

RADIOLOGICAL ENVIRONMENTAL SURVEILLANCE REPORT

Volume III

Sample Analyses Data

July 1, 1988-December 31, 1988

H.B. Robinson Steam Electric Plant

Unit 2

Carolina Power & Light Company

8905020351 890425  
PDR ADDCK 05000261  
R PNU

## TABLE OF CONTENTS

Third Quarter 1988

	<u>Page</u>
Air Cartridge Samples.....	138
Air Particulate Samples.....	145
Broadleaf Vegetation Samples.....	159
Food Crop Samples.....	188
Groundwater Samples.....	190
Milk Samples.....	199
Shoreline Sediment Samples.....	213
Surface Water Samples.....	215
Environmental TLD Samples.....	224

TABLE OF CONTENTS  
Fourth Quarter 1988

	<u>Page</u>
Air Cartridge Samples.....	227
Air Particulate Samples.....	234
Broadleaf Vegetation Samples.....	250
Fish Samples.....	259
Groundwater Samples.....	265
Milk Samples.....	274
Surface Water Samples.....	286
Environmental TLD Samples.....	295

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 138

THIRD QUARTER, 1988

26 MI ESE - FLORENCE - CONTROL (AC-1)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	852.0		(< 5.56E-03)
07/11/88	908.8		(< 1.27E-02)
07/18/88	790.9		(< 1.21E-02)
07/25/88	837.8		(< 2.11E-02)
08/01/88	875.4		(< 1.29E-02)
08/08/88	886.6		(< 7.92E-03)
08/15/88	879.9		(< 1.27E-02)
08/21/88	759.6		(< 8.68E-03)
08/29/88	972.8		(< 1.04E-02)
09/05/88	879.8		(< 7.51E-03)
09/12/88	872.3		(< 1.03E-02)
09/19/88	854.8		(< 9.26E-03)
09/26/88	872.7		(< 1.17E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 139

THIRD QUARTER, 1988

0.2 MI S - INFORMATION CENTER (AC-2)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88		NOT ANALYZED	(< 5.56E-03)
07/11/88	547.4	< 1.09E-02	(< 1.27E-02)
07/18/88	890.1	< 1.16E-02	(< 1.21E-02)
07/25/88	926.1	< 1.53E-02	(< 2.11E-02)
08/01/88	964.7	< 1.27E-02	(< 1.29E-02)
08/08/88	943.6	< 1.44E-02	(< 7.92E-03)
08/15/88	890.7	< 1.29E-02	(< 1.27E-02)
08/21/88	752.2	< 5.53E-03	(< 8.68E-03)
08/29/88	982.5	< 1.10E-02	(< 1.04E-02)
09/05/88	873.4	< 9.55E-03	(< 7.51E-03)
09/12/88	881.7	< 1.02E-02	(< 1.03E-02)
09/19/88	870.0	< 1.02E-02	(< 9.26E-03)
09/26/88	869.2	< 7.34E-03	(< 1.17E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 140

THIRD QUARTER, 1988

0.7 MI N - MICROWAVE TOWER (AC-3)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	904.9	< 9.33E-03	(< 5.56E-03)
07/11/88	924.1	< 5.13E-03	(< 1.27E-02)
07/18/88	872.1	< 1.47E-02	(< 1.21E-02)
07/25/88	896.1	< 1.34E-02	(< 2.11E-02)
08/01/88	890.7	< 1.65E-02	(< 1.29E-02)
08/08/88	885.3	< 1.25E-02	(< 7.92E-03)
08/15/88	895.7	< 1.43E-02	(< 1.27E-02)
08/21/88	770.6	< 1.05E-02	(< 8.68E-03)
08/29/88	1005.4	< 8.88E-03	(< 1.04E-02)
09/05/88	883.1	< 7.51E-03	(< 7.51E-03)
09/12/88	885.6	< 1.35E-02	(< 1.03E-02)
09/19/88	892.5	< 9.96E-03	(< 9.26E-03)
09/26/88	926.1	< 1.18E-02	(< 1.17E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 141

THIRD QUARTER, 1988

0.4 MI ESE - SPILLWAY (AC-4)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	773.9	< 6.12E-03	(< 5.56E-03)
07/11/88	945.2	< 7.75E-03	(< 1.27E-02)
07/18/88	885.3	< 1.01E-02	(< 1.21E-02)
07/25/88	924.6	< 1.74E-02	(< 2.11E-02)
08/01/88	913.5	< 9.34E-03	(< 1.29E-02)
08/08/88	920.2	< 5.13E-03	(< 7.92E-03)
08/15/88	921.8	< 1.27E-02	(< 1.27E-02)
08/21/88	783.9	< 1.06E-02	(< 8.68E-03)
08/29/88	1033.5	< 9.40E-03	(< 1.04E-02)
09/05/88	918.8	< 4.56E-03	(< 7.51E-03)
09/12/88	913.1	< 1.06E-02	(< 1.03E-02)
09/19/88	916.8	< 8.68E-03	(< 9.26E-03)
09/26/88	915.3	< 1.05E-02	(< 1.17E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 142

THIRD QUARTER, 1988

0.9 MI ENE - JOHNSON'S LANDING (AC-5)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	824.6	< 5.13E-03	(< 5.56E-03)
07/11/88	933.9	< 8.80E-03	(< 1.27E-02)
07/18/88	901.8	< 9.06E-03	(< 1.21E-02)
07/25/88	893.2	< 1.35E-02	(< 2.11E-02)
08/01/88	914.3	< 1.40E-02	(< 1.29E-02)
08/08/88	923.5	< 9.13E-03	(< 7.92E-03)
08/15/88	913.1	< 1.74E-02	(< 1.27E-02)
08/21/88	773.3	< 6.08E-03	(< 8.68E-03)
08/29/88	1087.7	< 1.32E-02	(< 1.04E-02)
09/05/88	906.5	< 5.18E-03	(< 7.51E-03)
09/12/88	903.3	< 1.23E-02	(< 1.03E-02)
09/19/88	906.1	< 1.16E-02	(< 9.26E-03)
09/26/88	910.1	< 9.08E-03	(< 1.17E-02)



AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 143

THIRD QUARTER, 1988

0.3 MI SW - INFORMATION CENTER (AC-6)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	937.0	< 8.77E-03	(< 5.56E-03)
07/11/88	944.2	< 8.97E-03	(< 1.27E-02)
07/18/88	877.6	< 1.57E-02	(< 1.21E-02)
07/25/88	909.0	< 1.00E-02	(< 2.11E-02)
08/01/88	959.1	< 1.22E-02	(< 1.29E-02)
08/08/88	927.1	< 5.11E-03	(< 7.92E-03)
08/15/88	940.4	< 1.55E-02	(< 1.27E-02)
08/21/88	775.5	< 9.37E-03	(< 8.68E-03)
08/29/88	1096.8	< 7.71E-03	(< 1.04E-02)
09/05/88	906.9	< 8.01E-03	(< 7.51E-03)
09/12/88	883.4	< 1.47E-02	(< 1.03E-02)
09/19/88	896.6	< 1.77E-02	(< 9.26E-03)
09/26/88	910.3	< 1.21E-02	(< 1.17E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 144

THIRD QUARTER, 1988

6.3 MI ESE - HARTSVILLE CP&L SUBSTATION (AC-7)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	997.2	< 7.35E-03	(< 5.56E-03)
07/11/88	1021.0	< 6.58E-03	(< 1.27E-02)
07/18/88	989.4	< 6.83E-03	(< 1.21E-02)
07/25/88	994.9	< 1.19E-02	(< 2.11E-02)
08/01/88	986.7	< 1.22E-02	(< 1.29E-02)
08/08/88	981.3	< 4.31E-03	(< 7.92E-03)
08/15/88	987.7	< 1.10E-02	(< 1.27E-02)
08/21/88	856.3	< 1.10E-02	(< 8.68E-03)
08/29/88	1123.0	< 1.00E-02	(< 1.04E-02)
09/05/88	987.0	< 4.77E-03	(< 7.51E-03)
09/12/88	982.4	< 1.39E-02	(< 1.03E-02)
09/19/88	978.0	< 1.32E-02	(< 9.26E-03)
09/26/88	990.9	< 1.14E-02	(< 1.17E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 145

THIRD QUARTER, 1988

26 MI ESE - FLORENCE - CONTROL (AP-1)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	852.0		(1.34 $\pm$ 0.13 E-02)
07/11/88	908.8		(1.90 $\pm$ 0.16 E-02)
07/18/88	790.9		(1.35 $\pm$ 0.15 E-02)
07/25/88	837.8		(7.86 $\pm$ 1.16 E-03)
08/01/88	875.4		(1.64 $\pm$ 0.14 E-02)
08/08/88	886.6		(1.48 $\pm$ 0.14 E-02)
08/15/88	879.9		(1.48 $\pm$ 0.14 E-02)
08/21/88	759.6		(1.29 $\pm$ 0.14 E-02)
08/29/88	972.8		(1.44 $\pm$ 0.13 E-02)
09/05/88	879.8		(1.05 $\pm$ 0.12 E-02)
09/12/88	872.3		(1.37 $\pm$ 0.14 E-02)
09/19/88	854.8		(2.07 $\pm$ 0.16 E-02)
09/26/88	872.7		(1.42 $\pm$ 0.14 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 146

THIRD QUARTER, 1988

0.2 MI S - INFORMATION CENTER (AP-2)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88		NOT ANALYZED	(1.34 $\pm$ 0.13 E-02)
07/11/88	547.4	2.85 $\pm$ 0.26 E-02	(1.90 $\pm$ 0.16 E-02)
07/18/88	890.1	1.37 $\pm$ 0.14 E-02	(1.35 $\pm$ 0.15 E-02)
07/25/88	926.1	9.39 $\pm$ 1.15 E-03	(7.86 $\pm$ 1.16 E-03)
08/01/88	964.7	1.99 $\pm$ 0.15 E-02	(1.64 $\pm$ 0.14 E-02)
08/08/88	943.6	1.18 $\pm$ 0.12 E-02	(1.48 $\pm$ 0.14 E-02)
08/15/88	890.7	1.42 $\pm$ 0.14 E-02	(1.48 $\pm$ 0.14 E-02)
08/21/88	752.2	1.20 $\pm$ 0.14 E-02	(1.29 $\pm$ 0.14 E-02)
08/29/88	982.5	1.35 $\pm$ 0.13 E-02	(1.44 $\pm$ 0.13 E-02)
09/05/88	873.4	1.01 $\pm$ 0.12 E-02	(1.05 $\pm$ 0.12 E-02)
09/12/88	881.7	1.23 $\pm$ 0.13 E-02	(1.37 $\pm$ 0.14 E-02)
09/19/88	870.0	2.10 $\pm$ 0.16 E-02	(2.07 $\pm$ 0.16 E-02)
09/26/88	869.2	2.11 $\pm$ 0.16 E-02	(1.42 $\pm$ 0.14 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 147

THIRD QUARTER, 1988

0.7 MI N - MICROWAVE TOWER (AP-3)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	904.9	1.49 $\pm$ 0.14 E-02	(1.34 $\pm$ 0.13 E-02)
07/11/88	924.1	2.23 $\pm$ 0.17 E-02	(1.90 $\pm$ 0.16 E-02)
07/18/88	872.1	1.58 $\pm$ 0.15 E-02	(1.35 $\pm$ 0.15 E-02)
07/25/88	896.1	8.35 $\pm$ 1.13 E-03	(7.86 $\pm$ 1.16 E-03)
08/01/88	890.7	2.03 $\pm$ 0.16 E-02	(1.64 $\pm$ 0.14 E-02)
08/08/88	885.3	1.21 $\pm$ 0.13 E-02	(1.48 $\pm$ 0.14 E-02)
08/15/88	895.7	1.33 $\pm$ 0.13 E-02	(1.48 $\pm$ 0.14 E-02)
08/21/88	770.6	1.20 $\pm$ 0.14 E-02	(1.29 $\pm$ 0.14 E-02)
08/29/88	1005.4	1.22 $\pm$ 0.12 E-02	(1.44 $\pm$ 0.13 E-02)
09/05/88	883.1	9.95 $\pm$ 1.17 E-03	(1.05 $\pm$ 0.12 E-02)
09/12/88	885.6	1.26 $\pm$ 0.13 E-02	(1.37 $\pm$ 0.14 E-02)
09/19/88	892.5	1.69 $\pm$ 0.15 E-02	(2.07 $\pm$ 0.16 E-02)
09/26/88	926.1	1.65 $\pm$ 0.14 E-02	(1.42 $\pm$ 0.14 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 148

THIRD QUARTER, 1988

0.4 MI ESE - SPILLWAY (AP-4)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	773.9	1.69 $\pm$ 0.16 E-02	(1.34 $\pm$ 0.13 E-02)
07/11/88	945.2	2.12 $\pm$ 0.16 E-02	(1.90 $\pm$ 0.16 E-02)
07/18/88	885.3	1.74 $\pm$ 0.16 E-02	(1.35 $\pm$ 0.15 E-02)
07/25/88	924.6	8.31 $\pm$ 1.10 E-03	(7.86 $\pm$ 1.16 E-03)
08/01/88	913.5	1.85 $\pm$ 0.15 E-02	(1.64 $\pm$ 0.14 E-02)
08/08/88	920.2	1.24 $\pm$ 0.13 E-02	(1.48 $\pm$ 0.14 E-02)
08/15/88	921.8	1.04 $\pm$ 0.12 E-02	(1.48 $\pm$ 0.14 E-02)
08/21/88	783.9	1.07 $\pm$ 0.13 E-02	(1.29 $\pm$ 0.14 E-02)
08/29/88	1033.5	1.15 $\pm$ 0.11 E-02	(1.44 $\pm$ 0.13 E-02)
09/05/88	918.8	9.34 $\pm$ 1.12 E-03	(1.05 $\pm$ 0.12 E-02)
09/12/88	913.1	1.07 $\pm$ 0.12 E-02	(1.37 $\pm$ 0.14 E-02)
09/19/88	916.8	1.70 $\pm$ 0.14 E-02	(2.07 $\pm$ 0.16 E-02)
09/26/88	915.3	1.77 $\pm$ 0.15 E-02	(1.42 $\pm$ 0.14 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 149

THIRD QUARTER, 1988

0.9 MI ENE - JOHNSON'S LANDING (AP-5)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	824.6	$1.63 \pm 0.15 \text{ E-02}$	$(1.34 \pm 0.13 \text{ E-02})$
07/11/88	933.9	$2.24 \pm 0.17 \text{ E-02}$	$(1.90 \pm 0.16 \text{ E-02})$
07/18/88	901.8	$1.54 \pm 0.15 \text{ E-02}$	$(1.35 \pm 0.15 \text{ E-02})$
07/25/88	893.2	$1.14 \pm 0.13 \text{ E-02}$	$(7.86 \pm 1.16 \text{ E-03})$
08/01/88	914.3	$2.15 \pm 0.16 \text{ E-02}$	$(1.64 \pm 0.14 \text{ E-02})$
08/08/88	923.5	$1.17 \pm 0.12 \text{ E-02}$	$(1.48 \pm 0.14 \text{ E-02})$
08/15/88	913.1	$1.35 \pm 0.13 \text{ E-02}$	$(1.48 \pm 0.14 \text{ E-02})$
08/21/88	773.3	$1.17 \pm 0.14 \text{ E-02}$	$(1.29 \pm 0.14 \text{ E-02})$
08/29/88	1087.7	$1.48 \pm 0.12 \text{ E-02}$	$(1.44 \pm 0.13 \text{ E-02})$
09/05/88	906.5	$9.64 \pm 1.14 \text{ E-03}$	$(1.05 \pm 0.12 \text{ E-02})$
09/12/88	903.3	$1.30 \pm 0.13 \text{ E-02}$	$(1.37 \pm 0.14 \text{ E-02})$
09/19/88	906.1	$1.85 \pm 0.15 \text{ E-02}$	$(2.07 \pm 0.16 \text{ E-02})$
09/26/88	910.1	$1.77 \pm 0.15 \text{ E-02}$	$(1.42 \pm 0.14 \text{ E-02})$

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 150

THIRD QUARTER, 1988

0.3 MI SW - INFORMATION CENTER (AP-6)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	937.0	1.60 $\pm$ 0.14 E-02	(1.34 $\pm$ 0.13 E-02)
07/11/88	944.2	2.46 $\pm$ 0.17 E-02	(1.90 $\pm$ 0.16 E-02)
07/18/88	877.6	1.55 $\pm$ 0.15 E-02	(1.35 $\pm$ 0.15 E-02)
07/25/88	909.0	8.95 $\pm$ 1.14 E-03	(7.86 $\pm$ 1.16 E-03)
08/01/88	959.1	2.03 $\pm$ 0.15 E-02	(1.64 $\pm$ 0.14 E-02)
08/08/88	927.1	1.42 $\pm$ 0.13 E-02	(1.48 $\pm$ 0.14 E-02)
08/15/88	940.4	1.18 $\pm$ 0.13 E-02	(1.48 $\pm$ 0.14 E-02)
08/21/88	775.5	1.32 $\pm$ 0.14 E-02	(1.29 $\pm$ 0.14 E-02)
08/29/88	1096.8	1.43 $\pm$ 0.12 E-02	(1.44 $\pm$ 0.13 E-02)
09/05/88	906.9	1.09 $\pm$ 0.12 E-02	(1.05 $\pm$ 0.12 E-02)
09/12/88	883.4	1.38 $\pm$ 0.14 E-02	(1.37 $\pm$ 0.14 E-02)
09/19/88	896.6	1.87 $\pm$ 0.15 E-02	(2.07 $\pm$ 0.16 E-02)
09/26/88	910.3	2.07 $\pm$ 0.16 E-02	(1.42 $\pm$ 0.14 E-02)



AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 151

THIRD QUARTER, 1988

6.3 MI ESE - HARTSVILLE CP&L SUBSTATION (AP-7)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/04/88	997.2	1.33 $\pm$ 0.12 E-02	(1.34 $\pm$ 0.13 E-02)
07/11/88	1021.0	2.01 $\pm$ 0.15 E-02	(1.90 $\pm$ 0.16 E-02)
07/18/88	989.4	1.42 $\pm$ 0.14 E-02	(1.35 $\pm$ 0.15 E-02)
07/25/88	994.9	8.92 $\pm$ 1.08 E-03	(7.86 $\pm$ 1.16 E-03)
08/01/88	986.7	1.71 $\pm$ 0.14 E-02	(1.64 $\pm$ 0.14 E-02)
08/08/88	981.3	1.24 $\pm$ 0.12 E-02	(1.48 $\pm$ 0.14 E-02)
08/15/88	987.7	1.18 $\pm$ 0.12 E-02	(1.48 $\pm$ 0.14 E-02)
08/21/88	856.3	9.92 $\pm$ 1.22 E-03	(1.29 $\pm$ 0.14 E-02)
08/29/88	1123.0	1.49 $\pm$ 0.12 E-02	(1.44 $\pm$ 0.13 E-02)
09/05/88	987.0	9.76 $\pm$ 1.09 E-03	(1.05 $\pm$ 0.12 E-02)
09/12/88	982.4	1.30 $\pm$ 0.13 E-02	(1.37 $\pm$ 0.14 E-02)
09/19/88	978.0	1.82 $\pm$ 0.14 E-02	(2.07 $\pm$ 0.16 E-02)
09/26/88	990.9	1.81 $\pm$ 0.14 E-02	(1.42 $\pm$ 0.14 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 152

THIRD QUARTER, 1988

26 MI ESE - FLORENCE - CONTROL (AP-1)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11243.4 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(6.13 $\pm$ 0.65 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 153

THIRD QUARTER, 1988

0.2 MI S - INFORMATION CENTER (AP-2)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 10391.6 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.65 \pm 0.67 \text{ E-02}$	$(6.13 \pm 0.65 \text{ E-02})$
RA-226	$4.74 \pm 3.26 \text{ E-03}$	(LESS THAN LLD)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 154

THIRD QUARTER, 1988

0.7 MI N - MICROWAVE TOWER (AP-3)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11632.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.15 \pm 0.73 \text{ E-02}$	$(6.13 \pm 0.65 \text{ E-02})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 155

THIRD QUARTER, 1988

0.4 MI ESE - SPILLWAY (AP-4)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11765.9 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$6.28 \pm 0.67 \text{ E-02}$	$(6.13 \pm 0.65 \text{ E-02})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 156

THIRD QUARTER, 1988

0.9 MI ENE - JOHNSON'S LANDING (AP-5)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11791.4 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.58 \pm 0.68 \text{ E-02}$	$(6.13 \pm 0.65 \text{ E-02})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 157

THIRD QUARTER, 1988

0.3 MI SW - INFORMATION CENTER (AP-6)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11963.9 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.17 \pm 0.70 \text{ E-02}$	$(6.13 \pm 0.65 \text{ E-02})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 158

THIRD QUARTER, 1988

6.3 MI ESE - HARTSVILLE CP&L SUBSTATION (AP-7)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 12875.8 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$9.25 \pm 0.77 \text{ E-02}$	$(6.13 \pm 0.65 \text{ E-02})$



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 159

JULY, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 07/08/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS:

511 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$5.69 \pm 0.75 \text{ E-01}$	$(6.57 \pm 0.80 \text{ E-01})$
K-40	$2.94 \pm 0.24 \text{ E+00}$	$(2.81 \pm 0.21 \text{ E+00})$
I-131	$< 1.76\text{E-02}$	$(< 1.65\text{E-02})$
CS-134	$< 2.28\text{E-02}$	$(< 1.68\text{E-02})$
CS-137	$5.82 \pm 0.84 \text{ E-02}$	$(6.30 \pm 0.97 \text{ E-02})$
PB-212	$4.27 \pm 1.25 \text{ E-02}$	$(9.12 \pm 7.96 \text{ E-03})$
RA-226	$1.70 \pm 1.22 \text{ E-01}$	$(2.23 \pm 1.22 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 160

JULY, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 07/08/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 610.9 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.67 \pm 0.76 \text{ E-01}$	$(6.57 \pm 0.80 \text{ E-01})$
K-40	$2.48 \pm 0.17 \text{ E+00}$	$(2.81 \pm 0.21 \text{ E+00})$
I-131	$< 2.16\text{E-02}$	$(< 1.65\text{E-02})$
CS-134	$< 2.02\text{E-02}$	$(< 1.68\text{E-02})$
CS-137	$< 1.70\text{E-02}$	$(6.30 \pm 0.97 \text{ E-02})$
PB-212	LESS THAN LLD	$(9.12 \pm 7.96 \text{ E-03})$
RA-226	LESS THAN LLD	$(2.23 \pm 1.22 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 161

JULY, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 07/08/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS:

596.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(6.57 $\pm$ 0.80 E-01)
K-40		(2.81 $\pm$ 0.21 E+00)
I-131		(< 1.65E-02)
CS-134		(< 1.68E-02)
CS-137		(6.30 $\pm$ 0.97 E-02)
PB-212		(9.12 $\pm$ 7.96 E-03)
RA-226		(2.23 $\pm$ 1.22 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 162

JULY, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 07/08/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 507.9 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.81 \pm 0.71 \text{ E-01}$	$(6.49 \pm 0.81 \text{ E-01})$
K-40	$2.16 \pm 0.15 \text{ E+00}$	$(2.86 \pm 0.24 \text{ E+00})$
I-131	$< 1.85\text{E-02}$	$(< 1.85\text{E-02})$
CS-134	$< 1.61\text{E-02}$	$(< 2.05\text{E-02})$
CS-137	$8.27 \pm 0.84 \text{ E-02}$	$(< 2.01\text{E-02})$
PB-212	$3.05 \pm 1.72 \text{ E-02}$	$(4.52 \pm 1.20 \text{ E-02})$
BI-214	LESS THAN LLD	$(4.33 \pm 1.42 \text{ E-02})$
RA-226	LESS THAN LLD	$(2.86 \pm 2.12 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 163

JULY, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 07/08/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 377.9 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.40 \pm 1.25 \text{ E-01}$	$(6.49 \pm 0.81 \text{ E-01})$
K-40	$2.69 \pm 0.30 \text{ E+00}$	$(2.86 \pm 0.24 \text{ E+00})$
I-131	$< 2.11\text{E-02}$	$(< 1.85\text{E-02})$
CS-134	$< 2.92\text{E-02}$	$(< 2.05\text{E-02})$
CS-137	$5.77 \pm 1.21 \text{ E-02}$	$(< 2.01\text{E-02})$
TL-208	$2.55 \pm 0.91 \text{ E-02}$	(LESS THAN LLD)
PB-212	$9.86 \pm 2.07 \text{ E-02}$	$(4.52 \pm 1.20 \text{ E-02})$
BI-214	LESS THAN LLD	$(4.33 \pm 1.42 \text{ E-02})$
RA-226	LESS THAN LLD	$(2.86 \pm 2.12 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 164

JULY, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 07/08/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 463.1 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(6.49 $\pm$ 0.81 E-01)
K-40		(2.86 $\pm$ 0.24 E+00)
I-131		(< 1.85E-02)
CS-134		(< 2.05E-02)
CS-137		(< 2.01E-02)
PB-212		(4.52 $\pm$ 1.20 E-02)
BI-214		(4.33 $\pm$ 1.42 E-02)
RA-226		(2.86 $\pm$ 2.12 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 165

JULY, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 07/08/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 453.7 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$5.82 \pm 1.19 \text{ E-01}$	$(7.09 \pm 0.80 \text{ E-01})$
K-40	$2.06 \pm 0.25 \text{ E+00}$	$(2.42 \pm 0.21 \text{ E+00})$
I-131	$< 2.79\text{E-02}$	$(< 2.36\text{E-02})$
CS-134	$< 1.75\text{E-02}$	$(< 2.36\text{E-02})$
CS-137	$9.91 \pm 0.29 \text{ E-01}$	$(2.05 \pm 0.15 \text{ E-01})$
TL-208	LESS THAN LLD	$(2.18 \pm 1.07 \text{ E-02})$
PB-212	$2.50 \pm 1.55 \text{ E-02}$	$(5.57 \pm 1.90 \text{ E-02})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 166

JULY, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 07/08/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 488.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.04 \pm 0.92 \text{ E-01}$	$(7.09 \pm 0.80 \text{ E-01})$
K-40	$1.41 \pm 0.19 \text{ E+00}$	$(2.42 \pm 0.21 \text{ E+00})$
I-131	$< 1.86\text{E-02}$	$(< 2.36\text{E-02})$
CS-134	$< 2.26\text{E-02}$	$(< 2.36\text{E-02})$
CS-137	$1.17 \pm 0.13 \text{ E-01}$	$(2.05 \pm 0.15 \text{ E-01})$
TL-208	$2.38 \pm 0.96 \text{ E-02}$	$(2.18 \pm 1.07 \text{ E-02})$
PB-212	$1.30 \pm 1.18 \text{ E-02}$	$(5.57 \pm 1.90 \text{ E-02})$
RA-226	$1.75 \pm 1.52 \text{ E-01}$	(LESS THAN LLD)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 167

JULY, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 07/08/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 425.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(7.09 $\pm$ 0.80 E-01)
K-40		(2.42 $\pm$ 0.21 E+00)
I-131		(< 2.36E-02)
CS-134		(< 2.36E-02)
CS-137		(2.05 $\pm$ 0.15 E-01)
TL-208		(2.18 $\pm$ 1.07 E-02)
PB-212		(5.57 $\pm$ 1.90 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 168

AUGUST, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 08/09/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 661 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.61 \pm 0.73 \text{ E-01}$	$(5.79 \pm 0.88 \text{ E-01})$
K-40	$2.39 \pm 0.19 \text{ E+00}$	$(2.29 \pm 0.14 \text{ E+00})$
I-131	$< 1.29\text{E-02}$	$(< 1.80\text{E-02})$
CS-134	$< 1.64\text{E-02}$	$(< 1.59\text{E-02})$
CS-137	$7.00 \pm 0.95 \text{ E-02}$	$(6.65 \pm 0.83 \text{ E-02})$
TL-208	LESS THAN LLD	$(2.46 \pm 0.95 \text{ E-02})$
PB-212	$3.05 \pm 0.90 \text{ E-02}$	$(4.11 \pm 1.89 \text{ E-02})$
RA-226	$1.09 \pm 0.95 \text{ E-01}$	$(4.62 \pm 1.57 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 169

AUGUST, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 08/09/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 649.6 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	$7.93 \pm 1.04 \text{ E-02}$	$(4.11 \pm 1.89 \text{ E-02})$
BE-7	$4.65 \pm 0.52 \text{ E-01}$	$(5.79 \pm 0.88 \text{ E-01})$
K-40	$3.74 \pm 0.17 \text{ E+00}$	$(2.29 \pm 0.14 \text{ E+00})$
I-131	$< 1.27\text{E-02}$	$(< 1.80\text{E-02})$
CS-134	$< 1.50\text{E-02}$	$(< 1.59\text{E-02})$
CS-137	$1.08 \pm 0.09 \text{ E-01}$	$(6.65 \pm 0.83 \text{ E-02})$
TL-208	$2.86 \pm 0.73 \text{ E-02}$	$(2.46 \pm 0.95 \text{ E-02})$
BI-212	$7.28 \pm 4.85 \text{ E-02}$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(4.62 \pm 1.57 \text{ E-01})$
AC-228	$1.14 \pm 0.24 \text{ E-01}$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 170

AUGUST, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 08/09/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 539.8 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(5.79 $\pm$ 0.88 E-01)
K-40		(2.29 $\pm$ 0.14 E+00)
I-131		(< 1.80E-02)
CS-134		(< 1.59E-02)
CS-137		(6.65 $\pm$ 0.83 E-02)
TL-208		(2.46 $\pm$ 0.95 E-02)
PB-212		(4.11 $\pm$ 1.89 E-02)
RA-226		(4.62 $\pm$ 1.57 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 171

AUGUST, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 08/09/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 550.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$4.27 \pm 0.70 \text{ E-01}$	$(3.30 \pm 0.65 \text{ E-01})$
K-40	$2.80 \pm 0.16 \text{ E+00}$	$(1.41 \pm 0.16 \text{ E-02})$
I-131	$< 1.49\text{E-02}$	$(< 1.81\text{E-02})$
CS-134	$< 1.58\text{E-02}$	$(< 1.82\text{E-02})$
CS-137	$5.34 \pm 0.74 \text{ E-02}$	$(2.13 \pm 0.76 \text{ E-02})$
TL-208	LESS THAN LLD	$(1.21 \pm 0.80 \text{ E-02})$
PB-212	$1.84 \pm 1.31 \text{ E-02}$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(5.30 \pm 1.53 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 172

AUGUST, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 08/09/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 494.8 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.51 \pm 0.76 \text{ E-01}$	$(3.30 \pm 0.65 \text{ E-01})$
K-40	$7.05 \pm 1.67 \text{ E-01}$	$(1.41 \pm 0.16 \text{ E-02})$
I-131	$< 2.21\text{E-02}$	$(< 1.81\text{E-02})$
CS-134	$< 2.31\text{E-02}$	$(< 1.82\text{E-02})$
CS-137	$< 2.03\text{E-02}$	$(2.13 \pm 0.76 \text{ E-02})$
TL-208	$2.31 \pm 1.17 \text{ E-02}$	$(1.21 \pm 0.80 \text{ E-02})$
PB-212	$6.60 \pm 1.64 \text{ E-02}$	(LESS THAN LLD)
RA-226	$3.21 \pm 1.74 \text{ E-01}$	$(5.30 \pm 1.53 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 173

AUGUST, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 08/09/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 463.6 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(3.30 $\pm$ 0.65 E-01)
K-40		(1.41 $\pm$ 0.16 E-02)
I-131		(< 1.81E-02)
CS-134		(< 1.82E-02)
CS-137		(2.13 $\pm$ 0.76 E-02)
TL-208		(1.21 $\pm$ 0.80 E-02)
RA-226		(5.30 $\pm$ 1.53 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 174

AUGUST, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 08/09/88)

PIN OAK

GAMMA SPECTROMETRY

MASS: 315.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.35 \pm 0.16 \text{ E}+00$	$(1.68 \pm 0.12 \text{ E}+00)$
K-40	$2.23 \pm 0.22 \text{ E}+00$	$(2.81 \pm 0.25 \text{ E}+00)$
I-131	$< 3.08\text{E}-02$	$(< 3.22\text{E}-02)$
CS-134	$< 2.62\text{E}-02$	$(< 2.82\text{E}-02)$
CS-137	$5.88 \pm 0.22 \text{ E}-01$	$(5.15 \pm 0.21 \text{ E}-01)$
PB-212	$9.28 \pm 3.00 \text{ E}-02$	$(2.29 \pm 1.40 \text{ E}-02)$



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 175

AUGUST, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 08/09/88)

PIN OAK

GAMMA SPECTROMETRY

MASS: 409.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(1.68 $\pm$ 0.12 E+00)
K-40		(2.81 $\pm$ 0.25 E+00)
I-131		(< 3.22E-02)
CS-134		(< 2.82E-02)
CS-137		(5.15 $\pm$ 0.21 E-01)
PB-212		(2.29 $\pm$ 1.40 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 176

AUGUST, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 08/09/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 508.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$5.04 \pm 0.75 \text{ E-01}$	$(6.96 \pm 0.81 \text{ E-01})$
K-40	$3.08 \pm 0.26 \text{ E+00}$	$(1.55 \pm 0.17 \text{ E+00})$
I-131	$< 1.60\text{E-02}$	$(< 2.30\text{E-02})$
CS-134	$< 1.94\text{E-02}$	$(< 2.32\text{E-02})$
CS-137	$2.23 \pm 0.17 \text{ E-01}$	$(1.79 \pm 0.11 \text{ E-01})$
PB-212	$4.41 \pm 1.55 \text{ E-02}$	$(3.09 \pm 1.39 \text{ E-02})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 177

AUGUST, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 08/09/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 528.9 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		$(6.96 \pm 0.81 \text{ E-01})$
K-40		$(1.55 \pm 0.17 \text{ E+00})$
I-131		$(< 2.30\text{E-02})$
CS-134		$(< 2.32\text{E-02})$
CS-137		$(1.79 \pm 0.11 \text{ E-01})$
PB-212		$(3.09 \pm 1.39 \text{ E-02})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 178

SEPTEMBER, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 09/06/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS:

529 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$9.73 \pm 0.87 \text{ E-01}$	$(8.21 \pm 0.71 \text{ E-01})$
K-40	$2.70 \pm 0.19 \text{ E+00}$	$(2.86 \pm 0.17 \text{ E+00})$
I-131	$< 1.80\text{E-02}$	$(< 1.61\text{E-02})$
CS-134	$< 1.66\text{E-02}$	$(< 1.70\text{E-02})$
CS-137	$4.64 \pm 0.80 \text{ E-02}$	$(5.52 \pm 0.90 \text{ E-02})$
PB-212	$3.01 \pm 1.12 \text{ E-02}$	$(2.85 \pm 1.08 \text{ E-02})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 179

SEPTEMBER, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 09/06/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 490.5 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$9.08 \pm 1.00 \text{ E-01}$	$(8.21 \pm 0.71 \text{ E-01})$
K-40	$2.35 \pm 0.15 \text{ E+00}$	$(2.86 \pm 0.17 \text{ E+00})$
I-131	$< 1.69\text{E-02}$	$(< 1.61\text{E-02})$
CS-134	$< 1.88\text{E-02}$	$(< 1.70\text{E-02})$
CS-137	$3.86 \pm 0.78 \text{ E-02}$	$(5.52 \pm 0.90 \text{ E-02})$
PB-212	LESS THAN LLD	$(2.85 \pm 1.08 \text{ E-02})$
AC-228	$4.69 \pm 3.65 \text{ E-02}$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 180

SEPTEMBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 09/06/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 504.5 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(8.21 $\pm$ 0.71 E-01)
K-40		(2.86 $\pm$ 0.17 E+00)
I-131		(< 1.61E-02)
CS-134		(< 1.70E-02)
CS-137		(5.52 $\pm$ 0.90 E-02)
PB-212		(2.85 $\pm$ 1.08 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 181

SEPTEMBER, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 09/06/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 413.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$5.58 \pm 0.87 \text{ E-01}$	$(1.39 \pm 0.11 \text{ E+00})$
K-40	$2.66 \pm 0.25 \text{ E+00}$	$(2.76 \pm 0.22 \text{ E+00})$
I-131	$< 1.69\text{E-02}$	$(< 2.04\text{E-02})$
CS-134	$< 2.34\text{E-02}$	$(< 1.94\text{E-02})$
CS-137	$< 2.06\text{E-02}$	$(< 2.04\text{E-02})$
PB-212	$3.35 \pm 1.34 \text{ E-02}$	$(6.14 \pm 2.10 \text{ E-02})$
BI-214	$3.60 \pm 1.72 \text{ E-02}$	(LESS THAN LLD)
RA-226	$2.38 \pm 1.96 \text{ E-01}$	$(2.14 \pm 1.97 \text{ E-01})$
AC-228	LESS THAN LLD	$(2.69 \pm 0.36 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 182

SEPTEMBER, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 09/06/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 446.1 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.57 \pm 1.01 \text{ E-01}$	$(1.39 \pm 0.11 \text{ E+00})$
K-40	$2.08 \pm 0.16 \text{ E+00}$	$(2.76 \pm 0.22 \text{ E+00})$
I-131	$< 1.95\text{E-02}$	$(< 2.04\text{E-02})$
CS-134	$< 2.08\text{E-02}$	$(< 1.94\text{E-02})$
CS-137	$< 2.04\text{E-02}$	$(< 2.04\text{E-02})$
TL-208	$1.31 \pm 1.02 \text{ E-02}$	(LESS THAN LLD)
PB-212	$5.12 \pm 1.99 \text{ E-02}$	$(6.14 \pm 2.10 \text{ E-02})$
RA-226	LESS THAN LLD	$(2.14 \pm 1.97 \text{ E-01})$
AC-228	$4.44 \pm 4.17 \text{ E-02}$	$(2.69 \pm 0.36 \text{ E-01})$



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 183

SEPTEMBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 09/06/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 469.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(1.39 $\pm$ 0.11 E+00)
K-40		(2.76 $\pm$ 0.22 E+00)
I-131		(< 2.04E-02)
CS-134		(< 1.94E-02)
CS-137		(< 2.04E-02)
PB-212		(6.14 $\pm$ 2.10 E-02)
RA-226		(2.14 $\pm$ 1.97 E-01)
AC-228		(2.69 $\pm$ 0.36 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 184

SEPTEMBER, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 09/06/88)

PIN OAK

GAMMA SPECTROMETRY

MASS: 383.2 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.66 \pm 0.12 \text{ E}+00$	$(1.76 \pm 0.13 \text{ E}+00)$
K-40	$1.17 \pm 0.23 \text{ E}+00$	$(1.92 \pm 0.21 \text{ E}+00)$
I-131	$< 2.51\text{E}-02$	$(< 2.50\text{E}-02)$
CS-134	$< 2.13\text{E}-02$	$(< 2.35\text{E}-02)$
CS-137	$3.13 \pm 0.17 \text{ E}-01$	$(1.37 \pm 0.15 \text{ E}-01)$
PB-212	$3.62 \pm 1.78 \text{ E}-02$	$(1.88 \pm 1.64 \text{ E}-02)$
AC-228	$1.45 \pm 0.40 \text{ E}-01$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 185

SEPTEMBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 09/06/88)

PIN OAK

GAMMA SPECTROMETRY      MASS:      356.1 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(1.76 $\pm$ 0.13 E+00)
K-40		(1.92 $\pm$ 0.21 E+00)
I-131		(< 2.50E-02)
CS-134		(< 2.35E-02)
CS-137		(1.37 $\pm$ 0.15 E-01)
PB-212		(1.88 $\pm$ 1.64 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 186

SEPTEMBER, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 09/06/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 426.2 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$6.05 \pm 0.85 \text{ E-01}$	$(1.05 \pm 0.11 \text{ E+00})$
K-40	$2.60 \pm 0.24 \text{ E+00}$	$(1.86 \pm 0.16 \text{ E+00})$
I-131	$< 1.99\text{E-02}$	$(< 2.26\text{E-02})$
CS-134	$< 2.47\text{E-02}$	$(< 1.91\text{E-02})$
CS-137	$1.57 \pm 1.53 \text{ E-01}$	$(1.99 \pm 0.12 \text{ E-01})$
TL-208	$1.10 \pm 0.70 \text{ E-02}$	$(2.49 \pm 1.13 \text{ E-02})$
PB-212	$2.10 \pm 1.30 \text{ E-02}$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 187

SEPTEMBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 09/06/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 429.6 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(1.05 $\pm$ 0.11 E+00)
K-40		(1.86 $\pm$ 0.16 E+00)
I-131		(< 2.26E-02)
CS-134		(< 1.91E-02)
CS-137		(1.99 $\pm$ 0.12 E-01)
TL-208		(2.49 $\pm$ 1.13 E-02)

FOOD CROP SAMPLES  
(PICOCURIES PER GRAM)

HBR - 188

ONE TIME PER GROWING SEASON, 1988

GREATER THAN 5 MI FROM SITE - CONTROL (FC-49)  
(DATE COLLECTED: 08/03/88)

CORN

GAMMA SPECTROMETRY

MASS:

534 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.74 ± 0.20 E+00)
I-131		(< 1.51E-02)
CS-134		(< 2.28E-02)
CS-137		(< 2.01E-02)

FOOD CROP SAMPLES  
(PICOCURIES PER GRAM)

HBR - 189

ONE TIME PER GROWING SEASON, 1988

10.1 MI E - AUBURNDALE PLANTATION (FC-54)  
(DATE COLLECTED: 08/03/88)

CORN

GAMMA SPECTROMETRY

MASS: 556.2 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$1.28 \pm 0.12 \text{ E}+00$	$(1.74 \pm 0.20 \text{ E}+00)$
I-131	$< 1.50\text{E}-02$	$(< 1.51\text{E}-02)$
CS-134	$< 1.42\text{E}-02$	$(< 2.28\text{E}-02)$
CS-137	$< 1.52\text{E}-02$	$(< 2.01\text{E}-02)$
TL-208	$1.06 \pm 0.79 \text{ E}-02$	(LESS THAN LLD)
PB-212	$1.92 \pm 1.37 \text{ E}-02$	(LESS THAN LLD)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 190

JULY, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (GW-40)  
(DATE COLLECTED: 07/11/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.17E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD



GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 191

JULY, 1988

UNIT 1 DEEP WELL NEAR SITE ENTRANCE (GW-42)  
(DATE COLLECTED: 07/11/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.17E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	5.15 $\pm$ 3.57 E+01	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 192

JULY, 1988

UNIT 2 DEEP WELL (GW-43)  
(DATE COLLECTED: 07/11/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.17E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 193

AUGUST, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (GW-40)  
(DATE COLLECTED: 08/08/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.12E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TL-208	2.44 ± 1.81 E+00	(NOT REQUIRED)
RA-226	4.16 ± 3.45 E+01	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 194

AUGUST, 1988

UNIT 1 DEEP WELL NEAR SITE ENTRANCE (GW-42)  
(DATE COLLECTED: 08/08/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.12E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 195

AUGUST, 1988

UNIT 2 DEEP WELL (GW-43)  
(DATE COLLECTED: 08/08/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.12E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 196

SEPTEMBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (GW-40)  
(DATE COLLECTED: 09/12/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.20E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BI-214	7.20 $\pm$ 4.14 E+00	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 197

SEPTEMBER, 1988

UNIT 1 DEEP WELL NEAR SITE ENTRANCE (GW-42)  
(DATE COLLECTED: 09/12/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.20E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 198

SEPTEMBER, 1988

UNIT 2 DEEP WELL (GW-43)  
(DATE COLLECTED: 09/12/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.20E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	7.72 $\pm$ 3.01 E+00	(NOT REQUIRED)



MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 199

JULY 4, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 07/04/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 4.38E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.06 ± 0.07 E+03)
PB-212		(6.17 ± 4.33 E+00)
RA-226		(6.08 ± 5.60 E+01)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 200

JULY 4, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 07/04/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 5.10E-01	(< 4.38E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.09 $\pm$ 0.07 E+03	(1.06 $\pm$ 0.07 E+03)
PB-212	LESS THAN LLD	(6.17 $\pm$ 4.33 E+00)
RA-226	LESS THAN LLD	(6.08 $\pm$ 5.60 E+01)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 201

JULY 18, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 07/18/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 4.51E-01)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(9.63 $\pm$ 0.69 E+02)
PB-212		(5.79 $\pm$ 4.17 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 202

JULY 18, 1988

10.1 MI E - AUBURNDAL PLANTATION (MK-54)  
(DATE COLLECTED: 07/18/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 3.81E-01	(< 4.51E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.28 ± 0.07 E+03	(9.63 ± 0.69 E+02)
PB-212	LESS THAN LLD	(5.79 ± 4.17 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 203

AUGUST 1, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 08/01/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 4.47E-01)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.01 $\pm$ 0.07 E+03)
TL-208		(3.79 $\pm$ 2.17 E+00)
PB-212		(5.75 $\pm$ 3.50 E+00)
RA-226		(6.27 $\pm$ 4.70 E+01)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 204

AUGUST 1, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 08/01/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 4.23E-01	(< 4.47E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$1.00 \pm 0.07 \text{ E}+03$	$(1.01 \pm 0.07 \text{ E}+03)$
TL-208	LESS THAN LLD	$(3.79 \pm 2.17 \text{ E}+00)$
PB-212	LESS THAN LLD	$(5.75 \pm 3.50 \text{ E}+00)$
BI-214	$1.23 \pm 0.46 \text{ E}+01$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(6.27 \pm 4.70 \text{ E}+01)$

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 205

AUGUST 15, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 08/15/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 2.84E-01)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.24 ± 0.07 E+03)
RA-226		(6.68 ± 5.42 E+01)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 206

AUGUST 15, 1988

10.1 MI E - AUBURNDAL PLANTATION (MK-54)  
(DATE COLLECTED: 08/15/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 3.09E-01	(< 2.84E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$1.19 \pm 0.05 \text{ E}+03$	$(1.24 \pm 0.07 \text{ E}+03)$
PB-212	$9.03 \pm 6.47 \text{ E}+00$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(6.68 \pm 5.42 \text{ E}+01)$



MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 207

AUGUST 29, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 08/29/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 4.63E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.20 $\pm$ 0.05 E+03)
PB-212		(8.69 $\pm$ 6.19 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 208

AUGUST 29, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 08/29/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 3.11E-01	(< 4.63E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.16 $\pm$ 0.07 E+03	(1.20 $\pm$ 0.05 E+03)
PB-212	LESS THAN LLD	(8.69 $\pm$ 6.19 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 209

SEPTEMBER 12, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 09/12/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 3.75E-01)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.11 $\pm$ 0.05 E+03)
TL-208		(4.40 $\pm$ 3.38 E+00)
BI-214		(8.57 $\pm$ 6.49 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 210

SEPTEMBER 12, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 09/12/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 3.64E-01	(< 3.75E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.16 $\pm$ 0.07 E+03	(1.11 $\pm$ 0.05 E+03)
TL-208	LESS THAN LLD	(4.40 $\pm$ 3.38 E+00)
BI-214	LESS THAN LLD	(8.57 $\pm$ 6.49 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 211

SEPTEMBER 26, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 09/26/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 4.19E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.22 $\pm$ 0.05 E+03)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 212

SEPTEMBER 26, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 09/26/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 4.30E-01	(< 4.19E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$1.22 \pm 0.06 \text{ E}+03$	$(1.22 \pm 0.05 \text{ E}+03)$

SHORELINE SEDIMENT SAMPLES  
(PICOCURIES PER GRAM)

HBR - 213

SECOND SEMI-ANNUAL, 1988

1.9 MI NNE - SHADY REST CLUB (SS-44)  
(DATE COLLECTED: 07/18/88)

GAMMA SPECTROMETRY

MASS: 1069.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TL-208	$5.24 \pm 0.76 \text{ E-02}$	(NOT REQUIRED)
PB-212	$1.95 \pm 0.19 \text{ E-01}$	(NOT REQUIRED)
PB-214	$1.99 \pm 0.19 \text{ E-01}$	(NOT REQUIRED)
BI-212	$1.63 \pm 0.46 \text{ E-01}$	(NOT REQUIRED)
BI-214	$1.67 \pm 0.17 \text{ E-01}$	(NOT REQUIRED)
AC-228	$1.37 \pm 0.24 \text{ E-01}$	(NOT REQUIRED)

SHORELINE SEDIMENT SAMPLES  
(PICOCURIES PER GRAM)

HBR - 214

SECOND SEMI-ANNUAL, 1988

0.9 MI NNW - ASH POND (SS-57)  
(DATE COLLECTED: 07/18/88)

GAMMA SPECTROMETRY

MASS: 743.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	3.51 $\pm$ 0.30 E+00	(NOT REQUIRED)
CS-137	1.01 $\pm$ 0.19 E-01	(NOT REQUIRED)
TL-208	4.38 $\pm$ 0.27 E-01	(NOT REQUIRED)
PB-212	1.30 $\pm$ 0.03 E+00	(NOT REQUIRED)
PB-214	1.35 $\pm$ 0.05 E+00	(NOT REQUIRED)
BI-212	8.46 $\pm$ 1.47 E-01	(NOT REQUIRED)
BI-214	1.17 $\pm$ 0.06 E+00	(NOT REQUIRED)
RA-226	2.75 $\pm$ 0.38 E+00	(NOT REQUIRED)
AC-228	1.45 $\pm$ 0.09 E+00	(NOT REQUIRED)



SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 215

JULY, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (SW-40)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$1.74 \pm 0.68 \text{ E}+03$	(< $1.04\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TL-208	$4.97 \pm 1.93 \text{ E}+00$	(LESS THAN LLD)
PB-212	$5.22 \pm 3.59 \text{ E}+00$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(7.99 \pm 4.52 \text{ E}+01)$

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 216

JULY, 1988

7.2 MI NNW - BLACK CREEK - CONTROL (SW-41)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005		(< 1.04E+03)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
RA-226		(7.99 $\pm$ 4.52 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 217

JULY, 1988

0.9 MI NNW - ASH POND (SW-57)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$1.74 \pm 0.68 \text{ E}+03$	(< $1.04\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$1.46 \pm 0.36 \text{ E}+02$	(LESS THAN LLD)
TL-208	$3.79 \pm 2.06 \text{ E}+00$	(LESS THAN LLD)
PB-212	$6.13 \pm 3.53 \text{ E}+00$	(LESS THAN LLD)
PB-214	$5.14 \pm 4.45 \text{ E}+00$	(LESS THAN LLD)
BI-214	$6.42 \pm 4.24 \text{ E}+00$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(7.99 \pm 4.52 \text{ E}+01)$

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 218

AUGUST, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (SW-40)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$2.35 \pm 0.76 \text{ E}+03$	(< $1.18\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	$2.94 \pm 2.47 \text{ E}+00$	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 219

AUGUST, 1988

7.2 MI NNW - BLACK CREEK - CONTROL (SW-41)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005		(< 1.18E+03)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 220

AUGUST, 1988

0.9 MI NNW - ASH POND (SW-57)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$1.91 \pm 0.76 \text{ E}+03$	(< $1.18\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	$2.02 \pm 1.44 \text{ E}+00$	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 221

SEPTEMBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (SW-40)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$1.65 \pm 0.78 \text{ E}+03$	(< $1.22\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	$9.02 \pm 2.70 \text{ E}+00$	$(4.43 \pm 3.21 \text{ E}+00)$
RA-226	$2.81 \pm 2.76 \text{ E}+01$	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 222

SEPTEMBER, 1988

7.2 MI NNW - BLACK CREEK - CONTROL (SW-41)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005		(< 1.22E+03)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212		(4.43 $\pm$ 3.21 E+00)



SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 223

SEPTEMBER, 1988

0.9 MI NNW - ASH POND (SW-57)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.22E+03	(< 1.22E+03)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$3.33 \pm 0.30 \text{ E}+02$	(LESS THAN LLD)
TL-208	$2.11 \pm 1.81 \text{ E}+00$	(LESS THAN LLD)
PB-212	$5.20 \pm 2.60 \text{ E}+00$	$(4.43 \pm 3.21 \text{ E}+00)$
RA-226	$1.64 \pm 0.35 \text{ E}+02$	(LESS THAN LLD)

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

HBR - 224

THIRD QUARTER, 1988

<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
CONTROL	(1.30 $\pm$ 0.20 E+00)
1 26 MI ESE - FLORENCE - CONTROL	1.30 $\pm$ 0.20 E+00
2 0.2 MI S - INFORMATION CENTER	1.00 $\pm$ 0.20 E+00
3 0.7 MI N - MICROWAVE TOWER	1.20 $\pm$ 0.20 E+00
4 0.4 MI ESE - SPILLWAY	9.00 $\pm$ 2.00 E-01
5 0.9 MI ENE - JOHNSON'S LANDING	1.20 $\pm$ 0.20 E+00
6 0.3 MI SW - INFORMATION CENTER	1.10 $\pm$ 0.30 E+00
7 6.3 MI ESE - HARTSVILLE CP&L SUBSTATION	1.20 $\pm$ 0.20 E+00
8 0.8 MI SSE - POWER POLES FROM HBR	1.00 $\pm$ 0.20 E+00
9 1.0 MI S - POWER POLE NEAR HWY 151	1.60 $\pm$ 0.20 E+00
10 1.0 MI WSW - CHURCH OF GOD CEMETERY	1.30 $\pm$ 0.20 E+00
11 1.0 MI SW - POWER POLE AT OLD CAMDEN RD	9.00 $\pm$ 2.00 E-01
12 1.2 MI SSW-PINE TREE AT 2ND INT DIRT RD	9.00 $\pm$ 2.00 E-01
13 1.0 MI W-PINE TREE WHERE DIRT RD SPLITS	8.00 $\pm$ 2.00 E-01
14 0.9 MI WNW - HWY 151 AT PINE RIDGE CH	9.00 $\pm$ 2.00 E-01
15 1.0 MI NW -DIRT RD NEAR ASH POND	9.00 $\pm$ 2.00 E-01
16 1.0 MI NNW - DARLINGTON IC TURBINE PLANT	1.20 $\pm$ 0.20 E+00
17 1.1 MI N - DIS CANAL RD AT UNIT 1 WEIR	1.40 $\pm$ 0.20 E+00
18 0.7 MI SE - TRAIN TRESTLE OVER BLACK CR	9.00 $\pm$ 2.00 E-01
19 1.0 MI E - RD S-16-23	1.00 $\pm$ 0.20 E+00
20 1.3 MI ENE - RD S-16-39 NORTH	1.00 $\pm$ 0.20 E+00
21 ATKINSON'S BOAT LANDING	1.10 $\pm$ 0.20 E+00

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

HBR - 225

THIRD QUARTER, 1988

<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
CONTROL	(1.30 $\pm$ 0.20 E+00)
22 1.9 MI NNE - SHADY REST NEAR DOCK	9.00 $\pm$ 2.00 E-01
23 1.2 MI ESE - INT RD 41E-5 AND S-16-39	1.00 $\pm$ 0.20 E+00
24 5.0 MI NW - S-13-711 PAST PEACH FARM	1.20 $\pm$ 0.20 E+00
25 4.6 MI NNW - RD S-13-346 OFF 151 NORTH	1.00 $\pm$ 0.20 E+00
26 5.0 MI N - RD S-13-346	1.30 $\pm$ 0.20 E+00
27 5.0 MI NNE - RD S-13-763 NEAR INTER	1.00 $\pm$ 0.20 E+00
28 4.8 MI NE - NEAR DUMPSTER RD S-13-39	1.30 $\pm$ 0.20 E+00
29 RD S-16-20 SOUTH OF LOOKOUT TOWER	1.30 $\pm$ 0.20 E+00
30 4.6 MI E - RD S-16-20 JOHNSON FENCE CO	1.00 $\pm$ 0.20 E+00
31 4.6 MI ESE - LAKESHORE DRIVE	1.30 $\pm$ 0.20 E+00
32 4.5 MI SE - END OF KALBER DRIVE	1.00 $\pm$ 0.20 E+00
33 4.6 MI SSE-RD S16-493 NEAR SEGAR'S ENTR	1.10 $\pm$ 0.20 E+00
34 4.6 MI S - RD S-16-772	8.00 $\pm$ 2.00 E-01
35 4.4 MI SSW - INT RD S-31-51 & S-16-12	1.70 $\pm$ 0.20 E+00
36 4.7 MI SW - PAVED RD OFF RD S-16-85	1.40 $\pm$ 0.20 E+00
37 5.0 MI WSW - TRANS TOWER NEAR CLAY RD	1.30 $\pm$ 0.20 E+00
38 4.9 MI W - RD S-16-231 AT UNION CHURCH	1.10 $\pm$ 0.20 E+00
39 5.0 MI WNW - POWER POLE IN FIELD	1.00 $\pm$ 0.20 E+00

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 226

FOURTH QUARTER, 1988

26 MI ESE - FLORENCE - CONTROL (AC-1)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	855.2		(< 1.15E-02)
10/10/88	887.6		(< 1.21E-02)
10/17/88	819.2		(< 1.25E-02)
10/24/88	724.3		(< 1.29E-02)
10/31/88	689.5		(< 1.68E-02)
11/06/88	747.5		(< 1.20E-02)
11/14/88	848.2		(< 1.43E-02)
11/21/88	703.8		(< 6.13E-03)
11/28/88	739.7		(< 1.37E-02)
12/05/88	749.5		(< 1.25E-02)
12/11/88	567.1		(< 1.97E-02)
12/19/88	747.9		(< 1.72E-02)
12/27/88	829.6		(< 9.84E-03)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 227

FOURTH QUARTER, 1988

0.2 MI S - INFORMATION CENTER (AC-2)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	864.8	< 6.77E-03	(< 1.15E-02)
10/10/88	876.8	< 1.03E-02	(< 1.21E-02)
10/17/88	814.2	< 1.00E-02	(< 1.25E-02)
10/24/88	848.5	< 7.97E-03	(< 1.29E-02)
10/31/88	793.2	< 1.12E-02	(< 1.68E-02)
11/06/88	785.0	< 1.24E-02	(< 1.20E-02)
11/14/88	958.2	< 1.01E-02	(< 1.43E-02)
11/21/88	774.6	< 4.97E-03	(< 6.13E-03)
11/28/88	810.1	< 1.27E-02	(< 1.37E-02)
12/05/88	824.0	< 1.48E-02	(< 1.25E-02)
12/11/88	635.1	< 1.52E-02	(< 1.97E-02)
12/19/88	851.9	< 1.12E-02	(< 1.72E-02)
12/27/88	861.1	< 9.51E-03	(< 9.84E-03)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 228

FOURTH QUARTER, 1988

0.7 MI N - MICROWAVE TOWER (AC-3)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	915.8	< 1.70E-02	(< 1.15E-02)
10/10/88	876.6	< 1.67E-02	(< 1.21E-02)
10/17/88	885.6	< 1.12E-02	(< 1.25E-02)
10/24/88	857.5	< 1.48E-02	(< 1.29E-02)
10/31/88	890.9	< 1.32E-02	(< 1.68E-02)
11/06/88	771.4	< 1.68E-02	(< 1.20E-02)
11/14/88	1020.9	< 9.49E-03	(< 1.43E-02)
11/21/88	873.2	< 4.95E-03	(< 6.13E-03)
11/28/88	897.4	< 1.53E-02	(< 1.37E-02)
12/05/88	918.6	< 1.10E-02	(< 1.25E-02)
12/11/88	723.3	< 2.12E-02	(< 1.97E-02)
12/19/88	1007.0	< 1.26E-02	(< 1.72E-02)
12/27/88	982.8	< 9.04E-03	(< 9.84E-03)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 229

FOURTH QUARTER, 1988

0.4 MI ESE - SPILLWAY (AC-4)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	901.1	< 1.20E-02	(< 1.15E-02)
10/10/88	914.6	< 8.31E-03	(< 1.21E-02)
10/17/88	768.6	< 1.14E-02	(< 1.25E-02)
10/24/88	780.6	< 1.20E-02	(< 1.29E-02)
10/31/88	864.0	< 1.39E-02	(< 1.68E-02)
11/06/88	713.7	< 2.66E-02	(< 1.20E-02)
11/14/88	980.5	< 1.24E-02	(< 1.43E-02)
11/21/88	889.4	< 6.13E-03	(< 6.13E-03)
11/28/88	877.0	< 1.44E-02	(< 1.37E-02)
12/05/88	925.2	< 1.29E-02	(< 1.25E-02)
12/11/88	760.0	< 1.09E-02	(< 1.97E-02)
12/19/88	1014.4	< 1.19E-02	(< 1.72E-02)
12/27/88	953.4	< 7.26E-03	(< 9.84E-03)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 230

FOURTH QUARTER, 1988

0.9 MI ENE - JOHNSON'S LANDING (AC-5)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	882.3	< 1.01E-02	(< 1.15E-02)
10/10/88	935.5	< 1.11E-02	(< 1.21E-02)
10/17/88	784.7	< 1.21E-02	(< 1.25E-02)
10/24/88	815.5	< 1.10E-02	(< 1.29E-02)
10/31/88	842.4	< 8.93E-03	(< 1.68E-02)
11/06/88	783.1	< 1.30E-02	(< 1.20E-02)
11/14/88	926.8	< 1.25E-02	(< 1.43E-02)
11/21/88	846.7	< 1.14E-02	(< 6.13E-03)
11/28/88	854.6	< 1.21E-02	(< 1.37E-02)
12/05/88	880.4	< 7.62E-03	(< 1.25E-02)
12/11/88	703.5	< 1.37E-02	(< 1.97E-02)
12/19/88	977.1	< 7.75E-03	(< 1.72E-02)
12/27/88	1002.0	< 7.48E-03	(< 9.84E-03)



AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 231

FOURTH QUARTER, 1988

0.3 MI SW - INFORMATION CENTER (AC-6)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	896.9	< 1.81E-02	(< 1.15E-02)
10/10/88	905.6	< 1.32E-02	(< 1.21E-02)
10/17/88	946.4	< 1.41E-02	(< 1.25E-02)
10/24/88	920.2	< 1.62E-02	(< 1.29E-02)
10/31/88	838.4	< 1.07E-02	(< 1.68E-02)
11/06/88	857.5	< 1.43E-02	(< 1.20E-02)
11/14/88	1030.1	< 1.15E-02	(< 1.43E-02)
11/21/88	875.6	< 4.41E-03	(< 6.13E-03)
11/28/88	907.1	< 1.62E-02	(< 1.37E-02)
12/05/88	894.4	< 1.07E-02	(< 1.25E-02)
12/11/88	694.8	< 2.10E-02	(< 1.97E-02)
12/19/88	991.9	< 1.36E-02	(< 1.72E-02)
12/27/88	993.7	< 1.10E-02	(< 9.84E-03)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 232

FOURTH QUARTER, 1988

6.3 MI ESE - HARTSVILLE CP&L SUBSTATION (AC-7)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	948.1	< 1.04E-02	(< 1.15E-02)
10/10/88	993.5	< 1.03E-02	(< 1.21E-02)
10/17/88	880.9	< 7.85E-03	(< 1.25E-02)
10/24/88	911.0	< 8.61E-03	(< 1.29E-02)
10/31/88	992.6	< 1.17E-02	(< 1.68E-02)
11/06/88	790.0	< 1.52E-02	(< 1.20E-02)
11/14/88	1147.9	< 8.82E-03	(< 1.43E-02)
11/21/88	895.7	< 1.28E-02	(< 6.13E-03)
11/28/88	980.7	< 9.82E-03	(< 1.37E-02)
12/05/88	994.9	< 1.19E-02	(< 1.25E-02)
12/11/88	829.0	< 1.08E-02	(< 1.97E-02)
12/19/88	1082.3	< 9.60E-03	(< 1.72E-02)
12/27/88	969.7	< 1.06E-02	(< 9.84E-03)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

HBR - 233

FOURTH QUARTER, 1988

0.3 MI SSE - SITE BOUNDARY (AC-55)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
12/05/88	695.3	< 1.93E-02	(< 1.25E-02)
12/11/88	432.0	< 1.69E-02	(< 1.97E-02)
12/19/88	683.3	< 1.22E-02	(< 1.72E-02)
12/27/88	667.1	< 1.12E-02	(< 9.84E-03)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 234

FOURTH QUARTER, 1988

26 MI ESE - FLORENCE - CONTROL (AP-1)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	855.2		(2.17 $\pm$ 0.16 E-02)
10/10/88	887.6		(1.68 $\pm$ 0.14 E-02)
10/17/88	819.2		(1.88 $\pm$ 0.16 E-02)
10/24/88	724.3		(2.05 $\pm$ 0.18 E-02)
10/31/88	689.5		(2.01 $\pm$ 0.18 E-02)
11/06/88	747.5		(1.82 $\pm$ 0.17 E-02)
11/14/88	848.2		(2.21 $\pm$ 0.17 E-02)
11/21/88	703.8		(1.91 $\pm$ 0.18 E-02)
11/28/88	739.7		(2.15 $\pm$ 0.18 E-02)
12/05/88	749.5		(1.91 $\pm$ 0.17 E-02)
12/11/88	567.1		(2.27 $\pm$ 0.21 E-02)
12/19/88	747.9		(2.05 $\pm$ 0.17 E-02)
12/27/88	829.6		(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 235

FOURTH QUARTER, 1988

0.2 MI S - INFORMATION CENTER (AP-2)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	864.8	2.10 $\pm$ 0.16 E-02	(2.17 $\pm$ 0.16 E-02)
10/10/88	876.8	1.85 $\pm$ 0.15 E-02	(1.68 $\pm$ 0.14 E-02)
10/17/88	814.2	1.94 $\pm$ 0.16 E-02	(1.88 $\pm$ 0.16 E-02)
10/24/88	848.5	2.00 $\pm$ 0.16 E-02	(2.05 $\pm$ 0.18 E-02)
10/31/88	793.2	2.00 $\pm$ 0.17 E-02	(2.01 $\pm$ 0.18 E-02)
11/06/88	785.0	2.14 $\pm$ 0.17 E-02	(1.82 $\pm$ 0.17 E-02)
11/14/88	958.2	1.88 $\pm$ 0.15 E-02	(2.21 $\pm$ 0.17 E-02)
11/21/88	774.6	1.62 $\pm$ 0.16 E-02	(1.91 $\pm$ 0.18 E-02)
11/28/88	810.1	2.03 $\pm$ 0.16 E-02	(2.15 $\pm$ 0.18 E-02)
12/05/88	824.0	1.57 $\pm$ 0.15 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	635.1	1.56 $\pm$ 0.17 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	851.9	2.24 $\pm$ 0.17 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	861.1	1.46 $\pm$ 0.14 E-02	(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 236

FOURTH QUARTER, 1988

0.7 MI N - MICROWAVE TOWER (AP-3)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	915.8	1.93 $\pm$ 0.15 E-02	(2.17 $\pm$ 0.16 E-02)
10/10/88	876.6	1.78 $\pm$ 0.15 E-02	(1.68 $\pm$ 0.14 E-02)
10/17/88	885.6	1.61 $\pm$ 0.14 E-02	(1.88 $\pm$ 0.16 E-02)
10/24/88	857.5	1.72 $\pm$ 0.15 E-02	(2.05 $\pm$ 0.18 E-02)
10/31/88	890.9	1.86 $\pm$ 0.15 E-02	(2.01 $\pm$ 0.18 E-02)
11/06/88	771.4	2.31 $\pm$ 0.18 E-02	(1.82 $\pm$ 0.17 E-02)
11/14/88	1020.9	1.79 $\pm$ 0.14 E-02	(2.21 $\pm$ 0.17 E-02)
11/21/88	873.2	1.45 $\pm$ 0.14 E-02	(1.91 $\pm$ 0.18 E-02)
11/28/88	897.4	1.69 $\pm$ 0.14 E-02	(2.15 $\pm$ 0.18 E-02)
12/05/88	918.6	1.44 $\pm$ 0.13 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	723.3	1.91 $\pm$ 0.17 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	1007.0	1.77 $\pm$ 0.14 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	982.8	1.37 $\pm$ 0.13 E-02	(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 237

FOURTH QUARTER, 1988

0.4 MI ESE - SPILLWAY (AP-4)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	901.1	2.10 $\pm$ 0.16 E-02	(2.17 $\pm$ 0.16 E-02)
10/10/88	914.6	1.57 $\pm$ 0.14 E-02	(1.68 $\pm$ 0.14 E-02)
10/17/88	768.6	2.06 $\pm$ 0.17 E-02	(1.88 $\pm$ 0.16 E-02)
10/24/88	780.6	2.13 $\pm$ 0.17 E-02	(2.05 $\pm$ 0.18 E-02)
10/31/88	864.0	1.94 $\pm$ 0.16 E-02	(2.01 $\pm$ 0.18 E-02)
11/06/88	713.7	1.98 $\pm$ 0.18 E-02	(1.82 $\pm$ 0.17 E-02)
11/14/88	980.5	1.93 $\pm$ 0.15 E-02	(2.21 $\pm$ 0.17 E-02)
11/21/88	889.4	1.77 $\pm$ 0.15 E-02	(1.91 $\pm$ 0.18 E-02)
11/28/88	877.0	1.86 $\pm$ 0.15 E-02	(2.15 $\pm$ 0.18 E-02)
12/05/88	925.2	1.47 $\pm$ 0.13 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	760.0	2.44 $\pm$ 0.18 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	1014.4	1.94 $\pm$ 0.14 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	953.4	2.26 $\pm$ 0.16 E-02	(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 238

FOURTH QUARTER, 1988

0.9 MI ENE - JOHNSON'S LANDING (AP-5)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	882.3	2.22 $\pm$ 0.16 E-02	(2.17 $\pm$ 0.16 E-02)
10/10/88	935.5	1.66 $\pm$ 0.14 E-02	(1.68 $\pm$ 0.14 E-02)
10/17/88	784.7	2.15 $\pm$ 0.17 E-02	(1.88 $\pm$ 0.16 E-02)
10/24/88	815.5	1.73 $\pm$ 0.16 E-02	(2.05 $\pm$ 0.18 E-02)
10/31/88	842.4	2.21 $\pm$ 0.17 E-02	(2.01 $\pm$ 0.18 E-02)
11/06/88	783.1	2.15 $\pm$ 0.17 E-02	(1.82 $\pm$ 0.17 E-02)
11/14/88	962.8	1.85 $\pm$ 0.15 E-02	(2.21 $\pm$ 0.17 E-02)
11/21/88	846.7	1.65 $\pm$ 0.15 E-02	(1.91 $\pm$ 0.18 E-02)
11/28/88	854.6	1.65 $\pm$ 0.15 E-02	(2.15 $\pm$ 0.18 E-02)
12/05/88	880.4	1.59 $\pm$ 0.14 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	703.5	2.77 $\pm$ 0.20 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	977.1	2.25 $\pm$ 0.15 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	1002.0	1.94 $\pm$ 0.14 E-02	(1.54 $\pm$ 0.15 E-02)



AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 239

FOURTH QUARTER, 1988

0.3 MI SW - INFORMATION CENTER (AP-6)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	896.9	2.19 $\pm$ 0.16 E-02	(2.17 $\pm$ 0.16 E-02)
10/10/88	905.6	1.95 $\pm$ 0.15 E-02	(1.68 $\pm$ 0.14 E-02)
10/17/88	946.4	1.86 $\pm$ 0.15 E-02	(1.88 $\pm$ 0.16 E-02)
10/24/88	920.2	1.60 $\pm$ 0.14 E-02	(2.05 $\pm$ 0.18 E-02)
10/31/88	838.4	2.05 $\pm$ 0.16 E-02	(2.01 $\pm$ 0.18 E-02)
11/06/88	857.5	2.17 $\pm$ 0.17 E-02	(1.82 $\pm$ 0.17 E-02)
11/14/88	1030.1	1.90 $\pm$ 0.14 E-02	(2.21 $\pm$ 0.17 E-02)
11/21/88	875.6	1.81 $\pm$ 0.15 E-02	(1.91 $\pm$ 0.18 E-02)
11/28/88	907.1	1.97 $\pm$ 0.15 E-02	(2.15 $\pm$ 0.18 E-02)
12/05/88	894.4	1.54 $\pm$ 0.14 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	694.8	2.26 $\pm$ 0.19 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	991.9	1.94 $\pm$ 0.14 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	993.7	1.69 $\pm$ 0.14 E-02	(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 240

FOURTH QUARTER, 1988

6.3 MI ESE - HARTSVILLE CP&L SUBSTATION (AP-7)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/03/88	948.1	1.97 $\pm$ 0.15 E-02	(2.17 $\pm$ 0.16 E-02)
10/10/88	993.5	1.57 $\pm$ 0.13 E-02	(1.68 $\pm$ 0.14 E-02)
10/17/88	880.9	1.69 $\pm$ 0.15 E-02	(1.88 $\pm$ 0.16 E-02)
10/24/88	911.0	1.82 $\pm$ 0.15 E-02	(2.05 $\pm$ 0.18 E-02)
10/31/88	992.6	1.69 $\pm$ 0.14 E-02	(2.01 $\pm$ 0.18 E-02)
11/06/88	790.0	2.07 $\pm$ 0.17 E-02	(1.82 $\pm$ 0.17 E-02)
11/14/88	1147.9	1.64 $\pm$ 0.13 E-02	(2.21 $\pm$ 0.17 E-02)
11/21/88	895.7	1.51 $\pm$ 0.14 E-02	(1.91 $\pm$ 0.18 E-02)
11/28/88	980.7	1.52 $\pm$ 0.13 E-02	(2.15 $\pm$ 0.18 E-02)
12/05/88	994.9	1.42 $\pm$ 0.13 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	829.0	1.33 $\pm$ 0.14 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	1082.3	1.46 $\pm$ 0.12 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	969.7	1.74 $\pm$ 0.14 E-02	(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

HBR - 241

FOURTH QUARTER, 1988

0.3 MI SSE - SITE BOUNDARY (AP-55)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
12/05/88	695.3	1.88 $\pm$ 0.18 E-02	(1.91 $\pm$ 0.17 E-02)
12/11/88	432.0	3.11 $\pm$ 0.28 E-02	(2.27 $\pm$ 0.21 E-02)
12/19/88	683.3	2.78 $\pm$ 0.21 E-02	(2.05 $\pm$ 0.17 E-02)
12/27/88	667.1	2.47 $\pm$ 0.20 E-02	(1.54 $\pm$ 0.15 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 242

FOURTH QUARTER, 1988

26 MI ESE - FLORENCE - CONTROL (AP-1)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 9909.1 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(8.28 $\pm$ 0.99 E-02)
BI-214		(1.42 $\pm$ 0.60 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 243

FOURTH QUARTER, 1988

0.2 MI S - INFORMATION CENTER (AP-2)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 10697.5 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.89 \pm 0.72 \text{ E-02}$	$(8.28 \pm 0.99 \text{ E-02})$
PB-212	$6.13 \pm 3.29 \text{ E-04}$	(LESS THAN LLD)
BI-214	LESS THAN LLD	$(1.42 \pm 0.60 \text{ E-03})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 244

FOURTH QUARTER, 1988

0.7 MI N - MICROWAVE TOWER (AP-3)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11621 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.66 \pm 0.68 \text{ E-02}$	$(8.28 \pm 0.99 \text{ E-02})$
BI-214	$6.73 \pm 3.81 \text{ E-04}$	$(1.42 \pm 0.60 \text{ E-03})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 245

FOURTH QUARTER, 1988

0.4 MI ESE - SPILLWAY (AP-4)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11342.5 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.87 \pm 0.64 \text{ E-02}$	$(8.28 \pm 0.99 \text{ E-02})$
PB-212	$4.35 \pm 3.88 \text{ E-04}$	(LESS THAN LLD)
BI-214	LESS THAN LLD	$(1.42 \pm 0.60 \text{ E-03})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 246

FOURTH QUARTER, 1988

0.9 MI ENE - JOHNSON'S LANDING (AP-5)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11270.6 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.03 \pm 0.09 \text{ E-01}$	$(8.28 \pm 0.99 \text{ E-02})$
BI-214	LESS THAN LLD	$(1.42 \pm 0.60 \text{ E-03})$



AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 247

FOURTH QUARTER, 1988

0.3 MI SW - INFORMATION CENTER (AP-6)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 11752.6 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$9.58 \pm 0.88 \text{ E-02}$	$(8.28 \pm 0.99 \text{ E-02})$
BI-214	LESS THAN LLD	$(1.42 \pm 0.60 \text{ E-03})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 248

FOURTH QUARTER, 1988

6.3 MI ESE - HARTSVILLE CP&L SUBSTATION (AP-7)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 12416.3 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$7.86 \pm 0.61 \text{ E-02}$	$(8.28 \pm 0.99 \text{ E-02})$
PB-212	$5.30 \pm 3.92 \text{ E-04}$	(LESS THAN LLD)
BI-214	$8.69 \pm 3.73 \text{ E-04}$	$(1.42 \pm 0.60 \text{ E-03})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

HBR - 249

FOURTH QUARTER, 1988

0.3 MI SSE - SITE BOUNDARY (AP-55)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 2477.7 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$2.22 \pm 0.32 \text{ E-01}$	$(8.28 \pm 0.99 \text{ E-02})$
BI-214	LESS THAN LLD	$(1.42 \pm 0.60 \text{ E-03})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 250

OCTOBER, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 10/06/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 447.9 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$2.06 \pm 0.10 \text{ E}+00$	$(1.00 \pm 0.10 \text{ E}+00)$
K-40	$2.98 \pm 0.22 \text{ E}+00$	$(2.16 \pm 0.18 \text{ E}+00)$
I-131	$< 1.65\text{E}-02$	$(< 1.99\text{E}-02)$
CS-134	$< 2.20\text{E}-02$	$(< 1.80\text{E}-02)$
CS-137	$6.67 \pm 0.92 \text{ E}-02$	$(4.56 \pm 0.81 \text{ E}-02)$
TL-208	$1.67 \pm 1.06 \text{ E}-02$	(LESS THAN LLD)
PB-212	$6.22 \pm 1.47 \text{ E}-02$	$(2.10 \pm 1.15 \text{ E}-02)$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 251

OCTOBER, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 10/06/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 529.5 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.10 \pm 0.09 \text{ E}+00$	$(1.00 \pm 0.10 \text{ E}+00)$
K-40	$2.43 \pm 0.19 \text{ E}+00$	$(2.16 \pm 0.18 \text{ E}+00)$
I-131	$< 2.02\text{E}-02$	$(< 1.99\text{E}-02)$
CS-134	$< 1.89\text{E}-02$	$(< 1.80\text{E}-02)$
CS-137	$< 1.89\text{E}-02$	$(4.56 \pm 0.81 \text{ E}-02)$
PB-212	$2.83 \pm 1.26 \text{ E}-02$	$(2.10 \pm 1.15 \text{ E}-02)$
RA-226	$3.45 \pm 1.93 \text{ E}-01$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 252

OCTOBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 10/06/88)

PERSIMMONS

GAMMA SPECTROMETRY

MASS: 512.8 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(1.00 $\pm$ 0.10 E+00)
K-40		(2.16 $\pm$ 0.18 E+00)
I-131		(< 1.99E-02)
CS-134		(< 1.80E-02)
CS-137		(4.56 $\pm$ 0.81 E-02)
PB-212		(2.10 $\pm$ 1.15 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 253

OCTOBER, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 10/06/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 450.6 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$6.39 \pm 0.82 \text{ E-01}$	$(6.42 \pm 1.16 \text{ E-01})$
K-40	$2.59 \pm 0.22 \text{ E+00}$	$(2.16 \pm 0.23 \text{ E+00})$
I-131	$< 1.75\text{E-02}$	$(< 2.55\text{E-02})$
CS-134	$< 2.17\text{E-02}$	$(< 2.06\text{E-02})$
CS-137	$< 2.05\text{E-02}$	$(< 2.17\text{E-02})$
TL-208	$2.12 \pm 1.03 \text{ E-02}$	(LESS THAN LLD)
PB-212	$5.65 \pm 1.62 \text{ E-02}$	$(4.07 \pm 1.58 \text{ E-02})$
RA-226	$3.16 \pm 1.93 \text{ E-01}$	$(2.71 \pm 2.27 \text{ E-01})$
AC-228	$2.81 \pm 0.41 \text{ E-01}$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 254

OCTOBER, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 10/06/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 387.7 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.42 \pm 1.00 \text{ E-01}$	$(6.42 \pm 1.16 \text{ E-01})$
K-40	$2.47 \pm 0.22 \text{ E+00}$	$(2.16 \pm 0.23 \text{ E+00})$
I-131	$< 2.70\text{E-02}$	$(< 2.55\text{E-02})$
CS-134	$< 2.41\text{E-02}$	$(< 2.06\text{E-02})$
CS-137	$< 2.21\text{E-02}$	$(< 2.17\text{E-02})$
TL-208	$3.71 \pm 1.26 \text{ E-02}$	(LESS THAN LLD)
PB-212	$5.36 \pm 1.70 \text{ E-02}$	$(4.07 \pm 1.58 \text{ E-02})$
RA-226	$3.53 \pm 2.01 \text{ E-01}$	$(2.71 \pm 2.27 \text{ E-01})$
AC-228	$2.73 \pm 0.33 \text{ E-01}$	(LESS THAN LLD)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 255

OCTOBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 10/06/88)

CHERRY

GAMMA SPECTROMETRY

MASS: 428.1 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(6.42 $\pm$ 1.16 E-01)
K-40		(2.16 $\pm$ 0.23 E+00)
I-131		(< 2.55E-02)
CS-134		(< 2.06E-02)
CS-137		(< 2.17E-02)
PB-212		(4.07 $\pm$ 1.58 E-02)
RA-226		(2.71 $\pm$ 2.27 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 256

OCTOBER, 1988

0.25 MI SSE - CP&L PROPERTY (BL-50)  
(DATE COLLECTED: 10/06/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 349.2 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$9.84 \pm 1.14 \text{ E-01}$	$(1.23 \pm 0.11 \text{ E+00})$
K-40	$2.22 \pm 0.19 \text{ E+00}$	$(7.30 \pm 1.18 \text{ E-01})$
I-131	$< 2.54\text{E-02}$	$(< 2.33\text{E-02})$
CS-134	$< 2.27\text{E-02}$	$(< 1.73\text{E-02})$
CS-137	$3.30 \pm 0.18 \text{ E-01}$	$(1.78 \pm 0.12 \text{ E-01})$
TL-208	$2.59 \pm 1.31 \text{ E-02}$	$(1.91 \pm 0.90 \text{ E-02})$
PB-212	$6.84 \pm 2.34 \text{ E-02}$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 257

OCTOBER, 1988

0.25 MI NNE - CP&L PROPERTY (BL-51)  
(DATE COLLECTED: 10/06/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 414.6 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.32 \pm 0.10 \text{ E}+00$	$(1.23 \pm 0.11 \text{ E}+00)$
K-40	$1.87 \pm 0.21 \text{ E}+00$	$(7.30 \pm 1.18 \text{ E}-01)$
I-131	$< 2.45\text{E}-02$	$(< 2.33\text{E}-02)$
CS-134	$< 2.32\text{E}-02$	$(< 1.73\text{E}-02)$
CS-137	$6.39 \pm 1.21 \text{ E}-02$	$(1.78 \pm 0.12 \text{ E}-01)$
TL-208	$1.79 \pm 1.05 \text{ E}-02$	$(1.91 \pm 0.90 \text{ E}-02)$
PB-212	$3.66 \pm 1.85 \text{ E}-02$	(LESS THAN LLD)
AC-228	$3.10 \pm 0.40 \text{ E}-01$	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

HBR - 258

OCTOBER, 1988

10 MI W - BETHUNE - CONTROL (BL-52)  
(DATE COLLECTED: 10/06/88)

SASSAFRAS

GAMMA SPECTROMETRY

MASS: 490.5 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7		(1.23 $\pm$ 0.11 E+00)
K-40		(7.30 $\pm$ 1.18 E-01)
I-131		(< 2.33E-02)
CS-134		(< 1.73E-02)
CS-137		(1.78 $\pm$ 0.12 E-01)
TL-208		(1.91 $\pm$ 0.90 E-02)

BOTTOM FEEDER SAMPLES  
(PICOCURIES PER GRAM)

HBR - 259

SECOND SEMI-ANNUAL, 1988

SITE VARIES WITHIN LAKE ROBINSON (F1-45)  
(DATE COLLECTED: 11/10/88)

BOTTOM FEEDERS

GAMMA SPECTROMETRY

MASS: 944.4 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$2.97 \pm 0.25 \text{ E}+00$	$(2.47 \pm 0.26 \text{ E}+00)$
CS-134	$1.61 \pm 0.66 \text{ E}-02$	(LESS THAN LLD)
CS-137	$1.21 \pm 0.14 \text{ E}-01$	$(1.03 \pm 0.15 \text{ E}-01)$
PB-212	$2.33 \pm 1.21 \text{ E}-02$	$(7.73 \pm 1.83 \text{ E}-02)$
PB-214	LESS THAN LLD	$(2.73 \pm 0.34 \text{ E}-01)$
BI-214	$3.06 \pm 1.73 \text{ E}-02$	$(2.34 \pm 0.27 \text{ E}-01)$
RA-226	LESS THAN LLD	$(3.01 \pm 1.62 \text{ E}-01)$

BOTTOM FEEDER SAMPLES  
(PICOCURIES PER GRAM)

HBR - 260

SECOND SEMI-ANNUAL, 1988

4.9 MI ESE - PRESTWOOD LAKE (F1-46)  
(DATE COLLECTED: 11/10/88)

BOTTOM FEEDERS

GAMMA SPECTROMETRY

MASS: 996.1 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$2.68 \pm 0.24 \text{ E}+00$	$(2.47 \pm 0.26 \text{ E}+00)$
CS-137	$1.06 \pm 0.12 \text{ E}-01$	$(1.03 \pm 0.15 \text{ E}-01)$
PB-212	LESS THAN LLD	$(7.73 \pm 1.83 \text{ E}-02)$
PB-214	LESS THAN LLD	$(2.73 \pm 0.34 \text{ E}-01)$
BI-214	LESS THAN LLD	$(2.34 \pm 0.27 \text{ E}-01)$
RA-226	LESS THAN LLD	$(3.01 \pm 1.62 \text{ E}-01)$

BOTTOM FEEDER SAMPLES  
(PICOCURIES PER GRAM)

HBR - 261

SECOND SEMI-ANNUAL, 1988

13 MI NNW - LAKE BEE - CONTROL (F1-47)  
(DATE COLLECTED: 11/10/88)

BOTTOM FEEDERS

GAMMA SPECTROMETRY

MASS: 575.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(2.47 $\pm$ 0.26 E+00)
CS-137		(1.03 $\pm$ 0.15 E-01)
PB-212		(7.73 $\pm$ 1.83 E-02)
PB-214		(2.73 $\pm$ 0.34 E-01)
BI-214		(2.34 $\pm$ 0.27 E-01)
RA-226		(3.01 $\pm$ 1.62 E-01)

FREE SWIMMER SAMPLES  
(PICOCURIES PER GRAM)

HBR - 262

SECOND SEMI-ANNUAL, 1988

SITE VARIES WITHIN LAKE ROBINSON (F2-45)  
(DATE COLLECTED: 11/10/88)

FREE SWIMMERS

GAMMA SPECTROMETRY

MASS: 871.2 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$2.63 \pm 0.20 \text{ E}+00$	$(2.85 \pm 0.26 \text{ E}+00)$
CS-137	$1.03 \pm 0.12 \text{ E}-01$	$(2.24 \pm 0.21 \text{ E}-01)$
TL-208	$1.29 \pm 0.81 \text{ E}-02$	(LESS THAN LLD)
PB-212	LESS THAN LLD	$(1.89 \pm 1.17 \text{ E}-02)$
PB-214	LESS THAN LLD	$(7.33 \pm 2.63 \text{ E}-02)$
BI-214	$3.03 \pm 2.26 \text{ E}-02$	$(8.54 \pm 2.50 \text{ E}-02)$
RA-226	LESS THAN LLD	$(6.37 \pm 2.00 \text{ E}-01)$



FREE SWIMMER SAMPLES  
(PICOCURIES PER GRAM)

HBR - 263

SECOND SEMI-ANNUAL, 1988

4.9 MI ESE - PRESTWOOD LAKE (F2-46)  
(DATE COLLECTED: 11/10/88)

FREE SWIMMERS

GAMMA SPECTROMETRY

MASS: 915.2 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$2.32 \pm 0.20 \text{ E}+00$	$(2.85 \pm 0.26 \text{ E}+00)$
CS-134	$3.20 \pm 1.07 \text{ E}-02$	(LESS THAN LLD)
CS-137	$1.76 \pm 0.15 \text{ E}-01$	$(2.24 \pm 0.21 \text{ E}-01)$
TL-208	$9.27 \pm 8.11 \text{ E}-03$	(LESS THAN LLD)
PB-212	$4.17 \pm 1.92 \text{ E}-02$	$(1.89 \pm 1.17 \text{ E}-02)$
PB-214	$9.44 \pm 2.10 \text{ E}-02$	$(7.33 \pm 2.63 \text{ E}-02)$
BI-214	$9.93 \pm 1.99 \text{ E}-02$	$(8.54 \pm 2.50 \text{ E}-02)$
RA-226	LESS THAN LLD	$(6.37 \pm 2.00 \text{ E}-01)$

FREE SWIMMER SAMPLES  
(PICOCURIES PER GRAM)

HBR - 264

SECOND SEMI-ANNUAL, 1988

13 MI NNW - LAKE BEE - CONTROL (F2-47)  
(DATE COLLECTED: 11/10/88)

FREE SWIMMERS

GAMMA SPECTROMETRY

MASS: 463.8 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(2.85 $\pm$ 0.26 E+00)
CS-137		(2.24 $\pm$ 0.21 E-01)
PB-212		(1.89 $\pm$ 1.17 E-02)
PB-214		(7.33 $\pm$ 2.63 E-02)
BI-214		(8.54 $\pm$ 2.50 E-02)
RA-226		(6.37 $\pm$ 2.00 E-01)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 265

OCTOBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (GW-40)  
(DATE COLLECTED: 10/10/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.15E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	4.30 $\pm$ 3.08 E+00	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 266

OCTOBER, 1998

UNIT 1 DEEP WELL NEAR SITE ENTRANCE (GW-42)  
(DATE COLLECTED: 10/10/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM		NOT ANALYZED	(NOT REQUIRED)

GAMMA SPECTROMETRY                      VOLUME:              1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
NO-SAM	NOT ANALYZED	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 267

OCTOBER, 1988

UNIT 2 DEEP WELL (GW-43)  
(DATE COLLECTED: 10/10/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.15E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	7.82 $\pm$ 2.57 E+00	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 268

NOVEMBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (GW-40)  
(DATE COLLECTED: 11/14/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.11E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	2.07 $\pm$ 1.98 E+00	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 269

NOVEMBER, 1988

UNIT 1 DEEP WELL NEAR SITE ENTRANCE (GW-42)  
(DATE COLLECTED: 11/14/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM		NOT ANALYZED	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
NO-SAM	NOT ANALYZED	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 270

NOVEMBER, 1988

UNIT 2 DEEP WELL (GW-43)  
(DATE COLLECTED: 11/14/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.11E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD



GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 271

DECEMBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (GW-40)  
(DATE COLLECTED: 12/11/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.20E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 272

DECEMBER, 1988

UNIT 1 DEEP WELL NEAR SITE ENTRANCE (GW-42)  
(DATE COLLECTED: 12/11/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.000	NOT ANALYZED	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
NO-SAM	NOT ANALYZED	(NOT REQUIRED)

GROUNDWATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 273

DECEMBER, 1988

UNIT 2 DEEP WELL (GW-43)  
(DATE COLLECTED: 12/11/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.20E+03	(NOT REQUIRED)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	4.95 $\pm$ 1.62 E+00	(NOT REQUIRED)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 274

OCTOBER 10, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 10/10/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 2.54E-01)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.17 ± 0.05 E+03)
PB-212		(7.34 ± 5.81 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 275

OCTOBER 10, 1988

10.1 MI E - AUBURNDAL E PLANTATION (MK-54)  
(DATE COLLECTED: 10/10/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 2.46E-01	(< 2.54E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.43 $\pm$ 0.08 E+03	(1.17 $\pm$ 0.05 E+03)
PB-212	LESS THAN LLD	(7.34 $\pm$ 5.81 E+00)
RA-226	9.30 $\pm$ 5.44 E+01	(LESS THAN LLD)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 276

OCTOBER 24, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 10/24/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 2.74E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.11 $\pm$ 0.08 E+03)
TL-208		(3.80 $\pm$ 2.03 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 277

OCTOBER 24, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 10/24/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 2.65E-01	(< 2.74E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.22 $\pm$ 0.07 E+03	(1.11 $\pm$ 0.08 E+03)
TL-208	LESS THAN LLD	(3.80 $\pm$ 2.03 E+00)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 278

NOVEMBER 7, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 11/07/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 2.51E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.18 $\pm$ 0.08 E+03)



MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 279

NOVEMBER 7, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 11/07/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 3.41E-01	(< 2.51E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.31 $\pm$ 0.07 E+03	(1.18 $\pm$ 0.08 E+03)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 280

NOVEMBER 21, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 11/21/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 3.21E-01)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.21 ± 0.08 E+03)
RA-226		(9.08 ± 5.38 E+01)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 281

NOVEMBER 21, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 11/21/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 3.98E-01	(< 3.21E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.26 $\pm$ 0.08 E+03	(1.21 $\pm$ 0.08 E+03)
RA-226	6.01 $\pm$ 4.65 E+01	(9.08 $\pm$ 5.38 E+01)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 282

DECEMBER 5, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 12/05/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 2.91E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.23 ± 0.06 E+03)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 283

DECEMBER 5, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 12/05/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 2.99E-01	(< 2.91E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	9.94 $\pm$ 0.81 E+02	(1.23 $\pm$ 0.06 E+03)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 284

DECEMBER 19, 1988

9.0 MI SW - LYNDAL FARM - CONTROL (MK-53)  
(DATE COLLECTED: 12/19/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0		(< 3.51E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(1.23 ± 0.05 E+03)

MILK SAMPLES  
(PICOCURIES PER LITER)

HBR - 285

DECEMBER 19, 1988

10.1 MI E - AUBURNDALE PLANTATION (MK-54)  
(DATE COLLECTED: 12/19/88)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
I-131	4.0	< 4.25E-01	(< 3.51E-01)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$1.05 \pm 0.07 \text{ E}+03$	$(1.23 \pm 0.05 \text{ E}+03)$
RA-226	$8.33 \pm 5.46 \text{ E}+01$	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 286

OCTOBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (SW-40)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$2.14 \pm 0.76 \text{ E}+03$	(< $1.17\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	LESS THAN LLD	$(2.81 \pm 2.54 \text{ E}+01)$
TL-208	LESS THAN LLD	$(1.90 \pm 1.76 \text{ E}+00)$
PB-212	$2.96 \pm 2.69 \text{ E}+00$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(7.89 \pm 4.39 \text{ E}+01)$



SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 287

OCTOBER, 1988

7.2 MI NNW - BLACK CREEK - CONTROL (SW-41)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005		(< 1.17E+03)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40		(2.81 $\pm$ 2.54 E+01)
TL-208		(1.90 $\pm$ 1.76 E+00)
RA-226		(7.89 $\pm$ 4.39 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 288

OCTOBER, 1988

0.9 MI NNW - ASH POND (SW-57)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$2.25 \pm 0.76 \text{ E}+03$	(< $1.17\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	LESS THAN LLD	$(2.81 \pm 2.54 \text{ E}+01)$
TL-208	LESS THAN LLD	$(1.90 \pm 1.76 \text{ E}+00)$
BI-214	$3.89 \pm 3.31 \text{ E}+00$	(LESS THAN LLD)
RA-226	$2.90 \pm 2.67 \text{ E}+00$	$(7.89 \pm 4.39 \text{ E}+01)$

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 289

NOVEMBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (SW-40)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$2.19 \pm 0.73 \text{ E}+03$	(< $1.13\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY      CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 290

NOVEMBER, 1988

7.2 MI NNW - BLACK CREEK - CONTROL (SW-41)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005		(< 1.13E+03)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

ALL GAMMA EMITTERS LESS THAN LLD

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 291

NOVEMBER, 1988

0.9 MI NNW - ASH POND (SW-57)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$2.24 \pm 0.74 \text{ E}+03$	(< $1.13\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	$4.37 \pm 3.22 \text{ E}+00$	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 292

DECEMBER, 1988

0.6 MI ESE-SC23 AT BLACK CR AND ART WELL (SW-40)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$1.65 \pm 0.73 \text{ E}+03$	(< $1.14\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212	LESS THAN LLD	$(2.05 \pm 1.23 \text{ E}+00)$

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 293

DECEMBER, 1988

7.2 MI NNW - BLACK CREEK - CONTROL (SW-41)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005		(< 1.14E+03)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
PB-212		(2.05 $\pm$ 1.23 E+00)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

HBR - 294

DECEMBER, 1988

0.9 MI NNW - ASH POND (SW-57)  
(COMPOSITE SAMPLE)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	$1.39 \pm 0.72 \text{ E}+03$	(< $1.14\text{E}+03$ )

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	$5.70 \pm 2.75 \text{ E}+01$	(LESS THAN LLD)
TL-208	$2.56 \pm 1.91 \text{ E}+00$	(LESS THAN LLD)
PB-212	$4.69 \pm 2.50 \text{ E}+00$	$(2.05 \pm 1.23 \text{ E}+00)$



ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

HBR - 295

FOURTH QUARTER, 1988

<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
CONTROL	(1.00 $\pm$ 0.10 E+00)
1 26 MI ESE - FLORENCE - CONTROL	1.00 $\pm$ 0.10 E+00
2 0.2 MI S - INFORMATION CENTER	1.00 $\pm$ 0.10 E+00
3 0.7 MI N - MICROWAVE TOWER	1.10 $\pm$ 0.10 E+00
4 0.4 MI ESE - SPILLWAY	9.00 $\pm$ 1.00 E-01
5 0.9 MI ENE - JOHNSON'S LANDING	9.00 $\pm$ 1.00 E-01
6 0.3 MI SW - INFORMATION CENTER	1.00 $\pm$ 0.10 E+00
7 6.3 MI ESE - HARTSVILLE CP&L SUBSTATION	9.00 $\pm$ 1.00 E-01
8 0.8 MI SSE - POWER POLES FROM HBR	8.00 $\pm$ 1.00 E-01
9 1.0 MI S - POWER POLE NEAR HWY 151	1.40 $\pm$ 0.10 E+00
10 1.0 MI WSW - CHURCH OF GOD CEMETERY	1.00 $\pm$ 0.10 E+00
11 1.0 MI SW - POWER POLE AT OLD CAMDEN RD	8.00 $\pm$ 1.00 E-01
12 1.2 MI SSW-PINE TREE AT 2ND INT DIRT RD	9.00 $\pm$ 1.00 E-01
13 1.0 MI W-PINE TREE WHERE DIRT RD SPLITS	1.10 $\pm$ 0.10 E+00
14 0.9 MI WNW - HWY 151 AT PINE RIDGE CH	9.00 $\pm$ 1.00 E-01
15 1.0 MI NW -DIRT RD NEAR ASH POND	9.00 $\pm$ 1.00 E-01
16 1.0 MI NNW - DARLINGTON IC TURBINE PLANT	9.00 $\pm$ 1.00 E-01
17 1.1 MI N - DIS CANAL RD AT UNIT 1 WEIR	1.30 $\pm$ 0.10 E+00
18 0.7 MI SE - TRAIN TRESTLE OVER BLACK CR	9.00 $\pm$ 1.00 E-01
19 1.0 MI E - RD S-16-23	1.00 $\pm$ 0.10 E+00
20 1.3 MI ENE - RD S-16-39 NORTH	1.00 $\pm$ 0.10 E+00
21 ATKINSON'S BOAT LANDING	1.10 $\pm$ 0.10 E+00

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

HBR - 296

FOURTH QUARTER, 1988

<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
CONTROL	(1.00 $\pm$ 0.10 E+00)
22 1.9 MI NNE - SHADY REST NEAR DOCK	9.00 $\pm$ 1.00 E-01
23 1.2 MI ESE - INT RD 41E-5 AND S-16-39	1.00 $\pm$ 0.10 E+00
24 5.0 MI NW - S-13-711 PAST PEACH FARM	1.10 $\pm$ 0.10 E+00
25 4.6 MI NNW - RD S-13-346 OFF 151 NORTH	9.00 $\pm$ 1.00 E-01
26 5.0 MI N - RD S-13-346	1.20 $\pm$ 0.10 E+00
27 5.0 MI NNE - RD S-13-763 NEAR INTER	1.00 $\pm$ 0.10 E+00
28 4.8 MI NE - NEAR DUMPSTER RD S-13-39	1.20 $\pm$ 0.10 E+00
29 RD S-16-20 SOUTH OF LOOKOUT TOWER	1.20 $\pm$ 0.10 E+00
30 4.6 MI E - RD S-16-20 JOHNSON FENCE CO	9.00 $\pm$ 1.00 E-01
31 4.6 MI ESE - LAKESHORE DRIVE	1.10 $\pm$ 0.10 E+00
32 4.5 MI SE - END OF KALBER DRIVE	1.00 $\pm$ 0.10 E+00
33 4.6 MI SSE-RD S16-493 NEAR SEGAR'S ENTR	1.00 $\pm$ 0.10 E+00
34 4.6 MI S - RD S-16-772	8.00 $\pm$ 1.00 E-01
35 4.4 MI SSW - INT RD S-31-51 & S-16-12	1.70 $\pm$ 0.10 E+00
36 4.7 MI SW - PAVED RD OFF RD S-16-85	1.50 $\pm$ 0.10 E+00
37 5.0 MI WSW - TRANS TOWER NEAR CLAY RD	1.40 $\pm$ 0.10 E+00
38 4.9 MI W - RD S-16-231 AT UNION CHURCH	1.00 $\pm$ 0.10 E+00
39 5.0 MI WNW - POWER POLE IN FIELD	1.10 $\pm$ 0.10 E+00