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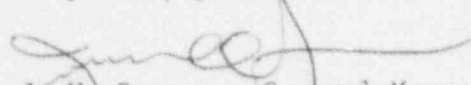
BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2  
DOCKET NOS. 50-325 AND 50-324  
LICENSE NOS. DPR-71 AND DPR-62  
ANNUAL RADIOLOGICAL ENVIRONMENTAL MONITORING REPORT

Gentlemen:

Enclosed is the Annual Radiological Environmental Monitoring Report for the Brunswick Steam Electric Plant, Units 1 and 2, covering the period from January 1 through December 31, 1991.

This report is submitted in accordance with Brunswick Technical Specifications 6.9.1.6 and 6.9.1.7.

Very truly yours,

  
J. W. Spencer, General Manager  
Brunswick Nuclear Project

Enclosure

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Mr. N. B. Le  
BSEP NRC Resident Office

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PDR ADOCK 05000324  
R PDR

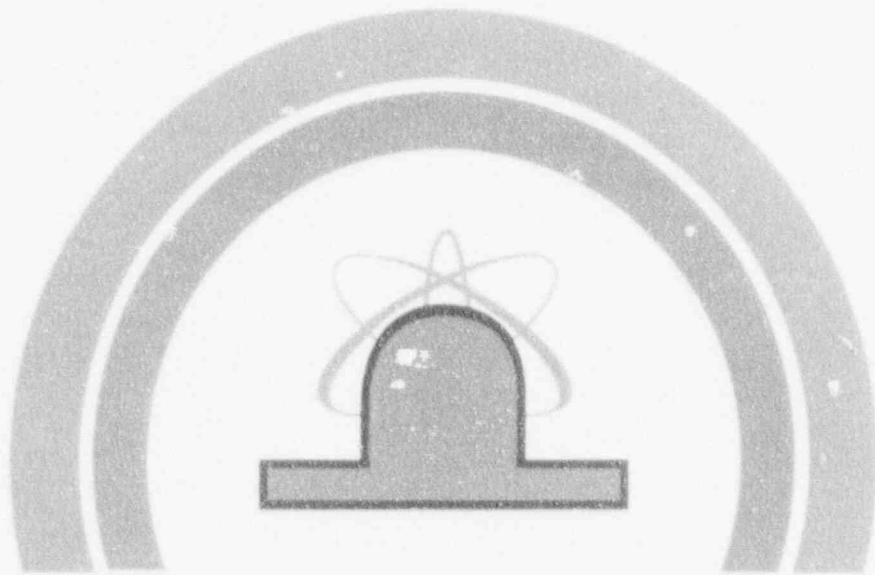
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# **Radiological Environmental Operating Report**

1991



**BRUNSWICK NUCLEAR PROJECT**

CAROLINA POWER & LIGHT COMPANY

SHEARON HARRIS ENERGY & ENVIRONMENTAL CENTER

Carolina Power & Light Company

New Hill, North Carolina

RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

FOR

BRUNSWICK STEAM ELECTRIC PLANT

JANUARY 1 THROUGH DECEMBER 31, 1991

Prepared by:

Katherine C. Miranda

Reviewed by:

Samuel F. Cahill

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## 1.0 SUMMARY

This report presents the results of the Radiological Environmental Monitoring Program conducted during 1991 for the Brunswick Nuclear Project (BNP). The program was conducted in accordance with Technical Specification 4.12.1, the Off-site Dose Calculation Manual, and applicable procedures.

The 1991 Annual Radiological Environmental Operating Report has been prepared in accordance with Technical Specification 6.9.1.7 and is being submitted in accordance with Technical Specification 6.9.1.6. The report applies to both BNP Units 1 and 2 (License Nos. DPR-071 and DPR-062, respectively).

Over 900 samples from six environmental media types were analyzed during the year. No detectable radioactivity (or radioactivity which did not differ significantly from the corresponding control) was observed in the 825 measurements taken at indicator locations. All samples analyzed met the LLD requirements as established by Technical Specification 6.9.1.7.h and Table 4.12.1-1.

A statistical summary of all the data gathered in 1991 has been compiled in Table 1-1. No nonroutine measurements were reported during the year.

The radiological environmental data indicates that BNP operations in 1991 had no significant impact on the environment or public health and safety. No radiation exposure is attributed to any off-site member of the public due to the operations of BNP.

Comparison of the current data with preoperational (1973, 1974) information (Tables 3-1, 3-2) indicate that air particulate filter gross beta activity and ambient gamma radiation levels were lower in 1991.



TABLE 1-1

## RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY

Brunswick Steam Electric Plant  
Brunswick County, North Carolina

Docket Numbers - 50-324 and 325  
Calendar Year 1991

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations <sup>(2)</sup> Mean Range	Location w/Highest Annual Mean		
				Name, Distance, and Direction	Mean Range <sup>(2)</sup>	Control Locations Mean Range <sup>(2)</sup>
Air Cartridge (pCi/m <sup>3</sup> )	I-131 <sup>(3)</sup> 318	2.1E-2	All less than LLD		All less than LLD	All less than LLD
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 318 <sup>(3)</sup>	3.5E-3	1.51E-2 (264/265) 5.07E-3 - 3.43E-2	Plant property 0.6 mile NE	1.55E-2 (53/53) 7.02E-3 - 3.08E-2	1.57E-2 (53/53) 7.41E-3 - 3.31E-2
	Gamma <sup>(5)</sup> 24	See Table 6-1	All less than LLD		All less than LLD	All less than LLD
Broadleaf Vegetation (pCi/g, wet)	Gamma <sup>(5)</sup> 142		All less than LLD		All less than LLD	3.95E-2 (1/36) Single Value
	Cs-137	1.90E-2				
Fish and Invertebrates (pCi/g, wet)	Gamma <sup>(5)</sup> 12	See Table 6-1	All less than LLD		All less than LLD	All less than LLD
Sediments- Shoreline (pCi/g, dry)	Gamma <sup>(5)</sup> 2	See Table 6-1	All less than LLD		All less than LLD	No control
Surface Water (pCi/l)	Gamma <sup>(5)</sup> 24	See Table 6-1	All less than LLD		All less than LLD	All less than LLD
	Tritium 24	1.20E+3	All less than LLD		All less than LLD	All less than LLD
TLD (mR per week)	TLD Readout 17 <sup>(4)</sup>	1 mR	7.56E-1 (168/168) 6.00E-1 - 1.10E+0	Plant property 0.5 mile NE	1.00E+0 (4/4) 9.00E-1 - 1.10E+0	7.25E-1 (4/4) 7.00E-1 - 8.00E-1

## FOOTNOTES TO TABLE 1-1

1. Lower limit of detection (LLD) is calculated based on 4.66 standard deviations above background using typical sample sizes and counting times. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. See Table 6-1.
2. Mean and range are based on detectable measurements only. The fractions of detectable measurements at specific locations are indicated in parentheses.
3. Air particulate and charcoal cartridges were collected weekly. Six sampling stations were operated for 53 weeks. A total of 318 cartridges and 318 particulate filters were analyzed.
4. Minimum sensitivity is approximately .4 to .8 mR per week. Refer to Section 6.5 for additional information. Missing samples are discussed in Section 4.0.
5. Summary of gamma analysis results in this report does not include the following naturally occurring isotopes since most environmental samples contained some or all of these: Be-7, K-40, Tl-208, Pb-212, Bi-212, Bi-214, Pb-214, Ra-226, Ac-228, and Th-234.

## 2.0 GENERAL INFORMATION

The Brunswick Nuclear Project (BNP) consists of two boiling water reactors with a design rating of 821 MWe net each. Commercial production was initiated by Unit 2 on November 3, 1975, and by Unit 1 on March 18, 1977.

The BNP is located approximately 2.5 miles north of Southport, North Carolina. This location is near the mouth of the Cape Fear River, which is the source of condenser cooling water. The cooling water is then discharged into the Atlantic Ocean.

The plant site lies at sea level to 30 feet (MSL) surrounded by extensive swamps and marshes. Recreational beaches are located within 20 miles of the plant. Fishing and boating are popular activities in the area. Within 50 miles of the plant, less than half of the land is used for agriculture. The agricultural activities include small truck farms, cattle, and poultry farms as well as farms producing corn, soybeans, and tobacco. Most of the industrial activity is in the Wilmington area approximately 16 miles north of BNP. Sunny Point Military Ocean Terminal is located approximately 4.5 miles north of BNP. Archer-Daniels-Midland Chemical Company, located 1.5 miles southeast of BNP, manufactures citric acid. This plant is supplied with steam from two 55-megawatt coal-fired boilers operated by Cogentrix, Inc., and is located 1.0 mile south of BNP. A shipping channel in the Cape Fear River intercepts the Atlantic Intracoastal Waterway near Southport.

The sampling program developed during preoperational surveillance provided the basis for the environmental monitoring program required by the BNP Technical Specifications. Details of this sampling program--including sampling type, distance, and direction from the plant site--are listed in Table 2-1. Maps, including the sampling locations with respect to the plant, are shown in Figures 2-1 through 2-5. Types of samples collected include air cartridge (iodine), air particulate, fish and invertebrates, broadleaf vegetation, shoreline sediment, surface water, and direct radiation monitoring.

The following is a tabulation of the specific methods used in monitoring the gaseous effluent and liquid effluent pathways of exposure to man.

### Pathway of Exposure to Man

External Dose

Inhalation

### Media Sampled

TLD

Shoreline Sediment

Broadleaf vegetation

Fish and Invertebrates Samples

Surface Water

Air Samples

**TABLE 2-1**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM**  
**BRUNSWICK NUCLEAR PROJECT**

<u>Sample Type</u>	<u>Sampling Point and Description</u>	<u>Sampling Frequency</u>	<u>Typical Sample Size</u>	<u>Sample Analysis</u>
Air Cartridge (AC)	200-1.0 mile SW Visitors Center 201-0.6 mile NE PMAC 202-1.0 mile S substation-construction road 203-2.3 miles SSW Southport substation 204-23 miles NNE Sutton Plant* 205-0.6 mile SSE Spoil Pond	Weekly	10,000 cu ft (300 cu m)	Iodine
Air Particulate (AP)	200-1.0 mile SW Visitors Center 201-0.6 mile NE PMAC 202-1.0 mile S substation-construction road 203-2.3 miles SSW Southport substation 204-23 miles NNE Sutton Plant* 205-0.6 mile SSE Spoil Pond	Weekly	10,000 cu ft (300 cu m)	Gross Beta-Weekly Composite Gamma-Quarterly
Fish (FD)	700-5.5 miles SSW Atlantic Ocean @ discharge (free-swimmers) 701-5.5 miles SSW Atlantic Ocean @ discharge (bottom feeders) 702-5.5 miles SSW Atlantic Ocean @ discharge (invertebrates) 703-Atlantic Ocean, location not specified*	Semiannually when in season	500 grams (wet)	Gamma
Broadleaf Vegetation (BL)	800-0.7 mile NE intake canal 801-0.6 mile SW discharge canal 802-10 miles, location not specified* 803-0.6 mile SSE Spoil Pond	Monthly when available	500 grams (wet)	I-131, Gamma
Shoreline Sediment (SS)	500-4.9 miles SSW, beach near D pumps	Semiannually	500 grams	Gamma
Surface Water (SW)	400-0.7 mile NE intake canal* 401-4.9 miles SSW discharge canal at stilling pond	Monthly composite	4 liters	Gamma Tritium

\*Control Station

**TABLE 2-1 (continued)**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM**  
**BRUNSWICK NUCLEAR PROJECT**

<u>Sample Type</u>		<u>Sampling Point and Description</u>	<u>Sampling Frequency</u>	<u>Typical Sample Size</u>	<u>Sample Analysis</u>
Thermoluminescent Dosimeters (TLD)	1	1.1 miles E Moore St. extension	Quarterly	Not Applicable	TLD Readout
	2	1.0 mile ESE Moore St. extension			
	3	0.9 mile SE Moore St. extension			
	4	1.1 miles SSE Moore St. extension			
	5	1.1 miles S Leonard St.			
	6	1.0 mile SSW pine tree on right-of-way BEMCO power line			
	7	1.0 mile SW Hwy 87 at right-of-way			
	8	1.2 miles W Hwy 87			
	9	1.0 mile WNW Bethel Church Rd.			
	10	0.9 mile NW Bethel Church Rd.			
	11	0.9 mile NNW Bethel Church Rd.			
	12	1.0 mile N Bethel Church Rd.			
	13	1.2 miles NNE Bethel Church Rd.			
	14	0.5 mile NE intake canal			
	15	0.9 mile ENE intake canal			
	16	1.0 mile WSW discharge canal			
	17	1.5 miles ESE Pfizer property			
	18	1.7 miles SE Pfizer property			
	20	2.0 miles S Moore St.			
	21	2.9 miles SSW West St. at Sea Captain			
	22	5.3 miles SW Caswell Beach Rd.			
	23	4.6 miles WSW near airport			
	24	3.0 miles W Hwy 211			
	25	8.7 miles WNW Antioch Baptist Church			
	26	5.9 miles NW W Boiling Springs Rd.			
	27	5.0 miles NNW Hwy 133			
	28	4.2 miles NW at South Brunswick HS			
	29	2.6 miles SSW Southport Elementary School			
	30	2.0 miles NE Sunny Point MOT			
	31	2.6 miles ENE Sunny Point MOT			
	32	5.7 miles ENE at Ft. Fisher AFB			
	33	4.0 miles E at Ferry Slip N. H. Co.			
	34	5.5 miles ENE at Ft. Fisher Museum			
	35	7.5 miles SSE Bald Head Island			
	36	9.3 miles NE at Carolina Beach			
	37	5.5 miles NW at Boiling Springs Lakes			
	38	11.0 miles W at Sunset Harbor			
	39	5.3 miles SW at Yaupon Beach			
	40	6.9 miles WSW at Long Beach			
	75	4.5 miles S at Ft. Caswell Bapt. Assy.			
	76	4.8 miles SSW at Caswell Beach			
	77	5.3 miles S at Bald Head Island			
	78	10.0 miles NNE Hwy. 133 at SR 1521			
	79	9.5 miles N SR 1539 at SR 1521			
	81	10.0 miles WNW Midway Road at SR 150B*			

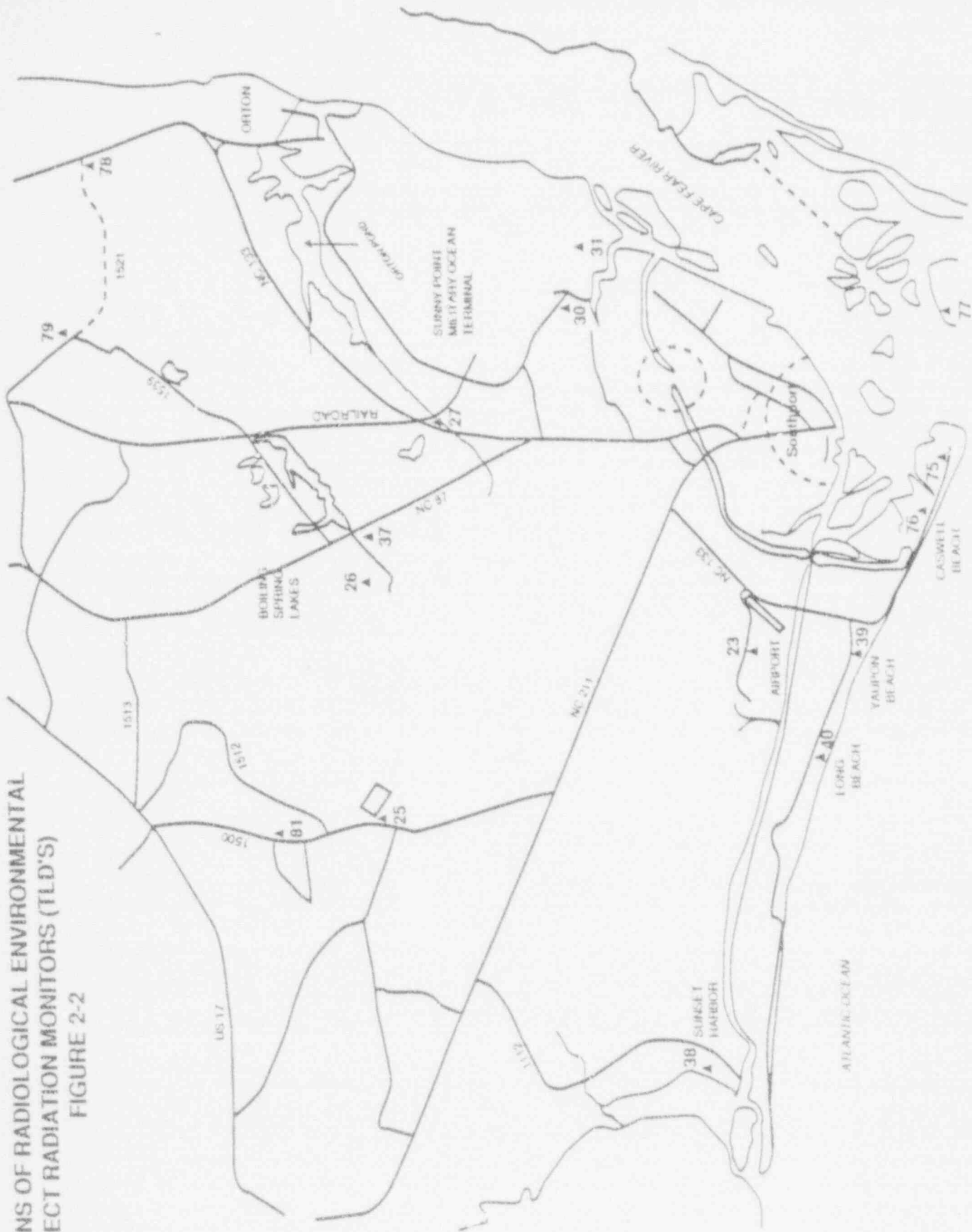
\*Control Station

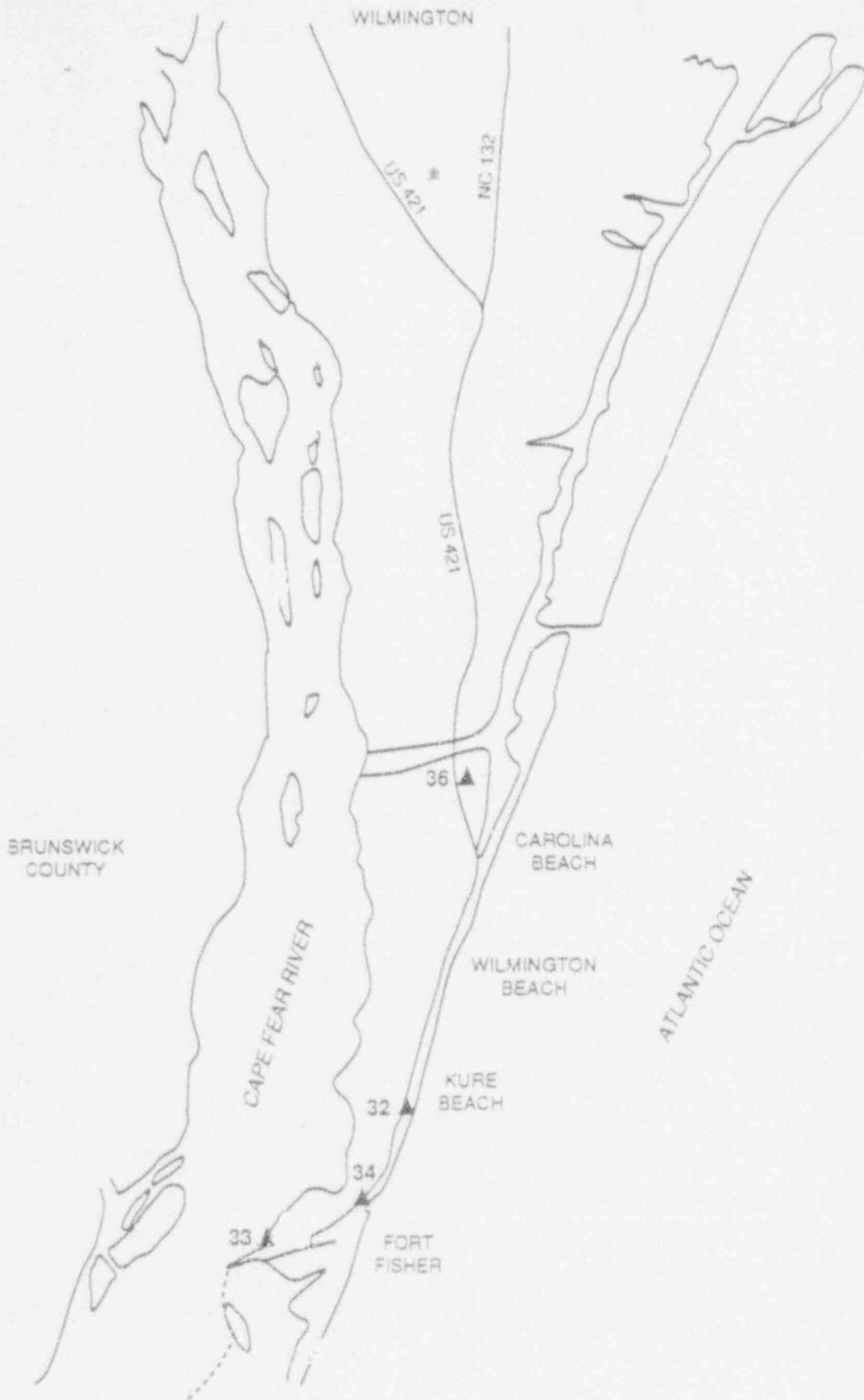
Refer to Figures 2-1, 2-2, 2-3, 2-4, and 2-5



LOCATIONS OF RADIOLOGICAL ENVIRONMENTAL  
 DIRECT RADIATION MONITORS (TLD's)  
 FIGURE 2-1

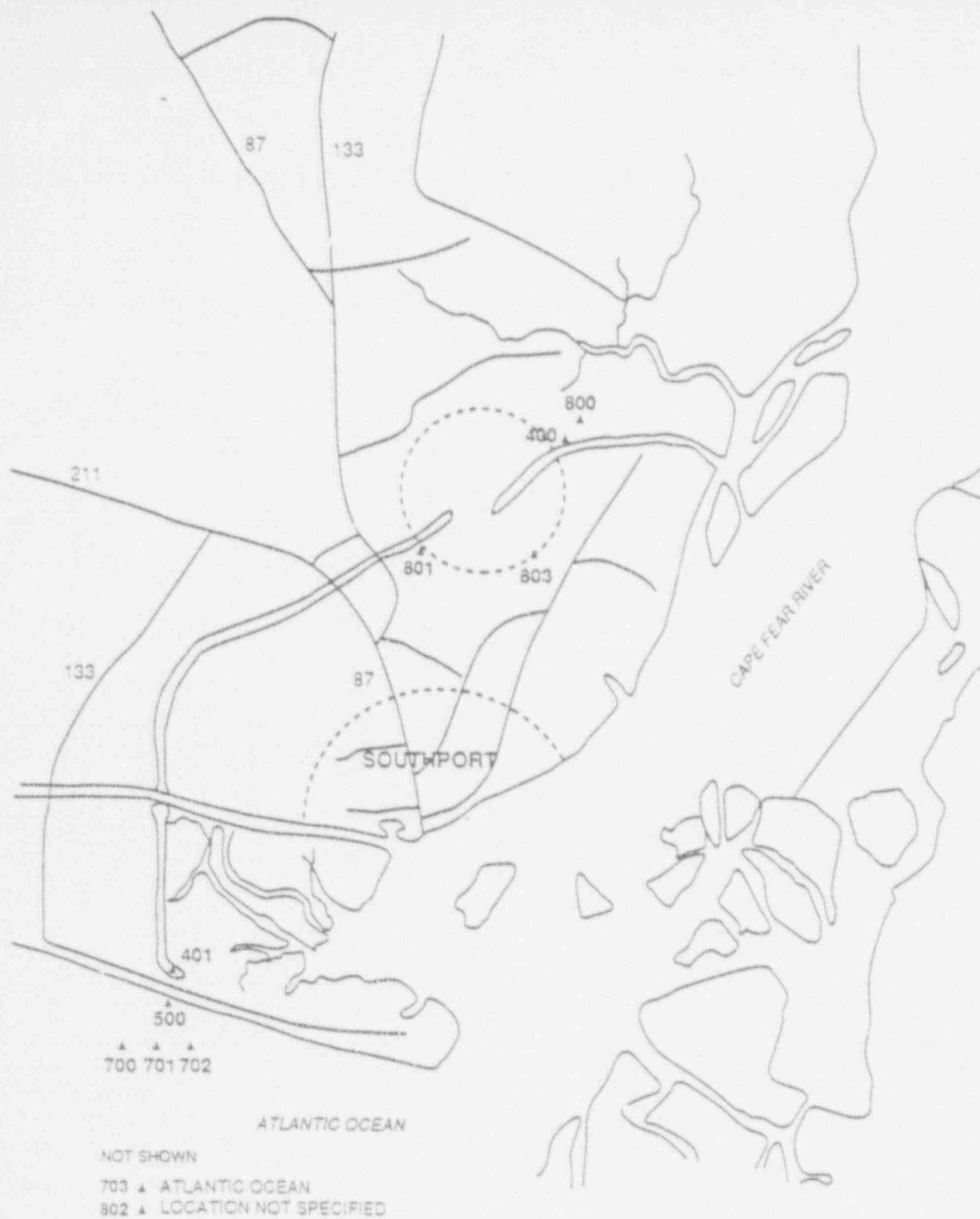
LOCATIONS OF RADIOLOGICAL ENVIRONMENTAL  
 DIRECT RADIATION MONITORS (TLD'S)  
 FIGURE 2-2





LOCATIONS OF RADIOLOGICAL ENVIRONMENTAL  
DIRECT RADIATION MONITORS (TLD's)  
FIGURE 2-3





LOCATIONS OF RADIOLOGICAL ENVIRONMENTAL  
 WATERBORNE AND INGESTION PATHWAY STATIONS  
 SW SS FI FC  
 FIGURE 2-4



LOCATIONS OF RADIOLOGICAL ENVIRONMENTAL  
 AIR MONITORING STATIONS (AC, AP)  
 FIGURE 2-5

## 3.0 INTERPRETATIONS AND CONCLUSIONS

### 3.1 Air Samples

The average gross beta concentration measured in 265 air particulate samples collected at indicator stations during 1991 was  $1.5 \text{ E-2}$  picocuries per cubic meter ( $\text{pCi/m}^3$ ). The preoperational (1973-1974) average concentration was  $8.2 \text{ E-2}$   $\text{pCi/m}^3$ , while the average activity in the recent past (1988-1990) was  $1.7 \text{ E-2}$   $\text{pCi/m}^3$  (Table 3-1). The airborne concentrations of gross beta activity in 1991 are indicative of natural background and do not indicate any abnormal activities originating from the nuclear operations at the Brunswick Nuclear Project (BNP). Figures 3-1 through 3-5 depict the monthly variations of these values.

Gamma analyses of the composited air particulate filters indicated that all of the radionuclides indicative of plant effluents were at concentrations less than their respective LLDs. All radionuclides positively identified by the radionuclide analyses were typical of naturally occurring materials.

Analyses of 265 indicator location air cartridges for the collection of radioiodines indicated that concentrations of those radionuclides, and particularly I-131, were less than the LLD.

### 3.2 Milk Samples

No milk sampling locations are currently identified in the BNP environs, and therefore no sampling of this media was available.

### 3.3 Vegetation

Food crop were not grown in the vicinity of the plant in 1991 and this media was represented by indigenous vegetation samples consisting of wild cheery, wax myrtle, yaupon and gum leaves along with fescue grass and giant reeds. One hundred and six samples were collected from indicator locations and 36 from the control location. Fallout Cs-137 was detected only in a single control sample at a level of  $3.95 \text{ E-2}$   $\text{pCi/g}$ . In 1990, Cs-137 was also observed in a single indicator sample at  $7.7 \text{ E-2}$   $\text{pCi/g}$ .

### 3.4 Fish and Invertebrates

Fish and invertebrate samples are collected semiannually from two locations: (1) near the Atlantic Ocean discharge pipe at Caswell Beach and (2) a control location in the Atlantic Ocean not influenced by plant operations. In all 12 samples, the radionuclide content was determined to be less than the respective LLDs for the gamma-emitting radionuclides.

### 3.5 Sediments-Shoreline

Two shoreline sediments are drawn from the beach area near the pumping station location at Caswell Beach. No detectable activities relate to plant effluents were detected in this sampling media.

### 3.6 Surface Water

Surface water is sampled monthly from the intake and discharge canal. These samples are analyzed for gamma-emitting radionuclides and for tritium. Neither of these analyses indicated any detectable concentrations of radionuclides in the 12 indicator samples. Figure 3-6 depicts the observed tritium concentrations for 1991.

### 3.7 External Radiation Dose (TLD)

The environmental dosimetry data on external radiation dose for 1991 was essentially unchanged from 1989 and 1990 with an average dose rate for all indicator locations of 0.76 mrem per week. The average dose rate observed over the preoperational period was 1.02 mrem per week observed from the fourth quarter of 1972 through the second quarter of 1975. Table 3-2 provides a comparison of recent data with the preoperational data. The highest average dose rate occurred at the plant boundary 0.5 mile NE. That dose rate was 1.0 mrem per week. The highest value in 1990 also occurred at this location at 0.90 mrem per week. Figure 3-7 depicts average inner and outer ring TLD data for each quarter of 1991. This depiction does not indicate a significant higher dose rate for the inner versus the outer ring. This is interpreted as demonstrating that no discernible off-site exposure dose rate arises from plant operations.

TABLE 3-1

GROSS BETA AIR PARTICULATE ACTIVITY AVERAGES ( $\text{pCi}/\text{m}^3$ )

Comparison of Preoperational (1973, 1974) and Recent Operational (1988-1991) Data

<u>Location</u>	<u>1973</u>	<u>1974</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
AP-200	2.2 E-2	1.4 E-1	1.7 E-2	1.4 E-2	1.6 E-2	1.5 E-2
AP-201	3.1 E-2	1.4 E-1	1.6 E-2	1.5 E-2	1.7 E-2	1.6 E-2
AP-202	3.4 E-2	1.4 E-1	1.9 E-2	1.6 E-2	1.7 E-2	1.5 E-2
AP-203	2.4 E-2	1.3 E-1	1.7 E-2	1.6 E-2	1.8 E-2	1.5 E-2
AP-204	2.5 E-2	1.3 E-1	1.7 E-2	1.6 E-2	1.7 E-2	1.5 E-2
AP-205	————	————	1.6 E-2	1.6 E-2	1.7 E-2	1.6 E-2

TABLE 3-2  
HISTORICAL TLD RESULTS (1972-1991)

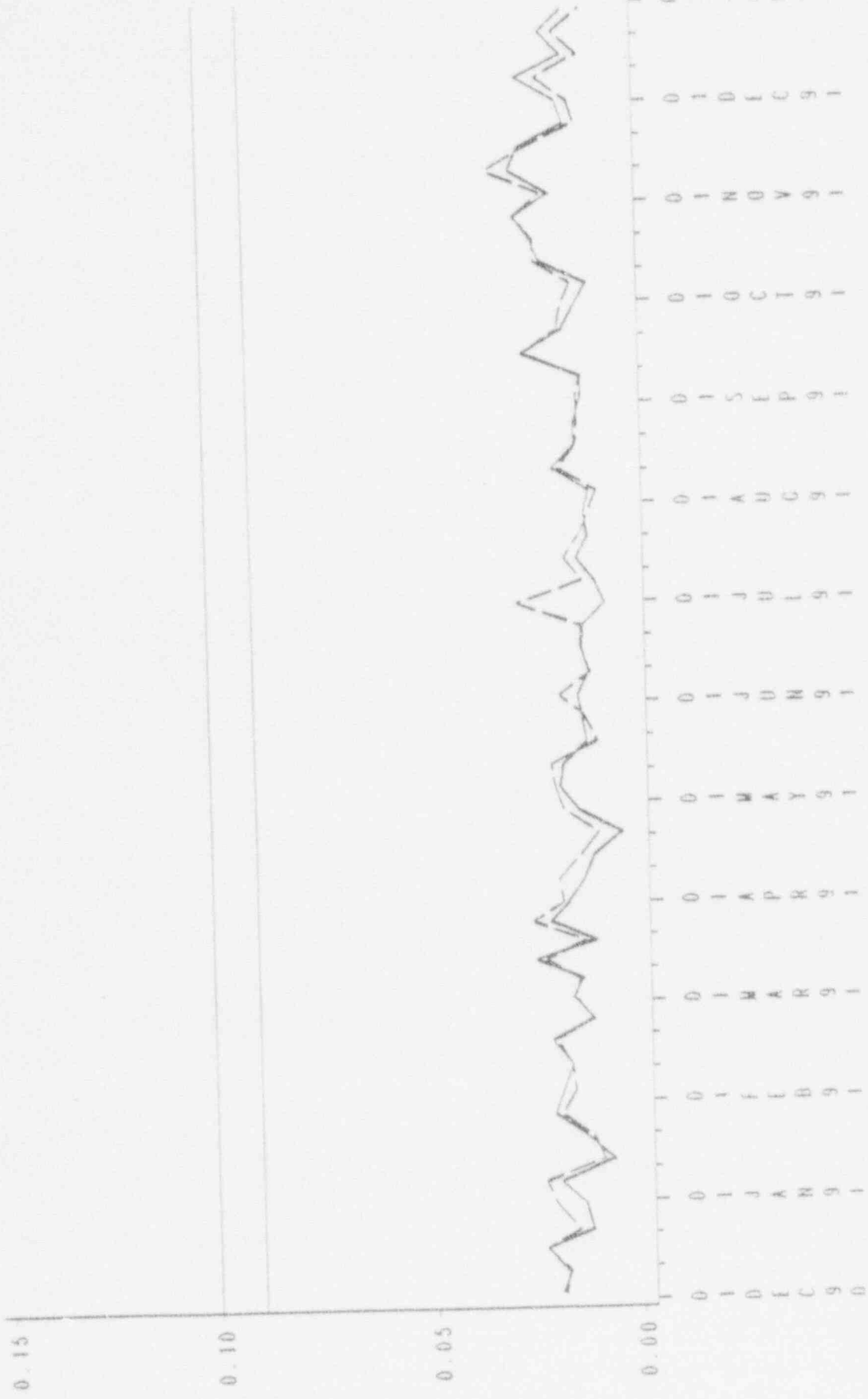
Year	Average Dose of All TLD Monitoring Locations (mrem per week)
1972 (4th Qtr.)	0.80
1973	1.25
1974	0.97
1975 (1st, 2nd Qtr)	0.80
1976	0.98
1977	1.32
1978	1.24
1979	0.93
1980	0.90
1981	0.96
1982	1.18
1983	1.21
1984	0.98
1985	1.03
1986	0.89
1987	0.92
1988	0.86
1989	0.75
1990	0.76
1991	0.76

**CP&L ENVIRONMENTAL SURVEILLANCE**

GROSS BETA ACTIVITY FOR

AIR PARTICULATE SAMPLES

PLANT=BSEP SAMPLE POINT=0200



PCI PER CU METER

SAMPLE DATES

Figure 3-1

SOLID LINE FOR SAMPLE STATION  
 PROXIMITY TO PLANT

THE CURVE ABOVE  
 IS THE DATA REQUIRED ABOVE

CP&I ENVIRONMENTAL SURVEILLANCE  
 GROSS BETA ACTIVITY FOR  
 AIR PARTICULATE SAMPLES  
 PLANT=BSEP SAMPLE POINT=0201

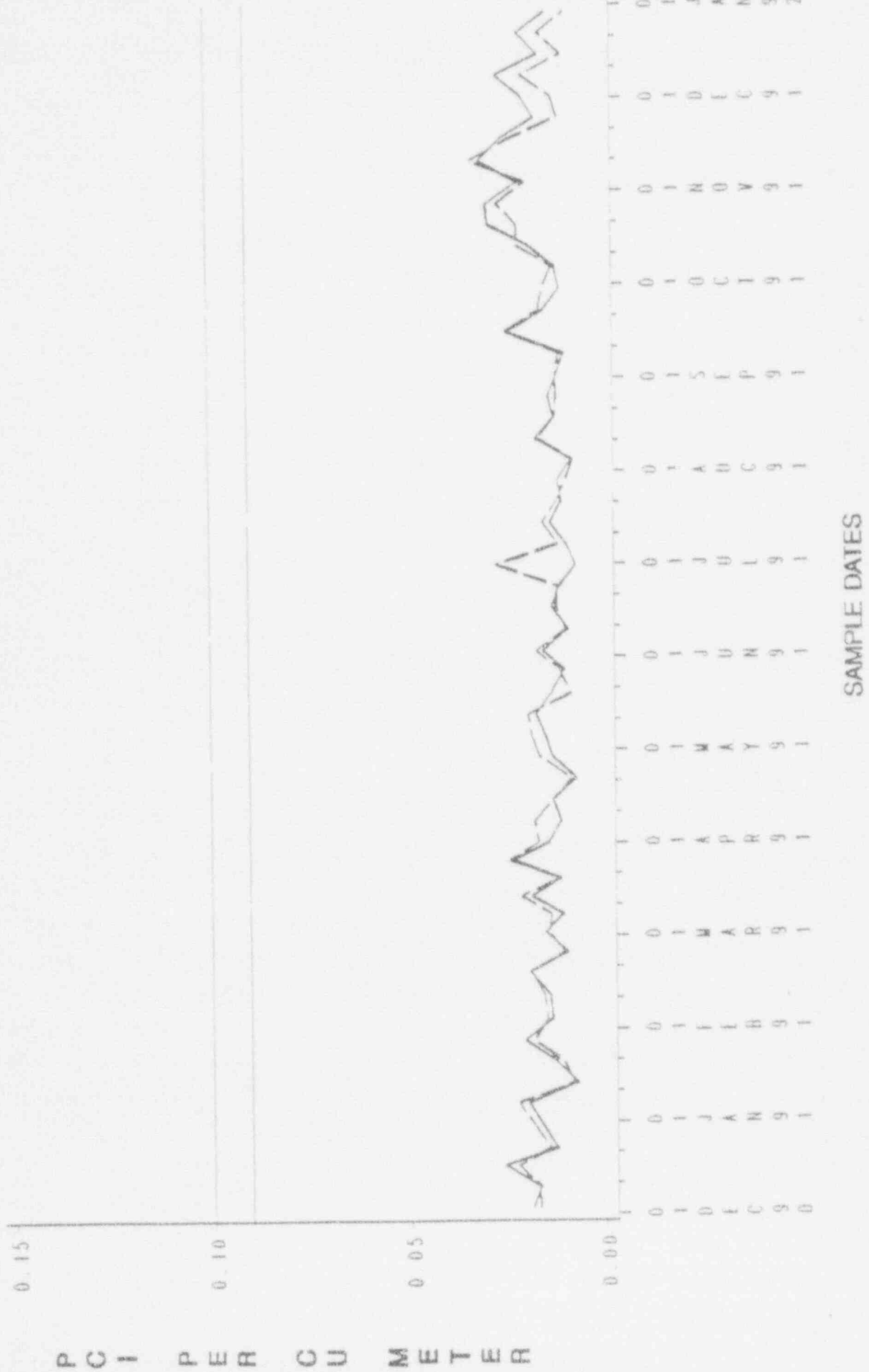


Figure 3-2

THE Y-AXIS SCALE IS IN MICRO CURIES ABOVE 0.10  
 ELECTRIC ACTIVITY IS IN MICRO CURIES ABOVE 0.10

SOLID LINE FOR SAMPLE STATION  
 DASHED LINE FOR CONTROL STATION



CP&I ENVIRONMENTAL SURVEILLANCE  
 GROSS BETA ACTIVITY FOR  
 AIR PARTICULATE SAMPLES  
 PLANT=BSEP SAMPLE POINT=0202



Figure 3-3

SAMPLE DATES

PRE - GP AVERAGE - 0.09  
 PARTICULATE ACTIVITY IS REQUIRED ABOVE 0.10

SOLID LINE FOR SAMPLE SEARCH  
 DASHED LINE FOR CHECK SEARCH

CP&L ENVIRONMENTAL SURVEILLANCE  
 GROSS BETA ACTIVITY FOR  
 AIR PARTICULATE SAMPLES  
 PLANT=BSEP SAMPLE POINT=0203



Figure 3-4

PCI PER CUBIC METER  
 3-8

SOLID LINE FOR SAMPLE STATION  
 0203 (PLANT=BSEP)

PERCENTAGE OF AIRBORNE GROSS  
 BETA ACTIVITY RECORDED ABOVE 0.10

CP&L ENVIRONMENTAL SURVEILLANCE  
 GROSS BETA ACTIVITY FOR  
 AIR PARTICULATE SAMPLES  
 PLANT=BSEP SAMPLE POINT=0205

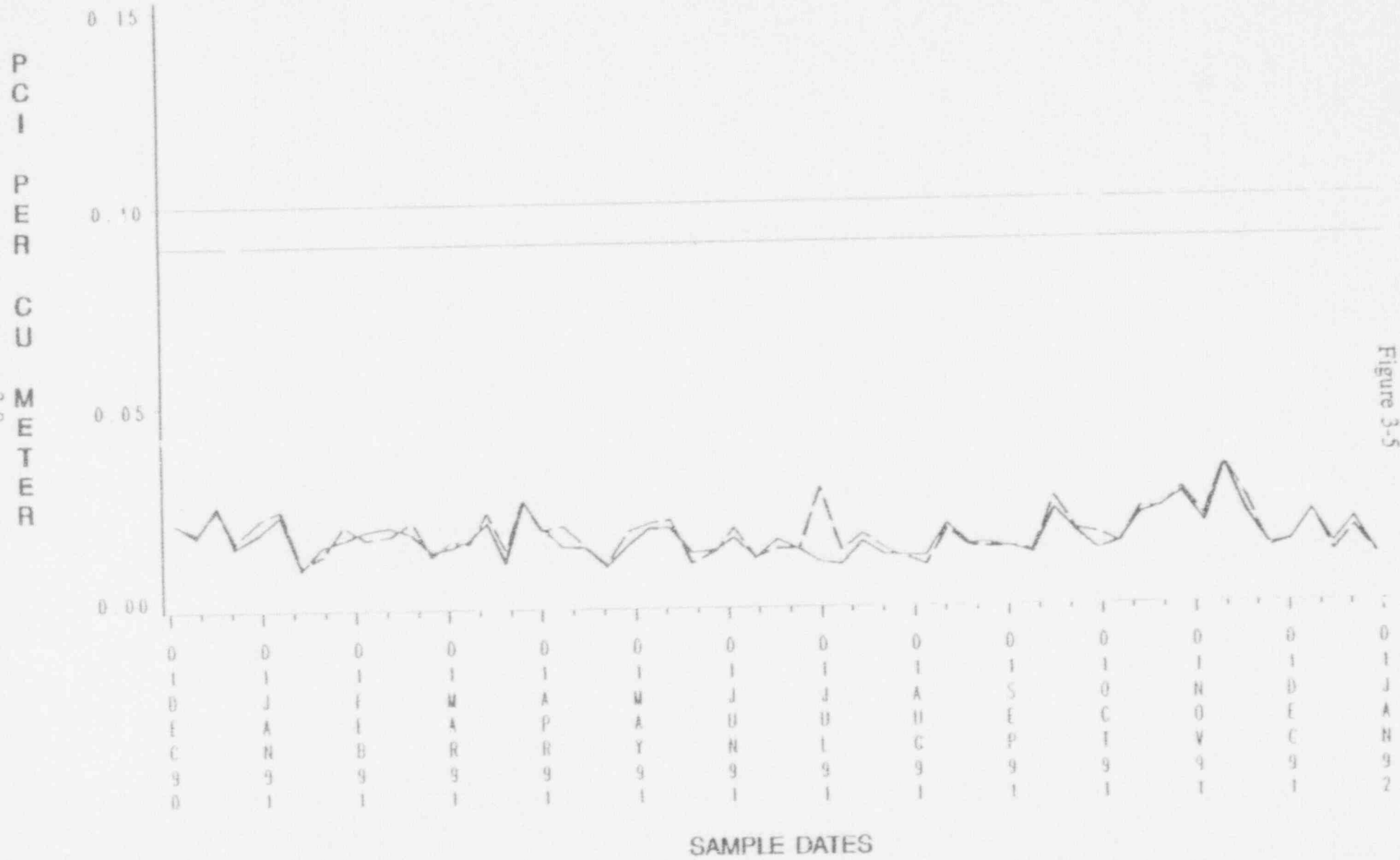


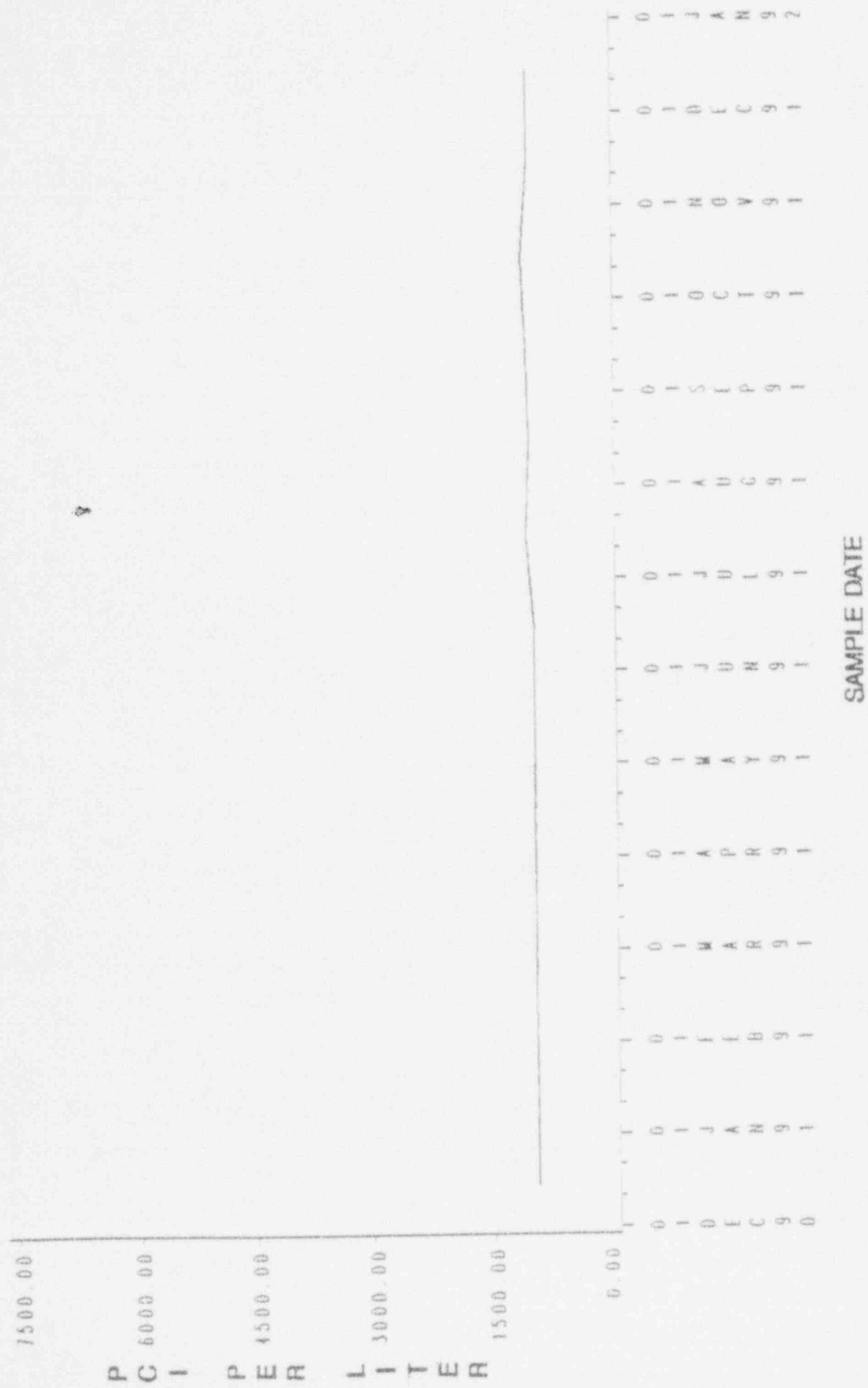
Figure 3-5

SOLID LINE FOR SAMPLE STATION

PRE-OP AVERAGE = 0.09  
 NO MORE BIRTHS SHOULD BE REQUIRED ABOVE 0.10

CP&L ENVIRONMENTAL SURVEILLANCE  
 TRITIUM ACTIVITY FOR  
 SURFACE WATER SAMPLES  
 PLANT=BSEP SAMPLE POINT=0101

Figure 3-6

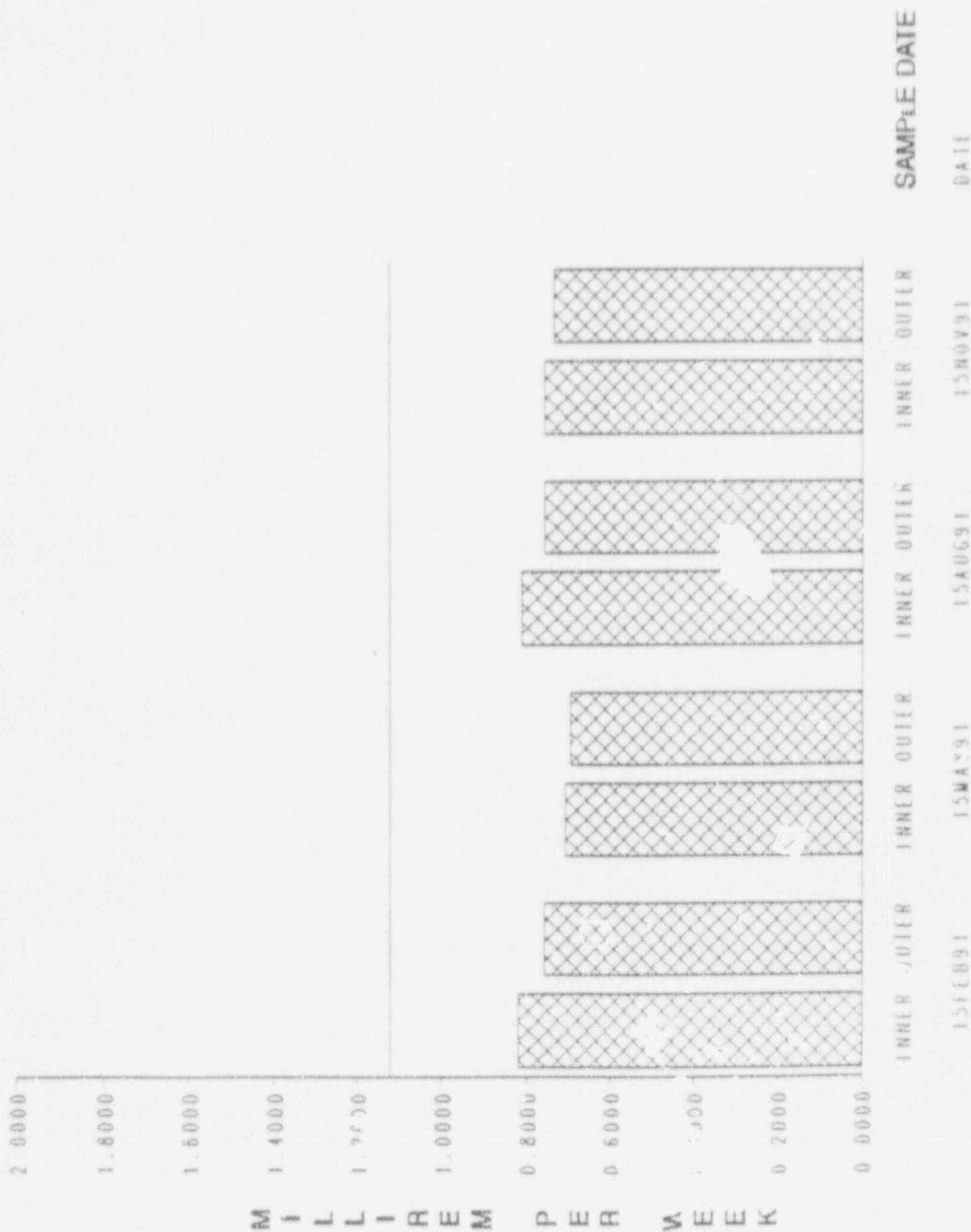


SOLID LINE FOR SAMPLE STATION

DOTTED LINE FOR CONTROL DATA

Figure 3-7

CP&L ENVIRONMENTAL SURVEILLANCE  
 TLD AVERAGES FOR  
 INNER AND OUTER RING LOCATIONS  
 PLANT=BSEP



## 4.0 MISSED SAMPLES AND ANALYSES

### 4.1 TLD

TLDs at Locations 20, 21, 28, 29, and 35 were added to the program beginning with the second quarter 1991. TLDs at Locations 3, 75, and 76 were missing in the field during the second quarter.

## 5.0 ANNUAL LAND-USE CENSUS

Technical Specifications require that a land-use census shall be conducted and identify within a distance of 8 km (5 miles) in each of the 16 meteorological sectors, the location of the nearest milk animal, resident, and garden of greater than 50 square meters (500 square feet) producing broadleaf vegetation.

Sampling of at least three different kinds of broadleaf vegetation may be performed at the site boundary in each of two different direction sectors with the highest D/Qs in lieu of the garden census.

The land-use census shall be conducted during the growing season at least once per 12 months using techniques such as door-to-door survey, aerial survey, or consulting local agricultural authorities.

The 1991 BNP land-use census was performed using aerial photographs and by performing a visual inspection from roads within a 5-mile radius excluding those within the Sunny Point Military Ocean Terminal. Additional information was obtained from residents, the county extension agents, and farm supply businesses. The census was performed by the BNP environmental staff during the period August 16, 1991, to August 20, 1991.

Table 5-1 summarizes the locations of the nearest residence, meat animal, and garden in each of the 16 compass sectors. Meat animals were found approximately 1.0 mile from the plant in the SE and SSE sectors. No milk animals were found within the 5-mile radius.

TABLE 5-1

DISTANCE TO THE NEAREST SPECIAL LOCATIONS FOR THE  
BRUNSWICK NUCLEAR PROJECT (MILES)

<u>Sector</u>	<u>Residence (Miles)</u>	<u>Milk Cow</u>	<u>Milk Goat</u>	<u>Meat Animal</u>	<u>Garden</u>
N	0.9	—	—	—	—
NNE	1.2	—	—	—	1.2
NE	—	—	—	—	—
ENE	—	—	—	—	—
E	—	—	—	—	—
ESE	1.6	—	—	—	—
SE	0.9	—	—	1.0	—
SSE	1.0	—	—	1.0	—
S	1.5	—	—	—	1.6
SSW	1.2	—	—	—	1.5
SW	1.0	—	—	—	1.0
WSW	1.1	—	—	—	1.1
W	0.8	—	—	—	0.8
WNW	0.9	—	—	—	0.9
NW	0.9	—	—	—	0.9
NNW	0.8	—	—	—	4.8

Area surveyed is within 5 miles of the plant. Distances are estimates from composite map-- approximate error  $\pm 0.1$  mile.



## 6.0 ANALYTICAL PROCEDURES

### 6.1 Gross Beta

Gross beta radioactivity measurements are made utilizing a Tennelec Low-Background Alpha/Beta Counting System. The LLD for air particulates is approximately 0.0035 pCi/m<sup>3</sup>.

Air particulate samples are mounted in 2-inch stainless steel planchets and counted directly.

### 6.2 Tritium

Liquid samples requiring tritium analysis are first distilled. Five milliliters of the distillate are mixed with ten milliliters of liquid scintillation cocktail and counted in a liquid scintillation counter for 50 minutes. The LLD is approximately 1200 pCi/l.

### 6.3 Iodine-131

Iodine-131 airborne concentrations are analyzed by the intrinsic germanium (Ge) gamma spectrometry systems. The cartridges are placed on the detector and each charcoal cartridge is counted individually with an approximate LLD of 2.1 E-2 pCi/m<sup>3</sup>.

### 6.4 Gamma Spectrometry

Gamma spectrum analysis utilizes intrinsic germanium detectors with thin aluminum windows housed in steel and lead shields. The analyzer system is the Nuclear Data 6685. Table 6-1 summarizes LLD values derived from instrument sensitivity based upon a blank sample background.

Air particulate filter quarterly composites are placed in a Petri dish and analyzed directly.

Liquid samples are boiled down to reduce the volume, transferred to 500-ml Marinelli beaker, and analyzed directly.

Effective sediments are dried, weighed, and then analyzed in a Marinelli beaker.

Bottom sediment and benthic organism samples are weighed wet and analyzed in a Marinelli beaker.

Fish samples are cleaned, dressed, and placed in a Marinelli beaker for analysis.

## 6.5 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 lighttight 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 above 150°C. The photons from the lower-energy traps are automatically eliminated through a preheat cycle. Calibration is checked regularly using dosimeters irradiated to known doses. Prior to the measurement of each dosimeter, the instrument is checked through use of an internal constant light source as a secondary standard. The minimum sensitivity of the dosimeters used is approximately 1 mR.

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

## 6.6 EPA Laboratory Intercomparison Program

The Radiochemistry Laboratory at the Harris Energy & Environmental Center in New Hill, North Carolina, provides radioanalytical services for CP&L's nuclear plant environmental surveillance programs. The laboratory is a participant in the EPA cross-check program and uses its performance in this program as a major determinant of the accuracy and precision of its analytical results.

During 1991, 54 analyses were completed on 20 samples representing three major environmental media (water, milk, and air filters). Data on the known activities and the normalized standard deviations for the 54 analyses have been received from EPA.

A comparison of the average of our reported values with the EPA known activity and its normalized standard deviation is provided below:

<u>Standard Deviation From Known Activity</u>	<u>Percent of Analyses</u>
≤ 1 standard deviation	63
≤ 2 standard deviation	93
≤ 3 standard deviation	97

One of fifty-four analyses exceeded the 3 sigma action level. A gross beta analysis of a water sample received in May 1991 fell outside the  $3\sigma$  limit. Independent verification of the sample analysis was accomplished by a reanalysis. This result was well within the known activity limits and indicated a contamination problem from the beakers or planchets used in the initial sample analysis. The potential sources of contamination were discarded.

#### 6.7 Lower Limits of Detection

All samples analyzed met the LLD required by Technical Specification 6.9.1.7 and Table 4.12.1-1. Typical "a priori" LLD values for the samples analyzed are listed in Table 6-1.

TABLE 6-1

TYPICAL LOWER LIMITS OF DETECTION (A PRIORI)  
GAMMA SPECTROMETRY

Surface Water/Groundwater Samples

Isotope	(LLD)
Cr-51	24 pCi/l
Mn-54	3
Co-58	3
Fe-59	7
Co-60	4
Zn-65	7
Nb-95	3
Zr-95	7
I-131	0.4*
Cs-134	4
Cs-137	4
Ba-140	10
La-140	3
Other Expected Gamma Emitters	2 to 27

Surface Water Samples  
(Saline Water)

Isotope	(LLD)
Cr-51	22 pCi/l
Mn-54	3
Co-58	3
Fe-59	5
Co-60	3
I-131	0.4*
Cs-134	3
Cs-137	3
Ba-140	9
La-140	3
Other Expected Gamma Emitters	1 to 62

\*NaI well crystal analysis of resin concentrates of samples

TABLE 6-1

TYPICAL LOWER LIMITS OF DETECTION (A PRIORI)  
GAMMA SPECTROMETRY

Air Particulates  
(Quarterly Composite)

Isotope	(LLD)
Cs-134	0.002 pCi/m <sup>3</sup>
Cs-137	0.001
Ba-140	0.004
La-140	0.002
Other Expected Gamma Emitters	0.001 to 0.47

Milk

Isotope	(LLD)
Cr-51	27 pCi/l
Mn-54	4
Co-58	3
Co-60	4
I-131	4*
Cs-134	4
Cs-137	4
Ba-140	12
La-140	4
Other Expected Gamma Emitters	3 to 182

TABLE 6-1

TYPICAL LOWER LIMITS OF DETECTION (A PRIORI)  
GAMMA SPECTROMETRY

<u>Sediment</u>	
Isotope	(LLD)
Cr-51	212 pCi/kg (dry weight)
Mn-54	27
Co-58	24
Co-60	20
Cs-134	35
Cs-137	30
Other Expected Gamma Emitters	17 to 1470

<u>Fish</u>	
Isotope	(LLD)
Cr-51	191 pCi/kg (wet weight)
Mn-54	17
Co-58	25
Fe-59	47
Co-60	24
Zn-65	49
I-131	23
Cs-134	29
Cs-137	27
Other Expected Gamma Emitters	17 to 544

TABLE 6-1

TYPICAL LOWER LIMITS OF DETECTION (A PRIORI)  
GAMMA SPECTROMETRY

Food Products and Vegetation	
Isotope	(LLD)
Cr-51	110 pCi/kg (wet weight)
Mn-54	16
Co-58	19
Co-60	23
I-131	13
Cs-134	20
Cs-137	19
Other Expected Gamma Emitters	12 to 976

## 7.0 INDEX TO TECHNICAL SPECIFICATION REQUIREMENTS

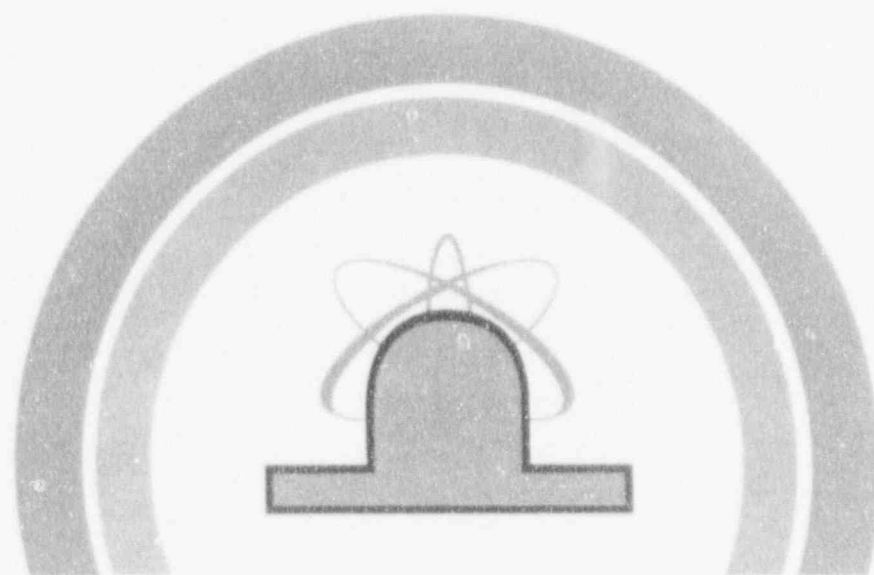
This page provides correlation between this report and the Brunswick Technical Specifications.

SPECIFICATION	REPORT SECTION
6.9.1.7 a	3.0 INTERPRETATIONS AND CONCLUSIONS
6.9.1.7 b	5.0 ANNUAL LAND-USE CENSUS
6.9.1.7 c	Table 1-1 (Results of Analysis of Env. Samples)
6.9.1.7 d	2.0 PROGRAM SUMMARY
6.9.1.7 e	Figures 2-1, 2-2, 2-3, 2-4, and 2-5
6.9.1.7 f	6.6 EPA Laboratory Intercomparison Program
6.9.1.7 g	4.0 MISSING SAMPLES AND ANALYSES
6.9.1.7 h	6.1 Gross Beta
	6.2 Tritium
	6.3 Iodine-131
	6.7 Lower Limits of Detection
	Table 6-1 Typical Lower Limits of Detection Gamma Spectrometry



# **Radiological Environmental Operating Report**

VOLUME II  
JANUARY 1, 1991 - JUNE 30, 1991  
SAMPLE ANALYSES DATA



**BRUNSWICK NUCLEAR PROJECT**

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT  
RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT  
JANUARY - JUNE, 1991

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AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 1

FIRST QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AC-200)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	300.4	< 2.40E-02	(< 3.38E-02)
01/14/91	297.8	< 2.86E-02	(< 2.42E-02)
01/21/91	297.0	< 2.76E-02	(< 3.07E-02)
01/28/91	300.0	< 2.28E-02	(< 1.73E-02)
02/04/91	302.4	< 2.93E-02	(< 2.77E-02)
02/11/91	301.1	< 3.20E-02	(< 2.86E-02)
02/18/91	299.3	< 2.55E-02	(< 3.40E-02)
02/24/91	255.3	< 3.45E-02	(< 2.71E-02)
03/02/91	259.0	< 3.21E-02	(< 3.68E-02)
03/08/91	259.8	< 4.02E-02	(< 3.23E-02)
03/14/91	257.7	< 5.04E-02	(< 5.38E-02)
03/20/91	260.5	< 4.40E-02	(< 5.72E-02)
03/26/91	262.6	< 2.57E-02	(< 2.69E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 2

FIRST QUARTER, 1991

0.6 MI NE - PMAC (AC-201)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	277.0	< 1.55E-02	(< 3.38E-02)
01/14/91	276.9	< 3.45E-02	(< 2.42E-02)
01/21/91	272.0	< 3.52E-02	(< 3.07E-02)
01/28/91	279.1	< 2.66E-02	(< 1.73E-02)
02/04/91	277.8	< 2.95E-02	(< 2.77E-02)
02/11/91	279.5	< 3.29E-02	(< 2.86E-02)
02/18/91	280.7	< 3.44E-02	(< 3.40E-02)
02/24/91	243.9	< 2.95E-02	(< 2.71E-02)
03/02/91	247.3	< 3.75E-02	(< 3.68E-02)
03/08/91	238.5	< 5.19E-02	(< 3.23E-02)
03/14/91	244.2	< 5.38E-02	(< 5.38E-02)
03/20/91	249.4	< 4.07E-02	(< 5.72E-02)
03/26/91	246.0	< 3.31E-02	(< 2.69E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 3

FIRST QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AC-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	300.2	< 2.25E-02	(< 3.38E-02)
01/14/91	300.6	< 2.25E-02	(< 2.42E-02)
01/21/91	303.7	< 2.94E-02	(< 3.07E-02)
01/28/91	301.4	< 2.48E-02	(< 1.73E-02)
02/04/91	305.7	< 2.56E-02	(< 2.77E-02)
02/11/91	304.4	< 1.95E-02	(< 2.86E-02)
02/18/91	304.0	< 2.24E-02	(< 3.40E-02)
02/24/91	246.7	< 3.52E-02	(< 2.71E-02)
03/02/91	252.9	< 2.67E-02	(< 3.68E-02)
03/08/91	253.0	< 3.94E-02	(< 3.23E-02)
03/14/91	252.2	< 5.39E-02	(< 5.38E-02)
03/20/91	255.0	< 3.24E-02	(< 5.72E-02)
03/26/91	253.5	< 3.24E-02	(< 2.69E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 4

FIRST QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AC-203)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	316.5	< 1.47E-02	(< 3.38E-02)
01/14/91	320.3	< 1.02E-02	(< 2.42E-02)
01/21/91	311.6	< 2.05E-02	(< 3.07E-02)
01/28/91	318.6	< 2.72E-02	(< 1.73E-02)
02/04/91	322.0	< 2.04E-02	(< 2.77E-02)
02/11/91	323.7	< 2.25E-02	(< 2.86E-02)
02/18/91	319.5	< 1.04E-02	(< 3.40E-02)
02/24/91	250.6	< 3.25E-02	(< 2.71E-02)
03/02/91	248.1	< 4.74E-02	(< 3.68E-02)
03/08/91	250.6	< 3.57E-02	(< 3.23E-02)
03/14/91	229.4	< 4.98E-02	(< 5.38E-02)
03/20/91	194.5	< 4.37E-02	(< 5.72E-02)
03/26/91	250.9	< 2.70E-02	(< 2.69E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 5

FIRST QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AC-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
01/07/91	271.9	(< 3.38E-02)
01/14/91	267.4	(< 2.42E-02)
01/21/91	267.9	(< 3.07E-02)
01/28/91	269.2	(< 1.73E-02)
02/04/91	274.0	(< 2.77E-02)
02/11/91	272.3	(< 2.86E-02)
02/18/91	271.9	(< 3.40E-02)
02/24/91	241.2	(< 2.71E-02)
03/02/91	241.8	(< 3.68E-02)
03/08/91	239.2	(< 3.23E-02)
03/14/91	241.6	(< 5.38E-02)
03/20/91	243.0	(< 5.72E-02)
03/26/91	248.2	(< 2.69E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 6

FIRST QUARTER, 1991

0.6 MI SSE - SPOIL POND (AC-205)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	272.1	< 2.74E-02	(< 3.38E-02)
01/14/91	272.2	< 3.15E-02	(< 2.42E-02)
01/21/91	274.7	< 2.61E-02	(< 3.07E-02)
01/28/91	275.4	< 4.40E-02	(< 1.73E-02)
02/04/91	275.5	< 2.67E-02	(< 2.77E-02)
02/11/91	277.3	< 1.67E-02	(< 2.86E-02)
02/18/91	276.5	< 2.40E-02	(< 3.40E-02)
02/24/91	226.7	< 3.55E-02	(< 2.71E-02)
03/02/91	232.0	< 2.38E-02	(< 3.68E-02)
03/08/91	232.3	< 4.87E-02	(< 3.23E-02)
03/14/91	232.4	< 4.02E-02	(< 5.38E-02)
03/20/91	233.8	< 4.95E-02	(< 5.72E-02)
03/26/91	234.8	< 2.75E-02	(< 2.69E-02)



AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 7

SECOND QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AC-200)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	260.6	< 3.40E-02	(< 4.39E-02)
04/08/91	306.2	< 2.87E-02	(< 3.24E-02)
04/15/91	306.5	< 3.04E-02	(< 2.85E-02)
04/22/91	300.4	< 2.74E-02	(< 2.79E-02)
04/29/91	272.6	< 2.92E-02	(< 3.40E-02)
05/06/91	298.1	< 3.23E-02	(< 2.85E-02)
05/13/91	314.2	< 2.50E-02	(< 2.98E-02)
05/20/91	298.6	< 3.06E-02	(< 2.53E-02)
05/28/91	348.3	< 1.88E-02	(< 2.27E-02)
06/03/91	265.4	< 2.69E-02	(< 3.09E-02)
06/10/91	301.2	< 2.61E-02	(< 3.05E-02)
06/17/91	304.8	< 2.55E-02	(< 2.87E-02)
06/24/91	305.5	< 3.47E-02	(< 3.29E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 8

SECOND QUARTER, 1991

0.6 MI NE - PMAC (AC-201)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	244.6	< 3.20E-02	(< 4.39E-02)
04/08/91	290.9	< 1.69E-02	(< 3.24E-02)
04/15/91	288.7	< 2.48E-02	(< 2.85E-02)
04/22/91	295.3	< 3.56E-02	(< 2.79E-02)
04/29/91	285.7	< 3.02E-02	(< 3.40E-02)
05/06/91	290.8	< 3.67E-02	(< 2.85E-02)
05/13/91	312.3	< 2.72E-02	(< 2.98E-02)
05/20/91	282.2	< 3.10E-02	(< 2.53E-02)
05/28/91	328.6	< 2.19E-02	(< 2.27E-02)
06/03/91	250.0	< 3.65E-02	(< 3.09E-02)
06/10/91	285.0	< 3.44E-02	(< 3.05E-02)
06/17/91	282.7	< 2.42E-02	(< 2.87E-02)
06/24/91	289.2	< 3.96E-02	(< 3.29E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 9

SECOND QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AC-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	251.1	< 3.24E-02	(< 4.39E-02)
04/08/91	294.8	< 3.05E-02	(< 3.24E-02)
04/15/91	293.8	< 3.13E-02	(< 2.85E-02)
04/22/91	300.6	< 2.60E-02	(< 2.79E-02)
04/29/91	285.8	< 3.47E-02	(< 3.40E-02)
05/06/91	294.2	< 2.08E-02	(< 2.85E-02)
05/13/91	303.1	< 2.48E-02	(< 2.98E-02)
05/20/91	288.2	< 2.26E-02	(< 2.53E-02)
05/28/91	333.8	< 2.64E-02	(< 2.27E-02)
06/03/91	252.7	< 1.71E-02	(< 3.09E-02)
06/10/91	287.1	< 2.26E-02	(< 3.05E-02)
06/17/91	290.0	< 2.09E-02	(< 2.87E-02)
06/24/91	288.6	< 2.91E-02	(< 3.29E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 10

SECOND QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AC-203)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	249.0	< 3.05E-02	(< 4.39E-02)
04/08/91	278.2	< 2.59E-02	(< 3.24E-02)
04/15/91	279.5	< 3.56E-02	(< 2.85E-02)
04/22/91	299.9	< 3.15E-02	(< 2.79E-02)
04/29/91	286.0	< 3.53E-02	(< 3.40E-02)
05/06/91	290.4	< 3.23E-02	(< 2.85E-02)
05/13/91	299.9	< 2.51E-02	(< 2.98E-02)
05/20/91	285.3	< 3.09E-02	(< 2.53E-02)
05/28/91	332.3	< 1.98E-02	(< 2.27E-02)
06/03/91	251.6	< 3.37E-02	(< 3.09E-02)
06/10/91	291.4	< 2.70E-02	(< 3.05E-02)
06/17/91	292.1	< 2.77E-02	(< 2.87E-02)
06/24/91	303.6	< 3.27E-02	(< 3.29E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 11

SECOND QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AC-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
04/01/91	240.0	(< 4.39E-02)
04/08/91	284.8	(< 3.24E-02)
04/15/91	286.9	(< 2.85E-02)
04/22/91	295.3	(< 2.79E-02)
04/29/91	281.4	(< 3.40E-02)
05/06/91	286.1	(< 2.85E-02)
05/13/91	297.2	(< 2.98E-02)
05/20/91	308.3	(< 2.53E-02)
05/28/91	329.5	(< 2.27E-02)
06/03/91	250.4	(< 3.09E-02)
06/10/91	290.4	(< 3.05E-02)
06/17/91	293.0	(< 2.87E-02)
06/24/91	289.4	(< 3.29E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 12

SECOND QUARTER, 1991

0.6 MI SSE - SPOIL POND (AC-205)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	231.7	< 3.66E-02	(< 4.39E-02)
04/08/91	274.2	< 2.72E-02	(< 3.24E-02)
04/15/91	273.3	< 3.00E-02	(< 2.85E-02)
04/22/91	275.9	< 3.18E-02	(< 2.79E-02)
04/29/91	266.3	< 2.87E-02	(< 3.40E-02)
05/06/91	270.5	< 2.66E-02	(< 2.85E-02)
05/13/91	279.3	< 2.58E-02	(< 2.98E-02)
05/20/91	269.6	< 2.42E-02	(< 2.53E-02)
05/28/91	313.4	< 2.95E-02	(< 2.27E-02)
06/03/91	239.6	< 3.72E-02	(< 3.09E-02)
06/10/91	271.4	< 2.40E-02	(< 3.05E-02)
06/17/91	160.8	< 5.33E-02	(< 2.87E-02)
06/24/91	272.2	< 3.23E-02	(< 3.29E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 13

FIRST QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	300.4	1.90 ± 0.31 E-02	(2.29 ± 0.35 E-02)
01/14/91	297.8	6.30 ± 2.40 E-03	(8.47 ± 2.76 E-03)
01/21/91	297.0	1.25 ± 0.28 E-02	(1.09 ± 0.29 E-02)
01/28/91	300.0	2.04 ± 0.32 E-02	(1.88 ± 0.34 E-02)
02/04/91	302.4	1.81 ± 0.30 E-02	(1.52 ± 0.31 E-02)
02/11/91	301.1	1.59 ± 0.30 E-02	(1.59 ± 0.32 E-02)
02/18/91	299.3	2.06 ± 0.32 E-02	(1.95 ± 0.34 E-02)
02/24/91	255.3	1.04 ± 0.29 E-02	(1.07 ± 0.31 E-02)
03/02/91	259.0	1.53 ± 0.33 E-02	(1.46 ± 0.34 E-02)
03/08/91	259.8	1.29 ± 0.31 E-02	(1.40 ± 0.34 E-02)
03/14/91	257.7	2.44 ± 0.37 E-02	(2.18 ± 0.37 E-02)
03/20/91	260.5	9.73 ± 2.84 E-03	(1.22 ± 0.32 E-02)
03/26/91	262.6	2.05 ± 0.34 E-02	(2.50 ± 0.38 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 14

FIRST QUARTER, 1991

0.6 MI NE - PMAC (AP-201)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	277.0	2.02 ± 0.33 E-02	(2.29 ± 0.35 E-02)
01/14/91	276.9	7.43 ± 2.62 E-03	(8.47 ± 2.76 E-03)
01/21/91	272.0	1.29 ± 0.30 E-02	(1.09 ± 0.29 E-02)
01/28/91	279.1	2.11 ± 0.34 E-02	(1.88 ± 0.34 E-02)
02/04/91	277.8	1.38 ± 0.30 E-02	(1.52 ± 0.31 E-02)
02/11/91	279.5	1.44 ± 0.31 E-02	(1.59 ± 0.32 E-02)
02/18/91	280.7	1.96 ± 0.33 E-02	(1.95 ± 0.34 E-02)
02/24/91	243.9	9.84 ± 3.02 E-03	(1.07 ± 0.31 E-02)
03/02/91	247.3	1.55 ± 0.34 E-02	(1.46 ± 0.34 E-02)
03/08/91	238.5	1.08 ± 0.32 E-02	(1.40 ± 0.34 E-02)
03/14/91	244.2	1.92 ± 0.35 E-02	(2.18 ± 0.37 E-02)
03/20/91	249.4	1.15 ± 0.31 E-02	(1.22 ± 0.32 E-02)
03/26/91	246.0	2.41 ± 0.38 E-02	(2.50 ± 0.38 E-02)



AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 15

FIRST QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	300.2	2.09 ± 0.32 E-02	(2.29 ± 0.35 E-02)
01/14/91	300.6	6.31 ± 2.38 E-03	(8.47 ± 2.76 E-03)
01/21/91	303.7	1.15 ± 0.27 E-02	(1.09 ± 0.29 E-02)
01/28/91	301.4	1.82 ± 0.31 E-02	(1.88 ± 0.34 E-02)
02/04/91	305.7	1.69 ± 0.29 E-02	(1.52 ± 0.31 E-02)
02/11/91	304.4	1.51 ± 0.29 E-02	(1.59 ± 0.32 E-02)
02/18/91	304.0	2.05 ± 0.31 E-02	(1.95 ± 0.34 E-02)
02/24/91	246.7	1.07 ± 0.30 E-02	(1.07 ± 0.31 E-02)
03/02/91	252.9	1.43 ± 0.33 E-02	(1.46 ± 0.34 E-02)
03/08/91	253.0	1.38 ± 0.32 E-02	(1.40 ± 0.34 E-02)
03/14/91	252.2	2.08 ± 0.36 E-02	(2.18 ± 0.37 E-02)
03/20/91	255.0	9.13 ± 2.85 E-03	(1.22 ± 0.31 E-02)
03/26/91	253.5	2.44 ± 0.37 E-02	(2.50 ± 0.38 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 16

FIRST QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	316.5	1.78 ± 0.29 E-02	(2.29 ± 0.35 E-02)
01/14/91	320.3	5.07 ± 2.18 E-03	(8.47 ± 2.76 E-03)
01/21/91	311.6	1.20 ± 0.27 E-02	(1.09 ± 0.29 E-02)
01/28/91	318.6	1.65 ± 0.29 E-02	(1.88 ± 0.34 E-02)
02/04/91	322.0	1.45 ± 0.27 E-02	(1.52 ± 0.31 E-02)
02/11/91	323.7	1.65 ± 0.29 E-02	(1.59 ± 0.32 E-02)
02/18/91	319.5	1.75 ± 0.29 E-02	(1.95 ± 0.34 E-02)
02/24/91	250.6	1.16 ± 0.31 E-02	(1.07 ± 0.31 E-02)
03/02/91	248.1	1.38 ± 0.33 E-02	(1.46 ± 0.34 E-02)
03/08/91	250.6	1.47 ± 0.33 E-02	(1.40 ± 0.34 E-02)
03/14/91	229.4	2.20 ± 0.39 E-02	(2.18 ± 0.37 E-02)
03/20/91	194.5	1.40 ± 0.39 E-02	(1.22 ± 0.32 E-02)
03/26/91	250.9	2.17 ± 0.36 E-02	(2.50 ± 0.38 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 17

FIRST QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
01/07/91	271.9	(2.29 ± 0.35 E-02)
01/14/91	267.4	(8.47 ± 2.76 E-03)
01/21/91	267.9	(1.09 ± 0.29 E-02)
01/28/91	269.2	(1.88 ± 0.34 E-02)
02/04/91	274.0	(1.52 ± 0.31 E-02)
02/11/91	272.3	(1.59 ± 0.32 E-02)
02/18/91	271.9	(1.95 ± 0.34 E-02)
02/24/91	241.2	(1.07 ± 0.31 E-02)
03/02/91	241.8	(1.46 ± 0.34 E-02)
03/08/91	239.2	(1.40 ± 0.34 E-02)
03/14/91	241.6	(2.18 ± 0.37 E-02)
03/20/91	243.0	(1.22 ± 0.32 E-02)
03/26/91	248.2	(2.50 ± 0.38 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 18

FIRST QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
01/07/91	272.1	2.13 ± 0.34 E-02	(2.29 ± 0.35 E-02)
01/14/91	272.2	7.64 ± 2.67 E-03	(8.47 ± 2.76 E-03)
01/21/91	274.7	1.33 ± 0.30 E-02	(1.09 ± 0.29 E-02)
01/28/91	275.4	1.51 ± 0.31 E-02	(1.88 ± 0.34 E-02)
02/04/91	275.5	1.73 ± 0.32 E-02	(1.52 ± 0.31 E-02)
02/11/91	277.3	1.83 ± 0.33 E-02	(1.59 ± 0.32 E-02)
02/18/91	276.5	1.64 ± 0.32 E-02	(1.95 ± 0.34 E-02)
02/24/91	226.7	1.18 ± 0.33 E-02	(1.07 ± 0.31 E-02)
03/02/91	232.0	1.29 ± 0.35 E-02	(1.46 ± 0.34 E-02)
03/08/91	232.3	1.50 ± 0.35 E-02	(1.40 ± 0.34 E-02)
03/14/91	232.4	1.92 ± 0.37 E-02	(2.18 ± 0.37 E-02)
03/20/91	233.8	9.17 ± 3.06 E-03	(1.22 ± 0.32 E-02)
03/26/91	234.8	2.48 ± 0.39 E-02	(2.50 ± 0.38 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 19

SECOND QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	260.6	1.60 ± 0.32 E-02	(1.73 ± 0.35 E-02)
04/08/91	306.2	1.22 ± 0.26 E-02	(1.83 ± 0.31 E-02)
04/15/91	306.5	9.85 ± 2.52 E-03	(1.29 ± 0.28 E-02)
04/22/91	300.4	< 3.10E-03	(8.50 ± 2.51 E-03)
04/29/91	272.6	1.34 ± 0.29 E-02	(1.69 ± 0.31 E-02)
05/06/91	298.1	1.76 ± 0.30 E-02	(1.88 ± 0.32 E-02)
05/13/91	314.2	1.67 ± 0.28 E-02	(1.98 ± 0.31 E-02)
05/20/91	298.6	1.10 ± 0.28 E-02	(8.37 ± 2.60 E-03)
05/28/91	348.3	1.20 ± 0.25 E-02	(1.15 ± 0.25 E-02)
06/03/91	265.4	1.29 ± 0.31 E-02	(1.74 ± 0.34 E-02)
06/10/91	301.2	1.01 ± 0.26 E-02	(9.84 ± 2.65 E-03)
06/17/91	304.8	1.18 ± 0.27 E-02	(1.20 ± 0.28 E-02)
06/24/91	305.5	1.15 ± 0.26 E-02	(1.19 ± 0.27 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 20

SECOND QUARTER, 1991

0.6 MI NE - PMAC (AP-201)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	244.6	1.47 ± 0.33 E-02	(1.73 ± 0.35 E-02)
04/08/91	290.9	1.14 ± 0.27 E-02	(1.83 ± 0.31 E-02)
04/15/91	288.7	1.33 ± 0.28 E-02	(1.29 ± 0.28 E-02)
04/22/91	295.3	7.33 ± 2.44 E-03	(8.50 ± 2.51 E-03)
04/29/91	285.7	1.35 ± 0.28 E-02	(1.69 ± 0.31 E-02)
05/06/91	290.8	1.53 ± 0.30 E-02	(1.88 ± 0.32 E-02)
05/13/91	312.3	1.77 ± 0.29 E-02	(1.98 ± 0.31 E-02)
05/20/91	282.2	1.36 ± 0.31 E-02	(8.37 ± 2.60 E-03)
05/28/91	328.6	1.01 ± 0.25 E-02	(1.15 ± 0.25 E-02)
06/03/91	250.0	1.58 ± 0.34 E-02	(1.74 ± 0.34 E-02)
06/10/91	285.0	9.22 ± 2.65 E-03	(9.84 ± 2.65 E-03)
06/17/91	282.7	1.33 ± 0.29 E-02	(1.20 ± 0.28 E-02)
06/24/91	289.2	1.14 ± 0.27 E-02	(1.19 ± 0.27 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 21

SECOND QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	251.1	1.58 ± 0.33 E-02	(1.73 ± 0.35 E-02)
04/08/91	294.8	1.31 ± 0.28 E-02	(1.83 ± 0.31 E-02)
04/15/91	293.8	1.40 ± 0.28 E-02	(1.29 ± 0.28 E-02)
04/22/91	300.6	7.97 ± 2.44 E-03	(8.50 ± 2.51 E-03)
04/29/91	285.8	1.43 ± 0.29 E-02	(1.69 ± 0.31 E-02)
05/06/91	294.2	1.75 ± 0.31 E-02	(1.88 ± 0.32 E-02)
05/13/91	303.1	1.60 ± 0.28 E-02	(1.98 ± 0.31 E-02)
05/20/91	288.2	8.47 ± 2.75 E-03	(8.37 ± 2.60 E-03)
05/28/91	333.8	1.18 ± 0.25 E-02	(1.15 ± 0.25 E-02)
06/03/91	252.7	1.48 ± 0.33 E-02	(1.74 ± 0.34 E-02)
06/10/91	287.1	9.47 ± 2.65 E-03	(9.84 ± 2.65 E-03)
06/17/91	290.0	1.28 ± 0.28 E-02	(1.20 ± 0.28 E-02)
06/24/91	288.6	1.28 ± 0.28 E-02	(1.19 ± 0.27 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIERS PER CUBIC METER)

BSEP - 22

SECOND QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	249.0	1.30 ± 0.32 E-02	(1.73 ± 0.35 E-02)
04/08/91	278.2	1.81 ± 0.32 E-02	(1.83 ± 0.31 E-02)
04/15/91	279.5	1.39 ± 0.29 E-02	(1.29 ± 0.28 E-02)
04/22/91	299.9	8.30 ± 2.47 E-03	(8.50 ± 2.51 E-03)
04/29/91	286.0	1.39 ± 0.29 E-02	(1.69 ± 0.31 E-02)
05/06/91	290.4	1.67 ± 0.30 E-02	(1.88 ± 0.32 E-02)
05/13/91	299.9	1.66 ± 0.29 E-02	(1.98 ± 0.31 E-02)
05/20/91	285.3	1.03 ± 0.29 E-02	(8.37 ± 2.60 E-03)
05/28/91	332.3	1.26 ± 0.26 E-02	(1.15 ± 0.25 E-02)
06/03/91	251.6	1.54 ± 0.33 E-02	(1.74 ± 0.34 E-02)
06/10/91	291.4	9.88 ± 2.64 E-03	(9.84 ± 2.65 E-03)
06/17/91	292.1	1.25 ± 0.28 E-02	(1.20 ± 0.28 E-02)
06/24/91	303.6	1.17 ± 0.26 E-02	(1.19 ± 0.27 E-02)



AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 23

SECOND QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
04/01/91	240.0	(1.73 ± 0.35 E-02)
04/08/91	284.8	(1.83 ± 0.31 E-02)
04/15/91	286.9	(1.29 ± 0.28 E-02)
04/22/91	295.3	(8.50 ± 2.51 E-03)
04/29/91	281.4	(1.69 ± 0.31 E-02)
05/06/91	286.1	(1.88 ± 0.32 E-02)
05/13/91	297.2	(1.98 ± 0.31 E-02)
05/20/91	308.3	(8.37 ± 2.60 E-03)
05/28/91	329.5	(1.15 ± 0.25 E-02)
06/03/91	250.4	(1.74 ± 0.34 E-02)
06/10/91	290.4	(9.84 ± 2.65 E-03)
06/17/91	293.0	(1.20 ± 0.28 E-02)
06/24/91	289.4	(1.19 ± 0.27 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 24

SECOND QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
04/01/91	231.7	1.80 ± 0.37 E-02	(1.73 ± 0.35 E-02)
04/08/91	274.2	1.29 ± 0.29 E-02	(1.83 ± 0.31 E-02)
04/15/91	273.3	1.28 ± 0.29 E-02	(1.29 ± 0.28 E-02)
04/22/91	275.9	7.77 ± 2.60 E-03	(6.50 ± 2.51 E-03)
04/29/91	266.3	1.34 ± 0.30 E-02	(1.69 ± 0.31 E-02)
05/06/91	270.5	1.75 ± 0.32 E-02	(1.88 ± 0.32 E-02)
05/13/91	279.3	1.76 ± 0.31 E-02	(1.98 ± 0.31 E-02)
05/20/91	269.6	1.12 ± 0.31 E-02	(8.37 ± 2.60 E-03)
05/28/91	313.4	1.18 ± 0.27 E-02	(1.15 ± 0.25 E-02)
06/03/91	239.6	1.49 ± 0.34 E-02	(1.74 ± 0.34 E-02)
06/10/91	271.4	9.68 ± 2.78 E-03	(9.84 ± 2.65 E-03)
06/17/91	160.8	1.45 ± 0.46 E-02	(1.20 ± 0.28 E-02)
06/24/91	272.2	1.19 ± 0.28 E-02	(1.19 ± 0.27 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 25

FIRST QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3652.9 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

1.31 ± 0.12 E-01

(1.53 ± 0.17 E-01)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 26

FIRST QUARTER, 1991

0.6 MI NE - PMAC (AP-201)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3412.3 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.36 ± 0.16 E-01	(1.53 ± 0.17 E-01)
K-40	9.50 ± 8.51 E-03	(LESS THAN LLD)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 27

FIRST QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3633.6 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

1.09 ± 0.15 E-01

(1.53 ± 0.17 E-01)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 28

FIRST QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3656.3 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.16 ± 0.15 E-01	(1.53 ± 0.17 E-01)
RA-226	2.70 ± 1.28 E-02	(LESS THAN LLD)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 29

FIRST QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3349.6 CUBIC METERS

ISOTOPE

CONTROL ACTIVITY

BE-7

(1.53 ± 0.17 E-01)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 30

FIRST QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3340.7 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

1.25 ± 0.16 E-01

(1.53 ± 0.17 E-01)



AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 31

SECOND QUARTER, 1991

1.0 MI SW - VISITOR'S CEN ? (AP-200)  
(COMPOSITE SAMPL.)

GAMMA SPECTROMETRY

VOLUME: 3882.4 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	8.21 ± 1.52 E-02	(9.01 ± 1.56 E-02)
BI-214	LESS THAN LLD	(2.06 ± 1.13 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 32

SECOND QUARTER, 1991

0.6 MI NE - PMAC (AP-201)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3726 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	8.42 ± 1.34 E-02	(9.01 ± 1.56 E-02)
BI-214	LESS THAN LLD	(2.06 ± 1.13 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 33

SECOND QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3763.8 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

1.11 ± 0.15 E-01

(9.01 ± 1.56 E-02)

BI-214

LESS THAN LLD

(2.06 ± 1.13 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIIES PER CUBIC METER)

BSEP - 34

SECOND QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3739.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.83 ± 1.35 E-02	(9.01 ± 1.56 E-02)
BI-214	LESS THAN LLD	(2.05 ± 1.13 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 35

SECOND QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3732.7 CUBIC METERS

ISOTOPE

CONTROL ACTIVITY

SE-7

(9.01 ± 1.56 E-02)

BI-214

(2.06 ± 1.13 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 36

SECOND QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3398.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$1.11 \pm 0.14 \text{ E-01}$	$(9.01 \pm 1.56 \text{ E-02})$
BI-214	LESS THAN LLD	$(2.06 \pm 1.13 \text{ E-03})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 37

JANUARY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 01/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 401.4 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.52 ± 0.13 E+00	(1.39 ± 0.11 E+00)
K-40	1.39 ± 0.18 E+00	(1.32 ± 0.17 E+00)
I-131	< 4.41E-02	(< 2.30E-02)
CS-134	< 2.21E-02	(< 1.92E-02)
CS-137	< 2.11E-02	(< 1.99E-02)
PB-212	LESS THAN LLD	(3.93 ± 1.18 E-02)
PB-214	LESS THAN LLD	(6.23 ± 1.27 E-02)
BI-214	2.17 ± 2.12 E-02	(3.86 ± 2.07 E-02)
RA-226	LESS THAN LLD	(2.32 ± 1.80 E-01)
AC-228	LESS THAN LLD	(1.47 ± 0.40 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIIES PER GRAM)

BSEP - 38

JANUARY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 01/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 385.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.00 ± 0.14 E+00	(1.39 ± 0.11 E+00)
K-40	1.58 ± 0.27 E+00	(1.32 ± 0.17 E+00)
I-131	< 3.19E-02	(< 2.30E-02)
CS-134	< 2.79E-02	(< 1.92E-02)
CS-137	< 2.60E-02	(< 1.99E-02)
PB-212	LESS THAN LLD	(3.93 ± 1.18 E-02)
PB-214	LESS THAN LLD	(6.23 ± 1.27 E-02)
BI-214	4.43 ± 1.55 E-02	(3.86 ± 2.07 E-02)
RA-226	LESS THAN LLD	(2.32 ± 1.80 E-01)
AC-228	LESS THAN LLD	(1.47 ± 0.40 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 39

JANUARY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-302)  
(DATE COLLECTED: 01/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 391.2 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.39 ± 0.11 E+00)
K-40	(1.32 ± 0.17 E+00)
I-131	(< 2.30E-02)
CS-134	(< 1.92E-02)
CS-137	(< 1.99E-02)
PB-212	(3.93 ± 1.18 E-02)
PB-214	(6.23 ± 1.27 E-02)
EI-214	(3.86 ± 2.07 E-02)
RA-226	(2.32 ± 1.80 E-01)
AC-228	(1.47 ± 0.40 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 40

JANUARY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 01/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 380.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.14 ± 0.11 E+00	(1.39 ± 0.11 E+00)
K-40	1.78 ± 0.20 E+00	(1.32 ± 0.17 E+00)
I-131	< 3.97E-02	(< 2.30E-02)
CS-134	< 2.55E-02	(< 1.92E-02)
CS-137	< 3.82E-02	(< 1.99E-02)
PB-212	LESS THAN LLD	(3.93 ± 1.18 E-02)
PB-214	LESS THAN LLD	(6.23 ± 1.27 E-02)
BI-214	3.61 ± 2.03 E-02	(3.86 ± 2.07 E-02)
RA-226	LESS THAN LLD	(2.32 ± 1.80 E-01)
AC-228	LESS THAN LLD	(1.47 ± 0.40 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 41

JANUARY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 01/02/91)

YAUPON

GAMMA SPECTROMETRY

MASS: 332.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.27 ± 0.12 E+00	(NOT REQUIRED)
K-40	2.20 ± 0.19 E+00	(NOT REQUIRED)
I-131	< 4.20E-02	(NOT REQUIRED)
CS-134	< 2.10E-02	(NOT REQUIRED)
CS-137	< 2.10E-02	(NOT REQUIRED)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 42

JANUARY, 1991

0.6 MI SW - DISCHARGE CAN. (J-801)  
(DATE COLLECTED: 01/02/91)

YAUPON

GAMMA SPECTROMETRY

MASS: 344.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.25 ± 1.15 E-01	(NOT REQUIRED)
K-40	4.94 ± 0.27 E+00	(NOT REQUIRED)
I-131	< 4.38E-02	(NOT REQUIRED)
CS-134	< 2.82E-02	(NOT REQUIRED)
CS-137	< 2.59E-02	(NOT REQUIRED)
BI-214	5.17 ± 2.93 E-02	(NOT REQUIRED)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 43

JANUARY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 01/02/91)

YAUPON

GAMMA SPECTROMETRY

MASS: 369.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	5.08 ± 0.94 E-01	(NOT REQUIRED)
K-40	5.55 ± 0.24 E+00	(NOT REQUIRED)
I-131	< 3.41E-02	(NOT REQUIRED)
CS-134	< 2.17E-02	(NOT REQUIRED)
CS-137	< 2.23E-02	(NOT REQUIRED)
PB-212	3.02 ± 1.30 E-02	(NOT REQUIRED)
RA-226	4.39 ± 2.25 E-01	(NOT REQUIRED)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 44

JANUARY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 01/02/91)

BAY PUSH

GAMMA SPECTROMETRY

MASS: 467.2 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(7.30 ± 1.02 E-01)
K-40	(1.40 ± 0.24 E+00)
CS-134	(< 2.23E-02)
<sup>35</sup> S-137	(< 2.73E-02)
I-131	(< 3.18E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 45

JANUARY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 01/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 365.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.63 ± 0.93 E-01	(8.78 ± 0.94 E-01)
K-40	5.23 ± 0.25 E+00	(6.14 ± 0.25 E+00)
I-131	< 3.22E-02	(< 3.24E-02)
CS-134	< 2.22E-02	(< 2.35E-02)
CS-137	< 2.25E-02	(< 2.20E-02)
RA-226	LESS THAN LLD	(4.97 ± 2.37 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 46

JANUARY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 01/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 348.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.28 ± 0.12 E+00	(8.78 ± 0.94 E-01)
K-40	4.34 ± 0.38 E+00	(6.14 ± 0.25 E+00)
I-131	< 3.90E-02	(< 3.24E-02)
CS-134	< 2.24E-02	(< 2.35E-02)
CS-137	< 3.42E-02	(< 2.20E-02)
RA-226	LESS THAN LLD	(4.97 ± 2.37 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 47

JANUARY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 01/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 346.9 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(8.78 ± 0.94 E-01)
K-40	(6.14 ± 0.25 E+00)
I-131	(< 3.24E-02)
CS-134	(< 2.35E-02)
CS-137	(< 2.20E-02)
RA-226	(4.97 ± 2.37 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIIES PER GRAM)

BSEP -- 48

JANUARY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 01/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 344.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.59 ± 0.10 E+00	(8.78 ± 0.94 E-01)
K-40	4.93 ± 0.24 E+00	(6.14 ± 0.25 E+00)
I-131	< 3.61E-02	(< 3.24E-02)
CS-134	< 2.34E-02	(< 2.35E-02)
CS-137	< 2.13E-02	(< 2.20E-02)
RA-226	LESS THAN LLD	(4.97 ± 2.37 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 49

FEBRUARY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 02/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 394.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.1 ± 0.14 E+00	(2.31 ± 0.12 E+00)
K-40	1.29 ± 0.27 E+00	(2.32 ± 0.24 E+00)
I-131	< 1.89E-02	(< 2.42E-02)
CS-134	< 2.42E-02	(< 2.41E-02)
CS-137	< 2.10E-02	(< 2.29E-02)
TL-208	LESS THAN LLD	(2.13 ± 1.16 E-02)
PB-212	1.35 ± 1.74 E-02	(2.90 ± 1.73 E-02)
BI-214	LESS THAN LLD	(2.16 ± 2.13 E-02)
AC-228	LESS THAN LLD	(2.77 ± 0.43 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 50

FEBRUARY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 02/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 376.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.27 ± 0.17 E+00	(2.31 ± 0.12 E+00)
K-40	2.00 ± 0.17 E+00	(2.32 ± 0.24 E+00)
I-131	< 1.71E-02	(< 2.42E-02)
CS-134	< 1.75E-02	(< 2.41E-02)
CS-137	< 2.07E-02	(< 2.29E-02)
TL-208	LESS THAN LLD	(2.13 ± 1.16 E-02)
PB-212	2.57 ± 2.00 E-02	(2.90 ± 1.73 E-02)
BI-214	LESS THAN LLD	(2.16 ± 2.13 E-02)
AC-228	LESS THAN LLD	(2.77 ± 0.43 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 51

FEBRUARY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 02/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 305.5 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(2.31 ± 0.12 E+00)
K-40	(2.32 ± 0.24 E+00)
I-131	(< 2.42E-02)
CS-134	(< 2.41E-02)
CS-137	(< 2.29E-02)
TL-208	(2.13 ± 1.16 E-02)
PB-212	(2.90 ± 1.73 E-02)
BI-214	(2.16 ± 2.13 E-02)
AC-228	(2.77 ± 0.43 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 52

FEBRUARY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 02/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 348 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	LESS THAN LLD	(2.31 ± 0.12 E+00)
K-40	2.34 ± 0.20 E+00	(2.32 ± 0.24 E+00)
I-131	< 2.09E-02	(< 2.42E-02)
CS-134	< 2.15E-02	(< 2.41E-02)
CS-137	< 1.91E-02	(< 2.29E-02)
TL-208	LESS THAN LLD	(2.13 ± 1.16 E-02)
PB-212	2.18 ± 1.40 E-02	(2.90 ± 1.73 E-02)
BI-214	LESS THAN LLD	(2.16 ± 2.13 E-02)
AC-228	LESS THAN LLD	(2.77 ± 0.43 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 53

FEEURARY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 02/05/91)

GIANT REED

GAMMA SPECTROMETRY

MASS: 165.3 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.21 ± 0.19 E+00	(LESS THAN LLD)
K-40	2.81 ± 0.45 E+00	(1.07 ± 0.31 E+00)
I-131	< 4.20E-02	(< 4.48E-02)
CS-134	< 4.51E-02	(< 3.94E-02)
CS-137	< 4.15E-02	(< 3.38E-02)
PB-212	5.16 ± 2.89 E-02	(IESS THAN LLD)
PB-214	LESS THAN LLD	(4.70 ± 4.24 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 54

FEBRUARY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 02/03/91)

GIANT REED

GAMMA SPECTROMETRY

MASS: 114.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.14 ± 0.08 E+00	(LESS THAN LLD)
K-40	1.17 ± 0.28 E+00	(1.07 ± 0.31 E+00)
I-131	< 3.97E-02	(< 4.48E-02)
CS-134	< 3.68E-02	(< 3.94E-02)
CS-137	< 3.59E-02	(< 3.38E-02)
PB-214	LESS THAN LLD	(4.70 ± 4.24 E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 55

FEBRUARY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 02/05/91)

GIANT REED

GAMMA SPECTROMETRY

MASS: 136.9 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
K-40	(1.07 ± 0.31 E+00)
I-131	(< 4.48E-02)
CS-134	(< 3.94E-02)
CS-137	(< 3.78E-02)
PB-214	(4.70 ± 4.24 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIIES PER GRAM)

BSEP - 56

FEBRUARY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 02/05/91)

GIANT REED

GAMMA SPECTROMETRY

MASS: 170.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.42 ± 0.11 E+00	(LESS THAN LLD)
K-40	2.29 ± 0.31 E+00	(1.07 ± 0.31 E+00)
I-131	< 4.31E-02	(< 4.48E-02)
CS-134	< 3.92E-02	(< 3.94E-02)
CS-137	< 4.14E-02	(< 3.38E-02)
PB-214	LESS THAN LLD	(4.70 ± 4.24 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 57

FEBRUARY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 02/05/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 255.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.22 ± 0.21 E+00	(5.33 ± 0.19 E+00)
K-40	6.57 ± 0.38 E+00	(7.71 ± 0.33 E+00)
I-131	< 3.26E-02	(< 2.95E-02)
CS-134	< 3.25E-02	(< 3.18E-02)
CS-137	< 3.22E-02	(< 3.08E-02)
PB-212	LESS THAN LLD	(2.81 ± 2.49 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 58

FEBRUARY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 02/05/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 284.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.75 ± 0.17 E+00	(5.33 ± 0.19 E+00)
K-40	6.81 ± 0.42 E+00	(7.71 ± 0.33 E+00)
I-131	< 2.89E-02	(< 2.95E-02)
CS-134	< 3.88E-02	(< 3.18E-02)
CS-137	< 3.07E-02	(< 3.08E-02)
PB-212	3.04 ± 1.89 E-02	(2.81 ± 2.49 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 59

FEBRUARY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 02/05/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 236.4 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(5.33 ± 0.19 E+00)
K-40	(7.71 ± 0.33 E+00)
I-131	(< 2.95E-02)
CS-134	(< 3.18E-02)
CS-137	(< 3.08E-02)
PB-212	(2.81 ± 2.49 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 60

FEBRUARY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 02/05/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 262.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.08 ± 0.23 E+00	(5.33 ± 0.19 E+00)
K-40	6.48 ± 0.29 E+00	(7.71 ± 0.33 E+00)
I-131	< 2.60E-02	(< 2.95E-02)
CS-134	< 2.68E-02	(< 3.18E-02)
CS-137	< 2.83E-02	(< 3.08E-02)
PB-212	LESS THAN LLD	(2.81 ± 2.49 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 61

MARCH, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 03/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 455.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.84 ± 0.12 E+00	(2.90 ± 0.12 E+00)
K-40	1.68 ± 0.15 E+00	(1.90 ± 0.16 E+00)
I-131	< 2.72E-02	(< 2.35E-02)
CS-134	< 1.99E-02	(< 1.77E-02)
CS-137	< 1.79E-02	(< 1.79E-02)
PB-212	LESS THAN LLD	(3.31 ± 1.32 E-02)
BI-214	LESS THAN LLD	(2.66 ± 1.82 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 62

MARCH, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 03/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 356.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.24 ± 0.14 E+00	(2.90 ± 0.12 E+00)
K-40	1.45 ± 0.29 E+00	(1.90 ± 0.16 E+00)
I-131	< 2.85E-02	(< 2.35E-02)
CS-134	< 2.96E-02	(< 1.77E-02)
CS-137	< 2.88E-02	(< 1.79E-02)
PB-212	2.98 ± 1.45 E-02	(3.31 ± 1.32 E-02)
BI-214	LESS THAN LLD	(2.66 ± 1.02 E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 63

MARCH, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 03/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 404.8 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(2.90 ± 0.12 E+00)
K-40	(1.90 ± 0.16 E+00)
I-131	(< 2.35E-02)
CS-134	(< 1.77E-02)
CS-137	(< 1.79E-02)
PB-212	(3.31 ± 1.32 E-02)
BI-214	(2.66 ± 1.82 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 64

MARCH, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 03/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 358 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.22 ± 0.13 E+00	(2.90 ± 0.12 E+00)
K-40	1.95 ± 0.28 E+00	(1.90 ± 0.16 E+00)
I-131	< 2.91E-02	(< 2.35E-02)
CS-134	< 3.19E-02	(< 1.77E-02)
CS-137	< 2.64E-02	(< 1.79E-02)
PE-212	2.57 ± 1.42 E-02	(3.31 ± 1.32 E-02)
BI-214	LESS THAN LLD	(2.66 ± 1.82 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 65

MARCH, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 03/02/91)

YAUPON

GAMMA SPECTROMETRY

MASS: 282.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.94 ± 0.16 E+00	(NOT REQUIRED)
K-40	2.71 ± 0.22 E+00	(NOT REQUIRED)
I-131	< 3.12E-02	(NOT REQUIRED)
CS-134	< 2.63E-02	(NOT REQUIRED)
CS-137	< 2.78E-02	(NOT REQUIRED)
PB-212	3.70 ± 1.67 E-02	(NOT REQUIRED)
RA-226	3.97 ± 3.08 E-01	(NOT REQUIRED)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 66

MARCH, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 03/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 328.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.81 ± 0.21 E+00	(3.01 ± 0.18 E+00)
K-40	6.07 ± 0.40 E+00	(7.19 ± 0.39 E+00)
I-131	< 3.52E-02	(< 3.37E-02)
CS-134	< 3.37E-02	(< 3.09E-02)
CS-137	< 3.20E-02	(< 2.91E-02)
PB-212	1.82 ± 1.74 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 67

MARCH, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 03/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 282.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.89 ± 0.16 E+00	(3.01 ± 0.18 E+00)
K-40	7.67 ± 0.32 E+00	(7.19 ± 0.39 E+00)
I-131	< 3.34E-02	(< 3.37E-02)
CS-134	< 2.94E-02	(< 3.09E-02)
CS-137	< 2.34E-02	(< 2.91E-02)
PB-212	4.11 ± 1.89 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 68

MARCH, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 03/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 369.5 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(3.01 $\pm$ 0.18 E+00)
K-40	(7.19 $\pm$ 0.39 E+00)
I-131	(< 3.37E-02)
CS-134	(< 3.09E-02)
CS-137	(< 2.91E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 69

MARCH, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 03/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 339.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.71 ± 0.12 E+00	(3.01 ± 0.18 E+00)
K-40	6.04 ± 0.25 E+00	(7.19 ± 0.39 E+00)
I-131	< 2.75E-02	(< 3.37E-02)
CS-134	< 2.22E-02	(< 3.09E-02)
CS-137	< 2.30E-02	(< 2.91E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 70

APRIL, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 04/12/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 387.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.49 ± 0.76 E-01	(1.85 ± 0.79 E-01)
K-40	3.92 ± 0.21 E+00	(4.44 ± 0.22 E+00)
I-131	< 2.53E-02	(< 2.99E-02)
CS-134	< 1.77E-02	(< 2.12E-02)
CS-137	< 1.78E-02	(< 2.45E-02)
PB-212	2.32 ± 1.30 E-02	(2.37 ± 1.94 E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 71

APRIL, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 04/12/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 399 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.19 ± 0.60 E-01	(1.85 ± 0.79 E-01)
K-40	3.92 ± 0.19 E+00	(4.44 ± 0.22 E+00)
I-131	< 2.15E-02	(< 2.99E-02)
CS-134	< 1.88E-02	(< 2.12E-02)
CS-137	< 1.94E-02	(< 2.45E-02)
PB-212	LESS THAN LLD	(2.37 ± 1.94 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 72

APRIL, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 04/12/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 330.5 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.85 ± 0.79 E-01)
K-40	(4.44 ± 0.22 E+00)
I-131	(< 2.99E-02)
CS-134	(< 2.12E-02)
CS-137	(< 2.45E-02)
PB-212	(2.37 ± 1.94 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 73

APRIL, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 04/12/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 327.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	LESS THAN LLD	(1.85 ± 0.79 E-01)
K-40	3.73 ± 0.23 E+00	(4.44 ± 0.22 E+00)
I-131	< 3.19E-02	(< 2.99E-02)
CS-134	< 2.28E-02	(< 2.12E-02)
CS-137	< 2.17E-02	(< 2.45E-02)
PB-212	LESS THAN LLD	(2.37 ± 1.94 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICCCURIES PER GRAM)

BSEP - 74

APRIL, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 04/12/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 359.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.02 ± 0.14 E+00	(1.64 ± 0.13 E+00)
K-40	2.75 ± 0.22 E+00	(2.57 ± 0.26 E+00)
I-131	< 3.34E-02	(< 4.74E-02)
CS-134	< 2.48E-02	(< 3.41E-02)
CS-137	< 2.26E-02	(< 3.14E-02)
BI-214	LESS THAN LLD	(3.70 ± 3.02 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 75

APRIL, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 04/12/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 369.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.22 ± 0.11 E+00	(1.64 ± 0.13 E+00)
K-40	3.35 ± 0.23 E+00	(2.57 ± 0.26 E+00)
I-131	< 3.44E-02	(< 4.74E-02)
CS-134	< 2.30E-02	(< 3.41E-02)
CS-137	< 2.32E-02	(< 3.14E-02)
BI-214	2.46 ± 2.26 E-02	(3.70 ± 3.02 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 76

APRIL, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 04/12/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 309.3 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.64 ± 0.13 E+00)
K-40	(2.57 ± 0.26 E+00)
I-131	(< 4.74E-02)
CS-134	(< 3.41E-02)
CS-137	(< 3.14E-02)
BI-214	(3.70 ± 3.02 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 77

APRIL, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 04/12/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 312.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.62 ± 1.02 E-01	(1.64 ± 0.13 E+00)
K-40	3.14 ± 0.25 E+00	(2.57 ± 0.26 E+00)
I-131	< 3.48E-02	(< 4.74E-02)
CS-134	< 2.67E-02	(< 3.41E-02)
CS-137	< 2.39E-02	(< 3.14E-02)
PB-212	3.79 ± 1.81 E-02	(LESS THAN LLD)
BI-214	LESS THAN LLD	(3.70 ± 3.02 E-02)
RA-226	3.41 ± 2.26 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 78

APRIL, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 04/12/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 328.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.31 ± 0.10 E+00	(3.53 ± 0.80 E-01)
K-40	6.59 ± 0.29 E+00	(5.78 ± 0.26 E+00)
I-131	< 3.13E-02	(< 3.61E-02)
CS-134	< 2.48E-02	(< 2.54E-02)
CS-137	< 2.35E-02	(< 2.35E-02)
PB-212	5.87 ± 1.96 E-02	(LESS THAN LLD)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 79

APRIL, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 04/12/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 350.3 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.13 ± 0.89 E-01	(3.53 ± 0.80 E-01)
K-40	4.97 ± 0.25 E+00	(5.78 ± 0.26 E+00)
I-131	< 2.76E-02	(< 3.61E-02)
CS-134	< 2.28E-02	(< 2.54E-02)
CS-137	< 2.09E-02	(< 2.35E-02)
PB-212	2.20 ± 2.17 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 80

APRIL, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 04/12/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 382.9 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(3.53 ± 0.80 E-01)
K-40	(5.78 ± 0.26 E+00)
I-131	(< 3.61E-02)
CS-134	(< 2.54E-02)
CS-137	(< 2.35E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 81

APRIL, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 04/12/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 287.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.47 ± 1.26 E-01	(3.53 ± 0.80 E-01)
K-40	6.37 ± 0.29 E+00	(5.78 ± 0.26 E+00)
I-131	< 3.63E-02	(< 3.61E-02)
CS-134	< 2.37E-02	(< 2.54E-02)
CS-137	< 2.60E-02	(< 2.35E-02)
RA-226	2.56 ± 2.24 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 82

MAY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 05/07/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 443.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	LESS THAN LLD	(6.67 ± 0.95 E-01)
K-40	2.17 ± 0.15 E+00	(3.57 ± 0.22 E+00)
I-131	< 1.30E-02	(< 2.25E-02)
CS-134	< 1.47E-02	(< 2.34E-02)
CS-137	< 1.54E-02	(< 3.35E-02)
PB-212	LESS THAN LLD	(2.02 ± 1.61 E-02)
BI-214	1.93 ± 1.80 E-02	(LESS THAN LLD)
RA-226	2.28 ± 1.72 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 83

MAY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 05/07/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 330.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	5.51 ± 0.77 E-01	(6.67 ± 0.95 E-01)
K-40	4.83 ± 0.26 E+00	(3.57 ± 0.22 E+00)
I-131	< 2.10E-02	(< 2.25E-02)
CS-134	< 2.26E-02	(< 2.34E-02)
CS-137	< 2.14E-02	(< 3.35E-02)
TL-208	2.05 ± 1.06 E-02	(LESS THAN LLD)
PB-212	4.56 ± 1.54 E-02	(2.02 ± 1.61 E-02)
Bl-214	2.67 ± 2.17 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 84

MAY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 05/07/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 312.5 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(6.67 ± 0.95 E-01)
K-40	(3.57 ± 0.22 E+00)
I-131	(< 2.25E-02)
CS-134	(< 2.34E-02)
CS-137	(< 3.35E-02)
PB-212	(2.02 ± 1.61 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 85

MAY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 05/07/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 327.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	5.40 ± 0.79 E-01	(6.67 ± 0.95 E-01)
K-40	2.58 ± 0.25 E+00	(3.57 ± 0.22 E+00)
I-131	< 2.89E-02	(< 2.25E-02)
CS-134	< 2.20E-02	(< 2.34E-02)
CS-137	< 2.11E-02	(< 3.35E-02)
PB-212	LESS THAN LLD	(2.02 ± 1.61 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 86

MAY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 05/07/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 389.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.72 ± 0.66 E-01	(1.13 ± 0.11 E+00)
K-40	3.16 ± 0.20 E+00	(2.53 ± 0.21 E+00)
I-131	< 2.10E-02	(< 2.48E-02)
CS-134	< 2.21E-02	(< 2.33E-02)
CS-137	< 2.18E-02	(3.95 ± 1.43 E-02)
PB-214	LESS THAN LLD	(5.81 ± 3.42 E-02)
BI-214	4.84 ± 2.49 E-02	(LESS THAN LLD)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 87

MAY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 05/07/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 344.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
EE-7	1.07 ± 0.09 E+00	(1.13 ± 0.11 E+00)
K-40	2.83 ± 0.18 E+00	(2.53 ± 0.21 E+00)
I-131	< 1.85E-02	(< 2.48E-02)
CS-134	< 2.09E-02	(< 2.33E-02)
CS-137	< 2.09E-02	(3.95 ± 1.43 E-02)
PB-212	3.70 ± 1.68 E-02	(LESS THAN LLD)
PB-214	LESS THAN LLD	(5.81 ± 3.42 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 88

MAY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 05/07/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 370.5 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.13 ± 0.11 E+00)
K-40	(2.53 ± 0.21 E+00)
I-131	(< 2.48E-02)
CS-134	(< 2.33E-02)
CS-137	(3.95 ± 1.43 E-02)
PB-214	(5.81 ± 3.42 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 89

MAY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 05/07/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 391 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.56 ± 0.81 E-01	(1.13 ± 0.11 E+00)
K-40	3.14 ± 0.20 E+00	(2.53 ± 0.21 E+00)
I-131	< 2.01E-02	(< 2.43E-02)
CS-134	< 1.86E-02	(< 2.33E-02)
CS-137	< 1.94E-02	(3.95 ± 1.43 E-02)
PB-214	LESS THAN LLD	(5.81 ± 3.42 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 90

MAY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 05/07/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 332 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.61 ± 0.10 E+00	(9.16 ± 0.91 E-01)
K-40	5.48 ± 0.28 E+00	(3.66 ± 0.22 E+00)
I-131	< 2.02E-02	(< 1.92E-02)
CS-134	< 2.28E-02	(< 2.06E-02)
CS-137	< 2.07E-02	(< 1.85E-02)
TL-208	2.53 ± 1.11 E-02	(LESS THAN LLD)
PB-212	1.04 ± 0.21 E-01	(2.94 ± 1.28 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 91

MAY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 05/07/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 410.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	7.93 ± 0.92 E-01	(9.16 ± 0.91 E-01)
K-40	4.47 ± 0.23 E+00	(3.66 ± 0.22 E+00)
I-131	< 2.16E-02	(< 1.92E-02)
CS-134	< 2.14E-02	(< 2.06E-02)
CS-137	< 1.59E-02	(< 1.85E-02)
TL-208	1.48 ± 1.23 E-02	(LESS THAN LLD)
PB-212	LESS THAN LLD	(2.94 ± 1.28 E-02)
BI-214	2.90 ± 2.81 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 92

MAY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 05/07/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 396.7 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(9.16 ± 0.91 E-01)
K-40	(3.66 ± 0.22 E+00)
I-131	(< 1.92E-02)
CS-134	(< 2.06E-02)
CS-137	(< 1.85E-02)
PB-212	(2.94 ± 1.28 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 93

MAY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 05/07/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 371.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.25 ± 0.72 E-01	(9.16 ± 0.91 E-01)
K-40	4.72 ± 0.23 E+00	(3.66 ± 0.22 E+00)
I-131	< 2.12E-02	(< 1.32E-02)
CS-134	< 2.10E-02	(< 2.06E-02)
CS-137	< 2.15E-02	(< 1.85E-02)
PB-212	LESS THAN LLD	(2.94 ± 1.28 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 94

JUNE, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 06/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 404.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.43 ± 0.11 E+00	(1.11 ± 0.08 E+00)
K-40	2.40 ± 0.19 E+00	(2.73 ± 0.16 E+00)
I-131	< 1.95E-02	(< 1.64E-02)
CS-134	< 2.32E-02	(< 1.78E-02)
CS-137	< 1.96E-02	(< 1.72E-02)
PB-212	LESS THAN LLD	(3.12 ± 1.50 E-02)
RA-226	LESS THAN LLD	(2.19 ± 1.70 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 95

JUNE, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 06/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 435.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.90 ± 0.61 E-01	(1.11 ± 0.08 E+00)
K-40	3.56 ± 0.20 E+00	(2.73 ± 0.16 E+00)
I-131	< 1.63E-02	(< 1.64E-02)
CS-134	< 1.89E-02	(< 1.78E-02)
CS-137	< 1.71E-02	(< 1.72E-02)
TL-208	1.77 ± 0.81 E-02	(LESS THAN LLD)
PB-212	3.70 ± 1.37 E-02	(3.12 ± 1.50 E-02)
RA-226	LESS THAN LLD	(2.19 ± 1.70 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 96

JUNE, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 06/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 405.7 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.11 ± 0.08 E+00)
K-40	(2.73 ± 0.16 E+00)
I-131	(< 1.64E-02)
CS-134	(< 1.78E-02)
CS-137	(< 1.72E-02)
PB-212	(3.12 ± 1.50 E-02)
RA-226	(2.19 ± 1.70 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 97

JUNE, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 06/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 351.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.02 ± 0.77 E-01	(1.11 ± 0.08 E+00)
K-40	3.63 ± 0.22 E+00	(2.73 ± 0.16 E+00)
I-131	< 2.24E-02	(< 1.64E-02)
CS-134	< 2.07E-02	(< 1.78E-02)
CS-137	< 2.09E-02	(< 1.72E-02)
PB-212	LESS THAN LLD	(3.12 ± 1.50 E-02)
RA-226	LESS THAN LLD	(2.19 ± 1.70 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 98

JUNE, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 06/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 402.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTRCL ACT VITY</u>
BE-7	4.42 ± 0.55 E-01	(7.28 ± 0.79 E-01)
K-40	2.41 ± 0.15 E+00	(2.80 ± 0.20 E+00)
I-131	< 1.50E-02	(< 2.08E-02)
CS-134	< 1.75E-02	(< 2.16E-02)
CS-137	< 1.77E-02	(< 1.85E-02)
PB-212	3.21 ± 1.55 E-02	(2.24 ± 1.32 E-02)
RA-226	2.00 ± 1.73 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 99

JUNE, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 06/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 312.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.91 ± 1.14 E-01	(7.28 ± 0.79 E-01)
K-40	2.14 ± 0.25 E+00	(2.80 ± 0.20 E+00)
I-131	< 2.61E-02	(< 2.08E-02)
CS-134	< 2.59E-02	(< 2.16E-02)
CS-137	< 2.33E-02	(< 1.85E-02)
PB-212	LESS THAN LLD	(2.24 ± 1.32 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 100

JUNE, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 06/04 '91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 366.3 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(7.28 ± 0.79 E-01)
K-40	(2.80 ± 0.20 E+00)
I-131	(< 2.08E-02)
CS-134	(< 2.16E-02)
CS-137	(< 1.85E-02)
PB-212	(2.24 ± 1.32 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 101

JUNE, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 06/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 341.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	7.31 ± 0.83 E-01	(7.28 ± 0.79 E-01)
K-40	2.52 ± 0.19 E+00	(2.80 ± 0.20 E+00)
I-131	< 2.06E-02	(< 2.08E-02)
CS-134	< 2.05E-02	(< 2.16E-02)
CS-137	< 2.00E-02	(< 1.85E-02)
PB-212	LESS THAN LLD	(2.24 ± 1.32 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 102

JUNE, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 06/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 460 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	8.94 ± 0.68 E-01	(1.45 ± 0.11 E+00)
K-40	2.56 ± 0.16 E+00	(2.08 ± 0.19 E+00)
I-131	< 1.38E-02	(< 2.21E-02)
CS-134	< 1.38E-02	(< 2.03E-02)
CS-137	< 1.48E-02	(< 2.41E-02)
PB-212	16 ± 1.01 E-02	(LESS THAN LLD)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 103

JUNE, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 06/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 347.4 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.27 ± 0.09 E+00	(1.45 ± 0.11 E+00)
K-40	2.92 ± 0.20 E+00	(2.08 ± 0.15 E+00)
I-131	< 1.90E-02	(< 2.21E-02)
CS-134	< 1.98E-02	(< 2.03E-02)
CS-137	< 2.18E-02	(< 2.41E-02)
PB-212	1.62 ± 1.25 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 104

JUNE, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 06/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 403 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.45 ± 0.11 E+00)
K-40	(. . . ± .19 E+00)
I-131	(< 2.21E-02)
CS-134	(< 2.03E-02)
CS-137	(< 2.41E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 105

JUNE, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 06/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 418.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.13 ± 0.10 E+00	(1.45 ± 0.11 E+00)
K-40	2.36 ± 0.18 E+00	(2.08 ± 0.19 E+00)
I-131	< 2.18E-02	(< 2.21E-02)
CS-134	< 2.16E-02	(< 2.03E-02)
CS-137	< 1.88E-02	(< 2.41E-02)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 106

FIRST SEMI-ANNUAL, 1991

5.5 MI SSW - ATLANTIC OCEAN AT DISCHARGE (FI-700)  
(DATE COLLECTED: 06/06/91)

FREE SWIMMERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 714.8 GRAMS FRESH

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

K-40

4.19 ± 0.29 E+00

(2.66 ± 0.26 E+00)

BI-214

LESS THAN LLD

(7.48 ± 1.91 E-02)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 107

FIRST SEMI-ANNUAL, 1991

NOT SPECIFIED - ATLANTIC OCEAN (CONTROL) (FI-703)  
(DATE COLLECTED: 06/06/91)

FREE SWIMMERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 768.4 GRAMS FRESH

ISOTOPE

CONTROL ACTIVITY

K-40

(2.66 ± 0.26 E+00)

BI-214

(7.48 ± 1.91 E-02)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 108

FIRST SEMI-ANNUAL, 1991

5.5 MI SSW - ATLANTIC OCEAN AT DISCHARGE (FI-701)  
(DATE COLLECTED: 06/06/91)

BOTTOM FEEDERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 843.6 GRAMS FRESH

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.81 ± 0.18 E+00	(4.40 ± 0.30 E+00)
TL-208	1.54 ± 0.97 E-02	(LESS THAN LLD)
PB-214	9.47 ± 2.07 E-02	(LESS THAN LLD)
BI-214	1.32 ± 0.21 E-01	(LESS THAN LLD)
RA-226	4.68 ± 1.96 E-01	(LESS THAN LLD)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 109

FIRST SEMI-ANNUAL, 1991

NOT SPECIFIED - ATLANTIC OCEAN (CONTROL) (FI-703)  
(DATE COLLECTED: 06/06/91)

BOTTOM FEEDERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 751.9 GRAMS FRESH

ISOTOPE

CONTROL ACTIVITY

K-40

(4.40 ± 0.30 E+00)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 110

FIRST SEMI-ANNUAL, 1991

5.5 MI SSW - ATLANTIC OCEAN AT DISCHARGE (FI-702)  
(DATE COLLECTED: 06/06/91)

INVERTEBRATES, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 665.8 GRAMS FRESH

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

K-40

3.02 ± 0.27 E+00

(2.67 ± 0.19 E+00)

PB-212

3.18 ± 1.27 E-02

(LESS THAN LLD)

BI-214

LESS THAN LLD

(1.99 ± 1.44 E-02)



FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 111

FIRST SEMI-ANNUAL, 1991

NOT SPECIFIED - ATLANTIC OCEAN (CONTROL) (FI-703)  
(DATE COLLECTED: 06/06/91)

INVERTEBRATES, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 781.7 GRAMS FRESH

ISOTOPE

CONTROL ACTIVITY

K-40

(2.67 ± 0.19 E+00)

BI-214

(1.99 ± 1.44 E-02)

SHORELINE SEDIMENT SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 112

FIRST SEMI-ANNUAL, 1991

4.9 MI SSW - DISCHARGE, BEACH (SS-500)  
(DATE COLLECTED: 05/20/91)

GAMMA SPECTROMETRY

MASS: 784.3 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.24 ± 0.14 E+00	(NOT REQUIRED)
TL-208	3.12 ± 0.94 E-02	(NOT REQUIRED)
PB-212	3.99 ± 1.39 E-02	(NOT REQUIRED)
PB-214	9.17 ± 1.82 E-02	(NOT REQUIRED)
BI-214	1.50 ± 0.20 E-01	(NOT REQUIRED)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 113

JANUARY, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.22E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

K-40

CONTROL ACTIVITY  
(9.54 ± 4.50 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 114

JANUARY, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.22E+02	(< 9.22E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.10 ± 0.66 E+02	(9.54 ± 4.50 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 115

FEBRUARY, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.30E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

K-40

CONTROL ACTIVITY  
(2.18 ± 0.35 E+02)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 116

FEBRUARY, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.30E+02	(< 9.30E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.97 ± 0.35 E+02	(2.18 ± 0.35 E+02)
PB-212	3.91 ± 2.55 E+00	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 117

MARCH, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.22E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

ISOTOPE

K-40

CONTROL ACTIVITY  
(1.22 ± 0.27 E+02)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 118

MARCH, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.22E+02	(< 9.22E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.86 ± 0.32 E+02	(1.22 ± 0.27 E+02)



SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 119

APRIL, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.29E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

ISOTOPE

CONTROL ACTIVITY

K-40

(1.77 ± 0.31 E+02)

PB-212

(5.91 ± 2.44 E+00)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 120

APRIL, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.29E+02	(< 9.29E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.32 ± 0.26 E-02	(1.77 ± 0.31 E+02)
PB-212	LESS THAN LLD	(5.91 ± 2.44 E+00)
PB-214	4.90 ± 3.80 E+00	(LESS THAN LLD)
RA-226	3.78 ± 3.48 E+01	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 121

MAY, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.17E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

ISOTOPE

CONTROL ACTIVITY

K-40	(2.98 ± 0.33 E+02)
PB-212	(3.67 ± 2.78 E+00)
RA-226	(1.98 ± 3.52 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 122

MAY, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.17E+02	(< 9.17E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.09 ± 0.27 E+02	(2.98 ± 0.33 E+02)
PB-212	LESS THAN LLD	(3.67 ± 2.78 E+00)
BI-214	4.91 ± 3.91 E+00	(LESS THAN LLD)
RA-226	LESS THAN LLD	(1.98 ± 3.52 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 123

JUNE, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.16E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

ISOTOPE

CONTROL ACTIVITY

K-40

(3.51 ± 0.35 E+02)

PB-212

(2.45 ± 2.16 E+00)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 124

JUNE, 1991

9 SSW - DISCHARGE CANAL, STILL POND (SW-401)

CHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
DIUM	0.005	< 9.16E+02	(< 9.16E+02)

ALPHA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
.2	2.87 ± 0.33 E+02	(3.51 ± 0.35 E+02)
	LESS THAN LLD	(2.45 ± 2.16 E+00)

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 125

FIRST QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(8.00 ± 2.00 E-01)
1	1.1 MI E - MOORE ST EXTENSION	1.00 ± 0.20 E+00
2	1.0 MI ESE - MOORE ST EXTENSION	7.00 ± 1.00 E-01
3	0.9 MI SE - MOORE ST EXTENSION	7.00 ± 1.00 E-01
4	1.1 MI SSE - MOORE ST EXTENTION	7.00 ± 1.00 E-01
5	1.1 MI S - LEONARD ST	7.00 ± 1.00 E-01
6	1.0 MI S - BEMCO POWER LINE	6.00 ± 1.00 E-01
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	1.00 ± 0.20 E+00
8	1.2 MI W - HWY 87	7.00 ± 1.00 E-01
9	1.0 MI WNW - BETHEL CHURCH RD	7.00 ± 1.00 E-01
10	0.9 MI NW - BETHEL CHURCH RD	7.00 ± 1.00 E-01
11	0.9 MI NNW - BETHEL CHURCH RD	7.00 ± 1.00 E-01
12	1.0 MI N - BETHEL CHURCH RD	1.00 ± 0.10 E+00
13	1.2 MI NNE - BETHEL CHURCH RD	7.00 ± 1.00 E-01
14	0.5 MI NE - INTAKE CANAL	1.10 ± 0.20 E+00
15	0.9 MI ENE - INTAKE CANAL	1.10 ± 0.20 E+00
16	1.0 MI WSW - DISCHARGE CANAL	1.00 ± 0.10 E+00
17	1.5 MI ESE - PFIZER PROPERTY	7.00 ± 2.00 E-01
18	1.7 MI SE - PFIZER PROPERTY	7.00 ± 1.00 E-01
22	5.3 MI SW - CASWELL BEACH RD	7.00 ± 2.00 E-01
23	4.6 MI WSW - NEAR AIRPORT	6.00 ± 1.00 E-01
24	3.0 MI W - HWY 211	1.00 ± 0.10 E+00

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 126

FIRST QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(8.00 ± 2.00 E-01)
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	9.00 ± 2.00 E-01
26	5.9 MI NW - W BOILING SPRINGS RD	7.00 ± 1.00 E-01
27	5.0 MI NNW - HWY 133	7.00 ± 2.00 E-01
30	2.0 MI NE - SUNNY POINT MOT	8.00 ± 1.00 E-01
31	2.6 MI ENE - SUNNY POINT MOT	9.00 ± 2.00 E-01
32	5.7 MI ENE - FT FISHER AFB HOUSING	8.00 ± 2.00 E-01
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	7.00 ± 1.00 E-01
34	5.5 MI ENE - FT FISHER MUSEUM	8.00 ± 1.00 E-01
35	9.3 MI NE - CAROLINA BEACH	7.00 ± 1.00 E-01
37	5.5 MI NW - BOILING SPRINGS LAKES	7.00 ± 1.00 E-01
38	11.0 MI W - SUNSET HARBOR	9.00 ± 1.00 E-01
39	5.3 MI SW - YAUPON BEACH CITY HALL	7.00 ± 1.00 E-01
40	6.9 MI WSW - LONG BEACH CITY HALL	7.00 ± 1.00 E-01
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	8.00 ± 1.00 E-01
76	4.8 MI SSW - CASWELL BEACH	9.00 ± 3.00 E-01
77	5.3 MI SSE - BALDHEAD ISLAND	7.00 ± 2.00 E-01
78	10.0 MI NNE - HWY 133 AT SR 1521	7.00 ± 2.00 E-01
79	9.5 MI N - SR 1539 AT SR 1521	9.00 ± 2.00 E-01
81	10.0 MI WNW - MIDWAY RD AT SR 1508	8.00 ± 2.00 E-01



ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 127

SECOND QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(7.00 ± 1.00 E-01)
1	1.1 MI E - MOORE ST EXTENSION	7.00 ± 1.00 E-01
2	1.0 MI ESE - MOORE ST EXTENSION	7.00 ± 1.00 E-01
4	1.1 MI SSE - MOORE ST EXTENTION	7.00 ± 1.00 E-01
5	1.1 MI S - LEONARD ST	7.00 ± 1.00 E-01
6	1.0 MI S - BEMCO POWER LINE	7.00 ± 1.00 E-01
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	8.00 ± 1.00 E-01
8	1.2 MI W - HWY 87	7.00 ± 1.00 E-01
9	1.0 MI WNW - BETHEL CHURCH RD	7.00 ± 1.00 E-01
10	0.9 MI NW - BETHEL CHURCH RD	6.00 ± 1.00 E-01
11	0.9 MI NNW - BETHEL CHURCH RD	7.00 ± 1.00 E-01
12	1.0 MI N - BETHEL CHURCH RD	7.00 ± 1.00 E-01
13	1.2 MI NNE - BETHEL CHURCH RD	7.00 ± 1.00 E-01
14	0.5 MI NE - INTAKE CANAL	9.00 ± 1.00 E-01
15	0.9 MI ENE - INTAKE CANAL	8.00 ± 1.00 E-01
16	1.0 MI WSW - DISCHARGE CANAL	7.00 ± 1.00 E-01
17	1.5 MI ESE - PFIZER PROPERTY	7.00 ± 1.00 E-01
19	1.7 MI SE - PFIZER PROPERTY	7.00 ± 1.00 E-01
20	2.0 MI S - MOORE ST	6.00 ± 1.00 E-01
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	6.00 ± 1.00 E-01
22	5.3 MI SW - CASWELL BEACH RD	7.00 ± 1.00 E-01
23	4.6 MI WSW - NEAR AIRPORT	6.00 ± 1.00 E-01

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 128

SECOND QUARTER, 1991

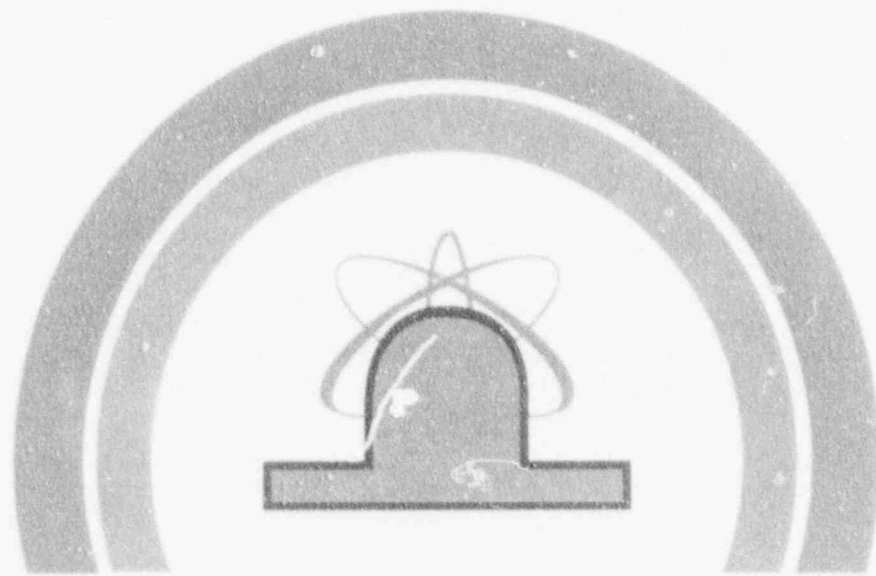
STATION

MILLIROENTGEN PER WEEK

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(7.00 ± 1.00 I-31)
24	3.0 MI W - HWY 211	7.00 ± 1.00 E-01
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	8.00 ± 1.00 E-01
26	5.9 MI NW - W BOILING SPRINGS RD	8.00 ± 1.00 E-01
27	5.0 MI NNW - HWY 133	7.00 ± 1.00 E-01
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	7.00 ± 1.00 E-01
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	6.00 ± 1.00 E-01
30	2.0 MI NE - SUNNY POINT MOT	8.00 ± 1.00 E-01
31	2.6 MI ENE - SUNNY POINT MOT	8.00 ± 1.00 E-01
32	5.7 MI ENE - FT FISHER AFB HOUSING	8.00 ± 1.00 E-01
33	4.0 MI E - FERRY SLIP IN NEW HAMOVER CO	6.00 ± 1.00 E-01
34	5.5 MI ENE - FT FISHER MUSEUM	7.00 ± 1.00 E-01
35	7.5 MI SSE - BALD HEAD ISLAND	6.00 ± 1.00 E-01
36	9.3 MI NE - CAROLINA BEACH	6.00 ± 1.00 E-01
37	5.1 MI NW - BOILING SPRINGS LAKES	7.00 ± 1.00 E-01
38	11.0 MI W - SUNSET HARBOR	7.00 ± 1.00 E-01
39	5.3 MI SW - YAUPON BEACH CITY H LL	7.00 ± 1.00 E-01
40	6.9 MI WSW - LONG BEACH CITY HALL	7.00 ± 1.00 E-01
77	5.3 MI SSE - BALDHEAD ISLAND	7.00 ± 1.00 E-01
78	10.0 MI NNE - HWY 133 AT SR 1521	7.00 ± 1.00 E-01
79	9.5 MI N - SR 1539 AT SR 1521	7.00 ± 1.00 E-01
	10.0 MI WNW - MIDWAY RD AT SR 1508	7.00 ± 1.00 E-01

# **Radiological Environmental Operating Report**

VOLUME III  
JULY 1, 1991 - DECEMBER 31, 1991  
SAMPLE ANALYSES DATA



**BRUNSWICK NUCLEAR PROJECT**  
CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT  
RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT  
JULY - DECEMBER, 1991

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AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 1

THIRD QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AC-200)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	304.7	< 2.57E-02	(< 2.88E-02)
07/08/91	287.3	< 3.31E-02	(< 3.72E-02)
07/15/91	309.7	< 1.78E-02	(< 2.82E-02)
07/22/91	311.3	< 2.39E-02	(< 2.68E-02)
07/29/91	310.0	< 2.81E-02	(< 2.69E-02)
08/05/91	307.7	< 2.20E-02	(< 2.84E-02)
08/12/91	316.9	< 2.68E-02	(< 2.41E-02)
08/19/91	314.7	< 2.98E-02	(< 2.91E-02)
08/26/91	318.7	< 2.59E-02	(< 3.51E-02)
09/03/91	360.8	< 2.30E-02	(< 2.36E-02)
09/09/91	273.3	< 3.13E-02	(< 2.64E-02)
09/16/91	314.1	< 2.29E-02	(< 2.84E-02)
09/23/91	314.2	< 2.15E-02	(< 2.97E-02)
09/30/91	315.8	< 2.48E-02	(< 2.97E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 2

THIRD QUARTER, 1991

0.6 MI NE - PMAC (AC-201)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	285.7	< 2.84E-02	(< 2.88E-02)
07/08/91	308.0	< 2.49E-02	(< 3.72E-02)
07/15/91	289.3	< 2.65E-02	(< 2.82E-02)
07/22/91	284.7	< 2.70E-02	(< 2.68E-02)
07/29/91	287.7	< 2.80E-02	(< 2.69E-02)
08/05/91	283.5	< 3.10E-02	(< 2.84E-02)
08/12/91	281.5	< 2.76E-02	(< 2.41E-02)
08/19/91	277.7	< 3.65E-02	(< 2.91E-02)
08/26/91	278.4	< 3.51E-02	(< 3.51E-02)
09/03/91	319.3	< 2.72E-02	(< 2.36E-02)
09/09/91	243.0	< 3.45E-02	(< 2.64E-02)
09/16/91	280.3	< 2.90E-02	(< 2.84E-02)
09/23/91	281.6	< 3.55E-02	(< 2.97E-02)
09/30/91	280.3	< 2.76E-02	(< 2.97E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 3

THIRD QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AC-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	286.5	< 2.82E-02	(< 2.88E-02)
07/08/91	306.4	< 2.61E-02	(< 3.72E-02)
07/15/91	284.6	< 3.01E-02	(< 2.82E-02)
07/22/91	272.8	< 2.72E-02	(< 2.68E-02)
07/29/91	276.5	< 2.90E-02	(< 2.69E-02)
08/05/91	270.9	< 1.95E-02	(< 2.84E-02)
08/12/91	292.5	< 3.23E-02	(< 2.41E-02)
08/19/91	285.9	< 3.39E-02	(< 2.91E-02)
08/26/91	290.9	< 1.48E-02	(< 3.51E-02)
09/03/91	334.9	< 2.13E-02	(< 2.36E-02)
09/09/91	253.0	< 2.93E-02	(< 2.64E-02)
09/16/91	291.7	< 2.57E-02	(< 2.84E-02)
09/23/91	293.2	< 2.19E-02	(< 2.97E-02)
09/30/91	294.4	< 2.54E-02	(< 2.97E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 4

THIRD QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AC-203)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	307.4	< 2.85E-02	(< 2.88E-02)
07/08/91	284.9	< 3.54E-02	(< 3.72E-02)
07/15/91	308.6	< 2.53E-02	(< 2.82E-02)
07/22/91	298.6	< 2.51E-02	(< 2.68E-02)
07/29/91	300.0	< 2.50E-02	(< 2.69E-02)
08/05/91	296.2	< 2.97E-02	(< 2.84E-02)
08/12/91	298.3	< 2.95E-02	(< 2.41E-02)
08/19/91	295.5	< 3.07E-02	(< 2.91E-02)
08/26/91	299.5	< 2.74E-02	(< 3.51E-02)
09/03/91	340.5	< 1.64E-02	(< 2.36E-02)
09/09/91	257.1	< 1.62E-02	(< 2.64E-02)
09/16/91	294.4	< 2.29E-02	(< 2.84E-02)
09/23/91	296.7	< 2.15E-02	(< 2.97E-02)
09/30/91	299.5	< 1.92E-02	(< 2.97E-02)



AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 5

THIRD QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AC-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
07/01/91	294.7	(< 2.88E-02)
07/08/91	262.0	(< 3.72E-02)
07/15/91	286.1	(< 2.82E-02)
07/22/91	288.2	(< 2.68E-02)
07/29/91	287.6	(< 2.69E-02)
08/05/91	286.1	(< 2.84E-02)
08/12/91	287.9	(< 2.41E-02)
08/19/91	281.6	(< 2.91E-02)
08/26/91	288.9	(< 3.51E-02)
09/03/91	329.6	(< 2.36E-02)
09/09/91	248.6	(< 2.64E-02)
09/16/91	286.3	(< 2.84E-02)
09/23/91	286.9	(< 2.97E-02)
09/30/91	285.0	(< 2.97E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 6

THIRD QUARTER, 1991

0.6 MI SSE - SPOIL POND (AC-205)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	273.8	< 2.85E-02	(< 2.88E-02)
07/08/91	290.2	< 2.35E-02	(< 3.72E-02)
07/15/91	275.6	< 2.47E-02	(< 2.82E-02)
07/22/91	274.4	< 1.76E-02	(< 2.68E-02)
07/29/91	277.5	< 2.58E-02	(< 2.69E-02)
08/05/91	270.4	< 2.40E-02	(< 2.84E-02)
08/12/91	295.0	< 2.65E-02	(< 2.41E-02)
08/19/91	278.2	< 2.72E-02	(< 2.91E-02)
08/26/91	294.1	< 2.45E-02	(< 3.51E-02)
09/03/91	336.9	< 1.84E-02	(< 2.36E-02)
09/09/91	254.5	< 2.54E-02	(< 2.64E-02)
09/16/91	294.0	< 2.30E-02	(< 2.84E-02)
09/23/91	295.5	< 1.96E-02	(< 2.97E-02)
09/30/91	297.1	< 1.94E-02	(< 2.97E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 7

FOURTH QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AC-200)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	321.0	< 2.34E-02	(< 2.63E-02)
10/14/91	315.5	< 2.87E-02	(< 3.58E-02)
10/21/91	307.4	< 2.32E-02	(< 3.56E-02)
10/28/91	316.6	< 2.76E-02	(< 3.48E-02)
11/04/91	317.0	< 2.94E-02	(< 2.93E-02)
11/11/91	309.8	< 2.35E-02	(< 2.29E-02)
11/18/91	282.8	< 2.85E-02	(< 3.13E-02)
11/25/91	290.8	< 2.67E-02	(< 3.28E-02)
12/02/91	292.0	< 2.21E-02	(< 2.25E-02)
12/09/91	289.5	< 2.69E-02	(< 3.21E-02)
12/16/91	293.0	< 2.76E-02	(< 2.74E-02)
12/23/91	291.6	< 3.26E-02	(< 2.98E-02)
12/30/91	291.7	< 3.66E-02	(< 3.16E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 8

FOURTH QUARTER, 1991

0.6 MI NE - PMAC (AC-201)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	280.9	< 3.26E-02	(< 2.63E-02)
10/14/91	279.7	< 3.03E-02	(< 3.58E-02)
10/21/91	268.4	< 3.27E-02	(< 3.56E-02)
10/28/91	277.9	< 3.88E-02	(< 3.48E-02)
11/04/91	277.1	< 3.29E-02	(< 2.93E-02)
11/11/91	273.6	< 2.90E-02	(< 2.29E-02)
11/18/91	282.1	< 2.52E-02	(< 3.13E-02)
11/25/91	284.2	< 3.81E-02	(< 3.28E-02)
12/02/91	285.9	< 2.02E-02	(< 2.25E-02)
12/09/91	282.5	< 2.85E-02	(< 3.21E-02)
12/16/91	287.1	< 2.80E-02	(< 2.74E-02)
12/23/91	285.8	< 3.48E-02	(< 2.98E-02)
12/30/91	285.8	< 3.50E-02	(< 3.16E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 9

FOURTH QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AC-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	297.7	< 2.62E-02	(< 2.63E-02)
10/14/91	294.2	< 1.95E-02	(< 3.58E-02)
10/21/91	288.3	< 2.69E-02	(< 3.56E-02)
10/28/91	298.7	< 3.00E-02	(< 3.48E-02)
11/04/91	298.5	< 2.60E-02	(< 2.93E-02)
11/11/91	293.1	< 2.99E-02	(< 2.29E-02)
11/18/91	275.8	< 2.81E-02	(< 3.13E-02)
11/25/91	281.5	< 2.41E-02	(< 3.28E-02)
12/02/91	280.4	< 3.03E-02	(< 2.25E-02)
12/09/91	280.8	< 2.95E-02	(< 3.21E-02)
12/16/91	287.1	< 2.23E-02	(< 2.74E-02)
12/23/91	281.8	< 2.20E-02	(< 2.98E-02)
12/30/91	287.3	< 3.20E-02	(< 3.16E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

3SEP - 10

FOURTH QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AC-203)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	300.2	< 2.25E-02	(< 2.63E-02)
10/14/91	297.1	< 1.94E-02	(< 3.58E-02)
10/21/91	291.2	< 2.20E-02	(< 3.56E-02)
10/28/91	299.0	< 1.63E-02	(< 3.48E-02)
11/04/91	299.4	< 1.79E-02	(< 2.93E-02)
11/11/91	296.5	< 2.08E-02	(< 2.29E-02)
11/18/91	271.3	< 1.13E-02	(< 3.13E-02)
11/25/91	259.4	< 2.80E-02	(< 3.28E-02)
12/02/91	283.2	< 2.50E-02	(< 2.25E-02)
12/09/91	269.6	< 2.59E-02	(< 3.21E-02)
12/16/91	262.5	< 3.22E-02	(< 2.74E-02)
12/23/91	255.7	< 4.20E-02	(< 2.98E-02)
12/30/91	287.0	< 2.51E-02	(< 3.16E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 11

FOURTH QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AC-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
10/07/91	286.5	(< 2.63E-02)
10/14/91	284.5	(< 3.58E-02)
10/21/91	276.3	(< 3.56E-02)
10/28/91	287.7	(< 3.48E-02)
11/04/91	288.5	(< 2.93E-02)
11/11/91	271.6	(< 2.29E-02)
11/18/91	282.9	(< 3.13E-02)
11/25/91	282.6	(< 3.28E-02)
12/02/91	285.5	(< 2.25E-02)
12/09/91	280.6	(< 3.21E-02)
12/16/91	283.6	(< 2.74E-02)
12/23/91	282.8	(< 2.98E-02)
12/30/91	281.3	(< 3.16E-02)

AIR CARTRIDGE SAMPLES - IODINE  
(PICOCURIES PER CUBIC METER)

BSEP - 12

FOURTH QUARTER, 1991

0.6 MI SSE - SPOIL POND (AC-205)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	298.2	< 1.81E-02	(< 2.63E-02)
10/14/91	293.9	< 2.20E-02	(< 3.58E-02)
10/21/91	285.9	< 1.88E-02	(< 3.56E-02)
10/28/91	296.3	< 2.09E-02	(< 3.48E-02)
11/04/91	296.5	< 2.27E-02	(< 2.93E-02)
11/11/91	286.9	< 2.96E-02	(< 2.29E-02)
11/18/91	294.4	< 2.65E-02	(< 3.13E-02)
11/25/91	294.5	< 3.50E-02	(< 3.28E-02)
12/02/91	296.6	< 2.07E-02	(< 2.25E-02)
12/09/91	289.8	< 3.75E-02	(< 3.21E-02)
12/16/91	293.7	< 2.30E-02	(< 2.74E-02)
12/23/91	292.4	< 2.27E-02	(< 2.98E-02)
12/30/91	287.2	< 2.52E-02	(< 3.16E-02)



AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

RSEP - 13

THIRD QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	304.7	6.05 ± 2.38 E-03	(2.78 ± 0.36 E-02)
07/08/91	287.3	8.34 ± 2.57 E-03	(1.13 ± 0.29 E-02)
07/15/91	309.7	1.26 ± 0.27 E-02	(1.57 ± 0.30 E-02)
07/22/91	311.3	9.77 ± 2.48 E-03	(1.20 ± 0.28 E-02)
07/29/91	310.0	1.07 ± 0.26 E-02	(9.53 ± 2.73 E-03)
08/05/91	307.7	9.36 ± 2.54 E-03	(7.41 ± 2.57 E-03)
08/12/91	316.9	1.82 ± 0.29 E-02	(1.67 ± 0.31 E-02)
08/19/91	314.7	1.26 ± 0.26 E-02	(1.22 ± 0.28 E-02)
08/26/91	318.7	1.27 ± 0.25 E-02	(1.18 ± 0.26 E-02)
09/03/91	360.8	1.07 ± 0.23 E-02	(1.19 ± 0.26 E-02)
09/09/91	273.3	1.06 ± 0.28 E-02	(1.10 ± 0.30 E-02)
09/16/91	314.1	2.52 ± 0.33 E-02	(2.48 ± 0.35 E-02)
09/23/91	314.2	1.50 ± 0.28 E-02	(1.63 ± 0.31 E-02)
09/30/91	315.8	1.19 ± 0.26 E-02	(1.52 ± 0.30 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 14

THIRD QUARTER, 1991

0.6 MI NE - PMAC (AP-201)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	285.7	7.02 ± 2.58 E-03	(2.78 ± 0.36 E-02)
07/08/91	308.0	9.50 ± 2.50 E-03	(1.13 ± 0.29 E-02)
07/15/91	289.3	1.37 ± 0.29 E-02	(1.57 ± 0.30 E-02)
07/22/91	284.7	1.06 ± 0.27 E-02	(1.20 ± 0.28 E-02)
07/29/91	287.7	1.17 ± 0.29 E-02	(9.53 ± 2.73 E-03)
08/05/91	283.5	7.96 ± 2.62 E-03	(7.41 ± 2.57 E-03)
08/12/91	281.5	1.74 ± 0.32 E-02	(1.67 ± 0.31 E-02)
08/19/91	277.7	1.25 ± 0.29 E-02	(1.22 ± 0.28 E-02)
08/26/91	278.4	1.38 ± 0.28 E-02	(1.18 ± 0.26 E-02)
09/03/91	319.3	1.15 ± 0.26 E-02	(1.19 ± 0.26 E-02)
09/09/91	243.0	9.67 ± 3.01 E-03	(1.10 ± 0.30 E-02)
09/16/91	280.3	2.45 ± 0.36 E-02	(2.48 ± 0.35 E-02)
09/23/91	281.6	1.50 ± 0.30 E-02	(1.63 ± 0.31 E-02)
09/30/91	280.3	1.07 ± 0.28 E-02	(1.52 ± 0.30 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 15

THIRD QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	286.5	6.27 ± 2.52 E-03	(2.78 ± 0.36 E-02)
07/08/91	306.4	6.69 ± 2.33 E-03	(1.13 ± 0.29 E-02)
07/15/91	284.6	1.41 ± 0.30 E-02	(1.57 ± 0.30 E-02)
07/22/91	272.8	7.94 ± 2.63 E-03	(1.20 ± 0.28 E-02)
07/29/91	276.5	1.27 ± 0.30 E-02	(9.53 ± 2.73 E-03)
08/05/91	270.9	1.01 ± 0.29 E-02	(7.41 ± 2.57 E-03)
08/12/91	292.5	1.54 ± 0.30 E-02	(1.67 ± 0.31 E-02)
08/19/91	285.9	1.41 ± 0.29 E-02	(1.22 ± 0.28 E-02)
08/26/91	290.9	1.28 ± 0.27 E-02	(1.18 ± 0.26 E-02)
09/03/91	334.9	9.01 ± 2.36 E-03	(1.19 ± 0.26 E-02)
09/09/91	253.0	1.11 ± 0.30 E-02	(1.10 ± 0.30 E-02)
09/16/91	291.7	2.36 ± 0.34 E-02	(2.48 ± 0.35 E-02)
09/23/91	293.2	1.32 ± 0.28 E-02	(1.63 ± 0.31 E-02)
09/30/91	294.4	1.36 ± 0.28 E-02	(1.52 ± 0.30 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 16

THIRD QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	307.4	6.15 ± 2.37 E-03	(2.78 ± 0.36 E-02)
07/08/91	284.9	1.01 ± 0.27 E-02	(1.13 ± 0.29 E-02)
07/15/91	308.6	1.41 ± 0.28 E-02	(1.57 ± 0.30 E-02)
07/22/91	298.6	9.95 ± 2.57 E-03	(1.20 ± 0.28 E-02)
07/29/91	300.0	9.60 ± 2.65 E-03	(9.53 ± 2.73 E-03)
08/05/91	296.2	7.78 ± 2.52 E-03	(7.41 ± 2.57 E-03)
08/12/91	298.3	1.90 ± 0.31 E-02	(1.67 ± 0.31 E-02)
08/19/91	295.5	1.43 ± 0.29 E-02	(1.22 ± 0.28 E-02)
08/26/91	299.5	1.30 ± 0.26 E-02	(1.18 ± 0.26 E-02)
09/03/91	340.5	1.06 ± 0.24 E-02	(1.19 ± 0.26 E-02)
09/09/91	257.1	1.08 ± 0.29 E-02	(1.10 ± 0.30 E-02)
09/16/91	294.4	2.10 ± 0.33 E-02	(2.43 ± 0.35 E-02)
09/23/91	296.7	1.54 ± 0.29 E-02	(1.63 ± 0.31 E-02)
09/30/91	299.5	1.00 ± 0.26 E-02	(1.52 ± 0.30 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 17

THIRD QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
07/01/91	294.7	(2.78 ± 0.36 E-02)
07/08/91	262.0	(1.13 ± 0.29 E-02)
07/15/91	286.1	(1.57 ± 0.30 E-02)
07/22/91	288.2	(1.20 ± 0.28 E-02)
07/29/91	287.6	(9.53 ± 2.73 E-03)
08/05/91	286.1	(7.41 ± 2.57 E-03)
08/12/91	287.9	(1.67 ± 0.31 E-02)
08/19/91	281.6	(1.22 ± 0.28 E-02)
08/26/91	288.9	(1.18 ± 0.26 E-02)
09/03/91	329.6	(1.19 ± 0.26 E-02)
09/09/91	248.6	(1.10 ± 0.30 E-02)
09/16/91	286.3	(2.48 ± 0.35 E-02)
09/23/91	286.9	(1.63 ± 0.31 E-02)
09/30/91	285.0	(1.52 ± 0.30 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 18

THIRD QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
07/01/91	273.8	8.42 ± 2.76 E-03	(2.78 ± 0.36 E-02)
07/08/91	290.2	7.78 ± 2.51 E-03	(1.13 ± 0.29 E-02)
07/15/91	275.6	1.36 ± 0.30 E-02	(1.57 ± 0.30 E-02)
07/22/91	274.4	1.02 ± 0.28 E-02	(1.20 ± 0.28 E-02)
07/29/91	277.5	9.88 ± 2.83 E-03	(9.53 ± 2.73 E-03)
08/05/91	270.4	9.80 ± 2.84 E-03	(7.41 ± 2.57 E-03)
08/12/91	295.0	1.81 ± 0.31 E-02	(1.67 ± 0.31 E-02)
08/19/91	278.2	1.28 ± 0.29 E-02	(1.22 ± 0.28 E-02)
08/26/91	294.1	1.28 ± 0.27 E-02	(1.18 ± 0.26 E-02)
09/03/91	336.9	1.16 ± 0.25 E-02	(1.19 ± 0.26 E-02)
09/09/91	254.5	1.01 ± 0.29 E-02	(1.10 ± 0.30 E-02)
09/16/91	294.0	2.16 ± 0.33 E-02	(2.48 ± 0.35 E-02)
09/23/91	295.5	1.56 ± 0.30 E-02	(1.63 ± 0.31 E-02)
09/30/91	297.1	1.09 ± 0.27 E-02	(1.52 ± 0.30 E-02)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 19

FOURTH QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	321.0	8.76 ± 2.43 E-03	(1.26 ± 0.29 E-02)
10/14/91	315.5	2.02 ± 0.31 E-02	(2.16 ± 0.34 E-02)
10/21/91	307.4	2.23 ± 0.32 E-02	(2.16 ± 0.35 E-02)
10/28/91	316.6	2.63 ± 0.33 E-02	(2.65 ± 0.35 E-02)
11/04/91	317.0	1.75 ± 0.30 E-02	(1.96 ± 0.33 E-02)
11/11/91	309.8	2.73 ± 0.34 E-02	(3.31 ± 0.39 E-02)
11/18/91	282.8	2.49 ± 0.35 E-02	(2.35 ± 0.35 E-02)
11/25/91	290.8	1.35 ± 0.29 E-02	(1.08 ± 0.28 E-02)
12/02/91	292.0	1.55 ± 0.30 E-02	(1.26 ± 0.29 E-02)
12/09/91	289.5	2.52 ± 0.34 E-02	(2.04 ± 0.32 E-02)
12/16/91	293.0	1.38 ± 0.30 E-02	(9.75 ± 2.80 E-03)
12/23/91	291.6	1.91 ± 0.31 E-02	(1.58 ± 0.30 E-02)
12/30/91	291.7	1.33 ± 0.29 E-02	(8.93 ± 2.77 E-03)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 20

FOURTH QUARTER, 1991

0.6 MI NE - PMAC (AP-201)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	280.9	1.19 ± 0.29 E-02	(1.26 ± 0.29 E-02)
10/14/91	279.7	1.87 ± 0.33 E-02	(2.16 ± 0.34 E-02)
10/21/91	263.4	2.87 ± 0.39 E-02	(2.16 ± 0.35 E-02)
10/28/91	277.9	2.92 ± 0.38 E-02	(2.65 ± 0.35 E-02)
11/04/91	277.1	2.14 ± 0.35 E-02	(1.96 ± 0.33 E-02)
11/11/91	273.6	3.08 ± 0.38 E-02	(3.31 ± 0.39 E-02)
11/18/91	282.1	2.56 ± 0.36 E-02	(2.35 ± 0.35 E-02)
11/25/91	284.2	1.69 ± 0.31 E-02	(1.08 ± 0.28 E-02)
12/02/91	285.9	2.04 ± 0.33 E-02	(1.26 ± 0.29 E-02)
12/09/91	282.5	2.65 ± 0.35 E-02	(2.04 ± 0.32 E-02)
12/16/91	287.1	1.60 ± 0.31 E-02	(9.75 ± 2.80 E-03)
12/23/91	285.8	2.11 ± 0.33 E-02	(1.58 ± 0.30 E-02)
12/30/91	285.8	1.40 ± 0.30 E-02	(8.93 ± 2.77 E-03)



AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 21

FOURTH QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	297.7	1.34 ± 0.28 E-02	(1.26 ± 0.29 E-02)
10/14/91	294.2	2.38 ± 0.34 E-02	(2.16 ± 0.34 E-02)
10/21/91	288.3	2.75 ± 0.36 E-02	(2.16 ± 0.35 E-02)
10/28/91	298.7	2.15 ± 0.32 E-02	(2.65 ± 0.35 E-02)
11/04/91	298.5	2.15 ± 0.33 E-02	(1.96 ± 0.33 E-02)
11/11/91	293.1	3.43 ± 0.38 E-02	(3.31 ± 0.39 E-02)
11/18/91	275.8	2.42 ± 0.35 E-02	(2.35 ± 0.35 E-02)
11/25/91	281.5	1.51 ± 0.30 E-02	(1.08 ± 0.28 E-02)
12/02/91	280.4	1.25 ± 0.29 E-02	(1.26 ± 0.29 E-02)
12/09/91	280.8	2.67 ± 0.35 E-02	(2.04 ± 0.32 E-02)
12/16/91	287.1	1.24 ± 0.29 E-02	(9.75 ± 2.80 E-03)
12/23/91	281.8	1.59 ± 0.30 E-02	(1.58 ± 0.30 E-02)
12/30/91	287.3	1.07 ± 0.28 E-02	(8.93 ± 2.77 E-03)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 22

FOURTH QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)

<u>DATE COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	300.2	1.30 ± 0.28 E-02	(1.26 ± 0.29 E-02)
10/14/91	297.1	2.04 ± 0.33 E-02	(2.16 ± 0.34 E-02)
10/21/91	291.2	2.78 ± 0.36 E-02	(2.16 ± 0.35 E-02)
10/28/91	299.0	2.64 ± 0.35 E-02	(2.65 ± 0.35 E-02)
11/04/91	299.4	2.06 ± 0.33 E-02	(1.96 ± 0.33 E-02)
11/11/91	296.5	3.40 ± 0.38 E-02	(3.31 ± 0.39 E-02)
11/18/91	271.3	1.73 ± 0.32 E-02	(2.35 ± 0.35 E-02)
11/25/91	259.4	1.01 ± 0.29 E-02	(1.08 ± 0.28 E-02)
12/02/91	283.2	1.25 ± 0.29 E-02	(1.26 ± 0.29 E-02)
12/09/91	269.6	1.98 ± 0.33 E-02	(2.04 ± 0.32 E-02)
12/16/91	262.5	1.21 ± 0.31 E-02	(9.75 ± 2.80 E-03)
12/23/91	255.7	1.96 ± 0.35 E-02	(1.58 ± 0.30 E-02)
12/30/91	287.0	1.06 ± 0.28 E-02	(8.93 ± 2.77 E-03)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 23

FOURTH QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>CONTROL ACTIVITY</u>
10/07/91	286.5	(1.26 ± 0.29 E-02)
10/14/91	284.5	(2.16 ± 0.34 E-02)
10/21/91	276.3	(2.16 ± 0.35 E-02)
10/28/91	287.7	(2.65 ± 0.35 E-02)
11/04/91	288.5	(1.96 ± 0.33 E-02)
11/11/91	271.6	(3.31 ± 0.39 E-02)
11/18/91	282.9	(2.35 ± 0.35 E-02)
11/25/91	282.6	(1.08 ± 0.28 E-02)
12/02/91	285.5	(1.26 ± 0.29 E-02)
12/09/91	280.6	(2.04 ± 0.32 E-02)
12/16/91	283.6	(9.75 ± 2.80 E-03)
12/23/91	282.8	(1.58 ± 0.30 E-02)
12/30/91	281.3	(8.93 ± 2.77 E-03)

AIR PARTICULATE SAMPLES - BETA  
(PICOCURIES PER CUBIC METER)

BSEP - 24

FOURTH QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)

<u>DATE</u> <u>COLLECTED</u>	<u>CUBIC METERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
10/07/91	298.2	1.28 ± 0.28 E-02	(1.26 ± 0.29 E-02)
10/14/91	293.9	2.01 ± 0.33 E-02	(2.16 ± 0.34 E-02)
10/21/91	285.9	2.19 ± 0.34 E-02	(2.16 ± 0.35 E-02)
10/28/91	296.3	2.53 ± 0.34 E-02	(2.65 ± 0.35 E-02)
11/04/91	296.5	1.79 ± 0.32 E-02	(1.96 ± 0.33 E-02)
11/11/91	286.9	3.25 ± 0.38 E-02	(3.31 ± 0.39 E-02)
11/18/91	294.4	1.97 ± 0.32 E-02	(2.35 ± 0.35 E-02)
11/25/91	294.5	1.17 ± 0.27 E-02	(1.08 ± 0.28 E-02)
12/02/91	296.6	1.27 ± 0.28 E-02	(1.26 ± 0.29 E-02)
12/09/91	289.8	2.05 ± 0.32 E-02	(2.04 ± 0.32 E-02)
12/16/91	293.7	1.18 ± 0.28 E-02	(9.75 ± 2.80 E-03)
12/23/91	292.4	1.83 ± 0.31 E-02	(1.58 ± 0.30 E-02)
12/30/91	287.2	9.23 ± 2.74 E-03	(8.93 ± 2.77 E-03)

AIR PARTICULATE SAMPLES  
(PICOCURIS PER CUBIC METER)

BSEP - 25

THIRD QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 4359.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	8.13 ± 1.21 E-02	(1.04 + 0.15 E-01)
K-40	LESS THAN LLD	(1.69 ± 1.00 E-02)
RA-226	LESS THAN LLD	(1.77 ± 0.87 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 26

THIRD QUARTER, 1991

0.6 MI NE - PMAC (AP-201)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3981 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.84 \pm 1.48 \text{ E-02}$	$(1.04 \pm 0.15 \text{ E-01})$
K-40	LESS THAN LLD	$(1.69 \pm 1.00 \text{ E-02})$
RA-226	LESS THAN LLD	$(1.77 \pm 0.87 \text{ E-02})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 27

THIRD QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 4034.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$8.36 \pm 1.40 \text{ E-01}$	$(1.04 \pm 0.15 \text{ E-01})$
K-40	LESS THAN LLD	$(1.69 \pm 1.00 \text{ E-02})$
BI-214	$1.63 \pm 1.08 \text{ E-03}$	(LESS THAN LLD)
RA-226	LESS THAN LLD	$(1.77 \pm 0.87 \text{ E-02})$

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 28

THIRD QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 4177.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	8.57 ± 1.10 E-02	(1.04 ± 0.15 E-01)
K-40	LESS THAN LLD	(1.69 ± 1.00 E-02)
RA-226	LESS THAN LLD	(1.77 ± 0.87 E-02)



AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 29

THIRD QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3999.5 CUBIC METERS

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.04 ± 0.15 E-01)
K-40	(1.69 ± 1.00 E-02)
RA-226	(1.77 ± 0.87 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 30

THIRD QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 4007.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.29 ± 0.14 E-01	(1.04 ± 0.15 E-01)
K-40	LESS THAN LLD	(1.69 ± 1.00 E-02)
RA-226	LESS THAN LLD	(1.77 ± 0.87 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 31

FOURTH QUARTER, 1991

1.0 MI SW - VISITOR'S CENTER (AP-200)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3908.7 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.07 ± 0.15 E-01	(8.62 ± 1.59 E-02)
K-40	2.03 ± 1.37 E-02	(LESS THAN LLD)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

FSEP - 32

FOURTH QUARTER, 1991

0.6 MI NE - PMAC (AP-201)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3651 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

7.04 ± 1.79 E-02

(8.62 ± 1.59 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 33

FOURTH QUARTER, 1991

1.0 MI S - SUBSTATION ON CONSTRUCTION RD (AP-202)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3745.2 CUBIC METERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.30 ± 0.14 E-01	(8.62 ± 1.59 E-02)
BI-214	1.16 ± 1.01 E-03	(LESS THAN LLD)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 34

FOURTH QUARTER, 1991

2.3 MI SSW - SOUTHPORT SUBSTATION (AP-203)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3672.1 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

9.48 ± 1.56 E-02

(8.62 ± 1.59 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 35

FOURTH QUARTER, 1991

23.0 MI NNE - SUTTON PLANT (CONTROL) (AP-204)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3674.4 CUBIC METERS

ISOTOPE

CONTROL ACTIVITY

BE-7

(8.62 ± 1.59 E-02)

AIR PARTICULATE SAMPLES  
(PICOCURIES PER CUBIC METER)

BSEP - 36

FOURTH QUARTER, 1991

0.6 MI SSE - SPOIL POND (AP-205)  
(COMPOSITE SAMPLE)

GAMMA SPECTROMETRY

VOLUME: 3806.3 CUBIC METERS

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

BE-7

9.79 ± 1.57 E-02

(8.62 ± 1.59 E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 37

JULY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 07/01/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 405.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.03 ± 0.08 E+00	(4.55 ± 0.81 E-01)
K-40	2.11 ± 0.17 E+00	(3.09 ± 0.16 E+00)
I-131	< 1.64E-02	(< 1.95E-02)
CS-134	< 1.71E-02	(< 1.62E-02)
CS-137	< 1.79E-02	(< 1.77E-02)
TL-208	LESS THAN LLD	(9.74 ± 7.30 E-03)
PB-212	LESS THAN LLD	(1.70 ± 1.02 E-02)
RA-226	2.27 ± 1.69 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 38

JULY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 07/01/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 407.4 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.80 ± 0.55 E-01	(4.55 ± 0.81 E-01)
K-40	2.45 ± 0.15 E+00	(3.09 ± 0.16 E+00)
I-131	< 1.90E-02	(< 1.95E-02)
CS-134	< 1.66E-02	(< 1.62E-02)
CS-137	< 1.67E-02	(< 1.77E-02)
TL-208	LESS THAN LLD	(9.74 ± 7.30 E-03)
PB-212	LESS THAN LLD	(1.70 ± 1.02 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 39

JULY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 07/01/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 436.4 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(4.55 ± 0.81 E-01)
K-40	(3.09 ± 0.16 E+00)
I-131	(< 1.95E-02)
CS-134	(< 1.62E-02)
CS-137	(< 1.77E-02)
TL-208	(9.74 ± 7.30 E-03)
PB-212	(1.70 ± 1.02 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 40

JULY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 07/01/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 440 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	4.62 ± 0.65 E-01	(4.55 ± 0.81 E-01)
K-40	2.13 ± 0.15 E+00	(3.09 ± 0.16 E+00)
I-131	< 2.04E-02	(< 1.95E-02)
CS-134	< 1.60E-02	(< 1.62E-02)
CS-137	< 1.48E-02	(< 1.77E-02)
TL-208	LESS THAN LLD	(9.74 ± 7.30 E-03)
PB-212	LESS THAN LLD	(1.70 ± 1.02 E-02)
RA-226	2.06 ± 1.51 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 41

42

JULY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 07/01/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 417.3 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.94 ± 0.64 E-01	(4.11 ± 0.66 E-01)
K-40	2.01 ± 0.16 E+00	(1.99 ± 0.16 E+00)
I-131	< 1.76E-02	(< 1.70E-02)
CS-134	< 1.69E-02	(< 1.59E-02)
CS-137	< 1.71E-02	(< 1.51E-02)
TL-208	LESS THAN LLD	(2.61 ± 0.74 E-02)
PB-212	2.10 ± 1.18 E-02	(3.23 ± 1.11 E-02)
BI-214	LESS THAN LLD	(1.58 ± 1.31 E-02)
RA-226	LESS THAN LLD	(3.31 ± 1.37 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 43

JULY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 07/01/91)

SWEETGUM

MMA SPECTROMETRY

MASS: 496.1 GRAMS WET

<u>OTOPE</u>	<u>CONTROL ACTIVITY</u>
-7	(4.11 ± 0.66 E-01)
40	(1.99 ± 0.16 E+00)
131	(< 1.70E-02)
-134	(< 1.59E-02)
-137	(< 1.51E-02)
-2	(2.61 ± 0.74 E-02)
-212	(3.23 ± 1.11 E-02)
-214	(1.58 ± 1.31 E-02)
-226	(3.31 ± 1.37 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 45

JULY, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 07/01/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 405.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.14 ± 0.95 E-01	(3.35 ± 0.73 E-01)
K-40	2.83 ± 0.20 E+00	(2.67 ± 0.22 E+00)
I-131	< 2.21E-02	(< 2.62E-02)
CS-134	< 2.26E-02	(< 1.97E-02)
CS-137	< 1.87E-02	(< 2.15E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 46

JULY, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 07/01/91)

WAX MYRTLE

AMMA SPECTROMETRY

MASS: 474.9 GRAMS WET

<u>SOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
E-7	7.45 ± 0.79 E-01	(3.35 ± 0.73 E-01)
-40	2.12 ± 0.17 E+00	(2.67 ± 0.22 E+00)
-131	.. 2.16E-02	(< 2.62E-02)
3-134	< 2.11E-02	(< 1.97E-02)
3-137	< 1.53E-02	(< 2.15E-02)
I-134	3.17 ± 1.73 E-02	(LESS THAN LLD)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 47

JULY, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (3L-802)  
(DATE COLLECTED: 07/01/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 416.9 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(3.35 ± 0.73 E-01)
K-40	(2.67 ± 0.22 E+00)
I-131	(< 2.62E-02)
CS-134	(< 1.97E-02)
CS-137	(< 2.15E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 48

JULY, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 07/01/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 405.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.22 ± 0.11 E+00	(3.35 ± 0.73 E-01)
K-40	1.96 ± 0.19 E+00	(2.67 ± 0.22 E+00)
I-131	< 2.97E-02	(< 2.62E-02)
CS-134	< 2.10E-02	(< 1.97E-02)
CS-137	< 1.92E-02	(< 2.15E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 49

AUGUST, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 08/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 432.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.51 ± 0.08 E+00	(1.37 ± 0.08 E+00)
K-40	1.42 ± 0.17 E+00	(4.27 ± 0.20 E+00)
I-131	< 2.23E-02	(< 2.48E-02)
CS-134	< 1.55E-02	(< 1.82E-02)
CS-137	< 1.55E-02	(< 1.51E-02)
PB-212	LESS THAN LLD	(1.96 ± 1.02 E-02)
BI-214	LESS THAN LLD	(1.54 ± 1.42 E-02)
RA-226	LESS THAN LLD	(3.10 ± 1.50 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 50

AUGUST, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 08/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 397.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	5.77 ± 0.75 E-01	(1.37 ± 0.08 E+00)
K-40	1.91 ± 0.18 E+00	(4.27 ± 0.20 E+00)
I-131	< 2.53E-02	(< 2.48E-02)
CS-134	< 1.83E-02	(< 1.82E-02)
CS-137	< 1.72E-02	(< 1.51E-02)
PB-212	LESS THAN LLD	(1.96 ± 1.02 E-02)
BI-214	LESS THAN LLD	(1.54 ± 1.42 E-02)
RA-226	LESS THAN LLD	(3.10 ± 1.50 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 51

AUGUST, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 08/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 446.8 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.37 ± 0.08 E+00)
K-40	(4.27 ± 0.20 E+00)
I-131	(< 2.48E-02)
CS-134	(< 1.82E-02)
CS-137	(< 1.51E-02)
PB-210	(1.96 ± 1.02 E-02)
BI-214	(1.54 ± 1.42 E-02)
RA-226	(3.10 ± 1.50 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 52

AUGUST, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 08/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 458 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	3.38 ± 0.59 E-01	(1.37 ± 0.08 E+00)
K-40	2.47 ± 0.16 E+00	(4.27 ± 0.20 E+00)
I-131	< 2.14E-02	(< 2.48E-02)
CS-134	< 1.45E-02	(< 1.82E-02)
CS-137	< 1.50E-02	(< 1.51E-02)
PB-212	2.97 ± 1.28 E-02	(1.96 ± 1.02 E-02)
BI-214	LESS THAN LLD	(1.54 ± 1.42 E-02)
RA-226	LESS THAN LLD	(3.10 ± 1.50 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 53

AUGUST, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 08/02/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 461.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.45 ± 0.08 E+00	(1.11 ± 0.07 E+00)
K-40	1.46 ± 0.12 E+00	(1.73 ± 0.14 E+00)
I-131	< 1.95E-02	(< 2.04E-02)
CS-134	< 1.31E-02	(< 1.45E-02)
CS-137	< 1.77E-02	(< 1.53E-02)
RA-226	1.79 ± 1.70 E-01	(2.46 ± .63 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 54

AUGUST, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 08/02/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 394.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.41 ± 0.86 E-01	(1.11 ± 0.07 E+00)
K-40	1.91 ± 0.14 E+00	(1.73 ± 0.14 E+00)
I-131	< 2.36E-02	(< 2.04E-02)
CS-134	< 1.68E-02	(< 1.45E-02)
CS-137	< 1.67E-02	(< 1.53E-02)
RA-226	2.36 ± 1.81 E-01	(2.46 ± 1.63 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 55

AUGUST, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 08/02/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS:

465 GRAMS WET

ISOTOPE

CONTROL ACTIVITY

BE-7

(1.11 ± 0.07 E+00)

K-40

(1.73 ± 0.14 E+00)

I-131

(< 2.04E-02)

CS-134

(< 1.45E-02)

CS-137

(< 1.53E-02)

RA-226

(2.46 ± 1.63 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 57

AUGUST, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 08/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 386.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.47 ± 0.11 E+00	(1.96 ± 0.11 E+00)
K-40	1.58 ± 0.20 E+00	(1.50 ± 0.20 E+00)
I-131	< 3.00E-02	(< 3.38E-02)
CS-134	< 2.22E-02	(< 2.31E-02)
CS-137	< 2.00E-02	(< 2.20E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIERS PER GRAM)

BSEP - 58

AUGUST, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 08/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 451.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.34 ± 0.09 E+00	(1.96 ± 0.11 E+00)
K-40	1.48 ± 0.16 E+00	(1.50 ± 0.20 E+00)
I-131	< 2.59E-02	(< 3.38E-02)
CS-134	< 2.02E-02	(< 2.31E-02)
CS-137	< 1.58E-02	(< 2.20E-02)
BI-214	2.80 ± 1.76 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 59

AUGUST, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 08/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 383.7 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.96 ± 0.11 E+00)
K-40	(1.50 ± 0.20 E+00)
I-131	(< 3.38E-02)
CS-134	(< 2.31E-02)
CS-137	(< 2.20E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 60

AUGUST, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 08/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 443.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.03 ± 0.10 E+00	(1.96 ± 0.11 E+00)
K-40	1.99 ± 0.18 E+00	(1.50 ± 0.20 E+00)
I-131	< 2.87E-02	(< 3.38E-02)
CS-134	< 1.82E-02	(< 2.31E-02)
CS-137	< 1.73E-02	(< 2.20E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 61

SEPTEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 09/05/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 277.4 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.76 ± 0.15 E+00	(1.00 ± 0.09 E+00)
K-40	2.15 ± 0.23 E+00	(3.46 ± 0.17 E+00)
I-131	< 3.90E-02	(< 2.29E-02)
CS-134	< 3.22E-02	(< 1.93E-02)
CS-137	< 2.80E-02	(< 1.68E-02)
PO-214	LESS THAN LLD	(5.75 ± 1.74 E-02)
BI-214	LESS THAN LLD	(4.34 ± 2.14 E-02)
AC-228	LESS THAN LLD	(1.93 ± 0.41 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 62

SEPTEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 09/05/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 376.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.82 ± 0.77 E-01	(1.00 ± 0.09 E+00)
K-40	2.28 ± 0.18 E+00	(3.46 ± 0.17 E+00)
I-131	< 2.05E-02	(< 2.29E-02)
CS-134	< 1.69E-02	(< 1.93E-02)
CS-137	< 1.75E-02	(< 1.68E-02)
PB-214	LESS THAN LLD	(5.75 ± 1.74 E-02)
BI-214	5.09 ± 1.56 E-02	(4.34 ± 2.14 E-02)
AC-228	LESS THAN LLD	(1.93 ± 0.41 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 63

SEPTEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 09/05/91)

CHERRY

MMA SPECTROMETRY

MASS: 415.6 GRAMS WET

<u>OTOPE</u>	<u>CONTROL ACTIVITY</u>
-7	(1.00 ± 0.09 E+00)
40	(3.46 ± 0.17 E+00)
131	(< 2.29E-02)
-134	(< 1.93E-02)
-137	(< 1.68E-02)
-	(5.75 ± 1.74 E-02)
-214	(4.34 ± 2.14 E-02)
-228	(1.93 ± 0.41 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 64

SEPTEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 09/05/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 400.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	$4.67 \pm 0.80 \text{ E-01}$	$(1.00 \pm 0.09 \text{ E+00})$
K-40	$4.24 \pm 0.22 \text{ E+00}$	$(3.46 \pm 0.17 \text{ E+00})$
I-131	$< 2.50\text{E-02}$	$(< 2.29\text{E-02})$
CS-134	$< 1.86\text{E-02}$	$(< 1.93\text{E-02})$
CS-137	$< 1.75\text{E-02}$	$(< 1.68\text{E-02})$
PB-212	$2.13 \pm 1.02 \text{ E-02}$	(LESS THAN LLD)
PB-214	LESS THAN LLD	$(5.75 \pm 1.74 \text{ E-02})$
BI-214	$2.50 \pm 2.04 \text{ E-02}$	$(4.34 \pm 2.14 \text{ E-02})$
RA-226	$2.16 \pm 1.85 \text{ E-01}$	(LESS THAN LLD)
AC-228	LESS THAN LLD	$(1.93 \pm 0.41 \text{ E-01})$

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 65

SEPTEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 09/05/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 322.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.36 ± 0.94 E-01	(2.02 ± 0.12 E+00)
K-40	1.05 ± 0.17 E+00	(2.07 ± 0.18 E+00)
I-131	< 2.58E-02	(< 3.04E-02)
CS-134	< 2.23E-02	(< 2.31E-02)
CS-137	< 2.09E-02	(< 2.12E-02)
TL-208	1.18 ± 1.13 E-02	(1.80 ± 1.38 E-02)
BI-214	LESS THAN LLD	(5.26 ± 2.20 E-02)
RA-226	2.52 ± 2.35 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

RSEP - 66

SEPTEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 09/05/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 323.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	8.99 ± 1.12 E-01	(2.02 ± 0.12 E+00)
K-40	3.17 ± 0.23 E+00	(2.07 ± 0.18 E+00)
I-131	< 3.00E-02	(< 3.04E-02)
CS-134	< 2.25E-02	(< 2.31E-02)
CS-137	< 2.24E-02	(< 2.12E-02)
TL-208	LESS THAN LLD	(1.80 ± 1.38 E-02)
PB-212	2.83 ± 1.39 E-02	(LESS THAN LLD)
BI-214	LESS THAN LLD	(5.26 ± 2.20 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 67

SEPTEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 09/05/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 401.8 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(2.02 ± 0.12 E+00)
K-40	(2.07 ± 0.18 E+00)
I-131	(< 3.04E-02)
CS-134	(< 2.31E-02)
CS-137	(< 2.12E-02)
TL-208	(1.80 ± 1.38 E-02)
BI-214	(5.26 ± 2.20 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 68

SEPTEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 09/05/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 378.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.46 ± 0.09 E+00	(2.02 ± 0.12 E+00)
K-40	2.27 ± 0.18 E+00	(2.07 ± 0.18 E+00)
I-131	< 2.22E-02	(< 3.04E-02)
CS-134	< 1.67E-02	(< 2.31E-02)
CS-137	< 1.71E-02	(< 2.12E-02)
TL-208	LESS THAN LLD	(1.80 ± 1.38 E-02)
PB-212	2.03 ± 1.38 E-02	(LESS THAN LLD)
BI-214	3.37 ± 1.74 E-02	(5.26 ± 2.20 E-02)
RA-226	2.80 ± 1.62 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 69

SEPTEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 09/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 404.8 GPAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.84 ± 0.10 E+00	(1.61 ± 0.10 E+00)
K-40	2.08 ± 0.19 E+00	(1.86 ± 0.19 E+00)
I-131	< 2.47E-02	(< 1.19E-02)
CS-134	< 1.91E-02	(< 1.76E-02)
CS-137	< 1.59E-02	(< 2.08E-02)
TL-208	LESS THAN LLD	(1.40 ± 0.92 E-02)
PB-212	4.09 ± 1.38 E-02	(LESS THAN LLD)
PB-214	LESS THAN LLD	(3.72 ± 1.54 E-02)
BI-214	LESS THAN LLD	(4.84 ± 1.82 E-02)
RA-226	1.61 ± 1.44 E-01	(2.69 ± 1.52 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 70

SEPTEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 09/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 342.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.68 ± 0.13 E+00	(1.61 ± 0.10 E+00)
K-40	2.29 ± 0.22 E+00	(1.86 ± 0.19 E+00)
I-131	< 3.49E-02	(< 1.19E-02)
CS-134	< 2.54E-02	(< 1.76E-02)
CS-137	< 2.30E-02	(< 2.08E-02)
TL-208	LESS THAN LLD	(1.40 ± 0.92 E-02)
PB-214	LESS THAN LLD	(3.72 ± 1.54 E-02)
BI-214	7.06 ± 2.73 E-02	(4.84 ± 1.82 E-02)
RA-226	LESS THAN LLD	(2.69 ± 1.52 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 71

SEPTEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 09/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 376.8 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.61 ± 0.10 E+00)
K-40	(1.86 ± 0.19 E+00)
I-131	(< 1.19E-02)
CS-134	(< 1.76E-02)
CS-137	(< 2.08E-02)
TL-208	(1.40 ± 0.92 E-02)
PB-214	(3.72 ± 1.54 E-02)
BI-214	(4.84 ± 1.82 E-02)
RA-226	(2.69 ± 1.52 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 72

SEPTEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 09/05/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 341.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.17 ± 0.10 E+00	(1.61 ± 0.10 E+00)
K-40	2.40 ± 0.18 E+00	(1.86 ± 0.19 E+00)
I-131	< 2.66E-02	(< 1.19E-02)
CS-134	< 2.06E-02	(< 1.76E-02)
CS-137	< 2.22E-02	(< 2.08E-02)
TL-208	LESS THAN LLD	(1.40 ± 0.92 E-02)
PB-214	LESS THAN LLD	(3.72 ± 1.54 E-02)
BI-214	LESS THAN LLD	(4.84 ± 1.82 E-02)
RA-226	3.13 ± 2.06 E-01	(2.69 ± 1.52 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

ESEP - 73

OCTOBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 10/08/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 279.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.49 ± 0.17 E+00	(1.68 ± 0.10 E+00)
K-40	1.70 ± 0.25 E+00	(3.26 ± 0.23 E+00)
I-131	< 2.96E-02	(< 2.36E-02)
CS-134	< 3.13E-02	(< 2.82E-02)
CS-137	< 2.70E-02	(< 2.30E-02)
PB-212	LESS THAN LLD	(4.73 ± 1.82 E-02)
BI-214	2.78 ± 2.69 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 74

OCTOBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 10/08/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 444.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.36 ± 0.65 E-01	(1.68 ± 0.10 E+00)
K-40	3.11 ± 0.18 E+00	(3.26 ± 0.23 E+00)
I-131	< 1.32E-02	(< 2.36E-02)
CS-134	< 1.45E-02	(< 2.82E-02)
CS-137	< 1.50E-02	(< 2.30E-02)
TL-208	9.95 ± 1.05 E-02	(LESS THAN LLD)
PB-212	2.39 ± 0.14 E-01	(4.73 ± 1.82 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 75

OCTOBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 10/08/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 291 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.68 ± 0.10 E+00)
K-40	(3.26 ± 0.23 E+00)
I-131	(< 2.36E-02)
CS-134	(< 2.82E-02)
CS-137	(< 2.30E-02)
PB-212	(4.73 ± 1.82 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 76

OCTOBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 10/08/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 342.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.03 ± 0.09 E+00	(1.68 ± 0.10 E+00)
K-40	3.25 ± 0.22 E+00	(3.26 ± 0.23 E+00)
I-131	< 2.03E-02	(< 2.36E-02)
CS-134	< 2.14E-02	(< 2.82E-02)
CS-137	< 1.87E-02	(< 2.30E-02)
PB-212	3.28 ± 1.53 E-02	(4.73 ± 1.82 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 77

OCTOBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 10/08/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 283.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.88 ± 0.12 E+00	(1.51 ± 0.09 E+00)
K-40	1.57 ± 0.20 E+00	(1.97 ± 0.17 E+00)
I-131	< 2.12E-02	(< 2.12E-02)
CS-134	< 2.31E-02	(< 2.02E-02)
CS-137	< 2.55E-02	(< 1.88E-02)
PB-212	6.15 ± 2.24 E-02	(LESS THAN LLD)
BI-214	4.28 ± 2.37 E-02	(LESS THAN LLD)
RA-226	2.89 ± 2.55 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 78

OCTOBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 10/08/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 318.9 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.57 ± 0.10 E+00	(1.51 ± 0.09 E+00)
K-40	2.70 ± 0.23 E+00	(1.97 ± 0.17 E+00)
I-131	< 2.28E-02	(< 2.12E-02)
CS-134	< 2.10E-02	(< 2.02E-02)
CS-137	< 2.07E-02	(< 1.88E-02)
PB-212	4.13 ± 1.60 E-02	(LESS THAN LLD)
RA-226	2.87 ± 1.98 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 79

OCTOBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 10/08/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 425.6 GRAMS WET

ISOTOPE

CONTROL ACTIVITY

BE-7

(1.51 ± 0.09 E+00)

K-40

(1.97 ± 0.17 E+00)

I-131

(< 2.12E-02)

CS-134

(< 2.02E-02)

CS-137

(< 1.88E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 80

OCTOBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 10/08/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 342.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.49 ± 0.09 E+00	(1.51 ± 0.09 E+00)
K-40	2.09 ± 0.19 E+00	(1.97 ± 0.17 E+00)
I-131	< 1.89E-02	(< 2.12E-02)
CS-134	< 1.92E-02	(< 2.02E-02)
CS-137	< 1.89E-02	(< 1.88E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 81

OCTOBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 10/08/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 404.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.16 ± 0.09 E+00	(2.07 ± 0.10 E+00)
K-40	2.17 ± 0.17 E+00	(1.59 ± 0.18 E+00)
I-131	< 1.62E-02	(< 1.67E-02)
CS-134	< 1.92E-02	(< 1.95E-02)
CS-137	< 1.54E-02	(< 2.09E-02)
PB-212	2.97 ± 1.24 E-02	(3.22 ± 1.27 E-02)
PB-214	LESS THAN LLD	(7.72 ± 2.03 E-02)
BI-214	LESS THAN LLD	(7.50 ± 2.17 E-02)
RA-226	LESS THAN LLD	(2.65 ± 1.64 E-01)
AC-228	LESS THAN LLD	(2.92 ± 2.88 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 82

OCTOBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 10/08/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 477.1 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.71 ± 0.08 E+00	(2.07 ± 0.10 E+00)
K-40	2.10 ± 0.15 E+00	(1.59 ± 0.18 E+00)
I-131	< 1.34E-02	(< 1.67E-02)
CS-134	< 1.36E-02	(< 1.95E-02)
CS-137	< 1.36E-02	(< 2.09E-02)
TL-208	1.44 ± 0.71 E-02	(LESS THAN LLD)
PB-212	LESS THAN LLD	(3.22 ± 1.27 E-02)
PB-214	LESS THAN LLD	(7.72 ± 2.03 E-02)
BI-214	1.28 ± 1.20 E-02	(7.50 ± 2.17 E-02)
RA-226	LESS THAN LLD	(2.65 ± 1.64 E-01)
AC-228	LESS THAN LLD	(2.92 ± 2.88 E-02)

BROADLEAF VEGETATION SAMPLES  
(F...CURIES PER GRAM)

BSEP - 83

OCTOBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 10/08/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 370.1 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(2.07 ± 0.10 E+00)
K-40	(1.59 ± 0.18 E+00)
I-131	(< 1.67E-02)
CS-134	(< 1.95E-02)
CS-137	(< 2.09E-02)
PB-212	(3.22 ± 1.27 E-02)
PB-214	(7.72 ± 2.03 E-02)
BI-214	(7.50 ± 2.17 E-02)
RA-226	( 5 ± 1.64 E-01)
AC-228	( 92 ± 2.88 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 84

OCTOBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 10/08/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 336.3 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.32 ± 0.09 E+00	(2.07 ± 0.13 E+00)
K-40	1.70 ± 0.18 E+00	(1.59 ± 0.18 E+00)
I-131	< 2.07E-02	(< 1.67E-02)
CS-134	< 2.11E-02	(< 1.95E-02)
CS-137	< 2.04E-02	(< 2.09E-02)
PB-212	LESS THAN LLD	(3.22 ± 1.27 E-02)
PB-214	LESS THAN LLD	(7.72 ± 2.03 E-02)
BI-214	3.08 ± 2.16 E-02	(7.50 ± 2.17 E-02)
RA-226	LESS THAN LLD	(2.65 ± 1.64 E-01)
AC-228	LESS THAN LLD	(2.92 ± 2.88 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSZP - 85

NOVEMBER, 1991

0.7 MI NE - INTAKE CANALS (BL-800)  
(DATE COLLECTED: 11/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 400.7 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.98 ± 0.81 E-01	(6.80 ± 1.10 E-01)
K-40	3.85 ± 0.18 E+00	(2.66 ± 0.20 E+00)
I-131	< 1.68E-02	(< 2.60E-02)
CS-134	< 1.89E-02	(< 2.21E-02)
CS-137	< 2.00E-02	(< 1.90E-02)
-214	LESS THAN LLD	(4.59 ± 2.33 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 86

NOVEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 11/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 452.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.19 ± 0.66 E-01	(6.80 ± 1.10 E-01)
K-40	2.48 ± 0.17 E+00	(2.66 ± 0.20 E+00)
I-131	< 2.37E-02	(< 2.60E-02)
CS-134	< 2.03E-02	(< 2.21E-02)
CS-137	< 1.80E-02	(< 1.90E-02)
BI-214	3.33 ± 2.22 E-02	(4.59 ± 2.33 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 87

NOVEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (E-802)  
(DATE COLLECTED: 11/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 418.1 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(6.80 ± 1.10 E-01)
K-40	(2.66 ± 0.20 E-00)
I-131	(< 2.60E-02)
CS-134	(< 2.21E-02)
CS-137	(< 1.90E-02)
BI-214	(4.59 ± 2.33 E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 88

NOVEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 11/04/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 378.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	7.32 ± 0.78 E-01	(6.80 ± 1.10 E-01)
K-40	5.04 ± 0.20 E+00	(2.66 ± 0.20 E+00)
I-131	< 1.91E-02	(< 2.60E-02)
CS-134	< 2.04E-02	(< 2.21E-02)
CS-137	< 1.68E-02	(< 1.90E-02)
BI-214	LESS THAN LLD	(4.59 ± 2.33 E-02)
RA-226	2.90 ± 1.85 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 89

NOVEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 11/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 446.3 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.81 ± 0.11 E+00	(6.09 ± 0.56 E-01)
K-40	2.44 ± 0.17 E+00	(2.14 ± 0.15 E+00)
I-131	< 2.00E-02	(< 1.39E-02)
CS-134	< 1.85E-02	(< 1.34E-02)
CS-137	< 1.76E-02	(< 1.47E-02)
TL-208	LESS THAN LLD	(8.15 ± 5.55 E-03)
BI-214	3.46 ± 2.32 E-02	(1.24 ± 1.15 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 90

NOVEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 11/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 449.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.08 ± 0.08 E+00	(6.09 ± 0.56 E-01)
K-40	3.30 ± 0.15 E+00	(2.14 ± 0.15 E+00)
I-131	< 1.39E-02	(< 1.39E-02)
CS-134	< 1.31E-02	(< 1.34E-02)
CS-137	< 1.42E-02	(< 1.47E-02)
TL-208	LESS THAN LLD	(8.15 ± 5.55 E-03)
PB-212	1.55 ± 1.07 E-02	(LESS THAN LLD)
BI-214	LESS THAN LLD	(1.24 ± 1.15 E-02)
RA-226	2.38 ± 1.33 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 91

NOVEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BI-802)  
(DATE COLLECTED: 11/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS:

477 GRAMS WET

ISOTOPE

CONTROL ACTIVITY

BE-7

(6.09 ± 0.56 E-01)

K-40

(2.14 ± 0.15 E-0)

I-131

(< 1.39E-02)

CS-134

(< 1.34E-02)

CS-137

(< 1.47E-02)

TL-208

(8.15 ± 5.55 E-03)

BI-214

(1.24 ± 1.15 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 92

NOVEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 11/04/91)

SWEETGUM

GAMMA SPECTROMETRY

MASS: 466 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.05 ± 0.71 E-01	(6.09 ± 0.56 E-01)
K-40	2.35 ± 0.15 E+00	(2.14 ± 0.15 E+00)
I-131	< 1.86E-02	(< 1.39E-02)
CS-134	< 1.49E-02	(< 1.34E-02)
CS-137	< 1.57E-02	(< 1.47E-02)
TL-208	LESS THAN LLD	(8.15 ± 5.55 E-03)
PB-212	2.05 ± 1.20 E-02	(LESS THAN LLD)
BI-214	3.04 ± 1.54 E-02	(1.24 ± 1.15 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 93

NOVEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 11/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 387.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.30 ± 0.10 E+00	(8.10 ± 0.66 E-01)
K-40	2.30 ± 0.19 E+00	(1.86 ± 0.16 E+00)
I-131	< 1.99E-02	(< 1.76E-02)
CS-134	< 1.78E-02	(< 1.72E-02)
CS-137	< 1.90E-02	(< 1.69E-02)
TL-208	LESS THAN LLD	(9.71 ± 8.52 E-03)
PB-214	LESS THAN LLD	(4.33 ± 2.00 E-02)
BI-214	LESS THAN LLD	(6.13 ± 1.83 E-02)
RA-226	LESS THAN LLD	(1.59 ± 1.35 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 94

NOVEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 11/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 392.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.39 ± 0.08 E+00	(8.10 ± 0.66 E-01)
K-40	1.73 ± 0.19 E+00	(1.86 ± 0.16 E+00)
I-131	< 1.94E-02	(< 1.76E-02)
CS-134	< 1.90E-02	(< 1.72E-02)
CS-137	< 1.66E-02	(< 1.69E-02)
TL-208	LESS THAN LLD	(9.71 ± 8.52 E-03)
PB-212	2.41 ± 1.18 E-02	(LESS THAN LLD)
PB-214	LESS THAN LLD	(4.33 ± 2.00 E-02)
BI-214	2.23 ± 1.73 E-02	(6.13 ± 1.83 E-02)
RA-226	LESS THAN LLD	(1.59 ± 1.35 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 95

NOVEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 11/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 411.2 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(8.10 ± 0.66 E-01)
K-40	(1.86 ± 0.16 E+00)
I-131	(< 1.76E-02)
CS-134	(< 1.72E-02)
CS-137	(< 1.69E-02)
TL-208	(9.71 ± 8.52 E-03)
PB-214	(4.33 ± 2.00 E-02)
BI-214	(6.13 ± 1.83 E-02)
RA-226	(1.59 ± 1.35 E-01)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 96

NOVEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 11/04/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 429.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.02 ± 0.07 E+00	(8.10 ± 0.66 E-01)
K-40	1.30 ± 0.13 E+00	(1.86 ± 0.16 E+00)
I-131	< 1.93E-02	(< 1.76E-02)
CS-134	< 1.51E-02	(< 1.72E-02)
CS-137	< 1.55E-02	(< 1.69E-02)
TL-208	LESS THAN LLD	(9.71 ± 8.52 E-03)
PB-214	LESS THAN LLD	(4.33 ± 2.00 E-02)
BI-214	1.94 ± 1.93 E-02	(6.13 ± 1.83 E-02)
RA-226	LESS THAN LLD	(1.59 ± 1.35 E-01)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 97

DECEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 12/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 455.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	2.53 ± 0.54 E-01	(8.63 ± 0.93 E-01)
K-40	3.58 ± 0.18 E+00	(2.90 ± 0.20 E+00)
I-131	< 1.57E-02	(< 1.94E-02)
CS-134	< 1.45E-02	(< 1.95E-02)
CS-137	< 1.49E-02	(< 2.06E-02)
PB-212	LESS THAN LLD	(3.21 ± 1.31 E-02)
BI-214	1.82 ± 1.27 E-02	(LESS THAN LLD)
RA-226	1.68 ± 1.21 E-01	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 98

DECEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 12/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 386.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	5.50 ± 0.89 E-01	(8.63 ± 0.93 E-01)
K-40	3.15 ± 0.22 E+00	(2.90 ± 0.20 E+00)
I-131	< 2.70E-02	(< 1.94E-02)
CS-134	< 2.45E-02	(< 1.95E-02)
CS-137	< 2.03E-02	(< 2.06E-02)
PB-212	LESS THAN LLD	(3.21 ± 1.31 E-02)
BI-214	2.85 ± 2.70 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 99

DECEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 12/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 379 GRAMS WET

ISOTOPE

CONTROL ACTIVITY

BE-7

(8.63 ± 0.93 E-01)

K-40

(2.90 ± 0.20 E+00)

I-131

(< 1.94E-02)

CS-134

(< 1.95E-02)

CS-137

(< 2.06E-02)

PB-212

(3.21 ± 1.31 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 100

DECEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 12/02/91)

CHERRY

GAMMA SPECTROMETRY

MASS: 383.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.67 ± 0.69 E-01	(8.63 ± 0.93 E-01)
K-40	2.57 ± 0.19 E+00	(2.90 ± 0.20 E+00)
I-131	< 1.90E-02	(< 1.94E-02)
CS-134	< 1.91E-02	(< 1.95E-02)
CS-137	< 1.97E-02	(< 2.06E-02)
PB-212	2.87 ± 1.29 E-02	(3.21 ± 1.31 E-02)
BI-214	2.31 ± 1.71 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 101

DECEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 12/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 413.5 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.34 ± 0.08 E+00	(7.92 ± 0.90 E-01)
K-40	1.46 ± 0.15 E+00	(2.02 ± 0.19 E+00)
I-131	< 1.70E-02	(< 2.00E-02)
CS-134	< 1.64E-02	(< 1.90E-02)
CS-137	< 1.67E-02	(< 2.25E-02)
TL-208	LESS THAN LLD	(8.15 ± 7.50 E-03)
PB-212	1.29 ± 1.23 E-02	(6.41 ± 1.55 E-02)
BI-214	4.39 ± 1.92 E-02	(LESS THAN LLD)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 102

DECEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 12/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 373 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	9.29 ± 1.01 E-01	(7.92 ± 0.90 E-01)
K-40	1.91 ± 0.19 E+00	(2.02 ± 0.19 E+00)
I-131	< 2.85E-02	(< 2.00E-02)
CS-134	< 2.43E-02	(< 1.90E-02)
CS-137	< 2.34E-02	(< 2.25E-02)
TL-208	LESS THAN LLD	(8.15 ± 7.50 E-03)
PB-212	LESS THAN LLD	(6.41 ± 1.55 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 103

DECEMBER, 1991

10.0 MI - NOT SPECIFIED (CONTROL) (BL-802)  
(DATE COLLECTED: 12/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS:

373 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(7.92 ± 0.90 E-01)
K-40	(2.02 ± 0.19 E+00)
I-131	(< 2.00E-02)
CS-134	(< 1.90E-02)
CS-137	(< 2.25E-02)
TL-208	(8.15 ± 7.50 E-03)
PB-212	(6.41 ± 1.55 E-02)



BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 104

DECEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 12/02/91)

WAX MYRTLE

GAMMA SPECTROMETRY

MASS: 376.6 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	5.64 ± 0.86 E-01	(7.92 ± 0.90 E-01)
K-40	1.08 ± 0.15 E+00	(2.02 ± 0.19 E+00)
I-131	< 1.83E-02	(< 2.00E-02)
CS-134	< 1.71E-02	(< 1.90E-02)
CS-137	< 1.79E-02	(< 2.25E-02)
TL-208	LESS THAN LLD	(8.15 ± 7.50 E-03)
PB-212	LESS THAN LLD	(6.41 ± 1.55 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 105

DECEMBER, 1991

0.7 MI NE - INTAKE CANAL (BL-800)  
(DATE COLLECTED: 12/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 420.3 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	6.11 ± 1.01 E-01	(1.04 ± 0.10 E+00)
K-40	3.19 ± 0.19 E+00	(5.12 ± 0.26 E+00)
I-131	< 2.69E-02	(< 2.34E-02)
CS-134	< 2.14E-02	(< 2.64E-02)
CS-137	< 2.12E-02	(< 2.32E-02)
PB-212	1.09 ± 0.21 E-02	(LESS THAN LLD)
BI-214	LESS THAN LLD	(4.33 ± 2.70 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 106

DECEMBER, 1991

0.6 MI SW - DISCHARGE CANAL (BL-801)  
(DATE COLLECTED: 12/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 388.2 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	7.48 ± 0.86 E-01	(1.04 ± 0.10 E+00)
K-40	4.29 ± 0.22 E+00	(5.12 ± 0.26 E+00)
I-131	< 2.05E-02	(< 2.34E-02)
CS-134	< 1.82E-02	(< 2.64E-02)
CS-137	< 1.70E-02	(< 2.32E-02)
PB-212	3.70 ± 1.26 E-02	(LESS THAN LLD)
BI-214	LESS THAN LLD	(4.33 ± 2.70 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 107

DECEMBER 1991

10.0 MI - NOT SPECIFIED    CONTROL) (BL-802)  
(DATE COLLECTED: 2/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 386.7 GRAMS WET

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
BE-7	(1.04 ± 0.10 E+00)
K-40	(5.12 ± 0.26 E+00)
I-131	(< 2.34E-02)
CS-134	(< 2.64E-02)
CS-137	(< 2.32E-02)
BI-214	(4.33 ± 2.70 E-02)

BROADLEAF VEGETATION SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 108

DECEMBER, 1991

0.6 MI SSE - SPOIL POND (BL-803)  
(DATE COLLECTED: 12/02/91)

FESCUE

GAMMA SPECTROMETRY

MASS: 423.8 GRAMS WET

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
BE-7	1.10 ± 0.08 E+00	(1.04 ± 0.10 E+00)
K-40	4.51 ± 0.21 E+00	(5.12 ± 0.26 E+00)
I-131	< 1.36E-02	(< 2.34E-02)
CS-134	< 1.66E-02	(< 2.64E-02)
CS-137	< 1.66E-02	(< 2.32E-02)
BI-214	LESS THAN LLD	(4.33 ± 2.70 E-02)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 109

SECOND SEMI-ANNUAL, 1991

5.5 MI SSW - ATLANTIC OCEAN AT DISCHARGE (FI-700)  
(DATE COLLECTED: 11/07/91)

FREE SWIMMERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 706.3 GRAMS FRESH

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	3.34 ± 0.28 E+00	(3.17 ± 0.22 E+00)
.. 214	5.02 ± 1.81 E-02	(LESS THAN LLD)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GR<sup>1</sup>M)

BSEP - 110

SECOND SEMI-ANNUAL, 1991

NOT SPECIFIED - ATLANTIC OCEAN (CONTROL) (FI-703)  
(DATE COLLECTED: 11/07/91)

FREE SWIMMERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 787.2 GRAMS FRESH

ISOTOPE

CONTROL ACTIVITY

K-40

(3.17 ± 0.22 E+00)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 111

SECOND SEMI-ANNUAL, 1991

5.5 MI SSW - ATLANTIC OCEAN AT DISCHARGE (FI-701)  
(DATE COLLECTED: 11/07/91)

BOTTOM FEEDERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 847.6 GRAMS FRESH

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

K-40

2.37 ± 0.20 E+00

(3.09 ± 0.20 E+00)



FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 112

SECOND SEMI-ANNUAL, 1991

NOT SPECIFIED - ATLANTIC OCEAN (CONTROL) (FI-703)  
(DATE COLLECTED: 11/07/91)

BOTTOM FEEDERS, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 641.3 GRAMS FRESH

ISOTOPE

CONTROL ACTIVITY

K-40

(3.09 ± 0.29 E+00)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 113

SECOND SEMI-ANNUAL, 1991

5.5 MI S&W - ATLANTIC OCEAN AT DISCHARGE (FI-702)  
(DATE COLLECTED: 11/07/91)

INVERTEBRATES, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 745.5 GRAMS FRESH

ISOTOPE

SAMPLE ACTIVITY

CONTROL ACTIVITY

K-40

2.27 ± 0.22 E+00

(2.06 ± 0.20 E+00)

BI-214

LESS THAN LLL

(2.02 ± 1.35 E-02)

FISH AND INVERTEBRATES SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 114

SECOND SEMI-ANNUAL, 1991

NOT SPECIFIED - ATLANTIC OCEAN (CONTROL) (FI-703)  
(DATE COLLECTED: 11/07/91)

INVERTEBRATES, EDIBLE PORTION

GAMMA SPECTROMETRY

MASS: 750.4 GRAMS FRESH

ISOTOPE

CONTROL ACTIVITY

K-40

(2.06 ± 0.20 E+00)

BI-214

(2.02 ± 1.35 E-02)

SHORELINE SEDIMENT SAMPLES  
(PICOCURIES PER GRAM)

BSEP - 115

NOVEMBER, 1991

4.9 MI SSW - DISCHARGE, BEACH (SS-500)  
(DATE COLLECTED: 11/13/91)

GAMMA SPECTROMETRY

MASS: 831.6 GRAMS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.27 ± 0.15 E+00	(NOT REQUIRED)
TL-208	2.19 ± 0.16 E-01	(NOT REQUIRED)
PB-212	5.94 ± 0.23 E-01	(NOT REQUIRED)
PB-214	6.47 ± 0.32 E-01	(NOT REQUIRED)
BI-212	4.44 ± 0.90 E-01	(NOT REQUIRED)
BI-214	6.36 ± 0.34 E-01	(NOT REQUIRED)
RA-226	8.77 ± 2.81 E-01	(NOT REQUIRED)
AC-228	6.35 ± 0.49 E-01	(NOT REQUIRED)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 116

JULY, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 1.01E+03)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
K-40	(2.61 ± 0.34 E+02)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 117

JULY, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 1.01E+03	(< 1.01E+03)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.83 ± 0.34 E+02	(2.61 ± 0.34 E+02)
PB-212	8.04 ± 2.72 E+00	(LESS THAN LLD)
RA-226	4.28 ± 3.02 E+01	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 118

AUGUST, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.57E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

ISOTOPE

CONTROL ACTIVITY

K-40

(1.34 ± 0.30 E+02)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 119

AUGUST, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.57E+02	(< 9.57E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.14 ± 0.34 E+02	(1.34 ± 0.30 E+02)
PB-212	3.27 ± 2.24 E+00	(LESS THAN LLD)



SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 121

SEPTEMBER, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.84E+02	(< 9.84E+02)

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.89 ± 0.34 E+02	(2.54 ± 0.30 E+02)
PB-212	5.65 ± 2.40 E+00	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 122

OCTOBER, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

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

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>CONTROL ACTIVITY</u>
K-40	(1.77 ± 0.27 E+02)
RA-226	(4.29 ± 3.44 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 123

OCTOBER, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

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

GAMMA SPECTROMETRY

VOLUME: 1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	1.14 ± 0.32 E+02	(1.77 ± 0.27 E+02)
PB-212	4.42 ± 2.59 E+00	(LESS THAN LLD)
RA-226	LESS THAN LLD	(4.29 ± 3.44 E+01)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 124

NOVEMBER, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.44E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

ISOTOPE

CONTROL ACTIVITY

K-40 (2.18 ± 0.33 E+02)

BI-214 (3.71 ± 3.05 E+00)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 125

NOVEMBER, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.44E+02	(< 9.44E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	2.50 ± 0.33 E+02	(2.18 ± 0.33 E+02)
BI-214	3.96 ± 3.31 E+00	(3.71 ± 3.05 E+00)
RA-226	4.12 ± 3.29 E+01	(LESS THAN LLD)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 126

DECEMBER, 1991

0.7 MI NE - INTAKE CANAL (CONTROL) (SW-400)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	(< 9.47E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

ISOTOPE

K-40

CONTROL ACTIVITY  
(3.13 ± 0.35 E+02)

BI-214

(5.62 ± 3.23 E+00)

SURFACE WATER SAMPLES  
(PICOCURIES PER LITER)

BSEP - 127

DECEMBER, 1991

4.9 MI SSW - DISCHARGE CANAL, STILL POND (SW-401)

RADIOCHEMISTRY

<u>ANALYSIS</u>	<u>LITERS</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
TRITIUM	0.005	< 9.47E+02	(< 9.47E+02)

GAMMA SPECTROMETRY

VOLUME:

1 LITERS

<u>ISOTOPE</u>	<u>SAMPLE ACTIVITY</u>	<u>CONTROL ACTIVITY</u>
K-40	9.77 ± 2.48 E+01	(3.13 ± 0.35 E+02)
BI-214	LESS THAN LLD	(5.62 ± 3.23 E+00)

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 128

THIRD QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(7.00 ± 2.00 E-01)
1	1.1 MI E - MOORE ST EXTENSION	1.00 ± 0.20 E+00
2	1.0 MI ESE - MOORE ST EXTENSION	7.00 ± 2.00 E-01
3	0.9 MI SE - MOORE ST EXTENSION	7.00 ± 2.00 E-01
4	1.1 MI SSE - MOORE ST EXTENTION	7.00 ± 2.00 E-01
5	1.1 MI S - LEONARD ST	7.00 ± 2.00 E-01
6	1.0 MI S - BEMCO POWER LINE	6.00 ± 2.00 E-01
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	1.10 ± 0.20 E+00
8	1.2 MI W - HWY 87	9.00 ± 2.00 E-01
9	1.0 MI WNW - BETHEL CHURCH RD	6.00 ± 2.00 E-01
10	0.9 MI NW - BETHEL CHURCH RD	7.00 ± 2.00 E-01
11	0.9 MI NNW - BETHEL CHURCH RD	7.00 ± 2.00 E-01
12	1.0 MI N - BETHEL CHURCH RD	1.10 ± 0.20 E+00
13	1.2 MI NNE - BETHEL CHURCH RD	6.00 ± 2.00 E-01
14	0.5 MI NE - INTAKE CANAL	1.10 ± 0.20 E+00
15	0.9 MI ENE - INTAKE CANAL	1.10 ± 0.20 E+00
16	1.0 MI WSW - DISCHARGE CANAL	1.00 ± 0.30 E+00
17	1.5 MI ESE - PFIZER PROPERTY	7.00 ± 2.00 E-01
18	1.7 MI SE - PFIZER PROPERTY	7.00 ± 2.00 E-01
20	2.0 MI S - MOORE ST	7.00 ± 2.00 E-01
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	9.00 ± 2.00 E-01
22	5.3 MI SW - CASWELL BEACH RD	7.00 ± 2.00 E-01



ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 129

THIRD QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(7.00 ± 2.00 E-01)
23	4.6 MI WSW - NEAR AIRPORT	6.00 ± 2.00 E-01
24	3.0 MI W - HWY 211	1.00 ± 0.20 E+00
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	9.00 ± 4.00 E-01
26	5.9 MI NW - W BOILING SPRINGS RD	7.00 ± 2.00 E-01
27	5.0 MI NNW - HWY 133	7.00 ± 2.00 E-01
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	6.00 ± 2.00 E-01
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	7.00 ± 2.00 E-01
30	2.0 MI NE - SUNNY POINT MOT	8.00 ± 2.00 E-01
31	2.6 MI ENE - SUNNY POINT MOT	8.00 ± 2.00 E-01
32	5.7 MI ENE - FT FISHER AFB HOUSING	7.00 ± 2.00 E-01
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	7.00 ± 2.00 E-01
34	5.5 MI ENE - FT FISHER MUSEUM	8.00 ± 2.00 E-01
35	7.5 MI SSE - BALD HEAD ISLAND	6.00 ± 2.00 E-01
36	9.3 MI NE - CAROLINA BEACH	7.00 ± 2.00 E-01
37	5.5 MI NW - BOILING SPRINGS LAKES	7.00 ± 2.00 E-01
38	11.0 MI W - SUNSET HARBOR	9.00 ± 2.00 E-01
39	5.3 MI SW - YAUPON BEACH CITY HALL	7.00 ± 2.00 E-01
40	6.9 MI WSW - LONG BEACH CITY HALL	7.00 ± 2.00 E-01
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	1.00 ± 0.20 E+00
76	4.8 MI SSW - CASWELL BEACH	9.00 ± 2.00 E-01
77	5.3 MI SSE - BALDHEAD ISLAND	7.00 ± 2.00 E-01

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 130

THIRD QUARTER, 1991

<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
CONTROL	(7.00 ± 2.00 E-01)
78 10.0 MI NNE - HWY 133 AT SR 1521	7.00 ± 2.00 E-01
79 9.5 MI N - SR 1539 AT SR 1521	1.00 ± 0.20 E+00
81 10.0 MI WNW - MIDWAY RD AT SR 1508	7.00 ± 2.00 E-01

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 131

FOURTH QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(NOT REQUIRED)
1	1.1 MI E - MOORE ST EXTENSION	7.00 ± 1.00 E-01
3	1.0 MI ESE - MOORE ST EXTENSION	8.00 ± 1.00 E-01
3	1.0 MI SE - MOORE ST EXTENSION	8.00 ± 1.00 E-01
	1.1 MI SSE - MOORE ST EXTENSION	8.00 ± 1.00 E-01
5	1.1 MI S - LEONARD ST	7.00 ± 1.00 E-01
6	1.0 MI S - BEMCO POWER LINE	7.00 ± 1.00 E-01
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	8.00 ± 1.00 E-01
8	1.2 MI W - HWY 87	7.00 ± 1.00 E-01
9	1.0 MI WNW - BETHEL CHURCH RD	8.00 ± 1.00 E-01
10	0.9 MI NW - BETHEL CHURCH RD	7.00 ± 1.00 E-01
11	0.9 MI NNW - BETHEL CHURCH RD	8.00 ± 1.00 E-01
12	1.0 MI N - BETHEL CHURCH RD	8.00 ± 1.00 E-01
13	1.2 MI NNE - BETHEL CHURCH RD	7.00 ± 1.00 E-01
14	0.5 MI NE - INTAKE CANAL	9.00 ± 1.00 E-01
15	0.9 MI ENE - INTAKE CANAL	9.00 ± 1.00 E-01
16	1.0 MI WSW - DISCHARGE CANAL	8.00 ± 1.00 E-01
17	1.5 MI ESE - PFIZER PROPERTY	7.00 ± 1.00 E-01
18	1.7 MI SE - PFIZER PROPERTY	7.00 ± 1.00 E-01
20	2.0 MI S - MOORE ST	7.00 ± 1.00 E-01
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	7.00 ± 1.00 E-01
22	5.3 MI SW - CASWELL BEACH RD	7.00 ± 1.00 E-01

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 132

FOURTH QUARTER, 1991

	<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
	CONTROL	(NOT REQUIRED)
23	4.6 MI WSW - NEAR AIRPORT	6.00 ± 1.00 E-01
24	3.0 MI W - HWY 211	7.00 ± 1.00 E-01
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	9.00 ± 1.00 E-01
26	5.9 MI NW - W BOILING SPRINGS RD	8.00 ± 1.00 E-01
27	5.0 MI NNW - HWY 133	7.00 ± 1.00 E-01
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	7.00 ± 1.00 E-01
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	7.00 ± 1.00 E-01
30	2.0 MI NE - SUNNY POINT MOT	8.00 ± 1.00 E-01
31	2.6 MI ENE - SUNNY POINT MOT	8.00 ± 1.00 E-01
32	5.7 MI ENE - FT FISHER AFB HOUSING	9.00 ± 1.00 E-01
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	7.00 ± 1.00 E-01
34	5.5 MI ENE - FT FISHER MUSEUM	7.00 ± 1.00 E-01
35	7.5 MI SSE - BALD HEAD ISLAND	7.00 ± 1.00 E-01
36	9.3 MI NE - CAROLINA BEACH	7.00 ± 1.00 E-01
37	5.5 MI NW - BOILING SPRINGS LAKES	6.00 ± 1.00 E-01
38	11.0 MI W - SUNSET HARBOR	7.00 ± 1.00 E-01
39	5.3 MI SW - YAUPON BEACH CITY HALL	7.00 ± 1.00 E-01
40	6.9 MI WSW - LONG BEACH CITY HALL	7.00 ± 1.00 E-01
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	9.00 ± 1.00 E-01
76	4.8 MI SSW - CASWELL BEACH	8.00 ± 1.00 E-01
77	5.3 MI SSE - BALDHEAD ISLAND	7.00 ± 1.00 E-01

ENVIRONMENTAL TLD  
(MILLIROENTGEN PER WEEK)

BSEP - 133

FOURTH QUARTER, 1991

<u>STATION</u>	<u>MILLIROENTGEN PER WEEK</u>
CONTROL	(NOT REQUIRED)
78 10.0 MI NNE - HWY 133 AT SR 1521	7.00 ± 1.00 E-01
79 9.5 MI N - SR 1539 AT SR 1521	8.00 ± 1.00 E-01
81 10.0 MI WNW - MIDWAY RD AT SR 1508	7.00 ± 1.00 E-01