From
Chernobyl Nuclear Plant Accident (USSR)
April 26, 1986

ELEVATED AIRBORNE IODINE-131 ACTIVITY
 RESULTING FROM
 CHERNOBYL NUCLEAR PLANT ACCIDENT (USSR)
 APRIL 26, 1986

Location	Date	Concentration (pCi/m ³)
BY-2	05-12-86	0.13±0.03
BY-3	05-12-86	0.23±0.08
BY-5	05-12-86	0.25±0.04
BY-6	05-12-86	0.15±0.03
BY-8	05-12-86	0.34±0.09
BY-21	05-12-86	0.24±0.02
BY-22	05-12-86	0.29±0.08
BY-23	05-12-86	0.12±0.03
BY-24	05-12-86	0.12±0.03
BY-1	05-19-86	0.37±0.04
BY-2	05-19-86	0.63±0.14
BY-3	05-19-86	0.51±0.06
BY-4	05-19-86	1.11±0.11
BY-5	05-19-86	1.04±0.10
BY-6	05-19-86	0.15±0.03
BY-7	05-19-86	0.42±0.09
BY-8	05-19-86	0.43±0.16
BY-21	05-19-86	1.08±0.24
BY-22	05-19-86	0.93±0.13
BY-23	05-19-86	0.32±0.05
BY-24	05-19-86	0.27±0.05
BY-1	05-26-86	0.19±0.10
BY-2	05-26-86	0.27±0.04
BY-3	05-26-86	0.32±0.06
BY-4	05-26-86	0.20±0.04
BY-5	05-26-86	0.15±0.03
BY-6	05-26-86	0.23±0.10
BY-7	05-26-86	0.10±0.04
BY-8	05-26-86	0.13±0.03
BY-21	05-26-86	0.68±0.08
BY-22	05-26-86	0.81±0.20
BY-23	05-26-86	0.42±0.06
BY-24	05-26-86	0.16±0.04

ELEVATED AIRBORNE IODINE-131 ACTIVITY
 RESULTING FROM
 CHERNOBYL NUCLEAR PLANT ACCIDENT (USSR)
 APRIL 26, 1986 (continued)

Location	Date	Concentration (pCi/m ³)
BY-1	06-02-86	<0.11 ^a
BY-2	06-02-86	<0.11 ^a
BY-3	06-02-86	<0.11 ^a
BY-4	06-02-86	<0.11 ^a
BY-5	06-02-86	<0.11 ^a
BY-6	06-02-86	<0.11 ^a
BY-7	06-02-86	<0.11 ^a
BY-8	06-02-86	<0.11 ^a
BY-21	06-02-86	<0.11 ^a
BY-22	06-02-86	<0.11 ^a
BY-23	06-02-86	<0.11 ^a
BY-24	06-02-86	<0.11 ^a
BY-1	06-09-86	<0.10 ^a
BY-2	06-09-86	<0.10 ^a
BY-3	06-09-86	<0.10 ^a
BY-4	06-09-86	<0.10 ^a
BY-5	06-09-86	<0.10 ^a
BY-6	06-09-86	<0.10 ^a
BY-7	06-09-86	<0.10 ^a
BY-8	06-09-86	<0.10 ^a
BY-21	06-09-86	<0.10 ^a
BY-22	06-09-86	<0.10 ^a
BY-23	06-09-86	<0.10 ^a
BY-24	06-09-86	<0.10 ^a

^a Elevated LLD due to delay in counting.

ATTACHMENT D

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM

BYRON NUCLEAR POWER STATION

JANUARY - DECEMBER, 1987