



APR 27 2011

SERIAL: HNP-11-035

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

SHEARON HARRIS NUCLEAR POWER PLANT  
DOCKET NO. 50-400/RENEWED 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 2010.

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

Sincerely,

A handwritten signature in black ink, appearing to read "D. H. Corlett".

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

DHC/mgw

Enclosure

- c: Mr. J. D. Austin (NRC Senior Resident Inspector, HNP)  
Mr. V. M. McCree (NRC Regional Administrator, Region II)  
Mrs. B. L. Mozafari (NRC Project Manager, HNP)

JE25  
NRC

**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, 2010**

# TABLE OF CONTENTS

<b>Title</b>	<b>Page</b>
<b>Table of Contents</b> .....	<b>i</b>
<b>List of Figures</b> .....	<b>ii</b>
<b>List of Tables</b> .....	<b>iii</b>
<b>Executive Summary</b> .....	<b>1</b>
<b>Radiological Environmental Monitoring Program</b> .....	<b>3</b>
Purpose and Requirements for the Radiological Monitoring Program.....	3
General Site Description .....	4
Radiological Monitoring Program Quality Assurance.....	5
Radiological Monitoring Program General Description .....	6
Summary of Radiological Monitoring Program .....	16
Interpretations and Conclusions.....	22
Missed Surveillances .....	30
Analytical Procedures .....	33
<b>Land-Use Census</b> .....	<b>42</b>
Purpose of the Land-Use Census .....	42
Methodology .....	42
2010 Land-Use Census Results.....	43

## LIST OF FIGURES

<b>Figure</b>		<b>Page</b>
1	Location of Harris Nuclear Plant	4
2a	Radiological Environmental Sampling Locations (Distant from Plant)	7
2b	Radiological Environmental Sampling Locations (Distant from Plant)	8
3a	Radiological Environmental Sampling Locations (Nearest Plant)	9
3b	Radiological Environmental Sampling Locations (Nearest Plant)	10
3c	Radiological Environmental Ground Water (GW) Sampling Locations	11
4	Plot of HNP Air Particulate Gross Beta Activity (Locations 1 and 5)	45
5	Plot of HNP Air Particulate Gross Beta Activity (Locations 2 and 5)	46
6	Plot of HNP Air Particulate Gross Beta Activity (Locations 4 and 5)	47
7	Plot of HNP Air Particulate Gross Beta Activity (Locations 5 and 26)	48
8	Plot of HNP Air Particulate Gross Beta Activity (Locations 5 and 47)	49
9	Plot of HNP Air Particulate Gross Beta Activity (Locations 5 and 63)	50
10	Plot of HNP Air Particulate Gross Beta Activity (Locations 5 and 90)	51
11	Plot of HNP Air Particulate Gross Beta Activity (Locations 5 and 91)	52
12	Plot of HNP Drinking Water Gross Beta Activity (Locations 38 and 40)	53
13	Plot of HNP Surface Water Gross Beta Activity (Locations 26 and 38)	54
14	Plot of HNP Surface Water Tritium Activity (Locations 26, 38, and 40)	55
15	Plot of HNP 2010 TLD Averages for Inner and Outer Ring Locations	56

## **LIST OF TABLES**

<b>Table</b>		<b>Page</b>
1	Media Used to Assess Exposure Pathways to Man	6
2	Radiological Environmental Sampling Locations Legend	12
3	Radiological Environmental Monitoring Sampling Locations	14
4	Radiological Environmental Monitoring Program Data Summary	17
5	Typical Lower Limits of Detection (a priori) Gamma Spectrometry	40
6	Land-Use Census Comparison (2009-2010)	44

# 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, 2010, through December 31, 2010.

The Radiological Environmental Monitoring Program (REMP) was established in 1982. Radiation and radioactivity in various environmental media have been monitored for more than 25 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 slightly higher than the concentrations of radioactivity from pre-operation monitoring. These observations are also consistent with past operational data and control 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. An indicator milk-producing animal within five miles of the plant was introduced into the monitoring program mid-September 2010.
- 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 and aquatic vegetation results indicate no detectable radioactivity.
- 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 the Harris Lake spillway 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, 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 Environmental Monitoring Program was established in 1982 and has continued to collect samples and evaluate them for over 25 years.

Requirements are established for the Radiological Environmental Monitoring Program with the following:

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

Additional guidance regarding the Radiological Environmental 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 (Megawatts 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 during 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 blowdown, 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 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.

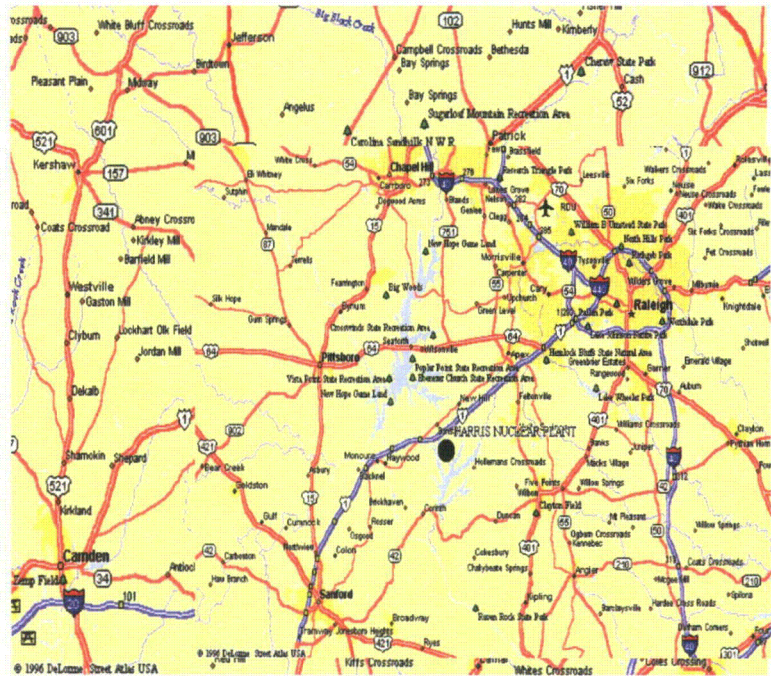


Figure 1: Location of Harris Nuclear Plant

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 REMP 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 Eckert & Ziegler Analytics 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.

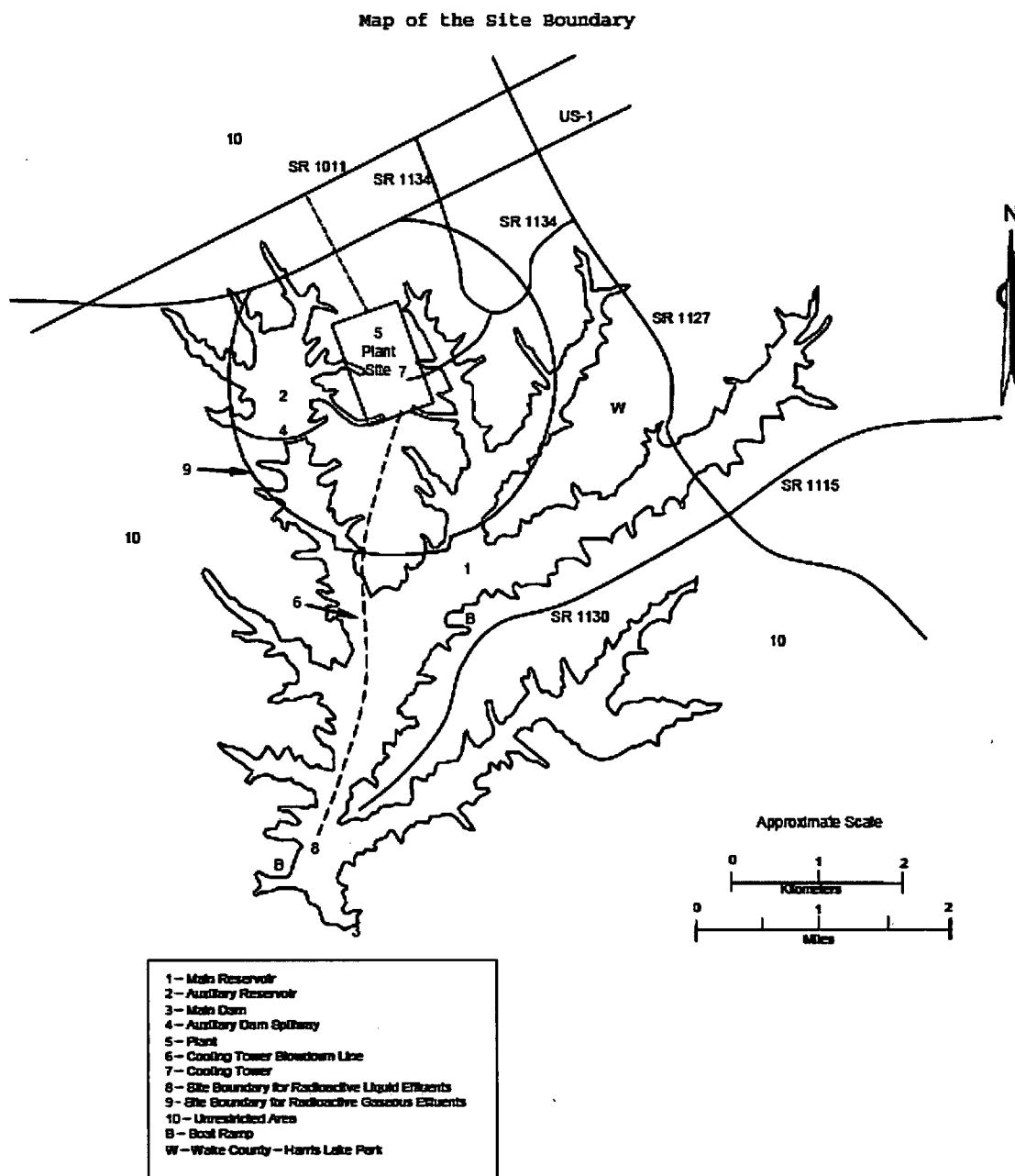
**Table 1**  
**Media Used to Assess Exposure Pathways to Man**

<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, 3a, 3b, and 3c. 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

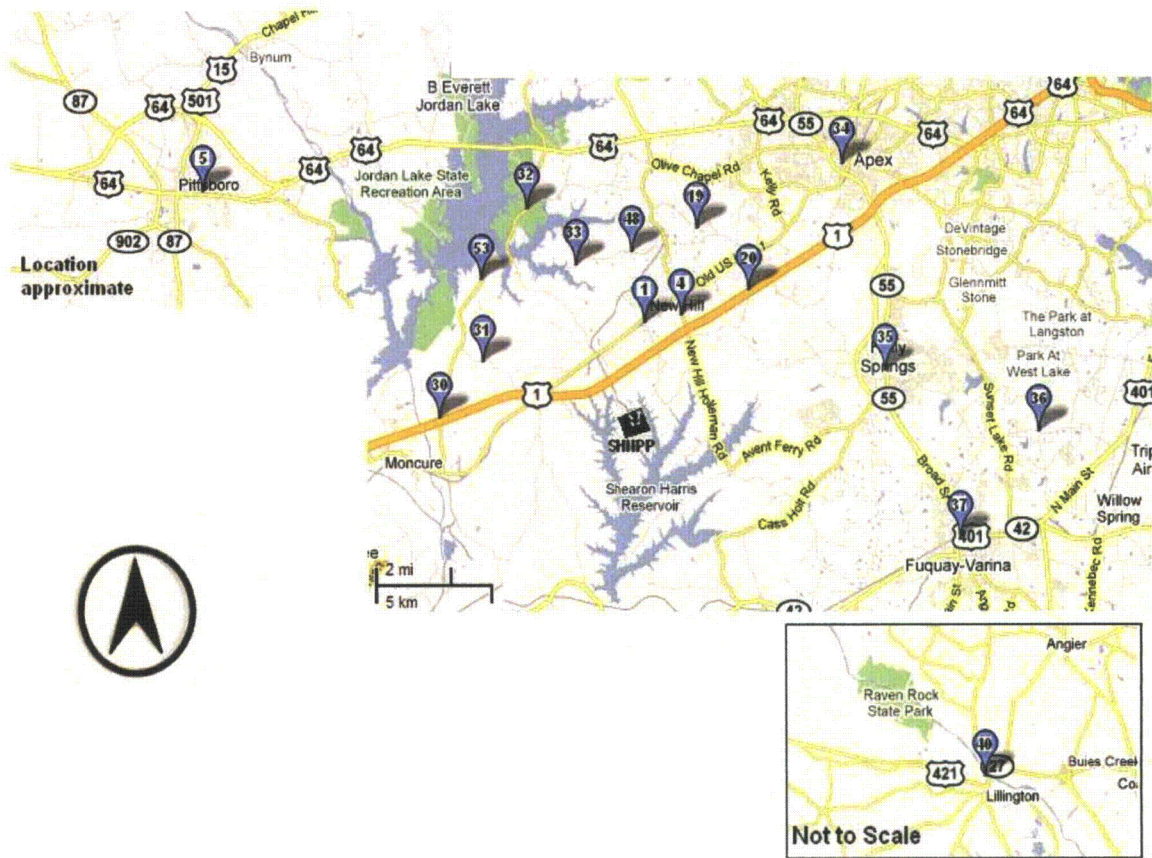


Figure 2b: Radiological Environmental Sampling Locations (Distant from Plant)

## Radiological Environmental Sampling Locations

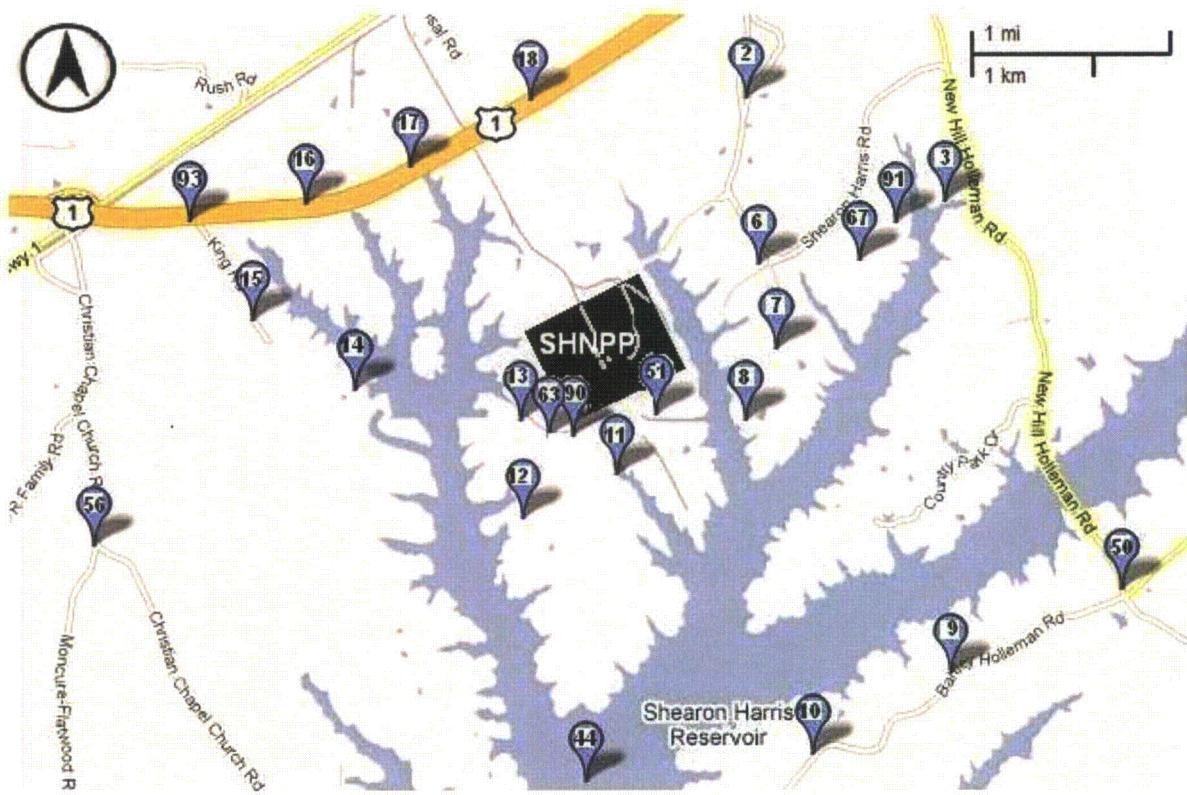


Figure 3a: Radiological Environmental Sampling Locations (Nearest Plant)

## Radiological Environmental Sampling Locations

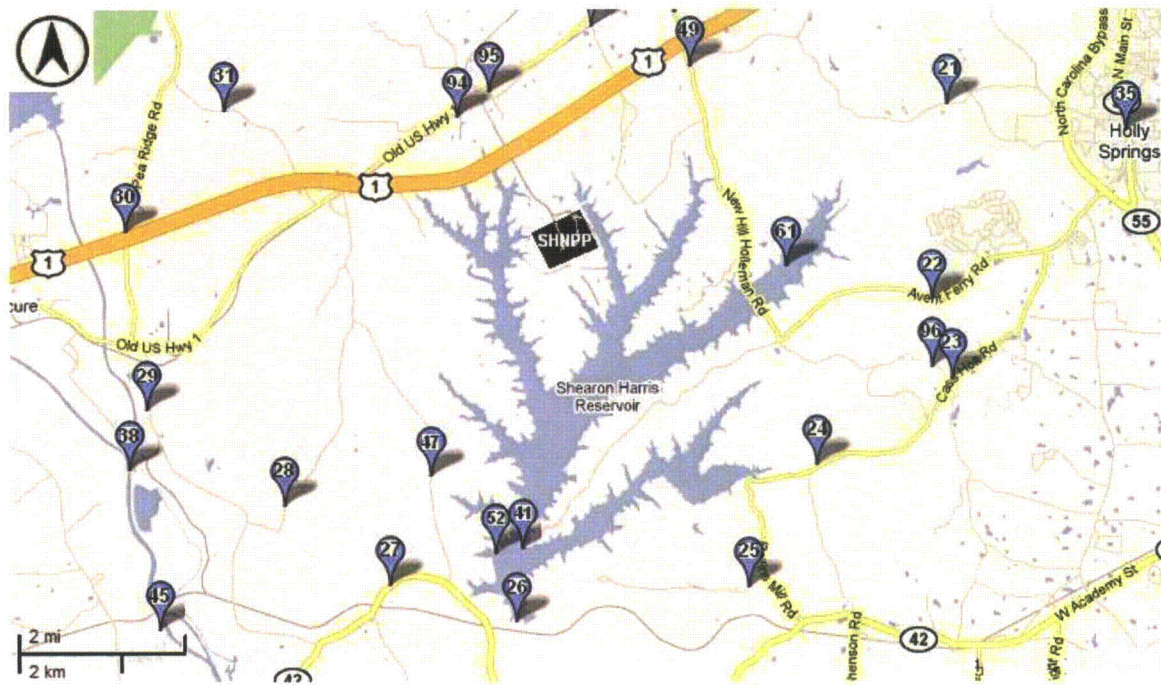


Figure 3b: Radiological Environmental Sampling Locations (Nearest Plant)

## Radiological Environmental Sampling Locations



**Figure 3c: Radiological Environmental Ground Water (GW) Sampling Locations**



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

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

Sample Type	Location & Description	Frequency	Sample Size	Analysis
Air Cartridge (AC)	1--2.6 miles N 2--1.4 miles NNE 4--3.1 miles NNE 5-- >12 miles WNW--Pittsboro* 26--4.7 miles S 47--3.4 miles SSW 63--0.6 miles SW 90--0.5 miles SSW 91--1.6 miles ENE	As required by dust loading, but at least once per 7 days	(220 m <sup>3</sup> )	Iodine
Air Particulate (AP)	1--2.6 miles N 2--1.4 miles NNE 4--3.1 miles NNE 5-- >12 miles WNW--Pittsboro* 26--4.7 miles S 47--3.4 miles SSW 63--0.6 miles SW 90--0.5 miles SSW 91--1.6 miles ENE	As required by dust loading, but at least once per 7 days	(250 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 Building (On Site)	2 Week Composite Monthly Composite	8 liters	I-131, Gamma Tritium Gross Beta
Ground Water (GW)	57--0.4 miles SSW 59--0.5 miles NNE 60--0.5 miles ESE 68--0.2 miles W 69--0.2 miles NNE 70--0.4 miles E 71--0.3 miles SE 72--0.2 miles SE 73--0.2 miles S 74--0.2 miles SSE 75--0.1 miles ESE 76--0.1 miles S	Quarterly	4 liters	Gamma Tritium
Milk (MK)	5-- > 12 miles WNW Manco Dairy* 96--4.6 miles ESE Humbug Farm	Monthly	8 liters	I-131 Gamma
Shoreline Sediment (SS)	26--4.6 miles S 41--3.8 miles S	Semiannual	575 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	530 grams	Gamma
Bottom Sediment (SD)	52--3.8 miles S	Semiannual	575 grams	Gamma
Broadleaf Vegetation (BL)	5-- > 12 miles NNW -- Pittsboro* 12--0.9 miles SSW 63--0.6 miles SW	Monthly	350 grams	Gamma
Food Crop (FC) or Food Products (FP) (Not required per ODCM)	5-- > 12 miles NNW -- Pittsboro* 54--1.7 miles NNE -- Wilkins or Morris 55--2.0 miles NNW -- L. L. Goodwin 64--1.8 miles ENE -- Michael	3 different kinds of broadleaf vegetation monthly during growing season	350 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 ENE 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 SSW 28 -- 4.8 miles SW 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 NE 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 93 -- 2.2 miles WNW 94 -- 2.0 miles NW 95 -- 2.0 miles NNW	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 2010 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 1327 total samples of 14 different media types from approximately 1090 indicator samples were compared to approximately 237 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 2010 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	3,830 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.	0.008 Total Body

The radiological environmental data indicates that HNP operations in 2010 had no significant impact on the environment or public health and safety.

A statistical summary of all the data for 2010 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 2010. 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: 2010

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-131 378	5.59E-2	All less than LLD	N/A	N/A	All less than LLD
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 378	5.1E-3	2.40E-2 (326/326) 6.36E-3 – 4.56E-2	On Site 0.6 miles SW	2.76E-2 (22/22) 1.42E-2 – 4.43E-2	2.12E-2 (52/52) 8.93E-3 - 3.66E-2
	Gamma 30	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
Drinking Water <sup>(4)</sup> (pCi/l)	I-131 78	8.6E-1	8.77E-1 (1/52) Single value	Lillington Cape Fear River 17.2 miles SSE	8.77E-1 (1/26) Single value	6.41E-1 (6/26) 4.95E-1 – 8.49E-1
	Gross Beta 36	1.2E+0	4.24E+0 (24/24) 2.27E+0 – 7.28E+0	Lillington Cape Fear River 17.2 miles SSE	5.07E+0 (12/12) 3.56E+0 – 7.28E+0	5.09E+0 (12/12) 3.31E+0 – 7.48E+0
	Gamma 36	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
	Tritium 36	2.50E+2 <sup>(6)</sup>	2.23E+3 (12/24) 1.25E+3 – 3.16E+3	Water Treatment Building on Site	2.23E+3 (12/12) 1.25E+3 – 3.16E+3	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: 2010

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	<u>Location w/Highest Annual Mean</u>		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	N/A	All less than LLD
Fish Free-Swimmers (pCi/g, wet)	Gamma 8	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
Food Crop (pCi/g, wet)	Gamma 17 <sup>(3)</sup>	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
Broadleaf Vegetation (pCi/g, wet)	Gamma 55 <sup>(3)</sup>	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
Aquatic Vegetation (pCi/g, wet)	Gamma 3	Refer to Table 5	All less than LLD	N/A	N/A	No control
Shoreline Sediments (pCi/g, dry)	Gamma 4	Refer to Table 5	All less than LLD	N/A	N/A	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: 2010

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 48	Refer to Table 5	All less than LLD	N/A	N/A	No control
	Tritium 48	2.50E+2 <sup>(6)</sup>	3.84E+2 (3/48) 2.84E+2 – 4.48E+2	Inside Owner Controlled area btwn WPB & SB 0.1 miles S	3.84E+2 (3/4) 2.84E+2 – 4.48E+2	No control
Milk (pCi/l)	I-131 20	8.2E-1	All less than LLD	N/A	N/A	All less than LLD
	Gamma 20	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
Bottom Sediment (pCi/g, dry)	Gamma 2	6.51E-2	6.84E-1 (2/2) 3.48E-1 – 1.02E+0	Harris Lake Cooling Tower Mixing Zone 3.8 miles S	6.84E-1 (2/2) 3.48E-1 – 1.02E+0	No Control
	Co-60					
	Cs-137	1.08E-1	2.23E-1 (2/2) 1.49E-1 – 2.97E-1	Harris Lake Cooling Tower Mixing Zone 3.8 miles S	2.23E-1 (2/2) 1.49E-1 – 2.97E-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: 2010

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 53	8.6E-1	8.77E-1 (1/27) Single value	Lillington Cape Fear River 17.2 miles SSE	8.77E-1 (1/26) Single value	6.41E-1 (6/26) 4.95E-1 – 8.49E-1
	Gross Beta 36	1.2 E+0	5.15E+0 (24/24) 3.56E+0 - 7.28E+0	Harris Lake Spillway 4.7 miles S	5.23E+0 (12/12) 3.73E+0 - 6.78E+0	5.09E+0 (12/12) 3.31E+0 – 7.48E+0
	Gamma 36	Refer to Table 5	All less than LLD	N/A	N/A	All less than LLD
	Tritium 36	2.50E+2 <sup>(6)</sup>	3.83E+3 (12/24) 2.50E+3 – 5.46E+3	Harris Lake Spillway 4.7 miles S	3.83E+3 (12/12) 2.50E+3 – 5.46E+3	All less than LLD
Direct Radiation (mR/qtr) <sup>(5)</sup>	TLD 177 <sup>(3)</sup>		1.19E+1 (173/175) 9.10E+0 – 1.70E+1	Apex at Population Center 8.7 miles NE	1.58E+1 (3/4) 1.43E+1 – 1.70E+1	1.47E+1 (4/4) 1.36E+1 – 1.53E+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 approximately  $2.50E+2$  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  $1.0E+3$  pCi/L.
7. Drinking Water 51 (DW-51) has been included, as of 2009, in the Data Summary even though it does not meet the EPA (Environmental Protection Agency) definition of a public drinking water supply.

## **INTERPRETATIONS AND CONCLUSIONS**

### **Air Monitoring**

All 378 air cartridge (AC) samples from indicator and control stations had I-131 concentrations less than the typical LLD of  $5.59\text{E-}2$  pCi/m<sup>3</sup>. The air samplers operated for a total of 99.5% availability for the 2010 year. 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 2010, which is the entire operating history of the plant.

For the period of January 1, 2010, to December 31, 2010, the gross beta activity was detectable in all airborne particulate (AP) samples, with acceptable runtime, from the eight indicator locations. The 326 indicator samples had an average concentration of  $2.40\text{E-}2$  pCi/m<sup>3</sup>, a value slightly higher than the preoperational data of  $2.00\text{E-}2$  pCi/m<sup>3</sup>. Similar gross beta activities were observed at the control location in Pittsboro, which had an average concentration of  $2.12\text{E-}2$  pCi/m<sup>3</sup> in 52 control samples. Figures 4 through 11 provide a graphic representation of the gross beta activity at the indicator locations compared to the control location for the year 2010. 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 2010. 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, the 26 water treatment building samples at the Harris Plant, and the control samples collected from the Cape Fear River above the Buckhorn Dam contained less than detectable I-131 activity ( $< 1.0\text{E+}0$  pCi/L) during 2010, except for seven control (DW/SW-38) samples (see chart). As indicated in the chart, the control composite water sample taken from the Cape Fear River, at the Cape Fear Plant, indicated small concentrations of I-131 ranging from  $4.95\text{E-}1$  pCi/Liter to  $8.49\text{E-}1$  pCi/Liter for the stated sample dates. This location is upstream of the discharge of Harris Lake.

Downstream of Harris Lake discharge at the Cape Fear River at the Lillington Water Treatment Plant (SW/DW-40), one out of seven corresponding samples detected I-131 during the collection period indicated in the chart; otherwise, no I-131 was detected. Therefore, the presence of I-131 would not be attributable to plant operations, along with the information that during the timeframes indicated water was not going over the spillway at the Harris Lake Dam. For the sample period of March 22, 2010, to April 5, 2010, a similar sample was taken from downstream at the Harris Lake Spillway discharge (SW-26) with no detectable I-131 detected (see chart). This indicates that the I-131 detected at the control location is from a source other than the plant's effluents as discussed in a previous investigation (NCR # 189683). Note that data from sample collection period December 28, 2010, to January 10, 2011, will be reported and discussed in the HNP 2011 Radiological Environmental Operating Report (REOR) (NCR # 441977). It has typically been the experience for all the I-131 drinking water samples to contain less than detectable activity ( $< 1.0E+0$  pCi/L) 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 99.8% availability for the 2010 year. Refer to the Missed Surveillance Section on the missed drinking/surface water samples (NCR # 435923) in 2010 collection year.

<b>Composite Period (Sample Date)</b>	<b>DW/SW-38 (Control) I-131 Activity Detected (pCi/Liter)</b>	<b>NCR #</b>	<b>DW-SW-40 (Downstream of HNP) I-131 Activity Detected (pCi/Liter)</b>	<b>SW-26 (Harris Lake)</b>
2/22/10 – 3/8/10 (3/1/10)	4.95E-1	392115	< LLD	N/A
3/22/10 – 4/5/10 (3/29/10)	8.49E-1	392115	8.77E-1	< LLD
6/14/10 – 6/28/10 (6/21/10)	5.21E-1	407927	< LLD	N/A
7/12/10 – 7/26/10 (7/19/10)	6.50E-1	412522	< LLD	N/A
11/1/10 – 11/15/10 (11/8/10)	7.63E-1	434214	< LLD	N/A
11/15/10 – 11/29/10 (11/22/10)	5.68E-1	436220	< LLD	N/A
*12/28/10 – 1/10/11 (1/3/11)	*5.61E-1	441977	< LLD	N/A

\*Note that data from sample collection period December 28, 2010, to January 10, 2011, will be reported and discussed in the HNP 2011 REOR.

The average annual gross beta concentrations at the indicator and control locations were similar with concentrations of 4.24E+0 pCi/L and 5.09E+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 12 provides graphic representation of the drinking water gross beta activity during 2010 for Location 40 (Lillington) and Location 38 (control at Cape Fear).

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 (approximately 2.50E+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 2010, other than naturally occurring nuclides. This is consistent with the data for 1989-2009. During the Chernobyl period, Cs-134 and Cs-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 0.008 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>	0.005	0.006	0.008

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 0.005, 0.006, and 0.008 mrem/year respectively.

### **Milk/Broadleaf Vegetation**

During 2010, 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 control 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 1.59E+3 pCi/L to 2.03E+3 pCi/L. Other natural occurring nuclides are identified in some of the control milk samples. In mid-September of 2010, the Humbug Farm (Goat milk indicator MK-96 – located in the ESE sector) was added to the HNP Environmental Monitoring Program. The K-40 concentrations in the goat milk indicator samples range from 2.11E+3 pCi/Liter to 2.48E+3 pCi/Liter. Other natural occurring nuclides are identified in the goat milk.

In May of 1997, the Maple Knoll Dairy (indicator MK-42 - located in the SSE sector) ceased operations. In lieu of the monthly 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 only one milk animal location is 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 gamma analyses on the broadleaf vegetation did not detect any plant-related radioactivity in any of the broadleaf vegetation (Fig Leaf, Maple, Sweetgum, and Wax Myrtle) in 2010. Refer to the Missed Surveillance Section for the missed (unavailable) surveillances (NCR # 389806, 396382, 435924, and 438363).

### **Surface Water**

Surface water samples were collected (weekly) and analyzed (bi-weekly) for I-131. Water samples collected contained less than detectable I-131 activity ( $< 1.0E+0$  pCi/L) during 2010, except for seven control (DW/SW-38) samples (see chart in Drinking Water Section). As indicated in the chart, the control composite water samples taken from the Cape Fear River, at the Cape Fear Plant, indicated small concentrations of I-131 ranging from  $4.95E-1$  pCi/Liter to  $8.49E-1$  pCi/Liter for the stated sample dates. This location is upstream of the discharge of Harris Lake. Downstream of Harris Lake discharge at the Cape Fear River at the Lillington Water Treatment Plant (SW/DW-40), one out of seven corresponding samples detected I-131 during the collection period indicated in the chart; otherwise, no I-131 was detected. Therefore, the presence of I-131 would not be attributable to plant operations, along with the information that during the timeframes indicated water was not going over the spillway at the Harris Lake Dam. For the sample period of March 22, 2010, to April 5, 2010, a similar sample was taken from downstream at the Harris Lake Spillway discharge (SW-26) with no detectable I-131 detected (see chart in Drinking Water Section). This indicates that the I-131 detected at the control location is from a source other than the plant's effluents as discussed in a previous investigation (NCR # 189683). Note that data from sample collection period December 28, 2010, to January 10, 2011, will be reported and discussed in the HNP 2011 REOR (NCR # 441977). It has typically been the experience for all the I-131 drinking water samples to contain less than detectable activity ( $< 1.0E+0$  pCi/L) 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 99.8% availability for the 2010 year. Refer to the Missed Surveillance Section on the missed drinking/surface water samples (NCR # 435923) in 2010 collection year.

Average gross beta concentrations at the indicator and control locations were  $5.15\text{E}+0$  pCi/L and  $5.09\text{E}+0$  pCi/L, respectively, in 2010, indicating no adverse influence from plant operations (See Figure 13).

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 at the Spillway was  $3.83\text{E}+3$  pCi/L with minimum and maximum values of  $2.50\text{E}+3$  pCi/L and  $5.46\text{E}+3$  pCi/L, respectively (see Figure 14). The average Harris Lake Spillway tritium concentration showed a decrease in tritium compared to the annual average of  $5.50\text{E}+3$  pCi/L in 2009. 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. The decrease in average tritium concentration from 2009 to 2010 is partially due to the tritium release program and the rainfall in 2010.

### **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 2010.

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 approximately 250 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 2010, except for low levels of tritium activity for GW-76 ranging from 284 pCi/Liter to 448 pCi/Liter. 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 2010 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 2010. No long-term trends are readily observed in these samples.

### **Bottom Sediment**

The 2010 data shows Cobalt (Co)-60 ( $3.48\text{E}-1$  pCi/gm dry to  $1.02\text{E}+0$  pCi/gm dry) and Cesium (Cs)-137 ( $1.49\text{E}-1$  pCi/gm dry to  $2.97\text{E}-1$  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 2010 included collards, cucumbers, eggplants, okra, and tomatoes. Gamma analyses of the food crops detected no plant-related activity in nine (9) samples from indicator locations and eight (8) samples from control locations collected in 2010.

### **Aquatic Vegetation**

The 2010 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 no plant-related activity in the three indicator samples collected during 2010. 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 11.9 mR and 14.7 mR, respectively. The highest indicator location was 8.7 miles NE of the plant (Apex at Population Center) and its average was 15.8 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 15. These data illustrate that the quarterly inner ring TLD exposures are slightly less than the quarterly outer ring TLD exposures (differences range from less than 0.01 mR to 0.40 mR). TLDs # 16, # 17, and # 18 were deleted from the 2010 HNP Environmental Monitoring Program in the 4<sup>th</sup> Quarter of 2010 and were replaced with TLDs # 93, # 94, and # 95 in the 3<sup>rd</sup> Quarter of 2010 for safer sample locations (NCR # 393038). Upon validating the TLDs locations using a GPS unit (NCR # 392755), it was determined that TLD # 6 and TLD # 49 sectors were listed incorrectly in the HNP ODCM and thus in the Annual HNP REOR (NCR # 393030). The correct sectors for both TLD # 6 and # 49 are now listed in the HNP ODCM and the current HNP REOR.

## **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 were no missed samples in 2010 from the established air samplers. The air samplers operated for a total of 99.5% availability in 2010.

#### Missed Samples:

- None in 2010 from established air samplers
- The new locations (APAC-63, 90, & 91) were put into service the end of July 2010. In May 2009, due to weather changes, the meteorology in ODCM Revision 20 was updated using the five year average meteorology (2003 through 2007). The meteorology previously used in the ODCM for Revision 0 through Revision 19 used the average ten year meteorology from 1976 through 1987. This change in the meteorology produced a change from previous ODCM revisions in two of the three highest D/Q sectors for collecting air samples (air cartridges and air particulates). Therefore, from May 2009 to July 2010, two of the three highest D/Q sectors were not monitored. Since July 2010, air samples and cartridges have been obtained from those locations. The 2009 air samplers’ locations are based on the pre-Revision 20 ODCM meteorology. The installation of the air samplers was tracked in the plant’s corrective action program (NCR # 309988).

#### Missed Surveillances:

- APAC-26; August 5, 2010 – Down time of 72 hours due to severe thunderstorms in the area (NCR # 415823).
- APAC-91; September 7, 2010 – Down time of 59 hours due to a tripped GFCI and the location of the GFCI was such that telemetry failed to provide notification of the power loss (NCR # 420569).
- APAC-91; September 13, 2010 – Down time of 99 hours due to a tripped GFCI due to two GFCI circuits in series (NCR # 421699).

### **Food Crops**

Food crops are no longer required to be collected as of July 27, 2006, Revision 18 of the HNP ODCM; therefore, any food crops collected is above and beyond requirements, but will appear in the current year's data report (NCR # 141151). Sampling of gardens goes above and beyond regulatory guidance since none of the gardens identified during the annual Land-Use Census 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.

The farmers and individuals at each garden location sampled during 2010 did not plant or produce three (3) different kinds of food crops in 2010. This was mostly due to seasonal unavailability, lack of sufficient quantity planted or lack of a variety of crops planted, and crops being too small to harvest at the time of collection.

### **Drinking / Surface Water**

DW/SW-38 (November 15 – November 29, 2010) had missed surveillances (NCR # 435923).

The drinking/surface water environmental sample (at Cape Fear Plant) for collection period November 15 through November 29, 2010, was found not working on November 22, 2010 due to a tripped breaker. Numerous attempts were made to reset the breaker by qualified personnel to no success. It was determined to be a malfunctioning breaker. A temporary power source was established and power restored to the water sampler. A work order was submitted by plant electrician to correct the problem. It was estimated that the sampler was out of service for approximately 48 hours.

### **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. The new indicator milk sample that was introduced to the HNP Environmental Monitoring Program in mid-September (Humbug Farm – goat milk) was not available in December of 2010 (NCR # 438362). Broadleaf vegetation samples were not available for

sampling due to seasonal unavailability during January, February, March, April, November, and December of 2010 (NCR # 389806, 396382, 435924, and 438363).

### TLDs

Two TLD samples, out of a possible 179 TLD samples (indicator and control locations), were missing during 2010.

TLD # 27      First Quarter 2010

TLD # 27 was missing in the field. The power pole that the TLD was located on appeared to have been replaced. The area was searched, but the TLD could not be located (NCR # 392254).

TLD # 34      Second Quarter 2010

TLD # 34 was missing in the field. The area was searched, but the TLD could not be located (NCR # 408643).

## **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  $5.1\text{E-}3$  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  $1.2\text{E+}0$  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 315 minutes with a LLD of approximately  $2.50\text{E+}2$  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  $5.59\text{E-}2$  pCi/m<sup>3</sup>.

Iodine-131 in milk and drinking water is determined by an instrumental method. Analysis involves passing 4 liters of sample 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  $1.0\text{E+}0$  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 APEX 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 1,500 seconds.

Liquid samples, milk and water, are transferred to Marinelli beakers and analyzed by gamma counting. One-liter ground water samples are gamma scanned directly in a 1-Liter Marinelli beaker for 16,000 seconds and the SW/DW samples for 73,000 seconds. One-liter milk samples are analyzed in a 1-liter Marinelli beaker for 12,600 seconds.

Shoreline and bottom sediments are dried, weighed, and then analyzed in a 1-liter Marinelli beaker for 840 seconds ( $> 1000$  grams, dry) or 1,380 seconds ( $\leq 1000$  grams, dry).

Aquatic vegetation and broadleaf vegetation samples are weighed as sampled and analyzed in a Marinelli beaker for 7,500 seconds. If any food crop samples are collected they will be handled like the aquatic and broadleaf vegetation samples.

Fish samples are prepared by stuffing small raw, edible portions of the fish 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 Eckert & Ziegler Analytics 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 2010, 88 analyses were completed on 21 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 88 analyses have been received from Eckert & Ziegler Analytics. The results were compared to the criteria established in the NRC Inspection Manual (Procedure 84750) for Radioactive Waste Treatment, Effluent, and Environmental monitoring (see below results).

All of the 88 analyses were within the acceptance criteria. During 2010, the individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors (NCR # 400312, and 419981). Complete documentation of any evaluation will be available and provided to the NRC upon request.



**Environmental Cross Check Performance Summary for 4Q 2009 and 2010**

Sample	Nuclide	Quarter	Units	HEEC Value	EZA Value	HEEC/EZA Ratio	Evaluation
Gross beta water 4 <sup>th</sup> Qtr '09 E6944-668 1 <sup>st</sup> Qtr E7007-668 3 <sup>rd</sup> Qtr E7212-668 4 <sup>th</sup> Qtr E7368-668	Gross beta	4 <sup>th</sup> '09	pCi/L	284	258	1.10	Agreement
		1 <sup>st</sup>	pCi/L	271	260	1.04	Agreement
		3 <sup>rd</sup>	pCi/L	231	218	1.06	Agreement
		4 <sup>th</sup>	pCi/L	261	251	1.04	Agreement
Gross beta filter 4 <sup>th</sup> Qtr '09 E6943-668 2 <sup>nd</sup> Qtr E7146-668 4 <sup>th</sup> Qtr E7367-668	Gross beta	4 <sup>th</sup> '09	pCi	116.0	107.0	1.08	Agreement
		2 <sup>nd</sup>	pCi	83.0	80.4	1.03	Agreement
		4 <sup>th</sup>	pCi	73.0	71.2	1.03	Agreement
Tritium in water 4 <sup>th</sup> Qtr '09 E6942-668 1 <sup>st</sup> Qtr E7006-668 4 <sup>th</sup> Qtr E7366-668	H-3	4 <sup>th</sup> '09	pCi/L	13800	14000	0.99	Agreement
		1 <sup>st</sup>	pCi/L	11700	12000	0.97	Agreement
		4 <sup>th</sup>	pCi/L	9180	9960	0.92	Agreement
Iodine Cartridge 4 <sup>th</sup> Qtr '09 E6945-668 2 <sup>nd</sup> Qtr E7145-668 4 <sup>th</sup> Qtr E7369-668	I-131	4 <sup>th</sup> '09	pCi	93.5	93.8	1.00	Agreement
		2 <sup>nd</sup>	pCi	78.0	80.1	0.97	Agreement
		4 <sup>th</sup>	pCi	83.1	84.2	0.99	Agreement
Gamma Milk E7008-668	I-131	1 <sup>st</sup>	pCi/L	75.0	74.0	1.01	Agreement
	Ce-141	1 <sup>st</sup>	pCi/L	273	261	1.04	Agreement
	Cr-51	1 <sup>st</sup>	pCi/L	389	361	1.08	Agreement
	Cs-134	1 <sup>st</sup>	pCi/L	176	178	0.99	Agreement
	Cs-137	1 <sup>st</sup>	pCi/L	172	158	1.09	Agreement
	Co-58	1 <sup>st</sup>	pCi/L	148	143	1.04	Agreement
	Mn-54	1 <sup>st</sup>	pCi/L	229	207	1.10	Agreement
	Fe-59	1 <sup>st</sup>	pCi/L	157	137	1.15	Agreement
	Zn-65	1 <sup>st</sup>	pCi/L	285	254	1.12	Agreement
Co-60	1 <sup>st</sup>	pCi/L	194	183	1.06	Agreement	
Gamma Soil E7009-668	Ce-141	1 <sup>st</sup>	pCi/g	0.479	0.452	1.06	Agreement
	Cr-51	1 <sup>st</sup>	pCi/g	0.645	0.624	1.03	Agreement
	Cs-134	1 <sup>st</sup>	pCi/g	0.301	0.307	0.98	Agreement
	Cs-137	1 <sup>st</sup>	pCi/g	0.391	0.364	1.07	Agreement
	Co-58	1 <sup>st</sup>	pCi/g	0.254	0.247	1.03	Agreement
	Mn-54	1 <sup>st</sup>	pCi/g	0.378	0.358	1.06	Agreement
	Fe-59	1 <sup>st</sup>	pCi/g	0.262	0.237	1.11	Agreement
	Zn-65	1 <sup>st</sup>	pCi/g	0.477	0.439	1.09	Agreement
	Co-60	1 <sup>st</sup>	pCi/g	0.326	0.317	1.03	Agreement
Gamma Vegetation E7213-668	Ce-141	3 <sup>rd</sup>	pCi/g	0.468	0.479	0.98	Agreement
	Cr-51	3 <sup>rd</sup>	pCi/g	0.853	0.859	0.99	Agreement
	Cs-134	3 <sup>rd</sup>	pCi/g	0.310	0.342	0.91	Agreement
	Cs-137	3 <sup>rd</sup>	pCi/g	0.360	0.347	1.04	Agreement
	Co-58	3 <sup>rd</sup>	pCi/g	0.269	0.271	0.99	Agreement
	Mn-54	3 <sup>rd</sup>	pCi/g	0.454	0.439	1.03	Agreement
	Fe-59	3 <sup>rd</sup>	pCi/g	0.373	0.335	1.11	Agreement
	Zn-65	3 <sup>rd</sup>	pCi/g	0.793	0.749	1.06	Agreement
	Co-60	3 <sup>rd</sup>	pCi/g	0.637	0.628	1.01	Agreement

**Environmental Cross Check Performance Summary for 4Q 2009 and 2010**

<b>Sample</b>	<b>Nuclide</b>	<b>Quarter</b>	<b>Units</b>	<b>HEEC Value</b>	<b>EZA Value</b>	<b>HEEC/EZA Ratio</b>	<b>Evaluation</b>
Gamma Vegetation E7213-668	Ce-141	3 <sup>rd</sup>	pCi/g	0.468	0.479	0.98	Agreement
Gamma Filter 2 <sup>nd</sup> Qtr E7143-668 3 <sup>rd</sup> Qtr E7214-668	Ce-141	2 <sup>nd</sup>	pCi	103	103	1.00	Agreement
		3 <sup>rd</sup>	pCi	124	121	1.02	Agreement
	Cr-51	2 <sup>nd</sup>	pCi	315	317	0.99	Agreement
		3 <sup>rd</sup>	pCi	221	217	1.02	Agreement
	Cs-134	2 <sup>nd</sup>	pCi	112	118	0.95	Agreement
		3 <sup>rd</sup>	pCi	94.0	86.5	1.09	Agreement
	Cs-137	2 <sup>nd</sup>	pCi	146	140	1.04	Agreement
		3 <sup>rd</sup>	pCi	94.0	87.9	1.07	Agreement
	Co-58	2 <sup>nd</sup>	pCi	96.0	94.6	1.01	Agreement
		3 <sup>rd</sup>	pCi	71.0	68.5	1.04	Agreement
	Mn-54	2 <sup>nd</sup>	pCi	172	158	1.09	Agreement
		3 <sup>rd</sup>	pCi	123	111	1.11	Agreement
	Fe-59	2 <sup>nd</sup>	pCi	129	111	1.16	Agreement
		3 <sup>rd</sup>	pCi	103	84.8	1.21	Agreement
	Zn-65	2 <sup>nd</sup>	pCi	227	192	1.18	Agreement
		3 <sup>rd</sup>	pCi	226	190	1.19	Agreement
Co-60	2 <sup>nd</sup>	pCi	187	184	1.02	Agreement	
	3 <sup>rd</sup>	pCi	166	159	1.05	Agreement	
Gamma 13 Filter Composite E7144-668	Ce-141	2 <sup>nd</sup>	pCi	85.0	83.5	1.02	Agreement
	Cr-51	2 <sup>nd</sup>	pCi	273	257	1.06	Agreement
	Cs-134	2 <sup>nd</sup>	pCi	98.0	95.2	1.03	Agreement
	Cs-137	2 <sup>nd</sup>	pCi	123	114	1.08	Agreement
	Co-58	2 <sup>nd</sup>	pCi	80.0	76.6	1.04	Agreement
	Mn-54	2 <sup>nd</sup>	pCi	143	128	1.12	Agreement
	Fe-59	2 <sup>nd</sup>	pCi	105	89.9	1.17	Agreement
	Zn-65	2 <sup>nd</sup>	pCi	185	156	1.19	Agreement
Co-60	2 <sup>nd</sup>	pCi	157	149	1.06	Agreement	

**Environmental Cross Check Performance Summary for 4Q 2009 and 2010**

<b>Sample</b>	<b>Nuclide</b>	<b>Quarter</b>	<b>Units</b>	<b>HEEC Value</b>	<b>EZA Value</b>	<b>HEEC/EZA Ratio</b>	<b>Evaluation</b>
Gamma Water 2 <sup>nd</sup> Qtr E7142-668 3 <sup>rd</sup> Qtr E7211-668	I-131	2 <sup>nd</sup>	pCi/L	80.0	78.9	1.01	Agreement
		3 <sup>rd</sup>	pCi/L	66.0	64.4	1.02	Agreement
	Ce-141	2 <sup>nd</sup>	pCi/L	169	161	1.05	Agreement
		3 <sup>rd</sup>	pCi/L	171	165	1.03	Agreement
	Cr-51	2 <sup>nd</sup>	pCi/L	540	494	1.09	Agreement
		3 <sup>rd</sup>	pCi/L	302	297	1.02	Agreement
	Cs-134	2 <sup>nd</sup>	pCi/L	180	183	0.98	Agreement
		3 <sup>rd</sup>	pCi/L	109	118	0.92	Agreement
	Cs-137	2 <sup>nd</sup>	pCi/L	242	218	1.11	Agreement
		3 <sup>rd</sup>	pCi/L	131	120	1.09	Agreement
	Co-58	2 <sup>nd</sup>	pCi/L	160	147	1.09	Agreement
		3 <sup>rd</sup>	pCi/L	95.0	93.5	1.02	Agreement
	Mn-54	2 <sup>nd</sup>	pCi/L	276	246	1.12	Agreement
		3 <sup>rd</sup>	pCi/L	163	152	1.07	Agreement
	Fe-59	2 <sup>nd</sup>	pCi/L	210	173	1.21	Agreement
		3 <sup>rd</sup>	pCi/L	127	116	1.10	Agreement
	Zn-65	2 <sup>nd</sup>	pCi/L	338	300	1.13	Agreement
		3 <sup>rd</sup>	pCi/L	279	259	1.08	Agreement
Co-60	2 <sup>nd</sup>	pCi/L	309	286	1.08	Agreement	
	3 <sup>rd</sup>	pCi/L	227	217	1.05	Agreement	

**Lower Limits of Detection**

All samples analyzed met the LLD required by the ODCM.

**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	3
Co-58	3
Fe-59	8
Co-60	3
Zn-65	6
Zr-Nb-95	5 / 4
I-131	13.2
Cs-134	3
Cs-137	3
Ba-La-140	24 / 8
*I-131 (Separation Procedure)	*0.86
<b>Air Particulates (Quarterly Composite)</b>	
<b>Isotope</b>	<b>LLD (pCi/m<sup>3</sup>)</b>
Cs-134	5.69E-3
Cs-137	3.90E-3
<b>Milk</b>	
<b>Isotope</b>	<b>LLD (pCi/L)</b>
Cs-134	8
Cs-137	8
Ba-La-140	32 / 9
*I-131 (Separation Procedure)	*0.82
<b>Sediment</b>	
<b>Isotope</b>	<b>LLD (pCi/kg dry)</b>
Cs-134	108
Cs-137	108
<b>Fish</b>	
<b>Isotope</b>	<b>LLD (pCi/kg wet)</b>
Mn-54	55
Co-58	59
Fe-59	182
Co-60	73
Zn-65	148
Cs-134	83
Cs-137	63

\* 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	39
Cs-134	26
Cs-137	27
<b>Aquatic Vegetation</b>	
<b>Isotope</b>	<b>LLD (pCi/kg wet)</b>
I-131	33
Cs-134	16
Cs-137	17
<b>Ground Water</b>	
<b>Isotope</b>	<b>LLD (pCi/L)</b>
Mn-54	7
Co-58	8
Fe-59	16
Co-60	7
Zn-65	14
Zr-Nb-95	13 / 13
I-131	13.5
Cs-134	9
Cs-137	7
Ba-La-140	36 / 14
<b>Air Cartridge</b>	
<b>Isotope</b>	<b>LLD (pCi/m<sup>3</sup>)</b>
I-131	5.59E-2

# 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.

## **2010 Land-Use Census Results**

The 2009 and 2010 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 2009 to 2010. No gardens were located within 5 miles of the plant for the NE, ENE, SE, SSE, S, WNW, and NW sectors. All the gardens located in 2010 were the same as the gardens located in 2009, except for where the 2010 survey did not locate any gardens in the ENE, SE, and NW sectors. A closer garden was located in the W sector during the 2010 survey. All meat animals located in 2010 were the same as 2009, except for the E sector, where no meat animal was located. No meat animals were found in the NNE, NE, E, SSE, S, SSW, W, and WNW sectors in 2010. Milk goats were found in the ESE sector and have been incorporated into the HNP environmental monitoring sample program as of September 20, 2010. Harris Lake County Park was included in the 2010 survey, even though there are not yet permanent residents on site. There are plans in the future for rangers and a campground. Although technically just outside the 5-mile radius, the resident in the S sector has again been included in the data because of the historical prevailing winds.



Table 6

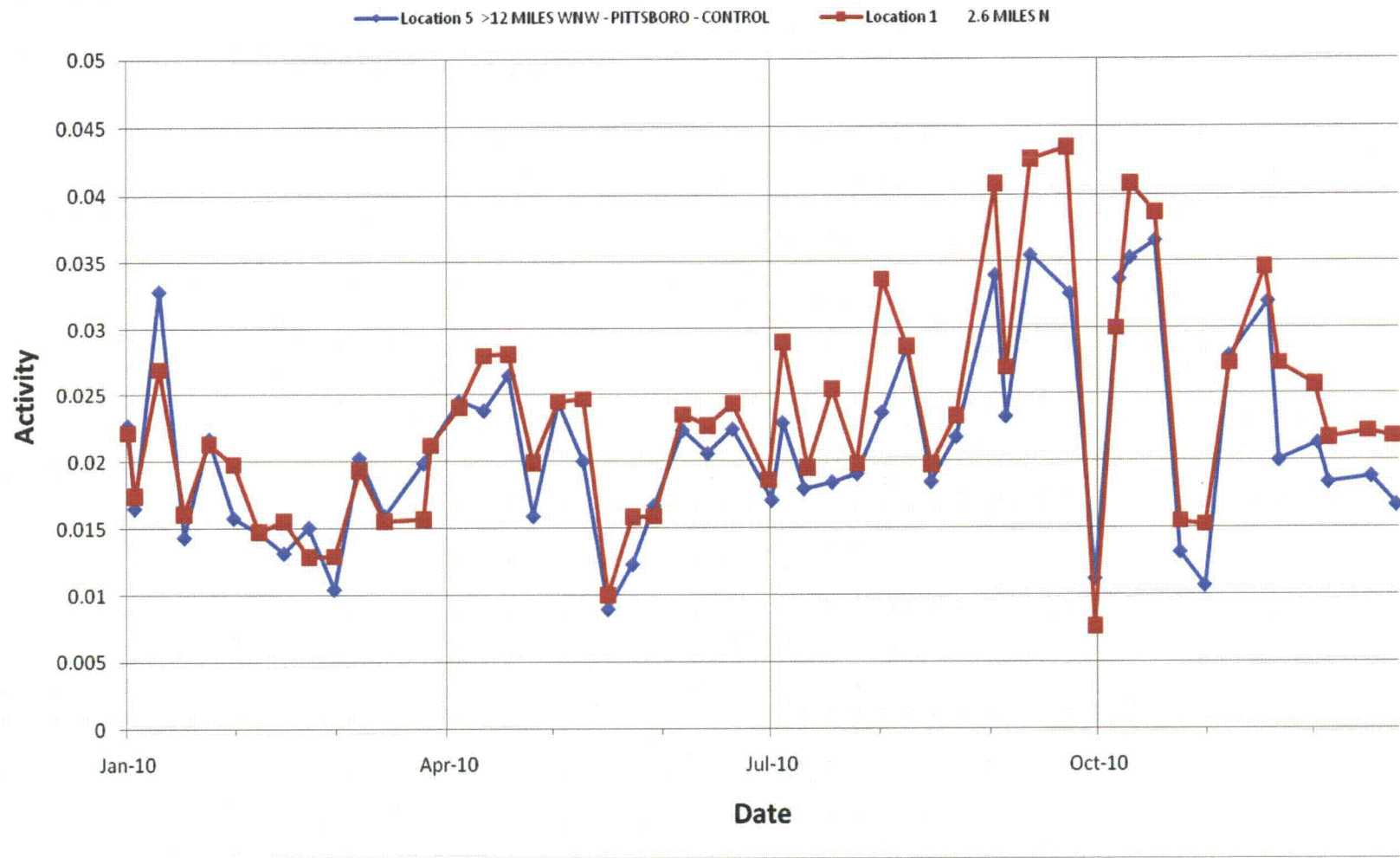
**Land-Use Census Comparison (2009-2010)  
Nearest Pathway (Miles)**

SECTOR	RESIDENT		GARDEN		MEAT ANIMAL		MILK ANIMAL	
	2010	2009	2010	2009	2010	2009	2010	2009
N	2.2	2.2	2.2	2.2	2.2	2.2	---	---
NNE	1.9	1.9	1.9	1.9	---	---	---	---
NE	2.3	2.3	---	---	---	---	---	---
ENE	1.6	1.6	---*	1.6	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	4.7*	---
SE	2.6	2.6	---*	2.6	2.6	2.6	---	---
SSE	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	3.0*	3.1	---	---	---	---
WNW	2.5	2.5	---	---	---	---	---	---
NW	2.4	2.4	---*	2.4	2.4	2.4	---	---
NNW	1.6	1.6	2.0	2.0	2.0	2.0	---	---

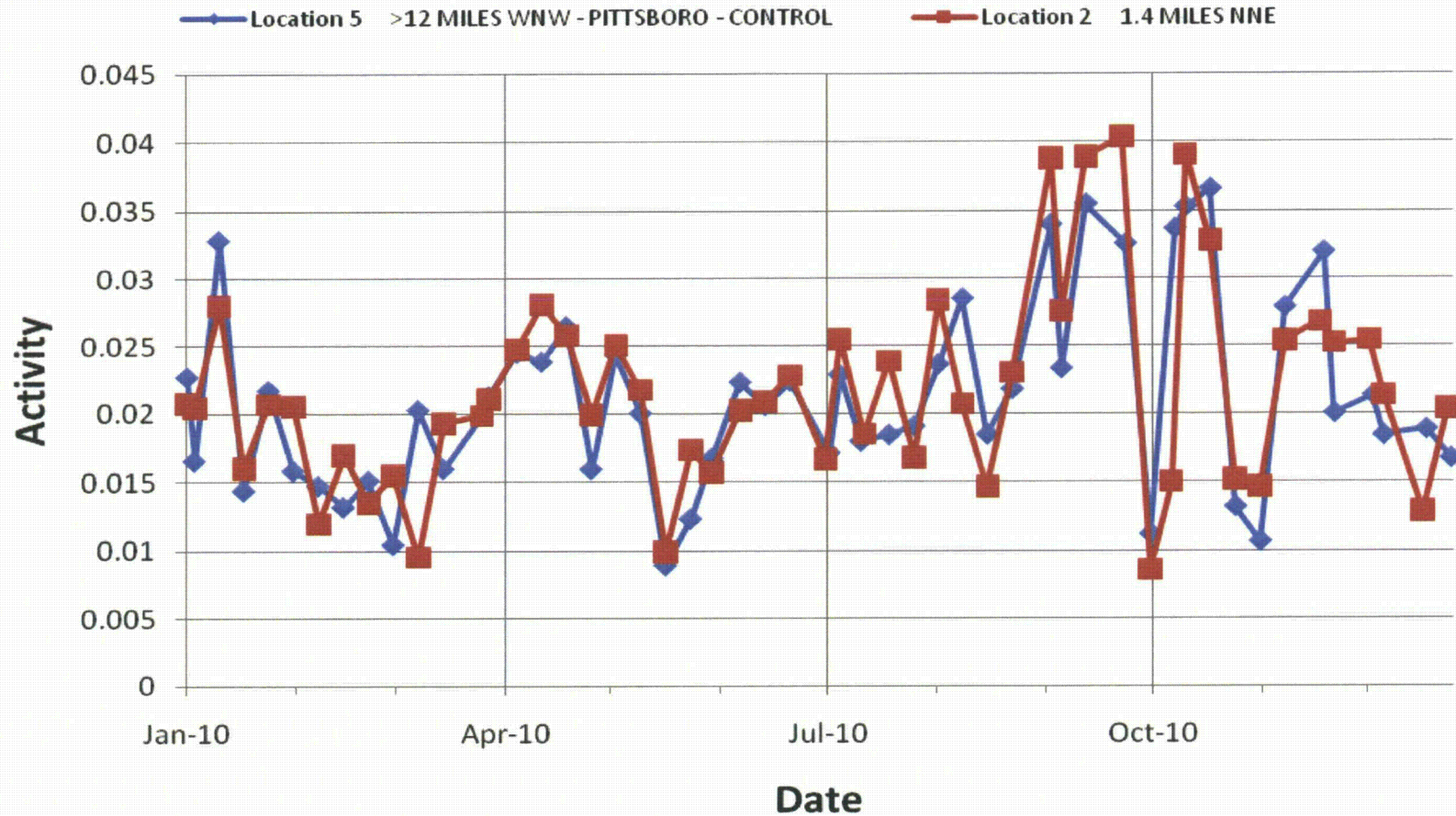
\* Represents a change from the previous year.

Sector and distance determined by Global Positioning System.

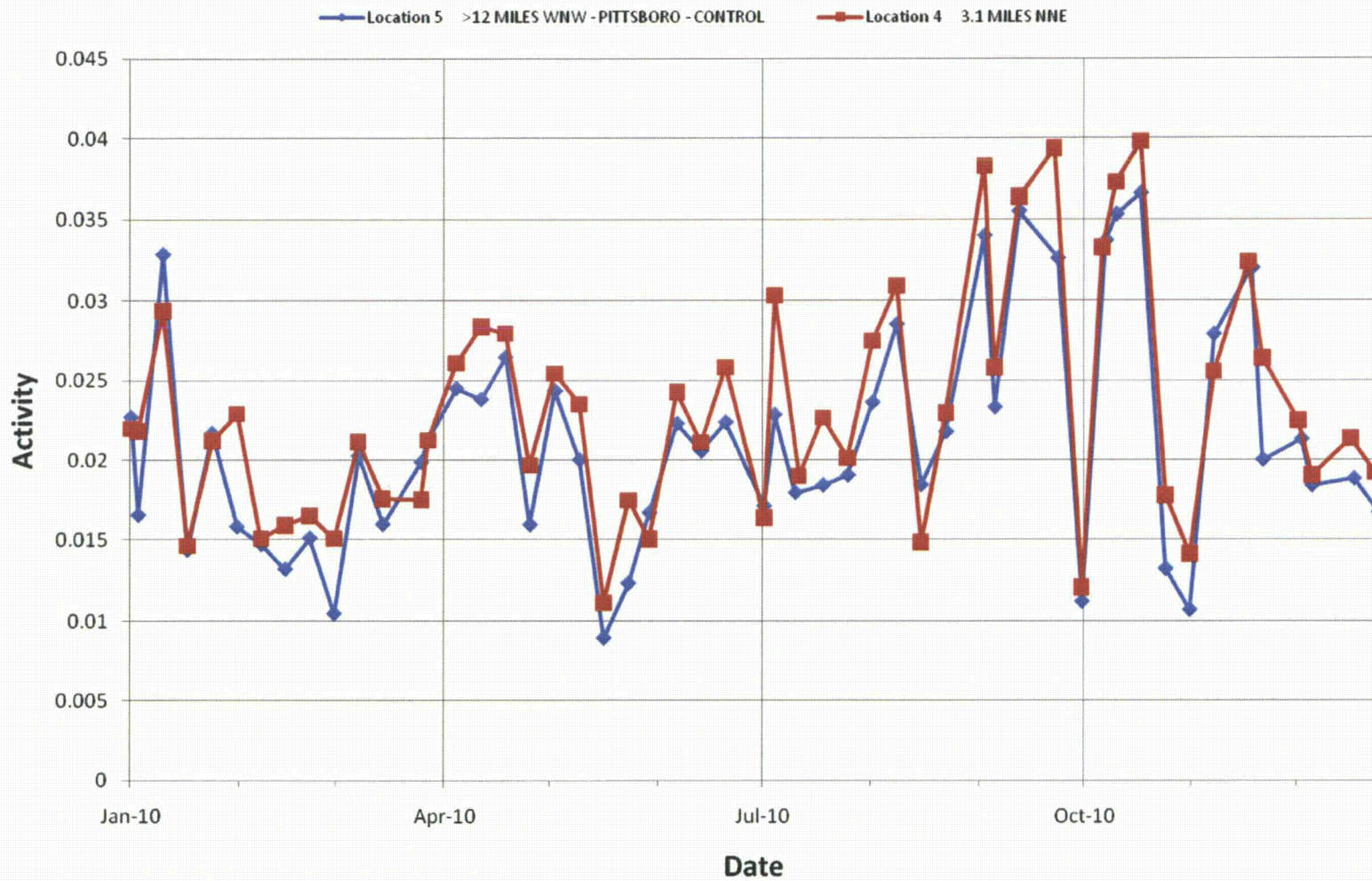
**Figure 4 HNP from 1/1/2010 To 12/31/2010  
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)**



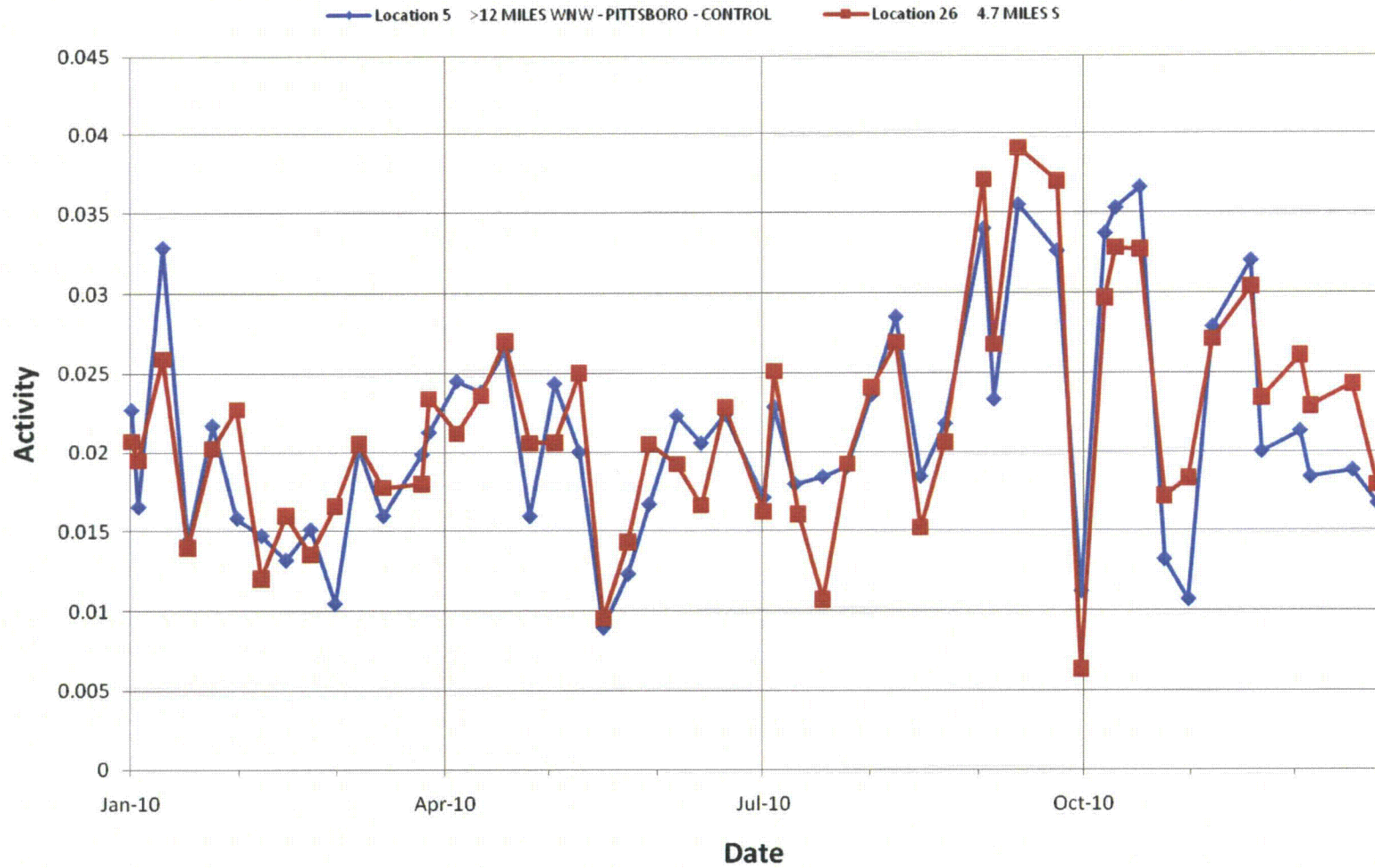
**Figure 5 HNP from 1/1/2010 To 12/31/2010  
AIR PARTICULATE for GROSS BETA - Activity (pCi/ cubic meter)**



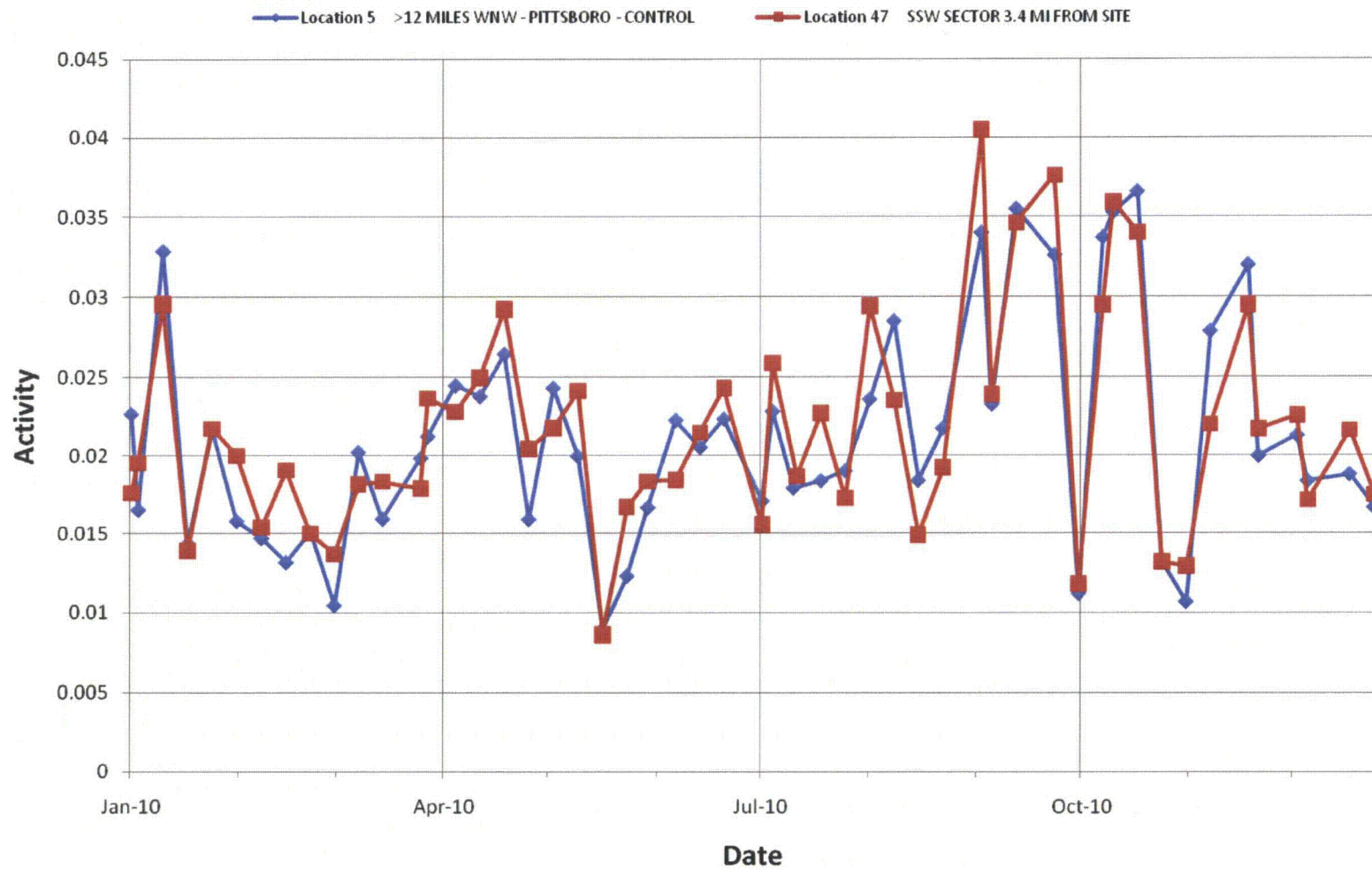
**Figure 6 HNP from 1/1/2010 To 12/31/2010  
AIR PARTICULATE for GROSS BETA - Activity (pCi/ cubic meter)**



**Figure 7 HNP from 1/1/2010 To 12/31/2010  
AIR PARTICULATE for GROSS BETA - Activity (pCi/ cubic meter)**



**Figure 8 HNP from 1/1/2010 To 12/31/2010**  
**AIR PARTICULATE for GROSS BETA - Activity (pCi/ cubic meter)**



**Figure 9 HNP from 1/1/2010 To 12/31/2010  
AIR PARTICULATE for GROSS BETA - Activity (pCi/ cubic meter)**

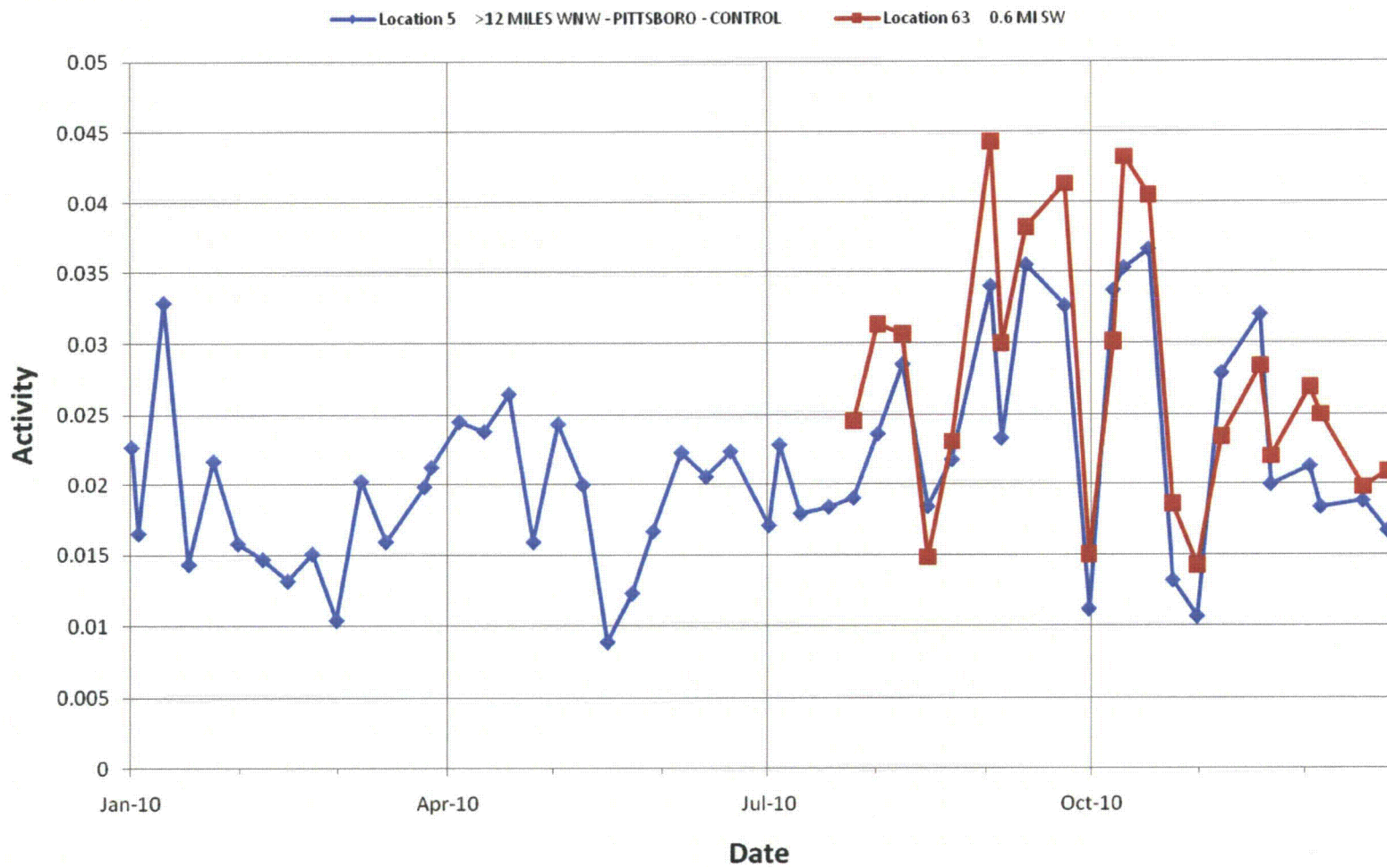
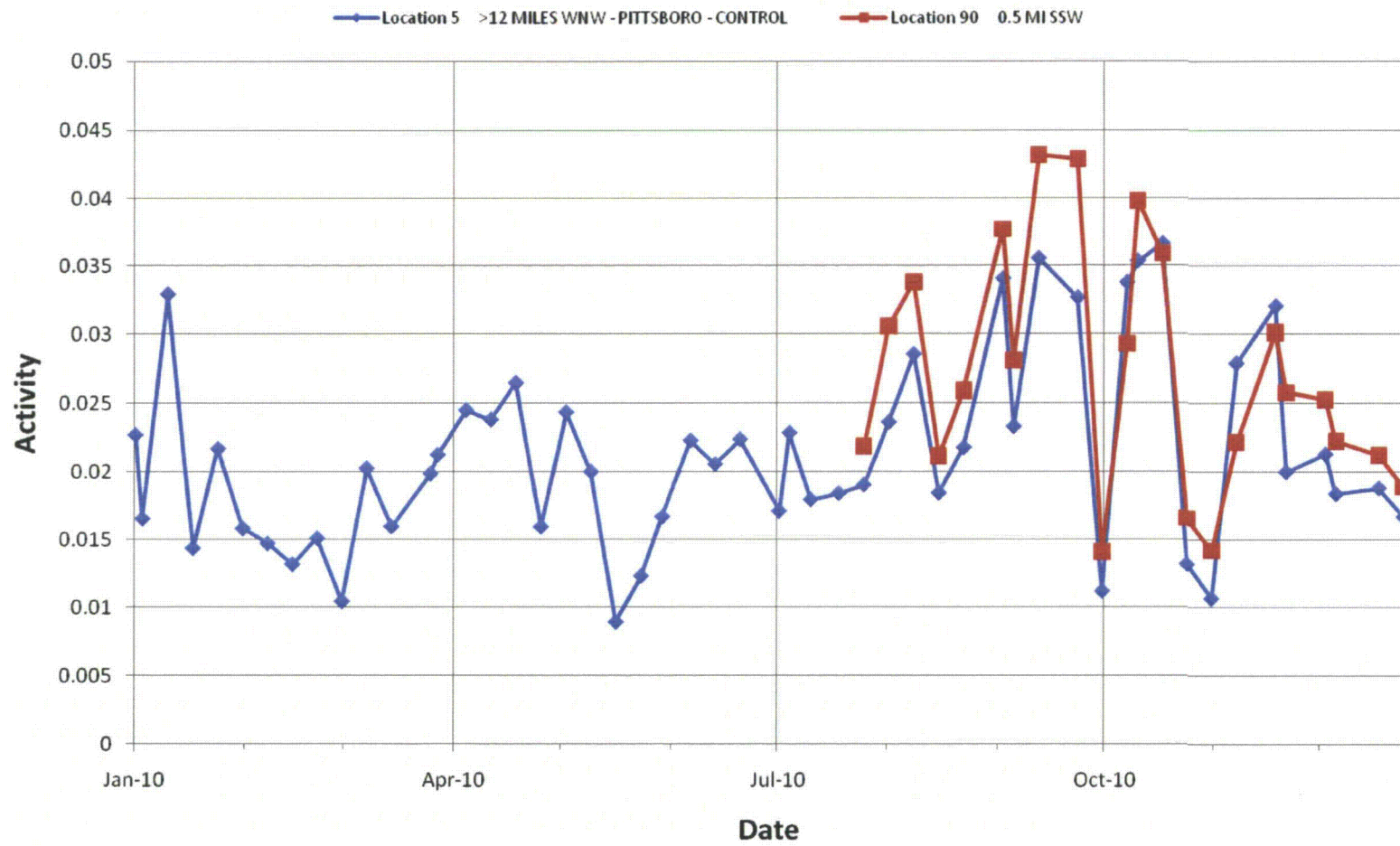


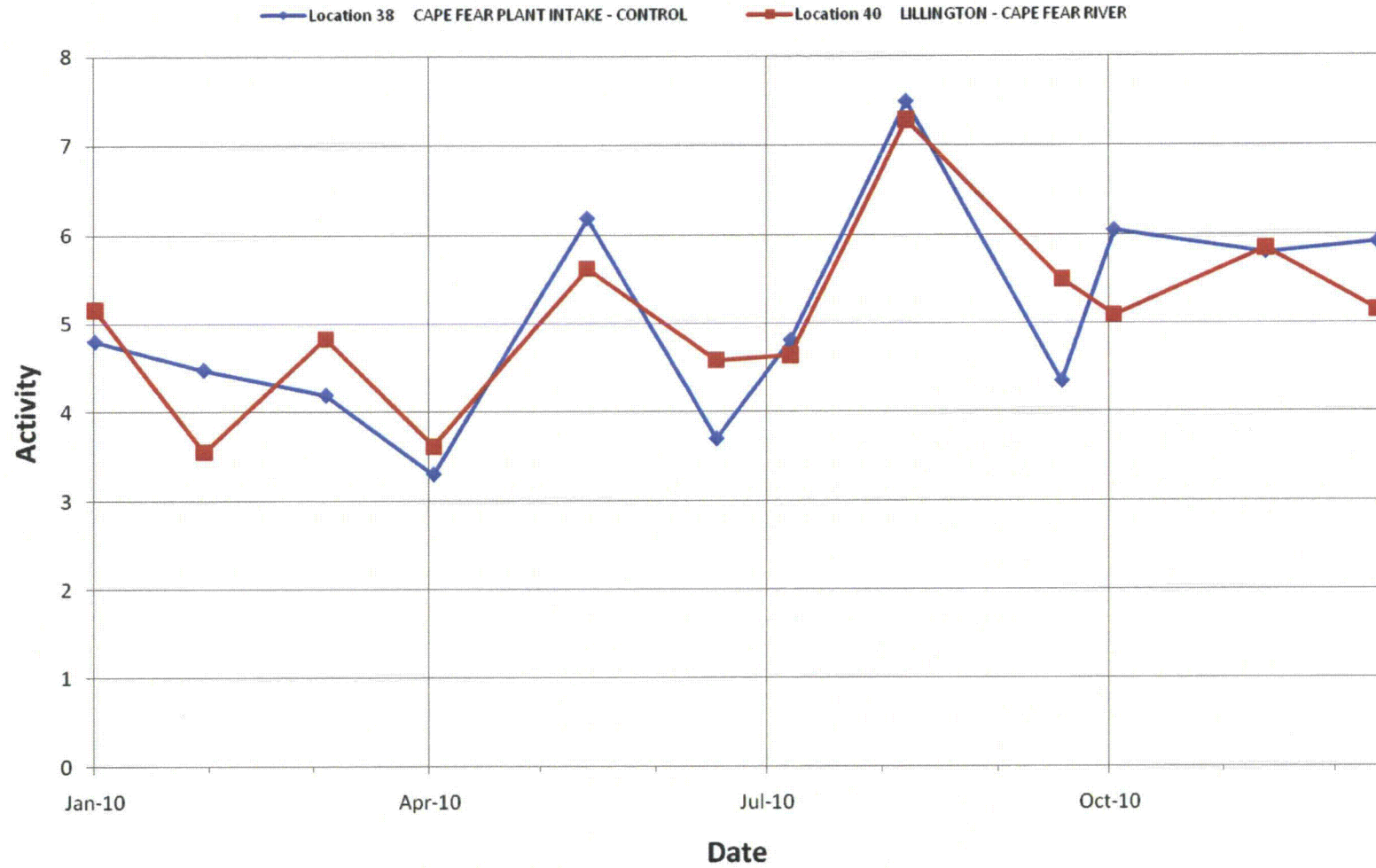
Figure 10 HNP from 1/1/2010 To 12/31/2010  
AIR PARTICULATE for GROSS BETA - Activity (pCi/ cubic meter)







**Figure 12 HNP from 1/1/2010 To 12/31/2010  
DRINKING WATER for GROSS BETA - Activity (pCi/Liter)**



**Figure 13 HNP from 1/1/2010 To 12/31/2010  
SURFACE WATER for GROSS BETA - Activity (pCi/Liter)**

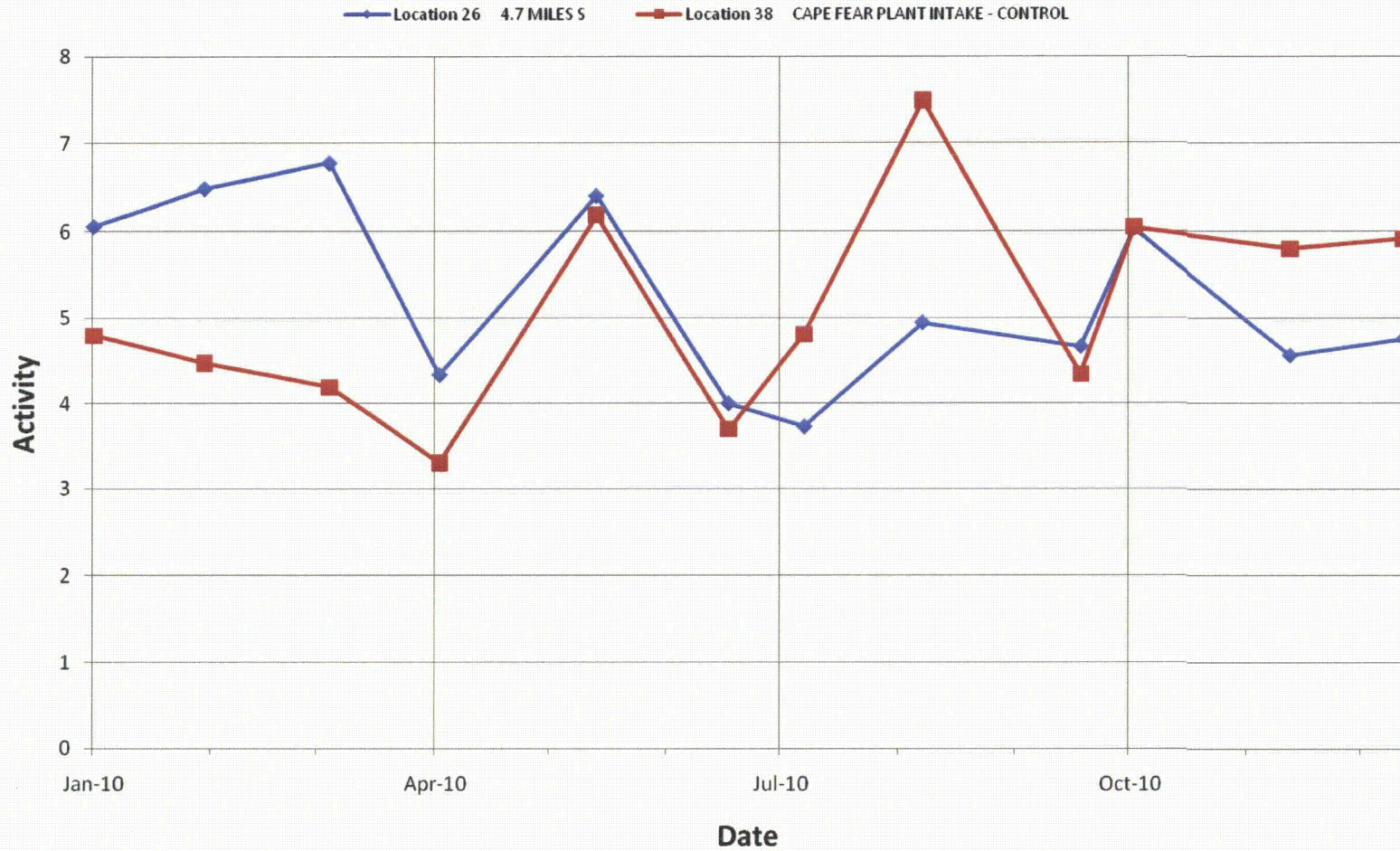
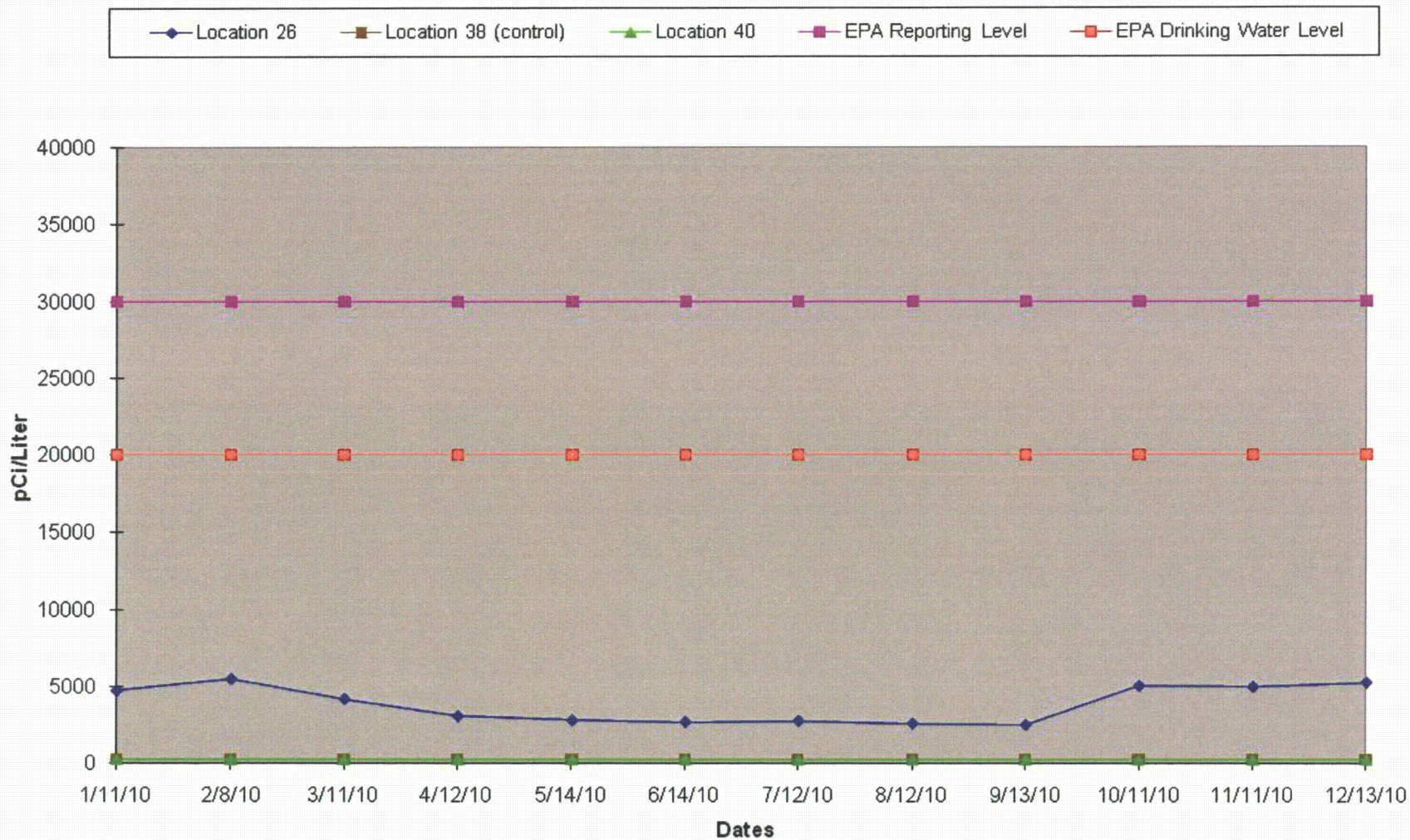
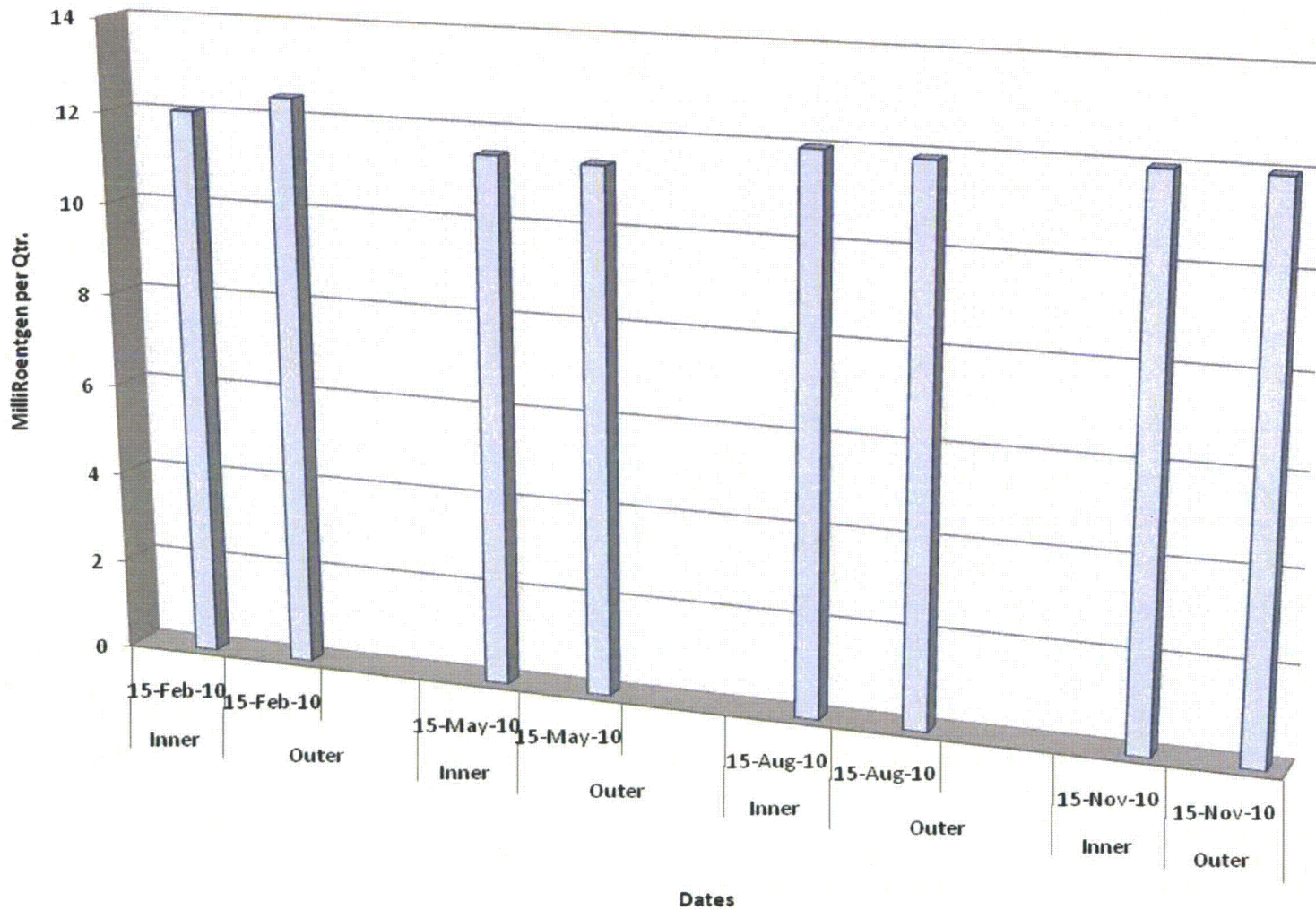


Figure 14 HNP 2010 Surface Water Tritium Activity



**Figure 15 HNP 2010 TLD Averages for Inner and Outer Ring Locations**



# **2010 HNP Radiological Environmental Monitoring TLD Report**

## **Comments**

- All HNP Environmental TLDS were present in 2010, except for the following TLDs:
  - TLD # 27 First Quarter of 2010
  - TLD # 34 Second Quarter of 2010
  - TLDs # 93, # 94, # 95 Third Quarter of 2010 were added to program
  - TLDs # 16, # 17, and # 18 Fourth Quarter of 2010 were deleted

## *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	2.6 MILES N	2/15/2010	13.3	1.2
1	2.6 MILES N	5/15/2010	12.5	2.3
1	2.6 MILES N	8/15/2010	12.9	1.5
1	2.6 MILES N	11/15/2010	12.9	1.7
2	1.4 MILES NNE	2/15/2010	14.3	1.4
2	1.4 MILES NNE	5/15/2010	12.9	1.4
2	1.4 MILES NNE	8/15/2010	14.4	1.1
2	1.4 MILES NNE	11/15/2010	13	1.4
3	1.9 MILES ENE - HE&EC	2/15/2010	11.8	1
3	1.9 MILES ENE - HE&EC	5/15/2010	10.4	1.1
3	1.9 MILES ENE - HE&EC	8/15/2010	10.9	0.8
3	1.9 MILES ENE - HE&EC	11/15/2010	11.4	0.7
4	3.1 MILES NNE	2/15/2010	12	1.9
4	3.1 MILES NNE	5/15/2010	10.7	1.1
4	3.1 MILES NNE	8/15/2010	11.6	1.7
4	3.1 MILES NNE	11/15/2010	11.2	0.5
5	>12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	15.1	0.9
5	>12 MILES WNW - PITTSBORO - CONTROL	5/15/2010	13.6	0.9
5	>12 MILES WNW - PITTSBORO - CONTROL	8/15/2010	15.3	1.2
5	>12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	14.6	1.6
6	0.8 MILES ENE	2/15/2010	12.2	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>
6	0.8 MILES ENE	5/15/2010	11.3	0.6
6	0.8 MILES ENE	8/15/2010	11.9	1.5
6	0.8 MILES ENE	11/15/2010	11.5	1.2
7	0.7 MILES E	2/15/2010	13.5	1.1
7	0.7 MILES E	5/15/2010	12.8	1.2
7	0.7 MILES E	8/15/2010	13.2	1.2
7	0.7 MILES E	11/15/2010	13	0.7
8	0.6 MILES ESE	2/15/2010	15	1.9
8	0.6 MILES ESE	5/15/2010	11.2	1.5
8	0.6 MILES ESE	8/15/2010	15.3	2.8
8	0.6 MILES ESE	11/15/2010	11.9	0.8
9	2.2 MILES SE	2/15/2010	10	1
9	2.2 MILES SE	5/15/2010	10.1	1.1
9	2.2 MILES SE	8/15/2010	9.3	1.1
9	2.2 MILES SE	11/15/2010	9.8	0.7
10	2.2 MILES SSE	2/15/2010	11.2	1
10	2.2 MILES SSE	5/15/2010	9.8	0.8
10	2.2 MILES SSE	8/15/2010	11	1.8
10	2.2 MILES SSE	11/15/2010	10.6	1.6
11	0.6 MILES S	2/15/2010	10.5	1.2
11	0.6 MILES S	5/15/2010	10.6	1.3
11	0.6 MILES S	8/15/2010	11.1	0.8
11	0.6 MILES S	11/15/2010	10.7	1.2
12	0.9 MILES SSW	2/15/2010	10	1.5



*Dose: mR/std. qtr.*

<b>TLD</b>	<b>TLD Location Description</b>	<b>Sample Date</b>	<b>Dose</b>	<b>2 Sigma Error</b>
12	0.9 MILES SSW	5/15/2010	9.8	0.7
12	0.9 MILES SSW	8/15/2010	9.8	1.6
12	0.9 MILES SSW	11/15/2010	10.7	0.8
13	0.7 MILES WSW	2/15/2010	11.1	1.1
13	0.7 MILES WSW	5/15/2010	10.1	1.6
13	0.7 MILES WSW	8/15/2010	10.2	0.7
13	0.7 MILES WSW	11/15/2010	10.6	1.7
14	1.5 MILES W	2/15/2010	13.5	1
14	1.5 MILES W	5/15/2010	16	1.7
14	1.5 MILES W	8/15/2010	14.3	1
14	1.5 MILES W	11/15/2010	15.3	0.7
15	2.0 MILES W	2/15/2010	9.6	2.6
15	2.0 MILES W	5/15/2010	10.1	1.3
15	2.0 MILES W	8/15/2010	10.3	1.4
15	2.0 MILES W	11/15/2010	10.4	0.9
16	1.9 MILES WNW	2/15/2010	11.8	2.8
16	1.9 MILES WNW	5/15/2010	11	0.7
16	1.9 MILES WNW	8/15/2010	10.8	1.5
17	1.5 MILES NW	2/15/2010	11.4	1.1
17	1.5 MILES NW	5/15/2010	10.9	0.7
17	1.5 MILES NW	8/15/2010	10.8	1.1
18	1.4 MILES NNW	2/15/2010	11.7	1.1
18	1.4 MILES NNW	5/15/2010	11.6	1.7
18	1.4 MILES NNW	8/15/2010	13	0.6

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
19	5.0 MILES NNE	2/15/2010	10.3	1.3
19	5.0 MILES NNE	5/15/2010	11.3	0.8
19	5.0 MILES NNE	8/15/2010	10.5	1.3
19	5.0 MILES NNE	11/15/2010	11.1	0.6
20	4.5 MILES NE	2/15/2010	14.2	1.7
20	4.5 MILES NE	5/15/2010	13.2	1.5
20	4.5 MILES NE	8/15/2010	12.6	1.3
20	4.5 MILES NE	11/15/2010	13.2	2.4
21	4.8 MILES ENE	2/15/2010	13.5	1.5
21	4.8 MILES ENE	5/15/2010	11.3	0.6
21	4.8 MILES ENE	8/15/2010	13.3	1.2
21	4.8 MILES ENE	11/15/2010	11.3	0.9
22	4.3 MILES E	2/15/2010	9.9	1.2
22	4.3 MILES E	5/15/2010	10.1	0.8
22	4.3 MILES E	8/15/2010	10	1.5
22	4.3 MILES E	11/15/2010	10.7	1.1
23	4.8 MILES ESE	2/15/2010	13.1	1
23	4.8 MILES ESE	5/15/2010	12.1	2.2
23	4.8 MILES ESE	8/15/2010	13	1.4
23	4.8 MILES ESE	11/15/2010	12.8	0.9
24	4.0 MILES SE	2/15/2010	11.7	0.9
24	4.0 MILES SE	5/15/2010	11	1.9
24	4.0 MILES SE	8/15/2010	11.9	0.7
24	4.0 MILES SE	11/15/2010	11.3	1.5

*Dose: mR/std. qtr.*

<b>TLD</b>	<b>TLD Location Description</b>	<b>Sample Date</b>	<b>Dose</b>	<b>2 Sigma Error</b>
25	4.7 MILES SSE	2/15/2010	13.9	2
25	4.7 MILES SSE	5/15/2010	10.8	1
25	4.7 MILES SSE	8/15/2010	13.7	1
25	4.7 MILES SSE	11/15/2010	12	1.9
26	4.7 MILES S	2/15/2010	12.1	1.6
26	4.7 MILES S	5/15/2010	11.8	0.8
26	4.7 MILES S	8/15/2010	12	1
26	4.7 MILES S	11/15/2010	12.8	1.4
27	4.8 MILES SW	5/15/2010	9.4	0.9
27	4.8 MILES SW	8/15/2010	9.4	0.7
27	4.8 MILES SW	11/15/2010	10	1.6
28	4.8 MILES SSW	2/15/2010	11.3	1.5
28	4.8 MILES SSW	5/15/2010	9.8	0.9
28	4.8 MILES SSW	8/15/2010	9.9	1.2
28	4.8 MILES SSW	11/15/2010	9.6	0.9
29	5.7 MILES WSW	2/15/2010	14.3	1.5
29	5.7 MILES WSW	5/15/2010	13.1	0.8
29	5.7 MILES WSW	8/15/2010	13.6	1.1
29	5.7 MILES WSW	11/15/2010	13.5	1.2
30	5.6 MILES W	2/15/2010	9.8	0.9
30	5.6 MILES W	5/15/2010	9.6	1.6
30	5.6 MILES W	8/15/2010	9.2	1.3
30	5.6 MILES W	11/15/2010	9.5	0.5
31	4.7 MILES WNW	2/15/2010	9.6	1.2

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
31	4.7 MILES WNW	5/15/2010	9.1	1.2
31	4.7 MILES WNW	8/15/2010	9.1	1.3
31	4.7 MILES WNW	11/15/2010	9.3	0.8
32	6.4 MILES NNW	2/15/2010	12.9	1.7
32	6.4 MILES NNW	5/15/2010	12.9	1.2
32	6.4 MILES NNW	8/15/2010	11.7	1.7
32	6.4 MILES NNW	11/15/2010	13.2	1.1
33	4.5 MILES NNW	2/15/2010	10.1	2.4
33	4.5 MILES NNW	5/15/2010	10	1.4
33	4.5 MILES NNW	8/15/2010	10.6	1.6
33	4.5 MILES NNW	11/15/2010	10.4	0.6
34	8.7 MILES NE - APEX (POP. CENTER)	2/15/2010	17	1.6
34	8.7 MILES NE - APEX (POP. CENTER)	8/15/2010	14.3	1.2
34	8.7 MILES NE - APEX (POP. CENTER)	11/15/2010	16.1	1.4
35	6.9 MILES E - HOLLY SPRINGS (POP. CENTER)	2/15/2010	13.1	1.6
35	6.9 MILES E - HOLLY SPRINGS (POP. CENTER)	5/15/2010	13	1.8
35	6.9 MILES E - HOLLY SPRINGS (POP. CENTER)	8/15/2010	13.4	1.1
35	6.9 MILES E - HOLLY SPRINGS (POP. CENTER)	11/15/2010	13.2	0.7
36	10.9 MILES E	2/15/2010	9.8	0.9
36	10.9 MILES E	5/15/2010	9.7	1.4
36	10.9 MILES E	8/15/2010	9.2	0.9
36	10.9 MILES E	11/15/2010	10.3	0.4
37	9.2 MILES ESE - FV AT OLD CP&L OFFICE	2/15/2010	15.7	1.5
37	9.2 MILES ESE - FV AT OLD CP&L OFFICE	5/15/2010	14.5	2.4

*Dose: mR/std. qtr.*

<b>TLD</b>	<b>TLD Location Description</b>	<b>Sample Date</b>	<b>Dose</b>	<b>2 Sigma Error</b>
37	9.2 MILES ESE - FV AT OLD CP&L OFFICE	8/15/2010	15.9	2.4
37	9.2 MILES ESE - FV AT OLD CP&L OFFICE	11/15/2010	14.4	1.9
48	4.5 MILES N	2/15/2010	13.2	0.9
48	4.5 MILES N	5/15/2010	12.5	1.4
48	4.5 MILES N	8/15/2010	12.8	1
48	4.5 MILES N	11/15/2010	13.4	1.4
49	2.5 MILES NE	2/15/2010	13.9	1.1
49	2.5 MILES NE	5/15/2010	14	1.1
49	2.5 MILES NE	8/15/2010	13.6	0.9
49	2.5 MILES NE	11/15/2010	14.9	1.3
50	2.6 MILES ESE - HOLLEMANS CROSSROADS	2/15/2010	11.3	1.9
50	2.6 MILES ESE - HOLLEMANS CROSSROADS	5/15/2010	10.4	1.3
50	2.6 MILES ESE - HOLLEMANS CROSSROADS	8/15/2010	11.7	1.2
50	2.6 MILES ESE - HOLLEMANS CROSSROADS	11/15/2010	11.3	1.6
53	5.8 MILES NW	2/15/2010	10.5	1.8
53	5.8 MILES NW	5/15/2010	10.4	1.7
53	5.8 MILES NW	8/15/2010	10.2	1.8
53	5.8 MILES NW	11/15/2010	10.3	0.8
56	3.0 MILES WSW	2/15/2010	12.4	1
56	3.0 MILES WSW	5/15/2010	11.9	2
56	3.0 MILES WSW	8/15/2010	12.1	1.6
56	3.0 MILES WSW	11/15/2010	11.8	0.6
63	0.6 MI SW	2/15/2010	12.9	1.8
63	0.6 MI SW	5/15/2010	12.8	1.6

*Dose: mR/std. qtr.*

<b><i>TLD</i></b>	<b><i>TLD Location Description</i></b>	<b><i>Sample Date</i></b>	<b><i>Dose</i></b>	<b><i>2 Sigma Error</i></b>
63	0.6 MI SW	8/15/2010	13.2	0.7
63	0.6 MI SW	11/15/2010	13	1.2
67	1.2 MI ENE - HEEC SEWAGE TREATMENT FACILITY	2/15/2010	11.5	1.5
67	1.2 MI ENE - HEEC SEWAGE TREATMENT FACILITY	5/15/2010	11.4	1.2
67	1.2 MI ENE - HEEC SEWAGE TREATMENT FACILITY	8/15/2010	11.1	1.4
67	1.2 MI ENE - HEEC SEWAGE TREATMENT FACILITY	11/15/2010	11.5	2.3
93	2.2 MI WNW - SR 1911	8/15/2010	12.1	1
93	2.2 MI WNW - SR 1911	11/15/2010	12	0.9
94	2.0 MI NW - OFF OLD US HWY 1	8/15/2010	13.4	1.5
94	2.0 MI NW - OFF OLD US HWY 1	11/15/2010	13.6	1
95	2.0 MI NNW - BONSAL RD.	8/15/2010	11.4	0.8
95	2.0 MI NNW - BONSAL RD.	11/15/2010	12.1	1.4

# **2010 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*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>	
1	2.6 MILES N	1/4/2010	282.4	2.21E-02	3.33E-03	3.05E-03
1	2.6 MILES N	1/11/2010	283.4	1.74E-02	3.05E-03	2.99E-03
1	2.6 MILES N	1/18/2010	281	2.69E-02	3.55E-03	2.96E-03
1	2.6 MILES N	1/25/2010	279.7	1.61E-02	3.05E-03	3.16E-03
1	2.6 MILES N	2/1/2010	292.2	2.13E-02	3.28E-03	3.15E-03
1	2.6 MILES N	2/8/2010	273.9	1.98E-02	3.33E-03	3.31E-03
1	2.6 MILES N	2/15/2010	280.6	1.47E-02	3.09E-03	3.45E-03
1	2.6 MILES N	2/22/2010	281.5	1.56E-02	2.98E-03	3.06E-03
1	2.6 MILES N	3/1/2010	281	1.29E-02	2.85E-03	3.14E-03
1	2.6 MILES N	3/8/2010	280.9	1.29E-02	2.95E-03	3.37E-03
1	2.6 MILES N	3/15/2010	274.9	1.93E-02	3.26E-03	3.19E-03
1	2.6 MILES N	3/22/2010	276.7	1.56E-02	3.10E-03	3.32E-03
1	2.6 MILES N	3/29/2010	277.3	1.57E-02	3.03E-03	3.13E-03
1	2.6 MILES N	4/5/2010	275	2.12E-02	3.36E-03	3.19E-03
1	2.6 MILES N	4/12/2010	274.6	2.41E-02	3.55E-03	3.30E-03
1	2.6 MILES N	4/19/2010	275.9	2.80E-02	3.74E-03	3.33E-03
1	2.6 MILES N	4/26/2010	274.6	2.81E-02	3.61E-03	2.88E-03
1	2.6 MILES N	5/3/2010	274.8	1.99E-02	3.22E-03	2.99E-03
1	2.6 MILES N	5/10/2010	274	2.45E-02	3.56E-03	3.28E-03
1	2.6 MILES N	5/17/2010	274.1	2.47E-02	3.53E-03	3.14E-03
1	2.6 MILES N	5/24/2010	275	9.97E-03	2.72E-03	3.24E-03
1	2.6 MILES N	6/1/2010	313.5	1.59E-02	2.79E-03	2.77E-03
1	2.6 MILES N	6/7/2010	234.2	1.59E-02	3.47E-03	3.84E-03
1	2.6 MILES N	6/14/2010	273.3	2.35E-02	3.42E-03	2.98E-03
1	2.6 MILES N	6/21/2010	273.4	2.27E-02	3.45E-03	3.21E-03



# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Air Particulate*

*Analysis: Beta*

*Quantity: cubic meters*

*Concentration (Activity): pCi/cubic meter*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>	
1	2.6 MILES N	6/28/2010	271.3	2.43E-02	3.58E-03	3.31E-03
1	2.6 MILES N	7/6/2010	315.1	1.86E-02	2.95E-03	2.83E-03
1	2.6 MILES N	7/12/2010	237.1	2.89E-02	4.15E-03	3.79E-03
1	2.6 MILES N	7/19/2010	271.1	1.95E-02	3.26E-03	3.12E-03
1	2.6 MILES N	7/26/2010	272.1	2.54E-02	3.61E-03	3.25E-03
1	2.6 MILES N	8/2/2010	274	1.97E-02	3.21E-03	2.97E-03
1	2.6 MILES N	8/9/2010	273.3	3.37E-02	3.97E-03	3.15E-03
1	2.6 MILES N	8/16/2010	270.1	2.86E-02	3.84E-03	3.42E-03
1	2.6 MILES N	8/23/2010	274.3	1.97E-02	3.27E-03	3.13E-03
1	2.6 MILES N	8/30/2010	271	2.33E-02	3.53E-03	3.28E-03
1	2.6 MILES N	9/7/2010	307.1	4.08E-02	3.99E-03	2.77E-03
1	2.6 MILES N	9/13/2010	231.4	2.70E-02	4.00E-03	3.51E-03
1	2.6 MILES N	9/20/2010	269.1	4.26E-02	4.42E-03	3.27E-03
1	2.6 MILES N	9/27/2010	264	4.35E-02	4.46E-03	3.13E-03
1	2.6 MILES N	10/4/2010	275.9	7.58E-03	2.65E-03	3.43E-03
1	2.6 MILES N	10/11/2010	272.4	3.00E-02	3.80E-03	3.12E-03
1	2.6 MILES N	10/18/2010	273.6	4.08E-02	4.26E-03	3.05E-03
1	2.6 MILES N	10/25/2010	275.2	3.87E-02	4.12E-03	2.92E-03
1	2.6 MILES N	11/1/2010	279.9	1.55E-02	3.06E-03	3.25E-03
1	2.6 MILES N	11/8/2010	285.5	1.53E-02	3.03E-03	3.26E-03
1	2.6 MILES N	11/15/2010	284	2.73E-02	3.65E-03	3.23E-03
1	2.6 MILES N	11/22/2010	283.7	3.46E-02	3.92E-03	3.03E-03
1	2.6 MILES N	11/29/2010	283.7	2.73E-02	3.69E-03	3.36E-03
1	2.6 MILES N	12/6/2010	282.3	2.57E-02	3.42E-03	2.73E-03
1	2.6 MILES N	12/13/2010	288.3	2.17E-02	3.32E-03	3.13E-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	2.6 MILES N	12/20/2010	287.3	2.22E-02	3.38E-03	3.22E-03
1	2.6 MILES N	12/28/2010	326.6	2.18E-02	3.00E-03	2.56E-03
2	1.4 MILES NNE	1/4/2010	280.6	2.08E-02	3.27E-03	3.07E-03
2	1.4 MILES NNE	1/11/2010	281.9	2.04E-02	3.23E-03	3.00E-03
2	1.4 MILES NNE	1/18/2010	278.8	2.80E-02	3.62E-03	2.98E-03
2	1.4 MILES NNE	1/25/2010	276.9	1.60E-02	3.07E-03	3.19E-03
2	1.4 MILES NNE	2/1/2010	288.5	2.07E-02	3.28E-03	3.19E-03
2	1.4 MILES NNE	2/8/2010	271	2.05E-02	3.39E-03	3.34E-03
2	1.4 MILES NNE	2/15/2010	278.1	1.20E-02	2.95E-03	3.48E-03
2	1.4 MILES NNE	2/22/2010	279.1	1.69E-02	3.07E-03	3.09E-03
2	1.4 MILES NNE	3/1/2010	277.4	1.35E-02	2.92E-03	3.19E-03
2	1.4 MILES NNE	3/8/2010	276.9	1.55E-02	3.13E-03	3.42E-03
2	1.4 MILES NNE	3/15/2010	269.8	9.53E-03	2.71E-03	3.25E-03
2	1.4 MILES NNE	3/22/2010	269.3	1.93E-02	3.36E-03	3.42E-03
2	1.4 MILES NNE	3/29/2010	269.9	1.99E-02	3.32E-03	3.22E-03
2	1.4 MILES NNE	4/5/2010	267.3	2.11E-02	3.42E-03	3.28E-03
2	1.4 MILES NNE	4/12/2010	267.9	2.48E-02	3.64E-03	3.38E-03
2	1.4 MILES NNE	4/19/2010	268.4	2.81E-02	3.82E-03	3.43E-03
2	1.4 MILES NNE	4/26/2010	267.8	2.58E-02	3.55E-03	2.95E-03
2	1.4 MILES NNE	5/3/2010	277.8	1.99E-02	3.20E-03	2.96E-03
2	1.4 MILES NNE	5/10/2010	276.4	2.51E-02	3.57E-03	3.25E-03
2	1.4 MILES NNE	5/17/2010	276.1	2.17E-02	3.36E-03	3.12E-03
2	1.4 MILES NNE	5/24/2010	276.5	9.92E-03	2.71E-03	3.22E-03
2	1.4 MILES NNE	6/1/2010	315.2	1.73E-02	2.86E-03	2.76E-03
2	1.4 MILES NNE	6/7/2010	235.7	1.57E-02	3.44E-03	3.81E-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>	
2	1.4 MILES NNE	6/14/2010	274.9	2.02E-02	3.23E-03	2.96E-03
2	1.4 MILES NNE	6/21/2010	272.7	2.08E-02	3.36E-03	3.21E-03
2	1.4 MILES NNE	6/28/2010	270.6	2.28E-02	3.51E-03	3.32E-03
2	1.4 MILES NNE	7/6/2010	314.8	1.66E-02	2.85E-03	2.83E-03
2	1.4 MILES NNE	7/12/2010	236.2	2.55E-02	3.99E-03	3.80E-03
2	1.4 MILES NNE	7/19/2010	271.7	1.85E-02	3.20E-03	3.11E-03
2	1.4 MILES NNE	7/26/2010	271.9	2.39E-02	3.53E-03	3.25E-03
2	1.4 MILES NNE	8/2/2010	274.6	1.68E-02	3.04E-03	2.97E-03
2	1.4 MILES NNE	8/9/2010	273.7	2.84E-02	3.72E-03	3.15E-03
2	1.4 MILES NNE	8/16/2010	270.3	2.07E-02	3.44E-03	3.42E-03
2	1.4 MILES NNE	8/23/2010	275.7	1.46E-02	2.97E-03	3.11E-03
2	1.4 MILES NNE	8/30/2010	274.1	2.30E-02	3.48E-03	3.24E-03
2	1.4 MILES NNE	9/7/2010	310.7	3.88E-02	3.88E-03	2.74E-03
2	1.4 MILES NNE	9/13/2010	234.4	2.76E-02	4.00E-03	3.46E-03
2	1.4 MILES NNE	9/20/2010	272.9	3.89E-02	4.23E-03	3.23E-03
2	1.4 MILES NNE	9/27/2010	270.8	4.04E-02	4.26E-03	3.06E-03
2	1.4 MILES NNE	10/4/2010	277	8.62E-03	2.71E-03	3.42E-03
2	1.4 MILES NNE	10/11/2010	272.8	1.50E-02	3.00E-03	3.12E-03
2	1.4 MILES NNE	10/18/2010	273.6	3.91E-02	4.19E-03	3.05E-03
2	1.4 MILES NNE	10/25/2010	274.8	3.28E-02	3.86E-03	2.92E-03
2	1.4 MILES NNE	11/1/2010	274.3	1.52E-02	3.08E-03	3.32E-03
2	1.4 MILES NNE	11/8/2010	280.6	1.46E-02	3.03E-03	3.32E-03
2	1.4 MILES NNE	11/15/2010	280.6	2.54E-02	3.58E-03	3.27E-03
2	1.4 MILES NNE	11/22/2010	280.4	2.68E-02	3.59E-03	3.06E-03
2	1.4 MILES NNE	11/29/2010	279.9	2.52E-02	3.62E-03	3.40E-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>	
2	1.4 MILES NNE	12/6/2010	280.8	2.54E-02	3.24E-03	2.74E-03
2	1.4 MILES NNE	12/13/2010	281.6	2.13E-02	3.35E-03	3.21E-03
2	1.4 MILES NNE	12/20/2010	276.3	1.28E-02	2.95E-03	3.35E-03
2	1.4 MILES NNE	12/28/2010	304.1	2.03E-02	3.06E-03	2.75E-03
4	3.1 MILES NNE	1/4/2010	276.2	2.20E-02	3.37E-03	3.12E-03
4	3.1 MILES NNE	1/11/2010	277.3	2.18E-02	3.34E-03	3.05E-03
4	3.1 MILES NNE	1/18/2010	274.1	2.94E-02	3.73E-03	3.03E-03
4	3.1 MILES NNE	1/25/2010	272.6	1.46E-02	3.02E-03	3.24E-03
4	3.1 MILES NNE	2/1/2010	284.9	2.12E-02	3.34E-03	3.23E-03
4	3.1 MILES NNE	2/8/2010	267.2	2.29E-02	3.55E-03	3.39E-03
4	3.1 MILES NNE	2/15/2010	274.2	1.51E-02	3.16E-03	3.53E-03
4	3.1 MILES NNE	2/22/2010	275	1.59E-02	3.05E-03	3.13E-03
4	3.1 MILES NNE	3/1/2010	274.2	1.65E-02	3.12E-03	3.22E-03
4	3.1 MILES NNE	3/8/2010	274.2	1.51E-02	3.13E-03	3.46E-03
4	3.1 MILES NNE	3/15/2010	268.5	2.12E-02	3.41E-03	3.26E-03
4	3.1 MILES NNE	3/22/2010	270.4	1.76E-02	3.26E-03	3.40E-03
4	3.1 MILES NNE	3/29/2010	271.2	1.75E-02	3.18E-03	3.20E-03
4	3.1 MILES NNE	4/5/2010	268.2	2.13E-02	3.42E-03	3.27E-03
4	3.1 MILES NNE	4/12/2010	268.4	2.61E-02	3.70E-03	3.37E-03
4	3.1 MILES NNE	4/19/2010	269.1	2.84E-02	3.83E-03	3.42E-03
4	3.1 MILES NNE	4/26/2010	268.1	2.79E-02	3.66E-03	2.95E-03
4	3.1 MILES NNE	5/3/2010	277.7	1.97E-02	3.19E-03	2.96E-03
4	3.1 MILES NNE	5/10/2010	276.1	2.54E-02	3.60E-03	3.25E-03
4	3.1 MILES NNE	5/17/2010	275.9	2.35E-02	3.45E-03	3.12E-03
4	3.1 MILES NNE	5/24/2010	277	1.11E-02	2.78E-03	3.22E-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	3.1 MILES NNE	6/1/2010	314.9	1.75E-02	2.87E-03	2.76E-03
4	3.1 MILES NNE	6/7/2010	235.4	1.51E-02	3.41E-03	3.82E-03
4	3.1 MILES NNE	6/14/2010	274.5	2.43E-02	3.45E-03	2.97E-03
4	3.1 MILES NNE	6/21/2010	273.6	2.11E-02	3.37E-03	3.20E-03
4	3.1 MILES NNE	6/28/2010	242.6	2.58E-02	3.93E-03	3.70E-03
4	3.1 MILES NNE	7/6/2010	316.6	1.64E-02	2.83E-03	2.81E-03
4	3.1 MILES NNE	7/12/2010	238.1	3.03E-02	4.21E-03	3.77E-03
4	3.1 MILES NNE	7/19/2010	273	1.90E-02	3.22E-03	3.10E-03
4	3.1 MILES NNE	7/26/2010	273.4	2.27E-02	3.46E-03	3.23E-03
4	3.1 MILES NNE	8/2/2010	276	2.01E-02	3.22E-03	2.95E-03
4	3.1 MILES NNE	8/9/2010	275.3	2.75E-02	3.66E-03	3.13E-03
4	3.1 MILES NNE	8/16/2010	272.1	3.09E-02	3.93E-03	3.40E-03
4	3.1 MILES NNE	8/23/2010	276.8	1.49E-02	2.97E-03	3.10E-03
4	3.1 MILES NNE	8/30/2010	274.5	2.30E-02	3.48E-03	3.24E-03
4	3.1 MILES NNE	9/7/2010	312.9	3.83E-02	3.84E-03	2.72E-03
4	3.1 MILES NNE	9/13/2010	234.1	2.58E-02	3.91E-03	3.47E-03
4	3.1 MILES NNE	9/20/2010	273.6	3.64E-02	4.11E-03	3.22E-03
4	3.1 MILES NNE	9/27/2010	271.1	3.94E-02	4.21E-03	3.05E-03
4	3.1 MILES NNE	10/4/2010	278.5	1.21E-02	2.92E-03	3.40E-03
4	3.1 MILES NNE	10/11/2010	274.9	3.33E-02	3.93E-03	3.10E-03
4	3.1 MILES NNE	10/18/2010	275.9	3.73E-02	4.08E-03	3.03E-03
4	3.1 MILES NNE	10/25/2010	276.8	3.98E-02	4.15E-03	2.90E-03
4	3.1 MILES NNE	11/1/2010	270.4	1.78E-02	3.26E-03	3.37E-03
4	3.1 MILES NNE	11/8/2010	274.8	1.42E-02	3.05E-03	3.39E-03
4	3.1 MILES NNE	11/15/2010	273.3	2.56E-02	3.66E-03	3.36E-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	3.1 MILES NNE	11/22/2010	273.5	3.24E-02	3.91E-03	3.14E-03
4	3.1 MILES NNE	11/29/2010	273.2	2.64E-02	3.74E-03	3.49E-03
4	3.1 MILES NNE	12/6/2010	274.6	2.25E-02	3.31E-03	2.80E-03
4	3.1 MILES NNE	12/13/2010	278	1.90E-02	3.26E-03	3.25E-03
4	3.1 MILES NNE	12/20/2010	278.7	2.14E-02	3.41E-03	3.32E-03
4	3.1 MILES NNE	12/28/2010	315.7	1.92E-02	2.93E-03	2.65E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	290.3	2.27E-02	3.30E-03	2.97E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	1/11/2010	291.7	1.65E-02	2.94E-03	2.90E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	1/18/2010	288.4	3.29E-02	3.77E-03	2.88E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	1/25/2010	286.5	1.44E-02	2.90E-03	3.08E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	293.6	2.17E-02	3.29E-03	3.13E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	2/8/2010	280.2	1.58E-02	3.06E-03	3.23E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	287.9	1.47E-02	3.03E-03	3.36E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	2/22/2010	280.6	1.32E-02	2.84E-03	3.07E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	277.3	1.51E-02	3.01E-03	3.19E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	3/8/2010	276.5	1.04E-02	2.83E-03	3.43E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	3/15/2010	269.7	2.02E-02	3.35E-03	3.25E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	3/22/2010	271.6	1.60E-02	3.16E-03	3.39E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	3/29/2010	271.3	1.99E-02	3.31E-03	3.20E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	4/5/2010	269.7	2.12E-02	3.41E-03	3.25E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	4/12/2010	267.9	2.45E-02	3.63E-03	3.38E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	4/19/2010	269.5	2.38E-02	3.60E-03	3.41E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	4/26/2010	268.4	2.65E-02	3.58E-03	2.94E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	267.4	1.59E-02	3.05E-03	3.08E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	5/10/2010	265.6	2.43E-02	3.63E-03	3.38E-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	>12 MILES WNW - PITTSBORO - CONTROL	5/17/2010	265.7	2.00E-02	3.35E-03	3.24E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	5/24/2010	265.9	8.93E-03	2.72E-03	3.35E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	6/1/2010	302.4	1.23E-02	2.65E-03	2.87E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	226	1.67E-02	3.61E-03	3.97E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	6/14/2010	263.7	2.23E-02	3.43E-03	3.09E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	6/21/2010	263.3	2.05E-02	3.42E-03	3.33E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	6/28/2010	263.8	2.24E-02	3.55E-03	3.41E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	300.7	1.71E-02	2.97E-03	2.96E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	7/12/2010	225.1	2.28E-02	3.98E-03	3.99E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	263.4	1.79E-02	3.24E-03	3.21E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	7/26/2010	258	1.84E-02	3.36E-03	3.43E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	259.8	1.90E-02	3.29E-03	3.14E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	8/9/2010	258.2	2.36E-02	3.61E-03	3.34E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	252.9	2.85E-02	4.00E-03	3.66E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	8/23/2010	279.2	1.84E-02	3.16E-03	3.07E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	8/30/2010	275.9	2.18E-02	3.40E-03	3.22E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	308.9	3.40E-02	3.69E-03	2.76E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	9/13/2010	235.6	2.33E-02	3.76E-03	3.44E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	275.3	3.55E-02	4.06E-03	3.20E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	9/27/2010	269.9	3.26E-02	3.92E-03	3.07E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	278.7	1.12E-02	2.86E-03	3.40E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	276.9	3.37E-02	3.93E-03	3.07E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	273.7	3.53E-02	4.01E-03	3.05E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	10/25/2010	277.6	3.66E-02	4.01E-03	2.89E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	270.8	1.32E-02	2.99E-03	3.36E-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	>12 MILES WNW - PITTSBORO - CONTROL	11/8/2010	276.4	1.07E-02	2.83E-03	3.37E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	275.4	2.79E-02	3.75E-03	3.33E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	11/22/2010	273.4	3.20E-02	3.89E-03	3.14E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	11/29/2010	273.9	2.00E-02	3.41E-03	3.48E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	274.4	2.13E-02	3.25E-03	2.81E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	12/13/2010	278.5	1.84E-02	3.22E-03	3.24E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	12/20/2010	278.7	1.88E-02	3.27E-03	3.32E-03
5	>12 MILES WNW - PITTSBORO - CONTROL	12/28/2010	311.2	1.67E-02	2.82E-03	2.68E-03
26	4.7 MILES S	1/4/2010	273.2	2.07E-02	3.33E-03	3.15E-03
26	4.7 MILES S	1/11/2010	277.3	1.95E-02	3.21E-03	3.05E-03
26	4.7 MILES S	1/18/2010	274.7	2.59E-02	3.55E-03	3.02E-03
26	4.7 MILES S	1/25/2010	283.8	1.40E-02	2.90E-03	3.11E-03
26	4.7 MILES S	2/1/2010	292.8	2.02E-02	3.23E-03	3.14E-03
26	4.7 MILES S	2/8/2010	297.4	2.27E-02	3.30E-03	3.04E-03
26	4.7 MILES S	2/15/2010	292.5	1.21E-02	2.84E-03	3.31E-03
26	4.7 MILES S	2/22/2010	289.5	1.60E-02	2.94E-03	2.98E-03
26	4.7 MILES S	3/1/2010	289.2	1.35E-02	2.83E-03	3.06E-03
26	4.7 MILES S	3/8/2010	287.8	1.66E-02	3.10E-03	3.29E-03
26	4.7 MILES S	3/15/2010	282.5	2.05E-02	3.27E-03	3.10E-03
26	4.7 MILES S	3/22/2010	284.1	1.78E-02	3.16E-03	3.24E-03
26	4.7 MILES S	3/29/2010	284.3	1.80E-02	3.10E-03	3.06E-03
26	4.7 MILES S	4/5/2010	281.6	2.34E-02	3.42E-03	3.11E-03
26	4.7 MILES S	4/12/2010	282.1	2.12E-02	3.34E-03	3.21E-03
26	4.7 MILES S	4/19/2010	282.4	2.36E-02	3.48E-03	3.26E-03
26	4.7 MILES S	4/26/2010	280.7	2.70E-02	3.51E-03	2.82E-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>	
26	4.7 MILES S	5/3/2010	271.3	2.06E-02	3.29E-03	3.03E-03
26	4.7 MILES S	5/10/2010	268.6	2.06E-02	3.41E-03	3.34E-03
26	4.7 MILES S	5/17/2010	268.3	2.50E-02	3.59E-03	3.21E-03
26	4.7 MILES S	5/24/2010	269.6	9.53E-03	2.74E-03	3.30E-03
26	4.7 MILES S	6/1/2010	306.2	1.43E-02	2.75E-03	2.84E-03
26	4.7 MILES S	6/7/2010	227.9	2.05E-02	3.81E-03	3.94E-03
26	4.7 MILES S	6/14/2010	266.1	1.92E-02	3.24E-03	3.06E-03
26	4.7 MILES S	6/21/2010	265.1	1.66E-02	3.19E-03	3.31E-03
26	4.7 MILES S	6/28/2010	257.1	2.29E-02	3.63E-03	3.49E-03
26	4.7 MILES S	7/6/2010	304.6	1.62E-02	2.89E-03	2.93E-03
26	4.7 MILES S	7/12/2010	127.7	2.51E-02	6.12E-03	7.03E-03
26	4.7 MILES S	7/19/2010	265.1	1.61E-02	3.11E-03	3.19E-03
26	4.7 MILES S	7/26/2010	262.9	1.07E-02	2.85E-03	3.36E-03
26	4.7 MILES S	8/2/2010	265.9	1.92E-02	3.25E-03	3.06E-03
26	4.7 MILES S	8/9/2010	125.1	2.41E-02	6.03E-03	6.88E-03
26	4.7 MILES S	8/16/2010	262.5	2.69E-02	3.83E-03	3.52E-03
26	4.7 MILES S	8/23/2010	267	1.52E-02	3.07E-03	3.21E-03
26	4.7 MILES S	8/30/2010	267.6	2.06E-02	3.41E-03	3.32E-03
26	4.7 MILES S	9/7/2010	303.2	3.71E-02	3.87E-03	2.81E-03
26	4.7 MILES S	9/13/2010	229	2.68E-02	4.02E-03	3.54E-03
26	4.7 MILES S	9/20/2010	266.5	3.91E-02	4.30E-03	3.31E-03
26	4.7 MILES S	9/27/2010	261.5	3.70E-02	4.20E-03	3.16E-03
26	4.7 MILES S	10/4/2010	247.8	6.36E-03	2.81E-03	3.82E-03
26	4.7 MILES S	10/11/2010	266.8	2.97E-02	3.84E-03	3.19E-03
26	4.7 MILES S	10/18/2010	268.7	3.28E-02	3.95E-03	3.11E-03

# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Air Particulate*

*Analysis: Beta*

*Quantity: cubic meters*

*Concentration (Activity): pCi/cubic meter*

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>	<i><b>LLD</b></i>	
26	4.7 MILES S	10/25/2010	270.3	3.27E-02	3.89E-03	2.97E-03
26	4.7 MILES S	11/1/2010	269.8	1.72E-02	3.23E-03	3.38E-03
26	4.7 MILES S	11/8/2010	276.6	1.83E-02	3.27E-03	3.37E-03
26	4.7 MILES S	11/15/2010	275.9	2.71E-02	3.71E-03	3.33E-03
26	4.7 MILES S	11/22/2010	266.2	3.04E-02	3.88E-03	3.23E-03
26	4.7 MILES S	11/29/2010	272.3	2.34E-02	3.60E-03	3.50E-03
26	4.7 MILES S	12/6/2010	276.6	2.61E-02	3.48E-03	2.78E-03
26	4.7 MILES S	12/13/2010	273.3	2.29E-02	3.50E-03	3.30E-03
26	4.7 MILES S	12/20/2010	277.6	2.43E-02	3.56E-03	3.33E-03
26	4.7 MILES S	12/28/2010	302.3	1.79E-02	2.94E-03	2.76E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/4/2010	269.3	1.76E-02	3.19E-03	3.20E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/11/2010	270.5	1.95E-02	3.27E-03	3.13E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/18/2010	268.3	2.96E-02	3.78E-03	3.10E-03
47	SSW SECTOR 3.4 MI FROM SITE	1/25/2010	267.2	1.39E-02	3.02E-03	3.31E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/1/2010	266.7	2.18E-02	3.52E-03	3.45E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/8/2010	268.9	2.00E-02	3.39E-03	3.37E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/15/2010	284.2	1.54E-02	3.10E-03	3.41E-03
47	SSW SECTOR 3.4 MI FROM SITE	2/22/2010	295.1	1.91E-02	3.08E-03	2.92E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/1/2010	293.4	1.50E-02	2.89E-03	3.01E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/8/2010	287.6	1.37E-02	2.94E-03	3.29E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/15/2010	282.8	1.82E-02	3.14E-03	3.10E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/22/2010	285.5	1.84E-02	3.18E-03	3.22E-03
47	SSW SECTOR 3.4 MI FROM SITE	3/29/2010	286.7	1.79E-02	3.08E-03	3.03E-03
47	SSW SECTOR 3.4 MI FROM SITE	4/5/2010	285.3	2.37E-02	3.41E-03	3.07E-03
47	SSW SECTOR 3.4 MI FROM SITE	4/12/2010	285.6	2.28E-02	3.39E-03	3.17E-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	4/19/2010	287.2	2.50E-02	3.51E-03	3.20E-03
47	SSW SECTOR 3.4 MI FROM SITE	4/26/2010	285.7	2.92E-02	3.58E-03	2.77E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/3/2010	270.6	2.04E-02	3.29E-03	3.04E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/10/2010	268.6	2.18E-02	3.47E-03	3.34E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/17/2010	268.7	2.41E-02	3.55E-03	3.21E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/24/2010	269.9	8.62E-03	2.67E-03	3.30E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/1/2010	307.4	1.67E-02	2.88E-03	2.83E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/7/2010	229.4	1.84E-02	3.67E-03	3.92E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/14/2010	268	1.85E-02	3.19E-03	3.04E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/21/2010	267.7	2.15E-02	3.44E-03	3.27E-03
47	SSW SECTOR 3.4 MI FROM SITE	6/28/2010	258.6	2.43E-02	3.70E-03	3.47E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/6/2010	306.2	1.56E-02	2.85E-03	2.91E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/12/2010	226.1	2.59E-02	4.13E-03	3.97E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/19/2010	267.2	1.87E-02	3.25E-03	3.17E-03
47	SSW SECTOR 3.4 MI FROM SITE	7/26/2010	265	2.27E-02	3.53E-03	3.33E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/2/2010	267.8	1.73E-02	3.12E-03	3.04E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/9/2010	256.9	2.94E-02	3.92E-03	3.35E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/16/2010	260.2	2.36E-02	3.68E-03	3.55E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/23/2010	263.7	1.49E-02	3.08E-03	3.26E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/30/2010	263.4	1.93E-02	3.37E-03	3.37E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/7/2010	298.8	4.05E-02	4.04E-03	2.85E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/13/2010	224.4	2.39E-02	3.91E-03	3.62E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/20/2010	262	3.46E-02	4.14E-03	3.36E-03
47	SSW SECTOR 3.4 MI FROM SITE	9/27/2010	255.6	3.76E-02	4.28E-03	3.24E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/4/2010	267.1	1.18E-02	2.99E-03	3.54E-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	10/11/2010	261.4	2.95E-02	3.87E-03	3.26E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/18/2010	262.5	3.59E-02	4.15E-03	3.18E-03
47	SSW SECTOR 3.4 MI FROM SITE	10/25/2010	264.6	3.40E-02	4.00E-03	3.04E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/1/2010	272.7	1.32E-02	2.98E-03	3.34E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/8/2010	281.4	1.29E-02	2.93E-03	3.31E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/15/2010	281.7	2.20E-02	3.41E-03	3.26E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/22/2010	267.3	2.95E-02	3.83E-03	3.21E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/29/2010	276.3	2.17E-02	3.48E-03	3.45E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/6/2010	281.3	2.26E-02	3.26E-03	2.74E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/13/2010	279.9	1.71E-02	3.14E-03	3.23E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/20/2010	286.9	2.16E-02	3.35E-03	3.22E-03
47	SSW SECTOR 3.4 MI FROM SITE	12/28/2010	311.2	1.75E-02	2.86E-03	2.68E-03
63	0.6 MI SW	8/2/2010	254.2	2.46E-02	3.64E-03	3.20E-03
63	0.6 MI SW	8/9/2010	265.6	3.13E-02	3.93E-03	3.24E-03
63	0.6 MI SW	8/16/2010	251.3	3.07E-02	4.12E-03	3.68E-03
63	0.6 MI SW	8/23/2010	262.4	1.48E-02	3.08E-03	3.27E-03
63	0.6 MI SW	8/30/2010	255.1	2.31E-02	3.66E-03	3.48E-03
63	0.6 MI SW	9/7/2010	290.4	4.43E-02	4.27E-03	2.93E-03
63	0.6 MI SW	9/13/2010	220.9	3.00E-02	4.28E-03	3.67E-03
63	0.6 MI SW	9/20/2010	257.7	3.82E-02	4.35E-03	3.42E-03
63	0.6 MI SW	9/27/2010	259.9	4.13E-02	4.40E-03	3.18E-03
63	0.6 MI SW	10/4/2010	267.2	1.50E-02	3.19E-03	3.54E-03
63	0.6 MI SW	10/11/2010	267.2	3.01E-02	3.85E-03	3.19E-03
63	0.6 MI SW	10/18/2010	267.4	4.32E-02	4.41E-03	3.12E-03
63	0.6 MI SW	10/25/2010	267.8	4.05E-02	4.27E-03	3.00E-03

# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Air Particulate*

*Analysis: Beta*

*Quantity: cubic meters*

*Concentration (Activity): pCi/cubic meter*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>	
63	0.6 MI SW	11/1/2010	280.7	1.86E-02	3.22E-03	3.24E-03
63	0.6 MI SW	11/8/2010	290.4	1.42E-02	2.94E-03	3.21E-03
63	0.6 MI SW	11/15/2010	271.3	2.34E-02	3.57E-03	3.38E-03
63	0.6 MI SW	11/22/2010	271.3	2.84E-02	3.74E-03	3.17E-03
63	0.6 MI SW	11/29/2010	273.5	2.20E-02	3.52E-03	3.48E-03
63	0.6 MI SW	12/6/2010	277.8	2.69E-02	3.52E-03	2.77E-03
63	0.6 MI SW	12/13/2010	284.8	2.50E-02	3.51E-03	3.17E-03
63	0.6 MI SW	12/20/2010	287.3	1.98E-02	3.26E-03	3.22E-03
63	0.6 MI SW	12/28/2010	319.2	2.09E-02	2.99E-03	2.62E-03
90	0.5 MI SSW	8/2/2010	283.4	2.19E-02	3.26E-03	2.87E-03
90	0.5 MI SSW	8/9/2010	254.8	3.06E-02	3.99E-03	3.38E-03
90	0.5 MI SSW	8/16/2010	244.2	3.38E-02	4.35E-03	3.79E-03
90	0.5 MI SSW	8/23/2010	274.5	2.12E-02	3.35E-03	3.13E-03
90	0.5 MI SSW	8/30/2010	239.3	2.59E-02	3.97E-03	3.71E-03
90	0.5 MI SSW	9/7/2010	293.5	3.77E-02	3.97E-03	2.90E-03
90	0.5 MI SSW	9/13/2010	221.8	2.81E-02	4.17E-03	3.66E-03
90	0.5 MI SSW	9/20/2010	257.6	4.32E-02	4.56E-03	3.42E-03
90	0.5 MI SSW	9/27/2010	239.7	4.29E-02	4.69E-03	3.45E-03
90	0.5 MI SSW	10/4/2010	246.2	1.41E-02	3.33E-03	3.84E-03
90	0.5 MI SSW	10/11/2010	246.2	2.93E-02	4.01E-03	3.46E-03
90	0.5 MI SSW	10/18/2010	246.1	3.98E-02	4.49E-03	3.39E-03
90	0.5 MI SSW	10/25/2010	246.2	3.59E-02	4.27E-03	3.26E-03
90	0.5 MI SSW	11/1/2010	275.7	1.66E-02	3.15E-03	3.30E-03
90	0.5 MI SSW	11/8/2010	271.9	1.42E-02	3.08E-03	3.43E-03
90	0.5 MI SSW	11/15/2010	267.5	2.22E-02	3.54E-03	3.43E-03

# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Air Particulate*

*Analysis: Beta*

*Quantity: cubic meters*

*Concentration (Activity): pCi/cubic meter*

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>	<i><b>LLD</b></i>	
90	0.5 MI SSW	11/22/2010	266.2	3.01E-02	3.87E-03	3.23E-03
90	0.5 MI SSW	11/29/2010	270.2	2.58E-02	3.74E-03	3.53E-03
90	0.5 MI SSW	12/6/2010	273.9	2.53E-02	3.46E-03	2.81E-03
90	0.5 MI SSW	12/13/2010	281.7	2.23E-02	3.40E-03	3.21E-03
90	0.5 MI SSW	12/20/2010	287.6	2.12E-02	3.33E-03	3.22E-03
90	0.5 MI SSW	12/28/2010	328.7	1.89E-02	2.83E-03	2.54E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/2/2010	261.8	1.88E-02	3.26E-03	3.11E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/9/2010	263.9	2.96E-02	3.86E-03	3.26E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/16/2010	255.1	2.56E-02	3.84E-03	3.63E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/23/2010	280.8	1.99E-02	3.23E-03	3.06E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/30/2010	287.5	1.71E-02	3.06E-03	3.09E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/7/2010	213.4	4.36E-02	5.10E-03	3.99E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/13/2010	66.4	4.56E-02	1.11E-02	1.22E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/20/2010	268.8	3.31E-02	4.01E-03	3.28E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/27/2010	267.6	3.48E-02	4.04E-03	3.09E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/4/2010	274.8	1.27E-02	2.99E-03	3.44E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/11/2010	275.9	3.11E-02	3.82E-03	3.08E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/18/2010	279	3.49E-02	3.95E-03	2.99E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/25/2010	281.6	2.65E-02	3.50E-03	2.85E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/1/2010	270.7	1.63E-02	3.18E-03	3.36E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/8/2010	275.9	1.36E-02	3.01E-03	3.38E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/15/2010	275.3	2.52E-02	3.62E-03	3.33E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/22/2010	274.5	2.47E-02	3.53E-03	3.13E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/29/2010	274.5	2.56E-02	3.69E-03	3.47E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/6/2010	272.5	2.71E-02	3.57E-03	2.82E-03

# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Air Particulate*

*Analysis: Beta*

*Quantity: cubic meters*

*Concentration (Activity): pCi/cubic meter*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>	
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/13/2010	276.7	2.22E-02	3.44E-03	3.26E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/20/2010	277.8	1.75E-02	3.21E-03	3.33E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/28/2010	314.3	2.17E-02	3.07E-03	2.66E-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	1/11/2010	1.00	4.80E+00	8.60E-01	7.04E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.00	4.47E+00	8.85E-01	8.22E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.00	4.19E+00	8.53E-01	7.43E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.00	3.31E+00	7.65E-01	7.34E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.00	6.19E+00	9.81E-01	6.93E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.00	3.70E+00	8.46E-01	8.20E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.00	4.81E+00	9.90E-01	9.53E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.00	7.48E+00	1.12E+00	7.57E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.00	4.34E+00	9.44E-01	9.43E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.00	6.05E+00	1.05E+00	9.50E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.00	5.80E+00	1.06E+00	9.90E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.00	5.91E+00	1.08E+00	9.56E-01
40	LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.00	5.16E+00	9.99E-01	8.55E-01
40	LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.00	3.56E+00	7.99E-01	7.91E-01
40	LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.00	4.83E+00	8.62E-01	6.95E-01
40	LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.00	3.62E+00	7.84E-01	7.27E-01
40	LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.00	5.62E+00	9.22E-01	6.68E-01
40	LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.00	4.58E+00	9.14E-01	8.26E-01
40	LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.00	4.64E+00	9.64E-01	9.32E-01
40	LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.00	7.28E+00	1.08E+00	7.27E-01
40	LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.00	5.49E+00	1.04E+00	9.75E-01
40	LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.00	5.09E+00	9.86E-01	9.43E-01
40	LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.00	5.85E+00	1.04E+00	9.66E-01
40	LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.00	5.14E+00	9.67E-01	8.68E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.00	3.59E+00	7.93E-01	7.30E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.00	2.40E+00	7.14E-01	7.96E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.00	4.25E+00	8.05E-01	6.73E-01



# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/Liter*

*Analysis: Beta*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>	
51	WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.00	3.04E+00	7.30E-01	7.13E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.00	6.19E+00	9.15E-01	6.15E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.00	2.40E+00	7.09E-01	7.69E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.00	2.27E+00	7.17E-01	8.24E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.00	3.54E+00	7.57E-01	6.46E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.00	3.21E+00	8.00E-01	8.48E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.00	4.01E+00	8.84E-01	8.99E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.00	2.31E+00	7.23E-01	8.50E-01
51	WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.00	3.77E+00	8.12E-01	7.82E-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	4.7 MILES S	1.00	6.06E+00	9.51E-01	7.15E-01
26	4.7 MILES S	1.00	6.49E+00	9.80E-01	7.81E-01
26	4.7 MILES S	1.00	6.78E+00	9.80E-01	6.88E-01
26	4.7 MILES S	1.00	4.33E+00	8.30E-01	7.20E-01
26	4.7 MILES S	1.00	6.41E+00	9.36E-01	6.25E-01
26	4.7 MILES S	1.00	4.00E+00	8.19E-01	7.52E-01
26	4.7 MILES S	1.00	3.73E+00	8.32E-01	8.32E-01
26	4.7 MILES S	1.00	4.94E+00	8.54E-01	6.39E-01
26	4.7 MILES S	1.00	4.66E+00	9.00E-01	8.48E-01
26	4.7 MILES S	1.00	6.04E+00	1.01E+00	8.96E-01
26	4.7 MILES S	1.00	4.56E+00	9.06E-01	8.88E-01
26	4.7 MILES S	1.00	4.76E+00	8.94E-01	8.03E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	4.80E+00	8.60E-01	7.04E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	4.47E+00	8.85E-01	8.22E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	4.19E+00	8.53E-01	7.43E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	3.31E+00	7.65E-01	7.34E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	6.19E+00	9.81E-01	6.93E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	3.70E+00	8.46E-01	8.20E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	4.81E+00	9.90E-01	9.53E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	7.48E+00	1.12E+00	7.57E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	4.34E+00	9.44E-01	9.43E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	6.05E+00	1.05E+00	9.50E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	5.80E+00	1.06E+00	9.90E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1.00	5.91E+00	1.08E+00	9.56E-01
40	LILLINGTON - CAPE FEAR RIVER	1.00	5.16E+00	9.99E-01	8.55E-01
40	LILLINGTON - CAPE FEAR RIVER	1.00	3.56E+00	7.99E-01	7.91E-01

# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/Liter*

*Analysis: Beta*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>	
40	LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.00	4.83E+00	8.62E-01	6.95E-01
40	LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.00	3.62E+00	7.84E-01	7.27E-01
40	LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.00	5.62E+00	9.22E-01	6.68E-01
40	LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.00	4.58E+00	9.14E-01	8.26E-01
40	LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.00	4.64E+00	9.64E-01	9.32E-01
40	LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.00	7.28E+00	1.08E+00	7.27E-01
40	LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.00	5.49E+00	1.04E+00	9.75E-01
40	LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.00	5.09E+00	9.86E-01	9.43E-01
40	LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.00	5.85E+00	1.04E+00	9.66E-01
40	LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.00	5.14E+00	9.67E-01	8.68E-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	2.6 MILES N	1/4/2010	282.40	<LLD	2.34E-02
1	2.6 MILES N	1/11/2010	283.40	<LLD	2.50E-02
1	2.6 MILES N	1/18/2010	281.00	<LLD	2.05E-02
1	2.6 MILES N	1/25/2010	279.70	<LLD	2.18E-02
1	2.6 MILES N	2/1/2010	292.20	<LLD	2.08E-02
1	2.6 MILES N	2/8/2010	273.90	<LLD	2.21E-02
1	2.6 MILES N	2/15/2010	280.60	<LLD	1.57E-02
1	2.6 MILES N	2/22/2010	281.50	<LLD	2.24E-02
1	2.6 MILES N	3/1/2010	281.00	<LLD	2.50E-02
1	2.6 MILES N	3/8/2010	280.90	<LLD	2.18E-02
1	2.6 MILES N	3/15/2010	274.90	<LLD	2.52E-02
1	2.6 MILES N	3/22/2010	276.70	<LLD	2.50E-02
1	2.6 MILES N	3/29/2010	277.30	<LLD	2.42E-02
1	2.6 MILES N	4/5/2010	275.00	<LLD	2.41E-02
1	2.6 MILES N	4/12/2010	274.60	<LLD	2.45E-02
1	2.6 MILES N	4/19/2010	275.90	<LLD	2.04E-02
1	2.6 MILES N	4/26/2010	274.60	<LLD	2.11E-02
1	2.6 MILES N	5/3/2010	274.80	<LLD	2.02E-02
1	2.6 MILES N	5/10/2010	274.00	<LLD	2.32E-02
1	2.6 MILES N	5/17/2010	274.10	<LLD	1.73E-02
1	2.6 MILES N	5/24/2010	275.00	<LLD	1.84E-02
1	2.6 MILES N	6/1/2010	313.50	<LLD	1.70E-02
1	2.6 MILES N	6/7/2010	234.20	<LLD	2.49E-02
1	2.6 MILES N	6/14/2010	273.30	<LLD	2.42E-02
1	2.6 MILES N	6/21/2010	273.40	<LLD	2.53E-02
1	2.6 MILES N	6/28/2010	271.30	<LLD	1.91E-02
1	2.6 MILES N	7/6/2010	315.10	<LLD	1.52E-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 2.6 MILES N	7/12/2010	237.10	<LLD		2.50E-02
1 2.6 MILES N	7/19/2010	271.10	<LLD		2.15E-02
1 2.6 MILES N	7/26/2010	272.10	<LLD		1.71E-02
1 2.6 MILES N	8/2/2010	274.00	<LLD		2.49E-02
1 2.6 MILES N	8/9/2010	273.30	<LLD		2.06E-02
1 2.6 MILES N	8/16/2010	270.10	<LLD		2.42E-02
1 2.6 MILES N	8/23/2010	274.30	<LLD		2.45E-02
1 2.6 MILES N	8/30/2010	271.00	<LLD		2.98E-02
1 2.6 MILES N	9/7/2010	307.10	<LLD		1.80E-02
1 2.6 MILES N	9/13/2010	231.40	<LLD		2.58E-02
1 2.6 MILES N	9/20/2010	269.10	<LLD		2.35E-02
1 2.6 MILES N	9/27/2010	264.00	<LLD		2.54E-02
1 2.6 MILES N	10/4/2010	275.90	<LLD		1.81E-02
1 2.6 MILES N	10/11/2010	272.40	<LLD		1.76E-02
1 2.6 MILES N	10/18/2010	273.60	<LLD		2.27E-02
1 2.6 MILES N	10/25/2010	275.20	<LLD		2.44E-02
1 2.6 MILES N	11/1/2010	279.90	<LLD		2.32E-02
1 2.6 MILES N	11/8/2010	285.50	<LLD		2.25E-02
1 2.6 MILES N	11/15/2010	284.00	<LLD		1.69E-02
1 2.6 MILES N	11/22/2010	283.70	<LLD		1.74E-02
1 2.6 MILES N	11/29/2010	283.70	<LLD		2.56E-02
1 2.6 MILES N	12/6/2010	282.30	<LLD		1.56E-02
1 2.6 MILES N	12/13/2010	288.30	<LLD		2.28E-02
1 2.6 MILES N	12/20/2010	287.30	<LLD		1.99E-02
1 2.6 MILES N	12/28/2010	326.60	<LLD		1.76E-02
2 1.4 MILES NNE	1/4/2010	280.60	<LLD		1.95E-02
2 1.4 MILES NNE	1/11/2010	281.90	<LLD		2.12E-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	1.4 MILES NNE	1/18/2010	278.80	<LLD	2.21E-02
2	1.4 MILES NNE	1/25/2010	276.90	<LLD	1.78E-02
2	1.4 MILES NNE	2/1/2010	288.50	<LLD	1.48E-02
2	1.4 MILES NNE	2/8/2010	271.00	<LLD	2.19E-02
2	1.4 MILES NNE	2/15/2010	278.10	<LLD	2.15E-02
2	1.4 MILES NNE	2/22/2010	279.10	<LLD	2.00E-02
2	1.4 MILES NNE	3/1/2010	277.40	<LLD	1.82E-02
2	1.4 MILES NNE	3/8/2010	276.90	<LLD	1.78E-02
2	1.4 MILES NNE	3/15/2010	269.80	<LLD	2.07E-02
2	1.4 MILES NNE	3/22/2010	269.30	<LLD	1.60E-02
2	1.4 MILES NNE	3/29/2010	269.90	<LLD	2.19E-02
2	1.4 MILES NNE	4/5/2010	267.30	<LLD	2.31E-02
2	1.4 MILES NNE	4/12/2010	267.90	<LLD	2.05E-02
2	1.4 MILES NNE	4/19/2010	268.40	<LLD	2.15E-02
2	1.4 MILES NNE	4/26/2010	267.80	<LLD	2.39E-02
2	1.4 MILES NNE	5/3/2010	277.80	<LLD	1.64E-02
2	1.4 MILES NNE	5/10/2010	276.40	<LLD	2.01E-02
2	1.4 MILES NNE	5/17/2010	276.10	<LLD	2.39E-02
2	1.4 MILES NNE	5/24/2010	276.50	<LLD	1.76E-02
2	1.4 MILES NNE	6/1/2010	315.20	<LLD	1.90E-02
2	1.4 MILES NNE	6/7/2010	235.70	<LLD	2.20E-02
2	1.4 MILES NNE	6/14/2010	274.90	<LLD	1.90E-02
2	1.4 MILES NNE	6/21/2010	272.70	<LLD	1.89E-02
2	1.4 MILES NNE	6/28/2010	270.60	<LLD	1.78E-02
2	1.4 MILES NNE	7/6/2010	314.80	<LLD	1.85E-02
2	1.4 MILES NNE	7/12/2010	236.20	<LLD	1.88E-02
2	1.4 MILES NNE	7/19/2010	271.70	<LLD	1.56E-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	1.4 MILES NNE	7/26/2010	271.90	<LLD	1.91E-02
2	1.4 MILES NNE	8/2/2010	274.60	<LLD	2.00E-02
2	1.4 MILES NNE	8/9/2010	273.70	<LLD	2.12E-02
2	1.4 MILES NNE	8/16/2010	270.30	<LLD	1.78E-02
2	1.4 MILES NNE	8/23/2010	275.70	<LLD	1.75E-02
2	1.4 MILES NNE	8/30/2010	274.10	<LLD	1.96E-02
2	1.4 MILES NNE	9/7/2010	310.70	<LLD	2.26E-02
2	1.4 MILES NNE	9/13/2010	234.40	<LLD	2.19E-02
2	1.4 MILES NNE	9/20/2010	272.90	<LLD	1.67E-02
2	1.4 MILES NNE	9/27/2010	270.80	<LLD	2.01E-02
2	1.4 MILES NNE	10/4/2010	277.00	<LLD	1.96E-02
2	1.4 MILES NNE	10/11/2010	272.80	<LLD	2.68E-02
2	1.4 MILES NNE	10/18/2010	273.60	<LLD	1.88E-02
2	1.4 MILES NNE	10/25/2010	274.80	<LLD	1.73E-02
2	1.4 MILES NNE	11/1/2010	274.30	<LLD	1.88E-02
2	1.4 MILES NNE	11/8/2010	280.60	<LLD	1.95E-02
2	1.4 MILES NNE	11/15/2010	280.60	<LLD	2.10E-02
2	1.4 MILES NNE	11/22/2010	280.40	<LLD	2.40E-02
2	1.4 MILES NNE	11/29/2010	279.90	<LLD	2.43E-02
2	1.4 MILES NNE	12/6/2010	280.80	<LLD	2.21E-02
2	1.4 MILES NNE	12/13/2010	281.60	<LLD	1.99E-02
2	1.4 MILES NNE	12/20/2010	276.30	<LLD	2.54E-02
2	1.4 MILES NNE	12/28/2010	304.10	<LLD	2.36E-02
4	3.1 MILES NNE	1/4/2010	276.20	<LLD	2.36E-02
4	3.1 MILES NNE	1/11/2010	277.30	<LLD	1.66E-02
4	3.1 MILES NNE	1/18/2010	274.10	<LLD	2.17E-02
4	3.1 MILES NNE	1/25/2010	272.60	<LLD	1.54E-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	3.1 MILES NNE	2/1/2010	284.90	<LLD	1.74E-02
4	3.1 MILES NNE	2/8/2010	267.20	<LLD	1.98E-02
4	3.1 MILES NNE	2/15/2010	274.20	<LLD	1.54E-02
4	3.1 MILES NNE	2/22/2010	275.00	<LLD	1.37E-02
4	3.1 MILES NNE	3/1/2010	274.20	<LLD	1.75E-02
4	3.1 MILES NNE	3/8/2010	274.20	<LLD	2.12E-02
4	3.1 MILES NNE	3/15/2010	268.50	<LLD	2.11E-02
4	3.1 MILES NNE	3/22/2010	270.40	<LLD	1.85E-02
4	3.1 MILES NNE	3/29/2010	271.20	<LLD	1.62E-02
4	3.1 MILES NNE	4/5/2010	268.20	<LLD	1.86E-02
4	3.1 MILES NNE	4/12/2010	268.40	<LLD	1.86E-02
4	3.1 MILES NNE	4/19/2010	269.10	<LLD	1.71E-02
4	3.1 MILES NNE	4/26/2010	268.10	<LLD	1.93E-02
4	3.1 MILES NNE	5/3/2010	277.70	<LLD	1.73E-02
4	3.1 MILES NNE	5/10/2010	276.10	<LLD	2.70E-02
4	3.1 MILES NNE	5/17/2010	275.90	<LLD	1.55E-02
4	3.1 MILES NNE	5/24/2010	277.00	<LLD	2.25E-02
4	3.1 MILES NNE	6/1/2010	314.90	<LLD	1.88E-02
4	3.1 MILES NNE	6/7/2010	235.40	<LLD	1.93E-02
4	3.1 MILES NNE	6/14/2010	274.50	<LLD	2.34E-02
4	3.1 MILES NNE	6/21/2010	273.60	<LLD	1.54E-02
4	3.1 MILES NNE	6/28/2010	242.60	<LLD	2.14E-02
4	3.1 MILES NNE	7/6/2010	316.60	<LLD	1.58E-02
4	3.1 MILES NNE	7/12/2010	238.10	<LLD	2.21E-02
4	3.1 MILES NNE	7/19/2010	273.00	<LLD	2.05E-02
4	3.1 MILES NNE	7/26/2010	273.40	<LLD	1.48E-02
4	3.1 MILES NNE	8/2/2010	276.00	<LLD	2.01E-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	3.1 MILES NNE	8/9/2010	275.30	<LLD	2.17E-02
4	3.1 MILES NNE	8/16/2010	272.10	<LLD	2.21E-02
4	3.1 MILES NNE	8/23/2010	276.80	<LLD	1.80E-02
4	3.1 MILES NNE	8/30/2010	274.50	<LLD	1.94E-02
4	3.1 MILES NNE	9/7/2010	312.90	<LLD	1.88E-02
4	3.1 MILES NNE	9/13/2010	234.10	<LLD	2.02E-02
4	3.1 MILES NNE	9/20/2010	273.60	<LLD	2.32E-02
4	3.1 MILES NNE	9/27/2010	271.10	<LLD	2.16E-02
4	3.1 MILES NNE	10/4/2010	278.50	<LLD	1.73E-02
4	3.1 MILES NNE	10/11/2010	274.90	<LLD	1.57E-02
4	3.1 MILES NNE	10/18/2010	275.90	<LLD	1.74E-02
4	3.1 MILES NNE	10/25/2010	276.80	<LLD	2.40E-02
4	3.1 MILES NNE	11/1/2010	270.40	<LLD	1.99E-02
4	3.1 MILES NNE	11/8/2010	274.80	<LLD	1.45E-02
4	3.1 MILES NNE	11/15/2010	273.30	<LLD	1.54E-02
4	3.1 MILES NNE	11/22/2010	273.50	<LLD	1.54E-02
4	3.1 MILES NNE	11/29/2010	273.20	<LLD	2.39E-02
4	3.1 MILES NNE	12/6/2010	274.60	<LLD	1.74E-02
4	3.1 MILES NNE	12/13/2010	278.00	<LLD	2.16E-02
4	3.1 MILES NNE	12/20/2010	278.70	<LLD	1.59E-02
4	3.1 MILES NNE	12/28/2010	315.70	<LLD	1.83E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	290.30	<LLD	2.34E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	1/11/2010	291.70	<LLD	2.22E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	1/18/2010	288.40	<LLD	1.91E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	1/25/2010	286.50	<LLD	2.00E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	293.60	<LLD	1.96E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	2/8/2010	280.20	<LLD	2.17E-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
5	>12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	287.90	<LLD	2.07E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	2/22/2010	280.60	<LLD	1.96E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	277.30	<LLD	2.15E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	3/8/2010	276.50	<LLD	2.42E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	3/15/2010	269.70	<LLD	2.45E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	3/22/2010	271.60	<LLD	2.54E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	3/29/2010	271.30	<LLD	2.72E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	4/5/2010	269.70	<LLD	2.13E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	4/12/2010	267.90	<LLD	2.01E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	4/19/2010	269.50	<LLD	2.25E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	4/26/2010	268.40	<LLD	1.91E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	267.40	<LLD	2.43E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	5/10/2010	265.60	<LLD	2.04E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	5/17/2010	265.70	<LLD	1.91E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	5/24/2010	265.90	<LLD	1.83E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	6/1/2010	302.40	<LLD	1.91E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	226.00	<LLD	2.69E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	6/14/2010	263.70	<LLD	2.65E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	6/21/2010	263.30	<LLD	2.68E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	6/28/2010	263.80	<LLD	2.02E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	300.70	<LLD	1.85E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	7/12/2010	225.10	<LLD	2.62E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	263.40	<LLD	2.40E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	7/26/2010	258.00	<LLD	1.72E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	259.80	<LLD	1.83E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	8/9/2010	258.20	<LLD	2.23E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	252.90	<LLD	2.45E-02

# ***HNP Radiological Environmental Monitoring Analysis Report***

Media Type: Air Cartridge

Quantity: cubic meters

Concentration (Activity): pCi/cubic meter

Analysis: Iodine

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>	<i><b>LLD</b></i>
5	>12 MILES WNW - PITTSBORO - CONTROL	8/23/2010	279.20	<LLD	2.02E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	8/30/2010	275.90	<LLD	2.35E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	308.90	<LLD	2.04E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	9/13/2010	235.60	<LLD	3.00E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	275.30	<LLD	2.12E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	9/27/2010	269.90	<LLD	2.44E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	278.70	<LLD	2.23E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	276.90	<LLD	1.77E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	273.70	<LLD	2.13E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	10/25/2010	277.60	<LLD	1.91E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	270.80	<LLD	2.60E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	11/8/2010	276.40	<LLD	1.99E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	275.40	<LLD	2.02E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	11/22/2010	273.40	<LLD	2.06E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	11/29/2010	273.90	<LLD	2.15E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	274.40	<LLD	2.22E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	12/13/2010	278.50	<LLD	2.29E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	12/20/2010	278.70	<LLD	1.75E-02
5	>12 MILES WNW - PITTSBORO - CONTROL	12/28/2010	311.20	<LLD	1.73E-02
26	4.7 MILES S	1/4/2010	273.20	<LLD	1.83E-02
26	4.7 MILES S	1/11/2010	277.30	<LLD	2.53E-02
26	4.7 MILES S	1/18/2010	274.70	<LLD	2.35E-02
26	4.7 MILES S	1/25/2010	283.80	<LLD	2.20E-02
26	4.7 MILES S	2/1/2010	292.80	<LLD	2.08E-02
26	4.7 MILES S	2/8/2010	297.40	<LLD	2.44E-02
26	4.7 MILES S	2/15/2010	292.50	<LLD	1.43E-02
26	4.7 MILES S	2/22/2010	289.50	<LLD	2.33E-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	4.7 MILES S	3/1/2010	289.20	<LLD	1.39E-02
26	4.7 MILES S	3/8/2010	287.80	<LLD	2.14E-02
26	4.7 MILES S	3/15/2010	282.50	<LLD	1.92E-02
26	4.7 MILES S	3/22/2010	284.10	<LLD	2.20E-02
26	4.7 MILES S	3/29/2010	284.30	<LLD	1.74E-02
26	4.7 MILES S	4/5/2010	281.60	<LLD	1.96E-02
26	4.7 MILES S	4/12/2010	282.10	<LLD	2.59E-02
26	4.7 MILES S	4/19/2010	282.40	<LLD	2.52E-02
26	4.7 MILES S	4/26/2010	280.70	<LLD	2.31E-02
26	4.7 MILES S	5/3/2010	271.30	<LLD	1.67E-02
26	4.7 MILES S	5/10/2010	268.60	<LLD	2.22E-02
26	4.7 MILES S	5/17/2010	268.30	<LLD	1.72E-02
26	4.7 MILES S	5/24/2010	269.60	<LLD	1.93E-02
26	4.7 MILES S	6/1/2010	306.20	<LLD	1.69E-02
26	4.7 MILES S	6/7/2010	227.90	<LLD	2.33E-02
26	4.7 MILES S	6/14/2010	266.10	<LLD	2.15E-02
26	4.7 MILES S	6/21/2010	265.10	<LLD	1.87E-02
26	4.7 MILES S	6/28/2010	257.10	<LLD	2.24E-02
26	4.7 MILES S	7/6/2010	304.60	<LLD	1.86E-02
26	4.7 MILES S	7/12/2010	127.70	<LLD	4.70E-02
26	4.7 MILES S	7/19/2010	265.10	<LLD	1.94E-02
26	4.7 MILES S	7/26/2010	262.90	<LLD	1.83E-02
26	4.7 MILES S	8/2/2010	265.90	<LLD	2.57E-02
26	4.7 MILES S	8/9/2010	125.10	<LLD	4.19E-02
26	4.7 MILES S	8/16/2010	262.50	<LLD	1.67E-02
26	4.7 MILES S	8/23/2010	267.00	<LLD	2.45E-02
26	4.7 MILES S	8/30/2010	267.60	<LLD	2.21E-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>
26	4.7 MILES S	9/7/2010	303.20	<LLD	2.32E-02
26	4.7 MILES S	9/13/2010	229.00	<LLD	2.06E-02
26	4.7 MILES S	9/20/2010	266.50	<LLD	2.14E-02
26	4.7 MILES S	9/27/2010	261.50	<LLD	1.98E-02
26	4.7 MILES S	10/4/2010	247.80	<LLD	1.41E-02
26	4.7 MILES S	10/11/2010	266.80	<LLD	1.85E-02
26	4.7 MILES S	10/18/2010	268.70	<LLD	2.03E-02
26	4.7 MILES S	10/25/2010	270.30	<LLD	2.50E-02
26	4.7 MILES S	11/1/2010	269.80	<LLD	1.80E-02
26	4.7 MILES S	11/8/2010	276.60	<LLD	2.70E-02
26	4.7 MILES S	11/15/2010	275.90	<LLD	1.68E-02
26	4.7 MILES S	11/22/2010	266.20	<LLD	2.00E-02
26	4.7 MILES S	11/29/2010	272.30	<LLD	2.46E-02
26	4.7 MILES S	12/6/2010	276.60	<LLD	1.94E-02
26	4.7 MILES S	12/13/2010	273.30	<LLD	2.26E-02
26	4.7 MILES S	12/20/2010	277.60	<LLD	1.67E-02
26	4.7 MILES S	12/28/2010	302.30	<LLD	1.74E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/4/2010	269.30	<LLD	2.50E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/11/2010	270.50	<LLD	1.76E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/18/2010	268.30	<LLD	2.14E-02
47	SSW SECTOR 3.4 MI FROM SITE	1/25/2010	267.20	<LLD	2.11E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/1/2010	266.70	<LLD	2.17E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/8/2010	268.90	<LLD	2.32E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/15/2010	284.20	<LLD	1.93E-02
47	SSW SECTOR 3.4 MI FROM SITE	2/22/2010	295.10	<LLD	1.84E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/1/2010	293.40	<LLD	2.13E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/8/2010	287.60	<LLD	1.96E-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	3/15/2010	282.80	<LLD	1.62E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/22/2010	285.50	<LLD	1.83E-02
47	SSW SECTOR 3.4 MI FROM SITE	3/29/2010	286.70	<LLD	2.36E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/5/2010	285.30	<LLD	2.12E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/12/2010	285.60	<LLD	1.58E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/19/2010	287.20	<LLD	1.70E-02
47	SSW SECTOR 3.4 MI FROM SITE	4/26/2010	285.70	<LLD	1.72E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/3/2010	270.60	<LLD	1.47E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/10/2010	268.60	<LLD	2.39E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/17/2010	268.70	<LLD	1.88E-02
47	SSW SECTOR 3.4 MI FROM SITE	5/24/2010	269.90	<LLD	2.02E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/1/2010	307.40	<LLD	1.90E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/7/2010	229.40	<LLD	1.81E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/14/2010	268.00	<LLD	2.03E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/21/2010	267.70	<LLD	2.10E-02
47	SSW SECTOR 3.4 MI FROM SITE	6/28/2010	258.60	<LLD	1.45E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/6/2010	306.20	<LLD	1.74E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/12/2010	226.10	<LLD	3.19E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/19/2010	267.20	<LLD	2.07E-02
47	SSW SECTOR 3.4 MI FROM SITE	7/26/2010	265.00	<LLD	2.08E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/2/2010	267.80	<LLD	2.07E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/9/2010	256.90	<LLD	2.06E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/16/2010	260.20	<LLD	2.33E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/23/2010	263.70	<LLD	1.85E-02
47	SSW SECTOR 3.4 MI FROM SITE	8/30/2010	263.40	<LLD	1.98E-02
47	SSW SECTOR 3.4 MI FROM SITE	9/7/2010	298.80	<LLD	2.00E-02
47	SSW SECTOR 3.4 MI FROM SITE	9/13/2010	224.40	<LLD	2.24E-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	9/20/2010	262.00	<LLD	1.90E-02
47	SSW SECTOR 3.4 MI FROM SITE	9/27/2010	255.60	<LLD	1.98E-02
47	SSW SECTOR 3.4 MI FROM SITE	10/4/2010	267.10	<LLD	2.11E-02
47	SSW SECTOR 3.4 MI FROM SITE	10/11/2010	261.40	<LLD	2.23E-02
47	SSW SECTOR 3.4 MI FROM SITE	10/18/2010	262.50	<LLD	2.29E-02
47	SSW SECTOR 3.4 MI FROM SITE	10/25/2010	264.60	<LLD	1.68E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/1/2010	272.70	<LLD	2.31E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/8/2010	281.40	<LLD	1.82E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/15/2010	281.70	<LLD	2.25E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/22/2010	267.30	<LLD	2.53E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/29/2010	276.30	<LLD	2.54E-02
47	SSW SECTOR 3.4 MI FROM SITE	12/6/2010	281.30	<LLD	1.52E-02
47	SSW SECTOR 3.4 MI FROM SITE	12/13/2010	279.90	<LLD	1.62E-02
47	SSW SECTOR 3.4 MI FROM SITE	12/20/2010	286.90	<LLD	2.42E-02
47	SSW SECTOR 3.4 MI FROM SITE	12/28/2010	311.20	<LLD	2.22E-02
63	0.6 MI SW	8/2/2010	254.20	<LLD	2.01E-02
63	0.6 MI SW	8/9/2010	265.60	<LLD	2.43E-02
63	0.6 MI SW	8/16/2010	251.30	<LLD	2.11E-02
63	0.6 MI SW	8/23/2010	262.40	<LLD	2.10E-02
63	0.6 MI SW	8/30/2010	255.10	<LLD	1.88E-02
63	0.6 MI SW	9/7/2010	290.40	<LLD	2.19E-02
63	0.6 MI SW	9/13/2010	220.90	<LLD	2.10E-02
63	0.6 MI SW	9/20/2010	257.70	<LLD	2.11E-02
63	0.6 MI SW	9/27/2010	259.90	<LLD	2.71E-02
63	0.6 MI SW	10/4/2010	267.20	<LLD	1.13E-02
63	0.6 MI SW	10/11/2010	267.20	<LLD	2.26E-02
63	0.6 MI SW	10/18/2010	267.40	<LLD	1.79E-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>
63	0.6 MI SW	10/25/2010	267.80	<LLD	2.77E-02
63	0.6 MI SW	11/1/2010	280.70	<LLD	2.05E-02
63	0.6 MI SW	11/8/2010	290.40	<LLD	1.52E-02
63	0.6 MI SW	11/15/2010	271.30	<LLD	1.68E-02
63	0.6 MI SW	11/22/2010	271.30	<LLD	1.91E-02
63	0.6 MI SW	11/29/2010	273.50	<LLD	2.66E-02
63	0.6 MI SW	12/6/2010	277.80	<LLD	2.13E-02
63	0.6 MI SW	12/13/2010	284.80	<LLD	2.36E-02
63	0.6 MI SW	12/20/2010	287.30	<LLD	1.54E-02
63	0.6 MI SW	12/28/2010	319.20	<LLD	1.16E-02
90	0.5 MI SSW	8/2/2010	283.40	<LLD	1.71E-02
90	0.5 MI SSW	8/9/2010	254.80	<LLD	1.97E-02
90	0.5 MI SSW	8/16/2010	244.20	<LLD	2.33E-02
90	0.5 MI SSW	8/23/2010	274.50	<LLD	2.15E-02
90	0.5 MI SSW	8/30/2010	239.30	<LLD	2.21E-02
90	0.5 MI SSW	9/7/2010	293.50	<LLD	2.03E-02
90	0.5 MI SSW	9/13/2010	221.80	<LLD	2.60E-02
90	0.5 MI SSW	9/20/2010	257.60	<LLD	1.78E-02
90	0.5 MI SSW	9/27/2010	239.70	<LLD	2.09E-02
90	0.5 MI SSW	10/4/2010	246.20	<LLD	2.37E-02
90	0.5 MI SSW	10/11/2010	246.20	<LLD	1.76E-02
90	0.5 MI SSW	10/18/2010	246.10	<LLD	2.57E-02
90	0.5 MI SSW	10/25/2010	246.20	<LLD	2.09E-02
90	0.5 MI SSW	11/1/2010	275.70	<LLD	1.91E-02
90	0.5 MI SSW	11/8/2010	271.90	<LLD	2.40E-02
90	0.5 MI SSW	11/15/2010	267.50	<LLD	1.97E-02
90	0.5 MI SSW	11/22/2010	266.20	<LLD	1.99E-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>
90	0.5 MI SSW	11/29/2010	270.20	<LLD	2.37E-02
90	0.5 MI SSW	12/6/2010	273.90	<LLD	2.16E-02
90	0.5 MI SSW	12/13/2010	281.70	<LLD	1.98E-02
90	0.5 MI SSW	12/20/2010	287.60	<LLD	2.01E-02
90	0.5 MI SSW	12/28/2010	328.70	<LLD	1.92E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/2/2010	261.80	<LLD	2.52E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/9/2010	263.90	<LLD	2.12E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/16/2010	255.10	<LLD	2.17E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/23/2010	280.80	<LLD	2.23E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/30/2010	287.50	<LLD	2.14E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/7/2010	213.40	<LLD	3.58E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/13/2010	66.40	<LLD	5.28E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/20/2010	268.80	<LLD	1.81E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	9/27/2010	267.60	<LLD	2.02E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/4/2010	274.80	<LLD	1.78E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/11/2010	275.90	<LLD	1.83E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/18/2010	279.00	<LLD	2.47E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	10/25/2010	281.60	<LLD	1.79E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/1/2010	270.70	<LLD	1.79E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/8/2010	275.90	<LLD	2.26E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/15/2010	275.30	<LLD	1.72E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/22/2010	274.50	<LLD	2.02E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/29/2010	274.50	<LLD	2.58E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/6/2010	272.50	<LLD	2.19E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/13/2010	276.70	<LLD	1.99E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/20/2010	277.80	<LLD	1.83E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	12/28/2010	314.30	<LLD	2.02E-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	1/4/2010	4.00			4.68E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/18/2010	4.00			6.08E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/1/2010	4.00			5.13E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/15/2010	4.00			4.94E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/1/2010	4.00	4.95E-01	3.05E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	3/15/2010	4.00			5.78E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/29/2010	4.00	8.49E-01	4.52E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	4.00			5.75E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/26/2010	4.00			5.68E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/10/2010	4.00			5.99E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/24/2010	4.00			7.28E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/7/2010	4.00			5.78E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/21/2010	4.00	5.21E-01	3.65E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	7/5/2010	4.00			5.30E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/19/2010	4.00	6.50E-01	4.95E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	8/2/2010	4.00			6.02E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/16/2010	4.00			5.83E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/30/2010	4.00			6.37E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	4.00			5.81E-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	9/27/2010	4.00			6.37E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	4.00			5.39E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/25/2010	4.00			5.68E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/8/2010	4.00	7.63E-01	4.05E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	11/22/2010	4.00	5.68E-01	4.69E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	12/6/2010	4.00			6.25E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/20/2010	4.00			5.36E-01
40 LILLINGTON - CAPE FEAR RIVER	1/4/2010	4.00			5.68E-01
40 LILLINGTON - CAPE FEAR RIVER	1/18/2010	4.00			4.87E-01
40 LILLINGTON - CAPE FEAR RIVER	2/1/2010	4.00			5.70E-01
40 LILLINGTON - CAPE FEAR RIVER	2/15/2010	4.00			4.57E-01
40 LILLINGTON - CAPE FEAR RIVER	3/1/2010	4.00			5.38E-01
40 LILLINGTON - CAPE FEAR RIVER	3/15/2010	4.00			5.45E-01
40 LILLINGTON - CAPE FEAR RIVER	3/29/2010	4.00	8.77E-01	4.13E-01	
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	4.00			4.86E-01
40 LILLINGTON - CAPE FEAR RIVER	4/26/2010	4.00			4.78E-01
40 LILLINGTON - CAPE FEAR RIVER	5/10/2010	4.00			4.94E-01
40 LILLINGTON - CAPE FEAR RIVER	5/24/2010	4.00			5.42E-01
40 LILLINGTON - CAPE FEAR RIVER	6/7/2010	4.00			5.05E-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	6/21/2010	4.00			4.73E-01
40 LILLINGTON - CAPE FEAR RIVER	7/5/2010	4.00			5.88E-01
40 LILLINGTON - CAPE FEAR RIVER	7/19/2010	4.00			4.86E-01
40 LILLINGTON - CAPE FEAR RIVER	8/2/2010	4.00			4.92E-01
40 LILLINGTON - CAPE FEAR RIVER	8/16/2010	4.00			5.77E-01
40 LILLINGTON - CAPE FEAR RIVER	8/30/2010	4.00			5.16E-01
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	4.00			4.84E-01
40 LILLINGTON - CAPE FEAR RIVER	9/27/2010	4.00			5.29E-01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	4.00			5.98E-01
40 LILLINGTON - CAPE FEAR RIVER	10/25/2010	4.00			4.70E-01
40 LILLINGTON - CAPE FEAR RIVER	11/8/2010	4.00			4.99E-01
40 LILLINGTON - CAPE FEAR RIVER	11/22/2010	4.00			5.23E-01
40 LILLINGTON - CAPE FEAR RIVER	12/6/2010	4.00			5.06E-01
40 LILLINGTON - CAPE FEAR RIVER	12/20/2010	4.00			5.52E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/4/2010	4.00			4.80E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/18/2010	4.00			4.54E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/1/2010	4.00			5.27E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/15/2010	4.00			5.60E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/1/2010	4.00			4.50E-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	3/15/2010	4.00			6.74E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/29/2010	4.00			5.08E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	4.00			5.06E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/26/2010	4.00			4.67E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/10/2010	4.00			4.33E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/24/2010	4.00			5.94E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/7/2010	4.00			4.85E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/21/2010	4.00			4.61E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/5/2010	4.00			4.93E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/19/2010	4.00			4.81E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/2/2010	4.00			4.98E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/16/2010	4.00			4.76E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/30/2010	4.00			6.07E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	4.00			5.23E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/27/2010	4.00			5.74E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	4.00			4.88E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/25/2010	4.00			3.94E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/8/2010	4.00			5.10E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/22/2010	4.00			5.60E-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	12/6/2010	4.00			5.02E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/20/2010	4.00			6.60E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Milk

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>
5 >12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	4.00	<LLD		5.07E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	4.00	<LLD		2.92E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	4.00	<LLD		4.99E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	4/5/2010	4.00	<LLD		3.23E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	4.00	<LLD		3.25E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	4.00	<LLD		3.79E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	4.00	<LLD		4.97E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	4.00	<LLD		3.04E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	4.00	<LLD		3.28E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	4.00	<LLD		3.97E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	4.00	<LLD		5.03E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	4.00	<LLD		2.98E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	4.00	<LLD		3.52E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	4.00	<LLD		4.06E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	4.00	<LLD		3.82E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	12/20/2010	4.00	<LLD		3.28E-01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	9/20/2010	4.00	<LLD		3.40E-01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/4/2010	4.00	<LLD		5.33E-01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	4.00	<LLD		3.32E-01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	11/1/2010	4.00	<LLD		3.29E-01

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Surface Water

Analysis: Iodine

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>
26	4.7 MILES S	3/29/2010	4.00			4.75E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1/4/2010	4.00			4.68E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	1/18/2010	4.00			6.08E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	2/1/2010	4.00			5.13E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	2/15/2010	4.00			4.94E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	3/1/2010	4.00	4.95E-01	3.05E-01	
38	CAPE FEAR PLANT INTAKE - CONTROL	3/15/2010	4.00			5.78E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	3/29/2010	4.00	8.49E-01	4.52E-01	
38	CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	4.00			5.75E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	4/26/2010	4.00			5.68E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	5/10/2010	4.00			5.99E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	5/24/2010	4.00			7.28E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	6/7/2010	4.00			5.78E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	6/21/2010	4.00	5.21E-01	3.65E-01	
38	CAPE FEAR PLANT INTAKE - CONTROL	7/5/2010	4.00			5.30E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	7/19/2010	4.00	6.50E-01	4.95E-01	
38	CAPE FEAR PLANT INTAKE - CONTROL	8/2/2010	4.00			6.02E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	8/16/2010	4.00			5.83E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	8/30/2010	4.00			6.37E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	4.00			5.81E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	9/27/2010	4.00			6.37E-01
38	CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	4.00			5.39E-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	10/25/2010	4.00			5.68E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/8/2010	4.00	7.63E-01	4.05E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	11/22/2010	4.00	5.68E-01	4.69E-01	
38 CAPE FEAR PLANT INTAKE - CONTROL	12/6/2010	4.00			6.25E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/20/2010	4.00			5.36E-01
40 LILLINGTON - CAPE FEAR RIVER	1/4/2010	4.00			5.68E-01
40 LILLINGTON - CAPE FEAR RIVER	1/18/2010	4.00			4.87E-01
40 LILLINGTON - CAPE FEAR RIVER	2/1/2010	4.00			5.70E-01
40 LILLINGTON - CAPE FEAR RIVER	2/15/2010	4.00			4.57E-01
40 LILLINGTON - CAPE FEAR RIVER	3/1/2010	4.00			5.38E-01
40 LILLINGTON - CAPE FEAR RIVER	3/15/2010	4.00			5.45E-01
40 LILLINGTON - CAPE FEAR RIVER	3/29/2010	4.00	8.77E-01	4.13E-01	
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	4.00			4.86E-01
40 LILLINGTON - CAPE FEAR RIVER	4/26/2010	4.00			4.78E-01
40 LILLINGTON - CAPE FEAR RIVER	5/10/2010	4.00			4.94E-01
40 LILLINGTON - CAPE FEAR RIVER	5/24/2010	4.00			5.42E-01
40 LILLINGTON - CAPE FEAR RIVER	6/7/2010	4.00			5.05E-01
40 LILLINGTON - CAPE FEAR RIVER	6/21/2010	4.00			4.73E-01
40 LILLINGTON - CAPE FEAR RIVER	7/5/2010	4.00			5.88E-01
40 LILLINGTON - CAPE FEAR RIVER	7/19/2010	4.00			4.86E-01
40 LILLINGTON - CAPE FEAR RIVER	8/2/2010	4.00			4.92E-01
40 LILLINGTON - CAPE FEAR RIVER	8/16/2010	4.00			5.77E-01

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Analysis: Iodine

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	8/30/2010	4.00			5.16E-01
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	4.00			4.84E-01
40 LILLINGTON - CAPE FEAR RIVER	9/27/2010	4.00			5.29E-01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	4.00			5.98E-01
40 LILLINGTON - CAPE FEAR RIVER	10/25/2010	4.00			4.70E-01
40 LILLINGTON - CAPE FEAR RIVER	11/8/2010	4.00			4.99E-01
40 LILLINGTON - CAPE FEAR RIVER	11/22/2010	4.00			5.23E-01
40 LILLINGTON - CAPE FEAR RIVER	12/6/2010	4.00			5.06E-01
40 LILLINGTON - CAPE FEAR RIVER	12/20/2010	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	1/11/2010	0.005	<LLD		2.32E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	0.005	<LLD		2.36E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	0.005	<LLD		2.35E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	0.005	<LLD		2.37E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	0.005	<LLD		2.35E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	0.005	<LLD		2.31E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	0.005	<LLD		2.24E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	0.005	<LLD		2.25E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	0.005	<LLD		2.28E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	0.005	<LLD		2.30E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	0.005	<LLD		2.27E+02
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	0.005	<LLD		2.28E+02
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	0.005	<LLD		2.32E+02
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	0.005	<LLD		2.38E+02
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	0.005	<LLD		2.34E+02
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	0.005	<LLD		2.37E+02
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	0.005	<LLD		2.34E+02
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	0.005	<LLD		2.32E+02
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	0.005	<LLD		2.24E+02
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	0.005	<LLD		2.24E+02
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	0.005	<LLD		2.28E+02
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	0.005	<LLD		2.29E+02
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	0.005	<LLD		2.28E+02
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	0.005	<LLD		2.28E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	0.005	2.80E+03	1.66E+02	2.31E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	0.005	2.39E+03	1.66E+02	2.37E+02

# ***HNP Radiological Environmental Monitoring Analysis Report***

*Media Type: Drinking Water*

*Analysis: Tritium*

*Quantity: Liters*

*Concentration (Activity): pCi/Liter*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	<b><i>LLD</i></b>
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	0.005	2.48E+03	1.65E+02	2.34E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	0.005	2.80E+03	1.69E+02	2.36E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	0.005	2.49E+03	1.65E+02	2.34E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	0.005	2.36E+03	1.63E+02	2.32E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	0.005	1.61E+03	1.51E+02	2.24E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	0.005	1.86E+03	1.54E+02	2.25E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	0.005	2.07E+03	1.57E+02	2.27E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	0.005	1.25E+03	1.51E+02	2.28E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	0.005	1.44E+03	1.52E+02	2.28E+02
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	0.005	3.16E+03	1.67E+02	2.28E+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>
57	0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	0.005	<LLD	2.37E+02
57	0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	0.005	<LLD	2.33E+02
57	0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	0.005	<LLD	2.28E+02
57	0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	0.005	<LLD	2.28E+02
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	2/12/2010	0.005	<LLD	2.35E+02
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	0.005	<LLD	2.34E+02
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	0.005	<LLD	2.28E+02
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	11/22/2010	0.005	<LLD	2.27E+02
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	2/12/2010	0.005	<LLD	2.35E+02
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	0.005	<LLD	2.36E+02
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	8/5/2010	0.005	<LLD	2.29E+02
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	11/22/2010	0.005	<LLD	2.27E+02
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	2/12/2010	0.005	<LLD	2.36E+02
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	0.005	<LLD	2.32E+02
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	0.005	<LLD	2.30E+02
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	0.005	<LLD	2.26E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	2/12/2010	0.005	<LLD	2.35E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	0.005	<LLD	2.33E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	0.005	<LLD	2.28E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	0.005	<LLD	2.27E+02
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	2/12/2010	0.005	<LLD	2.35E+02
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	0.005	<LLD	2.33E+02
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	0.005	<LLD	2.27E+02
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	11/22/2010	0.005	<LLD	2.28E+02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Tritium

Sample Point	Sample Date	Quantity	Activity	2 Sigma Error	LLD	
71	0.3 MI SE (S OF SWITCH YARD)	2/12/2010	0.005	<LLD	2.35E+02	
71	0.3 MI SE (S OF SWITCH YARD)	5/19/2010	0.005	<LLD	2.36E+02	
71	0.3 MI SE (S OF SWITCH YARD)	8/5/2010	0.005	<LLD	2.29E+02	
71	0.3 MI SE (S OF SWITCH YARD)	11/22/2010	0.005	<LLD	2.27E+02	
72	0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	2/12/2010	0.005	<LLD	2.36E+02	
72	0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	0.005	<LLD	2.35E+02	
72	0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	0.005	<LLD	2.28E+02	
72	0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	0.005	<LLD	2.28E+02	
73	0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCTURE)	2/12/2010	0.005	<LLD	2.35E+02	
73	0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCTURE)	5/19/2010	0.005	<LLD	2.34E+02	
73	0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCTURE)	8/5/2010	0.005	<LLD	2.28E+02	
73	0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCTURE)	11/22/2010	0.005	<LLD	2.29E+02	
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	0.005	<LLD	2.36E+02	
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	5/20/2010	0.005	<LLD	2.31E+02	
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	0.005	<LLD	2.27E+02	
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	0.005	<LLD	2.26E+02	
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	2/12/2010	0.005	<LLD	2.35E+02	
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	0.005	<LLD	2.35E+02	
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	0.005	<LLD	2.28E+02	
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	0.005	<LLD	2.28E+02	
76	0.1 MI S (INSD OCA BETWN SB & WPB)	2/15/2010	0.005	<LLD	2.35E+02	
76	0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	0.005	4.48E+02	1.47E+02	2.34E+02
76	0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	0.005	4.21E+02	1.42E+02	2.28E+02
76	0.1 MI S (INSD OCA BETWN SB & WPB)	11/22/2010	0.005	2.84E+02	1.41E+02	2.28E+02

# *HNP Radiological Environmental Monitoring Analysis Report*

Media Type: Surface Water

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>	
26	4.7 MILES S	1/11/2010	0.005	4.70E+03	1.82E+02	2.33E+02
26	4.7 MILES S	2/8/2010	0.005	5.46E+03	1.90E+02	2.37E+02
26	4.7 MILES S	3/11/2010	0.005	4.17E+03	1.79E+02	2.35E+02
26	4.7 MILES S	4/12/2010	0.005	3.06E+03	1.72E+02	2.38E+02
26	4.7 MILES S	5/14/2010	0.005	2.79E+03	1.68E+02	2.35E+02
26	4.7 MILES S	6/14/2010	0.005	2.69E+03	1.65E+02	2.31E+02
26	4.7 MILES S	7/12/2010	0.005	2.76E+03	1.61E+02	2.24E+02
26	4.7 MILES S	8/12/2010	0.005	2.59E+03	1.61E+02	2.26E+02
26	4.7 MILES S	9/13/2010	0.005	2.50E+03	1.61E+02	2.28E+02
26	4.7 MILES S	10/11/2010	0.005	5.05E+03	1.83E+02	2.28E+02
26	4.7 MILES S	11/11/2010	0.005	4.98E+03	1.80E+02	2.26E+02
26	4.7 MILES S	12/13/2010	0.005	5.26E+03	1.83E+02	2.27E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	0.005	<LLD		2.32E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	0.005	<LLD		2.36E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	0.005	<LLD		2.35E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	0.005	<LLD		2.37E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	0.005	<LLD		2.35E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	0.005	<LLD		2.31E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	0.005	<LLD		2.24E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	0.005	<LLD		2.25E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	0.005	<LLD		2.28E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	0.005	<LLD		2.30E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	0.005	<LLD		2.27E+02
38	CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	0.005	<LLD		2.28E+02

# HNP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

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>
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	0.005	<LLD		2.32E+02
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	0.005	<LLD		2.38E+02
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	0.005	<LLD		2.34E+02
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	0.005	<LLD		2.37E+02
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	0.005	<LLD		2.34E+02
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	0.005	<LLD		2.32E+02
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	0.005	<LLD		2.24E+02
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	0.005	<LLD		2.24E+02
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	0.005	<LLD		2.28E+02
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	0.005	<LLD		2.29E+02
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	0.005	<LLD		2.28E+02
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	0.005	<LLD		2.28E+02



# **2010 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

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
1 2.6 MILES N	2/15/2010	3645.5	PB-214	8.53E-03	1.79E-03
1 2.6 MILES N	2/15/2010	3645.5	BI-214	1.41E-02	2.37E-03
1 2.6 MILES N	2/15/2010	3645.5	BE-7	1.15E-01	1.78E-02
1 2.6 MILES N	2/15/2010	3645.5	K-40	7.43E-02	1.19E-02
1 2.6 MILES N	2/15/2010	3645.5	PB-212	2.77E-03	1.02E-03
1 2.6 MILES N	5/17/2010	3563.7	BE-7	1.35E-01	3.20E-02
1 2.6 MILES N	5/17/2010	3563.7	K-40	3.86E-02	1.94E-02
1 2.6 MILES N	8/16/2010	3529.7	BE-7	1.33E-01	3.63E-02
1 2.6 MILES N	8/16/2010	3529.7	K-40	7.66E-02	2.47E-02
1 2.6 MILES N	8/16/2010	3529.7	PB-212	2.17E-03	1.58E-03
1 2.6 MILES N	8/16/2010	3529.7	BI-214	4.41E-03	2.22E-03
1 2.6 MILES N	11/15/2010	3698.4	BE-7	1.06E-01	3.32E-02
1 2.6 MILES N	11/15/2010	3698.4	RA-226	2.02E-02	1.44E-02
2 1.4 MILES NNE	2/15/2010	3598.2	RA-226	2.11E-02	9.62E-03
2 1.4 MILES NNE	2/15/2010	3598.2	PB-214	7.56E-03	1.28E-03
2 1.4 MILES NNE	2/15/2010	3598.2	K-40	3.67E-02	1.05E-02
2 1.4 MILES NNE	2/15/2010	3598.2	TH-234	1.30E-02	7.59E-03
2 1.4 MILES NNE	2/15/2010	3598.2	PB-212	1.81E-03	6.64E-04
2 1.4 MILES NNE	2/15/2010	3598.2	BE-7	1.02E-01	1.54E-02
2 1.4 MILES NNE	2/15/2010	3598.2	BI-214	6.50E-03	1.77E-03
2 1.4 MILES NNE	5/17/2010	3547.3	BE-7	1.48E-01	3.52E-02
2 1.4 MILES NNE	5/17/2010	3547.3	K-40	4.12E-02	2.01E-02
2 1.4 MILES NNE	8/16/2010	3551.8	BE-7	1.18E-01	3.44E-02
2 1.4 MILES NNE	8/16/2010	3551.8	BI-214	3.44E-03	2.76E-03

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

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
2 1.4 MILES NNE	8/16/2010	3551.8	PB-214	5.36E-03	2.81E-03
2 1.4 MILES NNE	11/15/2010	3636.8	K-40	4.16E-02	2.64E-02
2 1.4 MILES NNE	11/15/2010	3636.8	BE-7	7.74E-02	2.71E-02
4 3.1 MILES NNE	2/15/2010	3559.9	K-40	2.98E-02	1.10E-02
4 3.1 MILES NNE	2/15/2010	3559.9	BE-7	1.07E-01	1.69E-02
4 3.1 MILES NNE	2/15/2010	3559.9	PB-212	9.42E-04	7.21E-04
4 3.1 MILES NNE	2/15/2010	3559.9	BI-214	5.92E-03	1.62E-03
4 3.1 MILES NNE	2/15/2010	3559.9	PB-214	6.27E-03	1.38E-03
4 3.1 MILES NNE	2/15/2010	3559.9	RA-226	1.33E-02	9.10E-03
4 3.1 MILES NNE	2/15/2010	3559.9	TL-208	5.32E-04	4.38E-04
4 3.1 MILES NNE	5/17/2010	3521.5	PB-214	3.24E-03	3.10E-03
4 3.1 MILES NNE	5/17/2010	3521.5	RA-226	1.66E-02	1.64E-02
4 3.1 MILES NNE	5/17/2010	3521.5	BE-7	1.59E-01	3.56E-02
4 3.1 MILES NNE	8/16/2010	3567.5	BE-7	1.18E-01	2.82E-02
4 3.1 MILES NNE	8/16/2010	3567.5	K-40	7.01E-02	2.34E-02
4 3.1 MILES NNE	8/16/2010	3567.5	RA-226	2.56E-02	2.47E-02
4 3.1 MILES NNE	11/15/2010	3618.3	BE-7	9.52E-02	2.91E-02
4 3.1 MILES NNE	11/15/2010	3618.3	K-40	8.17E-02	2.52E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	RA-226	1.97E-02	1.21E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	TH-234	1.97E-02	1.09E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	BE-7	9.25E-02	1.50E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	K-40	6.46E-02	1.16E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	PB-212	1.06E-03	9.36E-04
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	BI-214	1.65E-03	1.42E-03

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5 >12 MILES WNW - PITTSBORO - CONTROL	2/15/2010	3665.8	PB-214	2.43E-03	1.06E-03
5 >12 MILES WNW - PITTSBORO - CONTROL	5/17/2010	3459.3	BE-7	1.39E-01	3.20E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	3462.9	BE-7	1.09E-01	3.30E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	3619.6	TL-208	1.27E-03	8.01E-04
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	3619.6	K-40	3.79E-02	2.34E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	3619.6	BE-7	1.10E-01	2.69E-02
26 4.7 MILES S	2/15/2010	3709.1	BE-7	1.11E-01	1.62E-02
26 4.7 MILES S	2/15/2010	3709.1	K-40	6.93E-02	1.28E-02
26 4.7 MILES S	2/15/2010	3709.1	PB-212	9.02E-04	7.19E-04
26 4.7 MILES S	2/15/2010	3709.1	RA-226	1.44E-02	1.35E-02
26 4.7 MILES S	5/17/2010	3527	BI-214	3.44E-03	2.10E-03
26 4.7 MILES S	5/17/2010	3527	PB-214	3.44E-03	2.95E-03
26 4.7 MILES S	5/17/2010	3527	BE-7	1.35E-01	3.81E-02
26 4.7 MILES S	8/16/2010	3208.6	K-40	8.22E-02	2.68E-02
26 4.7 MILES S	8/16/2010	3208.6	BE-7	1.38E-01	3.28E-02
26 4.7 MILES S	11/15/2010	3544.2	PB-214	4.42E-03	3.44E-03
26 4.7 MILES S	11/15/2010	3544.2	BE-7	8.47E-02	2.56E-02
47 SSW SECTOR 3.4 MI FROM SITE	2/15/2010	3626.2	PB-214	6.12E-03	1.46E-03
47 SSW SECTOR 3.4 MI FROM SITE	2/15/2010	3626.2	BE-7	1.23E-01	1.61E-02
47 SSW SECTOR 3.4 MI FROM SITE	2/15/2010	3626.2	BI-214	3.13E-03	1.33E-03
47 SSW SECTOR 3.4 MI FROM SITE	2/15/2010	3626.2	RA-226	1.55E-02	9.18E-03
47 SSW SECTOR 3.4 MI FROM SITE	2/15/2010	3626.2	K-40	3.36E-02	8.77E-03
47 SSW SECTOR 3.4 MI FROM SITE	5/17/2010	3552.7	PB-214	5.56E-03	2.47E-03
47 SSW SECTOR 3.4 MI FROM SITE	5/17/2010	3552.7	BE-7	1.30E-01	3.49E-02

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

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>	
47	SSW SECTOR 3.4 MI FROM SITE	5/17/2010	3552.7	BI-214	3.60E-03	1.83E-03
47	SSW SECTOR 3.4 MI FROM SITE	5/17/2010	3552.7	PB-212	1.60E-03	1.48E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/16/2010	3417.3	PB-214	5.40E-03	2.54E-03
47	SSW SECTOR 3.4 MI FROM SITE	8/16/2010	3417.3	BE-7	1.74E-01	3.51E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/15/2010	3594.3	BE-7	1.10E-01	2.97E-02
47	SSW SECTOR 3.4 MI FROM SITE	11/15/2010	3594.3	PB-212	2.36E-03	1.72E-03
47	SSW SECTOR 3.4 MI FROM SITE	11/15/2010	3594.3	K-40	4.50E-02	2.11E-02
63	0.6 MI SW	8/26/2010	2317.5	BE-7	1.50E-01	3.89E-02
63	0.6 MI SW	8/26/2010	2317.5	K-40	9.92E-02	3.46E-02
63	0.6 MI SW	11/15/2010	3625.9	BE-7	1.29E-01	3.13E-02
63	0.6 MI SW	11/15/2010	3625.9	K-40	5.39E-02	2.72E-02
90	0.5 MI SSW	8/26/2010	2308.8	RA-226	4.01E-02	2.33E-02
90	0.5 MI SSW	8/26/2010	2308.8	PB-214	5.48E-03	3.36E-03
90	0.5 MI SSW	8/26/2010	2308.8	BE-7	1.64E-01	4.57E-02
90	0.5 MI SSW	11/15/2010	3508.1	BE-7	1.17E-01	3.12E-02
90	0.5 MI SSW	11/15/2010	3508.1	K-40	4.07E-02	1.75E-02
90	0.5 MI SSW	11/15/2010	3508.1	TL-208	1.19E-03	6.68E-04
90	0.5 MI SSW	11/15/2010	3508.1	PB-214	3.42E-03	3.11E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/26/2010	2165.3	K-40	9.99E-02	3.58E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/26/2010	2165.3	BI-214	8.59E-03	3.34E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/26/2010	2165.3	PB-214	8.32E-03	4.53E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	8/26/2010	2165.3	BE-7	1.42E-01	4.19E-02
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/15/2010	3623.5	PB-212	2.89E-03	1.35E-03
91	1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/15/2010	3623.5	BE-7	8.41E-02	2.72E-02

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

*Media Type: Air Particulate*

*Quantity: CUBIC METERS*

*Concentration (Activity): pCi/cubic meter*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
91      1.6 MI ENE - HEEC SEWAGE TRTMT FCLTY	11/15/2010	3623.5	TH-234	2.94E-02	1.87E-02

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

Media Type: Aquatic Vegetation

Quantity: Grams (wet)

Concentration (Activity): pCi/gm wet

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
26 4.7 MILES S	11/17/2010	603.9	K-40	3.19E+00	3.84E-01
26 4.7 MILES S	11/17/2010	603.9	TL-208	2.18E-02	1.02E-02
26 4.7 MILES S	11/17/2010	603.9	PB-212	3.43E-02	1.91E-02
26 4.7 MILES S	11/17/2010	603.9	BI-214	7.54E-02	2.68E-02
26 4.7 MILES S	11/17/2010	603.9	PB-214	1.04E-01	3.21E-02
26 4.7 MILES S	11/17/2010	603.9	RA-226	4.16E-01	2.61E-01
26 4.7 MILES S	11/17/2010	603.9	TH-234	4.37E-01	2.68E-01
26 4.7 MILES S	11/17/2010	603.9	BE-7	4.32E-01	1.45E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/17/2010	623.5	PB-212	3.19E-02	1.62E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/17/2010	623.5	BE-7	2.86E-01	1.05E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/17/2010	623.5	TL-208	1.84E-02	1.20E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/17/2010	623.5	BI-214	7.88E-02	2.74E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/17/2010	623.5	PB-214	3.26E-02	1.96E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	11/17/2010	623.5	K-40	4.38E+00	4.73E-01
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	TH-234	5.62E-01	3.86E-01
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	BE-7	2.82E-01	1.21E-01
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	K-40	3.79E+00	4.40E-01
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	TL-208	1.61E-02	1.03E-02
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	PB-212	3.31E-02	1.70E-02
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	BI-214	5.74E-02	2.60E-02
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	PB-214	7.27E-02	2.56E-02
61 2.5 MI E - HARRIS LK E NH-HOLLEMAN RD (CONTROL)	11/17/2010	618.3	RA-226	3.04E-01	2.27E-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 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	K-40	4.03E+00	4.49E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	TL-208	1.14E-01	2.36E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	BI-212	2.75E-01	1.21E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	PB-212	2.72E-01	4.11E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	BI-214	8.09E-02	3.29E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	AC-228	1.08E-01	7.66E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	427.4	BE-7	1.19E+00	1.99E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	K-40	4.91E+00	5.85E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	TH-234	5.72E-01	4.83E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	AC-228	1.62E-01	7.38E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	BE-7	1.33E+00	2.07E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	TL-208	7.77E-02	1.94E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	BI-212	2.48E-01	1.22E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	PB-212	2.25E-01	3.76E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	BI-214	8.25E-02	4.73E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	PB-214	7.35E-02	2.93E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	448.2	RA-226	4.87E-01	3.86E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	RA-226	7.84E-01	4.63E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	AC-228	1.87E-01	7.01E-02



# 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 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	RA-226	7.84E-01	4.63E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	BI-214	7.33E-02	3.66E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	PB-212	2.51E-01	4.37E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	BE-7	1.54E+00	2.31E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	TL-208	8.87E-02	2.19E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	K-40	5.99E+00	6.62E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	AC-228	1.87E-01	7.01E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	BE-7	1.54E+00	2.31E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	PB-212	2.51E-01	4.37E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	TL-208	8.87E-02	2.19E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	K-40	5.94E+00	6.62E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	435.3	BI-214	7.33E-02	3.66E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	K-40	6.81E+00	7.39E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	AC-228	2.46E-01	8.40E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	RA-226	5.45E-01	2.89E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	PB-214	1.11E-01	5.03E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	BI-214	8.80E-02	4.36E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	BE-7	3.26E+00	3.81E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	TL-208	6.16E-02	1.96E-02

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

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: FIG LEAF

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	413.6	PB-212	1.37E-01	4.67E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	TL-208	6.57E-02	2.43E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	AC-228	2.46E-01	9.37E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	RA-226	9.78E-01	4.80E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	PB-214	1.54E-01	5.23E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	BI-214	1.55E-01	5.25E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	PB-212	1.83E-01	3.31E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	BE-7	3.08E+00	3.95E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	429.4	K-40	7.92E+00	8.31E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	PB-212	3.40E-01	4.99E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	BE-7	3.94E+00	4.39E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	K-40	7.31E+00	8.11E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	TL-208	1.26E-01	3.00E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	BI-212	3.26E-01	1.38E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	BI-214	1.44E-01	4.99E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	PB-214	1.35E-01	4.51E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	RA-226	4.75E-01	3.32E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	402.3	AC-228	3.16E-01	8.35E-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 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	PB-212	2.62E-01	4.12E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	TH-234	8.44E-01	6.29E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	RA-226	7.87E-01	3.33E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	BI-214	6.07E-02	3.51E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	BI-212	2.07E-01	1.21E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	TL-208	9.72E-02	2.31E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	K-40	4.04E+00	4.93E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	BE-7	5.77E-01	1.84E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	351.5	PB-214	8.50E-02	3.71E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	393.9	TL-208	5.03E-02	2.48E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	393.9	PB-212	1.33E-01	4.36E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	393.9	BI-214	1.26E-01	4.22E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	393.9	PB-214	1.18E-01	4.21E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	393.9	BE-7	1.10E+00	1.93E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	393.9	K-40	4.44E+00	5.61E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	TL-208	1.67E-01	2.91E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	AC-228	1.55E-01	7.69E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	RA-226	6.50E-01	3.69E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	BI-214	9.83E-02	4.18E-02

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

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: MAPLE

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	BI-212	2.60E-01	1.49E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	K-40	5.01E+00	6.01E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	BE-7	1.09E+00	1.97E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	386.4	PB-212	4.23E-01	6.01E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	TL-208	5.08E-02	2.37E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	PB-212	1.69E-01	3.48E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	BI-214	7.64E-02	3.61E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	PB-214	7.12E-02	3.85E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	BI-212	1.84E-01	1.14E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	K-40	4.14E+00	5.29E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	RA-226	7.87E-01	3.42E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	BE-7	1.60E+00	2.40E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	400.9	AC-228	2.31E-01	6.80E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	TH-234	6.54E-01	4.70E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	RA-226	5.51E-01	3.51E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	PB-214	1.24E-01	4.36E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	BI-214	1.07E-01	4.56E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	PB-212	1.33E-01	2.81E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	TL-208	5.51E-02	2.81E-02

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

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: MAPLE

<i>Sample Point</i>	<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	K-40	4.41E+00	5.67E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	BE-7	9.68E-01	2.26E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	385.4	AC-228	1.90E-01	8.22E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	AC-228	1.44E-01	5.02E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	RA-226	8.86E-01	3.86E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	BE-7	1.06E+00	1.89E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	PB-214	9.00E-02	3.45E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	BI-214	9.87E-02	3.99E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	PB-212	2.14E-01	3.61E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	TL-208	8.54E-02	2.16E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	466.5	K-40	4.29E+00	5.05E-01
12 0.9 MILES SSW	5/19/2010	359.1	TL-208	1.00E-01	2.85E-02
12 0.9 MILES SSW	5/19/2010	359.1	RA-226	5.85E-01	4.81E-01
12 0.9 MILES SSW	5/19/2010	359.1	PB-214	1.20E-01	5.21E-02
12 0.9 MILES SSW	5/19/2010	359.1	TH-234	1.19E+00	6.90E-01
12 0.9 MILES SSW	5/19/2010	359.1	PB-212	3.04E-01	5.40E-02
12 0.9 MILES SSW	5/19/2010	359.1	K-40	3.05E+00	5.22E-01
12 0.9 MILES SSW	5/19/2010	359.1	BE-7	8.30E-01	2.89E-01
12 0.9 MILES SSW	5/19/2010	359.1	BI-214	9.91E-02	6.23E-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
12 0.9 MILES SSW	6/22/2010	403.4	PB-212	8.06E-02	2.36E-02
12 0.9 MILES SSW	6/22/2010	403.4	BI-214	8.60E-02	3.30E-02
12 0.9 MILES SSW	6/22/2010	403.4	BE-7	1.12E+00	2.09E-01
12 0.9 MILES SSW	6/22/2010	403.4	K-40	4.19E+00	5.16E-01
12 0.9 MILES SSW	6/22/2010	403.4	TL-208	2.84E-02	1.93E-02
12 0.9 MILES SSW	7/21/2010	416.9	BE-7	1.18E+00	2.08E-01
12 0.9 MILES SSW	7/21/2010	416.9	K-40	3.61E+00	4.91E-01
12 0.9 MILES SSW	7/21/2010	416.9	PB-212	1.52E-01	3.93E-02
12 0.9 MILES SSW	7/21/2010	416.9	BI-214	5.17E-02	3.93E-02
12 0.9 MILES SSW	7/21/2010	416.9	TL-208	6.81E-01	2.09E-02
12 0.9 MILES SSW	8/17/2010	325.6	TL-208	9.25E-02	2.93E-02
12 0.9 MILES SSW	8/17/2010	325.6	RA-226	9.60E-01	4.80E-01
12 0.9 MILES SSW	8/17/2010	325.6	PB-214	1.15E-01	4.23E-02
12 0.9 MILES SSW	8/17/2010	325.6	BI-214	1.23E-01	5.86E-02
12 0.9 MILES SSW	8/17/2010	325.6	BI-212	2.77E-01	1.45E-01
12 0.9 MILES SSW	8/17/2010	325.6	K-40	3.69E+00	4.96E-01
12 0.9 MILES SSW	8/17/2010	325.6	BE-7	1.66E+00	2.78E-01
12 0.9 MILES SSW	8/17/2010	325.6	PB-212	2.23E-01	4.53E-02
12 0.9 MILES SSW	9/21/2010	403.5	BI-214	1.00E-01	3.75E-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
12 0.9 MILES SSW	9/21/2010	403.5	TH-234	6.55E-01	3.97E-01
12 0.9 MILES SSW	9/21/2010	403.5	RA-226	5.40E-01	3.62E-01
12 0.9 MILES SSW	9/21/2010	403.5	PB-214	9.19E-02	3.64E-02
12 0.9 MILES SSW	9/21/2010	403.5	PB-212	1.20E-01	3.03E-02
12 0.9 MILES SSW	9/21/2010	403.5	TL-208	5.39E-02	2.24E-02
12 0.9 MILES SSW	9/21/2010	403.5	K-40	2.76E+00	4.40E-01
12 0.9 MILES SSW	9/21/2010	403.5	BE-7	1.68E+00	2.43E-01
12 0.9 MILES SSW	10/12/2010	468.7	PB-212	4.97E-02	3.41E-02
12 0.9 MILES SSW	10/12/2010	468.7	RA-226	4.64E-01	2.90E-01
12 0.9 MILES SSW	10/12/2010	468.7	PB-214	1.10E-01	3.24E-02
12 0.9 MILES SSW	10/12/2010	468.7	BI-212	9.53E-02	7.29E-02
12 0.9 MILES SSW	10/12/2010	468.7	TL-208	3.86E-02	1.59E-02
12 0.9 MILES SSW	10/12/2010	468.7	K-40	2.43E+00	3.68E-01
12 0.9 MILES SSW	10/12/2010	468.7	BE-7	8.23E-01	1.55E-01
12 0.9 MILES SSW	10/12/2010	468.7	BI-214	1.23E-01	3.48E-02
63 0.6 MI SW	5/19/2010	400.3	RA-226	6.57E-01	3.78E-01
63 0.6 MI SW	5/19/2010	400.3	K-40	3.16E+00	5.33E-01
63 0.6 MI SW	5/19/2010	400.3	BI-214	1.08E-01	5.48E-02
63 0.6 MI SW	5/19/2010	400.3	BE-7	5.67E-01	2.09E-01

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: MAPLE

<i>Sample Point</i>		<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
63	0.6 MI SW	5/19/2010	400.3	PB-212	1.04E-01	2.97E-02
63	0.6 MI SW	5/19/2010	400.3	TL-208	4.41E-02	2.15E-02
63	0.6 MI SW	5/19/2010	400.3	PB-214	1.19E-01	3.89E-02
63	0.6 MI SW	6/22/2010	364.2	PB-214	7.67E-02	3.59E-02
63	0.6 MI SW	6/22/2010	364.2	BE-7	7.81E-01	1.78E-01
63	0.6 MI SW	6/22/2010	364.2	TL-208	7.01E-02	1.94E-02
63	0.6 MI SW	6/22/2010	364.2	K-40	3.65E+00	5.18E-01
63	0.6 MI SW	6/22/2010	364.2	PB-212	1.21E-01	3.64E-02
63	0.6 MI SW	6/22/2010	364.2	BI-214	8.76E-02	3.75E-02
63	0.6 MI SW	6/22/2010	364.2	TH-234	1.04E+00	4.88E-01
63	0.6 MI SW	6/22/2010	364.2	RA-226	8.13E-01	4.22E-01
63	0.6 MI SW	7/21/2010	386	BI-214	7.12E-02	3.97E-02
63	0.6 MI SW	7/21/2010	386	BE-7	9.45E-01	1.99E-01
63	0.6 MI SW	7/21/2010	386	K-40	4.09E+00	5.24E-01
63	0.6 MI SW	7/21/2010	386	TL-208	9.10E-02	2.59E-02
63	0.6 MI SW	7/21/2010	386	PB-214	7.58E-02	4.31E-02
63	0.6 MI SW	7/21/2010	386	PB-212	2.41E-01	4.59E-02
63	0.6 MI SW	7/21/2010	386	BI-212	1.65E-01	1.12E-01
63	0.6 MI SW	8/17/2010	293.7	BE-7	8.51E-01	2.37E-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
63 0.6 MI SW	8/17/2010	293.7	BI-214	1.13E-01	4.70E-02
63 0.6 MI SW	8/17/2010	293.7	K-40	2.37E+00	4.54E-01
63 0.6 MI SW	8/17/2010	293.7	TL-208	1.60E-01	3.68E-02
63 0.6 MI SW	8/17/2010	293.7	BI-212	2.31E-01	1.37E-01
63 0.6 MI SW	8/17/2010	293.7	RA-226	8.80E-01	4.97E-01
63 0.6 MI SW	8/17/2010	293.7	PB-212	3.35E-01	5.60E-02
63 0.6 MI SW	8/17/2010	293.7	PB-214	8.32E-02	4.49E-02
63 0.6 MI SW	9/21/2010	389.6	PB-214	1.80E-01	4.52E-02
63 0.6 MI SW	9/21/2010	389.6	PB-212	1.30E-01	3.40E-02
63 0.6 MI SW	9/21/2010	389.6	TH-234	7.89E-01	4.89E-01
63 0.6 MI SW	9/21/2010	389.6	BE-7	1.60E+00	2.76E-01
63 0.6 MI SW	9/21/2010	389.6	TL-208	5.25E-02	2.14E-02
63 0.6 MI SW	9/21/2010	389.6	BI-214	1.96E-01	4.94E-02
63 0.6 MI SW	9/21/2010	389.6	RA-226	4.95E-01	3.99E-01
63 0.6 MI SW	9/21/2010	389.6	K-40	2.57E+00	4.13E-01
63 0.6 MI SW	10/12/2010	497.9	BE-7	1.27E+00	2.00E-01
63 0.6 MI SW	10/12/2010	497.9	K-40	3.24E+00	4.22E-01
63 0.6 MI SW	10/12/2010	497.9	TL-208	7.39E-02	1.70E-02
63 0.6 MI SW	10/12/2010	497.9	BI-214	4.01E-02	2.99E-02

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

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

**Media:** MAPLE

<b><i>Sample Point</i></b>		<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
63	0.6 MI SW	10/12/2010	497.9	PB-212	1.37E-01	3.72E-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 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	PB-214	5.29E-02	2.32E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	PB-212	1.84E-01	2.80E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	BE-7	3.86E-01	1.25E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	K-40	2.64E+00	3.13E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	TL-208	7.37E-02	1.67E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	BI-214	6.37E-02	2.90E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	RA-226	4.64E-01	2.27E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/19/2010	511.5	AC-228	9.81E-02	5.69E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	TL-208	9.73E-02	1.99E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	BI-212	1.75E-01	1.34E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	PB-212	2.75E-01	3.59E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	BI-214	6.64E-02	2.76E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	PB-214	5.63E-02	2.79E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	RA-226	7.27E-01	3.50E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	K-40	3.99E+00	4.77E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	BE-7	4.20E-01	1.28E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	TH-234	7.00E-01	4.13E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/22/2010	470.4	AC-228	1.43E-01	5.68E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	AC-228	1.47E-01	7.54E-02

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

*Media Type: Broadleaf Vegetation*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** SWEETGUM

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	BE-7	4.98E-01	1.42E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	K-40	3.90E+00	4.91E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	TL-208	1.77E-01	3.25E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	BI-212	3.49E-01	1.51E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	PB-212	5.24E-01	6.30E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	PB-214	7.80E-02	3.66E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	453.2	BI-214	5.64E-02	3.07E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	TH-234	6.02E-01	5.25E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	BE-7	9.13E-01	2.25E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	AC-228	2.96E-01	7.39E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	RA-226	7.14E-01	3.70E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	PB-214	5.50E-02	4.31E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	K-40	3.43E+00	4.48E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	TL-208	1.24E-01	2.88E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	BI-214	1.02E-01	3.31E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	PB-212	3.35E-01	4.87E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	417.5	BI-212	2.20E-01	1.41E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	BE-7	1.30E+00	2.20E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	RA-226	6.83E-01	4.51E-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>
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	PB-212	1.92E-01	4.09E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	AC-228	4.07E-01	9.15E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	K-40	4.01E+00	5.00E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	BI-214	1.25E-01	4.40E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	TL-208	7.26E-02	2.01E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	461.1	PB-214	1.13E-01	3.85E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	PB-214	6.39E-02	2.68E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	BI-214	7.02E-02	2.12E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	PB-212	1.32E-01	2.64E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	RA-226	5.58E-01	2.32E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	AC-228	3.32E-01	6.68E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	BE-7	2.42E+00	2.78E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	K-40	3.58E+00	4.14E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	TL-208	3.93E-02	1.36E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/11/2010	661.7	BI-212	1.05E-01	9.06E-02
12 0.9 MILES SSW	5/19/2010	368.7	K-40	2.38E+00	3.27E-01
12 0.9 MILES SSW	5/19/2010	368.7	BE-7	3.64E-01	1.24E-01
12 0.9 MILES SSW	5/19/2010	368.7	TL-208	2.74E-02	1.48E-02
12 0.9 MILES SSW	5/19/2010	368.7	PB-212	7.98E-02	2.11E-02

# *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>
12 0.9 MILES SSW	5/19/2010	368.7	BI-214	6.77E-02	3.10E-02
12 0.9 MILES SSW	5/19/2010	368.7	PB-214	8.51E-02	3.47E-02
12 0.9 MILES SSW	6/22/2010	482.1	BE-7	4.82E-01	1.38E-01
12 0.9 MILES SSW	6/22/2010	482.1	TL-208	4.58E-02	1.66E-02
12 0.9 MILES SSW	6/22/2010	482.1	PB-212	7.89E-02	2.92E-02
12 0.9 MILES SSW	6/22/2010	482.1	K-40	2.51E+00	3.62E-01
12 0.9 MILES SSW	6/22/2010	482.1	BI-214	6.82E-02	3.51E-02
12 0.9 MILES SSW	6/22/2010	482.1	PB-214	6.18E-02	2.37E-02
12 0.9 MILES SSW	6/22/2010	482.1	RA-226	4.10E-01	2.69E-01
12 0.9 MILES SSW	6/22/2010	482.1	TH-234	6.15E-01	3.47E-01
12 0.9 MILES SSW	7/21/2010	381.7	PB-212	2.07E-01	3.85E-02
12 0.9 MILES SSW	7/21/2010	381.7	TH-234	8.93E-01	4.18E-01
12 0.9 MILES SSW	7/21/2010	381.7	RA-226	7.66E-01	3.44E-01
12 0.9 MILES SSW	7/21/2010	381.7	PB-214	5.05E-02	3.24E-02
12 0.9 MILES SSW	7/21/2010	381.7	BI-212	2.57E-01	1.36E-01
12 0.9 MILES SSW	7/21/2010	381.7	TL-208	9.00E-02	2.17E-02
12 0.9 MILES SSW	7/21/2010	381.7	K-40	3.37E+00	4.66E-01
12 0.9 MILES SSW	7/21/2010	381.7	BI-214	8.87E-02	3.81E-02
12 0.9 MILES SSW	7/21/2010	381.7	BE-7	1.02E+00	2.03E-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
12 0.9 MILES SSW	8/17/2010	469	BE-7	1.80E+00	2.44E-01
12 0.9 MILES SSW	8/17/2010	469	PB-212	1.67E-01	3.67E-02
12 0.9 MILES SSW	8/17/2010	469	TL-208	5.77E-02	2.17E-02
12 0.9 MILES SSW	8/17/2010	469	K-40	2.96E+00	3.87E-01
12 0.9 MILES SSW	9/21/2010	521.1	RA-226	5.08E-01	3.05E-01
12 0.9 MILES SSW	9/21/2010	521.1	PB-214	5.25E-02	2.53E-02
12 0.9 MILES SSW	9/21/2010	521.1	PB-212	1.36E-01	2.77E-02
12 0.9 MILES SSW	9/21/2010	521.1	K-40	2.57E+00	3.61E-01
12 0.9 MILES SSW	9/21/2010	521.1	BE-7	1.12E+00	1.98E-01
12 0.9 MILES SSW	9/21/2010	521.1	BI-214	9.61E-02	3.26E-02
12 0.9 MILES SSW	9/21/2010	521.1	TL-208	5.25E-02	1.55E-02
12 0.9 MILES SSW	10/12/2010	517.9	PB-214	7.34E-02	2.73E-02
12 0.9 MILES SSW	10/12/2010	517.9	BI-214	5.70E-02	2.97E-02
12 0.9 MILES SSW	10/12/2010	517.9	PB-212	1.70E-01	3.27E-02
12 0.9 MILES SSW	10/12/2010	517.9	TL-208	4.06E-02	1.62E-02
12 0.9 MILES SSW	10/12/2010	517.9	K-40	2.77E+00	3.61E-01
12 0.9 MILES SSW	10/12/2010	517.9	BE-7	2.60E+00	2.97E-01
63 0.6 MI SW	5/19/2010	411.3	K-40	3.13E+00	3.86E-01
63 0.6 MI SW	5/19/2010	411.3	BE-7	4.49E-01	1.48E-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
63 0.6 MI SW	5/19/2010	411.3	PB-212	6.16E-02	2.95E-02
63 0.6 MI SW	5/19/2010	411.3	BI-214	7.17E-02	3.04E-02
63 0.6 MI SW	5/19/2010	411.3	PB-214	6.18E-02	3.10E-02
63 0.6 MI SW	5/19/2010	411.3	TL-208	3.53E-02	1.68E-02
63 0.6 MI SW	6/22/2010	361.2	BI-214	1.53E-01	4.23E-02
63 0.6 MI SW	6/22/2010	361.2	BE-7	4.78E-01	1.65E-01
63 0.6 MI SW	6/22/2010	361.2	PB-212	6.00E-02	2.54E-02
63 0.6 MI SW	6/22/2010	361.2	PB-214	1.28E-01	4.41E-02
63 0.6 MI SW	6/22/2010	361.2	RA-226	5.67E-01	3.60E-01
63 0.6 MI SW	6/22/2010	361.2	TH-234	7.42E-01	6.72E-01
63 0.6 MI SW	6/22/2010	361.2	K-40	3.32E+00	4.83E-01
63 0.6 MI SW	7/21/2010	338.2	RA-226	8.55E-01	4.66E-01
63 0.6 MI SW	7/21/2010	338.2	TH-234	7.96E-01	5.48E-01
63 0.6 MI SW	7/21/2010	338.2	PB-214	1.40E-01	4.40E-02
63 0.6 MI SW	7/21/2010	338.2	BI-214	2.12E-01	5.56E-02
63 0.6 MI SW	7/21/2010	338.2	PB-212	3.33E-01	6.06E-02
63 0.6 MI SW	7/21/2010	338.2	BI-212	3.90E-01	1.74E-01
63 0.6 MI SW	7/21/2010	338.2	K-40	4.43E+00	5.52E-01
63 0.6 MI SW	7/21/2010	338.2	TL-208	1.06E-01	2.77E-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
63 0.6 MI SW	7/21/2010	338.2	BE-7	7.85E-01	2.42E-01
63 0.6 MI SW	8/17/2010	245.9	PB-212	7.29E-01	9.29E-02
63 0.6 MI SW	8/17/2010	245.9	RA-226	1.02E+00	4.70E-01
63 0.6 MI SW	8/17/2010	245.9	BE-7	1.64E+00	3.22E-01
63 0.6 MI SW	8/17/2010	245.9	K-40	3.98E+00	6.34E-01
63 0.6 MI SW	8/17/2010	245.9	BI-214	9.13E-02	5.72E-02
63 0.6 MI SW	8/17/2010	245.9	TL-208	2.49E-01	5.10E-02
63 0.6 MI SW	8/17/2010	245.9	BI-212	5.70E-01	2.48E-01
63 0.6 MI SW	9/21/2010	460.4	TH-234	7.00E-01	3.60E-01
63 0.6 MI SW	9/21/2010	460.4	PB-212	1.18E-01	3.08E-02
63 0.6 MI SW	9/21/2010	460.4	TL-208	5.34E-02	1.89E-02
63 0.6 MI SW	9/21/2010	460.4	K-40	3.40E+00	4.24E-01
63 0.6 MI SW	9/21/2010	460.4	BI-214	1.49E-01	3.55E-02
63 0.6 MI SW	9/21/2010	460.4	BE-7	1.96E+00	2.63E-01
63 0.6 MI SW	9/21/2010	460.4	RA-226	7.54E-01	4.27E-01
63 0.6 MI SW	9/21/2010	460.4	PB-214	1.22E-01	4.01E-02
63 0.6 MI SW	10/12/2010	406.1	PB-214	9.46E-02	3.25E-02
63 0.6 MI SW	10/12/2010	406.1	BE-7	1.47E+00	2.35E-01
63 0.6 MI SW	10/12/2010	406.1	K-40	3.15E+00	4.34E-01

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

*Media Type: Broadleaf Vegetation*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** SWEETGUM

<b><i>Sample Point</i></b>		<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
63	0.6 MI SW	10/12/2010	406.1	TL-208	5.57E-02	1.90E-02
63	0.6 MI SW	10/12/2010	406.1	BI-214	1.11E-01	4.17E-02
63	0.6 MI SW	10/12/2010	406.1	PB-212	1.17E-01	3.47E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: WAX MYRTLE

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
12 0.9 MILES SSW	5/19/2010	384.8	K-40	3.75E+00	4.21E-01
12 0.9 MILES SSW	5/19/2010	384.8	BE-7	7.54E-01	1.81E-01
12 0.9 MILES SSW	5/19/2010	384.8	PB-212	1.10E-01	2.48E-02
12 0.9 MILES SSW	5/19/2010	384.8	BI-214	7.87E-02	3.51E-02
12 0.9 MILES SSW	5/19/2010	384.8	PB-214	8.02E-02	3.32E-02
12 0.9 MILES SSW	5/19/2010	384.8	RA-226	6.93E-01	3.82E-01
12 0.9 MILES SSW	5/19/2010	384.8	TL-208	4.10E-02	1.73E-02
12 0.9 MILES SSW	6/22/2010	433.7	PB-214	6.47E-02	3.31E-02
12 0.9 MILES SSW	6/22/2010	433.7	K-40	3.94E+00	4.87E-01
12 0.9 MILES SSW	6/22/2010	433.7	BI-214	7.39E-02	3.07E-02
12 0.9 MILES SSW	6/22/2010	433.7	TL-208	3.63E-02	1.66E-02
12 0.9 MILES SSW	6/22/2010	433.7	BE-7	1.95E+00	2.63E-01
12 0.9 MILES SSW	6/22/2010	433.7	PB-212	8.77E-02	3.33E-02
12 0.9 MILES SSW	7/21/2010	361.7	K-40	3.47E+00	4.85E-01
12 0.9 MILES SSW	7/21/2010	361.7	TL-208	9.37E-02	2.67E-02
12 0.9 MILES SSW	7/21/2010	361.7	PB-212	1.98E-01	4.58E-02
12 0.9 MILES SSW	7/21/2010	361.7	BI-214	8.39E-02	4.44E-02
12 0.9 MILES SSW	7/21/2010	361.7	PB-214	6.59E-02	4.68E-02
12 0.9 MILES SSW	7/21/2010	361.7	RA-226	6.02E-01	3.42E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: WAX MYRTLE

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
12 0.9 MILES SSW	7/21/2010	361.7	TH-234	7.85E-01	4.72E-01
12 0.9 MILES SSW	7/21/2010	361.7	BE-7	1.94E+00	2.90E-01
12 0.9 MILES SSW	8/17/2010	346.5	BI-214	7.79E-02	3.82E-02
12 0.9 MILES SSW	8/17/2010	346.5	BE-7	2.56E+00	3.49E-01
12 0.9 MILES SSW	8/17/2010	346.5	K-40	3.77E+00	5.09E-01
12 0.9 MILES SSW	8/17/2010	346.5	PB-212	1.77E-01	4.15E-02
12 0.9 MILES SSW	8/17/2010	346.5	TL-208	4.99E-02	2.00E-02
12 0.9 MILES SSW	9/21/2010	414	BE-7	2.42E+00	3.15E-01
12 0.9 MILES SSW	9/21/2010	414	K-40	3.36E+00	4.33E-01
12 0.9 MILES SSW	9/21/2010	414	TL-208	5.15E-02	2.14E-02
12 0.9 MILES SSW	9/21/2010	414	PB-212	1.04E-01	3.80E-02
12 0.9 MILES SSW	9/21/2010	414	BI-214	7.85E-02	3.63E-02
12 0.9 MILES SSW	9/21/2010	414	PB-214	4.37E-02	3.17E-02
12 0.9 MILES SSW	10/12/2010	438.9	RA-226	6.09E-01	3.14E-01
12 0.9 MILES SSW	10/12/2010	438.9	PB-214	4.08E-02	3.59E-02
12 0.9 MILES SSW	10/12/2010	438.9	TH-234	1.23E+00	5.05E-01
12 0.9 MILES SSW	10/12/2010	438.9	K-40	2.94E+00	3.98E-01
12 0.9 MILES SSW	10/12/2010	438.9	TL-208	3.33E-02	1.65E-02
12 0.9 MILES SSW	10/12/2010	438.9	BI-214	7.10E-02	2.91E-02

# *HNP Radiological Environmental Monitoring Gamma Isotopic Report*

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: WAX MYRTLE

<i>Sample Point</i>		<i>Sample Date</i>	<i>Quantity</i>	<i>Isotope</i>	<i>Activity</i>	<i>2 Sigma Error</i>
12	0.9 MILES SSW	10/12/2010	438.9	BE-7	4.72E+00	4.92E-01
12	0.9 MILES SSW	10/12/2010	438.9	PB-212	1.04E-01	2.81E-02
63	0.6 MI SW	5/19/2010	413.7	BI-214	5.17E-02	2.60E-02
63	0.6 MI SW	5/19/2010	413.7	PB-214	6.80E-02	2.70E-02
63	0.6 MI SW	5/19/2010	413.7	RA-226	4.89E-01	2.33E-01
63	0.6 MI SW	5/19/2010	413.7	PB-212	9.33E-02	2.91E-02
63	0.6 MI SW	5/19/2010	413.7	TL-208	3.84E-02	1.32E-02
63	0.6 MI SW	5/19/2010	413.7	K-40	2.97E+00	3.56E-01
63	0.6 MI SW	5/19/2010	413.7	BE-7	7.12E-01	1.42E-01
63	0.6 MI SW	6/22/2010	381.1	BI-214	6.44E-02	2.88E-02
63	0.6 MI SW	6/22/2010	381.1	BE-7	1.83E+00	2.80E-01
63	0.6 MI SW	6/22/2010	381.1	K-40	3.70E+00	4.87E-01
63	0.6 MI SW	6/22/2010	381.1	PB-212	1.24E-01	3.32E-02
63	0.6 MI SW	6/22/2010	381.1	RA-226	9.16E-01	4.23E-01
63	0.6 MI SW	6/22/2010	381.1	TL-208	6.60E-02	2.32E-02
63	0.6 MI SW	6/22/2010	381.1	TH-234	7.27E-01	4.67E-01
63	0.6 MI SW	7/21/2010	406.1	BE-7	1.07E+00	2.09E-01
63	0.6 MI SW	7/21/2010	406.1	K-40	4.61E+00	5.81E-01
63	0.6 MI SW	7/21/2010	406.1	TL-208	2.44E-01	3.78E-02

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: WAX MYRTLE

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
63 0.6 MI SW	7/21/2010	406.1	BI-212	5.22E-01	1.70E-01
63 0.6 MI SW	7/21/2010	406.1	PB-212	6.68E-01	7.14E-02
63 0.6 MI SW	7/21/2010	406.1	BI-214	1.73E-01	4.03E-02
63 0.6 MI SW	7/21/2010	406.1	PB-214	6.86E-02	4.02E-02
63 0.6 MI SW	8/17/2010	357.5	BI-214	5.47E-02	3.35E-02
63 0.6 MI SW	8/17/2010	357.5	RA-226	6.69E-01	3.63E-01
63 0.6 MI SW	8/17/2010	357.5	PB-212	7.89E-01	8.41E-02
63 0.6 MI SW	8/17/2010	357.5	BI-212	6.22E-01	1.96E-01
63 0.6 MI SW	8/17/2010	357.5	TL-208	2.98E-01	4.35E-02
63 0.6 MI SW	8/17/2010	357.5	K-40	3.12E+00	4.64E-01
63 0.6 MI SW	8/17/2010	357.5	BE-7	2.12E+00	2.89E-01
63 0.6 MI SW	8/17/2010	357.5	TH-234	1.03E+00	6.22E-01
63 0.6 MI SW	9/21/2010	441.6	K-40	3.05E+00	4.08E-01
63 0.6 MI SW	9/21/2010	441.6	TL-208	7.44E-02	1.90E-02
63 0.6 MI SW	9/21/2010	441.6	BI-212	1.45E-01	1.26E-01
63 0.6 MI SW	9/21/2010	441.6	PB-212	1.87E-01	3.42E-02
63 0.6 MI SW	9/21/2010	441.6	BI-214	1.21E-01	3.25E-02
63 0.6 MI SW	9/21/2010	441.6	PB-214	6.28E-02	3.15E-02
63 0.6 MI SW	9/21/2010	441.6	RA-226	5.85E-01	3.99E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: WAX MYRTLE

Sample Point		Sample Date	Quantity	Isotope	Activity	2 Sigma Error
63	0.6 MI SW	9/21/2010	441.6	BE-7	1.09E+00	1.89E-01
63	0.6 MI SW	10/12/2010	489.4	K-40	2.33E+00	3.66E-01
63	0.6 MI SW	10/12/2010	489.4	AC-228	7.49E-02	4.88E-02
63	0.6 MI SW	10/12/2010	489.4	RA-226	5.64E-01	2.40E-01
63	0.6 MI SW	10/12/2010	489.4	PB-214	8.20E-02	2.84E-02
63	0.6 MI SW	10/12/2010	489.4	BI-214	1.07E-01	3.47E-02
63	0.6 MI SW	10/12/2010	489.4	PB-212	2.77E-01	3.54E-02
63	0.6 MI SW	10/12/2010	489.4	TL-208	1.09E-01	2.42E-02
63	0.6 MI SW	10/12/2010	489.4	BE-7	1.24E+00	1.98E-01
63	0.6 MI SW	10/12/2010	489.4	BI-212	2.36E-01	1.05E-01

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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	K-40	5.34E+02	4.87E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	TL-208	5.29E+00	1.98E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	TH-234	7.15E+00	7.14E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	RA-226	1.16E+02	4.44E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	PB-214	7.62E+00	4.66E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	BI-214	1.14E+01	4.09E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1.0	PB-212	1.29E+01	3.30E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	PB-214	1.29E+01	5.20E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	TH-234	1.45E+02	7.75E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	RA-226	1.02E+02	4.49E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	BI-214	1.35E+01	4.48E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	PB-212	9.73E+00	3.61E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	TL-208	4.78E+00	2.24E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	AC-228	9.80E+00	8.20E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1.0	K-40	5.34E+02	5.09E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	PB-212	7.70E+00	2.94E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	TH-234	1.41E+02	6.41E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	AC-228	3.06E+01	9.13E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	RA-226	8.39E+01	4.41E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	BI-214	1.25E+01	4.74E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	PB-212	1.96E+01	1.29E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	TL-208	5.56E+00	2.09E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	K-40	5.12E+02	4.92E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1.0	PB-214	6.43E+00	3.89E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	BI-214	1.56E+01	3.98E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	PB-214	1.18E+01	3.66E+00



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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	RA-226	1.94E+02	4.09E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	TH-234	2.27E+02	6.36E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	PB-212	9.68E+00	2.69E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	TL-208	6.53E+00	1.86E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1.0	K-40	2.37E+02	2.82E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	AC-228	1.79E+01	5.71E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	BI-214	1.78E+01	3.80E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	K-40	4.19E+02	3.90E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	TH-234	1.96E+02	6.39E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	RA-226	2.13E+02	4.86E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	PB-214	1.42E+01	3.53E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	PB-212	1.76E+01	2.88E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1.0	TL-208	5.01E+00	1.87E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	K-40	4.31E+02	3.86E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	PB-214	1.23E+01	3.47E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	TL-208	7.40E+00	1.66E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	PB-212	1.79E+01	3.20E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	RA-226	1.78E+02	3.86E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	BI-214	1.52E+01	3.45E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	AC-228	1.87E+01	5.52E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1.0	TH-234	2.16E+02	5.33E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	TH-234	7.97E+01	7.51E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	AC-228	1.96E+01	7.96E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	K-40	8.37E+02	6.56E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	RA-226	1.77E+02	5.78E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	BI-214	1.11E+01	4.83E+00

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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	PB-212	8.47E+00	3.25E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1.0	TL-208	2.21E+00	2.11E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	TL-208	7.11E+00	2.25E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	TH-234	2.25E+02	6.20E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	AC-228	2.27E+01	6.21E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	RA-226	2.33E+02	4.78E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	PB-214	1.39E+01	3.49E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	BI-214	1.77E+01	4.21E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	PB-212	1.50E+01	2.90E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	BI-212	1.59E+01	9.06E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1.0	K-40	4.44E+02	4.01E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	RA-226	1.62E+02	3.51E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	PB-214	2.11E+01	4.18E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	BI-214	2.22E+01	4.98E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	PB-212	9.87E+00	2.26E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	TL-208	3.71E+00	1.43E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	K-40	2.44E+02	2.88E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1.0	TH-234	1.99E+02	5.73E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	RA-226	2.08E+02	4.36E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	K-40	2.47E+02	3.24E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	TL-208	3.74E+00	1.39E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	PB-212	8.52E+00	2.10E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	PB-214	1.67E+01	3.17E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	AC-228	9.07E+00	5.42E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	TH-234	1.95E+02	5.65E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1.0	BI-214	2.16E+01	4.02E+00

# 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	11/11/2010	1.0	PB-214	1.17E+01	3.90E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	RA-226	1.88E+02	3.73E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	AC-228	1.94E+01	6.02E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	TH-234	1.83E+02	5.57E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	K-40	4.03E+02	3.67E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	BI-214	1.49E+01	3.78E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	TL-208	7.01E+00	2.13E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1.0	PB-212	1.31E+01	3.21E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	BI-214	6.52E+00	1.01E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	PB-214	4.41E+00	9.35E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	RA-226	4.63E+01	9.53E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	TH-234	4.80E+01	1.70E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	K-40	6.67E+01	7.86E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	TL-208	1.08E+00	4.50E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1.0	PB-212	2.01E+00	5.56E-01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	TH-234	1.77E+02	6.39E+01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	RA-226	1.60E+02	4.85E+01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	PB-214	1.08E+01	4.09E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	BI-214	9.78E+00	4.29E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	K-40	2.32E+02	3.07E+01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	PB-212	1.43E+01	3.78E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1.0	TL-208	3.92E+00	1.76E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.0	PB-214	1.19E+01	3.53E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.0	BI-214	1.55E+01	5.11E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.0	TL-208	4.20E+00	2.41E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.0	TH-234	2.03E+02	6.52E+01

# 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	2/8/2010	1.0	K-40	2.18E+02	2.95E+01
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.0	RA-226	1.88E+02	4.25E+01
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1.0	PB-212	8.05E+00	2.77E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	RA-226	1.95E+02	5.01E+01
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	AC-228	2.04E+01	1.13E+01
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	K-40	1.94E+02	4.19E+01
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	PB-214	1.37E+01	6.30E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	BI-214	1.81E+01	5.02E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	TL-208	6.39E+00	2.71E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	PB-212	1.63E+01	3.92E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1.0	TH-234	2.23E+02	8.80E+01
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	RA-226	1.79E+02	4.14E+01
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	K-40	2.23E+02	3.22E+01
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	AC-228	1.55E+01	6.87E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	PB-214	1.43E+01	4.79E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	BI-214	1.83E+01	5.83E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	PB-212	1.60E+01	2.96E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	TL-208	8.55E+00	2.51E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1.0	TH-234	2.49E+02	8.55E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	PB-214	1.29E+01	3.80E+00
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	K-40	2.56E+02	3.01E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	TL-208	3.05E+00	1.82E+00
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	PB-212	9.63E+00	2.51E+00
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	RA-226	1.84E+02	4.14E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	TH-234	1.78E+02	5.27E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1.0	BI-214	1.72E+01	4.23E+00

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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	BI-214	1.19E+01	2.97E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	TH-234	2.28E+02	5.35E+01
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	RA-226	1.98E+02	3.81E+01
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	PB-214	1.40E+01	3.89E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	PB-212	6.76E+00	2.38E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	TL-208	5.71E+00	1.81E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1.0	K-40	2.42E+02	2.93E+01
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	PB-214	9.71E+00	3.48E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	K-40	5.91E+02	4.87E+01
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	PB-212	7.42E+00	4.53E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	BI-214	1.29E+01	3.74E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	TL-208	6.45E+00	2.02E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	RA-226	1.29E+02	4.26E+01
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	AC-228	1.96E+01	6.41E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1.0	TH-234	9.74E+01	6.28E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	TH-234	2.84E+02	7.66E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	TL-208	5.02E+00	2.36E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	AC-228	1.81E+01	7.72E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	RA-226	1.62E+02	3.82E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	K-40	2.04E+02	3.35E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	PB-214	2.45E+01	4.99E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	BI-214	2.54E+01	4.35E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1.0	PB-212	1.36E+01	3.04E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	PB-214	1.32E+01	4.33E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	TL-208	6.20E+00	2.12E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	RA-226	1.76E+02	4.08E+01

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

Media Type: Drinking Water

Quantity: Liters

Concentration (Activity): pCi/L

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	AC-228	1.20E+01	6.29E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	BI-214	2.17E+01	4.05E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	TH-234	1.91E+02	6.31E+01
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	PB-212	1.50E+01	3.12E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	BI-212	1.27E+01	9.91E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1.0	K-40	4.26E+02	3.91E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	TH-234	2.20E+02	6.49E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	AC-228	2.32E+01	7.33E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	RA-226	2.22E+02	4.31E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	PB-214	1.28E+01	4.42E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	PB-212	1.28E+01	3.14E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	K-40	2.24E+02	3.06E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	TL-208	5.26E+00	2.58E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1.0	BI-214	1.16E+01	4.10E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	PB-214	1.04E+01	3.77E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	K-40	2.06E+02	2.92E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	TL-208	4.89E+00	2.04E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	AC-228	2.05E+01	7.60E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	TH-234	2.02E+02	6.53E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	RA-226	2.12E+02	4.47E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	BI-214	1.52E+01	4.41E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	PB-212	1.54E+01	2.73E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1.0	BI-212	1.50E+01	1.34E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	BI-212	1.40E+01	1.14E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	TH-234	2.30E+02	5.86E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	AC-228	1.73E+01	6.77E+00

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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	RA-226	1.89E+02	4.09E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	PB-214	2.42E+01	4.59E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	PB-212	1.41E+01	3.00E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	K-40	2.09E+02	3.00E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	TL-208	7.93E+00	2.19E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1.0	BI-214	2.40E+01	4.24E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	TH-234	2.22E+02	7.10E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	K-40	3.83E+02	4.04E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	TL-208	5.89E+00	1.89E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	PB-212	1.35E+01	3.24E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	BI-214	1.22E+01	3.65E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	PB-214	6.55E+00	3.29E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	1/11/2010	1.0	RA-226	2.27E+02	5.65E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	K-40	4.25E+02	4.19E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	BI-214	1.61E+01	3.98E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	PB-214	1.28E+01	4.01E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	RA-226	1.95E+02	4.87E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	AC-228	1.03E+01	6.76E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	TH-234	1.82E+02	6.16E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	PB-212	1.82E+01	3.42E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	2/8/2010	1.0	TL-208	6.67E+00	1.99E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	K-40	2.27E+02	3.03E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	PB-212	9.60E+00	2.81E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	BI-214	1.54E+01	5.41E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	TH-234	2.06E+02	6.66E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	PB-214	1.29E+01	3.81E+00

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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	RA-226	1.68E+02	3.79E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	TL-208	4.63E+00	2.25E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	3/11/2010	1.0	AC-228	8.55E+00	5.28E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	AC-228	1.73E+01	6.32E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	RA-226	1.57E+02	4.11E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	PB-214	1.35E+01	3.92E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	BI-214	1.66E+01	3.87E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	PB-212	1.61E+01	3.01E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	TL-208	8.62E+00	1.97E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	K-40	4.25E+02	3.95E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	4/12/2010	1.0	TH-234	2.14E+02	6.33E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	K-40	8.10E+02	6.26E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	TH-234	1.31E+02	7.41E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	TL-208	6.08E+00	2.90E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	PB-212	7.45E+00	3.28E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	BI-214	9.33E+00	4.17E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	AC-228	2.00E+01	8.16E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	5/14/2010	1.0	RA-226	1.27E+02	4.90E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	BI-214	1.83E+01	4.11E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	K-40	4.49E+02	3.92E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	TL-208	7.99E+00	1.92E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	PB-212	1.49E+01	2.72E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	AC-228	1.78E+01	5.58E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	PB-214	1.56E+01	4.20E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	RA-226	1.85E+02	3.89E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	TH-234	2.38E+02	5.84E+01



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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
51 WATER TREATMENT BLDG AT HARRIS PLANT	6/14/2010	1.0	BI-212	2.79E+01	1.50E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	TH-234	1.58E+02	6.11E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	K-40	2.27E+02	3.26E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	RA-226	1.79E+02	4.19E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	PB-214	1.79E+01	4.06E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	BI-214	2.07E+01	5.48E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	PB-212	1.70E+01	3.37E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	TL-208	6.77E+00	2.03E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	7/12/2010	1.0	AC-228	1.51E+01	7.78E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	TL-208	4.73E+00	1.82E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	AC-228	1.27E+01	6.18E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	PB-212	9.25E+00	2.95E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	BI-214	1.42E+01	4.72E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	PB-214	1.21E+01	3.92E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	RA-226	1.18E+02	4.12E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	TH-234	1.49E+02	7.18E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	8/12/2010	1.0	K-40	5.11E+02	4.64E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	BI-212	1.45E+01	1.11E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	TH-234	2.35E+02	6.03E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	TL-208	6.38E+00	2.25E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	PB-212	1.36E+01	2.76E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	BI-214	1.61E+01	4.43E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	PB-214	1.52E+01	4.27E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	RA-226	1.94E+02	4.42E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	AC-228	2.33E+01	7.53E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	9/13/2010	1.0	K-40	2.07E+02	3.06E+01

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

*Media Type: Drinking Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	PB-212	1.35E+01	2.81E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	TH-234	2.48E+02	5.62E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	RA-226	2.27E+02	4.41E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	K-40	3.98E+02	3.61E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	BI-214	1.43E+01	4.13E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	TL-208	4.55E+00	1.86E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	10/11/2010	1.0	PB-214	1.46E+01	4.00E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	K-40	5.08E+02	4.73E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	RA-226	9.50E+01	4.91E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	AC-228	1.92E+01	7.72E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	PB-214	6.21E+00	3.28E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	TL-208	4.41E+00	1.99E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	BI-214	1.27E+01	3.75E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	PB-212	9.58E+00	3.05E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	11/11/2010	1.0	TH-234	1.71E+02	7.06E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	AC-228	3.33E+00	1.88E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	RA-226	3.23E+01	1.13E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	PB-214	3.74E+00	1.28E+00
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	BI-214	3.64E+00	9.88E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	PB-212	2.39E+00	7.58E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	TL-208	1.05E+00	4.59E-01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	TH-234	2.31E+01	1.62E+01
51 WATER TREATMENT BLDG AT HARRIS PLANT	12/13/2010	1.0	K-40	1.58E+02	1.31E+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 >12 MILES WNW - PITTSBORO - CONTROL	1/21/2010	480.9	K-40	3.52E+00	3.82E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	1/21/2010	480.9	TL-208	3.89E-02	1.34E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	1/21/2010	480.9	PB-212	1.28E-01	3.49E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	1/21/2010	480.9	PB-214	2.56E-02	1.91E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	1/21/2010	480.9	BE-7	3.28E-01	1.11E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	BI-212	2.10E-01	1.06E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	PB-214	7.81E-02	3.77E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	PB-212	1.72E-01	2.76E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	TL-208	6.03E-02	1.94E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	K-40	3.69E+00	4.12E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	BE-7	3.82E-01	1.68E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	2/25/2010	417.9	BI-214	4.19E-02	3.93E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	BI-214	5.65E-02	2.83E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	RA-226	4.69E-01	3.00E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	BE-7	1.06E-01	8.03E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	K-40	3.70E+00	3.83E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	TL-208	2.20E-01	2.56E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	PB-212	6.46E-01	5.17E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	PB-214	7.86E-02	2.73E-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	>12 MILES WNW - PITTSBORO - CONTROL	3/25/2010	505.4	BI-212	4.87E-01	1.35E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	BE-7	2.16E-01	1.00E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	K-40	2.33E+00	3.02E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	TL-208	2.85E-02	1.37E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	PB-212	5.92E-02	2.44E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	BI-214	6.00E-02	2.19E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	PB-214	5.74E-02	2.35E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	RA-226	2.88E-01	1.66E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	1/21/2010	518.8	TH-234	4.72E-01	3.30E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	2/25/2010	490.6	BI-214	8.84E-02	2.85E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	2/25/2010	490.6	PB-212	5.81E-02	2.16E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	2/25/2010	490.6	PB-214	6.18E-02	2.59E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	2/25/2010	490.6	RA-226	3.26E-01	3.03E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	2/25/2010	490.6	TH-234	6.72E-01	3.20E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	2/25/2010	490.6	K-40	3.85E+00	4.12E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	RA-226	3.60E-01	3.36E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	K-40	4.46E+00	4.69E-01
55	RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	TL-208	1.07E-01	2.34E-02
55	RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	BI-212	2.59E-01	1.31E-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
55 RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	PB-212	2.97E-01	3.86E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	PB-214	7.90E-02	2.99E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	3/25/2010	431.7	BI-214	6.46E-02	3.94E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	9/21/2010	503.9	PB-212	1.63E-01	3.34E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	9/21/2010	503.9	TL-208	7.70E-02	1.79E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	9/21/2010	503.9	K-40	5.87E+00	6.28E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	9/21/2010	503.9	AC-228	5.35E-02	5.30E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	BE-7	1.29E-01	1.11E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	BI-214	5.34E-02	1.90E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	PB-214	3.52E-02	2.30E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	RA-226	4.57E-01	2.17E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	TH-234	4.56E-01	2.88E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	PB-212	2.43E-01	3.12E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	BI-212	1.57E-01	8.58E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	K-40	3.38E+00	3.85E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	10/12/2010	755.7	TL-208	9.90E-02	1.70E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	BE-7	2.77E-01	1.06E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	K-40	3.78E+00	4.47E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	TL-208	1.26E-01	2.14E-02

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

*Media Type: Food Crop*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** COLLARDS

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	BI-212	1.94E-01	1.25E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	TH-234	6.50E-01	3.98E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	PB-212	3.16E-01	4.27E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	BI-214	1.06E-01	3.19E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	PB-214	8.86E-02	3.77E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	11/15/2010	545.8	RA-226	3.18E-01	3.14E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	TL-208	3.77E-02	1.50E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	BI-212	1.87E-01	1.10E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	PB-212	1.45E-01	2.96E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	BI-214	1.63E-01	3.60E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	PB-214	1.09E-01	2.85E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	K-40	4.78E+00	5.38E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	12/15/2010	516.5	BE-7	2.21E-01	1.31E-01

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

*Media Type: Food Crop*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** CUCUMBERS

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	1029.1	PB-214	3.21E-02	1.63E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	1029.1	BI-214	3.79E-02	1.23E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	1029.1	PB-212	1.28E-02	1.04E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	1029.1	K-40	2.53E+00	2.82E-01

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

*Media Type: Food Crop*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** EGGPLANT

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	516.8	K-40	3.53E+00	4.26E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	516.8	PB-212	3.38E-02	2.02E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	516.8	BI-214	5.21E-02	2.18E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	516.8	PB-214	4.83E-02	2.90E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	516.8	RA-226	3.27E-01	2.60E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	516.8	TH-234	5.58E-01	2.94E-01



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

*Media Type: Food Crop*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

**Media:** OKRA

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	RA-226	2.88E-01	1.96E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	TL-208	1.46E-02	8.35E-03
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	PB-212	1.98E-02	1.38E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	K-40	3.77E+00	4.12E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	TH-234	3.59E-01	2.70E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	BI-214	5.25E-02	2.21E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	729.8	PB-214	3.73E-02	1.89E-02

# ***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 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	788.4	RA-226	3.59E-01	1.75E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	788.4	PB-212	5.28E-02	1.92E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	788.4	TL-208	1.53E-02	7.21E-03
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	788.4	K-40	3.57E+00	3.86E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	788.4	BI-214	3.52E-02	1.77E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/19/2010	788.4	PB-214	3.12E-02	1.57E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	868.1	K-40	3.49E+00	3.75E-01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	868.1	PB-214	2.99E-02	2.00E-02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/16/2010	868.1	BI-214	4.12E-02	2.01E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	7/20/2010	975	RA-226	2.85E-01	1.32E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	7/20/2010	975	PB-212	2.78E-02	1.58E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	7/20/2010	975	BI-214	4.29E-02	1.79E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	7/20/2010	975	PB-214	3.56E-02	1.61E-02
55 RD 1167 1.7 MI NNW (GOODWIN)	7/20/2010	975	K-40	2.59E+00	2.90E-01
55 RD 1167 1.7 MI NNW (GOODWIN)	8/17/2010	988.8	K-40	2.80E+00	3.09E-01

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

*Media Type: Bottom Feeder*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

*Media: Catfish*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
44 SITE VARIES WITHIN HARRIS LAKE	5/10/2010	587.5	K-40	4.59E+00	7.76E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	597.3	K-40	4.17E+00	7.05E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/11/2010	556.8	BI-214	6.78E-02	4.67E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/11/2010	556.8	K-40	4.13E+00	7.47E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	638.8	PB-214	1.11E-01	4.46E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	638.8	BI-214	1.06E-01	4.09E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	638.8	K-40	3.48E+00	6.45E-01

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

*Media Type: Free Swimmer*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

*Media: Largemouth Bass*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
44 SITE VARIES WITHIN HARRIS LAKE	5/10/2010	646.3	TH-234	1.24E+00	4.80E-01
44 SITE VARIES WITHIN HARRIS LAKE	5/10/2010	646.3	RA-226	6.03E-01	5.01E-01
44 SITE VARIES WITHIN HARRIS LAKE	5/10/2010	646.3	K-40	4.65E+00	7.08E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	725.2	BI-214	6.28E-02	3.11E-02
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	725.2	K-40	4.13E+00	6.73E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/10/2010	663.3	PB-214	8.38E-02	3.86E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/10/2010	663.3	BI-214	4.40E-02	3.41E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/10/2010	663.3	K-40	4.33E+00	6.90E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	624.7	BI-214	1.01E-01	4.77E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	624.7	K-40	4.12E+00	6.82E-01

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

*Media Type: Free Swimmer*

*Quantity: GRAMS (wet)*

*Concentration (Activity): pCi/gm wet*

*Media: Sunfish*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
44 SITE VARIES WITHIN HARRIS LAKE	5/10/2010	609.8	K-40	4.31E+00	7.34E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	639.8	RA-226	6.85E-01	4.29E-01
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	639.8	PB-214	4.82E-02	4.38E-02
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	639.8	BI-214	5.76E-02	3.66E-02
44 SITE VARIES WITHIN HARRIS LAKE	11/1/2010	639.8	K-40	3.96E+00	6.66E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/10/2010	631.9	BI-214	8.31E-02	3.13E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	5/10/2010	631.9	K-40	3.34E+00	6.04E-01
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	593.5	BI-214	5.10E-02	4.14E-02
45 SITE VARIES ABOVE BUCKHORN DAM - CONTROL	11/1/2010	593.5	K-40	4.30E+00	7.44E-01

# HNP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/L

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	1	PB-212	1.56E+01	6.38E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	1	BI-214	1.72E+01	1.06E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	1	PB-214	2.01E+01	9.29E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	1	RA-226	2.07E+02	1.06E+02
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	1	TH-234	2.72E+02	1.37E+02
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	2/12/2010	1	K-40	2.33E+02	7.24E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	1	RA-226	2.21E+02	9.96E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	1	K-40	2.28E+02	5.73E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	1	PB-214	3.17E+01	9.97E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	1	TL-208	5.01E+00	4.12E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	1	TH-234	2.00E+02	1.36E+02
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	5/19/2010	1	BI-214	3.53E+01	8.91E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	PB-212	1.27E+01	6.13E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	K-40	2.03E+02	5.00E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	BI-214	2.72E+01	1.03E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	TL-208	3.60E+00	3.10E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	PB-214	2.89E+01	8.13E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	RA-226	2.02E+02	7.65E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	8/5/2010	1	TH-234	2.18E+02	1.30E+02
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	1	RA-226	2.03E+02	8.36E+01
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	1	PB-212	1.16E+01	4.47E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	1	TH-234	2.41E+02	1.25E+02
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	1	PB-214	2.08E+01	8.16E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	1	BI-214	2.09E+01	7.10E+00
57 0.4 MI SSW - N SIDE AUX RES INTAKE CANAL	11/22/2010	1	K-40	2.53E+02	5.13E+01
59 0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	2/12/2010	1	K-40	5.76E+02	9.13E+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>	
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	2/12/2010	1	PB-212	1.41E+01	1.00E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	2/12/2010	1	BI-214	2.29E+01	1.01E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	1	K-40	6.14E+02	7.94E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	1	BI-214	3.96E+01	9.78E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	1	TL-208	8.79E+00	4.26E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	1	PB-212	1.08E+01	7.90E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	1	PB-214	1.98E+01	1.07E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	5/19/2010	1	RA-226	1.33E+02	1.06E+02
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	1	PB-212	7.63E+00	6.59E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	1	BI-214	1.53E+01	7.80E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	1	RA-226	1.80E+02	1.02E+02
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	1	K-40	5.71E+02	6.96E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	1	PB-214	1.54E+01	8.58E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	8/5/2010	1	TL-208	6.26E+00	4.12E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	11/22/2010	1	K-40	5.17E+02	8.74E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	11/22/2010	1	PB-212	8.88E+00	7.33E+00
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	11/22/2010	1	BI-214	9.25E+01	1.32E+01
59	0.5 MI NNE (N SIDE OLD CONSTRUCTION RD)	11/22/2010	1	PB-214	8.60E+01	1.30E+01
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	2/12/2010	1	K-40	5.73E+02	8.79E+01
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	2/12/2010	1	PB-212	1.37E+01	6.89E+00
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	2/12/2010	1	BI-214	4.79E+01	1.23E+01
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	2/12/2010	1	PB-214	4.65E+01	1.11E+01
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	PB-212	1.48E+01	6.04E+00
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	RA-226	2.18E+02	9.95E+01
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	K-40	4.81E+02	6.79E+01
60	0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	TL-208	5.29E+00	3.97E+00

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

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/L

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	BI-214	3.22E+01	9.69E+00
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	TH-234	2.58E+02	1.24E+02
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	5/19/2010	1	PB-214	2.69E+01	9.95E+00
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	8/5/2010	1	RA-226	1.26E+02	9.98E+01
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	8/5/2010	1	PB-214	5.81E+01	1.17E+01
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	8/5/2010	1	BI-214	6.44E+01	1.21E+01
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	8/5/2010	1	K-40	5.01E+02	7.76E+01
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	11/22/2010	1	RA-226	2.48E+02	1.09E+02
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	11/22/2010	1	PB-214	1.45E+02	1.77E+01
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	11/22/2010	1	BI-214	1.40E+02	1.96E+01
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	11/22/2010	1	PB-212	1.48E+01	7.84E+00
60 0.5 MI ESE (W BANK HARRIS LK SE OF CT)	11/22/2010	1	K-40	2.02E+02	8.61E+01
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	2/12/2010	1	BI-214	2.18E+01	1.61E+01
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	2/12/2010	1	RA-226	2.16E+02	1.19E+02
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	2/12/2010	1	PB-212	1.54E+01	1.16E+01
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	2/12/2010	1	K-40	1.68E+02	1.18E+02
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	1	K-40	2.35E+02	6.63E+01
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	1	TL-208	7.45E+00	6.58E+00
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	1	BI-214	2.38E+01	9.71E+00
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	1	PB-212	2.28E+01	8.05E+00
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	1	RA-226	3.14E+02	1.21E+02
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	5/19/2010	1	TH-234	2.49E+02	1.53E+02
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	TL-208	1.01E+01	5.29E+00
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	PB-214	4.05E+01	1.27E+01
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	RA-226	2.24E+02	1.08E+02
68 0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	TH-234	2.20E+02	1.65E+02



# *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>	
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	PB-212	1.79E+01	7.88E+00
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	BI-214	4.42E+01	1.17E+01
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	8/5/2010	1	K-40	1.76E+02	7.30E+01
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	1	RA-226	1.34E+02	8.53E+01
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	1	TH-234	2.39E+02	9.53E+01
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	1	PB-212	1.29E+01	6.51E+00
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	1	BI-214	2.78E+01	7.47E+00
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	1	K-40	3.86E+02	7.22E+01
68	0.2 MI W (N OF OLD STEAM GEN. STORAGE BLD.)	11/22/2010	1	PB-214	2.21E+01	8.72E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	2/12/2010	1	BI-214	2.14E+01	9.08E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	2/12/2010	1	K-40	3.79E+02	7.21E+01
69	0.2 MI NNE (S SIDE OF WRHSE 9)	2/12/2010	1	TL-208	7.38E+00	3.99E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	2/12/2010	1	RA-226	2.33E+02	1.13E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	PB-212	1.53E+01	6.25E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	TL-208	5.90E+00	4.19E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	PB-214	2.18E+01	7.78E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	BI-214	2.92E+01	9.00E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	RA-226	2.27E+02	1.17E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	K-40	5.36E+02	6.95E+01
69	0.2 MI NNE (S SIDE OF WRHSE 9)	5/19/2010	1	TH-234	2.23E+02	1.40E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	BI-214	3.55E+01	1.01E+01
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	RA-226	2.21E+02	9.75E+01
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	PB-214	2.91E+01	9.84E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	TL-208	4.33E+00	3.32E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	K-40	4.39E+02	6.10E+01
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	PB-212	1.27E+01	6.86E+00

# *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>	
69	0.2 MI NNE (S SIDE OF WRHSE 9)	8/5/2010	1	TH-234	2.46E+02	1.41E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	TL-208	4.73E+00	4.29E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	PB-212	7.35E+00	6.30E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	BI-214	1.29E+01	9.16E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	PB-214	2.19E+01	9.57E+00
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	RA-226	1.68E+02	6.61E+01
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	TH-234	2.57E+02	1.31E+02
69	0.2 MI NNE (S SIDE OF WRHSE 9)	11/22/2010	1	K-40	2.55E+02	5.00E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	2/12/2010	1	TH-234	2.73E+02	1.66E+02
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	2/12/2010	1	BI-214	1.18E+01	1.01E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	2/12/2010	1	PB-212	8.86E+00	5.82E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	2/12/2010	1	K-40	2.77E+02	5.32E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	2/12/2010	1	RA-226	1.92E+02	8.42E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	1	PB-214	1.77E+01	8.94E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	1	BI-214	2.25E+01	7.90E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	1	K-40	2.39E+02	5.43E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	1	PB-212	9.58E+00	5.31E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	1	TL-208	5.40E+00	3.38E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	5/19/2010	1	RA-226	1.98E+02	7.67E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	K-40	2.75E+02	5.48E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	BI-214	2.98E+01	9.88E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	PB-212	1.01E+01	4.50E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	TH-234	2.64E+02	1.36E+02
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	PB-214	1.30E+01	8.37E+00
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	RA-226	1.63E+02	7.42E+01
70	0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	8/5/2010	1	TL-208	5.31E+00	4.55E+00

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

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/L

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
70 0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	11/22/2010	1	PB-212	1.12E+01	9.29E+00
70 0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	11/22/2010	1	K-40	5.60E+02	7.62E+01
70 0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	11/22/2010	1	PB-214	1.42E+01	8.90E+00
70 0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	11/22/2010	1	BI-214	1.78E+01	9.61E+00
70 0.4 MI E (N SIDE OF PLANT ENTRANCE RD)	11/22/2010	1	TL-208	5.38E+00	3.05E+00
71 0.3 MI SE (S OF SWITCH YARD)	2/12/2010	1	TL-208	8.23E+00	4.58E+00
71 0.3 MI SE (S OF SWITCH YARD)	2/12/2010	1	PB-212	1.27E+01	1.17E+01
71 0.3 MI SE (S OF SWITCH YARD)	2/12/2010	1	BI-214	3.20E+01	1.28E+01
71 0.3 MI SE (S OF SWITCH YARD)	2/12/2010	1	TH-234	4.02E+02	1.93E+02
71 0.3 MI SE (S OF SWITCH YARD)	2/12/2010	1	K-40	2.38E+02	8.74E+01
71 0.3 MI SE (S OF SWITCH YARD)	5/19/2010	1	RA-226	2.19E+02	8.28E+01
71 0.3 MI SE (S OF SWITCH YARD)	5/19/2010	1	K-40	2.28E+02	8.37E+01
71 0.3 MI SE (S OF SWITCH YARD)	5/19/2010	1	TL-208	7.41E+00	4.60E+00
71 0.3 MI SE (S OF SWITCH YARD)	5/19/2010	1	BI-214	2.22E+01	1.03E+01
71 0.3 MI SE (S OF SWITCH YARD)	5/19/2010	1	PB-212	1.65E+01	9.09E+00
71 0.3 MI SE (S OF SWITCH YARD)	5/19/2010	1	TH-234	3.17E+02	2.19E+02
71 0.3 MI SE (S OF SWITCH YARD)	8/5/2010	1	TH-234	2.44E+02	1.99E+02
71 0.3 MI SE (S OF SWITCH YARD)	8/5/2010	1	K-40	2.60E+02	7.62E+01
71 0.3 MI SE (S OF SWITCH YARD)	8/5/2010	1	TL-208	5.70E+00	4.36E+00
71 0.3 MI SE (S OF SWITCH YARD)	8/5/2010	1	PB-212	1.88E+01	8.23E+00
71 0.3 MI SE (S OF SWITCH YARD)	8/5/2010	1	BI-214	2.30E+01	1.18E+01
71 0.3 MI SE (S OF SWITCH YARD)	8/5/2010	1	RA-226	2.47E+02	1.19E+02
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	PB-212	1.53E+01	6.49E+00
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	TL-208	5.32E+00	4.76E+00
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	K-40	2.08E+02	7.67E+01
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	PB-214	1.81E+01	1.13E+01

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

Media Type: Groundwater

Quantity: Liters

Concentration (Activity): pCi/L

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	RA-226	2.53E+02	9.56E+01
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	BI-214	2.43E+01	1.07E+01
71 0.3 MI SE (S OF SWITCH YARD)	11/22/2010	1	TH-234	2.73E+02	1.61E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	2/12/2010	1	PB-214	7.52E+02	5.26E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	2/12/2010	1	BI-214	6.64E+02	5.68E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	2/12/2010	1	TH-234	3.79E+02	2.80E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	2/12/2010	1	K-40	3.97E+02	7.88E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	2/12/2010	1	RA-226	2.37E+02	1.82E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	PB-212	2.01E+01	9.28E+00
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	TL-208	5.19E+00	5.14E+00
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	K-40	4.81E+02	7.73E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	TH-234	3.55E+02	2.29E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	RA-226	2.17E+02	1.41E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	PB-214	7.24E+02	4.82E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	5/19/2010	1	BI-214	6.71E+02	5.47E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	1	TL-208	9.81E+00	5.98E+00
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	1	BI-214	4.47E+02	3.75E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	1	PB-212	2.68E+01	8.28E+00
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	1	RA-226	1.38E+02	1.07E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	1	PB-214	4.61E+02	3.18E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	8/5/2010	1	K-40	3.92E+02	6.43E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	1	K-40	3.73E+02	7.19E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	1	TH-234	2.84E+02	2.17E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	1	RA-226	3.28E+02	1.65E+02
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	1	PB-214	9.23E+02	5.69E+01
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	1	BI-214	8.69E+02	6.77E+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>
72 0.2 MI SE (N CTMAKEUP WATER INTAKE STRUCTURE)	11/22/2010	1	PB-212	1.68E+01	9.16E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	2/12/2010	1	BI-214	4.09E+01	1.26E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	2/12/2010	1	PB-214	3.49E+01	1.17E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	2/12/2010	1	K-40	4.99E+02	8.52E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	5/19/2010	1	RA-226	1.18E+02	8.13E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	5/19/2010	1	K-40	6.12E+02	8.52E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	5/19/2010	1	PB-214	2.63E+01	9.49E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	5/19/2010	1	PB-212	1.10E+01	5.89E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	5/19/2010	1	BI-214	2.99E+01	1.10E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	8/5/2010	1	RA-226	1.58E+02	1.05E+02
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	8/5/2010	1	BI-214	5.85E+01	1.13E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	8/5/2010	1	K-40	5.64E+02	7.62E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	8/5/2010	1	TL-208	6.80E+00	4.17E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	8/5/2010	1	PB-214	3.61E+01	9.16E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	8/5/2010	1	PB-212	1.32E+01	5.83E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	11/22/2010	1	K-40	2.32E+02	6.49E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	11/22/2010	1	RA-226	1.99E+02	9.00E+01
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	11/22/2010	1	TH-234	1.96E+02	1.07E+02
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	11/22/2010	1	PB-212	8.35E+00	4.71E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	11/22/2010	1	PB-214	2.99E+01	9.71E+00
73 0.2 MI S (N OF EMERG SRV WATER SCREENING STRUCT	11/22/2010	1	BI-214	3.17E+01	8.00E+00
74 0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	1	TL-208	7.27E+00	4.34E+00
74 0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	1	BI-214	2.55E+01	8.90E+00
74 0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	1	RA-226	1.27E+02	1.21E+02
74 0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	1	PB-212	1.53E+01	8.93E+00
74 0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	1	K-40	2.28E+02	7.27E+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>	
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	2/12/2010	1	PB-214	1.17E+01	1.11E+01
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	5/20/2010	1	K-40	5.71E+02	7.73E+01
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	5/20/2010	1	RA-226	1.84E+02	9.99E+01
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	5/20/2010	1	PB-214	1.63E+01	7.66E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	5/20/2010	1	PB-212	1.22E+01	7.52E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	5/20/2010	1	TL-208	4.08E+00	3.46E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	1	TH-234	1.72E+02	1.33E+02
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	1	K-40	2.61E+02	4.85E+01
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	1	BI-214	5.28E+01	8.78E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	1	PB-214	3.84E+01	9.51E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	1	RA-226	2.14E+02	8.69E+01
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	8/5/2010	1	PB-212	8.99E+00	5.88E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	PB-212	1.78E+01	6.83E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	BI-214	2.85E+01	8.31E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	PB-214	2.06E+01	9.06E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	TL-208	8.25E+00	3.98E+00
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	K-40	3.98E+02	6.83E+01
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	TH-234	2.38E+02	1.17E+02
74	0.2 MI SSE (N HELICOPTER LANDING PAD)	11/22/2010	1	RA-226	1.42E+02	8.27E+01
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	2/12/2010	1	K-40	5.30E+02	8.38E+01
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	PB-212	1.47E+01	7.43E+00
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	K-40	4.96E+02	7.22E+01
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	AC-228	9.61E+00	1.03E+01
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	PB-214	1.34E+01	8.71E+00
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	TH-234	2.19E+02	1.37E+02
75	0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	TL-208	5.96E+00	5.05E+00

# *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>
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	BI-214	2.52E+01	8.32E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	5/20/2010	1	RA-226	2.21E+02	1.21E+02
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	BI-214	1.75E+01	7.88E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	RA-226	1.70E+02	6.90E+01
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	TH-234	2.76E+02	1.06E+02
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	PB-214	2.18E+01	9.74E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	K-40	4.21E+02	6.83E+01
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	TL-208	8.74E+00	3.69E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	8/6/2010	1	PB-212	2.24E+01	6.71E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	RA-226	2.41E+02	9.43E+01
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	TL-208	7.31E+00	4.27E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	PB-212	1.44E+01	7.95E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	PB-214	3.23E+01	8.90E+00
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	BI-214	2.84E+01	1.10E+01
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	K-40	2.54E+02	5.59E+01
75 0.1 MI ESE (W OF SECURITY BLDG ENTRANCE)	11/22/2010	1	TH-234	3.00E+02	1.50E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	2/12/2010	1	PB-214	1.50E+02	1.73E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	2/12/2010	1	RA-226	2.08E+02	1.23E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	2/12/2010	1	K-40	1.77E+02	6.84E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	2/12/2010	1	BI-214	1.35E+02	2.05E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	2/12/2010	1	PB-212	1.09E+01	7.53E+00
76 0.1 MI S (INSD OCA BETWN SB & WPB)	2/12/2010	1	TH-234	4.03E+02	2.12E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	1	K-40	2.34E+02	6.75E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	1	TH-234	2.46E+02	1.97E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	1	RA-226	2.78E+02	1.53E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	1	PB-214	7.02E+01	1.54E+01

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

*Media Type: Groundwater*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
76 0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	1	BI-214	7.12E+01	1.76E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	5/20/2010	1	PB-212	2.49E+01	6.92E+00
76 0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	1	TL-208	8.98E+00	6.00E+00
76 0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	1	RA-226	2.16E+02	1.06E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	1	PB-214	5.51E+01	1.25E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	1	BI-214	7.08E+01	1.42E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	1	K-40	2.25E+02	7.48E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	8/6/2010	1	PB-212	2.07E+01	6.18E+00
76 0.1 MI S (INSD OCA BETWN SB & WPB)	11/22/2010	1	K-40	5.01E+02	7.56E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	11/22/2010	1	BI-214	2.75E+01	1.05E+01
76 0.1 MI S (INSD OCA BETWN SB & WPB)	11/22/2010	1	RA-226	1.40E+02	1.05E+02
76 0.1 MI S (INSD OCA BETWN SB & WPB)	11/22/2010	1	PB-212	9.68E+00	6.15E+00
76 0.1 MI S (INSD OCA BETWN SB & WPB)	11/22/2010	1	PB-214	1.97E+01	9.39E+00



# *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 >12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	1	K-40	1.62E+03	1.50E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	1	BI-214	2.35E+01	1.02E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	1	PB-214	2.65E+01	8.78E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	1	TH-234	2.84E+02	1.58E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	1/4/2010	1	PB-212	1.28E+01	6.48E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	1	PB-212	9.80E+00	8.09E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	1	TH-234	2.00E+02	1.37E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	1	BI-214	1.37E+01	7.53E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	1	TL-208	4.22E+00	3.85E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	1	K-40	1.67E+03	1.50E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	2/1/2010	1	RA-226	2.15E+02	9.56E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	TH-234	2.22E+02	1.54E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	BI-214	1.39E+01	1.11E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	K-40	1.79E+03	1.60E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	PB-212	1.66E+01	7.65E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	RA-226	1.93E+02	1.09E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	TL-208	7.57E+00	4.71E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	3/1/2010	1	PB-214	2.25E+01	1.06E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	4/5/2010	1	RA-226	1.93E+02	8.74E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	4/5/2010	1	K-40	1.96E+03	1.79E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	4/5/2010	1	BI-214	2.91E+01	1.06E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	1	PB-214	1.15E+01	1.08E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	1	RA-226	1.24E+02	1.02E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	1	K-40	1.98E+03	1.79E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	5/3/2010	1	BI-214	2.14E+01	1.07E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	1	PB-212	9.25E+00	8.53E+00

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

Media Type: Milk

Quantity: Liters

Concentration (Activity): pCi/L

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	1	BI-214	2.08E+01	1.02E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	1	K-40	1.92E+03	1.78E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	6/7/2010	1	TL-208	1.41E+01	8.37E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	1	PB-212	1.73E+01	1.13E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	1	BI-214	2.35E+01	1.27E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	1	TL-208	8.72E+00	6.06E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	1	K-40	1.93E+03	2.05E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	7/6/2010	1	RA-226	2.07E+02	9.66E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	PB-212	1.53E+01	7.15E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	TL-208	9.36E+00	6.73E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	BI-214	3.91E+01	1.34E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	PB-214	3.23E+01	1.45E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	RA-226	1.11E+02	8.83E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	TH-234	2.98E+02	1.80E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	8/2/2010	1	K-40	1.66E+03	1.87E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	1	BI-214	4.00E+01	1.46E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	1	PB-214	2.86E+01	1.04E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	1	RA-226	2.25E+02	9.90E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	1	TH-234	2.18E+02	1.43E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	1	K-40	1.71E+03	1.54E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/7/2010	1	PB-212	7.76E+00	5.97E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	1	TH-234	3.18E+02	1.81E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	1	K-40	1.59E+03	1.73E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	1	PB-212	1.41E+01	9.25E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	1	BI-214	2.49E+01	1.23E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	9/20/2010	1	RA-226	2.03E+02	1.09E+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 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	BI-214	2.46E+01	1.02E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	K-40	1.68E+03	1.50E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	TH-234	2.22E+02	1.49E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	PB-214	2.24E+01	1.05E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	PB-212	5.68E+00	5.34E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	TL-208	6.14E+00	3.80E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	10/4/2010	1	RA-226	2.48E+02	1.07E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	1	BI-214	5.50E+01	1.28E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	1	PB-214	2.90E+01	1.19E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	1	K-40	2.00E+03	1.83E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	10/18/2010	1	TL-208	7.94E+00	5.22E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	PB-212	9.00E+00	8.64E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	TL-208	5.86E+00	5.84E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	BI-214	3.29E+01	9.76E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	K-40	1.81E+03	1.63E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	PB-214	2.65E+01	1.09E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	RA-226	2.04E+02	1.05E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	11/1/2010	1	TH-234	1.64E+02	1.51E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	1	K-40	1.92E+03	1.75E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	1	PB-214	4.19E+01	1.06E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	1	BI-214	8.85E+01	1.39E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	11/15/2010	1	PB-212	1.48E+01	9.97E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	TL-208	7.24E+00	5.57E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	K-40	1.68E+03	1.83E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	PB-212	2.12E+01	8.26E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	TH-234	3.43E+02	1.98E+02

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

*Media Type: Milk*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	PB-214	3.21E+01	1.27E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	RA-226	2.33E+02	1.56E+02
5 >12 MILES WNW - PITTSBORO - CONTROL	12/6/2010	1	BI-214	4.67E+01	1.23E+01
5 >12 MILES WNW - PITTSBORO - CONTROL	12/20/2010	1	BI-214	1.80E+01	9.98E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	12/20/2010	1	TL-208	6.92E+00	3.92E+00
5 >12 MILES WNW - PITTSBORO - CONTROL	12/20/2010	1	K-40	2.03E+03	1.87E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	9/20/2010	1	RA-226	1.08E+02	1.02E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	9/20/2010	1	BI-214	2.96E+01	1.06E+01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	9/20/2010	1	PB-212	1.08E+01	9.03E+00
96 4.6 MI ESE HUMBUG FARM ON SR 1127	9/20/2010	1	K-40	2.34E+03	2.01E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/4/2010	1	BI-214	1.74E+01	1.00E+01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/4/2010	1	RA-226	1.27E+02	1.00E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/4/2010	1	K-40	2.48E+03	2.08E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/4/2010	1	PB-214	1.35E+01	1.25E+01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	1	RA-226	2.11E+02	1.14E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	1	PB-214	2.92E+01	9.87E+00
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	1	BI-214	3.50E+01	1.09E+01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	1	K-40	2.11E+03	1.80E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	1	PB-212	1.10E+01	6.94E+00
96 4.6 MI ESE HUMBUG FARM ON SR 1127	10/18/2010	1	TH-234	2.23E+02	1.32E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	11/1/2010	1	RA-226	1.73E+02	1.01E+02
96 4.6 MI ESE HUMBUG FARM ON SR 1127	11/1/2010	1	PB-214	1.31E+01	1.10E+01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	11/1/2010	1	BI-214	2.59E+01	1.24E+01
96 4.6 MI ESE HUMBUG FARM ON SR 1127	11/1/2010	1	K-40	2.43E+03	2.09E+02

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

*Media Type: Bottom Sediment*

*Quantity: GRAMS (dry)*

*Concentration (Activity): pCi/gm dry*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	BI-212	6.58E-01	2.04E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	BE-7	3.03E-01	2.40E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	K-40	9.33E+00	9.31E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	CO-60	3.48E-01	5.39E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	TL-208	1.88E-01	3.90E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	PB-212	6.12E-01	6.42E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	BI-214	4.33E-01	7.96E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	PB-214	4.73E-01	7.59E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	RA-226	1.47E+00	5.82E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	AC-228	7.30E-01	1.32E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	TH-234	1.07E+00	9.51E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	1/19/2010	1197.7	CS-137	1.49E-01	3.30E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	AC-228	1.09E+00	2.05E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	K-40	9.81E+00	1.09E+00
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	BI-214	6.39E-01	1.11E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	PB-214	7.68E-01	1.15E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	RA-226	1.55E+00	8.78E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	PB-212	9.62E-01	9.93E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	BI-212	1.01E+00	3.63E-01
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	TL-208	3.24E-01	6.09E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	CS-137	2.97E-01	5.67E-02
52 HARRIS LAKE COOLING TOWER MIXING ZONE	7/8/2010	833.2	CO-60	1.02E+00	1.13E-01

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

Media Type: Shoreline Sediment

Quantity: GRAMS (dry)

Concentration (Activity): pCi/gm dry

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
26 4.7 MILES S	1/19/2010	1410.8	PB-214	1.43E-01	3.71E-02
26 4.7 MILES S	1/19/2010	1410.8	AC-228	2.56E-01	8.02E-02
26 4.7 MILES S	1/19/2010	1410.8	PB-212	1.99E-01	3.24E-02
26 4.7 MILES S	1/19/2010	1410.8	TL-208	7.55E-02	1.86E-02
26 4.7 MILES S	1/19/2010	1410.8	K-40	7.46E+00	7.18E-01
26 4.7 MILES S	1/19/2010	1410.8	BI-214	1.27E-01	4.36E-02
26 4.7 MILES S	1/19/2010	1410.8	RA-226	9.55E-01	4.14E-01
26 4.7 MILES S	7/8/2010	1258.3	AC-228	3.09E-01	9.71E-02
26 4.7 MILES S	7/8/2010	1258.3	BI-212	4.80E-01	1.82E-01
26 4.7 MILES S	7/8/2010	1258.3	PB-212	4.24E-01	5.32E-02
26 4.7 MILES S	7/8/2010	1258.3	TH-234	2.31E+00	9.86E-01
26 4.7 MILES S	7/8/2010	1258.3	RA-226	1.54E+00	6.37E-01
26 4.7 MILES S	7/8/2010	1258.3	TL-208	1.48E-01	3.17E-02
26 4.7 MILES S	7/8/2010	1258.3	BI-214	1.97E-01	6.12E-02
26 4.7 MILES S	7/8/2010	1258.3	K-40	1.55E+01	1.25E+00
26 4.7 MILES S	7/8/2010	1258.3	PB-214	3.56E-01	6.09E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	BI-212	3.05E-01	1.88E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	BI-214	2.09E-01	4.43E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	AC-228	3.40E-01	7.83E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	TH-234	8.48E-01	7.34E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	RA-226	4.81E-01	3.93E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	PB-214	2.30E-01	5.23E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	PB-212	2.87E-01	3.71E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	BE-7	1.99E-01	1.09E-01
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	TL-208	9.42E-02	2.75E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	1/19/2010	1732.1	K-40	1.31E+01	1.07E+00

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

*Media Type: Shoreline Sediment*

*Quantity: GRAMS (dry)*

*Concentration (Activity): pCi/gm dry*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	TL-208	9.56E-02	2.85E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	PB-214	2.32E-01	5.37E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	BI-214	2.42E-01	5.22E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	PB-212	2.41E-01	4.52E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	K-40	1.27E+01	1.05E+00
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	AC-228	2.05E-01	8.93E-02
41 SHORELINE OF COOLING TOWER MIXING ZONE	7/8/2010	1434.4	RA-226	6.56E-01	3.98E-01

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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
26 4.7 MILES S	1/11/2010	1	TL-208	8.91E+00	2.03E+00
26 4.7 MILES S	1/11/2010	1	BI-214	9.94E+00	3.57E+00
26 4.7 MILES S	1/11/2010	1	RA-226	1.61E+02	4.31E+01
26 4.7 MILES S	1/11/2010	1	TH-234	1.80E+02	5.57E+01
26 4.7 MILES S	1/11/2010	1	K-40	3.81E+02	3.89E+01
26 4.7 MILES S	1/11/2010	1	PB-212	1.36E+01	3.28E+00
26 4.7 MILES S	2/8/2010	1	BI-214	1.61E+01	3.79E+00
26 4.7 MILES S	2/8/2010	1	PB-212	1.72E+01	3.41E+00
26 4.7 MILES S	2/8/2010	1	BI-212	1.93E+01	1.09E+01
26 4.7 MILES S	2/8/2010	1	PB-214	1.11E+01	4.25E+00
26 4.7 MILES S	2/8/2010	1	RA-226	2.10E+02	4.78E+00
26 4.7 MILES S	2/8/2010	1	AC-228	1.47E+01	8.65E+00
26 4.7 MILES S	2/8/2010	1	TH-234	2.30E+02	6.79E+01
26 4.7 MILES S	2/8/2010	1	TL-208	6.55E+00	2.03E+00
26 4.7 MILES S	2/8/2010	1	K-40	4.32E+02	4.07E+01
26 4.7 MILES S	3/11/2010	1	PB-214	1.30E+01	4.13E+00
26 4.7 MILES S	3/11/2010	1	RA-226	1.63E+02	4.48E+01
26 4.7 MILES S	3/11/2010	1	K-40	4.24E+02	4.25E+01
26 4.7 MILES S	3/11/2010	1	BI-214	1.60E+01	4.41E+00
26 4.7 MILES S	3/11/2010	1	TL-208	5.06E+00	1.77E+00
26 4.7 MILES S	3/11/2010	1	TH-234	1.92E+02	6.79E+01
26 4.7 MILES S	3/11/2010	1	PB-212	1.56E+01	3.38E+00
26 4.7 MILES S	4/12/2010	1	BI-214	6.95E+00	3.89E+00
26 4.7 MILES S	4/12/2010	1	TL-208	6.28E+00	2.46E+00
26 4.7 MILES S	4/12/2010	1	PB-214	8.12E+00	3.99E+00
26 4.7 MILES S	4/12/2010	1	TH-234	1.77E+02	6.60E+01



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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
26 4.7 MILES S	4/12/2010	1	PB-212	1.31E+01	3.42E+00
26 4.7 MILES S	4/12/2010	1	RA-226	6.99E+01	4.17E+01
26 4.7 MILES S	4/12/2010	1	K-40	5.22E+02	4.87E+01
26 4.7 MILES S	5/14/2010	1	PB-212	1.34E+01	3.57E+00
26 4.7 MILES S	5/14/2010	1	BI-214	1.76E+01	4.87E+00
26 4.7 MILES S	5/14/2010	1	TH-234	2.58E+02	7.88E+01
26 4.7 MILES S	5/14/2010	1	PB-214	1.46E+01	4.77E+00
26 4.7 MILES S	5/14/2010	1	TL-208	6.05E+00	2.41E+00
26 4.7 MILES S	5/14/2010	1	K-40	2.15E+02	3.54E+01
26 4.7 MILES S	5/14/2010	1	RA-226	1.98E+02	4.42E+01
26 4.7 MILES S	5/14/2010	1	AC-228	1.80E+01	8.09E+00
26 4.7 MILES S	6/14/2010	1	TL-208	5.29E+00	1.50E+00
26 4.7 MILES S	6/14/2010	1	RA-226	2.07E+02	4.18E+01
26 4.7 MILES S	6/14/2010	1	BI-212	1.37E+01	1.12E+01
26 4.7 MILES S	6/14/2010	1	TH-234	2.20E+02	5.77E+01
26 4.7 MILES S	6/14/2010	1	AC-228	1.77E+01	5.86E+00
26 4.7 MILES S	6/14/2010	1	PB-214	1.43E+01	4.53E+00
26 4.7 MILES S	6/14/2010	1	PB-212	1.41E+01	2.95E+00
26 4.7 MILES S	6/14/2010	1	K-40	3.96E+02	3.45E+01
26 4.7 MILES S	6/14/2010	1	BI-214	1.69E+01	4.01E+00
26 4.7 MILES S	7/12/2010	1	K-40	5.66E+02	4.67E+01
26 4.7 MILES S	7/12/2010	1	PB-212	8.82E+00	2.80E+00
26 4.7 MILES S	7/12/2010	1	BI-214	1.46E+01	3.91E+00
26 4.7 MILES S	7/12/2010	1	PB-214	7.23E+00	3.18E+00
26 4.7 MILES S	7/12/2010	1	AC-228	7.78E+00	5.65E+00
26 4.7 MILES S	7/12/2010	1	TL-208	3.30E+00	1.52E+00

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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
26 4.7 MILES S	7/12/2010	1	RA-226	1.04E+02	3.51E+01
26 4.7 MILES S	7/12/2010	1	TH-234	1.34E+02	5.57E+01
26 4.7 MILES S	8/12/2010	1	RA-226	1.97E+02	4.30E+01
26 4.7 MILES S	8/12/2010	1	BI-214	2.40E+01	4.73E+00
26 4.7 MILES S	8/12/2010	1	AC-228	1.36E+01	6.55E+00
26 4.7 MILES S	8/12/2010	1	PB-214	1.74E+01	3.99E+00
26 4.7 MILES S	8/12/2010	1	TH-234	2.00E+02	5.66E+01
26 4.7 MILES S	8/12/2010	1	PB-212	1.12E+01	2.48E+00
26 4.7 MILES S	8/12/2010	1	K-40	2.45E+02	3.12E+01
26 4.7 MILES S	8/12/2010	1	TL-208	3.45E+00	2.03E+00
26 4.7 MILES S	9/13/2010	1	TH-234	1.78E+02	7.10E+01
26 4.7 MILES S	9/13/2010	1	AC-228	1.35E+01	5.35E+00
26 4.7 MILES S	9/13/2010	1	RA-226	1.11E+02	4.49E+01
26 4.7 MILES S	9/13/2010	1	TL-208	2.81E+00	1.97E+00
26 4.7 MILES S	9/13/2010	1	BI-214	1.58E+01	4.26E+00
26 4.7 MILES S	9/13/2010	1	PB-212	9.17E+00	2.98E+00
26 4.7 MILES S	9/13/2010	1	PB-214	9.59E+00	3.73E+00
26 4.7 MILES S	9/13/2010	1	K-40	5.12E+02	4.70E+01
26 4.7 MILES S	10/11/2010	1	PB-214	6.71E+00	3.73E+00
26 4.7 MILES S	10/11/2010	1	RA-226	1.34E+02	4.07E+01
26 4.7 MILES S	10/11/2010	1	PB-212	8.83E+00	3.27E+00
26 4.7 MILES S	10/11/2010	1	TH-234	1.36E+02	8.50E+01
26 4.7 MILES S	10/11/2010	1	TL-208	3.25E+00	1.88E+00
26 4.7 MILES S	10/11/2010	1	K-40	5.70E+02	4.84E+01
26 4.7 MILES S	10/11/2010	1	BI-214	1.31E+01	3.78E+00
26 4.7 MILES S	10/11/2010	1	AC-228	1.31E+01	5.57E+00

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

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

<i><b>Sample Point</b></i>	<i><b>Sample Date</b></i>	<i><b>Quantity</b></i>	<i><b>Isotope</b></i>	<i><b>Activity</b></i>	<i><b>2 Sigma Error</b></i>
26 4.7 MILES S	11/11/2010	1	PB-214	1.50E+01	4.09E+00
26 4.7 MILES S	11/11/2010	1	TL-208	2.67E+00	1.89E+00
26 4.7 MILES S	11/11/2010	1	BI-214	1.58E+01	3.25E+00
26 4.7 MILES S	11/11/2010	1	PB-212	8.44E+00	2.38E+00
26 4.7 MILES S	11/11/2010	1	RA-226	2.03E+02	4.43E+01
26 4.7 MILES S	11/11/2010	1	TH-234	1.75E+02	5.59E+01
26 4.7 MILES S	11/11/2010	1	K-40	2.58E+02	3.03E+01
26 4.7 MILES S	12/13/2010	1	RA-226	1.84E+02	4.68E+01
26 4.7 MILES S	12/13/2010	1	BI-214	2.05E+01	4.30E+00
26 4.7 MILES S	12/13/2010	1	TH-234	2.32E+02	6.14E+01
26 4.7 MILES S	12/13/2010	1	K-40	4.44E+02	4.08E+01
26 4.7 MILES S	12/13/2010	1	PB-212	1.44E+01	2.77E+00
26 4.7 MILES S	12/13/2010	1	PB-214	1.72E+01	3.41E+00
26 4.7 MILES S	12/13/2010	1	TL-208	5.72E+00	1.81E+00
26 4.7 MILES S	12/13/2010	1	AC-228	1.78E+01	6.27E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	BI-214	1.14E+01	4.09E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	PB-214	7.62E+00	4.66E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	TL-208	5.29E+00	1.98E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	RA-226	1.16E+02	4.44E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	TH-234	7.15E+00	7.14E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	K-40	5.34E+02	4.87E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	1/11/2010	1	PB-212	1.29E+01	3.30E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	AC-228	9.80E+00	8.20E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	PB-212	9.73E+00	3.61E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	TH-234	1.45E+02	7.75E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	RA-226	1.02E+02	4.49E+01

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

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	BI-214	1.35E+01	4.48E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	PB-214	1.29E+01	5.20E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	TL-208	4.78E+00	2.24E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	2/8/2010	1	K-40	5.34E+02	5.09E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	TH-234	1.41E+02	6.41E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	K-40	5.12E+02	4.92E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	TL-208	5.56E+00	2.09E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	PB-212	7.70E+00	2.94E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	AC-228	3.06E+01	9.13E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	BI-214	1.25E+01	4.74E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	PB-214	6.43E+00	3.89E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	RA-226	8.39E+01	4.41E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	3/11/2010	1	BI-212	1.96E+01	1.29E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	TL-208	6.53E+00	1.86E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	BI-214	1.56E+01	3.98E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	RA-226	1.94E+02	4.09E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	TH-234	2.27E+02	6.36E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	K-40	2.37E+02	2.82E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	PB-214	1.18E+01	3.66E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	4/12/2010	1	PB-212	9.68E+00	2.69E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	AC-228	1.79E+01	5.71E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	TL-208	5.01E+00	1.87E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	TH-234	1.96E+02	6.39E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	PB-212	1.76E+01	2.88E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	BI-214	1.78E+01	3.80E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	K-40	4.19E+02	3.90E+01

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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	RA-226	2.13E+02	4.86E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	5/14/2010	1	PB-214	1.42E+01	3.53E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	K-40	4.31E+02	3.86E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	TH-234	2.16E+02	5.33E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	TL-208	7.40E+00	1.66E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	PB-214	1.23E+01	3.47E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	PB-212	1.79E+01	3.20E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	AC-228	1.87E+01	5.52E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	RA-226	1.78E+02	3.86E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	6/14/2010	1	BI-214	1.52E+01	3.45E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	AC-228	1.96E+01	7.96E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	TH-234	7.97E+01	7.51E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	TL-208	2.21E+00	2.11E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	PB-212	8.47E+00	3.25E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	BI-214	1.11E+01	4.83E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	K-40	8.37E+02	6.56E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	7/12/2010	1	RA-226	1.77E+02	5.78E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	BI-214	1.77E+01	4.21E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	AC-228	2.27E+01	6.21E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	PB-214	1.39E+01	3.49E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	TL-208	7.11E+00	2.25E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	TH-234	2.25E+02	6.20E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	BI-212	1.59E+01	9.06E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	K-40	4.44E+02	4.01E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	RA-226	2.33E+02	4.78E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	8/12/2010	1	PB-212	1.50E+01	2.90E+00

# 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>
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	TH-234	1.99E+02	5.73E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	K-40	2.44E+02	2.88E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	RA-226	1.62E+02	3.51E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	BI-214	2.22E+01	4.98E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	PB-212	9.87E+00	2.26E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	TL-208	3.71E+00	1.43E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	9/13/2010	1	PB-214	2.11E+01	4.18E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	K-40	2.47E+02	3.24E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	RA-226	2.08E+02	4.36E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	BI-214	2.16E+01	4.02E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	TL-208	3.74E+00	1.39E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	PB-212	8.52E+00	2.10E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	AC-228	9.07E+00	5.42E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	PB-214	1.67E+01	3.17E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	10/11/2010	1	TH-234	1.95E+02	5.65E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	TH-234	1.83E+02	5.57E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	PB-214	1.17E+01	3.90E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	AC-228	1.94E+01	6.02E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	K-40	4.03E+02	3.67E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	PB-212	1.31E+01	3.21E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	BI-214	1.49E+01	3.78E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	TL-208	7.01E+00	2.13E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	11/11/2010	1	RA-226	1.88E+02	3.73E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	K-40	6.67E+01	7.86E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	TL-208	1.08E+00	4.50E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	PB-212	2.01E+00	5.56E-01

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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	BI-214	6.52E+00	1.01E+00
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	PB-214	4.41E+00	9.35E-01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	TH-234	4.80E+01	1.70E+01
38 CAPE FEAR PLANT INTAKE - CONTROL	12/13/2010	1	RA-226	4.63E+01	9.53E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	K-40	2.32E+02	3.07E+01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	TH-234	1.77E+02	6.39E+01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	PB-214	1.08E+01	4.09E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	RA-226	1.60E+02	4.85E+01
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	TL-208	3.92E+00	1.76E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	PB-212	1.43E+01	3.78E+00
40 LILLINGTON - CAPE FEAR RIVER	1/11/2010	1	BI-214	9.78E+00	4.29E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	TH-234	2.03E+02	6.52E+01
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	K-40	2.18E+02	2.95E+01
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	TL-208	4.20E+00	2.41E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	PB-212	8.05E+00	2.77E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	PB-214	1.19E+01	3.53E+00
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	RA-226	1.88E+02	4.25E+01
40 LILLINGTON - CAPE FEAR RIVER	2/8/2010	1	BI-214	1.55E+01	5.11E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	PB-212	1.63E+01	3.92E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	TL-208	6.39E+00	2.71E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	PB-214	1.37E+01	6.30E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	TH-234	2.23E+02	8.80E+01
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	AC-228	2.04E+01	1.13E+01
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	BI-214	1.81E+01	5.02E+00
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	K-40	1.94E+02	4.19E+01
40 LILLINGTON - CAPE FEAR RIVER	3/11/2010	1	RA-226	1.95E+02	5.01E+01

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

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	PB-214	1.43E+01	4.79E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	RA-226	1.79E+02	4.14E+01
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	BI-214	1.83E+01	5.83E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	PB-212	1.60E+01	2.96E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	TL-208	8.55E+00	2.51E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	K-40	2.23E+02	3.22E+01
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	AC-228	1.55E+01	6.87E+00
40 LILLINGTON - CAPE FEAR RIVER	4/12/2010	1	TH-234	2.49E+02	8.55E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	RA-226	1.84E+02	4.14E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	BI-214	1.72E+01	4.23E+00
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	PB-214	1.29E+01	3.80E+00
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	TL-208	3.05E+00	1.82E+00
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	K-40	2.56E+02	3.01E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	TH-234	1.78E+02	5.27E+01
40 LILLINGTON - CAPE FEAR RIVER	5/14/2010	1	PB-212	9.63E+00	2.51E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	BI-214	1.19E+01	2.97E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	PB-214	1.40E+01	3.89E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	PB-212	6.76E+00	2.38E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	K-40	2.42E+02	2.93E+01
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	RA-226	1.98E+02	3.81E+01
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	TL-208	5.71E+00	1.81E+00
40 LILLINGTON - CAPE FEAR RIVER	6/14/2010	1	TH-234	2.28E+02	5.35E+01
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	BI-214	1.29E+01	3.74E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	PB-212	7.42E+00	4.53E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	RA-226	1.29E+02	4.26E+01
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	K-40	5.91E+02	4.87E+01



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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	TL-208	6.45E+00	2.02E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	TH-234	9.74E+01	6.28E+01
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	PB-214	9.71E+00	3.48E+00
40 LILLINGTON - CAPE FEAR RIVER	7/12/2010	1	AC-228	1.96E+01	6.41E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	PB-214	2.45E+01	4.99E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	RA-226	1.62E+02	3.82E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	K-40	2.04E+02	3.35E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	AC-228	1.81E+01	7.72E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	TH-234	2.84E+02	7.66E+01
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	BI-214	2.54E+01	4.35E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	PB-212	1.36E+01	3.04E+00
40 LILLINGTON - CAPE FEAR RIVER	8/12/2010	1	TL-208	5.02E+00	2.36E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	RA-226	1.76E+02	4.08E+01
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	K-40	4.26E+02	3.91E+01
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	TL-208	6.20E+00	2.12E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	PB-212	1.50E+01	3.12E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	BI-212	1.27E+01	9.91E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	PB-214	1.32E+01	4.33E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	AC-228	1.20E+01	6.29E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	BI-214	2.17E+01	4.05E+00
40 LILLINGTON - CAPE FEAR RIVER	9/13/2010	1	TH-234	1.91E+02	6.31E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	AC-228	2.32E+01	7.33E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	TH-234	2.20E+02	6.49E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	K-40	2.24E+02	3.06E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	PB-212	1.28E+01	3.14E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	BI-214	1.16E+01	4.10E+00

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

*Media Type: Surface Water*

*Quantity: Liters*

*Concentration (Activity): pCi/L*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	TL-208	5.26E+00	2.58E+00
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	RA-226	2.22E+02	4.31E+01
40 LILLINGTON - CAPE FEAR RIVER	10/11/2010	1	PB-214	1.28E+01	4.42E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	PB-212	1.54E+01	2.73E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	K-40	2.06E+02	2.92E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	TL-208	4.89E+00	2.04E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	BI-212	1.50E+01	1.34E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	PB-214	1.04E+01	3.77E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	TH-234	2.02E+02	6.53E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	BI-214	1.52E+01	4.41E+00
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	RA-226	2.12E+02	4.47E+01
40 LILLINGTON - CAPE FEAR RIVER	11/11/2010	1	AC-228	2.05E+01	7.60E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	AC-228	1.73E+01	6.77E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	TH-234	2.30E+02	5.86E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	BI-214	2.40E+01	4.24E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	PB-214	2.42E+01	4.59E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	PB-212	1.41E+01	3.00E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	BI-212	1.40E+01	1.14E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	TL-208	7.93E+00	2.19E+00
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	K-40	2.09E+02	3.00E+01
40 LILLINGTON - CAPE FEAR RIVER	12/13/2010	1	RA-226	1.89E+02	4.09E+01