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SERIAL: HNP-07-045

United States Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

Ladies and Gentlemen:

In accordance with Technical Specification 6.9.1.3 for the Harris Nuclear Plant, Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., is providing the enclosed Annual Radiological Environmental Operating Report for 2006.

Additionally, the Appendix to this report includes a replacement Table 5 (page 29) to the Annual Radiological Environmental Operating Report for 1996 to correct the Surface Water Tritium – All Indicator Locations Mean value from 4.75E+3 to 4.42E+3 pCi/Liter.

If you have questions regarding this information, please contact me at (919) 362-3137.

Sincerely,

D. H. Corlett  
Supervisor – Licensing/Regulatory Programs  
Harris Nuclear Plant

DHC/mgw

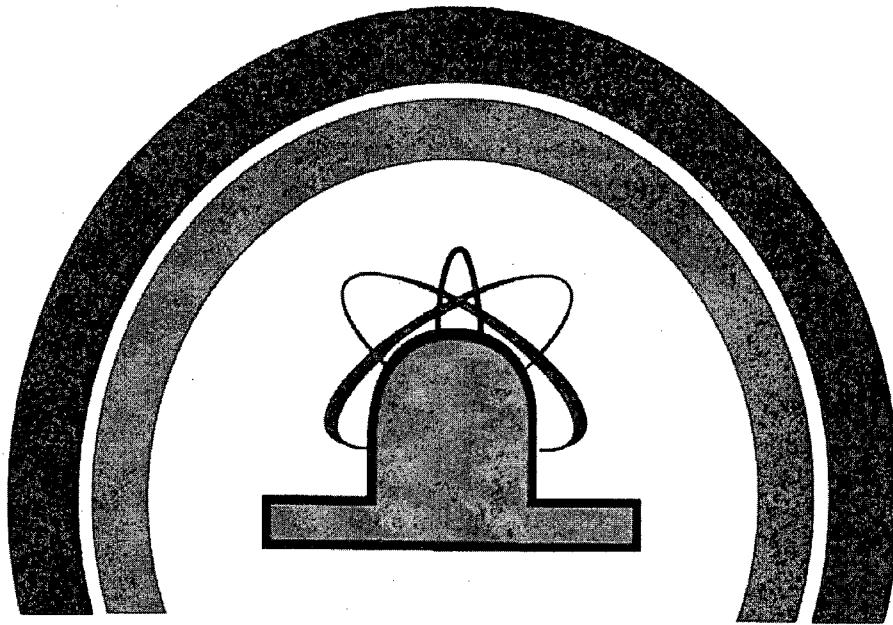
Enclosure

- c: Mr. P. B. O'Bryan (NRC Senior Resident Inspector, HNP)
- Ms. L. M. Regner (NRR Project Manager, HNP)
- Dr. W. D. Travers (NRC Regional Administrator, Region II)

Progress Energy Carolinas, Inc.  
Harris Nuclear Plant  
P. O. Box 165  
New Hill, NC 27562

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**RADIOLOGICAL  
ENVIRONMENTAL OPERATING  
REPORT**



**2006**

**HARRIS NUCLEAR PLANT  
CAROLINA POWER & LIGHT COMPANY  
DOING BUSINESS AS  
PROGRESS ENERGY CAROLINAS, INC.**

**HARRIS ENERGY &  
ENVIRONMENTAL CENTER  
CAROLINA POWER & LIGHT COMPANY  
DOING BUSINESS AS  
PROGRESS ENERGY CAROLINAS, INC.  
NEW HILL, NORTH CAROLINA**

**RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT  
FOR THE  
SHEARON HARRIS NUCLEAR POWER PLANT  
JANUARY 1 THROUGH DECEMBER 31, 2006**

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# EXECUTIVE SUMMARY

The Harris Nuclear Plant (HNP) is operated by Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., under a license granted by the Nuclear Regulatory Commission. Provisions of the Nuclear Regulatory Commission's Regulatory Guide 4.8, Harris Nuclear Plant Technical Specifications, and the Harris Nuclear Plant Offsite Dose Calculation Manual (ODCM) establish the requirements of the Radiological Environmental Monitoring Program (REMP). This report provides the results of the Radiological Environmental Monitoring program from January 1, 2006 through December 31, 2006.

The Radiological Environmental Monitoring program was established in 1982. Radiation and radioactivity in various environmental media have been monitored for more than 20 years, including 5 years prior to commencing operation. Monitoring is also provided for control locations, which would not be impacted by operations of the HNP. Using these control locations and data collected prior to operation allows comparison of data collected at locations near the HNP which could potentially be impacted by its operations.

Radiation levels show no significant change from pre-operational radiation levels:

Monitoring results for environmental media are summarized as follows:

- Air-monitoring results are similar or less than the concentrations of radioactivity from pre-operation monitoring. These observations are also consistent with past operational data.
- Milk and broadleaf vegetation monitoring results are similar to all the past years where no I-131 concentrations were detected. Broadleaf vegetation is in lieu of indicator milk samples, due to no milk-producing animal within five miles of the plant.
- Terrestrial vegetation includes various crops collected during a growing season and results indicate no detectable radioactivity.
- Aquatic organism monitoring includes fish and aquatic vegetation. The fish results indicate no detectable radioactivity; where as, the aquatic vegetation indicates detectable radioactivity in one out of three samples. Refer to the Interpretations and Conclusions section/ Aquatic Vegetation.
- Surface (and drinking) water results indicate no detectable gamma radionuclides including I-131, except for the I-131 noted in Interpretations and Conclusions section/ Drinking and Surface Water, which is performed by an I-131 separation analysis.
- Surface water (non-drinking water) results from Harris Lake show the presence of tritium, which is attributed to plant operation, but is well below the EPA reportable non-drinking water limit (30,000 pCi/Liter) and drinking water limit (20,000 pCi/Liter). Refer to the Interpretations and Conclusions section/ Surface Water.

- External radiation dose showed no measurable change from pre-operational data.

The continued operation of the HNP has not contributed measurable radiation or the presence of gamma radioactivity, with the exception of Harris Lake bottom sediment and aquatic vegetation, in the environmental monitoring program. The Harris Lake Surface water samples revealed tritium concentrations that are well within the applicable regulatory limits.



# **RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM**

## **PURPOSE AND REQUIREMENTS FOR THE RADIOLOGICAL MONITORING PROGRAM**

The operation of a nuclear generating station may increase background radiation by a small fraction. It is important to measure these emissions of radioactivity and radiation to assess their impact on the surrounding populations. The purpose of the radiological monitoring program (surveillances) is to measure accumulation of radioactivity in the environments, to determine whether this radioactivity is the result of operation of HNP, and to assess the potential dose to the off-site population based on the cumulative measurements of radioactivity of plant origin. Radiological monitoring programs provide an additional verification of the radiological controls of nuclear generating stations.

The HNP radiological monitoring program was established in 1982 and has continued to collect samples and evaluate them for over 20 years.

Requirements are established for the radiological monitoring program with the following:

- Technical Specifications
- Off-Site Dose Calculation Manual (ODCM)
- Various procedures

Additional guidance regarding the radiological monitoring program may be found in the following:

- NRC Regulatory Guide 1.109
- NRC Regulatory Guide 4.13
- NRC Regulatory Guide 4.15

## General Site Description

The Harris Nuclear Plant consists of a pressurized water reactor with a net output of approximately 900 MWe (Mega Watts electric). Commercial production was initiated on January 3, 1987. HNP is located in southwest Wake County, North Carolina. The site is along U.S. route 1 approximately sixteen (16) miles southwest of Raleigh, North Carolina and is displayed on the map of central North Carolina (Figure 1). The site is also approximately fifteen (15) miles northeast of Sanford, North Carolina. The nearest community is New Hill, which is north of the site.

Harris Lake is adjacent to the plant itself and is the source of cooling tower makeup water. The lake was impounded in the construction of Harris Plant. The lake is fed by Buckhorn Creek and is approximately 4,000 acres in area. The main dam is approximately 4.7 miles south of the site. The primary discharges to Harris Lake from the plant are surface runoff, cooling tower blow down, and radiological waste process systems.

Fishing, boating, and swimming are popular activities on Harris Lake and other nearby lakes. Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., encourages the recreational use of the lake, Harris Lake County Park, and the adjoining lands through a variety of agreements with state and local government.

Within a five mile radius most of the land is wooded with only a few residences and limited agricultural activity. There are no non-company industrial structures or residences on the plant site. The chief use of the land is for production of timber and pulp fiber.

Within a ten mile radius the area is considered rural with significant populations in Apex, Holly Springs, and Fuquay-Varina. Currently these communities are experiencing significant growth.

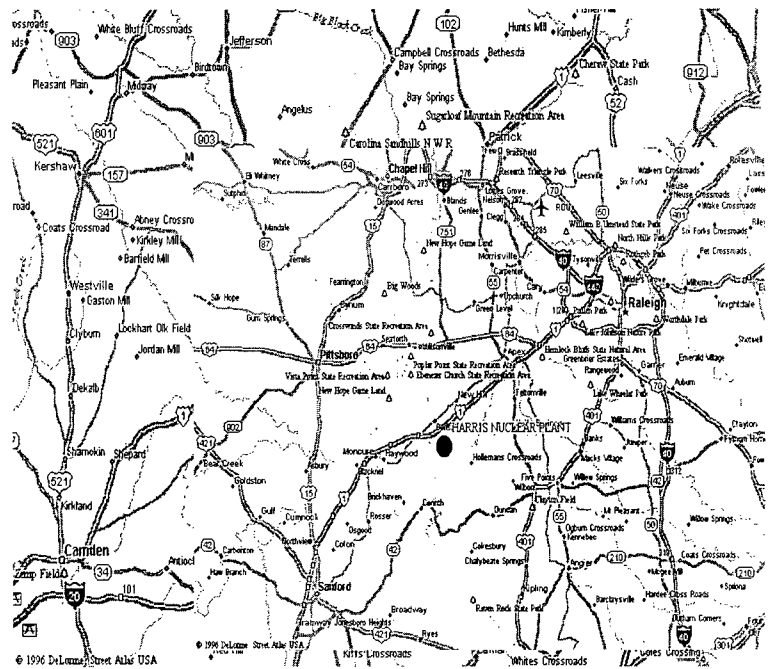


Figure 1: Location of Harris Nuclear Plant

Within a fifty-mile radius, much of the land is used in agricultural production with significant crops including corn, soybeans, and tobacco. Livestock is also an important component with significant production in cattle, hogs, poultry, and dairy products.

Consumption of drinking water, food crops, and fish are sample media that are examples of ingestion pathways for exposure.

## **RADIOLOGICAL MONITORING PROGRAM QUALITY ASSURANCE**

A required component of the REMF is the Quality Assurance Program. The standards for the quality assurance program are established in the NRC Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs." The purpose of the quality assurance program is "(1) to identify deficiencies in the sampling and measurement processes to those responsible for these operations so that corrective action can be taken, and (2) to obtain some measure of confidence in the results of the monitoring programs in order to assure the regulatory agencies and the public that the results are valid."(NRC Regulatory Guide 4.15 B Pg. 4.15-2) This provides the opportunity to implement corrective actions that address possible deficiencies. Examples of the activities of the quality assurance program include:

- regular review of sample collection and records
- regular review of laboratory procedures and methods
- participation in the Analytics, Inc. Environmental Cross-Check Program, which provides an independent assessment of the quality of laboratory results
- the use of known concentrations of radioactivity in test samples by the laboratory to ensure consistent quality results on an ongoing basis

## RADIOLOGICAL MONITORING PROGRAM GENERAL DESCRIPTION

Although the contribution to background radiation is small, Carolina Power & Light Company doing business as Progress Energy Carolinas, Inc. has established this program to measure the exposure pathways to man. An exposure pathway describes the source of the radiological exposure. The primary forms of radiological emissions from the plant are airborne and liquid discharge. The following pathways are monitored: external dose, ingestion of radioactive materials, and the inhalation of radioactive material. Specific methods and different environmental media are required to assess each pathway. Below in Table 1 is a list of the media used to assess each of these pathways.

**Table 1**  
**Media Used to Assess Exposure Pathways to Man**

<u>Pathway of Exposure to Man</u>	<u>Media Sampled</u>
External Dose	Thermoluminescent Dosimetry (TLD) Shoreline Sediment
Ingestion	Aquatic Vegetation Drinking Water Food Crops Fish Ground Water Milk Broadleaf Vegetation (when Milk samples are unavailable) Surface Water
Inhalation	Air Samples (Particulate & Radioiodine)

### Sampling Locations

Sampling locations are chosen based upon meteorological factors, preoperational monitoring, and results of the land use surveys. A number of locations are selected as controls. Control stations are selected because they are unaffected by the operation of the plant. Sample locations may be seen in Figures 2a, 2b, and 3. A description of each sample location may be found in Tables 2 and 3.

# Radiological Environmental Sampling Locations

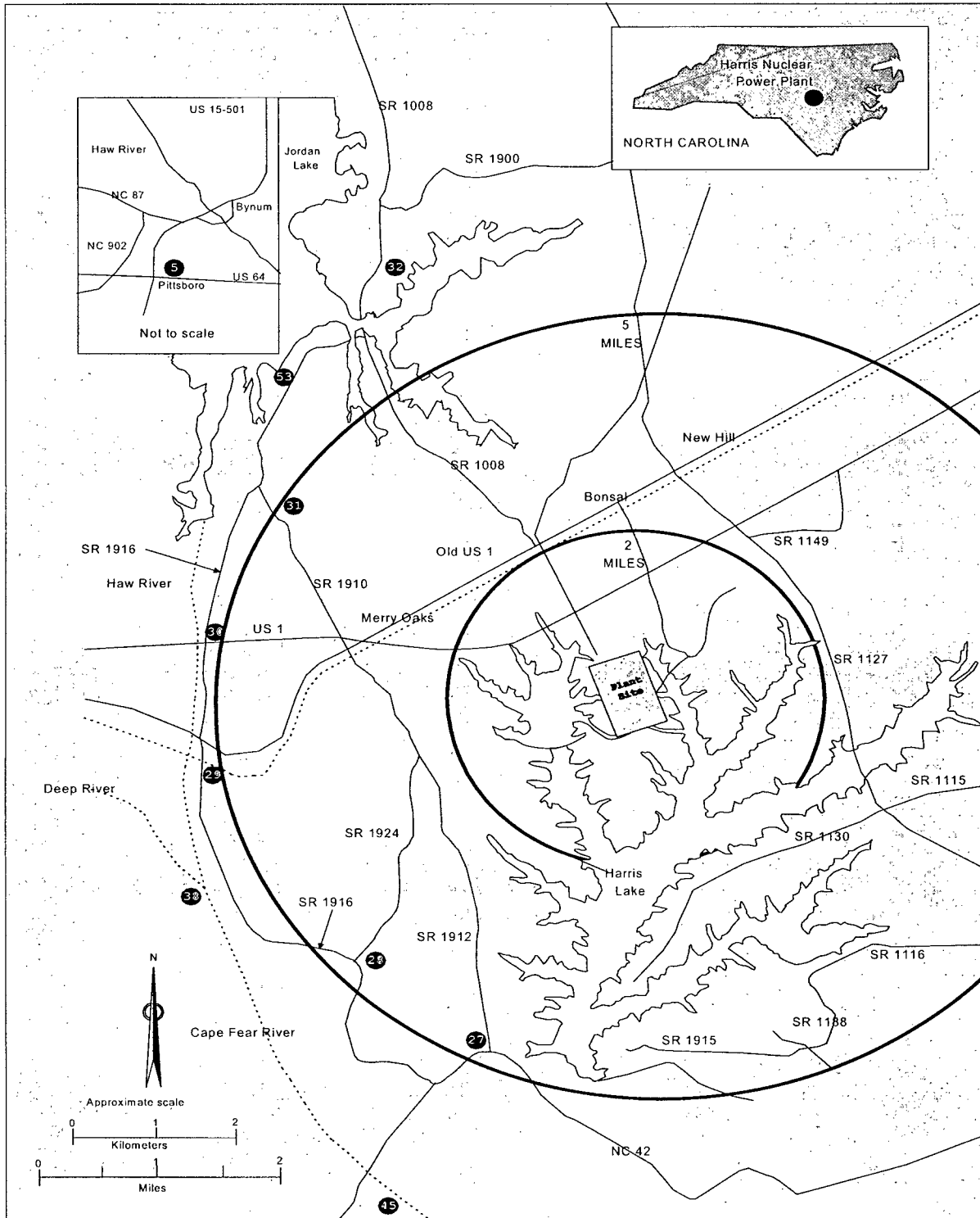


Figure 2a: Radiological Environmental Sampling Locations (Distant from Plant)

# Radiological Environmental Sampling Locations

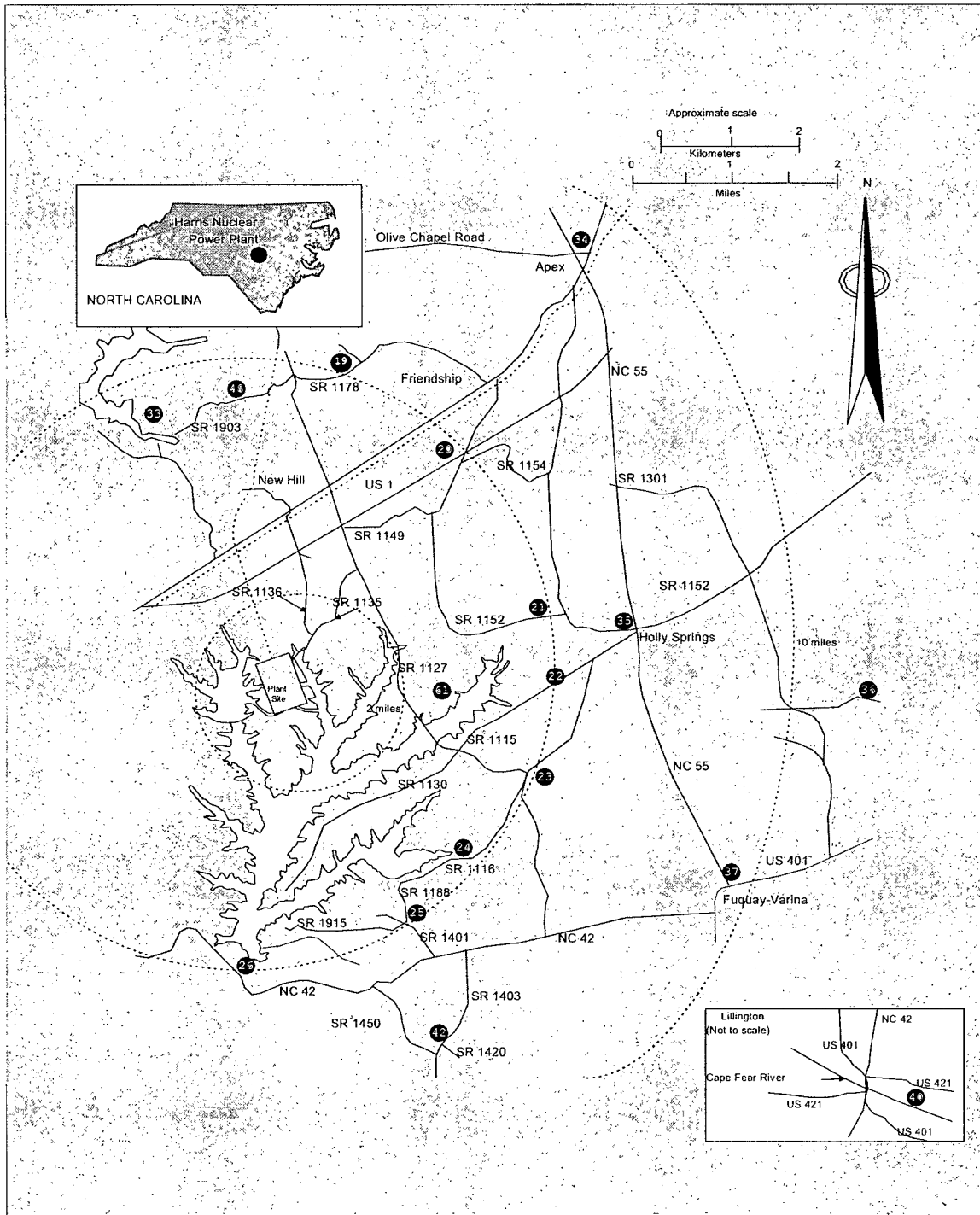


Figure 2b: Radiological Environmental Sampling Locations (Distant from Plant)

# Radiological Environmental Sampling Locations

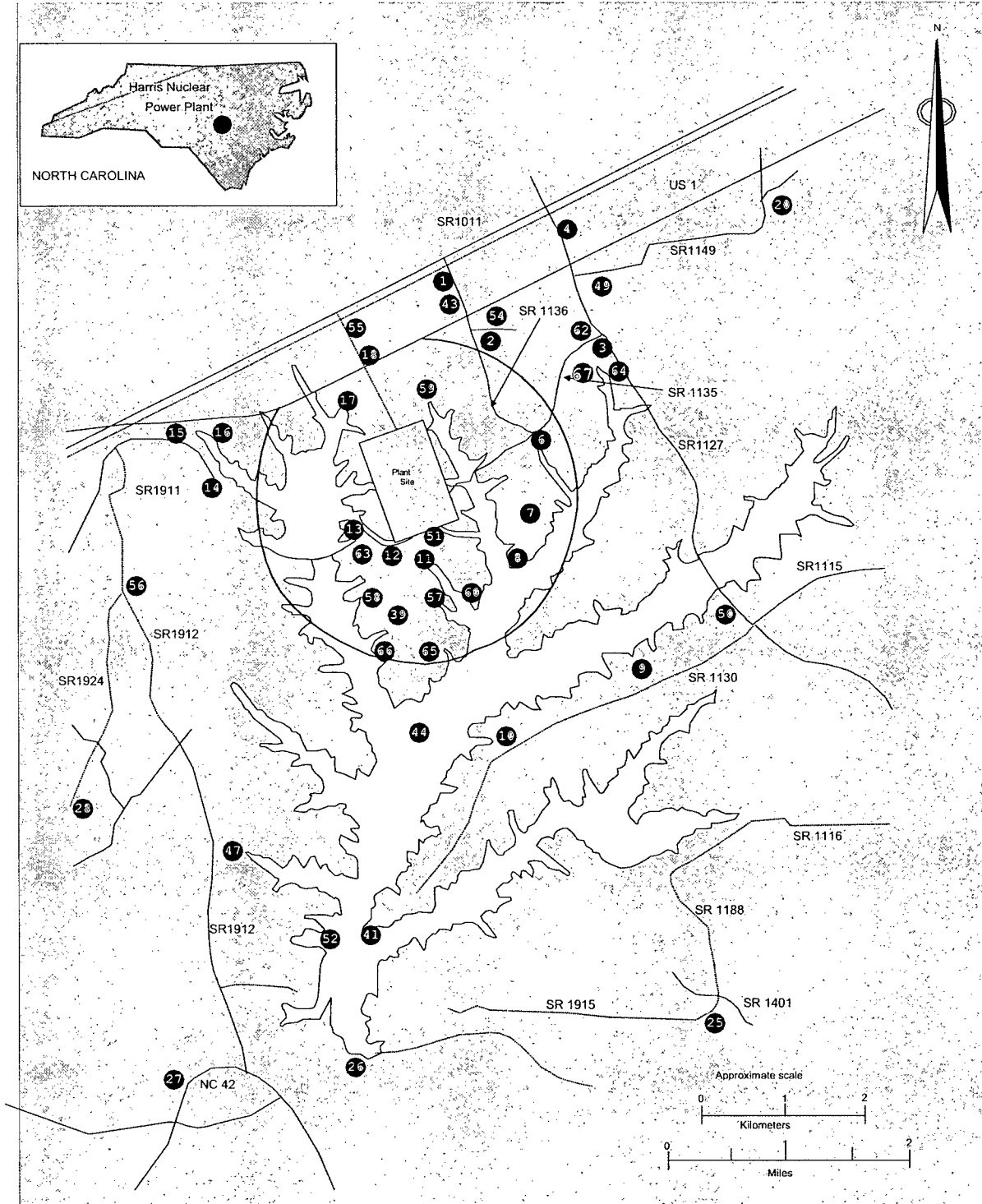


Figure 3: Radiological Environmental Sampling Locations (Nearest Plant)

Table 2

Radiological Environmental Sampling Locations Legend

STATION NUMBER	SAMPLE TYPE	REFER TO FIGURE	STATION NUMBER	SAMPLE TYPE	REFER TO FIGURE
1	AP, AC, TL	3	34	TL	2b
2	AP, AC, TL	3	35	TL	2b
3	TL	3	36	TL	2b
4	AP, AC, TL	3	37	TL	2b
5	AP, AC, MK, FC, TL, BL	2a *	38	SW, DW	2a
6	TL	3	39	GW	3
7	TL	3	40	SW, DW	2b *
8	TL	3	41	SS, AV	3
9	TL	3	42	DELETED	2b
10	TL	3	43	DELETED	3
11	TL	3	44	FH	3
12	TL	3	45	FH	2a
13	TL	3	47	AP, AC	3
14	TL	3	48	TL	2b
15	TL	3	49	TL	3
16	TL	3	50	TL	3
17	TL	3	51	DW	3
18	TL	3	52	SD	3
19	TL	2b	53	TL	2a
20	TL	2b, 3	54	FC	3
21	TL	2b	55	FC	3
22	TL	2b	56	TL	3
23	TL	2b	57	GW	3
24	TL	2b	58	GW	3
25	TL	2b, 3	59	GW	3
26	AP, AC, AV, SS, SW, TL	2b, 3	60	GW	3
27	TL	2a, 3	61	AV	2b
28	TL	2a, 3	62	FC	3
29	TL	2a	63	TL	3
30	TL	2a	64	FC	3
31	TL	2a	65	BL	3
32	TL	2a	66	BL	3
33	TL	2b	67	TL	3

AC	Air Cartridge	DW	Drinking Water	MK	Milk	TL	TLD
AP	Air Particulate	FC	Food Crop	SD	Bottom Sediment		
AV	Aquatic Vegetation	FH	Fish	SS	Shoreline Sediment		
BL	Broad Leaf Veg.	GW	Groundwater	SW	Surface Water		

\* Approximate location



**Table 3**  
**Harris Nuclear Plant**

**Radiological Environmental Monitoring Sampling Locations**

<b>Sample Type</b>	<b>Location &amp; Description</b>	<b>Frequency</b>	<b>Sample Size</b>	<b>Analysis</b>
Air Cartridge (AC)	1--2.6 miles N 2--1.4 miles NNE 4--3.1 miles NNE 5--13.4 miles WNW--Pittsboro* 26--4.7 miles S 47--3.4 miles SSW	As required by dust loading, but at least once per 7 days	(206 m <sup>3</sup> )	Iodine
Air Particulate (AP)	1--2.6 miles N 2--1.4 miles NNE 4--3.1 miles NNE 5--13.4 miles WNW--Pittsboro* 26--4.7 miles S 47--3.4 miles SSW	As required by dust loading, but at least once per 7 days	(206 m <sup>3</sup> )	Gross Beta (Weekly) Composite Gamma (Quarterly)
Fish (FH)	44--Site varies in Harris Lake 45--Site varies in Cape Fear River above Buckhorn Dam*	Semiannual	1 kg (wet) Free Swimmers & Bottom Feeders	Gamma
Drinking Water (DW)	38--6.2 miles WSW* 40--17.2 miles SSE Lillington 51--Water Treatment Plant (On Site)	2 Week Composite Monthly Composite	8 liters	I-131, Gamma Tritium Gross Beta
Ground Water (GW)	39--0.7 miles SSW 57--0.4 miles SSW 58--0.5 miles WSW 59--0.5 miles NNE 60--0.5 miles ESE	Quarterly	4 liters	Gamma Tritium
Milk (MK)	5--18.2 miles WNW Manco Dairy*	Semimonthly	8 liters	I-131 Gamma
Shoreline Sediment (SS)	26--4.6 miles S 41--3.8 miles S	Semiannual	500 grams	Gamma
Surface Water (SW)	26--4.7 miles S 38--6.2 miles WSW * 40--17.2 miles SSE Lillington	Weekly Monthly Composite	8 liters	I-131, Gamma Tritium Gross Beta
Aquatic Vegetation (AV)	26--4.7 miles S 41--3.8 miles S 61--2.5 miles E	Annually	500 grams	Gamma
Bottom Sediment (SD)	52--3.8 miles S	Semiannual	500 grams	Gamma
Food Crop (FC) or Food Products (FP)	5--18.0 miles NNW--Pittsboro* 54--1.7 miles NNE--Wilkins or Morris 55--2.0 miles NNW--L. L. Goodwin 62--2.3 miles NE -- Lee 64--1.8 miles ENE -- Michael	3 different kinds of broadleaf vegetation monthly during growing season	300 grams	Gamma
Broadleaf Vegetation (BL)	65--1.36 miles S -- Site Boundary 66--1.33 miles SSW -- Site Boundary 5 -- > 12 miles NNW -- Pittsboro*	Monthly	300 grams	Gamma

\* Control Stations

**Table 3 (Continued)**

**Harris Nuclear Plant**

**Radiological Environmental Monitoring Sampling Locations**

Sample Type	Location & Description	Frequency	Sample Size	Analysis
Thermoluminescent Dosimetry (TL or TLD)	1 -- 2.6 miles N 2 -- 1.4 miles NNE 3 -- 1.9 miles ENE 4 -- 3.1 miles NNE 5 -- 13.4 miles WNW--Pittsboro* 6 -- 0.8 mile NE 7 -- 0.7 mile E 8 -- 0.6 mile ESE 9 -- 2.2 miles SE 10 -- 2.2 miles SSE 11 -- 0.6 mile S 12 -- 0.9 mile SSW 13 -- 0.7 mile WSW 14 -- 1.5 miles W 15 -- 2.0 miles W 16 -- 1.9 miles WNW 17 -- 1.5 miles NW 18 -- 1.4 miles NNW 19 -- 5.0 miles NNE 20 -- 4.5 miles NE 21 -- 4.8 miles ENE 22 -- 4.3 miles E 23 -- 4.8 miles ESE 24 -- 4.0 miles SE 25 -- 4.7 miles SSE 26 -- 4.7 miles S 27 -- 4.8 miles SW 28 -- 4.8 miles SSW 29 -- 5.7 miles WSW 30 -- 5.6 miles W 31 -- 4.7 miles WNW 32 -- 6.4 miles NNW 33 -- 4.5 miles NNW 34 -- 8.7 miles NE--Apex 35 -- 6.9 miles E--Holly Springs 36 -- 10.9 miles E 37 -- 9.2 miles ESE--Fuquay-Varina 48 -- 4.5 miles N 49 -- 2.5 miles NNE 50 -- 2.6 miles ESE 53 -- 5.8 miles NW 56 -- 3.0 miles WSW 63 -- 0.6 mile SW 67 -- 1.2 miles ENE	Quarterly	Not Applicable	TLD Reading

\* Control Stations

## SUMMARY OF RADIOLOGICAL MONITORING PROGRAM

This report presents the results of the Radiological Environmental Monitoring Program conducted during 2006 for the Harris Nuclear Plant and fulfills the reporting requirements of Technical Specifications 6.9.1.3 and ODCM E.3. The program was conducted in accordance with Operational Requirement 3.12.1 in the Off-Site Dose Calculation Manual (ODCM), and applicable procedures.

Approximately 1132 total samples of 13 different media types from approximately 886 indicator samples were compared to approximately 250 control samples. Control stations are locations that are unaffected by plant operations. In approximately 99 percent of the indicator samples there was no difference from the activities observed in the corresponding control samples.

Radioactivity in environmental samples attributed to plant operations in 2006 for which there is a potential dose pathway to the public is as follows:

Environmental Media	Radionuclide	Location of w/Highest Annual Mean	Activity and Occurrence	Maximum Individual Dose (mrem/yr)
Surface Water	H-3	Harris Lake	4,730 pCi/L (12/12)	No ingestion pathway. No dose calculated.
Fish	H-3	Harris Lake	See above. Assumes H-3 equilibrium between lake water and fish tissue.	0.010 Total Body

The radiological environmental data indicates that HNP operations in 2006 had no significant impact on the environment or public health and safety.

A statistical summary of all the data for 2006 has been compiled and summarized in Table 4.

The plant-derived activity detected within the scope of the Radiological Environmental Monitoring Program can be seen in the Data Summary Table 4 for 2006. No detectable tritium activity was observed at Lillington, N.C., located 17 miles downstream on the Cape Fear River, which is the first public drinking water (ingestion pathway) location below the Harris Lake discharge spillway. No plant-related gamma activity has been detected in fish collected from Harris Lake or in the water samples from Lillington, N.C.

The Harris Lake Bottom Sediment (SD) and the Aquatic Vegetation (AV) pose no radiological dose to the general public via this pathway due to the fact that the SD is not easily accessible and the AV is not an ingestion pathway. These samples are for long-term trends.

**Table 4  
Harris Nuclear Plant  
Radiological Environmental Monitoring Program Data Summary**

Shearon Harris Nuclear Power Plant  
Wake County, North Carolina

Docket Number: STN 50-400  
Calendar Year: 2006

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Typical Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)</sup> Range	Location w/Highest Annual Mean		Control Locations Mean <sup>(2)</sup> Range
				Name, Distance, and Direction	Mean <sup>(2)</sup> Range	
Air Cartridge (pCi/m <sup>3</sup> )	I-131 312	6.8E-2	All less than LLD	N/A	All less than LLD	All less than LLD
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 311	5.3E-3	1.95E-2 (260/260) 5.01E-3 – 3.61E-2	New Hill Near 1 <sup>st</sup> Baptist Church 3.1 miles NNE	1.99E-2 (52/52) 5.01E-3 – 3.61E-2	1.98E-2 (51/52) 8.80E-3 - 2.93E-2
	Gamma 24	Refer to Table 5	All less than LLD	N/A	All less than LLD	All less than LLD
Drinking Water <sup>(4)</sup> (pCi/l)	I-131 52	1.0E+0	1.24E+0 (1/26) Single Value	Lillington Cape Fear River 17.2 miles SSE	1.24E+0 (1/26) Single Value	6.55E-1 (5/26) 3.89E-1 – 9.22E-1
	Gross Beta 24	1.2E+0	5.07E+0 (12/12) 3.40E+0 – 1.03E+1	Lillington Cape Fear River 17.2 miles SSE	5.07E+0 (12/12) 3.40E+0 – 1.03E+1	4.58E+0 (12/12) 2.09E+0 – 6.38E+0
	Gamma 24	Refer to Table 5	All less than LLD	N/A	All less than LLD	All less than LLD
	Tritium 24	3.50E+2 <sup>(6)</sup>	All less than LLD <sup>(7)</sup>	N/A	All less than LLD	All less than LLD

**Table 4 (cont.)  
Harris Nuclear Plant  
Radiological Environmental Monitoring Program Data Summary**

Shearon Harris Nuclear Power Plant  
Wake County, North Carolina

Docket Number: STN 50-400  
Calendar Year: 2006

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Typical Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)</sup> Range	Location w/Highest Annual Mean		Control Locations Mean <sup>(2)</sup> Range
				Name, Distance, and Direction	Mean <sup>(2)</sup> Range	
Fish Bottom-Feeders (pCi/g, wet)	Gamma 4	Refer to Table 5	All less than LLD	N/A	All less than LLD	All less than LLD
Free-Swimmers (pCi/g, wet)	Gamma 8	Refer to Table 5	All less than LLD	N/A	All less than LLD	All less than LLD
Food Crop (pCi/g, wet)	Gamma 36 <sup>(3)</sup>	Refer to Table 5	All less than LLD	N/A	All less than LLD	All less than LLD
Broadleaf Vegetation (pCi/g, wet)	Gamma 51 <sup>(3)</sup> Cs-137	5.4E-2	7.35E-2 (1/33) Single Value	Site Boundary 1.33 miles SSW	7.35E-2 (1/33) Single Value	All less than LLD
Aquatic Vegetation (pCi/g, wet)	Gamma 3 Co-60	2.7E-2	2.03E-2 (1/3) Single Value	Harris Lake Spillway 4.7 miles S	2.03E-2 (1/3) Single Value	No control

**Table 4 (cont.)  
Harris Nuclear Plant  
Radiological Environmental Monitoring Program Data Summary**

Shearon Harris Nuclear Power Plant  
Wake County, North Carolina

Docket Number: STN 50-400  
Calendar Year: 2006

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Typical Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)</sup> Range	Location w/Highest Annual Mean		Control Locations Mean <sup>(2)</sup> Range
				Name, Distance, and Direction	Mean <sup>(2)</sup> Range	
Ground Water (pCi/l)	Gamma 18	Refer to Table 5	All less than LLD	N/A	All less than LLD	No control
	Tritium 18	3.50E+2 <sup>(6)</sup>	8.26E+2 (2/18) 7.59E+2 – 8.92E+2	North Bank ESW Intake 0.5 mile WSW	8.26E+2 (2/18) 7.59E+2 – 8.92E+2	No control
Milk (pCi/l)	I-131 21	1.0E+0	N/A	N/A	N/A	All less than LLD
	Gamma 21	Refer to Table 5	N/A	N/A	N/A	All less than LLD
Shoreline Sediments (pCi/g, dry)	Gamma 4	Refer to Table 5	All less than LLD	N/A	All less than LLD	No Control
Bottom Sediment (pCi/g, dry)	Gamma 2	1.94E-1	1.23E+0 (2/2)	Harris Lake Cooling Tower Mixing Zone 3.8 miles S	1.23E+0 (2/2) 1.21E+0 – 1.25E+0	No Control
	Co-60		1.21E+0 – 1.25E+0			
	Cs-137	1.21E-1	2.11E-1 (2/2) 1.86E-1 – 2.36E-1	Harris Lake Cooling Tower Mixing Zone 3.8 miles S	2.11E-1 (2/2) 1.86E-1 – 2.36E-1	No Control

**Table 4 (cont.)  
Harris Nuclear Plant  
Radiological Environmental Monitoring Program Data Summary**

Shearon Harris Nuclear Power Plant  
Wake County, North Carolina

Docket Number: STN 50-400  
Calendar Year: 2006

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Typical Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)</sup> Range	Location w/Highest Annual Mean		Control Locations Mean <sup>(2)</sup> Range
				Name, Distance, and Direction	Mean <sup>(2)</sup> Range	
Surface Water <sup>(4)</sup> (pCi/l)	I-131 52	1.0E+0	1.24E+0 (1/26) Single Value	Lillington Cape Fear River 17.2 miles SSE	1.24E+0 (1/26) Single Value	6.55E-1 (5/26) 3.89E-1 - 9.22E-1
	Gross Beta 36	1.2 E+0	4.67E+0 (24/24) 3.38E+0 - 1.03E+1	Lillington Cape Fear River 17.2 miles SSE	5.07E+0 (12/12) 3.40E+0 - 1.03E+1	4.58E+0 (12/12) 2.09E+0 - 6.38E+0
	Gamma 36	Refer to Table 5	All less than LLD	N/A	All less than LLD	All less than LLD
	Tritium 36	3.50E+2 <sup>(6)</sup>	4.73E+3 (12/24) 3.15E+3 - 6.37E+3	Harris Lake Spillway 4.7 miles S	4.73E+3 (12/24) 3.15E+3 - 6.37E+3	All less than LLD
Direct Radiation (mR/qtr) <sup>(5)</sup>	TLD 174 <sup>(3)</sup>		1.21E+1 (170/172) 9.50E+0 - 1.68E+1	Fuquay Varina at Old CP&L Office 9.2 miles ESE	1.56E+1 (4/4) 1.48E+1 - 1.68E+1	1.55E+1 (4/4) 1.50E+1 - 1.60E+1

#### FOOTNOTES TO TABLE 4

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved.
2. Mean and range are based on detectable measurements only. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
3. Missing samples are discussed in Missed Surveillances.
4. Although quarterly composite samples are required, monthly composite samples are used to provide more frequent and sensitive analyses.
5. TLD exposure is reported in milliroentgen (mR) per 90-day period (quarter) beginning in 1995. This is the exposure standard used to compare data to the Nuclear Regulatory Commission (NRC).
6. Tritium Lower Limit of Detection (LLD) is  $3.50 \text{ E}+2$  pCi/L for samples that typically demonstrate activity less than the LLD. The LLD was lowered at the request of Carolina Power & Light Company doing business as Progress Energy Carolinas, Inc. in order to maintain comparable LLD and result values with the NC Division of Radiation Protection (NCDRP) laboratory. Other samples that typically exhibit activity greater than the LLD have a tritium Lower Limit of Detection (LLD) of  $1.0 \text{ E}+3$  pCi/L.
7. Drinking Water 51 (DW-51) is not included because it is not a source of public drinking water as defined by the EPA (Environmental Protection Agency).



## INTERPRETATIONS AND CONCLUSIONS

### Air Monitoring

All 312 air cartridge (AC) samples from indicator and control stations had I-131 concentrations less than the typical LLD of  $6.8E-2$  pCi/m<sup>3</sup>, except for AC-5 which had a low volume due to missed surveillance – see the Missed Surveillance Section (NCR # 179945). The air samplers operated for a total of 99.8% availability for the 2006 year (see Missed Surveillance Section) I-131 was detected in air samples for a six-week period following the Chernobyl incident in April 1986. With this exception, no I-131 has been detected in air samples collected from 1987 through 2006, which is the entire operating history of the plant.

For the period of January 1, 2006 to December 31, 2006; the gross beta activity was detectable in all airborne particulate (AP) samples, with acceptable runtime, from the five indicator locations. The 260 indicator samples had an average concentration of  $1.95E-2$  pCi/m<sup>3</sup>, a value similar to or less than preoperational data of  $2.00E-2$  pCi/m<sup>3</sup>. Similar gross beta activities were observed at the control location in Pittsboro, which had an average concentration of  $1.98E-2$  pCi/m<sup>3</sup> in 51 control samples. Refer to the Missed Surveillance Section for information on the Missed AP sample (NCR # 179945). Figures 4 through 8 provide a graphic representation of the gross beta activity at the indicator locations compared to the control location for the year 2006. AP samples that exhibit an elevated gross beta activity typically have a gamma isotopic analysis done and the results indicate all natural gamma activity. No plant-related gamma activity was observed for any air particulates during 2006. These concentrations are typical of the natural environment and are not attributed to plant operations.

No plant-related gamma activity was detected in quarterly composite filter samples from either the indicator or control locations. Typical LLDs for air particulates are contained in Table 5.

### Drinking Water

The 26 drinking water samples collected at the Lillington Municipal water supply and the 26 control samples collected from the Cape Fear River above the Buckhorn Dam contained less than

detectable I-131 activity ( $< 1.0E+0$  pCi/L) during 2006, except for five anomalous positive results from the control location (DW/SW-38 at Cape Fear) for I-131 during the composite periods 02/20/06, 03/06/06, 03/20/06, 05/01/06, and 11/13/06 (NCR # 186101, 189683, and 214643). This control location is upstream of the plant, thus outside the influence of the plant effluents. No I-131 activity was detected in any of the indicator drinking/surface water samples, except for one (DW/SW-40) during the 03/20/06 composite period (NCR # 189683). The control samples are upstream of the plant input to the river, thus indicating that the I-131 at the control and indicator locations is from a source other than the plant's effluents. This conclusion is reinforced by the fact that during the times in question there was no discharge of Harris Lake water to the Cape Fear River and no detectable I-131 in Harris Lake water. This has typically been the experience for the preoperational and operational period with the exception of 1986 when the fallout from Chernobyl was detected. The water samplers operated for a total of 100% availability for the 2006 year.

The average annual gross beta concentrations at the indicator and control locations were similar in concentrations of  $5.07E+0$  pCi/L and  $4.58E+0$  pCi/L, respectively. The preoperational average was  $4.00E+0$  pCi/L. These concentrations are attributed to the natural environment and are not attributed to plant operations. Figure 9 provides graphic representation of the gross beta activity during 2006 for Location 40 (Lillington) and Location 38 (control at Cape Fear). One result in October 2006 appears out of trend on the high side, but the gamma analysis did not indicate any plant related activity in the sample.

Analyses for gamma-emitting radionuclides from plant operations indicated all concentrations were less than the lower limit of detection for drinking water. Table 5 contains typical LLD values for gamma-emitting radionuclides in drinking water.

Tritium concentrations in the Lillington Municipal Water Supply samples were less than the lower limit of detection ( $3.50 E+2$  pCi/L) (see Footnotes to Table 4, Footnote 6).

### **Fish**

Analyses for gamma-emitting radionuclides in four samples of bottom-feeding species (catfish) and in eight samples of free-swimming species (sunfish and largemouth bass) from the indicator and control locations revealed no detectable activity for 2006, other than naturally occurring

nuclides. This is consistent with the data for 1989-2005. During the Chernobyl period, Cs-134, 137 were detected in both control and indicator samples.

Fish are assumed to be in equilibrium with the tritium concentration in the lake. The total body/organ dose to the maximum exposed individual due to tritium was calculated using Regulatory Guide 1.109, Rev.1, October 1977, Equation A-1, to be 0.010 mrem/year.

Equation A-1  

$$R_{aipj} = C_{ip} U_{ap} D_{aipj}$$

where as:

- $R_{aipj}$  = total body dose in mrem/yr of H-3
- $C_{ip}$  = concentration of nuclide (H-3) in pCi/kg = pCi/L
- $U_{ap}$  = maximum exposed individual's consumption (Reg. Guide 1.109 Table E-5)
- $D_{aipj}$  = ingestion dose factor for total body/organ of individual in  $U_{ap}$  in mrem/pCi (Reg. Guide 1.109 Table E-11, E-12, or E-13)

The Total Body/Organ dose is as follows:

	<b>Child</b>	<b>Teenager</b>	<b>Adult</b>
<b>Consumption of fish kg/yr</b>	6.9	16	21
<b>Dose (Total Body/Organ) mrem/yr</b>	0.007	0.008	0.010

The total body dose and organ dose, due to tritium in the fish, (ingestion dose factor - Reg. Guide 1.109 Table E-11, E-12, and E-13) for the maximum exposed individuals consuming 6.9 kg fish/yr. for a child, 16 kg fish/yr. for a teenager, and 21 kg fish/yr. for an adult are 0.007, 0.008, and 0.010 mrem/year respectively.

### **Milk/Broadleaf Vegetation**

During 2006, as in all past years with the exception of the Chernobyl period, no I-131 concentrations were detected in control milk samples. Gamma analyses revealed no detectable radioactivity from plant operations. The only detectable gamma activity consistently identified in each milk sample was potassium-40 (K-40). This is a natural occurring nuclide in any organic material. The K-40 concentrations in the milk control samples range from 1.05E+3 pCi/L-1.53E+3 pCi/L. Other natural occurring nuclides are identified in some of the milk samples.

In May of 1997, the Maple Knoll Dairy (indicator MK-42 - located in the SSE sector) ceased operations. In lieu of the semimonthly milk samples, per HNP ODCM Table 3.12-1, broadleaf vegetation samples were collected in both the South (S) and SSW sectors.

Broadleaf sampling is conducted since no milk animals are available within a radius of approximately five miles of the plant and is used to simulate dose to an individual via the milk pathway for compliance purposes. Broadleaf vegetation sampling is accomplished by collecting monthly, three different species of samples, when available, at two locations at the site boundary (two indicator locations of the highest predicted annual average ground level D/Q) and at the control location (BL-5 in the NNW sector at greater than 12 miles). The highest predicted annual average ground level D/Q (ODCM Table A-1 through A-4) was at the site boundary in both the South sector at 1.36 miles (BL-65) and SSW sector at 1.33 miles (BL-66). The control location (BL-5) was introduced into the environmental sampling program for HNP in January 2004. The gamma analyses on the broadleaf vegetation did not detect any plant-related radioactivity in any of the broadleaf vegetation (Dogwood, Fig Leaf, Maple, Oak, and Sweetgum) in 2006, except for Cs-137 on a broadleaf vegetation (Dogwood) sample for a single occurrence of 7.35E-2 pCi/gm for BL-66 in July of 2006.

### **Surface Water**

Surface water samples were collected (weekly) and analyzed (bi-weekly) for I-131. Water samples collected during 2006 contained less than detectable I-131 activity ( $< 1.0E+0$  pCi/L), except for five anomalous positive results from the control location (DW/SW-38 at Cape Fear) for I-131 during the composite periods 02/20/06, 03/06/06, 03/20/06, 05/01/06, and 11/13/06 (NCR # 186101, 189683, and 214643). This control location is upstream of the plant, thus

outside the influence of the plant effluents. No I-131 activity was detected in any of the indicator drinking/surface water samples, except for one SW/DW-40 sample during the 03/20/06 composite period (NCR # 189683). The control samples are upstream of the plant input to the river, thus indicating that the I-131 at the control and indicator locations is from a source other than the plant's effluents. This conclusion is reinforced by the fact that during the times in question there was no discharge of Harris Lake water to the Cape Fear River and no detectable I-131 in Harris Lake water. The water samplers operated for a total of 100% availability for the 2006 year.

Average gross beta concentrations at the indicator and control locations were  $4.67\text{E}+0$  pCi/L and  $4.58\text{E}+0$  pCi/L, respectively, in 2006, indicating no adverse influence from plant operations (See Figure 10). One result in October 2006 appears out of trend on the high side, but the gamma analysis did not indicate any plant related activity in the sample.

Surface water samples were analyzed for gamma and tritium radioactivity. All concentrations of man-made gamma-emitters were less than their respective lower limits of detection (see Table 5).

The annual average tritium concentration in Harris Lake was  $4.73\text{E}+3$  pCi/L with minimum and maximum values of  $3.15\text{E}+3$  pCi/L and  $6.37\text{E}+3$  pCi/L, respectively (see Figure 11). The average Harris Lake tritium concentration showed a decrease in tritium compared to the annual average of  $5.94\text{E}+3$  pCi/L in 2005. This concentration remains well below regulatory limits. The tritium liquid release program is optimized by releasing liquid effluents during periods of high rainfall to minimize the impact of the tritium concentration in the lake.

### **Ground Water**

Ground water samples are collected on site at HNP for gamma and tritium analysis. The measured concentrations of the gamma analyses indicated concentrations below their required Lower Limits of Detection (LLD) as specified in the Harris Plant ODCM (docket No. STN-50-400) in Table 4.12-1 titled "Detection Capabilities For Environmental Sample Analysis Lower Limit of Detection (LLD)" for the year 2006.

The measured tritium concentrations were below the required HNP ODCM Table 4.12-1 LLD for environmental samples. These limits are 2000 picocuries per Liter (pCi/L) for a drinking water pathway and 3000 pCi/L if no drinking water pathway exists. HNP administratively established a ground water tritium analysis LLD of 350 pCi/L, which is well below the requirements specified in the HNP ODCM.

The ground water tritium analysis determined that there was no detectable tritium concentration present based on the LLD specified in the HNP ODCM for 2006. Trace levels of tritium, below the 2000 pCi/L ODCM LLD, but above the HNP administrative LLD (350 pCi/L) were detected in ground water Location 58 (0.5 mile WSW Sector N Bank ESW Intake) (see Table 4 on page 16). Data trends and hydrology study results indicate that the probable source of the tritium in location 58 is from Harris Lake. Therefore, location 58 was removed from the groundwater monitoring program. The ground water wells, located on site at HNP, are all abandoned wells and are not a water supply for drinking or irrigation; therefore, there is no radiological dose via this pathway.

### **Shoreline Sediment**

Shoreline sediment samples were collected semiannually in 2006 from (1) opposite the discharge structure and (2) near the main dam. Gamma analyses of the shoreline sediments detected all natural activity in the samples collected during 2006. No long-term trends are readily observed in these samples.

### **Bottom Sediment**

The 2006 data shows Cobalt (Co)-60 ( $1.21\text{E}+0 - 1.25\text{E}+0$  pCi/gm dry) and Cesium (Cs)-137 ( $1.86\text{E}-1 - 2.36\text{E}-1$  pCi/gm dry) activity in the indicator sample, which is sampled semiannually. The bottom sediment sample from Harris Lake poses no radiological dose to the general public via this pathway due to the fact that it is not easily accessible (i.e. bottom sediment is approximately forty to sixty feet under water). These samples are for long-term trends for liquid effluents.

### **Food Crops**

In addition to milk sampling (or broadleaf vegetation sampling), a food product sampling program was maintained. Various crops were collected during the growing season(s), which continued year round. The species selected were primarily broad-leaf vegetables which are most sensitive to direct fallout of airborne radioactive particulates. Crops sampled in 2006 included cabbage, collards, lettuce, mustard greens, squash, tomatoes, and turnips and greens. Gamma analyses of the food crops detected no plant-related activity in 22 samples from indicator locations and 14 samples from control locations collected in 2006.

### **Aquatic Vegetation**

The 2006 data shows that there were three aquatic vegetation indicator samples collected from Harris Lake, which are sampled annually. The aquatic vegetation samples from Harris Lake pose no radiological dose to the general public by the ingestion pathway. Gamma analyses of the aquatic vegetation detected Cobalt (Co)-60 ( $2.03\text{E}-2$  pCi/gm wet, Single Value) in one out of the three indicator samples collected during 2006 (see Table 4). No long-term trends are readily observed in these samples.

### **External Radiation Exposure**

Thermoluminescent dosimeters (TLDs) were used to monitor ambient radiation exposures in the plant environs. The average quarterly exposure at the indicator and control locations was 12.1 mR and 15.5 mR, respectively. The highest indicator location was 9.2 miles ESE of the plant (Fuquay Varina at the old CP&L office) and its average was 15.6 mR/qtr. The differences among these locations are attributed to variations in soils, local geology, and are not the result of plant operations.

Comparison of the quarterly TLD exposure within approximately 2 miles (inner ring) of the plant with that at approximately 5 miles (outer ring) is presented in Figure 12. These data illustrate that the quarterly inner ring TLD exposures are slightly less than the quarterly outer ring TLD exposures (differences range from 0.06 mR to 0.35 mR).

## **MISSED SURVEILLANCES**

### **Air Cartridge and Air Particulates**

Any REMP weekly air samples (Air Cartridge – AC or Air Particulate – AP) that exceed 30 hours of down time in a surveillance period will be reported as a “missed surveillance”. However, this sample will still be counted and the data reported; whereas a “missed sample” will have no data reported. There was one missed sample and one missed surveillance for part of a week in December 2005 and January 2006.

#### **Missed Samples:**

- AP - 5; January 3, 2006 (December 2005 – January 2006) – Down time of 146.5 hours due to the failure of the Uninterruptible Power Supply (UPS) for the air sampler (NCR # 179945). This was also noted in the 2005 Annual Radiological Environmental Operating Report.

#### **Missed Surveillances:**

- AC - 5; January 3, 2006 (December 2005 – January 2006) – Down time of 146.5 hours due to the failure of the UPS for the air sampler (NCR # 179945). This was also noted in the 2005 Annual Radiological Environmental Operating Report.

### **Food Crops**

Food crops were not available from any garden location for sampling during May of 2006. During the remainder of the year, January through December, inadequate food crop samples (3 different kinds from each location) were available from each sample location in 2006. The farmers’ and individuals’ gardens at each sample location did not plant or produce three (3) different kinds of food crops in 2006; which was mostly due to seasonal unavailability, lack of sufficient quantity planted or lack of a variety of crops planted, and crops too small to be harvested at the time of collection. One sample location has not been able to supply any food crops in 2005 or in 2006, location 62. Based on NCR # 141151, sampling of the gardens listed in the HNP ODCM goes above and beyond regulatory guidance since none of the gardens identified during the annual Land-Use Census, including the gardens identified in the HNP ODCM, are irrigated by water in which liquid plant wastes have been discharged. Therefore, the absence of food crops from these locations does not constitute a failure to monitor a pathway.



Nuclear condition reports were written to document food crop unavailability (NCR # 196153, 204593, and 204354). Food crops no longer are required to be collected as of July 27, 2006, Revision 18 of HNP ODCM; therefore, any food crops collected is above and beyond requirements, but will appear in the current years data report.

### **Milk / Broad Leaf Vegetation**

If milk sampling cannot be performed, then 3 different kinds of broad leaf vegetation nearest each of two different offsite locations of highest predicted annual average ground level D/Q shall be sampled. Broadleaf vegetation samples were not available for sampling due to seasonal unavailability during January, February, March, April, October, November, and December of 2006 (NCR # 196152 and 227414).

### **TLDs**

Two TLD samples, out of a possible 176 TLD samples (indicator and control locations), were missing during 2006.

- TLD # 26 Second Quarter 2006      TLD # 26 was missing in the field due to fallen tree near the TLD site, dislodging the TLD cage. The area was searched, but the TLD could not be located (NCR # 199680).
  
- TLD # 34 Third Quarter 2006      TLD # 34 was missing in the field. The area was searched, but the TLD could not be located (NCR # 208727).

## **ANALYTICAL PROCEDURES**

### **Gross Beta**

Gross beta radioactivity measurements are made utilizing a Tennelec Low-Background Alpha/Beta Counting System. The LLD for air particulates is approximately  $5.3E-3$  pCi/m<sup>3</sup> for HNP samples. Air particulate samples are mounted in 2-inch stainless steel planchets and counted directly.

Gross beta activity in drinking and surface waters is determined by evaporating 1 liter of the sample and counting a planchet on a Tennelec Low-Background Alpha/Beta Counting System for 50 minutes. Typical LLD for gross beta is  $1.2E+0$  pCi/L.

### **Tritium**

Liquid samples requiring tritium analysis are treated with a small amount of sodium hydroxide, potassium permanganate crystals, and then distilled. Five milliliters of the distillate are mixed with thirteen milliliters of liquid scintillation cocktail and counted in a liquid scintillation counter. Samples are counted for 200 minutes with an approximate LLD of  $3.50E+2$  pCi/L.

### **Iodine-131**

Iodine-131 airborne concentrations are analyzed by the intrinsic germanium (Ge) spectrometry systems. The cartridges are placed on the detector, and each charcoal cartridge is counted individually with an LLD of  $6.8E-2$  pCi/m<sup>3</sup>.

Iodine-131 in milk and drinking water is determined by an instrumental method. Analysis involves passing 4 liters over an anion exchange resin and direct gamma analysis of the resin with an intrinsic Ge detector. The LLD using the Ge detector is approximately  $1.0E+0$  pCi/L using 25,000-second and 40,000-second count times respectively.

### **Gamma Spectrometry**

Gamma samples are analyzed by the intrinsic germanium detectors with thin aluminum windows housed in steel and lead shields. The analyzer system is the Canberra Nuclear 9900 Gamma Spectroscopy System. Table 5 summarizes LLD values derived from using the instrument with the worst sensitivity, typical sample volumes, typical count times, typical worst background count, and worst case on decay (from collection to counting).

Air particulate filter quarterly composites are placed in a Petri dish and analyzed directly for 7,000 seconds.

Liquid samples, except milk, are boiled down to a small volume, transferred to a Poly Bottle (PB-50 beaker) and analyzed groundwater samples for 7,000 seconds and others for 40,000 seconds. One-liter milk samples are analyzed in a 1-liter Marinelli beaker for 11,000 seconds.

Shoreline and bottom sediments are dried, weighed, and then analyzed in a 1-liter Marinelli beaker for 1,500 seconds.

Food crop, aquatic vegetation, and broadleaf vegetation samples are weighed as sampled and analyzed in a Marinelli beaker for 7,500 seconds.

Fish samples are cleaned, dressed, (raw, edible portions) and placed in a 1-liter Marinelli beaker for gamma analysis using a count time of 1,500 seconds.

### **Thermoluminescent Dosimetry**

Each area monitoring station includes a TLD packet which is a polyethylene bag containing three calcium sulfate phosphors contained in a Panasonic UD-814 badge. The TLD is light tight and the bag is weather-resistant.

Dosimeters are machine annealed before field placement. Following exposure in the field, each dosimeter is read utilizing a Panasonic TLD reader. This instrument integrates the light photons emitted from traps as the dosimeter is heated. Calibration is calculated using dosimeters irradiated to known doses for each set of dosimeters measured. Prior to the measurement of each

dosimeter, the instrument is checked through use of an internal constant light source as a secondary standard.

The exposure reported is corrected for exposure received in transit and during storage through the use of control dosimeters.

### **Interlaboratory Comparison Program**

The Radiochemistry Laboratory at the Harris Energy & Environmental Center in New Hill, North Carolina, provides radioanalytical services for Carolina Power & Light Company's, doing business as Progress Energy Carolinas, Inc., nuclear plant radiological environmental surveillance programs. In fulfillment of ODCM Operational Requirements, the laboratory is a participant in the Analytics, Inc., Environmental Cross-Check Program and uses its performance in this program as a major determinant of the accuracy and precision of its analytical results.

During 2006, 133 analyses were completed on 22 samples representing seven major environmental media (i.e., water, milk, air filters, air filters composite, soil, air cartridges, and simulated vegetation). Data on the known activities, the uncertainties, and the ratios to the known for the 133 analyses have been received from Analytics, Inc. The results shall be compared to the criteria established in the NRC Inspection Manual (Procedure 84750) for Radioactive Waste Treatment, Effluent, and Environmental monitoring.

All of the 133 analyses were within the acceptance criteria, except for one Gamma on Filter for Cs-134 result which fell outside the acceptable criteria (NCR # 204953). During 2006, each individual measurement (587 analyses) was evaluated; with all but six (6) of the individual measurements falling within the acceptable criteria (NCR # 199276, 204952, 204953, and 226140). Any results that lie outside the ratio criteria will have an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors. Complete documentation of any evaluation will be available and provided to the NRC upon request.

### **Lower Limits of Detection**

All samples analyzed met the LLD required by the ODCM, with the exception noted in Interpretations and Conclusions section/ Air Monitoring subsection.

**Table 5**  
**Typical Lower Limits of Detection (A Priori)**  
**Gamma Spectrometry**

<b>Drinking Water/Surface Water Samples</b>	
<b>Isotope</b>	<b>LLD (pCi/L)</b>
Mn-54	2
Co-58	3
Fe-59	4
Co-60	2
Zn-65	4
Zr-Nb-95	3 / 3
I-131	7
Cs-134	2
Cs-137	2
Ba-La-140	16 / 5
*I-131 (Separation Procedure)	*0.66
<b>Air Particulates (Quarterly Composite)</b>	
<b>Isotope</b>	<b>LLD (pCi/m<sup>3</sup>)</b>
Cs-134	0.002
Cs-137	0.002
<b>Milk</b>	
<b>Isotope</b>	<b>LLD (pCi/L)</b>
Cs-134	14.5
Cs-137	13
Ba-La-140	46 / 13
*I-131 (Separation Procedure)	*0.71
<b>Sediment</b>	
<b>Isotope</b>	<b>LLD (pCi/kg dry)</b>
Cs-134	148
Cs-137	121
<b>Fish</b>	
<b>Isotope</b>	<b>LLD (pCi/kg wet)</b>
Mn-54	97
Co-58	102
Fe-59	238
Co-60	127
Zn-65	251
Cs-134	128
Cs-137	115

\* Instrumental analysis of resin concentrates of samples.

**Table 5 (Cont.)  
 Typical Lower Limits of Detection (A Priori)  
 Gamma Spectrometry**

<b>Food Products and Vegetation</b>	
<b>Isotope</b>	<b>LLD (pCi/kg wet)</b>
I-131	59
Cs-134	47
Cs-137	54
<b>Aquatic Vegetation</b>	
<b>Isotope</b>	<b>LLD (pCi/kg wet)</b>
I-131	39
Cs-134	27
Cs-137	31
<b>Ground Water</b>	
<b>Isotope</b>	<b>LLD (pCi/L)</b>
Mn-54	7
Co-58	11
Fe-59	17
Co-60	12
Zn-65	18
Zr-Nb-95	13 / 9
I-131	7
Cs-134	9
Cs-137	8
Ba-La-140	32 / 10

# LAND-USE CENSUS

## PURPOSE OF THE LAND-USE CENSUS

The land-use census identifies the pathways (or routes) that radioactive material may reach the general populations near commercial nuclear generating stations. This is accomplished by completing studies each year that identify how the surrounding lands are used by the population. A comprehensive census of the use of the land within a five-mile distance of the plant is completed during the growing season each year. This information is used for dose assessment and to identify changes to the stations sampled and the type of samples. These results ensure that the Radiological Environmental Monitoring Program (REMP) is based upon current data regarding human activity in the vicinity of the plant. Therefore, the purpose of the land-use census is to ensure the monitoring program is current, as well as provide data for the calculation of estimated radiation exposure.

The pathways evaluated are:

- Ingestion Pathway - Results from eating food crops that may have radioactive materials deposited on them, incorporated radioactive materials from the soil or atmosphere. Another pathway is through drinking milk from local cows or goats if these are present and if not then broadleaf vegetation is collected in lieu of milk. The grass used to feed these animals may have incorporated or had deposited on it radioactive materials that can be transferred to the milk.
- Direct Radiation Exposure Pathway- Results from deposition of radioactive materials on the ground or from passage of these radioactive materials in the air.
- Inhalation Pathway- Results from breathing radioactive materials transported in the air.

## Methodology

The following must be identified within the five (5) mile radius of the plant for each of the sixteen meteorological sectors (compass direction the winds may blow, for example NNE [North North East]):

- The nearest resident
- The nearest garden of greater than 500 square feet, producing broadleaf vegetables
- The nearest milk animal

The primary methods are visual inspection from the roadside within the five (5) mile radius and personal contact with the individuals.

## **2006 Land-Use Census Results**

The 2005 and 2006 results of the survey for the nearest resident, garden, milk and meat animals in each sector are compared in Table 6.

The nearest resident in each sector remained the same from 2005 to 2006, except for the resident in the WNW sector from 2.3 miles to 2.5 miles. No gardens were located within 5 miles of the plant for the NE, S, WNW, and NW sectors. All the gardens located in 2006 were the same as 2005, except that the following garden where the previous year's survey did not find a garden in the E sector; the 2006 survey located a garden at 1.7 miles in the E sector. No meat animals were found in the NE, S, SSW, WNW, and NW sectors in 2006. All meat animals located in 2006 were the same as 2005. The dairy in the SSE sector at 7.0 miles from the plant ceased operation in 1997 and there still remain no milk animals near the plant. Harris Lake County Park was included in the 2006 survey, even though there are not yet permanent residents on site. There are plans in the future for rangers and a campground.



**Table 6**

**Land-Use Census Comparison (2005-2006)  
Nearest Pathway (Miles)**

SECTOR	RESIDENT		GARDEN		MEAT ANIMAL		MILK ANIMAL	
	2005	2006	2005	2006	2005	2006	2005	2006
N	2.2	2.2	2.2	2.2	2.2	2.2	---	---
NNE	1.9	1.9	1.9	1.9	1.9	1.9	---	---
NE	2.3	2.3	---	---	---	---	---	---
ENE	1.6	1.6	1.8	1.8	1.8	1.8	---	---
E	1.7	1.7	---	1.7*	1.7	1.7	---	---
ESE	2.6	2.6	4.6	4.6	4.6	4.6	---	---
SE	2.6	2.6	4.1	4.1	2.6	2.6	---	---
SSE	4.2	4.2	4.2	4.2	4.2	4.2	---	---
S	5.3	5.3	---	---	---	---	---	---
SSW	3.8	3.8	3.8	3.8	---	---	---	---
SW	2.9	2.9	2.9	2.9	2.9	2.9	---	---
WSW	4.5	4.5	4.5	4.5	4.5	4.5	---	---
W	3.0	3.0	3.1	3.1	3.1	3.1	---	---
WNW	2.3	2.5*	---	---	---	---	---	---
NW	2.4	2.4	---	---	---	---	---	---
NNW	1.6	1.6	2.0	2.0	2.0	2.0	---	---

\* Represents a change from the previous year.

Sector and distance determined by Global Positioning System.

Figure 4 HNP From 1/1/2006 To 12/31/2006  
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

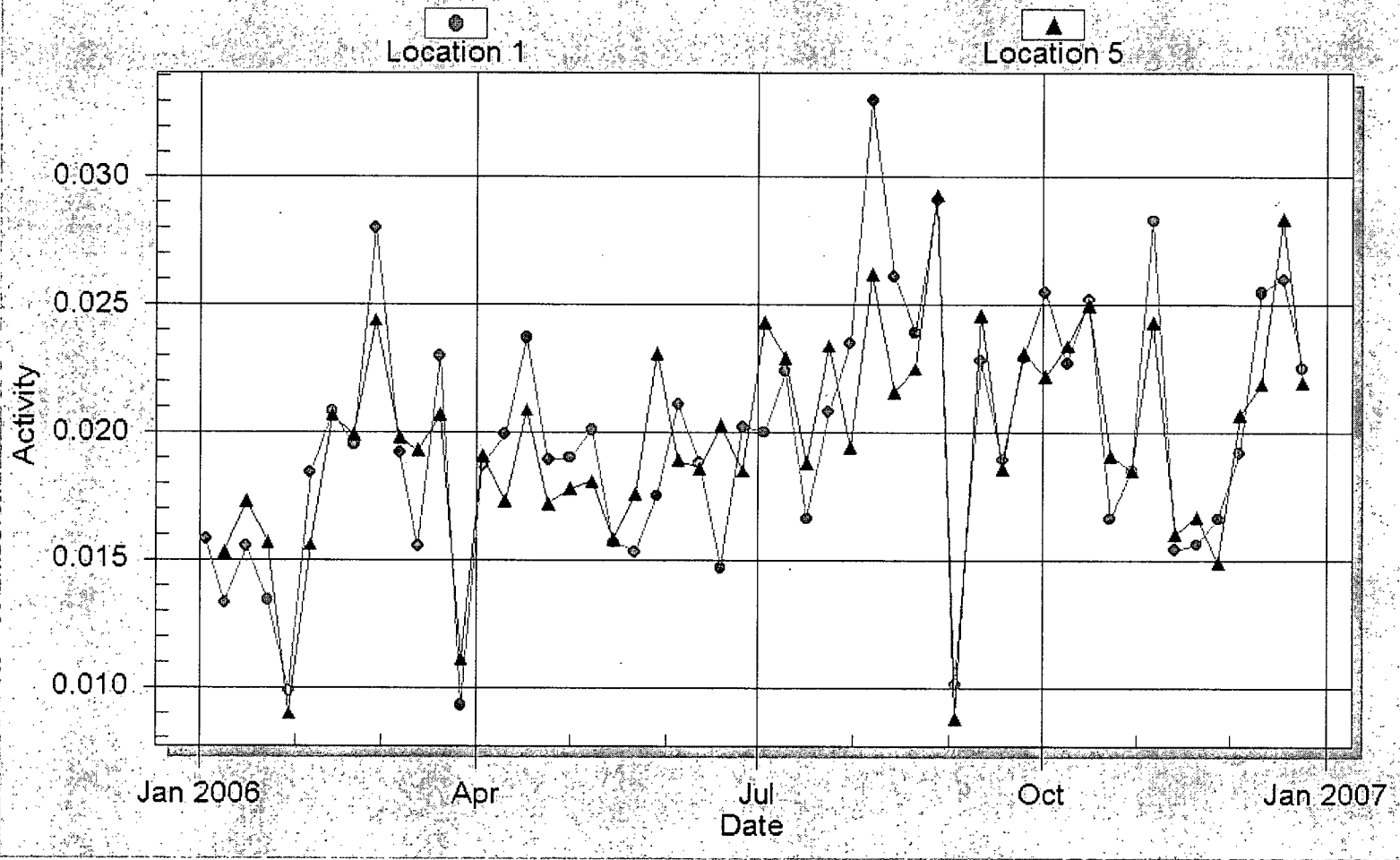


Figure 5 HNP From 1/1/2006 To 12/31/2006  
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

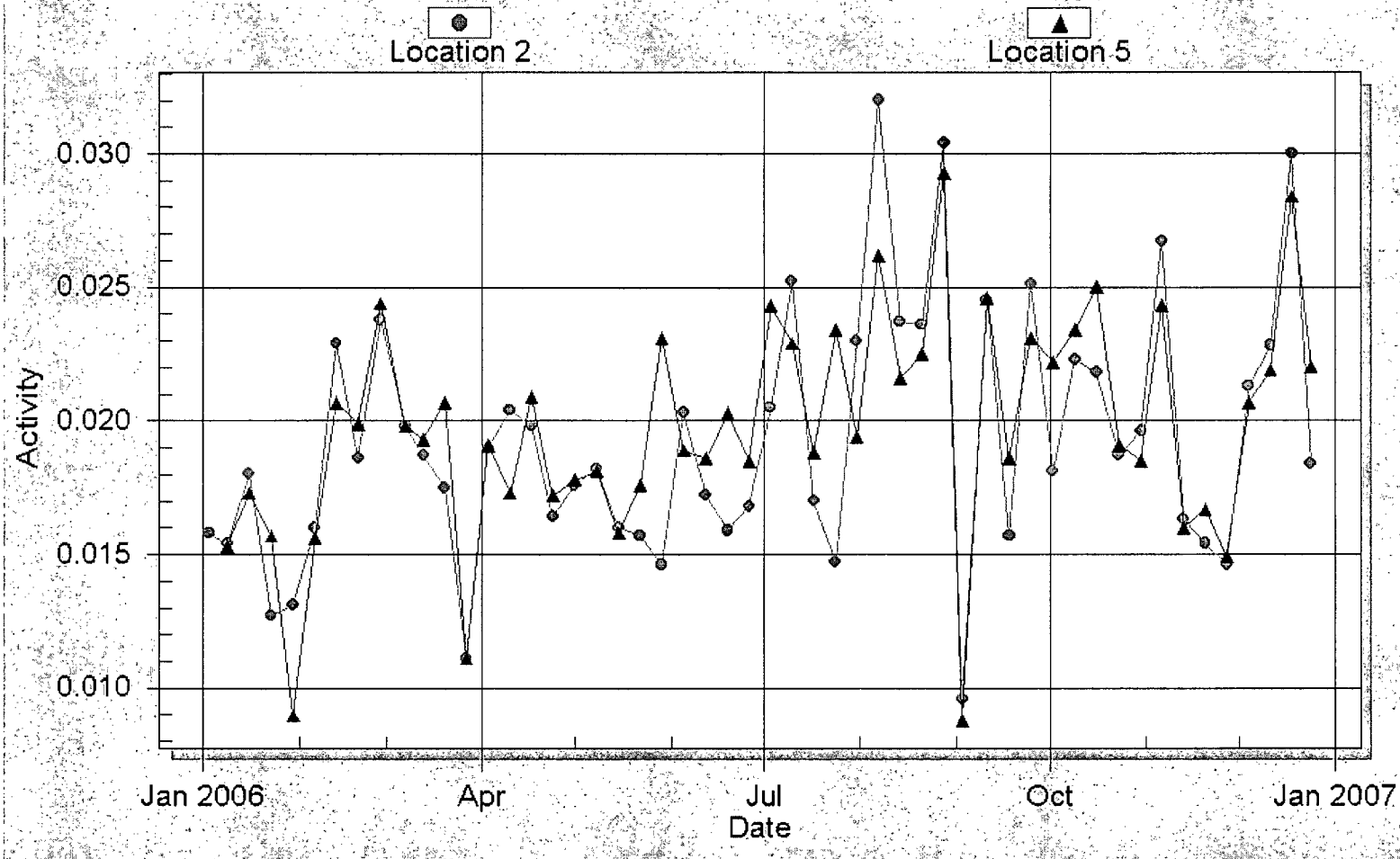


Figure 6 HNP From 1/1/2006 To 12/31/2006  
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

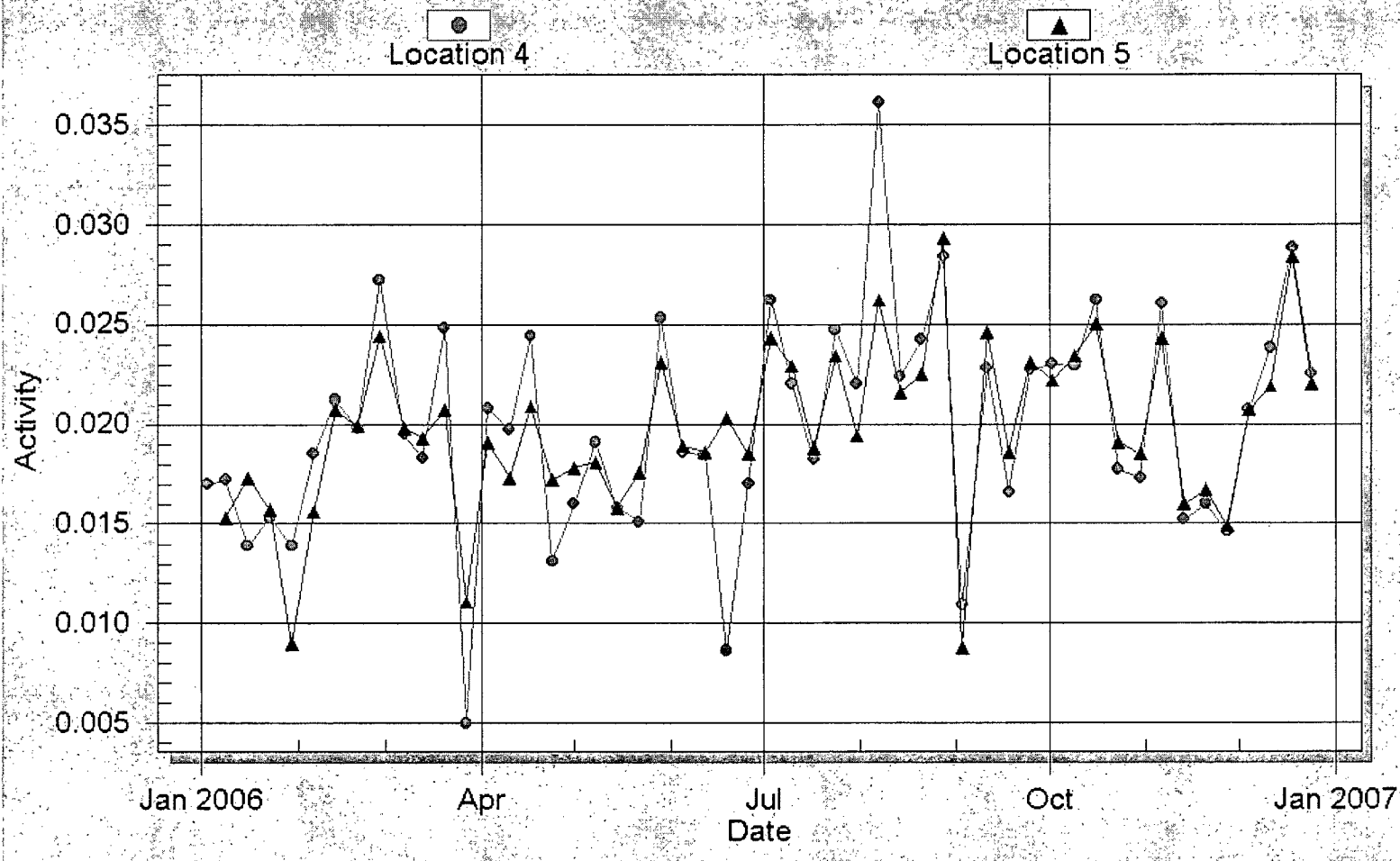


Figure 7 HNP From 1/1/2006 To 12/31/2006  
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

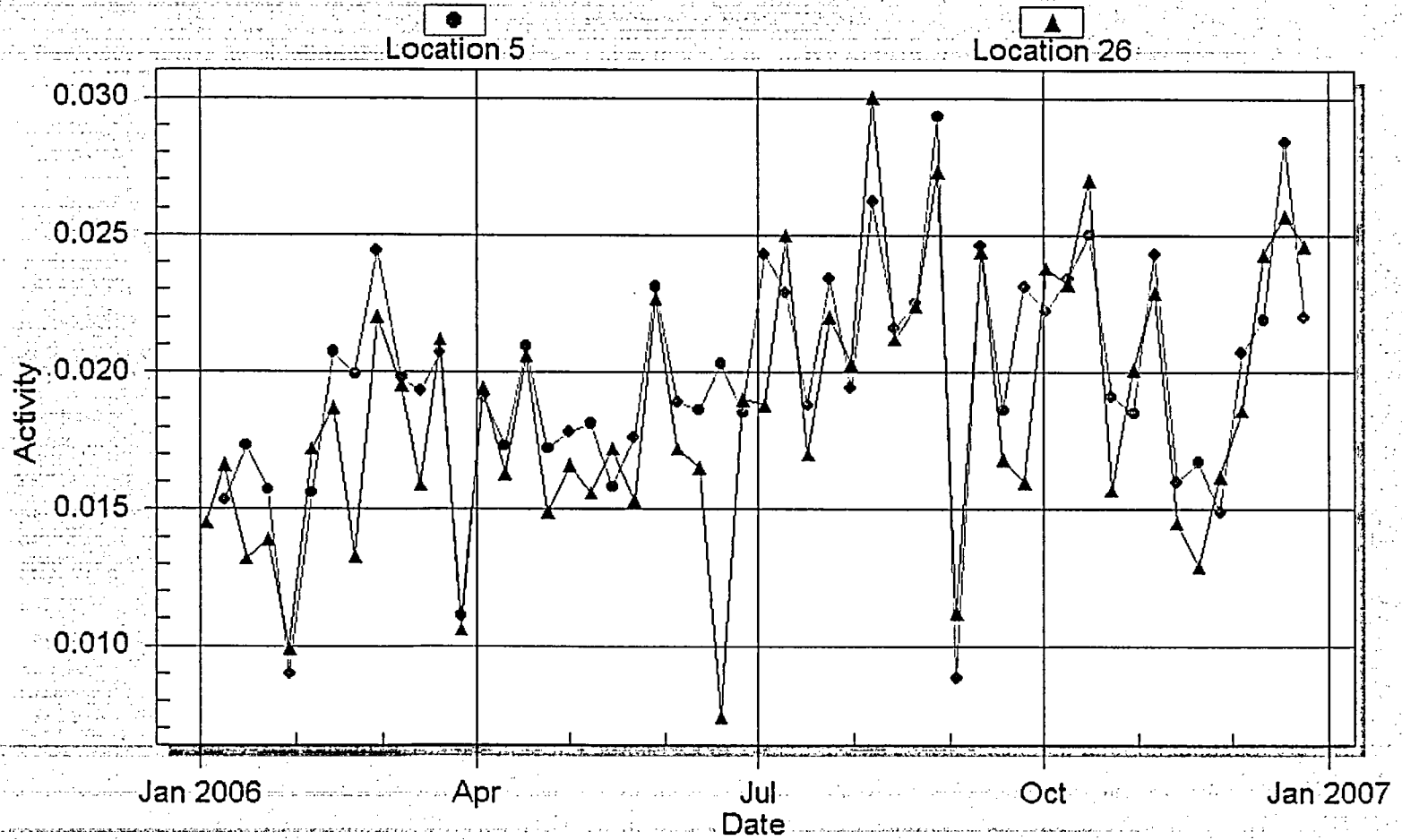


Figure 8 HNP From 1/1/2006 To 12/31/2006  
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

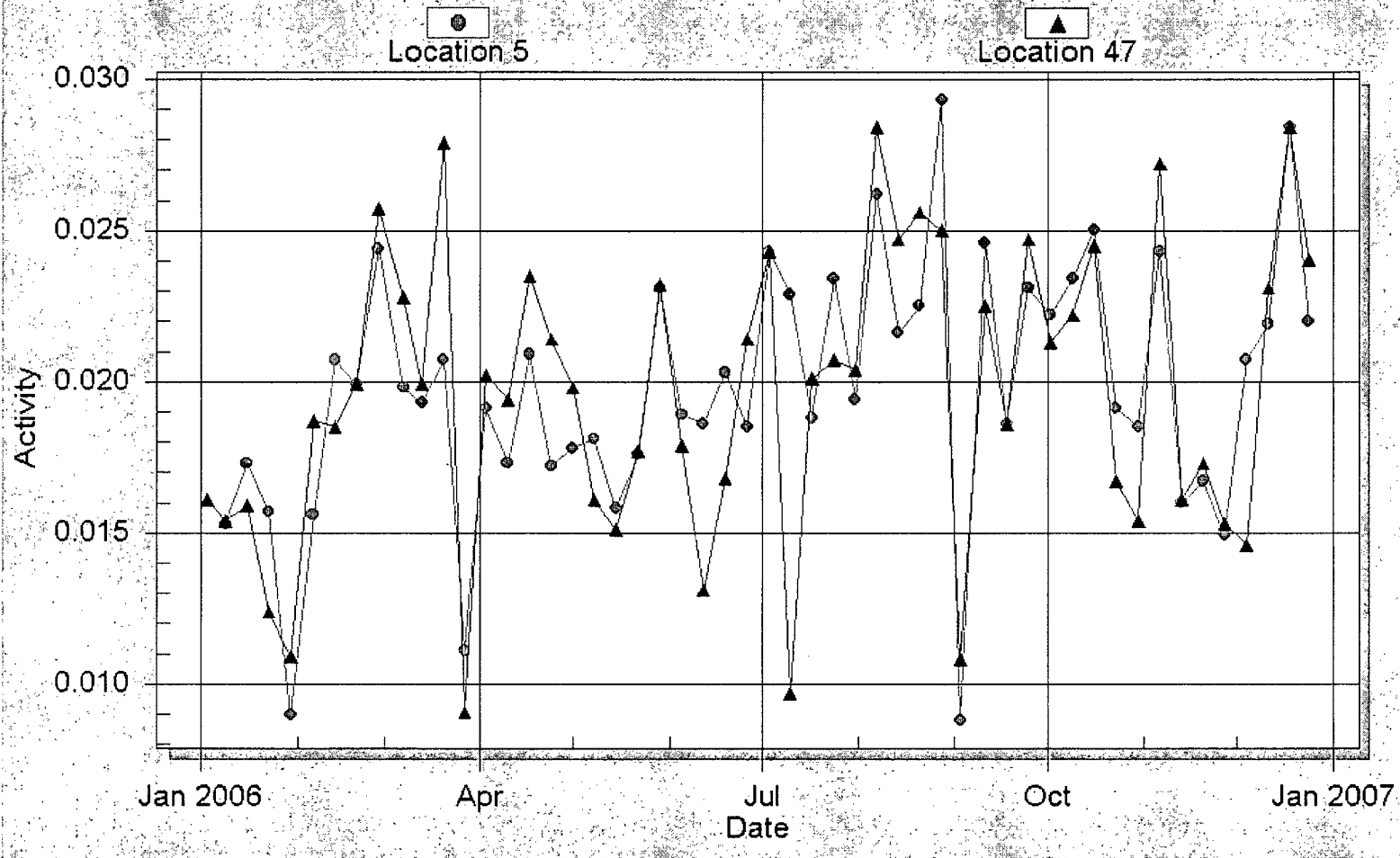


Figure 9 HNP From 1/1/2006 To 12/31/2006  
DRINKING WATER for GROSS BETA - Activity (pCi/Liter)

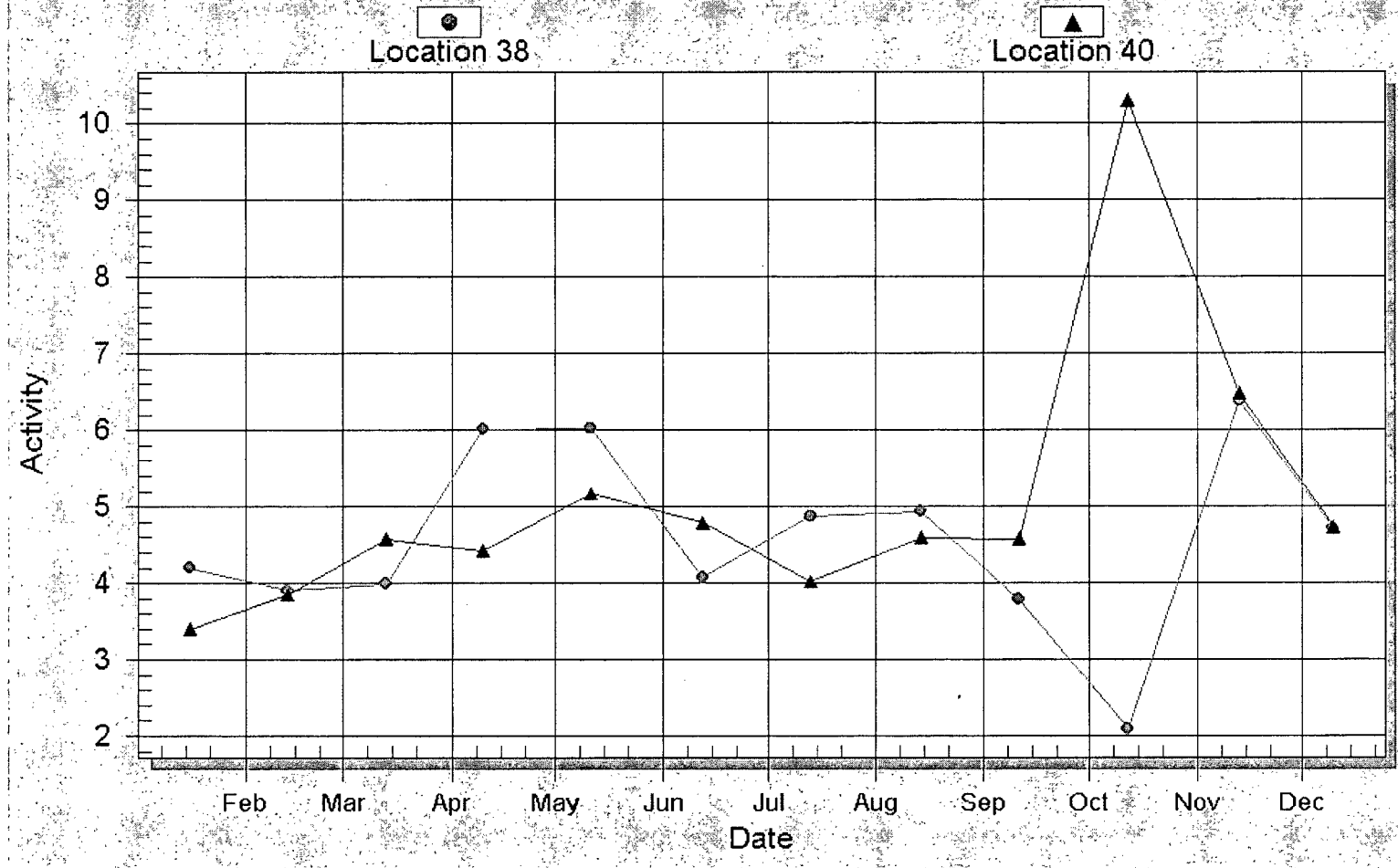


Figure 10 HNP From 1/1/2006 To 12/31/2006  
SURFACE WATER for GROSS BETA - Activity (pCi/Liter)

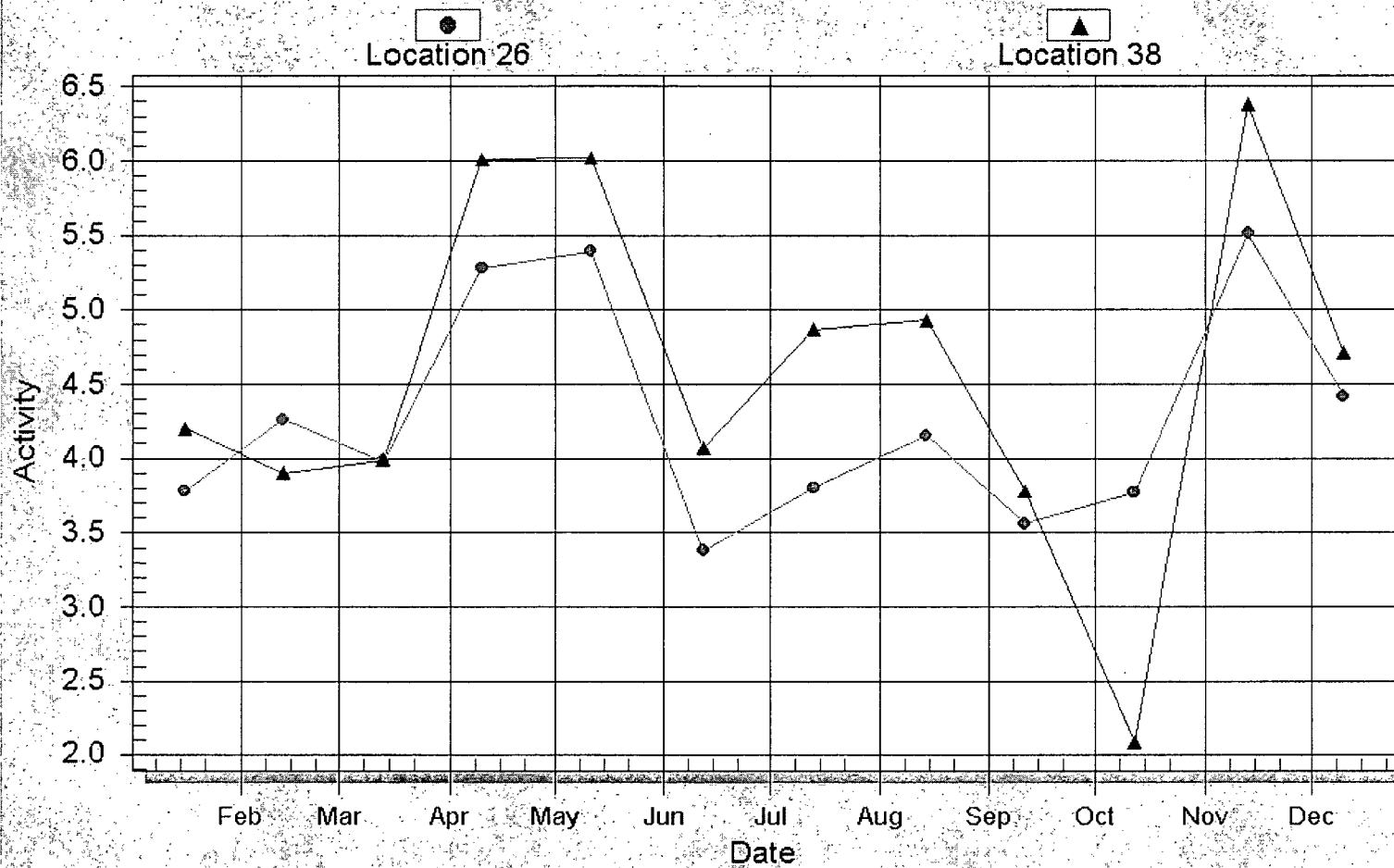




Figure 11 HNP 2006 Surface Water Tritium Activity

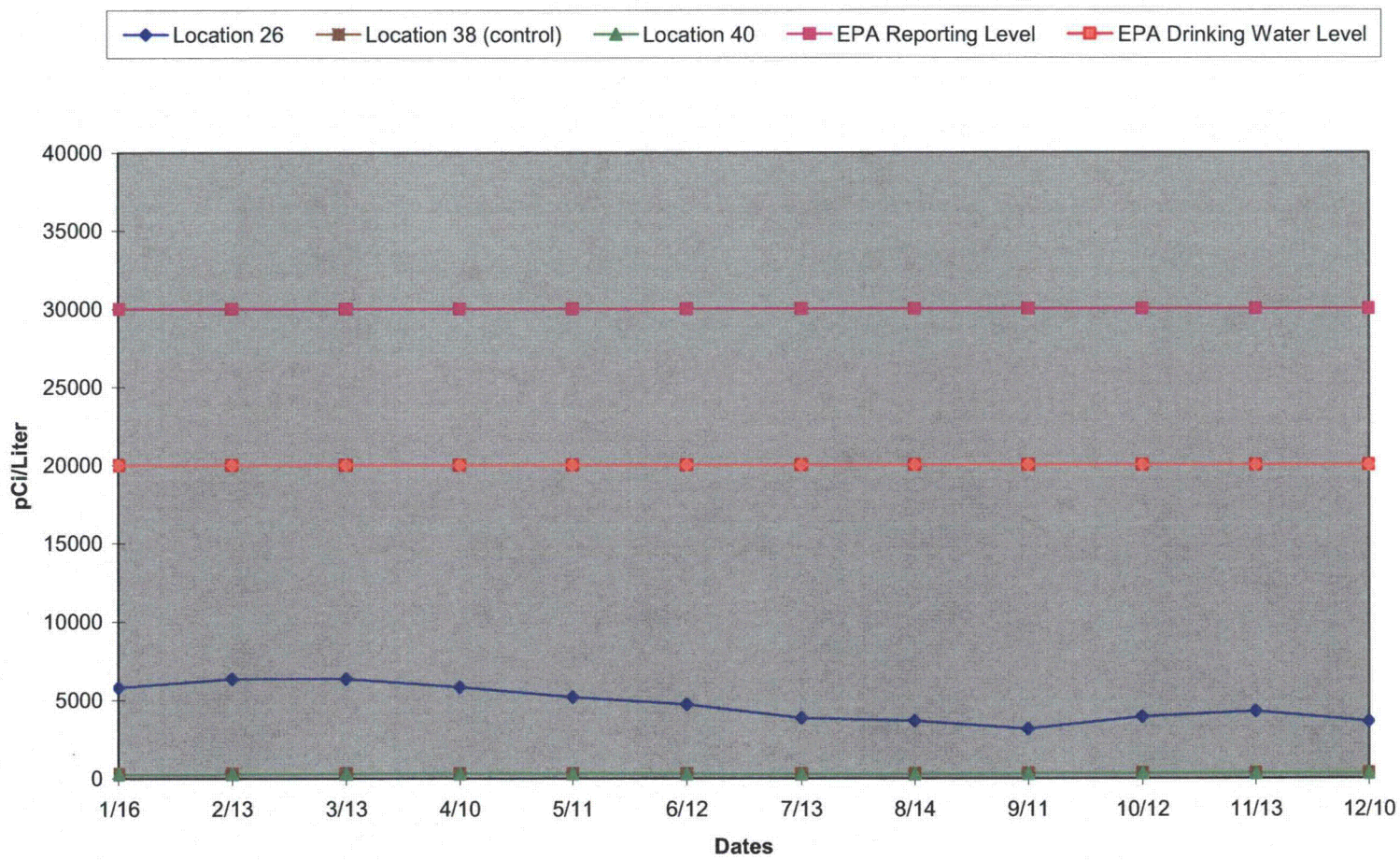
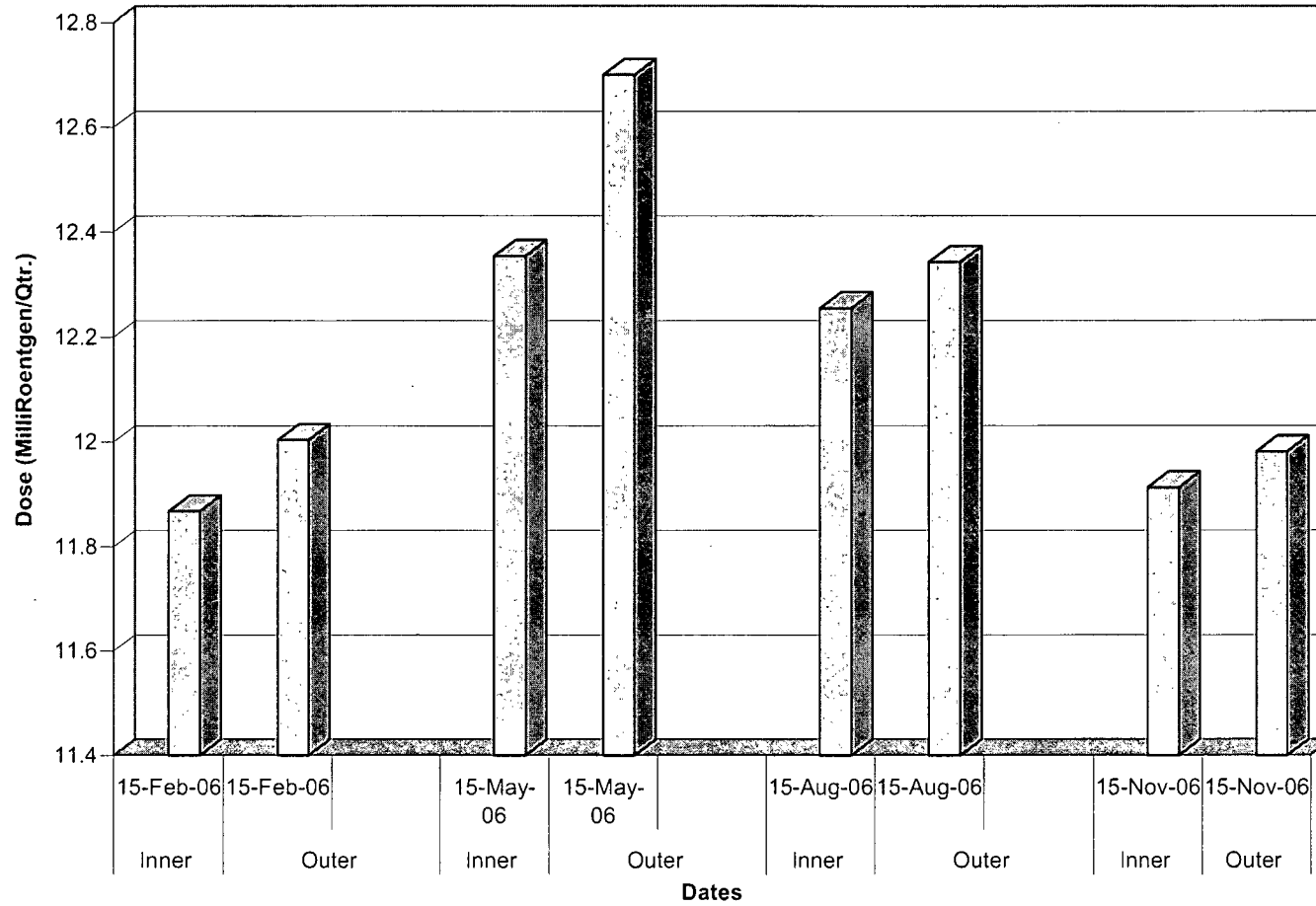


Figure 12 HNP 2006 TLD Averages for Inner and Outer Ring Locations



# APPENDIX

**TABLE 5 (cont.)  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

**Shearon Harris Nuclear Power Plant  
Wake County, North Carolina**

**Docket Number: STN 50-400  
Calendar Year: 1996**

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Typical Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)</sup> Range	Location w/Highest Annual Mean		Control Locations Mean <sup>(2)</sup> Range
				Name, Distance, and Direction	Mean <sup>(2)</sup> Range	
Food Crop (pCi/g. wet)	Gamma 13 <sup>(3)</sup>	Refer to Table 6	All less than LLD		All less than LLD	All less than LLD
Ground water (pCi/L)	Gamma 20	Refer to Table 6	All less than LLD		All less than LLD	No control
	Tritium 20	3.25E+2 (15/20) <sup>(6)</sup> 1.00E+3 (5/20) <sup>(6)</sup>	7.92E+2 (2/20) 7.43E+2 - 8.40E+2	North Bank ESW Intake 0.5 mile WSW	7.92E+2 (2/20) 7.43E+2 - 8.40E+2	No control
Milk (pCi/L)	I-131 48 <sup>(3)</sup>	1.0E+0	All less than LLD		All less than LLD	All less than LLD
	Gamma 48 <sup>(3)</sup>	Refer to Table 6	All less than LLD		All less than LLD	All less than LLD
Shoreline Sediments (pCi/g. dry)	Gamma 8	Refer to Table 6	All less than LLD		All less than LLD	No control
Surface Water <sup>(4)</sup> (pCi/L)	I-131 106	1.0E+0	All less than LLD		All less than LLD	All less than LLD
	Gross Beta 36	1.0E+0	3.32E+0 (24/24) 2.37E+0 - 4.97E+0	Lillington Cape Fear River 17.2 miles SSE	3.70E+0 (12/12) 2.75E+0 - 4.97E+0	3.68E+0 (12/12) 2.75E+0 - 4.61E+0
	Gamma 36	Refer to Table 6	All less than LLD		All less than LLD	All less than LLD
	Tritium 36	3.25E+2 (14/36) <sup>(6)</sup> 1.00E+3 (22/36) <sup>(6)</sup>	4.42E+3 (13/24) 4.55E+2 - 6.65E+3	Harris Lake 4.7 miles S	4.75E+3 (12/12) 3.86E+3 - 6.65E+3	All less than LLD
Direct Radiation (mR/qr) <sup>(5)</sup>	TLD 163 <sup>(3)</sup>		1.22E+1 (159/159) 1.12E+1 - 1.34E+1	Apex at Jones Park 8.7 miles NE-Apex	1.77E+1 (3/3) 1.35E+1 - 2.59E+1	1.60E+1 (4/4) 1.53E+1 - 1.68E+1

# **2006 HNP Radiological Environmental Monitoring TLD Report**

## **Comments**

- All HNP Environmental TLDS were present in 2006, except for the following TLDS:
  - TLD # 26 Second Quarter of 2006
  - TLD # 34 Third Quarter of 2006

# *HNP Radiological Environmental Monitoring TLD Report*

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/15/2006	13.1	1.2
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	14.3	1
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/15/2006	13.7	2.5
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/15/2006	13.8	1.1
2	SR 1134	2/15/2006	14.3	1.5
2	SR 1134	5/15/2006	14.7	0.8
2	SR 1134	8/15/2006	14.6	1.4
2	SR 1134	11/15/2006	14.2	0.5
3	HARRIS E&E CENTER - 2.2 MI NE	2/15/2006	11.7	1.3
3	HARRIS E&E CENTER - 2.2 MI NE	5/15/2006	12.8	1.3
3	HARRIS E&E CENTER - 2.2 MI NE	8/15/2006	12.8	0.8
3	HARRIS E&E CENTER - 2.2 MI NE	11/15/2006	11.7	1.3
4	NEW HILL NEAR 1ST BAPTIST CH	2/15/2006	11.9	1
4	NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	12.2	0.5
4	NEW HILL NEAR 1ST BAPTIST CH	8/15/2006	11.9	0.6
4	NEW HILL NEAR 1ST BAPTIST CH	11/15/2006	11.2	0.8
5	PITTSBORO - CONTROL	2/15/2006	15.5	0.9
5	PITTSBORO - CONTROL	5/15/2006	15.6	0.9
5	PITTSBORO - CONTROL	8/15/2006	16	1
5	PITTSBORO - CONTROL	11/15/2006	15	0.6
6	INT OF SR 1134 AND 1135	2/15/2006	11.5	1.1

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
6	INT OF SR 1134 AND 1135	5/15/2006	12.3	0.8
6	INT OF SR 1134 AND 1135	8/15/2006	11.9	1.2
6	INT OF SR 1134 AND 1135	11/15/2006	11.4	0.8
7	HOUSE RUINS ON SR 1134	2/15/2006	12.8	1
7	HOUSE RUINS ON SR 1134	5/15/2006	13.3	1.5
7	HOUSE RUINS ON SR 1134	8/15/2006	13.2	0.7
7	HOUSE RUINS ON SR 1134	11/15/2006	12.7	1.2
8	DEAD END OF SR 1134	2/15/2006	14.5	1
8	DEAD END OF SR 1134	5/15/2006	12.3	0.7
8	DEAD END OF SR 1134	8/15/2006	15.5	1.3
8	DEAD END OF SR 1134	11/15/2006	11.6	0.6
9	1 MI SW OF HOLLEMANS XRDS ON SR 1130	2/15/2006	10.2	1.2
9	1 MI SW OF HOLLEMANS XRDS ON SR 1130	5/15/2006	10.9	0.5
9	1 MI SW OF HOLLEMANS XRDS ON SR 1130	8/15/2006	10.2	1.9
9	1 MI SW OF HOLLEMANS XRDS ON SR 1130	11/15/2006	10.5	0.6
10	2.0 MI SW OF HOLLEMANS XRDS ON SR 1130	2/15/2006	10.8	0.8
10	2.0 MI SW OF HOLLEMANS XRDS ON SR 1130	5/15/2006	11.5	0.9
10	2.0 MI SW OF HOLLEMANS XRDS ON SR 1130	8/15/2006	11.2	0.7
10	2.0 MI SW OF HOLLEMANS XRDS ON SR 1130	11/15/2006	10.8	0.4
11	EARTHEN DAM AT HARRIS PLANT	2/15/2006	10.6	1
11	EARTHEN DAM AT HARRIS PLANT	5/15/2006	11.6	0.8
11	EARTHEN DAM AT HARRIS PLANT	8/15/2006	11.6	1.3
11	EARTHEN DAM AT HARRIS PLANT	11/15/2006	14.2	2.3
12	1 MI S ON DIRT RD FROM TLD 13	2/15/2006	10.4	1.1

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
12	1 MI S ON DIRT RD FROM TLD 13	5/15/2006	10.8	0.6
12	1 MI S ON DIRT RD FROM TLD 13	8/15/2006	10.1	1.3
12	1 MI S ON DIRT RD FROM TLD 13	11/15/2006	10.2	1.4
13	DIRT RD INT BETWEEN PLANT AND AUX RES	2/15/2006	10.8	1
13	DIRT RD INT BETWEEN PLANT AND AUX RES	5/15/2006	12	0.8
13	DIRT RD INT BETWEEN PLANT AND AUX RES	8/15/2006	11.1	0.7
13	DIRT RD INT BETWEEN PLANT AND AUX RES	11/15/2006	11	0.5
14	DEAD END OF SR 1911	2/15/2006	10.5	1.5
14	DEAD END OF SR 1911	5/15/2006	10.8	2
14	DEAD END OF SR 1911	8/15/2006	10.6	0.8
14	DEAD END OF SR 1911	11/15/2006	10.1	0.9
15	CEMETERY ON SR 1911	2/15/2006	10	1
15	CEMETERY ON SR 1911	5/15/2006	10.6	1.7
15	CEMETERY ON SR 1911	8/15/2006	10.2	1.5
15	CEMETERY ON SR 1911	11/15/2006	10.3	1.5
16	US 1 AT CHATHAM-WAKE CO LINE	2/15/2006	11.6	1.8
16	US 1 AT CHATHAM-WAKE CO LINE	5/15/2006	12.4	0.8
16	US 1 AT CHATHAM-WAKE CO LINE	8/15/2006	12.3	1.9
16	US 1 AT CHATHAM-WAKE CO LINE	11/15/2006	11.8	1.2
17	INT OF US 1 AND AUX RES	2/15/2006	11.4	0.9
17	INT OF US 1 AND AUX RES	5/15/2006	11.9	1.1
17	INT OF US 1 AND AUX RES	8/15/2006	12.1	0.9
17	INT OF US 1 AND AUX RES	11/15/2006	11.3	0.4
18	0.6 MI N ON US 1 FROM TLD 17	2/15/2006	11.9	0.7



*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
18	0.6 MI N ON US 1 FROM TLD 17	5/15/2006	12.6	1.3
18	0.6 MI N ON US 1 FROM TLD 17	8/15/2006	12.6	0.7
18	0.6 MI N ON US 1 FROM TLD 17	11/15/2006	11.9	0.7
19	SR 1142 - OLIVES DAIRY	2/15/2006	11.1	1.4
19	SR 1142 - OLIVES DAIRY	5/15/2006	12.1	0.5
19	SR 1142 - OLIVES DAIRY	8/15/2006	11.5	0.6
19	SR 1142 - OLIVES DAIRY	11/15/2006	11.1	0.5
20	INT OF SR 1149 AND US 1	2/15/2006	14.3	0.9
20	INT OF SR 1149 AND US 1	5/15/2006	14.5	1.6
20	INT OF SR 1149 AND US 1	8/15/2006	14.5	1.4
20	INT OF SR 1149 AND US 1	11/15/2006	13.9	1.6
21	1.3 MI ON SR 1152 FROM INT SR 1153	2/15/2006	11.9	1.2
21	1.3 MI ON SR 1152 FROM INT SR 1153	5/15/2006	10.2	0.5
21	1.3 MI ON SR 1152 FROM INT SR 1153	8/15/2006	12.7	1.2
21	1.3 MI ON SR 1152 FROM INT SR 1153	11/15/2006	9.6	0.5
22	2.0 MI E OF HOLLEMANS XRDS ON SR 1115	2/15/2006	9.9	1.4
22	2.0 MI E OF HOLLEMANS XRDS ON SR 1115	5/15/2006	11	1
22	2.0 MI E OF HOLLEMANS XRDS ON SR 1115	8/15/2006	10.3	0.9
22	2.0 MI E OF HOLLEMANS XRDS ON SR 1115	11/15/2006	10	0.5
23	INT SR 1116 AND SR 1127	2/15/2006	11.9	1
23	INT SR 1116 AND SR 1127	5/15/2006	13	1.7
23	INT SR 1116 AND SR 1127	8/15/2006	12.5	0.8
23	INT SR 1116 AND SR 1127	11/15/2006	12.1	1.2
24	SWEET SPRINGS CHURCH ON SR 1116	2/15/2006	11.8	0.9

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
24	SWEET SPRINGS CHURCH ON SR 1116	5/15/2006	11.8	0.7
24	SWEET SPRINGS CHURCH ON SR 1116	8/15/2006	12.3	0.8
24	SWEET SPRINGS CHURCH ON SR 1116	11/15/2006	11	1.1
25	0.2 MI W OF INT OF SR 1401 AND SR 1402	2/15/2006	13.4	0.7
25	0.2 MI W OF INT OF SR 1401 AND SR 1402	5/15/2006	12.3	0.7
25	0.2 MI W OF INT OF SR 1401 AND SR 1402	8/15/2006	14.5	0.6
25	0.2 MI W OF INT OF SR 1401 AND SR 1402	11/15/2006	11.5	1.2
26	SPILLWAY ON MAIN RES	2/15/2006	11.1	0.7
26	SPILLWAY ON MAIN RES	8/15/2006	12.7	1.9
26	SPILLWAY ON MAIN RES	11/15/2006	12.4	1.4
27	BUCKHORN UNITED METHODIST CH ON NC 42	2/15/2006	9.5	0.7
27	BUCKHORN UNITED METHODIST CH ON NC 42	5/15/2006	10.1	0.7
27	BUCKHORN UNITED METHODIST CH ON NC 42	8/15/2006	9.7	1.6
27	BUCKHORN UNITED METHODIST CH ON NC 42	11/15/2006	9.7	0.7
28	0.6 MI FROM INT SR 1916 AND SR 1924	2/15/2006	10.4	1.2
28	0.6 MI FROM INT SR 1916 AND SR 1924	5/15/2006	10.5	0.9
28	0.6 MI FROM INT SR 1916 AND SR 1924	8/15/2006	10.9	0.8
28	0.6 MI FROM INT SR 1916 AND SR 1924	11/15/2006	10.2	0.5
29	NESTE RESIN CORP ON SR 1916	2/15/2006	13.6	0.9
29	NESTE RESIN CORP ON SR 1916	5/15/2006	15.4	0.6
29	NESTE RESIN CORP ON SR 1916	8/15/2006	13.9	0.9
29	NESTE RESIN CORP ON SR 1916	11/15/2006	13.9	0.5
30	INT OF SR 1972 AND US 1	2/15/2006	9.9	1.1
30	INT OF SR 1972 AND US 1	5/15/2006	10.7	1.3

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
30	INT OF SR 1972 AND US 1	8/15/2006	9.6	2
30	INT OF SR 1972 AND US 1	11/15/2006	10.2	1.5
31	INT OF SR 1910	2/15/2006	9.6	0.8
31	INT OF SR 1910	5/15/2006	10.6	0.7
31	INT OF SR 1910	8/15/2006	9.8	0.9
31	INT OF SR 1910	11/15/2006	10.3	0.9
32	3 MI ON SR 1008 FROM INT SR 1011	2/15/2006	11.7	0.9
32	3 MI ON SR 1008 FROM INT SR 1011	5/15/2006	13.5	1.6
32	3 MI ON SR 1008 FROM INT SR 1011	8/15/2006	12.3	2
32	3 MI ON SR 1008 FROM INT SR 1011	11/15/2006	13.5	1.2
33	SR 1142 AT BARRICADE	2/15/2006	10.6	0.8
33	SR 1142 AT BARRICADE	5/15/2006	11.2	0.7
33	SR 1142 AT BARRICADE	8/15/2006	10.7	0.7
33	SR 1142 AT BARRICADE	11/15/2006	10.9	0.7
34	APEX AT JONES PARK	2/15/2006	14.1	1.4
34	APEX AT JONES PARK	5/15/2006	15.4	0.7
34	APEX AT JONES PARK	11/15/2006	14.4	0.8
35	HOLLY SPRINGS ON EARP STREET	2/15/2006	13	1
35	HOLLY SPRINGS ON EARP STREET	5/15/2006	13.8	0.8
35	HOLLY SPRINGS ON EARP STREET	8/15/2006	13.3	0.9
35	HOLLY SPRINGS ON EARP STREET	11/15/2006	12.9	0.8
36	INT OF SR 1393 AND SR 1421	2/15/2006	11.6	0.9
36	INT OF SR 1393 AND SR 1421	5/15/2006	12.7	0.9
36	INT OF SR 1393 AND SR 1421	8/15/2006	12.6	1.4

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
36	INT OF SR 1393 AND SR 1421	11/15/2006	12.5	0.8
37	FUQUAY VARINA AT OLD CP&L OFFICE	2/15/2006	15.3	1.2
37	FUQUAY VARINA AT OLD CP&L OFFICE	5/15/2006	16.8	2.4
37	FUQUAY VARINA AT OLD CP&L OFFICE	8/15/2006	15.5	1.3
37	FUQUAY VARINA AT OLD CP&L OFFICE	11/15/2006	14.8	1.2
48	SR 1142 AT UNDERGROUND CABLE SIGN	2/15/2006	13.2	0.9
48	SR 1142 AT UNDERGROUND CABLE SIGN	5/15/2006	13.9	1
48	SR 1142 AT UNDERGROUND CABLE SIGN	8/15/2006	13.7	0.7
48	SR 1142 AT UNDERGROUND CABLE SIGN	11/15/2006	13.3	0.6
49	SR 1127 AT WAKE CO TRASH COLLECTION AREA	2/15/2006	14.4	1.7
49	SR 1127 AT WAKE CO TRASH COLLECTION AREA	5/15/2006	15.1	0.6
49	SR 1127 AT WAKE CO TRASH COLLECTION AREA	8/15/2006	13.5	2.6
49	SR 1127 AT WAKE CO TRASH COLLECTION AREA	11/15/2006	14.2	1.3
50	HOLLEMANS CROSSROADS	2/15/2006	11.4	1.1
50	HOLLEMANS CROSSROADS	5/15/2006	10.8	0.9
50	HOLLEMANS CROSSROADS	8/15/2006	11.8	1.9
50	HOLLEMANS CROSSROADS	11/15/2006	10.6	0.5
53	INTERSECTION OF SR 1972 AND SR 1907	2/15/2006	10.7	1.4
53	INTERSECTION OF SR 1972 AND SR 1907	5/15/2006	11.6	0.7
53	INTERSECTION OF SR 1972 AND SR 1907	8/15/2006	10.2	1.9
53	INTERSECTION OF SR 1972 AND SR 1907	11/15/2006	10.4	1.1
56	2.8 MI WSW OF THE SITE	2/15/2006	12.3	0.8
56	2.8 MI WSW OF THE SITE	5/15/2006	12.5	1.1
56	2.8 MI WSW OF THE SITE	8/15/2006	13	2.1

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
56	2.8 MI WSW OF THE SITE	11/15/2006	11.4	0.9
63	0.7 MI SW SECTOR ON (POWER POLE COJ85)	2/15/2006	13.3	1.3
63	0.7 MI SW SECTOR ON (POWER POLE COJ85)	5/15/2006	14.1	1.2
63	0.7 MI SW SECTOR ON (POWER POLE COJ85)	8/15/2006	13.8	1.1
63	0.7 MI SW SECTOR ON (POWER POLE COJ85)	11/15/2006	15.1	0.7
67	1.2 MI FROM HNP IN ENE SECTOR	2/15/2006	11.7	0.8
67	1.2 MI FROM HNP IN ENE SECTOR	5/15/2006	12.3	0.5
67	1.2 MI FROM HNP IN ENE SECTOR	8/15/2006	11.9	1.1
67	1.2 MI FROM HNP IN ENE SECTOR	11/15/2006	12.1	1

# 2006 HNP Radiological Environmental Monitoring Analysis Report

## Comments

- The Less than LLD (<LLD) represents that no detectable radioactivity was present, but lists the LLD values.
- There are no 2 sigma error values reported when activity is <LLD.

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/3/2006	262.7	1.58E-02	3.15E-03	3.42E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/9/2006	225.3	1.33E-02	3.56E-03	4.43E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/16/2006	260.8	1.55E-02	3.18E-03	3.52E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/23/2006	228.5	1.34E-02	3.44E-03	4.16E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/30/2006	261.8	9.84E-03	2.91E-03	3.67E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/6/2006	261.7	1.84E-02	3.42E-03	3.74E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/13/2006	264.5	2.08E-02	3.37E-03	3.32E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/20/2006	263.8	1.95E-02	3.43E-03	3.65E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/27/2006	263.9	2.80E-02	3.71E-03	3.25E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/7/2006	299.9	1.92E-02	3.14E-03	3.25E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/13/2006	224	1.55E-02	3.64E-03	4.29E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/20/2006	261.6	2.30E-02	3.57E-03	3.53E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/27/2006	262.6	9.28E-03	2.79E-03	3.50E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/3/2006	261.7	1.87E-02	3.28E-03	3.33E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/10/2006	259.1	1.99E-02	3.49E-03	3.71E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/17/2006	258.5	2.37E-02	3.62E-03	3.53E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/24/2006	258.4	1.89E-02	3.39E-03	3.58E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/1/2006	260.3	1.90E-02	3.49E-03	3.83E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/8/2006	269.8	2.01E-02	3.18E-03	2.95E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	271.1	1.57E-02	2.97E-03	3.07E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/22/2006	269.6	1.53E-02	2.91E-03	2.95E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/29/2006	268.8	1.75E-02	3.25E-03	3.49E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/5/2006	267.2	2.11E-02	3.51E-03	3.69E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/12/2006	265.2	1.88E-02	3.38E-03	3.63E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/19/2006	270.3	1.47E-02	2.89E-03	3.00E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/26/2006	266	2.02E-02	3.31E-03	3.25E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/3/2006	264.4	2.00E-02	3.25E-03	3.09E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/10/2006	266.7	2.24E-02	3.39E-03	3.17E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/17/2006	262	1.66E-02	3.21E-03	3.48E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/24/2006	265.6	2.08E-02	3.46E-03	3.57E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/31/2006	267.2	2.35E-02	3.48E-03	3.26E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/7/2006	265.6	3.30E-02	3.96E-03	3.36E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	267	2.61E-02	3.56E-03	3.14E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/21/2006	265.2	2.39E-02	3.51E-03	3.26E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/28/2006	266.3	2.91E-02	3.61E-03	2.79E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/3/2006	227.6	1.01E-02	2.96E-03	3.56E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/11/2006	300.8	2.28E-02	3.28E-03	3.18E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/18/2006	264.5	1.89E-02	3.30E-03	3.40E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/25/2006	264	2.29E-02	3.46E-03	3.25E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/2/2006	268.1	2.55E-02	3.57E-03	3.25E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/9/2006	263.4	2.27E-02	3.54E-03	3.51E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/16/2006	267.1	2.52E-02	3.55E-03	3.24E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/23/2006	263.6	1.66E-02	3.25E-03	3.58E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/30/2006	267.8	1.85E-02	3.23E-03	3.31E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/6/2006	284.3	2.83E-02	3.56E-03	3.07E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/13/2006	281.3	1.54E-02	3.04E-03	3.35E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/20/2006	284.7	1.56E-02	3.10E-03	3.50E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/27/2006	286	1.66E-02	3.00E-03	3.12E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/4/2006	281.1	1.92E-02	3.17E-03	3.17E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/11/2006	286.9	2.55E-02	3.48E-03	3.24E-03



# *HNP Radiological Environmental Monitoring Analysis Report*

*Media Type: Air Particulate*

*Analysis: Beta*

*Quantity: cubic meters*

*Concentration (Activity): pCi/cubic meter*

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>	
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/18/2006	286.3	2.60E-02	3.41E-03	2.95E-03
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/24/2006	243.8	2.25E-02	3.55E-03	3.32E-03
2	SR 1134	1/3/2006	255	1.58E-02	3.21E-03	3.52E-03
2	SR 1134	1/9/2006	220	1.54E-02	3.75E-03	4.53E-03
2	SR 1134	1/16/2006	255.2	1.80E-02	3.37E-03	3.60E-03
2	SR 1134	1/23/2006	256.2	1.27E-02	3.11E-03	3.71E-03
2	SR 1134	1/30/2006	256.6	1.31E-02	3.15E-03	3.75E-03
2	SR 1134	2/6/2006	254.3	1.60E-02	3.36E-03	3.85E-03
2	SR 1134	2/13/2006	256.5	2.29E-02	3.55E-03	3.43E-03
2	SR 1134	2/20/2006	254.9	1.86E-02	3.47E-03	3.77E-03
2	SR 1134	2/27/2006	254.2	2.38E-02	3.59E-03	3.38E-03
2	SR 1134	3/7/2006	288.6	1.98E-02	3.25E-03	3.37E-03
2	SR 1134	3/13/2006	214.5	1.87E-02	3.94E-03	4.48E-03
2	SR 1134	3/20/2006	249.7	1.75E-02	3.40E-03	3.70E-03
2	SR 1134	3/27/2006	250.3	1.11E-02	3.01E-03	3.67E-03
2	SR 1134	4/3/2006	248.4	1.90E-02	3.41E-03	3.51E-03
2	SR 1134	4/10/2006	244.4	2.04E-02	3.67E-03	3.93E-03
2	SR 1134	4/17/2006	241.9	1.98E-02	3.58E-03	3.77E-03
2	SR 1134	4/24/2006	240.1	1.64E-02	3.44E-03	3.85E-03
2	SR 1134	5/1/2006	239	1.76E-02	3.64E-03	4.17E-03
2	SR 1134	5/8/2006	276.1	1.82E-02	3.03E-03	2.88E-03
2	SR 1134	5/15/2006	278.7	1.60E-02	2.93E-03	2.98E-03
2	SR 1134	5/22/2006	277.3	1.57E-02	2.88E-03	2.87E-03
2	SR 1134	5/29/2006	275.8	1.46E-02	3.03E-03	3.40E-03
2	SR 1134	6/5/2006	273.8	2.03E-02	3.41E-03	3.60E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
2	SR 1134	6/12/2006	270.9	1.72E-02	3.25E-03	3.55E-03
2	SR 1134	6/19/2006	276.4	1.59E-02	2.91E-03	2.93E-03
2	SR 1134	6/26/2006	272.1	1.68E-02	3.08E-03	3.18E-03
2	SR 1134	7/3/2006	270.2	2.05E-02	3.22E-03	3.02E-03
2	SR 1134	7/10/2006	272.8	2.52E-02	3.48E-03	3.10E-03
2	SR 1134	7/17/2006	267.7	1.70E-02	3.19E-03	3.41E-03
2	SR 1134	7/24/2006	270.5	1.47E-02	3.09E-03	3.51E-03
2	SR 1134	7/31/2006	265.6	2.30E-02	3.47E-03	3.28E-03
2	SR 1134	8/7/2006	261.5	3.20E-02	3.95E-03	3.41E-03
2	SR 1134	8/14/2006	261.8	2.37E-02	3.49E-03	3.20E-03
2	SR 1134	8/21/2006	259.1	2.36E-02	3.54E-03	3.34E-03
2	SR 1134	8/28/2006	260.2	3.04E-02	3.72E-03	2.85E-03
2	SR 1134	9/3/2006	225.5	9.58E-03	2.95E-03	3.59E-03
2	SR 1134	9/11/2006	296.6	2.45E-02	3.39E-03	3.22E-03
2	SR 1134	9/18/2006	259.8	1.57E-02	3.17E-03	3.46E-03
2	SR 1134	9/25/2006	257.5	2.51E-02	3.62E-03	3.34E-03
2	SR 1134	10/2/2006	261.4	1.81E-02	3.25E-03	3.34E-03
2	SR 1134	10/9/2006	255.7	2.23E-02	3.60E-03	3.62E-03
2	SR 1134	10/16/2006	259.8	2.18E-02	3.45E-03	3.33E-03
2	SR 1134	10/23/2006	256.8	1.87E-02	3.43E-03	3.67E-03
2	SR 1134	10/30/2006	262.4	1.96E-02	3.33E-03	3.38E-03
2	SR 1134	11/6/2006	287.4	2.67E-02	3.47E-03	3.04E-03
2	SR 1134	11/13/2006	287.2	1.63E-02	3.04E-03	3.28E-03
2	SR 1134	11/20/2006	292.3	1.54E-02	3.03E-03	3.41E-03
2	SR 1134	11/27/2006	298.1	1.46E-02	2.80E-03	2.99E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
2	SR 1134	12/4/2006	294.7	2.13E-02	3.18E-03	3.03E-03
2	SR 1134	12/11/2006	298.5	2.28E-02	3.27E-03	3.12E-03
2	SR 1134	12/18/2006	299	3.00E-02	3.50E-03	2.83E-03
2	SR 1134	12/24/2006	253.6	1.84E-02	3.24E-03	3.19E-03
4	NEW HILL NEAR 1ST BAPTIST CH	1/3/2006	283.5	1.70E-02	3.05E-03	3.17E-03
4	NEW HILL NEAR 1ST BAPTIST CH	1/9/2006	244.5	1.72E-02	3.56E-03	4.08E-03
4	NEW HILL NEAR 1ST BAPTIST CH	1/16/2006	280.3	1.39E-02	2.93E-03	3.28E-03
4	NEW HILL NEAR 1ST BAPTIST CH	1/23/2006	283	1.53E-02	3.03E-03	3.35E-03
4	NEW HILL NEAR 1ST BAPTIST CH	1/30/2006	284.8	1.39E-02	2.95E-03	3.38E-03
4	NEW HILL NEAR 1ST BAPTIST CH	2/6/2006	284.4	1.85E-02	3.22E-03	3.45E-03
4	NEW HILL NEAR 1ST BAPTIST CH	2/13/2006	288	2.12E-02	3.20E-03	3.05E-03
4	NEW HILL NEAR 1ST BAPTIST CH	2/20/2006	286.9	1.98E-02	3.25E-03	3.35E-03
4	NEW HILL NEAR 1ST BAPTIST CH	2/27/2006	287.2	2.72E-02	3.48E-03	2.99E-03
4	NEW HILL NEAR 1ST BAPTIST CH	3/7/2006	326.8	1.95E-02	2.97E-03	2.98E-03
4	NEW HILL NEAR 1ST BAPTIST CH	3/13/2006	245.2	1.83E-02	3.55E-03	3.92E-03
4	NEW HILL NEAR 1ST BAPTIST CH	3/20/2006	286.9	2.48E-02	3.44E-03	3.22E-03
4	NEW HILL NEAR 1ST BAPTIST CH	3/27/2006	287.6	5.01E-03	2.32E-03	3.19E-03
4	NEW HILL NEAR 1ST BAPTIST CH	4/3/2006	285.5	2.08E-02	3.20E-03	3.06E-03
4	NEW HILL NEAR 1ST BAPTIST CH	4/10/2006	282.3	1.97E-02	3.28E-03	3.41E-03
4	NEW HILL NEAR 1ST BAPTIST CH	4/17/2006	282.2	2.44E-02	3.45E-03	3.23E-03
4	NEW HILL NEAR 1ST BAPTIST CH	4/24/2006	282.9	1.31E-02	2.87E-03	3.27E-03
4	NEW HILL NEAR 1ST BAPTIST CH	5/1/2006	283	1.60E-02	3.13E-03	3.52E-03
4	NEW HILL NEAR 1ST BAPTIST CH	5/8/2006	276	1.91E-02	3.08E-03	2.88E-03
4	NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	277	1.58E-02	2.93E-03	3.00E-03
4	NEW HILL NEAR 1ST BAPTIST CH	5/22/2006	275.6	1.51E-02	2.85E-03	2.89E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<b>Sample Point</b>	<b>Sample Date</b>	<b>Quantity</b>	<b>Activity</b>	<b>2 Sigma Error</b>	<b>LLD</b>	
4	NEW HILL NEAR 1ST BAPTIST CH	5/29/2006	275.6	2.53E-02	3.57E-03	3.40E-03
4	NEW HILL NEAR 1ST BAPTIST CH	6/5/2006	274.1	1.86E-02	3.33E-03	3.60E-03
4	NEW HILL NEAR 1ST BAPTIST CH	6/12/2006	272	1.84E-02	3.30E-03	3.54E-03
4	NEW HILL NEAR 1ST BAPTIST CH	6/19/2006	274.3	8.63E-03	2.48E-03	2.95E-03
4	NEW HILL NEAR 1ST BAPTIST CH	6/26/2006	269.7	1.70E-02	3.10E-03	3.21E-03
4	NEW HILL NEAR 1ST BAPTIST CH	7/3/2006	270.3	2.62E-02	3.52E-03	3.02E-03
4	NEW HILL NEAR 1ST BAPTIST CH	7/10/2006	270.2	2.20E-02	3.34E-03	3.13E-03
4	NEW HILL NEAR 1ST BAPTIST CH	7/17/2006	267	1.82E-02	3.26E-03	3.41E-03
4	NEW HILL NEAR 1ST BAPTIST CH	7/24/2006	263	2.47E-02	3.68E-03	3.61E-03
4	NEW HILL NEAR 1ST BAPTIST CH	7/31/2006	268.6	2.20E-02	3.39E-03	3.25E-03
4	NEW HILL NEAR 1ST BAPTIST CH	8/7/2006	266.7	3.61E-02	4.09E-03	3.35E-03
4	NEW HILL NEAR 1ST BAPTIST CH	8/14/2006	268.3	2.24E-02	3.37E-03	3.12E-03
4	NEW HILL NEAR 1ST BAPTIST CH	8/21/2006	267.8	2.42E-02	3.50E-03	3.23E-03
4	NEW HILL NEAR 1ST BAPTIST CH	8/28/2006	268.8	2.84E-02	3.55E-03	2.76E-03
4	NEW HILL NEAR 1ST BAPTIST CH	9/3/2006	230.9	1.09E-02	2.98E-03	3.51E-03
4	NEW HILL NEAR 1ST BAPTIST CH	9/11/2006	305.3	2.28E-02	3.25E-03	3.13E-03
4	NEW HILL NEAR 1ST BAPTIST CH	9/18/2006	269.7	1.66E-02	3.13E-03	3.33E-03
4	NEW HILL NEAR 1ST BAPTIST CH	9/25/2006	269.1	2.27E-02	3.40E-03	3.19E-03
4	NEW HILL NEAR 1ST BAPTIST CH	10/2/2006	273.3	2.30E-02	3.40E-03	3.19E-03
4	NEW HILL NEAR 1ST BAPTIST CH	10/9/2006	268.2	2.29E-02	3.51E-03	3.45E-03
4	NEW HILL NEAR 1ST BAPTIST CH	10/16/2006	272.5	2.62E-02	3.55E-03	3.18E-03
4	NEW HILL NEAR 1ST BAPTIST CH	10/23/2006	269.5	1.77E-02	3.26E-03	3.50E-03
4	NEW HILL NEAR 1ST BAPTIST CH	10/30/2006	274.3	1.73E-02	3.11E-03	3.23E-03
4	NEW HILL NEAR 1ST BAPTIST CH	11/6/2006	291.1	2.60E-02	3.41E-03	3.00E-03
4	NEW HILL NEAR 1ST BAPTIST CH	11/13/2006	289.1	1.52E-02	2.97E-03	3.26E-03

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>	
4	NEW HILL NEAR 1ST BAPTIST CH	11/20/2006	292.6	1.60E-02	3.06E-03	3.41E-03
4	NEW HILL NEAR 1ST BAPTIST CH	11/27/2006	295.2	1.46E-02	2.82E-03	3.02E-03
4	NEW HILL NEAR 1ST BAPTIST CH	12/4/2006	293.2	2.07E-02	3.16E-03	3.04E-03
4	NEW HILL NEAR 1ST BAPTIST CH	12/11/2006	297.3	2.38E-02	3.32E-03	3.13E-03
4	NEW HILL NEAR 1ST BAPTIST CH	12/18/2006	297.8	2.88E-02	3.46E-03	2.84E-03
4	NEW HILL NEAR 1ST BAPTIST CH	12/24/2006	252.8	2.25E-02	3.47E-03	3.20E-03
5	PITTSBORO - CONTROL	1/9/2006	233.4	1.53E-02	3.58E-03	4.27E-03
5	PITTSBORO - CONTROL	1/16/2006	272.7	1.73E-02	3.17E-03	3.37E-03
5	PITTSBORO - CONTROL	1/23/2006	270.6	1.57E-02	3.15E-03	3.51E-03
5	PITTSBORO - CONTROL	1/30/2006	274.4	8.97E-03	2.75E-03	3.50E-03
5	PITTSBORO - CONTROL	2/6/2006	272.4	1.56E-02	3.18E-03	3.60E-03
5	PITTSBORO - CONTROL	2/13/2006	276.2	2.07E-02	3.27E-03	3.18E-03
5	PITTSBORO - CONTROL	2/20/2006	273.4	1.99E-02	3.36E-03	3.52E-03
5	PITTSBORO - CONTROL	2/27/2006	274.7	2.44E-02	3.44E-03	3.13E-03
5	PITTSBORO - CONTROL	3/7/2006	312.4	1.98E-02	3.08E-03	3.12E-03
5	PITTSBORO - CONTROL	3/13/2006	234.9	1.93E-02	3.71E-03	4.09E-03
5	PITTSBORO - CONTROL	3/20/2006	271.2	2.07E-02	3.37E-03	3.41E-03
5	PITTSBORO - CONTROL	3/27/2006	275.9	1.11E-02	2.80E-03	3.33E-03
5	PITTSBORO - CONTROL	4/3/2006	271.9	1.91E-02	3.21E-03	3.21E-03
5	PITTSBORO - CONTROL	4/10/2006	270.8	1.73E-02	3.25E-03	3.55E-03
5	PITTSBORO - CONTROL	4/17/2006	269.4	2.09E-02	3.38E-03	3.38E-03
5	PITTSBORO - CONTROL	4/24/2006	272.5	1.72E-02	3.18E-03	3.39E-03
5	PITTSBORO - CONTROL	5/1/2006	274.3	1.78E-02	3.30E-03	3.64E-03
5	PITTSBORO - CONTROL	5/8/2006	268.3	1.81E-02	3.08E-03	2.96E-03
5	PITTSBORO - CONTROL	5/15/2006	269.7	1.58E-02	2.99E-03	3.08E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Activity</u>	<u>2 Sigma Error</u>	<u>LLD</u>	
5	PITTSBORO - CONTROL	5/22/2006	269.9	1.76E-02	3.04E-03	2.95E-03
5	PITTSBORO - CONTROL	5/29/2006	269.4	2.31E-02	3.52E-03	3.48E-03
5	PITTSBORO - CONTROL	6/5/2006	269.4	1.89E-02	3.38E-03	3.66E-03
5	PITTSBORO - CONTROL	6/12/2006	266	1.86E-02	3.36E-03	3.62E-03
5	PITTSBORO - CONTROL	6/19/2006	271.5	2.03E-02	3.20E-03	2.98E-03
5	PITTSBORO - CONTROL	6/26/2006	268.1	1.85E-02	3.20E-03	3.23E-03
5	PITTSBORO - CONTROL	7/3/2006	269.2	2.43E-02	3.43E-03	3.03E-03
5	PITTSBORO - CONTROL	7/10/2006	268.4	2.29E-02	3.40E-03	3.15E-03
5	PITTSBORO - CONTROL	7/17/2006	266.9	1.88E-02	3.29E-03	3.42E-03
5	PITTSBORO - CONTROL	7/24/2006	269.2	2.34E-02	3.56E-03	3.53E-03
5	PITTSBORO - CONTROL	7/31/2006	270.9	1.94E-02	3.23E-03	3.22E-03
5	PITTSBORO - CONTROL	8/7/2006	265.4	2.62E-02	3.65E-03	3.36E-03
5	PITTSBORO - CONTROL	8/14/2006	271.3	2.16E-02	3.30E-03	3.09E-03
5	PITTSBORO - CONTROL	8/21/2006	265.1	2.25E-02	3.44E-03	3.27E-03
5	PITTSBORO - CONTROL	8/28/2006	269	2.93E-02	3.59E-03	2.76E-03
5	PITTSBORO - CONTROL	9/3/2006	232.1	8.80E-03	2.83E-03	3.49E-03
5	PITTSBORO - CONTROL	9/11/2006	306.7	2.46E-02	3.32E-03	3.12E-03
5	PITTSBORO - CONTROL	9/18/2006	269.1	1.86E-02	3.24E-03	3.34E-03
5	PITTSBORO - CONTROL	9/25/2006	268.3	2.31E-02	3.43E-03	3.20E-03
5	PITTSBORO - CONTROL	10/2/2006	274.1	2.22E-02	3.35E-03	3.18E-03
5	PITTSBORO - CONTROL	10/9/2006	269.5	2.34E-02	3.52E-03	3.43E-03
5	PITTSBORO - CONTROL	10/16/2006	270.9	2.50E-02	3.51E-03	3.20E-03
5	PITTSBORO - CONTROL	10/23/2006	270.3	1.91E-02	3.32E-03	3.49E-03
5	PITTSBORO - CONTROL	10/30/2006	275.6	1.85E-02	3.17E-03	3.21E-03
5	PITTSBORO - CONTROL	11/6/2006	272	2.43E-02	3.48E-03	3.21E-03

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>	
5	PITTSBORO - CONTROL	11/13/2006	269.3	1.60E-02	3.17E-03	3.50E-03
5	PITTSBORO - CONTROL	11/20/2006	270.8	1.67E-02	3.28E-03	3.68E-03
5	PITTSBORO - CONTROL	11/27/2006	273.8	1.49E-02	3.00E-03	3.26E-03
5	PITTSBORO - CONTROL	12/4/2006	271.2	2.07E-02	3.33E-03	3.29E-03
5	PITTSBORO - CONTROL	12/11/2006	273	2.19E-02	3.43E-03	3.41E-03
5	PITTSBORO - CONTROL	12/18/2006	271.8	2.84E-02	3.64E-03	3.11E-03
5	PITTSBORO - CONTROL	12/24/2006	232.7	2.20E-02	3.64E-03	3.48E-03
26	SPILLWAY ON MAIN RES	1/3/2006	282.5	1.45E-02	2.92E-03	3.18E-03
26	SPILLWAY ON MAIN RES	1/9/2006	241.9	1.66E-02	3.56E-03	4.12E-03
26	SPILLWAY ON MAIN RES	1/16/2006	280.9	1.32E-02	2.88E-03	3.27E-03
26	SPILLWAY ON MAIN RES	1/23/2006	277.2	1.39E-02	3.00E-03	3.43E-03
26	SPILLWAY ON MAIN RES	1/30/2006	281.3	9.91E-03	2.75E-03	3.42E-03
26	SPILLWAY ON MAIN RES	2/6/2006	278.7	1.72E-02	3.21E-03	3.52E-03
26	SPILLWAY ON MAIN RES	2/13/2006	281.2	1.87E-02	3.12E-03	3.13E-03
26	SPILLWAY ON MAIN RES	2/20/2006	278.4	1.33E-02	2.97E-03	3.45E-03
26	SPILLWAY ON MAIN RES	2/27/2006	277.3	2.20E-02	3.30E-03	3.10E-03
26	SPILLWAY ON MAIN RES	3/7/2006	314.3	1.95E-02	3.05E-03	3.10E-03
26	SPILLWAY ON MAIN RES	3/13/2006	235.2	1.59E-02	3.53E-03	4.09E-03
26	SPILLWAY ON MAIN RES	3/20/2006	273.3	2.12E-02	3.38E-03	3.38E-03
26	SPILLWAY ON MAIN RES	3/27/2006	276.2	1.06E-02	2.76E-03	3.32E-03
26	SPILLWAY ON MAIN RES	4/3/2006	272	1.94E-02	3.23E-03	3.21E-03
26	SPILLWAY ON MAIN RES	4/10/2006	271.2	1.63E-02	3.19E-03	3.55E-03
26	SPILLWAY ON MAIN RES	4/17/2006	268.4	2.06E-02	3.37E-03	3.40E-03
26	SPILLWAY ON MAIN RES	4/24/2006	268.7	1.49E-02	3.09E-03	3.44E-03
26	SPILLWAY ON MAIN RES	5/1/2006	271.9	1.66E-02	3.26E-03	3.67E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<b>Sample Point</b>	<b>Sample Date</b>	<b>Quantity</b>	<b>Activity</b>	<b>2 Sigma Error</b>	<b>LLD</b>	
26	SPILLWAY ON MAIN RES	5/8/2006	267.1	1.56E-02	2.95E-03	2.98E-03
26	SPILLWAY ON MAIN RES	5/15/2006	268.6	1.72E-02	3.08E-03	3.09E-03
26	SPILLWAY ON MAIN RES	5/22/2006	267	1.53E-02	2.93E-03	2.98E-03
26	SPILLWAY ON MAIN RES	5/29/2006	265.6	2.27E-02	3.54E-03	3.53E-03
26	SPILLWAY ON MAIN RES	6/5/2006	267.2	1.72E-02	3.32E-03	3.69E-03
26	SPILLWAY ON MAIN RES	6/12/2006	239.5	1.65E-02	3.51E-03	4.02E-03
26	SPILLWAY ON MAIN RES	6/19/2006	256.4	7.43E-03	2.52E-03	3.16E-03
26	SPILLWAY ON MAIN RES	6/26/2006	249.5	1.90E-02	3.39E-03	3.47E-03
26	SPILLWAY ON MAIN RES	7/3/2006	252.1	1.88E-02	3.28E-03	3.24E-03
26	SPILLWAY ON MAIN RES	7/10/2006	250.3	2.50E-02	3.67E-03	3.38E-03
26	SPILLWAY ON MAIN RES	7/17/2006	250.7	1.70E-02	3.34E-03	3.64E-03
26	SPILLWAY ON MAIN RES	7/24/2006	250	2.20E-02	3.67E-03	3.80E-03
26	SPILLWAY ON MAIN RES	7/31/2006	251.1	2.03E-02	3.45E-03	3.47E-03
26	SPILLWAY ON MAIN RES	8/7/2006	249.6	3.00E-02	3.99E-03	3.57E-03
26	SPILLWAY ON MAIN RES	8/14/2006	252.7	2.12E-02	3.44E-03	3.32E-03
26	SPILLWAY ON MAIN RES	8/21/2006	248.9	2.24E-02	3.58E-03	3.48E-03
26	SPILLWAY ON MAIN RES	8/28/2006	251.1	2.73E-02	3.65E-03	2.95E-03
26	SPILLWAY ON MAIN RES	9/3/2006	216.2	1.12E-02	3.16E-03	3.75E-03
26	SPILLWAY ON MAIN RES	9/11/2006	284.2	2.44E-02	3.49E-03	3.36E-03
26	SPILLWAY ON MAIN RES	9/18/2006	250	1.68E-02	3.32E-03	3.60E-03
26	SPILLWAY ON MAIN RES	9/25/2006	249.1	1.60E-02	3.22E-03	3.45E-03
26	SPILLWAY ON MAIN RES	10/2/2006	249.4	2.38E-02	3.66E-03	3.50E-03
26	SPILLWAY ON MAIN RES	10/9/2006	247.7	2.32E-02	3.72E-03	3.73E-03
26	SPILLWAY ON MAIN RES	10/16/2006	249.8	2.70E-02	3.81E-03	3.47E-03
26	SPILLWAY ON MAIN RES	10/23/2006	246	1.57E-02	3.37E-03	3.83E-03



# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
26	SPILLWAY ON MAIN RES	10/30/2006	252.2	2.01E-02	3.45E-03	3.51E-03
26	SPILLWAY ON MAIN RES	11/6/2006	277.3	2.29E-02	3.36E-03	3.15E-03
26	SPILLWAY ON MAIN RES	11/13/2006	216	1.45E-02	3.64E-03	4.37E-03
26	SPILLWAY ON MAIN RES	11/20/2006	290.6	1.29E-02	2.91E-03	3.43E-03
26	SPILLWAY ON MAIN RES	11/27/2006	297.4	1.62E-02	2.90E-03	3.00E-03
26	SPILLWAY ON MAIN RES	12/4/2006	298.8	1.86E-02	3.01E-03	2.99E-03
26	SPILLWAY ON MAIN RES	12/11/2006	300.6	2.43E-02	3.32E-03	3.10E-03
26	SPILLWAY ON MAIN RES	12/18/2006	300	2.57E-02	3.30E-03	2.82E-03
26	SPILLWAY ON MAIN RES	12/24/2006	258	2.46E-02	3.53E-03	3.14E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/3/2006	282	1.61E-02	3.01E-03	3.19E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/9/2006	242.6	1.54E-02	3.48E-03	4.11E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/16/2006	282.1	1.59E-02	3.02E-03	3.25E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/23/2006	281.3	1.24E-02	2.88E-03	3.38E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/30/2006	285.3	1.09E-02	2.78E-03	3.37E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/6/2006	285.1	1.87E-02	3.23E-03	3.44E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/13/2006	288.8	1.85E-02	3.06E-03	3.04E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/20/2006	287.3	1.99E-02	3.25E-03	3.35E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/27/2006	288.7	2.57E-02	3.40E-03	2.97E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/7/2006	328.6	2.28E-02	3.11E-03	2.96E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/13/2006	246.8	1.99E-02	3.62E-03	3.90E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/20/2006	287	2.79E-02	3.59E-03	3.22E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/27/2006	281.7	9.07E-03	2.63E-03	3.26E-03
47	SSW SECTOR 3.4 MI FROM SITE	4/3/2006	277	2.02E-02	3.23E-03	3.15E-03
47	SSW SECTOR 3.4 MI FROM SITE	4/10/2006	278	1.94E-02	3.30E-03	3.46E-03
47	SSW SECTOR 3.4 MI FROM SITE	4/17/2006	276.8	2.35E-02	3.45E-03	3.29E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<b>Sample Point</b>	<b>Sample Date</b>	<b>Quantity</b>	<b>Activity</b>	<b>2 Sigma Error</b>	<b>LLD</b>	
47	SSW SECTOR 3.4 MI FROM SITE	4/24/2006	276.1	2.14E-02	3.36E-03	3.35E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/1/2006	279.5	1.98E-02	3.36E-03	3.57E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/8/2006	263.2	1.61E-02	3.00E-03	3.02E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/15/2006	265.3	1.51E-02	2.98E-03	3.13E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/22/2006	264.1	1.77E-02	3.09E-03	3.01E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/29/2006	262.4	2.32E-02	3.59E-03	3.57E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/5/2006	264.2	1.79E-02	3.38E-03	3.73E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/12/2006	241.1	1.31E-02	3.30E-03	3.99E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/19/2006	261.4	1.68E-02	3.08E-03	3.10E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/26/2006	257.3	2.14E-02	3.45E-03	3.36E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/3/2006	260.9	2.43E-02	3.50E-03	3.13E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/10/2006	258.7	9.69E-03	2.72E-03	3.27E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/17/2006	258.7	2.01E-02	3.43E-03	3.52E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/24/2006	257.5	2.07E-02	3.53E-03	3.69E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/31/2006	258.7	2.04E-02	3.39E-03	3.37E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/7/2006	256.9	2.84E-02	3.83E-03	3.47E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/14/2006	260.7	2.47E-02	3.55E-03	3.21E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/21/2006	256.8	2.56E-02	3.67E-03	3.37E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/28/2006	258.1	2.50E-02	3.47E-03	2.87E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/3/2006	221.9	1.08E-02	3.07E-03	3.65E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/11/2006	292.6	2.25E-02	3.33E-03	3.27E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/18/2006	258	1.86E-02	3.34E-03	3.48E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/25/2006	258.3	2.47E-02	3.60E-03	3.32E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/2/2006	260	2.13E-02	3.43E-03	3.36E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/9/2006	258.4	2.22E-02	3.56E-03	3.58E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>	
47	SSW SECTOR 3.4 MI FROM SITE	10/16/2006	261.3	2.45E-02	3.57E-03	3.31E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/23/2006	257.9	1.67E-02	3.31E-03	3.66E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/30/2006	264.6	1.54E-02	3.09E-03	3.35E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/6/2006	279.2	2.72E-02	3.56E-03	3.12E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/13/2006	275.5	1.61E-02	3.12E-03	3.42E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/20/2006	277.2	1.73E-02	3.25E-03	3.60E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/27/2006	280.6	1.53E-02	2.97E-03	3.18E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/4/2006	279.4	1.46E-02	2.94E-03	3.19E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/11/2006	278.8	2.31E-02	3.43E-03	3.34E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/18/2006	278.4	2.84E-02	3.59E-03	3.04E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/24/2006	238.8	2.40E-02	3.68E-03	3.39E-03

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Beta

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
38	CAPE FEAR PLANT INTAKE - CONTROL	1/16/2006	1.00	4.20E+00	8.37E-01	8.35E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	2/13/2006	1.00	3.90E+00	8.13E-01	8.07E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	3/13/2006	1.00	3.99E+00	7.93E-01	7.33E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	4/10/2006	1.00	6.01E+00	9.54E-01	8.09E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	5/11/2006	1.00	6.02E+00	9.36E-01	7.53E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	1.00	4.07E+00	8.27E-01	8.10E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	7/13/2006	1.00	4.87E+00	8.66E-01	7.66E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	8/14/2006	1.00	4.93E+00	9.20E-01	8.90E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	9/11/2006	1.00	3.78E+00	7.93E-01	7.75E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	10/12/2006	1.00	2.09E+00	6.07E-01	6.69E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	1.00	6.38E+00	9.47E-01	7.60E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	12/10/2006	1.00	4.71E+00	8.18E-01	6.90E-01
40	LILLINGTON - CAPE FEAR RIVER	1/16/2006	1.00	3.40E+00	7.83E-01	8.33E-01
40	LILLINGTON - CAPE FEAR RIVER	2/13/2006	1.00	3.85E+00	8.01E-01	7.93E-01
40	LILLINGTON - CAPE FEAR RIVER	3/13/2006	1.00	4.57E+00	8.23E-01	7.22E-01
40	LILLINGTON - CAPE FEAR RIVER	4/10/2006	1.00	4.42E+00	8.36E-01	7.80E-01
40	LILLINGTON - CAPE FEAR RIVER	5/11/2006	1.00	5.17E+00	8.71E-01	7.35E-01
40	LILLINGTON - CAPE FEAR RIVER	6/12/2006	1.00	4.79E+00	8.74E-01	8.12E-01
40	LILLINGTON - CAPE FEAR RIVER	7/13/2006	1.00	4.02E+00	7.99E-01	7.50E-01
40	LILLINGTON - CAPE FEAR RIVER	8/14/2006	1.00	4.59E+00	8.84E-01	8.68E-01
40	LILLINGTON - CAPE FEAR RIVER	9/11/2006	1.00	4.57E+00	8.50E-01	7.82E-01
40	LILLINGTON - CAPE FEAR RIVER	10/12/2006	1.00	1.03E+01	1.27E+00	8.81E-01
40	LILLINGTON - CAPE FEAR RIVER	11/13/2006	1.00	6.48E+00	9.49E-01	7.56E-01
40	LILLINGTON - CAPE FEAR RIVER	12/10/2006	1.00	4.73E+00	8.27E-01	7.01E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	1/16/2006	1.00	1.51E+00	6.11E-01	7.80E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	2/13/2006	1.00	1.94E+00	6.25E-01	7.34E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	3/13/2006	1.00	1.72E+00	5.83E-01	6.76E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Beta

<b>Sample Point</b>	<b>Sample Date</b>	<b>Quantity</b>	<b>Activity</b>	<b>2 Sigma Error</b>	<b>LLD</b>
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/10/2006	1.00	3.05E+00	7.00E-01	7.16E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/11/2006	1.00	3.13E+00	6.95E-01	6.80E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/12/2006	1.00	1.71E+00	6.16E-01	7.51E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/13/2006	1.00	2.30E+00	6.55E-01	7.22E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/14/2006	1.00	2.19E+00	6.85E-01	8.14E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/11/2006	1.00	1.68E+00	6.07E-01	7.31E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/12/2006	1.00	1.81E+00	6.00E-01	6.94E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/13/2006	1.00	3.44E+00	7.29E-01	7.11E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/10/2006	1.00	2.37E+00	6.34E-01	6.65E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Beta

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
26	SPILLWAY ON MAIN RES	1/16/2006	1.00	3.78E+00	7.91E-01	8.07E-01
26	SPILLWAY ON MAIN RES	2/13/2006	1.00	4.26E+00	8.08E-01	7.66E-01
26	SPILLWAY ON MAIN RES	3/13/2006	1.00	3.98E+00	7.67E-01	6.97E-01
26	SPILLWAY ON MAIN RES	4/10/2006	1.00	5.28E+00	8.01E-01	6.62E-01
26	SPILLWAY ON MAIN RES	5/11/2006	1.00	5.39E+00	8.56E-01	6.97E-01
26	SPILLWAY ON MAIN RES	6/12/2006	1.00	3.38E+00	7.44E-01	7.57E-01
26	SPILLWAY ON MAIN RES	7/13/2006	1.00	3.80E+00	7.59E-01	7.14E-01
26	SPILLWAY ON MAIN RES	8/14/2006	1.00	4.15E+00	8.13E-01	8.04E-01
26	SPILLWAY ON MAIN RES	9/11/2006	1.00	3.56E+00	7.48E-01	7.31E-01
26	SPILLWAY ON MAIN RES	10/12/2006	1.00	3.77E+00	7.56E-01	7.08E-01
26	SPILLWAY ON MAIN RES	11/13/2006	1.00	5.51E+00	8.74E-01	7.30E-01
26	SPILLWAY ON MAIN RES	12/10/2006	1.00	4.42E+00	7.80E-01	6.65E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1/16/2006	1.00	4.20E+00	8.37E-01	8.35E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	2/13/2006	1.00	3.90E+00	8.13E-01	8.07E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	3/13/2006	1.00	3.99E+00	7.93E-01	7.33E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	4/10/2006	1.00	6.01E+00	9.54E-01	8.09E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	5/11/2006	1.00	6.02E+00	9.36E-01	7.53E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	1.00	4.07E+00	8.27E-01	8.10E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	7/13/2006	1.00	4.87E+00	8.66E-01	7.66E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	8/14/2006	1.00	4.93E+00	9.20E-01	8.90E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	9/11/2006	1.00	3.78E+00	7.93E-01	7.75E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	10/12/2006	1.00	2.09E+00	6.07E-01	6.69E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	1.00	6.38E+00	9.47E-01	7.60E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	12/10/2006	1.00	4.71E+00	8.18E-01	6.90E-01
40	LILLINGTON - CAPE FEAR RIVER	1/16/2006	1.00	3.40E+00	7.83E-01	8.33E-01
40	LILLINGTON - CAPE FEAR RIVER	2/13/2006	1.00	3.85E+00	8.01E-01	7.93E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Analysis: Beta

Quantity: Liters

Concentration (Activity): pCi/Liter

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
40 LILLINGTON - CAPE FEAR RIVER	3/13/2006	1.00	4.57E+00	8.23E-01	7.22E-01
40 LILLINGTON - CAPE FEAR RIVER	4/10/2006	1.00	4.42E+00	8.36E-01	7.80E-01
40 LILLINGTON - CAPE FEAR RIVER	5/11/2006	1.00	5.17E+00	8.71E-01	7.35E-01
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	1.00	4.79E+00	8.74E-01	8.12E-01
40 LILLINGTON - CAPE FEAR RIVER	7/13/2006	1.00	4.02E+00	7.99E-01	7.50E-01
40 LILLINGTON - CAPE FEAR RIVER	8/14/2006	1.00	4.59E+00	8.84E-01	8.68E-01
40 LILLINGTON - CAPE FEAR RIVER	9/11/2006	1.00	4.57E+00	8.50E-01	7.82E-01
40 LILLINGTON - CAPE FEAR RIVER	10/12/2006	1.00	1.03E+01	1.27E+00	8.81E-01
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1.00	6.48E+00	9.49E-01	7.56E-01
40 LILLINGTON - CAPE FEAR RIVER	12/10/2006	1.00	4.73E+00	8.27E-01	7.01E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/3/2006	262.70	<LLD	2.37E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/9/2006	225.30	<LLD	2.51E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/16/2006	260.80	<LLD	2.32E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/23/2006	228.50	<LLD	2.95E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	1/30/2006	261.80	<LLD	2.79E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/6/2006	261.70	<LLD	2.06E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/13/2006	264.50	<LLD	2.79E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/20/2006	263.80	<LLD	2.99E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/27/2006	263.90	<LLD	2.15E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/7/2006	299.90	<LLD	2.59E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/13/2006	224.00	<LLD	3.06E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/20/2006	261.60	<LLD	2.32E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	3/27/2006	262.60	<LLD	2.56E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/3/2006	261.70	<LLD	2.76E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/10/2006	259.10	<LLD	2.19E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/17/2006	258.50	<LLD	2.17E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	4/24/2006	258.40	<LLD	2.34E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/1/2006	260.30	<LLD	2.12E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/8/2006	269.80	<LLD	2.00E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	271.10	<LLD	2.38E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/22/2006	269.60	<LLD	2.09E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/29/2006	268.80	<LLD	2.10E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/5/2006	267.20	<LLD	2.16E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/12/2006	265.20	<LLD	2.07E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/19/2006	270.30	<LLD	2.16E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	6/26/2006	266.00	<LLD	1.61E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/3/2006	264.40	<LLD	2.02E-02



# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/10/2006	266.70	<LLD	2.24E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/17/2006	262.00	<LLD	2.49E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/24/2006	265.60	<LLD	2.82E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	7/31/2006	267.20	<LLD	3.17E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/7/2006	265.60	<LLD	2.57E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	267.00	<LLD	1.68E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/21/2006	265.20	<LLD	2.78E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/28/2006	266.30	<LLD	2.40E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/3/2006	227.60	<LLD	2.21E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/11/2006	300.80	<LLD	2.29E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/18/2006	264.50	<LLD	3.40E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	9/25/2006	264.00	<LLD	1.76E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/2/2006	268.10	<LLD	2.08E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/9/2006	263.40	<LLD	2.51E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/16/2006	267.10	<LLD	2.40E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/23/2006	263.60	<LLD	1.60E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	10/30/2006	267.80	<LLD	1.97E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/6/2006	284.30	<LLD	1.86E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/13/2006	281.30	<LLD	1.45E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/20/2006	284.70	<LLD	1.91E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/27/2006	286.00	<LLD	1.98E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/4/2006	281.10	<LLD	2.04E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/11/2006	286.90	<LLD	2.18E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/18/2006	286.30	<LLD	1.70E-02
1	SR 1134 AT INT SR 1011 - DIXIE PIPELINE	12/24/2006	243.80	<LLD	1.98E-02
2	SR 1134	1/3/2006	255.00	<LLD	2.61E-02
2	SR 1134	1/9/2006	220.00	<LLD	2.30E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
2 SR 1134	1/16/2006	255.20	<LLD		2.34E-02
2 SR 1134	1/23/2006	256.20	<LLD		2.16E-02
2 SR 1134	1/30/2006	256.60	<LLD		2.09E-02
2 SR 1134	2/6/2006	254.30	<LLD		2.29E-02
2 SR 1134	2/13/2006	256.50	<LLD		1.97E-02
2 SR 1134	2/20/2006	254.90	<LLD		1.99E-02
2 SR 1134	2/27/2006	254.20	<LLD		2.46E-02
2 SR 1134	3/7/2006	288.60	<LLD		1.89E-02
2 SR 1134	3/13/2006	214.50	<LLD		2.04E-02
2 SR 1134	3/20/2006	249.70	<LLD		1.76E-02
2 SR 1134	3/27/2006	250.30	<LLD		1.96E-02
2 SR 1134	4/3/2006	248.40	<LLD		1.48E-02
2 SR 1134	4/10/2006	244.40	<LLD		2.54E-02
2 SR 1134	4/17/2006	241.90	<LLD		2.79E-02
2 SR 1134	4/24/2006	240.10	<LLD		2.39E-02
2 SR 1134	5/1/2006	239.00	<LLD		3.50E-02
2 SR 1134	5/8/2006	276.10	<LLD		2.54E-02
2 SR 1134	5/15/2006	278.70	<LLD		1.61E-02
2 SR 1134	5/22/2006	277.30	<LLD		2.96E-02
2 SR 1134	5/29/2006	275.80	<LLD		2.45E-02
2 SR 1134	6/5/2006	273.80	<LLD		1.55E-02
2 SR 1134	6/12/2006	270.90	<LLD		1.63E-02
2 SR 1134	6/19/2006	276.40	<LLD		1.58E-02
2 SR 1134	6/26/2006	272.10	<LLD		2.09E-02
2 SR 1134	7/3/2006	270.20	<LLD		2.21E-02
2 SR 1134	7/10/2006	272.80	<LLD		1.73E-02
2 SR 1134	7/17/2006	267.70	<LLD		2.27E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
2 SR 1134	7/24/2006	270.50	<LLD		2.11E-02
2 SR 1134	7/31/2006	265.60	<LLD		2.21E-02
2 SR 1134	8/7/2006	261.50	<LLD		1.95E-02
2 SR 1134	8/14/2006	261.80	<LLD		2.48E-02
2 SR 1134	8/21/2006	259.10	<LLD		1.85E-02
2 SR 1134	8/28/2006	260.20	<LLD		1.89E-02
2 SR 1134	9/3/2006	225.50	<LLD		2.99E-02
2 SR 1134	9/11/2006	296.60	<LLD		1.85E-02
2 SR 1134	9/18/2006	259.80	<LLD		1.53E-02
2 SR 1134	9/25/2006	257.50	<LLD		2.30E-02
2 SR 1134	10/2/2006	261.40	<LLD		1.70E-02
2 SR 1134	10/9/2006	255.70	<LLD		2.01E-02
2 SR 1134	10/16/2006	259.80	<LLD		2.73E-02
2 SR 1134	10/23/2006	256.80	<LLD		2.33E-02
2 SR 1134	10/30/2006	262.40	<LLD		3.38E-02
2 SR 1134	11/6/2006	287.40	<LLD		1.69E-02
2 SR 1134	11/13/2006	287.20	<LLD		2.07E-02
2 SR 1134	11/20/2006	292.30	<LLD		2.38E-02
2 SR 1134	11/27/2006	298.10	<LLD		1.83E-02
2 SR 1134	12/4/2006	294.70	<LLD		1.56E-02
2 SR 1134	12/11/2006	298.50	<LLD		1.62E-02
2 SR 1134	12/18/2006	299.00	<LLD		2.38E-02
2 SR 1134	12/24/2006	253.60	<LLD		2.10E-02
4 NEW HILL NEAR 1ST BAPTIST CH	1/3/2006	283.50	<LLD		1.86E-02
4 NEW HILL NEAR 1ST BAPTIST CH	1/9/2006	244.50	<LLD		2.31E-02
4 NEW HILL NEAR 1ST BAPTIST CH	1/16/2006	280.30	<LLD		1.78E-02
4 NEW HILL NEAR 1ST BAPTIST CH	1/23/2006	283.00	<LLD		3.38E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
4	NEW HILL NEAR 1ST BAPTIST CH	1/30/2006	284.80	<LLD	1.72E-02
4	NEW HILL NEAR 1ST BAPTIST CH	2/6/2006	284.40	<LLD	3.18E-02
4	NEW HILL NEAR 1ST BAPTIST CH	2/13/2006	288.00	<LLD	1.95E-02
4	NEW HILL NEAR 1ST BAPTIST CH	2/20/2006	286.90	<LLD	2.04E-02
4	NEW HILL NEAR 1ST BAPTIST CH	2/27/2006	287.20	<LLD	1.60E-02
4	NEW HILL NEAR 1ST BAPTIST CH	3/7/2006	326.80	<LLD	1.54E-02
4	NEW HILL NEAR 1ST BAPTIST CH	3/13/2006	245.20	<LLD	1.84E-02
4	NEW HILL NEAR 1ST BAPTIST CH	3/20/2006	286.90	<LLD	1.68E-02
4	NEW HILL NEAR 1ST BAPTIST CH	3/27/2006	287.60	<LLD	1.85E-02
4	NEW HILL NEAR 1ST BAPTIST CH	4/3/2006	285.50	<LLD	1.74E-02
4	NEW HILL NEAR 1ST BAPTIST CH	4/10/2006	282.30	<LLD	1.93E-02
4	NEW HILL NEAR 1ST BAPTIST CH	4/17/2006	282.20	<LLD	2.14E-02
4	NEW HILL NEAR 1ST BAPTIST CH	4/24/2006	282.90	<LLD	2.68E-02
4	NEW HILL NEAR 1ST BAPTIST CH	5/1/2006	283.00	<LLD	1.92E-02
4	NEW HILL NEAR 1ST BAPTIST CH	5/8/2006	276.00	<LLD	2.01E-02
4	NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	277.00	<LLD	3.02E-02
4	NEW HILL NEAR 1ST BAPTIST CH	5/22/2006	275.60	<LLD	1.87E-02
4	NEW HILL NEAR 1ST BAPTIST CH	5/29/2006	275.60	<LLD	1.62E-02
4	NEW HILL NEAR 1ST BAPTIST CH	6/5/2006	274.10	<LLD	3.58E-02
4	NEW HILL NEAR 1ST BAPTIST CH	6/12/2006	272.00	<LLD	1.84E-02
4	NEW HILL NEAR 1ST BAPTIST CH	6/19/2006	274.30	<LLD	2.97E-02
4	NEW HILL NEAR 1ST BAPTIST CH	6/26/2006	269.70	<LLD	2.23E-02
4	NEW HILL NEAR 1ST BAPTIST CH	7/3/2006	270.30	<LLD	4.05E-02
4	NEW HILL NEAR 1ST BAPTIST CH	7/10/2006	270.20	<LLD	2.96E-02
4	NEW HILL NEAR 1ST BAPTIST CH	7/17/2006	267.00	<LLD	1.50E-02
4	NEW HILL NEAR 1ST BAPTIST CH	7/24/2006	263.00	<LLD	2.03E-02
4	NEW HILL NEAR 1ST BAPTIST CH	7/31/2006	268.60	<LLD	1.73E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
4	NEW HILL NEAR 1ST BAPTIST CH	8/7/2006	266.70	<LLD	2.17E-02
4	NEW HILL NEAR 1ST BAPTIST CH	8/14/2006	268.30	<LLD	1.53E-02
4	NEW HILL NEAR 1ST BAPTIST CH	8/21/2006	267.80	<LLD	2.21E-02
4	NEW HILL NEAR 1ST BAPTIST CH	8/28/2006	268.80	<LLD	1.25E-02
4	NEW HILL NEAR 1ST BAPTIST CH	9/3/2006	230.90	<LLD	2.08E-02
4	NEW HILL NEAR 1ST BAPTIST CH	9/11/2006	305.30	<LLD	3.44E-02
4	NEW HILL NEAR 1ST BAPTIST CH	9/18/2006	269.70	<LLD	2.62E-02
4	NEW HILL NEAR 1ST BAPTIST CH	9/25/2006	269.10	<LLD	1.79E-02
4	NEW HILL NEAR 1ST BAPTIST CH	10/2/2006	273.30	<LLD	3.58E-02
4	NEW HILL NEAR 1ST BAPTIST CH	10/9/2006	268.20	<LLD	1.72E-02
4	NEW HILL NEAR 1ST BAPTIST CH	10/16/2006	272.50	<LLD	2.06E-02
4	NEW HILL NEAR 1ST BAPTIST CH	10/23/2006	269.50	<LLD	2.04E-02
4	NEW HILL NEAR 1ST BAPTIST CH	10/30/2006	274.30	<LLD	2.43E-02
4	NEW HILL NEAR 1ST BAPTIST CH	11/6/2006	291.10	<LLD	3.15E-02
4	NEW HILL NEAR 1ST BAPTIST CH	11/13/2006	289.10	<LLD	1.99E-02
4	NEW HILL NEAR 1ST BAPTIST CH	11/20/2006	292.60	<LLD	1.64E-02
4	NEW HILL NEAR 1ST BAPTIST CH	11/27/2006	295.20	<LLD	3.38E-02
4	NEW HILL NEAR 1ST BAPTIST CH	12/4/2006	293.20	<LLD	2.99E-02
4	NEW HILL NEAR 1ST BAPTIST CH	12/11/2006	297.30	<LLD	1.63E-02
4	NEW HILL NEAR 1ST BAPTIST CH	12/18/2006	297.80	<LLD	1.66E-02
4	NEW HILL NEAR 1ST BAPTIST CH	12/24/2006	252.80	<LLD	1.85E-02
5	PITTSBORO - CONTROL	1/3/2006	36.00	<LLD	2.55E-01
5	PITTSBORO - CONTROL	1/9/2006	233.40	<LLD	3.91E-02
5	PITTSBORO - CONTROL	1/16/2006	272.70	<LLD	3.10E-02
5	PITTSBORO - CONTROL	1/23/2006	270.60	<LLD	2.91E-02
5	PITTSBORO - CONTROL	1/30/2006	274.40	<LLD	2.86E-02
5	PITTSBORO - CONTROL	2/6/2006	272.40	<LLD	2.84E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Activity</u>	<u>2 Sigma Error</u>	<u>LLD</u>
5	PITTSBORO - CONTROL	2/13/2006	276.20	<LLD	1.97E-02
5	PITTSBORO - CONTROL	2/20/2006	273.40	<LLD	2.97E-02
5	PITTSBORO - CONTROL	2/27/2006	274.70	<LLD	3.37E-02
5	PITTSBORO - CONTROL	3/7/2006	312.40	<LLD	2.94E-02
5	PITTSBORO - CONTROL	3/13/2006	234.90	<LLD	3.53E-02
5	PITTSBORO - CONTROL	3/20/2006	271.20	<LLD	2.49E-02
5	PITTSBORO - CONTROL	3/27/2006	275.90	<LLD	2.56E-02
5	PITTSBORO - CONTROL	4/3/2006	271.90	<LLD	2.63E-02
5	PITTSBORO - CONTROL	4/10/2006	270.80	<LLD	3.52E-02
5	PITTSBORO - CONTROL	4/17/2006	269.40	<LLD	2.73E-02
5	PITTSBORO - CONTROL	4/24/2006	272.50	<LLD	2.35E-02
5	PITTSBORO - CONTROL	5/1/2006	274.30	<LLD	2.92E-02
5	PITTSBORO - CONTROL	5/8/2006	268.30	<LLD	3.46E-02
5	PITTSBORO - CONTROL	5/15/2006	269.70	<LLD	2.45E-02
5	PITTSBORO - CONTROL	5/22/2006	269.90	<LLD	3.52E-02
5	PITTSBORO - CONTROL	5/29/2006	269.40	<LLD	3.23E-02
5	PITTSBORO - CONTROL	6/5/2006	269.40	<LLD	1.93E-02
5	PITTSBORO - CONTROL	6/12/2006	266.00	<LLD	2.16E-02
5	PITTSBORO - CONTROL	6/19/2006	271.50	<LLD	1.78E-02
5	PITTSBORO - CONTROL	6/26/2006	268.10	<LLD	1.57E-02
5	PITTSBORO - CONTROL	7/3/2006	269.20	<LLD	1.76E-02
5	PITTSBORO - CONTROL	7/10/2006	268.40	<LLD	2.02E-02
5	PITTSBORO - CONTROL	7/17/2006	266.90	<LLD	2.97E-02
5	PITTSBORO - CONTROL	7/24/2006	269.20	<LLD	3.18E-02
5	PITTSBORO - CONTROL	7/31/2006	270.90	<LLD	4.05E-02
5	PITTSBORO - CONTROL	8/7/2006	265.40	<LLD	2.90E-02
5	PITTSBORO - CONTROL	8/14/2006	271.30	<LLD	3.03E-02

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
5	PITTSBORO - CONTROL	8/21/2006	265.10	<LLD	3.54E-02
5	PITTSBORO - CONTROL	8/28/2006	269.00	<LLD	2.86E-02
5	PITTSBORO - CONTROL	9/3/2006	232.10	<LLD	2.17E-02
5	PITTSBORO - CONTROL	9/11/2006	306.70	<LLD	2.49E-02
5	PITTSBORO - CONTROL	9/18/2006	269.10	<LLD	2.57E-02
5	PITTSBORO - CONTROL	9/25/2006	268.30	<LLD	2.21E-02
5	PITTSBORO - CONTROL	10/2/2006	274.10	<LLD	2.29E-02
5	PITTSBORO - CONTROL	10/9/2006	269.50	<LLD	2.74E-02
5	PITTSBORO - CONTROL	10/16/2006	270.90	<LLD	1.82E-02
5	PITTSBORO - CONTROL	10/23/2006	270.30	<LLD	3.01E-02
5	PITTSBORO - CONTROL	10/30/2006	275.60	<LLD	2.04E-02
5	PITTSBORO - CONTROL	11/6/2006	272.00	<LLD	2.33E-02
5	PITTSBORO - CONTROL	11/13/2006	269.30	<LLD	2.14E-02
5	PITTSBORO - CONTROL	11/20/2006	270.80	<LLD	3.06E-02
5	PITTSBORO - CONTROL	11/27/2006	273.80	<LLD	2.55E-02
5	PITTSBORO - CONTROL	12/4/2006	271.20	<LLD	3.02E-02
5	PITTSBORO - CONTROL	12/11/2006	273.00	<LLD	2.24E-02
5	PITTSBORO - CONTROL	12/18/2006	271.80	<LLD	2.99E-02
5	PITTSBORO - CONTROL	12/24/2006	232.70	<LLD	4.21E-02
26	SPILLWAY ON MAIN RES	1/3/2006	282.50	<LLD	1.96E-02
26	SPILLWAY ON MAIN RES	1/9/2006	241.90	<LLD	3.04E-02
26	SPILLWAY ON MAIN RES	1/16/2006	280.90	<LLD	1.45E-02
26	SPILLWAY ON MAIN RES	1/23/2006	277.20	<LLD	1.60E-02
26	SPILLWAY ON MAIN RES	1/30/2006	281.30	<LLD	2.58E-02
26	SPILLWAY ON MAIN RES	2/6/2006	278.70	<LLD	2.12E-02
26	SPILLWAY ON MAIN RES	2/13/2006	281.20	<LLD	1.57E-02
26	SPILLWAY ON MAIN RES	2/20/2006	278.40	<LLD	2.10E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Activity</u>	<u>2 Sigma Error</u>	<u>LLD</u>
26	SPILLWAY ON MAIN RES	2/27/2006	277.30	<LLD	2.23E-02
26	SPILLWAY ON MAIN RES	3/7/2006	314.30	<LLD	2.34E-02
26	SPILLWAY ON MAIN RES	3/13/2006	235.20	<LLD	2.61E-02
26	SPILLWAY ON MAIN RES	3/20/2006	273.30	<LLD	2.28E-02
26	SPILLWAY ON MAIN RES	3/27/2006	276.20	<LLD	2.82E-02
26	SPILLWAY ON MAIN RES	4/3/2006	272.00	<LLD	2.46E-02
26	SPILLWAY ON MAIN RES	4/10/2006	271.20	<LLD	1.97E-02
26	SPILLWAY ON MAIN RES	4/17/2006	268.40	<LLD	2.08E-02
26	SPILLWAY ON MAIN RES	4/24/2006	268.70	<LLD	1.40E-02
26	SPILLWAY ON MAIN RES	5/1/2006	271.90	<LLD	2.07E-02
26	SPILLWAY ON MAIN RES	5/8/2006	267.10	<LLD	2.25E-02
26	SPILLWAY ON MAIN RES	5/15/2006	268.60	<LLD	1.93E-02
26	SPILLWAY ON MAIN RES	5/22/2006	267.00	<LLD	2.18E-02
26	SPILLWAY ON MAIN RES	5/29/2006	265.60	<LLD	2.51E-02
26	SPILLWAY ON MAIN RES	6/5/2006	267.20	<LLD	1.56E-02
26	SPILLWAY ON MAIN RES	6/12/2006	239.50	<LLD	1.98E-02
26	SPILLWAY ON MAIN RES	6/19/2006	256.40	<LLD	1.86E-02
26	SPILLWAY ON MAIN RES	6/26/2006	249.50	<LLD	2.26E-02
26	SPILLWAY ON MAIN RES	7/3/2006	252.10	<LLD	1.98E-02
26	SPILLWAY ON MAIN RES	7/10/2006	250.30	<LLD	2.16E-02
26	SPILLWAY ON MAIN RES	7/17/2006	250.70	<LLD	2.91E-02
26	SPILLWAY ON MAIN RES	7/24/2006	250.00	<LLD	2.78E-02
26	SPILLWAY ON MAIN RES	7/31/2006	251.10	<LLD	3.14E-02
26	SPILLWAY ON MAIN RES	8/7/2006	249.60	<LLD	2.94E-02
26	SPILLWAY ON MAIN RES	8/14/2006	252.70	<LLD	2.34E-02
26	SPILLWAY ON MAIN RES	8/21/2006	248.90	<LLD	2.73E-02
26	SPILLWAY ON MAIN RES	8/28/2006	251.10	<LLD	2.10E-02



# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
26	SPILLWAY ON MAIN RES	9/3/2006	216.20	<LLD	3.86E-02
26	SPILLWAY ON MAIN RES	9/11/2006	284.20	<LLD	2.09E-02
26	SPILLWAY ON MAIN RES	9/18/2006	250.00	<LLD	2.42E-02
26	SPILLWAY ON MAIN RES	9/25/2006	249.10	<LLD	2.62E-02
26	SPILLWAY ON MAIN RES	10/2/2006	249.40	<LLD	1.64E-02
26	SPILLWAY ON MAIN RES	10/9/2006	247.70	<LLD	2.90E-02
26	SPILLWAY ON MAIN RES	10/16/2006	249.80	<LLD	3.63E-02
26	SPILLWAY ON MAIN RES	10/23/2006	246.00	<LLD	1.92E-02
26	SPILLWAY ON MAIN RES	10/30/2006	252.20	<LLD	2.34E-02
26	SPILLWAY ON MAIN RES	11/6/2006	277.30	<LLD	1.77E-02
26	SPILLWAY ON MAIN RES	11/13/2006	216.00	<LLD	3.69E-02
26	SPILLWAY ON MAIN RES	11/20/2006	290.60	<LLD	1.96E-02
26	SPILLWAY ON MAIN RES	11/27/2006	297.40	<LLD	2.38E-02
26	SPILLWAY ON MAIN RES	12/4/2006	298.80	<LLD	2.56E-02
26	SPILLWAY ON MAIN RES	12/11/2006	300.60	<LLD	1.77E-02
26	SPILLWAY ON MAIN RES	12/18/2006	300.00	<LLD	2.49E-02
26	SPILLWAY ON MAIN RES	12/24/2006	258.00	<LLD	1.67E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/3/2006	282.00	<LLD	1.85E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/9/2006	242.60	<LLD	2.41E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/16/2006	282.10	<LLD	1.93E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/23/2006	281.30	<LLD	2.18E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/30/2006	285.30	<LLD	2.00E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/6/2006	285.10	<LLD	3.26E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/13/2006	288.80	<LLD	1.83E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/20/2006	287.30	<LLD	1.81E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/27/2006	288.70	<LLD	1.47E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/7/2006	328.60	<LLD	1.46E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
47	SSW SECTOR 3.4 MI FROM SITE	3/13/2006	246.80	<LLD	1.41E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/20/2006	287.00	<LLD	1.83E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/27/2006	281.70	<LLD	1.32E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/3/2006	277.00	<LLD	2.21E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/10/2006	278.00	<LLD	1.81E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/17/2006	276.80	<LLD	2.39E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/24/2006	276.10	<LLD	3.15E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/1/2006	279.50	<LLD	2.47E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/8/2006	263.20	<LLD	2.22E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/15/2006	265.30	<LLD	3.04E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/22/2006	264.10	<LLD	2.48E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/29/2006	262.40	<LLD	1.67E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/5/2006	264.20	<LLD	3.43E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/12/2006	241.10	<LLD	2.05E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/19/2006	261.40	<LLD	3.54E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/26/2006	257.30	<LLD	1.98E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/3/2006	260.90	<LLD	4.17E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/10/2006	258.70	<LLD	3.65E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/17/2006	258.70	<LLD	2.22E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/24/2006	257.50	<LLD	1.56E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/31/2006	258.70	<LLD	2.31E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/7/2006	256.90	<LLD	1.74E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/14/2006	260.70	<LLD	1.88E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/21/2006	256.80	<LLD	2.08E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/28/2006	258.10	<LLD	1.55E-02
47	SSW SECTOR 3.4 MI FROM SITE	9/3/2006	221.90	<LLD	2.23E-02
47	SSW SECTOR 3.4 MI FROM SITE	9/11/2006	292.60	<LLD	3.08E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
47 SSW SECTOR 3.4 MI FROM SITE	9/18/2006	258.00	<LLD		2.90E-02
47 SSW SECTOR 3.4 MI FROM SITE	9/25/2006	258.30	<LLD		1.63E-02
47 SSW SECTOR 3.4 MI FROM SITE	10/2/2006	260.00	<LLD		2.40E-02
47 SSW SECTOR 3.4 MI FROM SITE	10/9/2006	258.40	<LLD		2.26E-02
47 SSW SECTOR 3.4 MI FROM SITE	10/16/2006	261.30	<LLD		2.67E-02
47 SSW SECTOR 3.4 MI FROM SITE	10/23/2006	257.90	<LLD		1.83E-02
47 SSW SECTOR 3.4 MI FROM SITE	10/30/2006	264.60	<LLD		3.45E-02
47 SSW SECTOR 3.4 MI FROM SITE	11/6/2006	279.20	<LLD		2.69E-02
47 SSW SECTOR 3.4 MI FROM SITE	11/13/2006	275.50	<LLD		2.43E-02
47 SSW SECTOR 3.4 MI FROM SITE	11/20/2006	277.20	<LLD		2.70E-02
47 SSW SECTOR 3.4 MI FROM SITE	11/27/2006	280.60	<LLD		1.85E-02
47 SSW SECTOR 3.4 MI FROM SITE	12/4/2006	279.40	<LLD		1.67E-02
47 SSW SECTOR 3.4 MI FROM SITE	12/11/2006	278.80	<LLD		2.52E-02
47 SSW SECTOR 3.4 MI FROM SITE	12/18/2006	278.40	<LLD		3.28E-02
47 SSW SECTOR 3.4 MI FROM SITE	12/24/2006	238.80	<LLD		2.83E-02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
38 CAPE FEAR PLANT INTAKE - CONTROL	1/9/2006	4.00			6.03E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/23/2006	4.00			4.52E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/6/2006	4.00			4.47E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/20/2006	4.00	7.43E-01	4.01E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	3/6/2006	4.00	6.95E-01	6.08E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	3/20/2006	4.00	9.22E-01	5.16E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	4/3/2006	4.00			4.69E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/17/2006	4.00			6.55E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/1/2006	4.00	3.89E-01	3.13E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	5/15/2006	4.00			6.15E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/29/2006	4.00			5.07E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	4.00			5.28E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/26/2006	4.00			4.48E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/10/2006	4.00			5.34E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/24/2006	4.00			4.99E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/7/2006	4.00			6.04E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/21/2006	4.00			6.24E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/4/2006	4.00			5.47E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/18/2006	4.00			5.02E-01

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
38 CAPE FEAR PLANT INTAKE - CONTROL	10/2/2006	4.00			4.88E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/16/2006	4.00			6.07E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/30/2006	4.00			5.05E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	4.00	5.28E-01	3.92E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	11/27/2006	4.00			5.11E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/11/2006	4.00			4.52E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/24/2006	4.00			4.63E-01
40 LILLINGTON - CAPE FEAR RIVER	1/9/2006	4.00			4.77E-01
40 LILLINGTON - CAPE FEAR RIVER	1/23/2006	4.00			5.34E-01
40 LILLINGTON - CAPE FEAR RIVER	2/6/2006	4.00			5.38E-01
40 LILLINGTON - CAPE FEAR RIVER	2/20/2006	4.00			6.12E-01
40 LILLINGTON - CAPE FEAR RIVER	3/6/2006	4.00			4.91E-01
40 LILLINGTON - CAPE FEAR RIVER	3/20/2006	4.00	1.24E+00	4.46E-01	
40 LILLINGTON - CAPE FEAR RIVER	4/3/2006	4.00			5.54E-01
40 LILLINGTON - CAPE FEAR RIVER	4/17/2006	4.00			4.60E-01
40 LILLINGTON - CAPE FEAR RIVER	5/1/2006	4.00			4.10E-01
40 LILLINGTON - CAPE FEAR RIVER	5/15/2006	4.00			4.63E-01
40 LILLINGTON - CAPE FEAR RIVER	5/29/2006	4.00			4.29E-01
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	4.00			5.16E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
40 LILLINGTON - CAPE FEAR RIVER	6/26/2006	4.00			4.31E-01
40 LILLINGTON - CAPE FEAR RIVER	7/10/2006	4.00			6.96E-01
40 LILLINGTON - CAPE FEAR RIVER	7/24/2006	4.00			8.04E-01
40 LILLINGTON - CAPE FEAR RIVER	8/7/2006	4.00			4.34E-01
40 LILLINGTON - CAPE FEAR RIVER	8/21/2006	4.00			4.74E-01
40 LILLINGTON - CAPE FEAR RIVER	9/4/2006	4.00			4.16E-01
40 LILLINGTON - CAPE FEAR RIVER	9/18/2006	4.00			6.17E-01
40 LILLINGTON - CAPE FEAR RIVER	10/2/2006	4.00			5.81E-01
40 LILLINGTON - CAPE FEAR RIVER	10/16/2006	4.00			4.83E-01
40 LILLINGTON - CAPE FEAR RIVER	10/30/2006	4.00			6.14E-01
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	4.00			6.02E-01
40 LILLINGTON - CAPE FEAR RIVER	11/27/2006	4.00			6.43E-01
40 LILLINGTON - CAPE FEAR RIVER	12/11/2006	4.00			5.48E-01
40 LILLINGTON - CAPE FEAR RIVER	12/24/2006	4.00			5.52E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/9/2006	4.00			7.28E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/23/2006	4.00			3.89E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/6/2006	4.00			3.88E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/20/2006	4.00			4.42E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/6/2006	4.00			7.44E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/20/2006	4.00			4.40E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/3/2006	4.00			6.90E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/17/2006	4.00			6.82E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/1/2006	4.00			6.27E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/15/2006	4.00			7.63E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/29/2006	4.00			7.87E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/12/2006	4.00			4.32E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/26/2006	4.00			7.55E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/10/2006	4.00			4.87E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/24/2006	4.00			4.20E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/7/2006	4.00			4.64E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/21/2006	4.00			7.91E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/4/2006	4.00			6.28E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/18/2006	4.00			4.14E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/2/2006	4.00			4.54E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/16/2006	4.00			4.45E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/30/2006	4.00			4.33E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/13/2006	4.00			4.15E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/27/2006	4.00			4.30E-01

# *HNP Radiological Environmental Monitoring Analysis Report*

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/Liter*

*Analysis: Iodine*

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/11/2006	4.00			4.18E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/24/2006	4.00			4.14E-01



# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Milk

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Activity</u>	<u>2 Sigma Error</u>	<u>LLD</u>
5 PITTSBORO - CONTROL	1/3/2006	4.00	<LLD		3.19E-01
5 PITTSBORO - CONTROL	1/16/2006	4.00	<LLD		3.21E-01
5 PITTSBORO - CONTROL	1/30/2006	4.00	<LLD		5.19E-01
5 PITTSBORO - CONTROL	2/13/2006	4.00	<LLD		2.89E-01
5 PITTSBORO - CONTROL	2/27/2006	4.00	<LLD		5.08E-01
5 PITTSBORO - CONTROL	3/13/2006	4.00	<LLD		3.19E-01
5 PITTSBORO - CONTROL	3/27/2006	4.00	<LLD		3.75E-01
5 PITTSBORO - CONTROL	4/10/2006	4.00	<LLD		4.55E-01
5 PITTSBORO - CONTROL	4/24/2006	4.00	<LLD		4.39E-01
5 PITTSBORO - CONTROL	5/8/2006	4.00	<LLD		5.23E-01
5 PITTSBORO - CONTROL	5/22/2006	4.00	<LLD		3.25E-01
5 PITTSBORO - CONTROL	6/5/2006	4.00	<LLD		3.15E-01
5 PITTSBORO - CONTROL	6/19/2006	4.00	<LLD		3.16E-01
5 PITTSBORO - CONTROL	7/3/2006	4.00	<LLD		3.21E-01
5 PITTSBORO - CONTROL	7/17/2006	4.00	<LLD		3.14E-01
5 PITTSBORO - CONTROL	7/31/2006	4.00	<LLD		6.35E-01
5 PITTSBORO - CONTROL	8/14/2006	4.00	<LLD		4.92E-01
5 PITTSBORO - CONTROL	9/11/2006	4.00	<LLD		4.54E-01
5 PITTSBORO - CONTROL	10/9/2006	4.00	<LLD		5.24E-01
5 PITTSBORO - CONTROL	11/6/2006	4.00	<LLD		5.45E-01
5 PITTSBORO - CONTROL	12/4/2006	4.00	<LLD		5.31E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
38 CAPE FEAR PLANT INTAKE - CONTROL	1/9/2006	4.00			6.03E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/23/2006	4.00			4.52E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/6/2006	4.00			4.47E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/20/2006	4.00	7.43E-01	4.01E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	3/6/2006	4.00	6.95E-01	6.08E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	3/20/2006	4.00	9.22E-01	5.16E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	4/3/2006	4.00			4.69E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/17/2006	4.00			6.55E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/1/2006	4.00	3.89E-01	3.13E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	5/15/2006	4.00			6.15E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/29/2006	4.00			5.07E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	4.00			5.28E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/26/2006	4.00			4.48E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/10/2006	4.00			5.34E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/24/2006	4.00			4.99E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/7/2006	4.00			6.04E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/21/2006	4.00			6.24E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/4/2006	4.00			5.47E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/18/2006	4.00			5.02E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/2/2006	4.00			4.88E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/16/2006	4.00			6.07E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/30/2006	4.00			5.05E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	4.00	5.28E-01	3.92E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	11/27/2006	4.00			5.11E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/11/2006	4.00			4.52E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/24/2006	4.00			4.63E-01
40 LILLINGTON - CAPE FEAR RIVER	1/9/2006	4.00			4.77E-01
40 LILLINGTON - CAPE FEAR RIVER	1/23/2006	4.00			5.34E-01
40 LILLINGTON - CAPE FEAR RIVER	2/6/2006	4.00			5.38E-01
40 LILLINGTON - CAPE FEAR RIVER	2/20/2006	4.00			6.12E-01
40 LILLINGTON - CAPE FEAR RIVER	3/6/2006	4.00			4.91E-01
40 LILLINGTON - CAPE FEAR RIVER	3/20/2006	4.00	1.24E+00	4.46E-01	
40 LILLINGTON - CAPE FEAR RIVER	4/3/2006	4.00			5.54E-01
40 LILLINGTON - CAPE FEAR RIVER	4/17/2006	4.00			4.60E-01
40 LILLINGTON - CAPE FEAR RIVER	5/1/2006	4.00			4.10E-01
40 LILLINGTON - CAPE FEAR RIVER	5/15/2006	4.00			4.63E-01
40 LILLINGTON - CAPE FEAR RIVER	5/29/2006	4.00			4.29E-01
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	4.00			5.16E-01
40 LILLINGTON - CAPE FEAR RIVER	6/26/2006	4.00			4.31E-01
40 LILLINGTON - CAPE FEAR RIVER	7/10/2006	4.00			6.96E-01
40 LILLINGTON - CAPE FEAR RIVER	7/24/2006	4.00			8.04E-01
40 LILLINGTON - CAPE FEAR RIVER	8/7/2006	4.00			4.34E-01
40 LILLINGTON - CAPE FEAR RIVER	8/21/2006	4.00			4.74E-01
40 LILLINGTON - CAPE FEAR RIVER	9/4/2006	4.00			4.16E-01

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Iodine

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
40 LILLINGTON - CAPE FEAR RIVER	9/18/2006	4.00			6.17E-01
40 LILLINGTON - CAPE FEAR RIVER	10/2/2006	4.00			5.81E-01
40 LILLINGTON - CAPE FEAR RIVER	10/16/2006	4.00			4.83E-01
40 LILLINGTON - CAPE FEAR RIVER	10/30/2006	4.00			6.14E-01
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	4.00			6.02E-01
40 LILLINGTON - CAPE FEAR RIVER	11/27/2006	4.00			6.43E-01
40 LILLINGTON - CAPE FEAR RIVER	12/11/2006	4.00			5.48E-01
40 LILLINGTON - CAPE FEAR RIVER	12/24/2006	4.00			5.52E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Drinking Water

Analysis: Tritium

Quantity: Liters

Concentration (Activity): pCi/Liter

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD
38 CAPE FEAR PLANT INTAKE - CONTROL	1/16/2006	0.005	<LLD		3.07E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	2/13/2006	0.005	<LLD		3.09E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	3/13/2006	0.005	<LLD		3.12E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	4/10/2006	0.005	<LLD		3.09E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	5/11/2006	0.005	<LLD		3.14E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	0.005	<LLD		3.12E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	7/13/2006	0.005	<LLD		3.01E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	8/14/2006	0.005	<LLD		3.06E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	9/11/2006	0.005	<LLD		3.15E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	10/12/2006	0.005	<LLD		3.31E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	0.005	<LLD		3.27E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	12/10/2006	0.005	<LLD		3.26E+02
40 LILLINGTON - CAPE FEAR RIVER	1/16/2006	0.005	<LLD		3.08E+02
40 LILLINGTON - CAPE FEAR RIVER	2/13/2006	0.005	<LLD		3.09E+02
40 LILLINGTON - CAPE FEAR RIVER	3/13/2006	0.005	<LLD		3.12E+02
40 LILLINGTON - CAPE FEAR RIVER	4/10/2006	0.005	<LLD		3.10E+02
40 LILLINGTON - CAPE FEAR RIVER	5/11/2006	0.005	<LLD		3.13E+02
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	0.005	<LLD		3.11E+02
40 LILLINGTON - CAPE FEAR RIVER	7/13/2006	0.005	<LLD		3.02E+02
40 LILLINGTON - CAPE FEAR RIVER	8/14/2006	0.005	<LLD		3.06E+02
40 LILLINGTON - CAPE FEAR RIVER	9/11/2006	0.005	<LLD		3.16E+02
40 LILLINGTON - CAPE FEAR RIVER	10/12/2006	0.005	<LLD		3.31E+02
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	0.005	<LLD		3.27E+02
40 LILLINGTON - CAPE FEAR RIVER	12/10/2006	0.005	<LLD		3.27E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/16/2006	0.005	4.90E+03	2.37E+02	3.08E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/13/2006	0.005	4.91E+03	2.38E+02	3.10E+02

# *HNP Radiological Environmental Monitoring Analysis Report*

*Media Type: Drinking Water*

*Analysis: Tritium*

*Quantity: Liters*

*Concentration (Activity): pCi/Liter*

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/13/2006	0.005	5.04E+03	2.41E+02	3.14E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/10/2006	0.005	4.56E+03	2.33E+02	3.07E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/11/2006	0.005	4.55E+03	2.35E+02	3.12E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/12/2006	0.005	4.13E+03	2.32E+02	3.13E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/13/2006	0.005	3.62E+03	2.21E+02	3.01E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/14/2006	0.005	3.78E+03	2.25E+02	3.05E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/11/2006	0.005	3.17E+03	2.25E+02	3.17E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/12/2006	0.005	3.58E+03	2.37E+02	3.30E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/13/2006	0.005	3.24E+03	2.32E+02	3.27E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/10/2006	0.005	2.84E+03	2.28E+02	3.27E+02

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Tritium

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>2 Sigma Error</i>	<i>LLD</i>
39 DEEP WELL NEAR DIABASE DIKES	2/15/2006	0.005	<LLD		3.08E+02
39 DEEP WELL NEAR DIABASE DIKES	5/18/2006	0.005	<LLD		3.09E+02
39 DEEP WELL NEAR DIABASE DIKES	8/23/2006	0.005	<LLD		3.09E+02
39 DEEP WELL NEAR DIABASE DIKES	11/14/2006	0.005	<LLD		3.31E+02
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	2/15/2006	0.005	<LLD		3.08E+02
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	5/18/2006	0.005	<LLD		3.11E+02
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	8/23/2006	0.005	<LLD		3.09E+02
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	11/14/2006	0.005	<LLD		3.31E+02
58 0.5 MI WSW SECTOR N BANK ESW INTAKE	2/15/2006	0.005	8.92E+02	1.97E+02	3.08E+02
58 0.5 MI WSW SECTOR N BANK ESW INTAKE	5/18/2006	0.005	7.59E+02	1.96E+02	3.09E+02
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	2/15/2006	0.005	<LLD		3.08E+02
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	5/18/2006	0.005	<LLD		3.10E+02
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	8/23/2006	0.005	<LLD		3.10E+02
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	11/14/2006	0.005	<LLD		3.32E+02
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	2/15/2006	0.005	<LLD		3.09E+02
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	5/18/2006	0.005	<LLD		3.10E+02
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	8/23/2006	0.005	<LLD		3.11E+02
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	11/14/2006	0.005	<LLD		3.32E+02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Tritium

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Activity</u>	<u>2 Sigma Error</u>	<u>LLD</u>
26 SPILLWAY ON MAIN RES	1/16/2006	0.005	5.80E+03	2.44E+02	3.08E+02
26 SPILLWAY ON MAIN RES	2/13/2006	0.005	6.36E+03	2.49E+02	3.08E+02
26 SPILLWAY ON MAIN RES	3/13/2006	0.005	6.37E+03	2.52E+02	3.13E+02
26 SPILLWAY ON MAIN RES	4/10/2006	0.005	5.84E+03	2.45E+02	3.07E+02
26 SPILLWAY ON MAIN RES	5/11/2006	0.005	5.19E+03	2.42E+02	3.14E+02
26 SPILLWAY ON MAIN RES	6/12/2006	0.005	4.71E+03	2.36E+02	3.10E+02
26 SPILLWAY ON MAIN RES	7/13/2006	0.005	3.85E+03	2.24E+02	3.02E+02
26 SPILLWAY ON MAIN RES	8/14/2006	0.005	3.66E+03	2.23E+02	3.03E+02
26 SPILLWAY ON MAIN RES	9/11/2006	0.005	3.15E+03	2.24E+02	3.15E+02
26 SPILLWAY ON MAIN RES	10/12/2006	0.005	3.93E+03	2.41E+02	3.31E+02
26 SPILLWAY ON MAIN RES	11/13/2006	0.005	4.28E+03	2.42E+02	3.27E+02
26 SPILLWAY ON MAIN RES	12/10/2006	0.005	3.64E+03	2.37E+02	3.28E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	1/16/2006	0.005	<LLD		3.07E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	2/13/2006	0.005	<LLD		3.09E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	3/13/2006	0.005	<LLD		3.12E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	4/10/2006	0.005	<LLD		3.09E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	5/11/2006	0.005	<LLD		3.14E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	0.005	<LLD		3.12E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	7/13/2006	0.005	<LLD		3.01E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	8/14/2006	0.005	<LLD		3.06E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	9/11/2006	0.005	<LLD		3.15E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	10/12/2006	0.005	<LLD		3.31E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	0.005	<LLD		3.27E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	12/10/2006	0.005	<LLD		3.26E+02



# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Tritium

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Activity</u>	<u>2 Sigma Error</u>	<u>LLD</u>
40 LILLINGTON - CAPE FEAR RIVER	1/16/2006	0.005	<LLD		3.08E+02
40 LILLINGTON - CAPE FEAR RIVER	2/13/2006	0.005	<LLD		3.09E+02
40 LILLINGTON - CAPE FEAR RIVER	3/13/2006	0.005	<LLD		3.12E+02
40 LILLINGTON - CAPE FEAR RIVER	4/10/2006	0.005	<LLD		3.10E+02
40 LILLINGTON - CAPE FEAR RIVER	5/11/2006	0.005	<LLD		3.13E+02
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	0.005	<LLD		3.11E+02
40 LILLINGTON - CAPE FEAR RIVER	7/13/2006	0.005	<LLD		3.02E+02
40 LILLINGTON - CAPE FEAR RIVER	8/14/2006	0.005	<LLD		3.06E+02
40 LILLINGTON - CAPE FEAR RIVER	9/11/2006	0.005	<LLD		3.16E+02
40 LILLINGTON - CAPE FEAR RIVER	10/12/2006	0.005	<LLD		3.31E+02
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	0.005	<LLD		3.27E+02
40 LILLINGTON - CAPE FEAR RIVER	12/10/2006	0.005	<LLD		3.27E+02

# **2006 HNP Radiological Environmental Monitoring Gamma Isotopic Report**

## **Comments**

- NO-ACT refers to no detectable gamma activity being present in the samples. Refer to Table 5 for typical gamma Lower Limits of Detection for specific nuclides.

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/13/2006	3341.1	BI-214	3.31E-03	1.95E-03
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/13/2006	3341.1	PB-214	1.80E-03	1.23E-03
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	2/13/2006	3341.1	BE-7	1.15E-01	1.85E-02
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	3446.1	BE-7	1.27E-01	1.85E-02
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	3446.1	PB-212	1.15E-03	7.40E-04
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	3446.1	BI-214	3.34E-03	1.83E-03
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	5/15/2006	3446.1	PB-214	3.67E-03	1.30E-03
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	3446.9	TL-208	8.95E-04	6.54E-04
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	3446.9	BE-7	1.31E-01	1.61E-02
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	3446.9	PB-212	2.24E-03	8.74E-04
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	3446.9	BI-214	7.06E-03	1.66E-03
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	8/14/2006	3446.9	PB-214	8.45E-03	1.69E-03
1 SR 1134 AT INT SR 1011 - DIXIE PIPELINE	11/12/2006	3566.4	BE-7	1.15E-01	1.98E-02
2 SR 1134	2/13/2006	3266	PB-214	1.14E-02	1.81E-03
2 SR 1134	2/13/2006	3266	BE-7	1.12E-01	1.76E-02
2 SR 1134	2/13/2006	3266	PB-212	3.11E-03	8.76E-04
2 SR 1134	2/13/2006	3266	BI-214	1.42E-02	2.11E-03
2 SR 1134	5/15/2006	3414.8	BE-7	1.31E-01	2.14E-02
2 SR 1134	8/14/2006	3428.8	PB-214	3.81E-03	2.49E-03
2 SR 1134	8/14/2006	3428.8	BE-7	8.99E-02	2.00E-02
2 SR 1134	11/12/2006	3606.9	BE-7	1.04E-01	1.81E-02
4 NEW HILL NEAR 1ST BAPTIST CH	2/13/2006	3669.1	RA-226	9.33E-03	8.64E-03
4 NEW HILL NEAR 1ST BAPTIST CH	2/13/2006	3669.1	PB-214	2.32E-03	1.32E-03
4 NEW HILL NEAR 1ST BAPTIST CH	2/13/2006	3669.1	BE-7	1.10E-01	1.57E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Isotope</u>	<u>Activity</u>	<u>2 Sigma Error</u>
4 NEW HILL NEAR 1ST BAPTIST CH	2/13/2006	3669.1	PB-212	1.22E-03	7.00E-04
4 NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	3610.2	PB-214	4.19E-03	1.68E-03
4 NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	3610.2	BE-7	1.33E-01	1.73E-02
4 NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	3610.2	PB-212	1.21E-03	1.14E-03
4 NEW HILL NEAR 1ST BAPTIST CH	5/15/2006	3610.2	BI-214	5.37E-03	2.36E-03
4 NEW HILL NEAR 1ST BAPTIST CH	8/14/2006	3485.7	BI-214	1.87E-03	1.30E-03
4 NEW HILL NEAR 1ST BAPTIST CH	8/14/2006	3485.7	PB-212	1.74E-03	8.90E-04
4 NEW HILL NEAR 1ST BAPTIST CH	8/14/2006	3485.7	BE-7	1.16E-01	1.54E-02
4 NEW HILL NEAR 1ST BAPTIST CH	11/12/2006	3666.9	PB-214	3.31E-03	1.27E-03
4 NEW HILL NEAR 1ST BAPTIST CH	11/12/2006	3666.9	BI-214	2.87E-03	1.82E-03
4 NEW HILL NEAR 1ST BAPTIST CH	11/12/2006	3666.9	BE-7	1.12E-01	1.69E-02
4 NEW HILL NEAR 1ST BAPTIST CH	11/12/2006	3666.9	K-40	3.03E-02	1.33E-02
5 PITTSBORO - CONTROL	2/13/2006	3278.2	BE-7	1.08E-01	2.09E-02
5 PITTSBORO - CONTROL	2/13/2006	3278.2	K-40	2.53E-02	2.02E-02
5 PITTSBORO - CONTROL	2/13/2006	3278.2	BI-214	2.36E-03	1.76E-03
5 PITTSBORO - CONTROL	5/15/2006	3511.2	PB-212	1.52E-03	9.29E-04
5 PITTSBORO - CONTROL	5/15/2006	3511.2	PB-214	3.49E-03	1.41E-03
5 PITTSBORO - CONTROL	5/15/2006	3511.2	BE-7	1.31E-01	1.65E-02
5 PITTSBORO - CONTROL	5/15/2006	3511.2	BI-214	3.73E-03	1.55E-03
5 PITTSBORO - CONTROL	8/14/2006	3491.6	BI-214	1.51E-03	1.31E-03
5 PITTSBORO - CONTROL	8/14/2006	3491.6	BE-7	1.18E-01	1.84E-02
5 PITTSBORO - CONTROL	11/12/2006	3495	BE-7	1.07E-01	1.86E-02
26 SPILLWAY ON MAIN RES	2/13/2006	3578.4	TL-208	9.93E-04	6.85E-04
26 SPILLWAY ON MAIN RES	2/13/2006	3578.4	BE-7	9.68E-02	1.92E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

<u>Sample Point</u>	<u>Sample Date</u>	<u>Quantity</u>	<u>Isotope</u>	<u>Activity</u>	<u>2 Sigma Error</u>
26 SPILLWAY ON MAIN RES	5/15/2006	3433.1	BE-7	1.26E-01	2.15E-02
26 SPILLWAY ON MAIN RES	8/14/2006	3256	PB-214	6.29E-03	1.61E-03
26 SPILLWAY ON MAIN RES	8/14/2006	3256	BI-214	4.91E-03	1.63E-03
26 SPILLWAY ON MAIN RES	8/14/2006	3256	PB-212	1.51E-03	7.80E-04
26 SPILLWAY ON MAIN RES	8/14/2006	3256	BE-7	1.06E-01	1.68E-02
26 SPILLWAY ON MAIN RES	11/12/2006	3483.8	BI-214	3.69E-03	1.69E-03
26 SPILLWAY ON MAIN RES	11/12/2006	3483.8	BE-7	1.08E-01	1.50E-02
26 SPILLWAY ON MAIN RES	11/12/2006	3483.8	K-40	1.88E-02	1.22E-02
26 SPILLWAY ON MAIN RES	11/12/2006	3483.8	PB-214	4.29E-03	1.55E-03
47 SSW SECTOR 3.4 MI FROM SITE	2/13/2006	3667.3	BE-7	1.25E-01	1.54E-02
47 SSW SECTOR 3.4 MI FROM SITE	2/13/2006	3667.3	TL-208	7.01E-04	5.56E-04
47 SSW SECTOR 3.4 MI FROM SITE	2/13/2006	3667.3	PB-212	1.20E-03	7.44E-04
47 SSW SECTOR 3.4 MI FROM SITE	5/15/2006	3466.4	BE-7	1.41E-01	2.15E-02
47 SSW SECTOR 3.4 MI FROM SITE	8/14/2006	3357.8	BE-7	1.05E-01	1.94E-02
47 SSW SECTOR 3.4 MI FROM SITE	8/14/2006	3357.8	PB-214	1.97E-03	1.59E-03
47 SSW SECTOR 3.4 MI FROM SITE	11/12/2006	3484.1	K-40	2.06E-02	1.07E-02
47 SSW SECTOR 3.4 MI FROM SITE	11/12/2006	3484.1	BE-7	9.91E-02	1.87E-02
47 SSW SECTOR 3.4 MI FROM SITE	11/12/2006	3484.1	PB-214	8.04E-03	1.67E-03
47 SSW SECTOR 3.4 MI FROM SITE	11/12/2006	3484.1	TL-208	1.18E-03	6.14E-04
47 SSW SECTOR 3.4 MI FROM SITE	11/12/2006	3484.1	PB-212	1.42E-03	7.34E-04
47 SSW SECTOR 3.4 MI FROM SITE	11/12/2006	3484.1	BI-214	9.12E-03	1.80E-03

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Aquatic Vegetation

Quantity: Grams (wet)

Concentration (Activity): pCi/gm wet

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
26 SPILLWAY ON MAIN RES	11/30/2006	804.3	CO-60	2.03E-02	1.29E-02
26 SPILLWAY ON MAIN RES	11/30/2006	804.3	AC-228	1.02E-01	3.91E-02
26 SPILLWAY ON MAIN RES	11/30/2006	804.3	PB-212	1.94E-02	1.49E-02
26 SPILLWAY ON MAIN RES	11/30/2006	804.3	TL-208	1.18E-02	7.86E-03
26 SPILLWAY ON MAIN RES	11/30/2006	804.3	K-40	2.07E+00	2.25E-01
26 SPILLWAY ON MAIN RES	11/30/2006	804.3	BE-7	3.82E-01	7.99E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/30/2006	677.6	RA-226	3.38E-01	2.67E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/30/2006	677.6	K-40	2.40E+00	2.99E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/30/2006	677.6	BE-7	2.31E-01	8.79E-02
61 2.5 MI E SECTOR HOLLEMANS XRD BR	11/30/2006	560.7	AC-228	1.15E-01	7.93E-02
61 2.5 MI E SECTOR HOLLEMANS XRD BR	11/30/2006	560.7	BI-214	4.62E-02	3.18E-02
61 2.5 MI E SECTOR HOLLEMANS XRD BR	11/30/2006	560.7	PB-212	4.33E-02	3.40E-02
61 2.5 MI E SECTOR HOLLEMANS XRD BR	11/30/2006	560.7	K-40	3.00E+00	4.78E-01
61 2.5 MI E SECTOR HOLLEMANS XRD BR	11/30/2006	560.7	BE-7	2.72E-01	1.10E-01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Bottom Feeder

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: Catfish

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
44 SITE VARIES WITHIN HARRIS LAKE	5/3/2006	621.4	BI-214	5.86E-02	3.76E-02
44 SITE VARIES WITHIN HARRIS LAKE	5/3/2006	621.4	K-40	2.79E+00	6.03E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/28/2006	532.2	K-40	2.84E+00	6.53E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/1/2006	579.9	BI-214	1.62E-01	5.05E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/1/2006	579.9	K-40	3.28E+00	7.53E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/28/2006	608.9	K-40	2.49E+00	6.05E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Bottom Sediment

Quantity: GRAMS (dry)

Concentration (Activity): pCi/gm dry

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	CS-137	2.36E-01	6.82E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	K-40	8.84E+00	1.02E+00
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	TL-208	2.31E-01	5.50E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	PB-212	7.21E-01	7.82E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	BI-214	4.08E-01	1.25E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	PB-214	5.59E-01	1.06E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	RA-226	2.22E+00	1.09E+00
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	AC-228	7.27E-01	2.20E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	BE-7	3.15E-01	2.25E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/24/2006	1014.1	CO-60	1.25E+00	1.17E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	CS-137	1.86E-01	5.68E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	TL-208	2.52E-01	6.19E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	PB-212	6.37E-01	7.71E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	BI-214	5.24E-01	1.04E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	PB-214	4.35E-01	1.03E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	RA-226	1.31E+00	8.72E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	AC-228	6.54E-01	2.50E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	CO-60	1.21E+00	1.41E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/10/2006	1178.5	K-40	8.04E+00	1.06E+00



# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: DOGWOOD

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
65 1.36 MI S SECTOR	5/17/2006	461.5	BE-7	3.58E-01	2.26E-01
65 1.36 MI S SECTOR	5/17/2006	461.5	K-40	3.85E+00	5.40E-01
65 1.36 MI S SECTOR	5/17/2006	461.5	TL-208	5.55E-02	2.34E-02
65 1.36 MI S SECTOR	5/17/2006	461.5	PB-212	7.44E-02	4.29E-02
65 1.36 MI S SECTOR	6/15/2006	317.6	BE-7	8.33E-01	2.52E-01
65 1.36 MI S SECTOR	6/15/2006	317.6	K-40	2.77E+00	5.56E-01
65 1.36 MI S SECTOR	6/15/2006	317.6	PB-212	4.90E-02	4.32E-02
65 1.36 MI S SECTOR	7/19/2006	301.9	BE-7	1.25E+00	3.51E-01
65 1.36 MI S SECTOR	7/19/2006	301.9	BI-214	1.09E-01	6.42E-02
65 1.36 MI S SECTOR	7/19/2006	301.9	K-40	1.90E+00	6.48E-01
65 1.36 MI S SECTOR	7/19/2006	301.9	PB-212	7.82E-02	6.18E-02
65 1.36 MI S SECTOR	8/22/2006	377.5	BE-7	9.33E-01	2.44E-01
65 1.36 MI S SECTOR	8/22/2006	377.5	K-40	2.40E+00	4.10E-01
65 1.36 MI S SECTOR	8/22/2006	377.5	PB-212	1.01E-01	2.98E-02
65 1.36 MI S SECTOR	9/13/2006	348.6	PB-212	1.07E-01	4.69E-02
65 1.36 MI S SECTOR	9/13/2006	348.6	BE-7	1.50E+00	2.97E-01
65 1.36 MI S SECTOR	9/13/2006	348.6	K-40	1.73E+00	5.92E-01
66 1.33 MI SSW SECTOR	6/15/2006	448.8	TL-208	2.35E-02	2.14E-02
66 1.33 MI SSW SECTOR	6/15/2006	448.8	K-40	2.45E+00	3.94E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: DOGWOOD

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
66 1.33 MI SSW SECTOR	6/15/2006	448.8	BE-7	1.61E+00	2.25E-01
66 1.33 MI SSW SECTOR	7/19/2006	433.4	PB-212	1.09E-01	3.19E-02
66 1.33 MI SSW SECTOR	7/19/2006	433.4	BE-7	6.98E-01	1.84E-01
66 1.33 MI SSW SECTOR	7/19/2006	433.4	TL-208	4.20E-02	2.12E-02
66 1.33 MI SSW SECTOR	7/19/2006	433.4	CS-137	7.35E-02	2.16E-02
66 1.33 MI SSW SECTOR	7/19/2006	433.4	K-40	2.02E+00	3.72E-01
66 1.33 MI SSW SECTOR	8/22/2006	395.2	BE-7	1.73E+00	2.57E-01
66 1.33 MI SSW SECTOR	8/22/2006	395.2	K-40	2.25E+00	4.10E-01
66 1.33 MI SSW SECTOR	8/22/2006	395.2	TL-208	3.73E-02	2.48E-02
66 1.33 MI SSW SECTOR	8/22/2006	395.2	PB-212	7.27E-02	2.97E-02
66 1.33 MI SSW SECTOR	9/13/2006	312.9	PB-212	8.46E-02	3.77E-02
66 1.33 MI SSW SECTOR	9/13/2006	312.9	K-40	1.68E+00	4.19E-01
66 1.33 MI SSW SECTOR	9/13/2006	312.9	BE-7	2.87E+00	3.24E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: FIG LEAF

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
5	PITTSBORO - CONTROL	5/17/2006	467.7	K-40	3.49E+00	5.30E-01
5	PITTSBORO - CONTROL	5/17/2006	467.7	TL-208	5.80E-02	2.61E-02
5	PITTSBORO - CONTROL	5/17/2006	467.7	BE-7	4.62E-01	1.87E-01
5	PITTSBORO - CONTROL	5/17/2006	467.7	PB-212	1.15E-01	3.33E-02
5	PITTSBORO - CONTROL	6/15/2006	378.8	BE-7	1.22E+00	2.22E-01
5	PITTSBORO - CONTROL	6/15/2006	378.8	BI-214	5.42E-02	3.93E-02
5	PITTSBORO - CONTROL	6/15/2006	378.8	K-40	4.58E+00	5.59E-01
5	PITTSBORO - CONTROL	6/15/2006	378.8	PB-212	4.61E-02	2.98E-02
5	PITTSBORO - CONTROL	7/19/2006	414.2	BI-212	3.89E-01	1.92E-01
5	PITTSBORO - CONTROL	7/19/2006	414.2	AC-228	1.67E-01	9.86E-02
5	PITTSBORO - CONTROL	7/19/2006	414.2	BE-7	1.71E+00	2.38E-01
5	PITTSBORO - CONTROL	7/19/2006	414.2	TL-208	1.52E-01	2.89E-02
5	PITTSBORO - CONTROL	7/19/2006	414.2	PB-212	2.89E-01	3.88E-02
5	PITTSBORO - CONTROL	7/19/2006	414.2	RA-226	6.56E-01	4.21E-01
5	PITTSBORO - CONTROL	7/19/2006	414.2	BI-214	9.30E-02	5.43E-02
5	PITTSBORO - CONTROL	7/19/2006	414.2	K-40	3.84E+00	4.83E-01
5	PITTSBORO - CONTROL	8/22/2006	431.2	K-40	4.02E+00	6.48E-01
5	PITTSBORO - CONTROL	8/22/2006	431.2	PB-212	3.15E-01	5.43E-02
5	PITTSBORO - CONTROL	8/22/2006	431.2	AC-228	1.41E-01	1.01E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: FIG LEAF

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
5 PITTSBORO - CONTROL	8/22/2006	431.2	BE-7	1.17E+00	2.83E-01
5 PITTSBORO - CONTROL	8/22/2006	431.2	TL-208	9.78E-02	3.67E-02
5 PITTSBORO - CONTROL	9/13/2006	431.2	PB-214	8.83E-02	5.91E-02
5 PITTSBORO - CONTROL	9/13/2006	431.2	AC-228	2.65E-01	9.06E-02
5 PITTSBORO - CONTROL	9/13/2006	431.2	BE-7	1.79E+00	2.94E-01
5 PITTSBORO - CONTROL	9/13/2006	431.2	K-40	4.86E+00	6.48E-01
5 PITTSBORO - CONTROL	9/13/2006	431.2	TL-208	5.55E-02	2.74E-02
5 PITTSBORO - CONTROL	9/13/2006	431.2	PB-212	7.20E-02	5.01E-02
5 PITTSBORO - CONTROL	9/13/2006	431.2	BI-214	9.31E-02	5.68E-02
5 PITTSBORO - CONTROL	10/19/2006	393.3	BE-7	3.51E+00	3.28E-01
5 PITTSBORO - CONTROL	10/19/2006	393.3	PB-214	4.38E-02	3.76E-02
5 PITTSBORO - CONTROL	10/19/2006	393.3	AC-228	2.47E-01	1.17E-01
5 PITTSBORO - CONTROL	10/19/2006	393.3	BI-214	6.30E-02	4.57E-02
5 PITTSBORO - CONTROL	10/19/2006	393.3	K-40	5.42E+00	5.65E-01
5 PITTSBORO - CONTROL	10/19/2006	393.3	PB-212	1.13E-01	4.13E-02
5 PITTSBORO - CONTROL	10/19/2006	393.3	RA-226	6.06E-01	5.65E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: MAPLE

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
5	PITTSBORO - CONTROL	6/15/2006	375.6	PB-212	4.41E-02	3.40E-02
5	PITTSBORO - CONTROL	6/15/2006	375.6	K-40	3.01E+00	4.99E-01
5	PITTSBORO - CONTROL	6/15/2006	375.6	BE-7	1.04E+00	2.21E-01
5	PITTSBORO - CONTROL	7/19/2006	423.5	PB-212	2.00E-01	3.78E-02
5	PITTSBORO - CONTROL	7/19/2006	423.5	BE-7	9.59E-01	1.96E-01
5	PITTSBORO - CONTROL	7/19/2006	423.5	TL-208	6.87E-02	2.31E-02
5	PITTSBORO - CONTROL	7/19/2006	423.5	BI-214	5.98E-02	4.06E-02
5	PITTSBORO - CONTROL	7/19/2006	423.5	K-40	3.25E+00	4.95E-01
5	PITTSBORO - CONTROL	8/22/2006	399.1	TL-208	4.71E-02	2.96E-02
5	PITTSBORO - CONTROL	8/22/2006	399.1	BE-7	1.37E+00	2.63E-01
5	PITTSBORO - CONTROL	8/22/2006	399.1	K-40	2.03E+00	5.87E-01
5	PITTSBORO - CONTROL	8/22/2006	399.1	PB-212	9.22E-02	5.32E-02
5	PITTSBORO - CONTROL	9/13/2006	361.7	AC-228	1.46E-01	7.89E-02
5	PITTSBORO - CONTROL	9/13/2006	361.7	K-40	2.65E+00	5.04E-01
5	PITTSBORO - CONTROL	9/13/2006	361.7	BE-7	1.18E+00	2.30E-01
5	PITTSBORO - CONTROL	9/13/2006	361.7	PB-212	1.28E-01	4.32E-02
5	PITTSBORO - CONTROL	9/13/2006	361.7	BI-214	9.31E-02	4.54E-02
5	PITTSBORO - CONTROL	9/13/2006	361.7	PB-214	6.86E-02	5.63E-02
5	PITTSBORO - CONTROL	9/13/2006	361.7	TL-208	5.75E-02	3.04E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation  
 Quantity: GRAMS (wet)  
 Concentration (Activity): pCi/gm wet

Media: MAPLE

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
5	PITTSBORO - CONTROL	10/19/2006	480.3	K-40	2.00E+00	5.00E-01
5	PITTSBORO - CONTROL	10/19/2006	480.3	PB-212	6.56E-02	3.64E-02
5	PITTSBORO - CONTROL	10/19/2006	480.3	BI-214	7.60E-02	5.25E-02
5	PITTSBORO - CONTROL	10/19/2006	480.3	BE-7	2.58E+00	2.68E-01
65	1.36 MI S SECTOR	5/17/2006	405.7	BE-7	5.06E-01	1.94E-01
65	1.36 MI S SECTOR	5/17/2006	405.7	PB-212	7.16E-02	3.72E-02
65	1.36 MI S SECTOR	5/17/2006	405.7	K-40	2.98E+00	5.64E-01
65	1.36 MI S SECTOR	6/15/2006	395.1	BE-7	6.35E-01	1.67E-01
65	1.36 MI S SECTOR	6/15/2006	395.1	K-40	2.20E+00	4.10E-01
65	1.36 MI S SECTOR	7/19/2006	447.1	K-40	1.58E+00	3.43E-01
65	1.36 MI S SECTOR	7/19/2006	447.1	PB-214	4.78E-02	3.89E-02
65	1.36 MI S SECTOR	7/19/2006	447.1	BE-7	6.18E-01	1.61E-01
65	1.36 MI S SECTOR	8/22/2006	385.6	PB-212	5.67E-02	4.06E-02
65	1.36 MI S SECTOR	8/22/2006	385.6	K-40	2.48E+00	5.88E-01
65	1.36 MI S SECTOR	8/22/2006	385.6	BE-7	1.11E+00	2.36E-01
65	1.36 MI S SECTOR	9/13/2006	491.6	K-40	1.47E+00	4.25E-01
65	1.36 MI S SECTOR	9/13/2006	491.6	PB-212	2.96E-02	2.83E-02
65	1.36 MI S SECTOR	9/13/2006	491.6	BE-7	1.14E+00	2.52E-01
66	1.33 MI SSW SECTOR	5/17/2006	480.9	PB-212	3.15E-02	2.65E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: MAPLE

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
66	1.33 MI SSW SECTOR	480.9	K-40	2.72E+00	3.85E-01
66	1.33 MI SSW SECTOR	480.9	BE-7	7.70E-01	1.81E-01
66	1.33 MI SSW SECTOR	480.9	BI-214	6.08E-02	3.54E-02
66	1.33 MI SSW SECTOR	411.2	K-40	2.52E+00	4.39E-01
66	1.33 MI SSW SECTOR	411.2	BE-7	6.02E-01	1.62E-01
66	1.33 MI SSW SECTOR	504.4	K-40	1.91E+00	4.58E-01
66	1.33 MI SSW SECTOR	504.4	BI-214	3.69E-02	3.61E-02
66	1.33 MI SSW SECTOR	504.4	PB-212	4.83E-02	3.25E-02
66	1.33 MI SSW SECTOR	504.4	BE-7	5.78E-01	2.27E-01
66	1.33 MI SSW SECTOR	337.3	PB-212	5.44E-02	4.12E-02
66	1.33 MI SSW SECTOR	337.3	K-40	2.05E+00	4.48E-01
66	1.33 MI SSW SECTOR	337.3	BE-7	1.99E+00	2.92E-01
66	1.33 MI SSW SECTOR	523.3	PB-212	4.60E-02	2.80E-02
66	1.33 MI SSW SECTOR	523.3	K-40	1.55E+00	3.92E-01
66	1.33 MI SSW SECTOR	523.3	BE-7	1.57E+00	2.37E-01
66	1.33 MI SSW SECTOR	459	PB-212	4.78E-02	3.19E-02
66	1.33 MI SSW SECTOR	459	BE-7	3.61E+00	3.07E-01
66	1.33 MI SSW SECTOR	459	K-40	9.70E-01	2.75E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: OAK

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5	PITTSBORO - CONTROL	405.3	BI-214	4.98E-02	4.55E-02
5	PITTSBORO - CONTROL	405.3	BE-7	7.89E-01	2.25E-01
5	PITTSBORO - CONTROL	405.3	K-40	3.10E+00	6.02E-01
5	PITTSBORO - CONTROL	405.3	PB-212	1.14E-01	5.04E-02
5	PITTSBORO - CONTROL	405.3	TL-208	7.51E-02	3.05E-02
66	1.33 MI SSW SECTOR	348	BE-7	7.09E-01	2.50E-01
66	1.33 MI SSW SECTOR	348	K-40	2.52E+00	6.44E-01



# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: SWEETGUM

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
5	PITTSBORO - CONTROL	513.1	BE-7	3.68E-01	1.24E-01
5	PITTSBORO - CONTROL	513.1	RA-226	3.54E-01	3.19E-01
5	PITTSBORO - CONTROL	513.1	K-40	2.44E+00	3.56E-01
5	PITTSBORO - CONTROL	513.1	TL-208	1.81E-02	1.69E-02
5	PITTSBORO - CONTROL	513.1	PB-212	9.54E-02	3.12E-02
5	PITTSBORO - CONTROL	486.4	BE-7	2.44E-01	1.72E-01
5	PITTSBORO - CONTROL	486.4	PB-212	9.09E-02	4.05E-02
5	PITTSBORO - CONTROL	486.4	K-40	2.82E+00	4.54E-01
5	PITTSBORO - CONTROL	463.2	BE-7	6.97E-01	2.19E-01
5	PITTSBORO - CONTROL	463.2	K-40	2.23E+00	4.72E-01
5	PITTSBORO - CONTROL	463.2	TL-208	1.03E-01	2.79E-02
5	PITTSBORO - CONTROL	463.2	BI-212	2.94E-01	1.57E-01
5	PITTSBORO - CONTROL	463.2	PB-212	2.49E-01	5.00E-02
5	PITTSBORO - CONTROL	463.2	AC-228	1.03E-01	9.08E-02
5	PITTSBORO - CONTROL	446.1	K-40	1.87E+00	3.80E-01
5	PITTSBORO - CONTROL	446.1	AC-228	2.91E-01	1.10E-01
5	PITTSBORO - CONTROL	446.1	TL-208	8.81E-02	2.90E-02
5	PITTSBORO - CONTROL	446.1	BI-212	1.57E-01	1.29E-01
5	PITTSBORO - CONTROL	446.1	PB-212	2.05E-01	4.44E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: SWEETGUM

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
5	PITTSBORO - CONTROL	8/22/2006	446.1	BI-214	8.20E-02	4.54E-02
5	PITTSBORO - CONTROL	8/22/2006	446.1	BE-7	7.98E-01	2.08E-01
5	PITTSBORO - CONTROL	9/13/2006	506.3	K-40	2.34E+00	3.49E-01
5	PITTSBORO - CONTROL	9/13/2006	506.3	AC-228	1.18E-01	7.88E-02
5	PITTSBORO - CONTROL	9/13/2006	506.3	TL-208	7.50E-02	2.24E-02
5	PITTSBORO - CONTROL	9/13/2006	506.3	BE-7	4.71E-01	1.41E-01
5	PITTSBORO - CONTROL	9/13/2006	506.3	PB-212	2.07E-01	3.87E-02
5	PITTSBORO - CONTROL	10/19/2006	498	BE-7	4.09E+00	3.44E-01
5	PITTSBORO - CONTROL	10/19/2006	498	AC-228	2.34E-01	7.93E-02
5	PITTSBORO - CONTROL	10/19/2006	498	PB-212	6.25E-02	3.50E-02
5	PITTSBORO - CONTROL	10/19/2006	498	TL-208	2.76E-02	2.58E-02
5	PITTSBORO - CONTROL	10/19/2006	498	K-40	2.42E+00	4.56E-01
65	1.36 MI S SECTOR	5/17/2006	307.7	BE-7	6.19E-01	1.89E-01
65	1.36 MI S SECTOR	5/17/2006	307.7	TL-208	3.19E-02	2.82E-02
65	1.36 MI S SECTOR	5/17/2006	307.7	PB-212	7.43E-02	4.76E-02
65	1.36 MI S SECTOR	5/17/2006	307.7	K-40	1.81E+00	4.89E-01
65	1.36 MI S SECTOR	6/15/2006	444.5	TL-208	1.91E-02	1.84E-02
65	1.36 MI S SECTOR	6/15/2006	444.5	K-40	1.83E+00	3.98E-01
65	1.36 MI S SECTOR	6/15/2006	444.5	BE-7	7.23E-01	1.79E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: SWEETGUM

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
65 1.36 MI S SECTOR	7/19/2006	461.4	PB-214	6.56E-02	5.71E-02
65 1.36 MI S SECTOR	7/19/2006	461.4	PB-212	1.86E-01	4.83E-02
65 1.36 MI S SECTOR	7/19/2006	461.4	K-40	1.65E+00	4.31E-01
65 1.36 MI S SECTOR	7/19/2006	461.4	BE-7	1.06E+00	2.39E-01
65 1.36 MI S SECTOR	7/19/2006	461.4	BI-214	1.87E-01	6.43E-02
65 1.36 MI S SECTOR	8/22/2006	448.5	BE-7	1.11E+00	2.55E-01
65 1.36 MI S SECTOR	8/22/2006	448.5	K-40	2.13E+00	5.07E-01
65 1.36 MI S SECTOR	8/22/2006	448.5	TL-208	3.13E-02	2.37E-02
65 1.36 MI S SECTOR	8/22/2006	448.5	PB-212	7.33E-02	3.81E-02
65 1.36 MI S SECTOR	8/22/2006	448.5	PB-214	5.09E-02	3.99E-02
65 1.36 MI S SECTOR	9/13/2006	524.9	BE-7	6.83E-01	1.35E-01
65 1.36 MI S SECTOR	9/13/2006	524.9	K-40	1.63E+00	3.18E-01
65 1.36 MI S SECTOR	9/13/2006	524.9	TL-208	3.68E-02	2.30E-02
65 1.36 MI S SECTOR	9/13/2006	524.9	PB-212	3.57E-02	2.69E-02
65 1.36 MI S SECTOR	10/19/2006	409	K-40	1.91E+00	4.15E-01
65 1.36 MI S SECTOR	10/19/2006	409	TL-208	2.89E-02	2.31E-02
65 1.36 MI S SECTOR	10/19/2006	409	BE-7	1.06E+00	2.14E-01
65 1.36 MI S SECTOR	10/19/2006	409	PB-212	6.76E-02	3.07E-02
66 1.33 MI SSW SECTOR	5/17/2006	366.6	BE-7	3.64E-01	2.17E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: SWEETGUM

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
66 1.33 MI SSW SECTOR	5/17/2006	366.6	K-40	2.47E+00	5.49E-01
66 1.33 MI SSW SECTOR	5/17/2006	366.6	TL-208	4.13E-02	3.09E-02
66 1.33 MI SSW SECTOR	5/17/2006	366.6	PB-212	5.34E-02	4.67E-02
66 1.33 MI SSW SECTOR	5/17/2006	366.6	BI-214	7.21E-02	6.29E-02
66 1.33 MI SSW SECTOR	5/17/2006	366.6	PB-214	1.31E-01	6.25E-02
66 1.33 MI SSW SECTOR	6/15/2006	476.4	PB-212	5.52E-02	3.07E-02
66 1.33 MI SSW SECTOR	6/15/2006	476.4	K-40	2.72E+00	4.89E-01
66 1.33 MI SSW SECTOR	6/15/2006	476.4	BE-7	5.01E-01	2.15E-01
66 1.33 MI SSW SECTOR	7/19/2006	535.9	BE-7	9.23E-01	1.46E-01
66 1.33 MI SSW SECTOR	7/19/2006	535.9	TL-208	3.93E-02	1.71E-02
66 1.33 MI SSW SECTOR	7/19/2006	535.9	K-40	1.43E+00	3.30E-01
66 1.33 MI SSW SECTOR	7/19/2006	535.9	BI-214	9.92E-02	2.48E-02
66 1.33 MI SSW SECTOR	8/22/2006	467.7	K-40	1.50E+00	4.86E-01
66 1.33 MI SSW SECTOR	8/22/2006	467.7	BE-7	9.46E-01	2.33E-01
66 1.33 MI SSW SECTOR	8/22/2006	467.7	PB-212	5.00E-02	3.56E-02
66 1.33 MI SSW SECTOR	8/22/2006	467.7	TL-208	2.38E-02	2.14E-02
66 1.33 MI SSW SECTOR	9/13/2006	563.8	TL-208	2.49E-02	2.07E-02
66 1.33 MI SSW SECTOR	9/13/2006	563.8	PB-212	9.70E-02	3.38E-02
66 1.33 MI SSW SECTOR	9/13/2006	563.8	K-40	1.21E+00	3.56E-01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: SWEETGUM

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
66 1.33 MI SSW SECTOR	9/13/2006	563.8	BE-7	5.02E-01	1.58E-01
66 1.33 MI SSW SECTOR	10/19/2006	461.9	BE-7	3.15E+00	3.48E-01
66 1.33 MI SSW SECTOR	10/19/2006	461.9	K-40	1.50E+00	4.36E-01
66 1.33 MI SSW SECTOR	10/19/2006	461.9	PB-212	4.49E-02	4.07E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/L

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	K-40	8.13E+01	4.81E+01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	TL-208	4.11E+00	2.68E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	BI-214	7.75E+00	3.72E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	NO-ACT		
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	PB-214	6.02E+00	3.43E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	TL-208	1.78E+00	1.62E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	PB-212	3.18E+00	1.98E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	BI-214	8.49E+00	4.13E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1.0	BI-214	9.85E+00	4.13E+00
40	LILLINGTON - CAPE FEAR RIVER	1.0	K-40	4.40E+01	3.76E+01
40	LILLINGTON - CAPE FEAR RIVER	1.0	NO-ACT		
40	LILLINGTON - CAPE FEAR RIVER	1.0	NO-ACT		
40	LILLINGTON - CAPE FEAR RIVER	1.0	NO-ACT		
40	LILLINGTON - CAPE FEAR RIVER	1.0	NO-ACT		
40	LILLINGTON - CAPE FEAR RIVER	1.0	K-40	8.44E+01	4.29E+01
40	LILLINGTON - CAPE FEAR RIVER	1.0	TL-208	3.46E+00	3.04E+00
40	LILLINGTON - CAPE FEAR RIVER	1.0	PB-214	4.98E+00	4.59E+00
40	LILLINGTON - CAPE FEAR RIVER	1.0	NO-ACT		
40	LILLINGTON - CAPE FEAR RIVER	1.0	NO-ACT		

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/L

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
40 LILLINGTON - CAPE FEAR RIVER	10/12/2006	1.0	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1.0	PB-214	5.62E+00	3.21E+00
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1.0	BI-214	8.41E+00	4.36E+00
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1.0	PB-212	4.12E+00	2.17E+00
40 LILLINGTON - CAPE FEAR RIVER	12/10/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/16/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/13/2006	1.0	K-40	7.90E+01	4.59E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/13/2006	1.0	TL-208	4.17E+00	1.86E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/13/2006	1.0	PB-214	5.58E+00	4.42E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/13/2006	1.0	K-40	1.08E+02	4.74E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/10/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/11/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/12/2006	1.0	TL-208	2.93E+00	2.01E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/13/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/14/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/11/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/12/2006	1.0	PB-212	4.14E+00	2.06E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/12/2006	1.0	PB-214	1.13E+01	3.58E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/12/2006	1.0	BI-214	1.53E+01	4.54E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/13/2006	1.0	NO-ACT		
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/10/2006	1.0	PB-214	3.53E+00	3.02E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/10/2006	1.0	PB-212	2.82E+00	2.23E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/10/2006	1.0	BI-214	1.05E+01	4.16E+00

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

*Media Type: Food Crop*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** CABBAGE

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>	
55	RD 1167 1.7 MI NNW (GOODWIN)	6/15/2006	588.1	K-40	2.74E+00	4.95E-01
64	1.8 MI ENE SECTOR (MICHAEL)	3/15/2006	758.9	TL-208	1.46E-02	1.24E-02
64	1.8 MI ENE SECTOR (MICHAEL)	3/15/2006	758.9	K-40	3.38E+00	3.32E-01



# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: COLLARDS

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
5	PITTSBORO - CONTROL	1/16/2006	543.4	BI-214	6.48E-02	2.58E-02
5	PITTSBORO - CONTROL	1/16/2006	543.4	K-40	3.20E+00	3.80E-01
5	PITTSBORO - CONTROL	1/16/2006	543.4	PB-214	4.84E-02	3.69E-02
5	PITTSBORO - CONTROL	1/16/2006	543.4	PB-212	1.95E-01	2.87E-02
5	PITTSBORO - CONTROL	1/16/2006	543.4	TL-208	6.32E-02	2.15E-02
5	PITTSBORO - CONTROL	2/15/2006	591.8	K-40	2.46E+00	3.99E-01
5	PITTSBORO - CONTROL	2/15/2006	591.8	PB-212	6.69E-02	2.70E-02
5	PITTSBORO - CONTROL	2/15/2006	591.8	BE-7	1.70E-01	1.30E-01
5	PITTSBORO - CONTROL	3/15/2006	561.2	BI-214	3.23E-02	2.90E-02
5	PITTSBORO - CONTROL	3/15/2006	561.2	PB-212	5.01E-01	4.22E-02
5	PITTSBORO - CONTROL	3/15/2006	561.2	TL-208	1.91E-01	2.71E-02
5	PITTSBORO - CONTROL	3/15/2006	561.2	K-40	2.44E+00	3.78E-01
5	PITTSBORO - CONTROL	3/15/2006	561.2	BI-212	2.91E-01	1.33E-01
5	PITTSBORO - CONTROL	6/15/2006	592.6	BE-7	1.17E-01	9.46E-02
5	PITTSBORO - CONTROL	6/15/2006	592.6	TL-208	2.55E-02	1.56E-02
5	PITTSBORO - CONTROL	6/15/2006	592.6	K-40	2.80E+00	3.42E-01
5	PITTSBORO - CONTROL	6/15/2006	592.6	PB-212	7.91E-02	2.68E-02
5	PITTSBORO - CONTROL	12/15/2006	572.6	K-40	2.19E+00	3.59E-01
5	PITTSBORO - CONTROL	12/15/2006	572.6	TL-208	6.52E-02	1.77E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: COLLARDS

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
5	PITTSBORO - CONTROL	12/15/2006	572.6	BI-212	1.32E-01	1.00E-01
5	PITTSBORO - CONTROL	12/15/2006	572.6	PB-212	1.54E-01	2.81E-02
5	PITTSBORO - CONTROL	12/15/2006	572.6	BI-214	7.88E-02	3.48E-02
5	PITTSBORO - CONTROL	12/15/2006	572.6	PB-214	4.33E-02	2.96E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/16/2006	555.7	PB-212	4.47E-02	3.17E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/16/2006	555.7	K-40	2.48E+00	4.30E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	1/16/2006	555.7	BI-214	1.22E-01	5.03E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/16/2006	555.7	TL-208	2.67E-02	2.22E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/16/2006	555.7	PB-214	7.67E-02	4.06E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	2/15/2006	561.7	K-40	2.06E+00	3.08E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	6/15/2006	530.5	K-40	3.63E+00	4.99E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	10/19/2006	587	BE-7	2.06E-01	1.41E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	10/19/2006	587	K-40	1.57E+00	3.79E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	11/21/2006	571	BI-214	1.29E-01	4.40E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	11/21/2006	571	BE-7	1.41E-01	1.04E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	11/21/2006	571	K-40	1.85E+00	2.88E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	11/21/2006	571	PB-212	7.76E-02	2.48E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	11/21/2006	571	PB-214	3.70E-02	3.10E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	11/21/2006	571	TL-208	3.24E-02	1.64E-02

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: COLLARDS

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>	
55	RD 1167 1.7 MI NNW (GOODWIN)	12/15/2006	566.1	TL-208	2.06E-02	1.78E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	12/15/2006	566.1	PB-212	4.88E-02	2.68E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	12/15/2006	566.1	PB-214	4.25E-02	3.01E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	12/15/2006	566.1	BI-214	8.54E-02	3.81E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	12/15/2006	566.1	K-40	1.79E+00	4.32E-01
62	2.3 MI NE SECTOR (LEE)	1/16/2006	488.2	BI-214	4.99E-02	4.69E-02
62	2.3 MI NE SECTOR (LEE)	1/16/2006	488.2	PB-214	5.68E-02	3.20E-02
62	2.3 MI NE SECTOR (LEE)	1/16/2006	488.2	K-40	2.74E+00	4.00E-01
64	1.8 MI ENE SECTOR (MICHAEL)	2/15/2006	552.8	K-40	3.77E+00	4.81E-01
64	1.8 MI ENE SECTOR (MICHAEL)	2/15/2006	552.8	BE-7	2.35E-01	1.32E-01
64	1.8 MI ENE SECTOR (MICHAEL)	3/15/2006	577.6	PB-212	5.34E-02	3.38E-02
64	1.8 MI ENE SECTOR (MICHAEL)	3/15/2006	577.6	TL-208	4.34E-02	2.29E-02
64	1.8 MI ENE SECTOR (MICHAEL)	3/15/2006	577.6	K-40	2.88E+00	4.49E-01
64	1.8 MI ENE SECTOR (MICHAEL)	3/15/2006	577.6	PB-214	4.17E-02	3.40E-02
64	1.8 MI ENE SECTOR (MICHAEL)	4/18/2006	551.2	PB-212	7.91E-02	2.70E-02
64	1.8 MI ENE SECTOR (MICHAEL)	4/18/2006	551.2	K-40	2.55E+00	3.45E-01
64	1.8 MI ENE SECTOR (MICHAEL)	4/18/2006	551.2	TL-208	2.55E-02	1.58E-02
64	1.8 MI ENE SECTOR (MICHAEL)	9/20/2006	572.5	TL-208	3.22E-02	2.05E-02
64	1.8 MI ENE SECTOR (MICHAEL)	9/20/2006	572.5	BE-7	1.98E-01	1.88E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: COLLARDS

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
64	1.8 MI ENE SECTOR (MICHAEL)	9/20/2006	572.5	PB-212	9.42E-02	3.58E-02
64	1.8 MI ENE SECTOR (MICHAEL)	9/20/2006	572.5	K-40	3.95E+00	4.80E-01
64	1.8 MI ENE SECTOR (MICHAEL)	10/19/2006	634.1	K-40	4.61E+00	4.92E-01
64	1.8 MI ENE SECTOR (MICHAEL)	10/19/2006	634.1	BE-7	5.25E-01	1.60E-01
64	1.8 MI ENE SECTOR (MICHAEL)	11/21/2006	559	K-40	4.69E+00	5.61E-01
64	1.8 MI ENE SECTOR (MICHAEL)	11/21/2006	559	BE-7	4.22E-01	1.28E-01
64	1.8 MI ENE SECTOR (MICHAEL)	11/21/2006	559	BI-214	4.12E-02	3.40E-02
64	1.8 MI ENE SECTOR (MICHAEL)	12/15/2006	612.8	TL-208	2.62E-02	1.35E-02
64	1.8 MI ENE SECTOR (MICHAEL)	12/15/2006	612.8	PB-212	5.85E-02	2.37E-02
64	1.8 MI ENE SECTOR (MICHAEL)	12/15/2006	612.8	K-40	3.24E+00	3.60E-01
64	1.8 MI ENE SECTOR (MICHAEL)	12/15/2006	612.8	BE-7	1.77E-01	9.09E-02

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

*Media Type: Food Crop*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** LETTUCE

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5	PITTSBORO - CONTROL	545.7	K-40	2.59E+00	3.80E-01
5	PITTSBORO - CONTROL	545.7	TL-208	2.07E-02	1.46E-02
5	PITTSBORO - CONTROL	545.7	PB-212	7.08E-02	2.06E-02
5	PITTSBORO - CONTROL	545.7	BE-7	4.27E-01	1.40E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: MUSTARD GREENS

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>	
5	PITTSBORO - CONTROL	2/15/2006	501.2	BE-7	3.87E-01	1.35E-01
5	PITTSBORO - CONTROL	2/15/2006	501.2	K-40	4.20E+00	4.99E-01
5	PITTSBORO - CONTROL	2/15/2006	501.2	PB-212	3.15E-02	2.27E-02
5	PITTSBORO - CONTROL	3/15/2006	596.2	PB-212	9.81E-02	2.64E-02
5	PITTSBORO - CONTROL	3/15/2006	596.2	BE-7	1.74E-01	1.27E-01
5	PITTSBORO - CONTROL	3/15/2006	596.2	K-40	3.14E+00	4.32E-01
5	PITTSBORO - CONTROL	3/15/2006	596.2	TL-208	2.51E-02	1.76E-02
5	PITTSBORO - CONTROL	4/17/2006	554.9	RA-226	5.15E-01	4.17E-01
5	PITTSBORO - CONTROL	4/17/2006	554.9	K-40	3.28E+00	5.04E-01
5	PITTSBORO - CONTROL	4/17/2006	554.9	PB-212	2.52E-01	4.17E-02
5	PITTSBORO - CONTROL	4/17/2006	554.9	TL-208	8.04E-02	2.66E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: SQUASH

<i>Sample Point</i>		<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5	PITTSBORO - CONTROL	6/15/2006	857.5	K-40	1.69E+00	2.29E-01
5	PITTSBORO - CONTROL	7/18/2006	679.2	K-40	2.50E+00	3.75E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	7/18/2006	631.2	K-40	2.59E+00	3.34E-01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

**Media:** TOMATOES

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>	
5	PITTSBORO - CONTROL	7/18/2006	993.9	K-40	2.01E+00	2.29E-01
5	PITTSBORO - CONTROL	7/18/2006	993.9	BI-214	2.84E-02	1.52E-02
5	PITTSBORO - CONTROL	7/18/2006	993.9	PB-214	1.72E-02	1.67E-02
5	PITTSBORO - CONTROL	8/22/2006	931.2	K-40	2.47E+00	3.12E-01
54	RD 1189 1.7 MI NNE (WILKINS OR MORRIS)	7/18/2006	877.2	K-40	1.80E+00	2.98E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	7/18/2006	969	K-40	2.51E+00	2.45E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	7/18/2006	969	RA-226	2.49E-01	1.75E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	8/22/2006	938.9	K-40	2.12E+00	2.40E-01



# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Food Crop

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: TURNIPS AND GREENS

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5	PITTSBORO - CONTROL	529.3	K-40	3.91E+00	4.37E-01
5	PITTSBORO - CONTROL	529.3	BI-214	8.77E-02	3.45E-02
5	PITTSBORO - CONTROL	529.3	PB-212	3.47E-02	2.33E-02
5	PITTSBORO - CONTROL	529.3	TL-208	3.34E-02	1.82E-02
5	PITTSBORO - CONTROL	529.3	BE-7	3.69E-01	1.26E-01
5	PITTSBORO - CONTROL	529.3	RA-226	4.49E-01	3.22E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	530.6	TL-208	1.90E-02	1.58E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	530.6	PB-214	4.31E-02	3.29E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	530.6	PB-212	3.05E-02	2.04E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	530.6	K-40	3.47E+00	4.32E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	530.6	BE-7	4.86E-01	1.29E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	530.6	BI-214	4.49E-02	3.69E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	538.2	BE-7	4.22E-01	1.38E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	538.2	K-40	3.52E+00	4.92E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	538.2	BI-214	1.35E-01	4.89E-02

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

*Media Type: Free Swimmer*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

*Media: Largemouth Bass*

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
44 SITE VARIES WITHIN HARRIS LAKE	5/3/2006	745	PB-214	3.70E-02	2.56E-02
44 SITE VARIES WITHIN HARRIS LAKE	5/3/2006	745	K-40	2.65E+00	5.34E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/28/2006	703.3	K-40	3.73E+00	9.82E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/1/2006	577.8	K-40	2.67E+00	6.94E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/28/2006	703.6	BI-214	7.32E-02	4.38E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/28/2006	703.6	K-40	3.77E+00	8.10E-01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

*Media Type: Free Swimmer*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

*Media: Sunfish*

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
44 SITE VARIES WITHIN HARRIS LAKE	5/3/2006	516.9	K-40	2.04E+00	5.81E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/28/2006	764.6	K-40	1.97E+00	5.52E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/1/2006	518	K-40	1.74E+00	7.43E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/28/2006	662.4	PB-214	9.89E-02	6.29E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/28/2006	662.4	BI-214	1.45E-01	8.22E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/28/2006	662.4	K-40	3.59E+00	9.30E-01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/L

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
39 DEEP WELL NEAR DIABASE DIKES	2/15/2006	1	NO-ACT		
39 DEEP WELL NEAR DIABASE DIKES	5/18/2006	1	NO-ACT		
39 DEEP WELL NEAR DIABASE DIKES	8/23/2006	1	NO-ACT		
39 DEEP WELL NEAR DIABASE DIKES	11/14/2006	1	PB-212	8.29E+00	4.69E+00
39 DEEP WELL NEAR DIABASE DIKES	11/14/2006	1	PB-214	1.89E+01	8.03E+00
39 DEEP WELL NEAR DIABASE DIKES	11/14/2006	1	BI-214	4.95E+01	9.05E+00
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	2/15/2006	1	NO-ACT		
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	5/18/2006	1	K-40	1.70E+02	8.02E+01
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	8/23/2006	1	NO-ACT		
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	11/14/2006	1	BI-214	3.54E+01	1.08E+01
57 0.4 MI SSW SECTOR N BANK ESW INTAKE	11/14/2006	1	PB-214	2.46E+01	9.14E+00
58 0.5 MI WSW SECTOR N BANK ESW INTAKE	2/15/2006	1	NO-ACT		
58 0.5 MI WSW SECTOR N BANK ESW INTAKE	5/18/2006	1	PB-214	9.99E+00	6.62E+00
58 0.5 MI WSW SECTOR N BANK ESW INTAKE	5/18/2006	1	BI-214	8.73E+00	7.99E+00
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	2/15/2006	1	NO-ACT		
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	5/18/2006	1	NO-ACT		
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	8/23/2006	1	NO-ACT		
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	11/14/2006	1	BI-214	2.98E+01	8.22E+00
59 0.5 MI NNE SECTOR (NEAR CONSTRUCTION RD)	11/14/2006	1	PB-214	1.28E+01	7.28E+00
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	2/15/2006	1	K-40	9.11E+01	7.22E+01
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	5/18/2006	1	BI-214	5.12E+01	1.04E+01
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	5/18/2006	1	PB-214	1.89E+01	7.77E+00
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	8/23/2006	1	BI-214	1.40E+01	9.71E+00
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	11/14/2006	1	PB-214	1.31E+01	8.20E+00
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	11/14/2006	1	K-40	7.87E+01	7.53E+01
60 0.5 MI ESE SECTOR W BANK OF THOMAS CREEK	11/14/2006	1	PB-212	7.38E+00	4.14E+00

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Milk

Quantity: Liters

Concentration (Activity): pCi/L

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
5 PITTSBORO - CONTROL	1/3/2006	1	BI-214	4.79E+01	1.54E+01
5 PITTSBORO - CONTROL	1/3/2006	1	K-40	1.49E+03	1.99E+02
5 PITTSBORO - CONTROL	1/16/2006	1	K-40	1.47E+03	2.06E+02
5 PITTSBORO - CONTROL	1/16/2006	1	PB-212	1.93E+01	1.57E+01
5 PITTSBORO - CONTROL	1/16/2006	1	BI-214	8.22E+01	2.32E+01
5 PITTSBORO - CONTROL	1/16/2006	1	PB-214	4.90E+01	2.17E+01
5 PITTSBORO - CONTROL	1/30/2006	1	K-40	1.36E+03	2.12E+02
5 PITTSBORO - CONTROL	1/30/2006	1	PB-212	1.76E+01	1.49E+01
5 PITTSBORO - CONTROL	1/30/2006	1	RA-226	3.89E+02	2.37E+02
5 PITTSBORO - CONTROL	2/13/2006	1	BI-214	2.20E+01	1.16E+01
5 PITTSBORO - CONTROL	2/13/2006	1	K-40	1.28E+03	1.85E+02
5 PITTSBORO - CONTROL	2/13/2006	1	PB-212	1.81E+01	1.23E+01
5 PITTSBORO - CONTROL	2/27/2006	1	K-40	1.49E+03	1.96E+02
5 PITTSBORO - CONTROL	3/13/2006	1	PB-212	1.42E+01	1.34E+01
5 PITTSBORO - CONTROL	3/13/2006	1	K-40	1.49E+03	2.02E+02
5 PITTSBORO - CONTROL	3/27/2006	1	K-40	1.42E+03	2.03E+02
5 PITTSBORO - CONTROL	3/27/2006	1	TL-208	1.23E+01	8.42E+00
5 PITTSBORO - CONTROL	3/27/2006	1	PB-212	2.37E+01	1.37E+01
5 PITTSBORO - CONTROL	4/10/2006	1	K-40	1.45E+03	2.08E+02
5 PITTSBORO - CONTROL	4/24/2006	1	K-40	1.47E+03	1.94E+02
5 PITTSBORO - CONTROL	4/24/2006	1	RA-226	1.67E+02	1.39E+02
5 PITTSBORO - CONTROL	5/8/2006	1	K-40	1.30E+03	1.86E+02
5 PITTSBORO - CONTROL	5/8/2006	1	PB-214	2.01E+01	1.88E+01
5 PITTSBORO - CONTROL	5/22/2006	1	K-40	1.40E+03	1.76E+02
5 PITTSBORO - CONTROL	6/5/2006	1	BI-214	3.38E+01	1.73E+01
5 PITTSBORO - CONTROL	6/5/2006	1	K-40	1.50E+03	2.16E+02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Milk

Quantity: Liters

Concentration (Activity): pCi/L

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5 PITTSBORO - CONTROL	6/19/2006	1	K-40	1.45E+03	1.76E+02
5 PITTSBORO - CONTROL	7/3/2006	1	K-40	1.53E+03	1.70E+02
5 PITTSBORO - CONTROL	7/3/2006	1	PB-212	1.49E+01	1.09E+01
5 PITTSBORO - CONTROL	7/3/2006	1	BI-214	5.07E+01	2.00E+01
5 PITTSBORO - CONTROL	7/3/2006	1	PB-214	3.62E+01	1.71E+01
5 PITTSBORO - CONTROL	7/17/2006	1	PB-214	2.25E+02	2.50E+01
5 PITTSBORO - CONTROL	7/17/2006	1	K-40	1.36E+03	1.89E+02
5 PITTSBORO - CONTROL	7/17/2006	1	TL-208	1.08E+01	8.76E+00
5 PITTSBORO - CONTROL	7/17/2006	1	PB-212	2.57E+01	1.14E+01
5 PITTSBORO - CONTROL	7/17/2006	1	BI-214	4.26E+02	3.07E+01
5 PITTSBORO - CONTROL	7/31/2006	1	K-40	1.33E+03	1.68E+02
5 PITTSBORO - CONTROL	8/14/2006	1	K-40	1.05E+03	1.93E+02
5 PITTSBORO - CONTROL	9/11/2006	1	K-40	1.22E+03	1.97E+02
5 PITTSBORO - CONTROL	9/11/2006	1	BI-214	2.96E+01	2.24E+01
5 PITTSBORO - CONTROL	9/11/2006	1	PB-214	2.50E+01	2.33E+01
5 PITTSBORO - CONTROL	10/9/2006	1	K-40	1.41E+03	2.08E+02
5 PITTSBORO - CONTROL	10/9/2006	1	BI-214	3.29E+01	2.06E+01
5 PITTSBORO - CONTROL	10/9/2006	1	PB-214	2.15E+01	1.88E+01
5 PITTSBORO - CONTROL	11/6/2006	1	K-40	1.23E+03	2.09E+02
5 PITTSBORO - CONTROL	12/4/2006	1	PB-214	7.08E+01	1.89E+01
5 PITTSBORO - CONTROL	12/4/2006	1	K-40	1.36E+03	2.02E+02
5 PITTSBORO - CONTROL	12/4/2006	1	BI-214	7.66E+01	2.00E+01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Shoreline Sediment

Quantity: GRAMS (dry)

Concentration (Activity): pCi/gm dry

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	TL-208	1.07E-01	3.16E-02
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	PB-212	2.44E-01	4.04E-02
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	BI-214	2.50E-01	5.70E-02
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	PB-214	2.81E-01	6.33E-02
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	RA-226	1.69E+00	5.92E-01
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	K-40	1.11E+01	9.10E-01
26 SPILLWAY ON MAIN RES	1/24/2006	1404.4	AC-228	2.70E-01	1.02E-01
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	PB-214	2.44E-01	6.23E-02
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	TL-208	1.33E-01	3.46E-02
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	BI-212	3.89E-01	1.66E-01
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	BI-214	2.02E-01	6.95E-02
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	K-40	1.21E+01	8.60E-01
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	RA-226	4.33E-01	4.11E-01
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	AC-228	3.73E-01	1.03E-01
26 SPILLWAY ON MAIN RES	7/10/2006	1306.8	PB-212	3.65E-01	4.35E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	PB-212	2.17E-01	4.00E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	K-40	1.07E+01	9.30E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	TL-208	9.88E-02	3.16E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	BI-214	2.54E-01	5.96E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	PB-214	2.89E-01	6.11E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	AC-228	3.43E-01	1.22E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/24/2006	1363.9	RA-226	6.09E-01	5.54E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/10/2006	1577.3	AC-228	2.88E-01	1.23E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/10/2006	1577.3	K-40	1.28E+01	1.07E+00
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/10/2006	1577.3	TL-208	9.12E-02	3.79E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/10/2006	1577.3	PB-212	2.41E-01	6.47E-02

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

*Media Type: Shoreline Sediment*

*Quantity: GRAMS (dry)*

*Concentration (Activity): pCi/gm dry*

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/10/2006	1577.3	BI-214	3.03E-01	7.49E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/10/2006	1577.3	PB-214	2.48E-01	7.20E-02



# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
26	SPILLWAY ON MAIN RES	1/16/2006	1	NO-ACT	
26	SPILLWAY ON MAIN RES	2/13/2006	1	K-40	3.70E+01 3.60E+01
26	SPILLWAY ON MAIN RES	2/13/2006	1	TL-208	2.13E+00 2.04E+00
26	SPILLWAY ON MAIN RES	3/13/2006	1	NO-ACT	
26	SPILLWAY ON MAIN RES	4/10/2006	1	NO-ACT	
26	SPILLWAY ON MAIN RES	5/11/2006	1	RA-226	4.03E+01 3.05E+01
26	SPILLWAY ON MAIN RES	6/12/2006	1	PB-212	2.92E+00 2.30E+00
26	SPILLWAY ON MAIN RES	7/13/2006	1	NO-ACT	
26	SPILLWAY ON MAIN RES	8/14/2006	1	K-40	2.61E+01 2.35E+01
26	SPILLWAY ON MAIN RES	9/11/2006	1	NO-ACT	
26	SPILLWAY ON MAIN RES	10/12/2006	1	NO-ACT	
26	SPILLWAY ON MAIN RES	11/13/2006	1	PB-214	4.93E+00 4.44E+00
26	SPILLWAY ON MAIN RES	11/13/2006	1	BI-214	7.83E+00 4.65E+00
26	SPILLWAY ON MAIN RES	12/10/2006	1	BI-214	4.24E+00 3.70E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	1/16/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	2/13/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	3/13/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	4/10/2006	1	K-40	8.13E+01 4.81E+01
38	CAPE FEAR PLANT INTAKE - CONTROL	4/10/2006	1	TL-208	4.11E+00 2.68E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	5/11/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	6/12/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	7/13/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	8/14/2006	1	BI-214	7.75E+00 3.72E+00
38	CAPE FEAR PLANT INTAKE - CONTROL	9/11/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	10/12/2006	1	NO-ACT	
38	CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	1	PB-212	3.18E+00 1.98E+00

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	1	TL-208	1.78E+00	1.62E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	1	PB-214	6.02E+00	3.43E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/13/2006	1	BI-214	8.49E+00	4.13E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/10/2006	1	BI-214	9.85E+00	4.13E+00
40 LILLINGTON - CAPE FEAR RIVER	1/16/2006	1	K-40	4.40E+01	3.76E+01
40 LILLINGTON - CAPE FEAR RIVER	2/13/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	3/13/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	4/10/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	5/11/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	1	K-40	8.44E+01	4.29E+01
40 LILLINGTON - CAPE FEAR RIVER	6/12/2006	1	TL-208	3.46E+00	3.04E+00
40 LILLINGTON - CAPE FEAR RIVER	7/13/2006	1	PB-214	4.98E+00	4.59E+00
40 LILLINGTON - CAPE FEAR RIVER	8/14/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	9/11/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	10/12/2006	1	NO-ACT		
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1	PB-214	5.62E+00	3.21E+00
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1	PB-212	4.12E+00	2.17E+00
40 LILLINGTON - CAPE FEAR RIVER	11/13/2006	1	BI-214	8.41E+00	4.36E+00
40 LILLINGTON - CAPE FEAR RIVER	12/10/2006	1	NO-ACT		