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BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62  
ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT FOR 2001

Ladies and Gentlemen:

In accordance with Brunswick Steam Electric Plant (BSEP) Technical Specification 5.6.2, Carolina Power & Light Company submits the enclosed Annual Radiological Environmental Operating Report for 2001 for BSEP, Unit Nos. 1 and 2. A copy is being forwarded to the North Carolina Division of Water Quality in accordance with National Pollutant Discharge Elimination System Permit No. NC0007064, Section I.C.4.

No regulatory commitments are contained in this submittal. Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Supervisor – Licensing/Regulatory Programs, at (910) 457-2073.

Sincerely,

Edward T. O'Neil  
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Enclosure: Annual Radiological Environmental Operating Report for 2001

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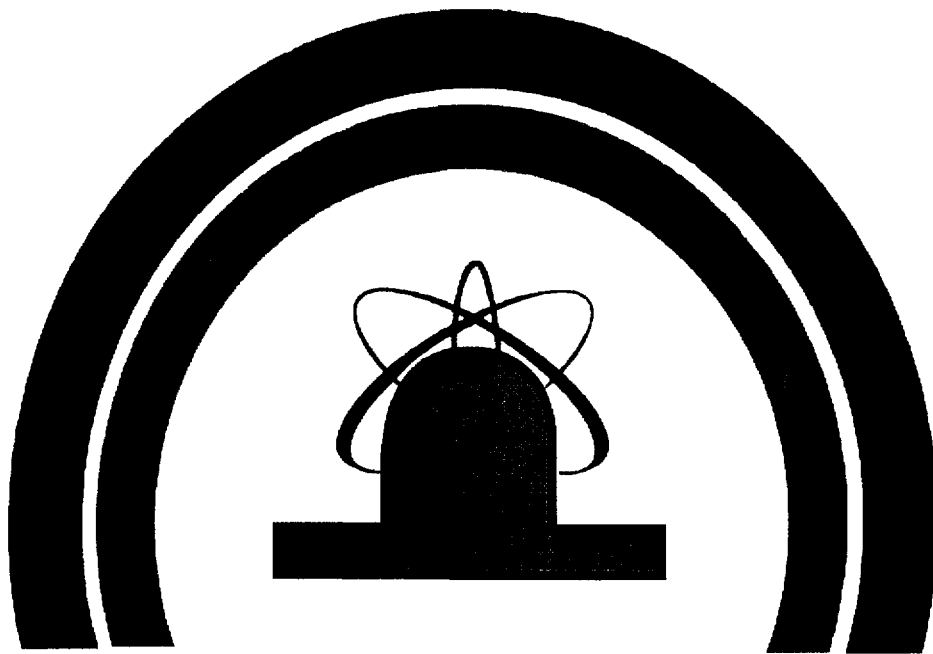
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ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT FOR 2001

**RADIOLOGICAL  
ENVIRONMENTAL OPERATING**



**REPORT**

**2001**

**BRUNSWICK STEAM ELECTRIC PLANT  
CAROLINA POWER & LIGHT**

**SHEARON HARRIS ENERGY &  
ENVIRONMENTAL CENTER  
CAROLINA POWER & LIGHT  
A PROGRESS ENERGY COMPANY  
NEW HILL, NORTH CAROLINA**

**RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT  
FOR  
BRUNSWICK STEAM ELECTRIC PLANT  
JANUARY 1 THROUGH DECEMBER 31, 2001**

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# EXECUTIVE SUMMARY

The Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, is operated by Carolina Power & Light (CP&L), A Progress Energy Company, under licenses granted by the Nuclear Regulatory Commission (NRC). BSEP Technical Specification 5.6.2 and BSEP Offsite Dose Calculation Manual (ODCM) establish the requirements of the Radiological Environmental Monitoring Program (REMP). This report provides the results of the REMP from January 1, 2001 through December 31, 2001.

The REMP was established in 1973. Radiation and radioactivity in various environmental media have been monitored for more than 25 years, including monitoring in excess of a year prior to commencing operation. Monitoring is also provided for control locations which would not be impacted by operations of BSEP. Using the data from the control locations and the historical data collected prior to operation, analyses of data from locations which could potentially be impacted by the operations of BSEP were performed. Radiation levels show no measurable change from pre-operational radiation levels.

Monitoring results for environmental media are summarized as follows:

- Air-monitoring results are similar or less than the concentrations of radioactivity from pre-operation monitoring. These observations are also consistent with past operational data.
- Milk was unavailable due to no milk (milch) animals (goat or cow) currently identified within the environs of the plant; therefore, no exposure pathway exists.
- Terrestrial vegetation includes broadleaf vegetation and results indicate no detectable activity.
- Aquatic organism monitoring includes fish (free swimmers and bottom feeders), invertebrates (shellfish (SH)), and Benthic organisms ((BO) organisms that live on the bottom of the ocean). Results indicated no detectable activity.
- Surface water results indicate no detectable activity.
- External radiation dose showed no measurable change from pre-operational data.

The continued operation of BSEP has not significantly contributed radiation or the presence of radioactivity in the environmental media monitored. The measured concentrations of radioactivity and radiation are well within applicable regulatory limits.

# **RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM**

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

Although the operation of a nuclear generating station results in the raising of background radiation only a small amount, it is important to measure these emissions of radioactivity and radiation to assess their impact on the surrounding populations. The purpose of the REMP is to measure accumulation of radioactivity in the environments, to determine whether this radioactivity is the result of operations of BSEP and to assess the potential dose to the off-site population based on the cumulative measurements of radioactivity of plant origin. Radiological monitoring programs provide an additional verification of the containment and radiological controls of nuclear generating stations.

The radiological monitoring program was established in 1973 and continues to collect samples and evaluate them.

Requirements are established for the radiological monitoring program as follows:

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

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

- NRC Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I"
- NRC Regulatory Guide 4.13, "Performance, Testing, and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications"
- NRC Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment"

## General Site Description

BSEP consists of two boiling water reactors with a design rating of 2558 megawatts thermal. Commercial production was initiated by Unit 2 on November 3, 1975 and by Unit 1 on March 18, 1977. BSEP is located in Brunswick County, North Carolina. The site is along state route 87 approximately two and a half miles north of Southport and is displayed on the map of southeastern North Carolina (Figure 1). The community of Boiling Spring Lakes is about three miles northwest of the site. The towns of Caswell Beach and Oak Island are on a barrier island south of the plant. The site is also approximately 16 miles south of Wilmington, North Carolina.

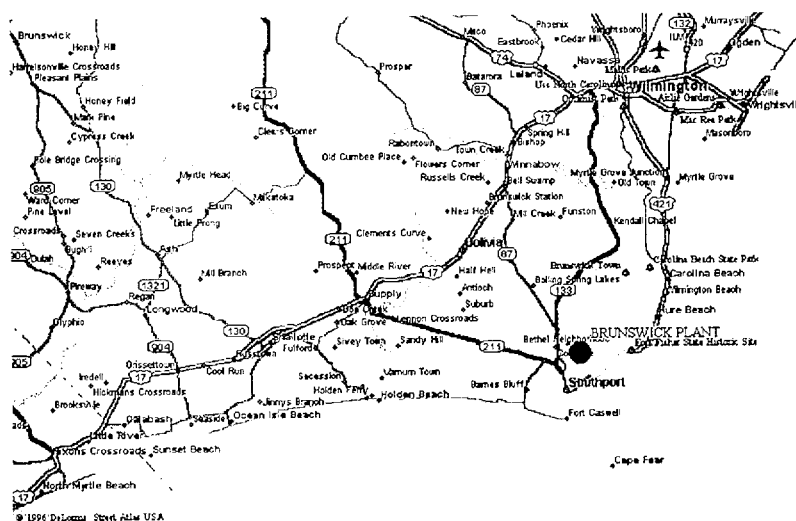


Figure 1: Location of Brunswick Steam Electric Plant

The Cape Fear River is east of the plant, and cooling water is drawn from the river through a canal. The cooling water is discharged to the Atlantic Ocean through a canal, pumping station, and piping. The discharge point is south of the town of Caswell Beach.

The plant site varies in elevation from sea level to 30 feet above mean sea level (MSL). It is surrounded by extensive marshes. The lower Cape Fear River is an important nursery area for shellfish, and other marine species.

The local economy supports significant recreational, industrial, agricultural, and government contributions. There is well-developed recreational use of the barrier islands south and east of the site. Fishing and boating are popular activities. Commercial fishing is also an important industry in the community. Agriculture utilizes some of the land within 50 miles of the site; such as small truck farms, cattle, poultry, and row crops including corn, soybeans and tobacco. Industrial activity includes the Archer-Daniels-Midland Chemical (ADM) Company, a manufacturer of citric acid, located one and a half miles southeast of the plant. In conjunction with the citric acid plant is a small electrical generating station operated by Cogentrix, Inc. This coal-fired station is composed of two units rated at 55 Mwe each.

Transportation is a significant industry in the local economy, with the Port of Wilmington north of the site. The shipping channel is just east of the site in the Cape Fear River. Also, the Sunny Point Military Ocean Terminal (MOT) is located approximately four and one half miles north of the plant site on the Cape Fear River.

## **RADIOLOGICAL MONITORING PROGRAM QUALITY ASSURANCE**

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

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

## **RADIOLOGICAL MONITORING PROGRAM GENERAL DESCRIPTION**

Although the contribution to background radiation is small, CP&L has established this program to measure the exposure pathways to man. An exposure pathway describes the source of the radiological exposure. The primary forms of potential radiological emissions from the plant are airborne and liquid discharge. The following pathways are monitored external dose, ingestion of radioactive materials, and the inhalation of radioactive material. Specific methods and different environmental media are required to assess each pathway. Table 1 provides a list of the media used to assess each of these pathways.

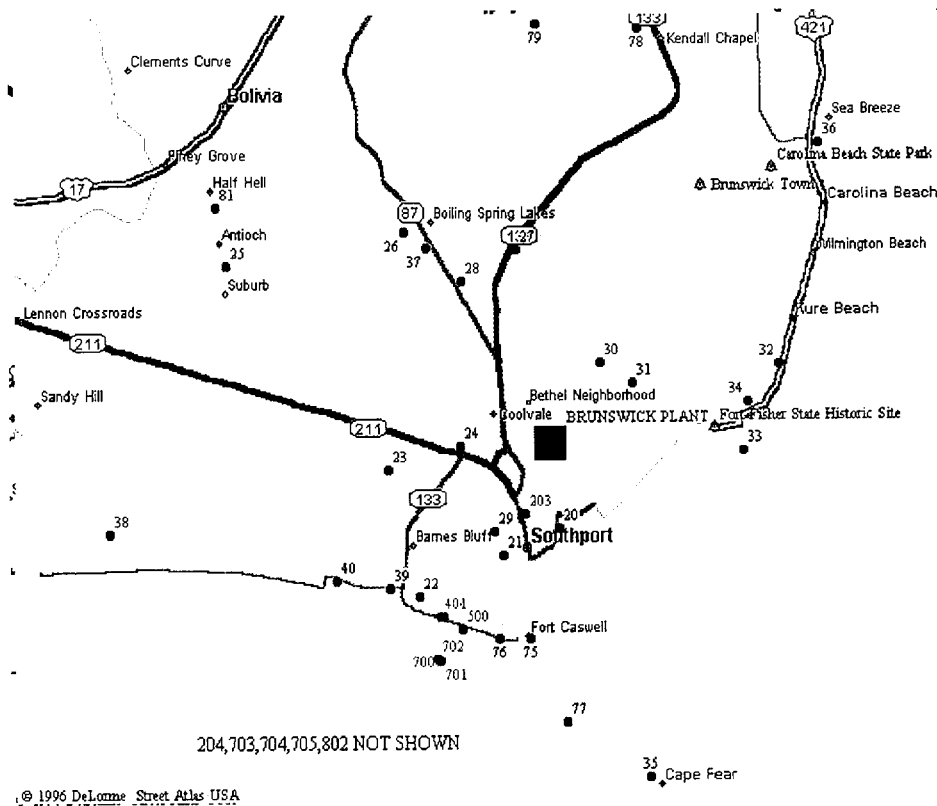
**Table 1**  
**Media Used to Assess Exposure Pathways to Man**

Pathway of Exposure to Man	Media Sampled
External Dose	Thermoluminescent Dosimetry (TLD) Shoreline Sediment
Ingestion	Broadleaf Vegetation Fish and Invertebrates Surface Water
Inhalation	Air Samples (Particulate & Radioiodine)

### **Sampling Locations**

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

## Radiological Sampling Locations



**Figure 2: Radiological Sampling Locations (Distant from Plant) (Scale 1 inch = 3.08 miles)**

Thermoluminescent dosimeter locations are displayed in black, ingestion and waterborne pathways in blue, and the inhalation or air sampling station in red.

Stations not illustrated:

204 (Sutton Plant in Wilmington) (Control Air Station)

703, 704, 705 (Location not Specified in the Atlantic Ocean)(Control Fish Station)

802 (Location not specified) (Control Vegetation)

# Radiological Sampling Locations

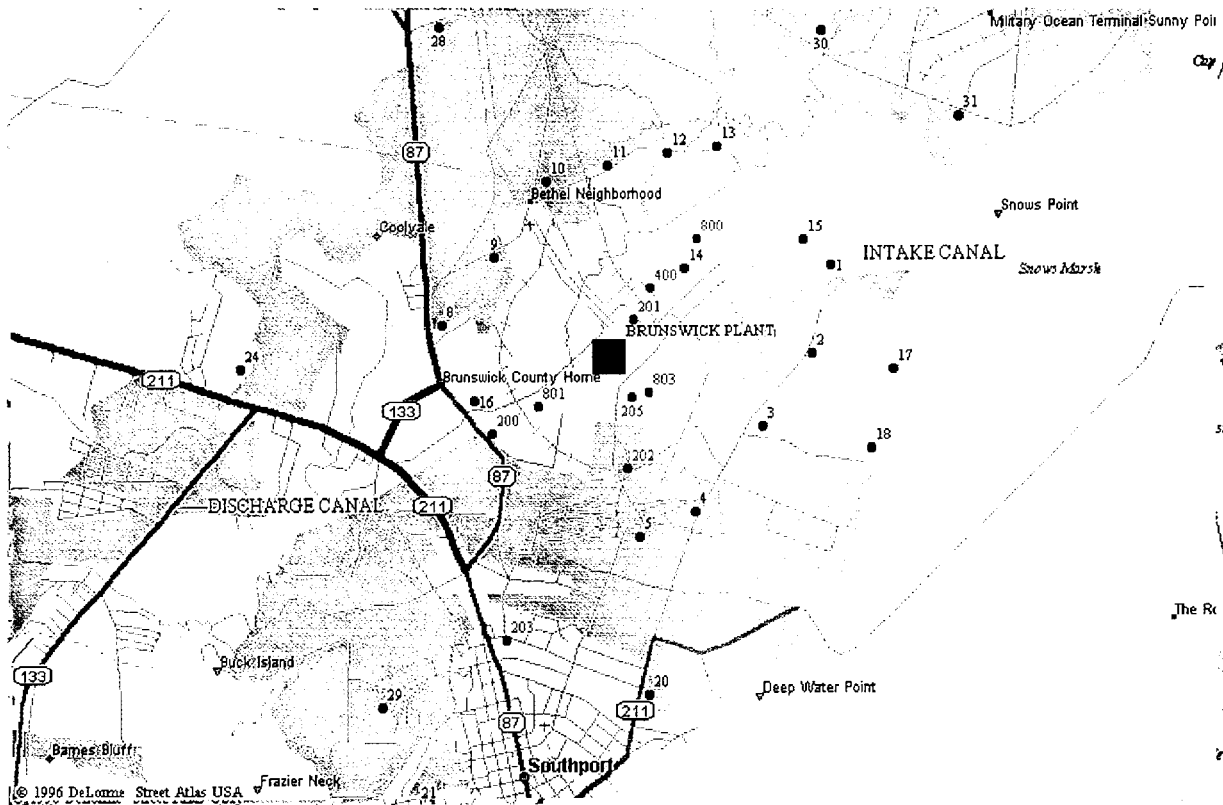


Figure 3: Radiological Sampling Locations (Nearest Plant) (Scale 1 inch = .8 miles)

Thermoluminescent dosimeter locations are displayed in black, ingestion and waterborne pathways in blue, and inhalation or air sampling stations in red.

Figure 3 (above) is an expanded view of the previous figure (Figure 2 page 6).

**Table 2**  
**Brunswick Steam Electric Plant**  
**Radiological Monitoring Sampling Locations**

Sample Type	Location & Description	Frequency	Sample Size	Analysis
Air Cartridge (AC)	200--1.0 mile SW Visitors Center 201--0.6 mile NE PMAC (Highest D/Q) 202--1.0 mile S substation--construction rd. 203--2.3 miles SSW Southport substation 204--23 miles NNE Sutton Plant* 205--0.6 mile SSE Spoil Pond	Weekly	10,000 ft <sup>3</sup> (300 m <sup>3</sup> )	Iodine-131
Air Particulate (AP)	200--1.0 mile SW Visitors Center 201--0.6 mile NE PMAC (Highest D/Q) 202--1.0 mile S substation--construction rd. 203--2.3 miles SSW Southport substation 204--23 miles NNE Sutton Plant* 205--0.6 mile SSE Spoil Pond	Weekly	10,000 ft <sup>3</sup> (300 m <sup>3</sup> )	Gross Beta (Weekly) Composite Gamma (Quarterly)
Fish (FI)	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* (free-swimmers) 704--Atlantic Ocean; location not specified* (bottom-feeders) 705--Atlantic Ocean; location not specified* (invertebrates)	Semiannual (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 (As available)	500 grams (wet)	Gamma Iodine-131
Shoreline Sediment (SS)	500--4.9 miles SSW; beach near OD pumps	Semiannual	500 grams	Gamma
Surface Water (SW)	400--0.7 mile NE intake canal* 401--4.9 miles SSW discharge canal @OD pumps	Monthly Composite	4 liters	Gamma Tritium

\* Control Stations



**Table 2 (Continued)**  
**Brunswick Steam Electric Plant**  
**Radiological Monitoring Sampling Locations**

<b>Sample Type</b>	<b>Location &amp; Description</b>	<b>Frequency</b>	<b>Sample Sz</b>	<b>Analysis</b>
Thermoluminescent Dosimetry (TLD)	1 1.1 miles E Moore St. extension	Quarterly	Not Applicable	TLD Reading
	2 1.0 mile ESE Moore St. ext.			
	3 0.9 mile SE Moore St. extension			
	4 1.1 miles SSE Moore St. ext.			
	5 1.1 miles S Leonard St.			
	6 1.0 mile SSW 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 A.D.M. property			
	18 1.7 miles SE A.D.M. property			
	20 2.0 miles S church on Stewart St.			
	21 2.9 miles SSW West St. Sea Captain Motel			
	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 Church			
	26 5.9 miles NW W Boiling Spring Rd			
	27 5.0 miles NNW Hwy 133			
	28 4.2 miles NW South Brunswick HS			
	29 2.6 miles SSW Southport Elem. School			
	30 2.0 miles NE Sunny Point MOT			
	31 2.6 miles ENE Sunny Point MOT			
	32 5.7 miles ENE Ft. Fisher AFB			
	33 4.0 miles E Ferry Slip New Hanover County			
	34 5.5 miles ENE Ft. Fisher Museum			
	35 7.5 miles SSE Bald Head Island			
	36 9.3 miles NE Carolina Beach			
	37 5.5 miles NW Boiling Spring Lakes			
	38 11.0 miles W at Sunset Harbor			
	39 5.3 miles SW Oak Island Comm. Svcs. Bldg.			
	40 6.9 miles WSW Oak Island Town Hall			
	75 4.5 miles S 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 Rd. at SR 1508*				

\*Control Station

## **SUMMARY OF RADIOLOGICAL MONITORING PROGRAM**

This report presents the results of the Radiological Environmental Monitoring Program conducted during 2001 for BSEP. The program was conducted in accordance with the ODCM, and applicable procedures.

The 2001 Annual Radiological Environmental Operating Report (REOR) has been prepared and submitted in accordance with Technical Specification 5.6.2 and ODCM 7.4.1. The report applies to both BSEP Unit Nos. 1 and 2 (License Nos. DPR-71 and DPR-62, respectively).

A total of 937 sample measurements were performed on 913 collected samples from indicator and control locations from six environmental media types during the year. No detectable radioactivity (or radioactivity which did not differ significantly from the corresponding control) was observed in any of the 783 measurements performed on the 771 indicator location samples in 2001. All samples analyzed met the Lower Limit of Detection (LLD) requirements as established by ODCM Table 7.3.15-3.

The radiological environmental data indicates that BSEP operations in 2001 had no significant impact on the environment or public health and safety. No measurable radiation exposure is attributed to any off-site member of the public due to the operations of BSEP.

A statistical summary of all the data gathered in 2001 has been compiled in Table 3.

Comparison of the current data with preoperational (1973, 1974) information (Tables 4 and 5) indicates that air particulate filter gross beta activity and ambient gamma radiation levels were lower in 2001.

**TABLE 3**  
**BRUNSWICK STEAM ELECTRIC PLANT**  
**RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY**

Brunswick Steam Electric Plant  
 Brunswick County, North Carolina

Docket Numbers - 50-324 and 325  
 Calendar Year 2001

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		Control Locations Mean Range <sup>(2)</sup>
				Name, Distance, and Direction	Mean Range <sup>(2)</sup>	
Air Cartridge (pCi/m <sup>3</sup> )	I-131 318 <sup>(3)</sup>	3.0E-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>	3.0E-3	1.79E-2 (265/265) <sup>(7)</sup> 6.98E-3 - 4.59E-2	PMAC (Highest D/Q) 0.6 miles NE	1.87E-2 (53/53) <sup>(7)</sup> 8.75E-3 - 4.59E-2	1.87E-2 (53/53) <sup>(7)</sup> 5.70E-3 - 3.24E-2
	Gamma <sup>(4)</sup> 24	See Table 8	All less than LLD		All less than LLD	All less than LLD
Broadleaf Vegetation (pCi/g, wet)	Gamma <sup>(4)</sup> 48	See Table 8	All less than LLD		All less than LLD	All less than LLD
Fish and Invertebrates (pCi/g, wet)	Gamma <sup>(4)</sup> 12	See Table 8	All less than LLD		All less than LLD	All less than LLD
Sediments--Shoreline (pCi/g, dry)	Gamma <sup>(4)</sup> 2	See Table 8	All less than LLD		All less than LLD	No control
Surface Water (pCi/l)	Gamma <sup>(4)</sup> 24	See Table 8	All less than LLD		All less than LLD	All less than LLD
	Tritium 24	3.25E+2(24/24) <sup>(6) (7)</sup>	All less than LLD		All less than LLD	All less than LLD
TLD (mR per quarter) <sup>(5)</sup>	TLD Readout 179 <sup>(3)</sup>		1.00E+1 (175/176) <sup>(7)</sup> 7.40E+0 - 1.35E+1	Caswell Beach 4.8 miles SSW	1.20E+1 (4/4) <sup>(7)</sup> 1.00E+1 - 1.35E+1	1.09E+1 (4/4) <sup>(7)</sup> 9.20E+0 - 1.22E+1

### FOOTNOTES TO TABLE 3

1. 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.
2. Mean and range are based on detectable measurements only. The fractions of detectable measurements at specific locations are indicated in parentheses.
3. Missing samples are discussed in Missed Samples and Analyses.
4. 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, and Ac-228.
5. TLD dose is reported in milliroentgen (mR) per 90-day period (quarter) beginning in 1995. This is the exposure standard used to compare data to the NRC.
6. The tritium LLD was lowered to  $3.25E+2$  pCi/L in June 1996. The LLD was lowered at the request of CP&L in order to maintain comparable LLD values with the North Carolina Division of Radiation Protection (NCDRP) laboratory.
7. The numbers in parentheses [i.e. Surface Water Tritium  $3.25E+2$  (24/24) for LLD] indicate how many samples that specific value and column apply to in relation to the total number of samples for that column heading.

## INTERPRETATIONS AND CONCLUSIONS

### Air Monitoring

The average gross beta concentration measured in 265 air particulate (AP) samples collected at indicator stations during 2001 was  $1.79\text{E-}2$  picocuries per cubic meter ( $\text{pCi}/\text{m}^3$ ) and the average gross beta concentration measured in 53 AP samples collected at control stations during 2001 was  $1.87\text{E-}2$   $\text{pCi}/\text{m}^3$ . The preoperational (1973-1974) average concentration was  $8.2\text{E-}2$   $\text{pCi}/\text{m}^3$ , while the average activity in the recent past (1996-2000) was  $1.80\text{E-}2$   $\text{pCi}/\text{m}^3$  (Table 4). The airborne concentrations of gross beta activity in 2001 are indicative of natural background and do not indicate any abnormal activities originating from the nuclear operations at BSEP. Figures 4 through 8 depict the monthly variations of these values. Two variations occurred for AP-200 (Figure 4) and AP-201 (Figure 5). AP-200, Figure 4 for 9-3-01, shows a gross beta activity of  $4.24\text{E-}2$   $\text{pCi}/\text{m}^3$ , which appears to be due to a lower than normal air volume, which was due to a blown fuse. AP-201, Figure 5 for 6-25-01, shows a gross beta activity of  $4.59\text{E-}2$   $\text{pCi}/\text{m}^3$ . A gamma scan was performed and showed all natural activity. A visual inspection showed heavier loading than normal. BNP personnel were notified and BSEP wrote a corrective action request (AR) 44775 to document the observations. The state of North Carolina was contacted and asked to check their sample (BRAP-23), which is collocated with AP-201. Their result was within their normal trends.

Gamma analyses of the composite 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 and 53 control air cartridges (AC) for the collection of radioiodines indicated that concentrations of those radionuclides, and particularly I-131, were less than the LLD.

### Milk

No milk (milch) sampling locations are currently identified in BSEP environs; therefore, no sampling of this media was available.

## **Vegetation**

Food crops were not grown in the vicinity of the plant in 2001, and this media was represented by indigenous vegetation samples consisting primarily of wild cherry and wax myrtle leaves. Thirty-six samples were collected from indicator locations and 12 from the control location. No detectable activities relating to plant effluents were detected in this sampling media in 2001.

## **Fish and Invertebrates**

Fish (free swimmers and bottom feeders), invertebrate (SH), and BO 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 for 2001.

## **Shoreline Sediments**

Two shoreline sediments in 2001 were drawn from the beach area near the pumping station location at Caswell Beach. In both samples, the radionuclide content was determined to be less than the respective LLDs for gamma-emitting radionuclides.

## **Surface Water**

Surface water is sampled monthly from the intake and discharge canal. These samples are analyzed for gamma-emitting radionuclides and for tritium. The analyses indicated that no detectable concentrations of radionuclides appeared in the 12 indicator samples. None of these samples indicated any detectable concentrations of tritium in the 12 indicator samples. Figure 9 depicts the observed tritium concentrations for 2001.

## **External Radiation Exposure**

The environmental data on external radiation exposure for 2001 was essentially unchanged from 1989-2000 with an average exposure for all of 2001 indicator locations of 10.0 mR per quarter. The average exposure observed over the preoperational period was 1.02 mR per week observed from the fourth quarter of 1972 through the second quarter of 1975. Table 5 provides a

comparison of recent data with the preoperational and historical data.

The highest average exposure occurred at Caswell Beach 4.8 miles SSW. The exposure was 12.0 mR per quarter. Figure 10 depicts average inner and outer ring TLD data for each quarter of 2001. This depiction does not indicate a significant higher exposure rate for the inner versus the outer ring. This is interpreted as demonstrating that no discernible off-site exposure has occurred from plant operations.

**TABLE 4**  
**Brunswick Steam Electric Plant**  
**GROSS BETA AIR PARTICULATE ACTIVITY AVERAGES**

<u>Location</u>	<u>Gross Beta Activity (pCi/m<sup>3</sup>)</u>							
	<u>Preoperational</u>		<u>Recent Operational</u>					
	<u>1973</u>	<u>1974</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2000</u>
AP-200	2.2E-2	1.4E-1	1.7E-2	1.7E-2	1.8E-2	1.7E-2	2.0E-2	1.8E-2
AP-201	3.1E-2	1.4E-1	1.7E-2	1.7E-2	1.9E-2	1.8E-2	2.0E-2	1.9E-2
AP-202	3.4E-2	1.4E-1	1.7E-2	1.7E-2	1.8E-2	1.7E-2	2.0E-2	1.8E-2
AP-203	2.4E-2	1.3E-1	1.7E-2	1.7E-2	1.9E-2	1.8E-2	2.1E-2	1.8E-2
AP-204*	2.5E-2	1.3E-1	1.8E-2	1.8E-2	1.8E-2	1.8E-2	2.0E-2	1.9E-2
AP-205	**	**	1.7E-2	1.7E-2	1.8E-2	1.7E-2	1.9E-2	1.7E-2

\* Control location

\*\* This sample point added post-operational.

**TABLE 5**  
**Brunswick Steam Electric Plant**  
**HISTORICAL TLD RESULTS (1972-2001)**

Year	Average Exposure of All TLD Monitoring Locations (mR 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
1992	0.75
1993	0.78
1994	0.77
1995	10.1 (mR per quarter)*
1996	10.1 (mR per quarter)
1997	10.1 (mR per quarter)
1998	9.7 (mR per quarter)
1999	9.7 (mR per quarter)
2000	9.7 (mR per quarter)
2001	10.0 (mR per quarter)

\*TLD exposure in mR per quarter beginning in 1995. The equivalent weekly exposure is 0.78 mR.



## **MISSED SAMPLES AND ANALYSES**

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

All AC and AP samples were available in 2001.

### **Food Crops / Vegetation**

No food crops were grown in the vicinity of the plant in 2001; therefore, none were collected. This media was represented by indigenous vegetation samples (broadleaf vegetation) consisting primarily of wild cherry and wax myrtle leaves.

### **Thermoluminescent Dosimeters (TLDs)**

One, of a possible 180 TLD samples, was missing during 2001. The missing TLD occurred:

Fourth Quarter - TLD 6 was missing in the field.

**Note:** TLD points 41 thru 74 are not ODCM TLD sample points and are not listed. TLD sample points 19 and 80 have been retired.

## **ANALYTICAL PROCEDURES**

### **Gross Beta**

Gross beta radioactivity measurements are made utilizing a Tennelec Low-Background Alpha/Beta Counting System. The LLD for air particulates is approximately  $3.0E-3$  pCi/m<sup>3</sup>.

AP samples are mounted in two-inch stainless steel planchets and counted directly for 50 minutes.

### **Tritium**

Liquid samples requiring tritium analysis are treated with a small amount of sodium hydroxide and potassium permanganate crystals and then distilled. Five milliliters of the distillate are mixed with 13 milliliters of liquid scintillation cocktail and counted in a liquid scintillation counter for 500 minutes. The LLD for this count time was approximately  $3.25E+2$  pCi/L. This lower LLD was established in June 1996 to compare BSEP tritium LLDs and NCDRP's reportable concentrations, in the Split Sample Program's Annual Report.

### **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 for 1,500 seconds with an approximate LLD of  $3.0E-2$  pCi/m<sup>3</sup>.

### **Gamma Spectrometry**

Gamma spectrum analysis utilizes intrinsic germanium detectors with thin aluminum windows housed in steel and lead shields. The analyzer system is the Canberra Nuclear 9900 Gamma Spectroscopy System. Table 6 summarizes LLD values derived from instrument sensitivity based upon a blank sample background.

AP filter quarterly composites are placed in a Petri dish and analyzed directly for 7,000 seconds. The count time was increased in 1997 from 3,600 sec. to 7,000 sec. due to decreased sample volumes.

Liquid samples are boiled down to reduce the volume, transferred to a 1000-milliliter Marinelli beaker, and analyzed for 10,000 seconds.

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

Broadleaf vegetation is weighed wet and analyzed in a Marinelli beaker for 7,500 seconds.

Fish samples and edible portions of invertebrate organisms are cleaned, dressed, and placed in a Marinelli beaker for analysis for 1,500 seconds.

### **Thermoluminescent Dosimetry**

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

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

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

### **Interlaboratory Comparison Program**

The Radiochemistry Laboratory at the Harris Energy & Environmental Center in New Hill, North Carolina, provides radioanalytical services for CP&L's nuclear plant radiological environmental surveillance programs. In fulfillment of ODCM Operational Requirements, the laboratory is a

participant in the Analytics, Inc., Environmental Cross-Check Program and uses its performance in this program as a major determinant of the accuracy and precision of its analytical results. The change in vendors for the Interlaboratory Program was due to the EPA Environmental Cross-Check Program's termination for utility participation as of December 31, 1995.

During 2001, 106 analyses were completed on 18 samples representing five major environmental media (i.e., water, milk, air filters, soil, and air cartridges). Data on the known activities and the ratios to the known values for the 106 analyses have been received from Analytics, Inc. A comparison of the average of our reported values with Analytics, Inc., known activity and its standard deviation is provided below:

<b><u>Standard Deviation From Known Activity</u></b>	<b><u>Percent of Analyses</u></b>
≤ 1 Standard Deviation	59
≤ 2 Standard Deviation	86
≤ 3 Standard Deviation	97

If Cross Check samples or checks exceed internal controls, corrective actions are taken. Three of the 106 analyses exceeded the three-sigma action level; however, all three were well within the ± 20% acceptable ratio to the known value. The analyses that exceed the three-sigma action level do not indicate a trend and the related environmental analyses' results were not impacted. The results that lie at greater than three standard deviations from the known value have an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors. AR 43487 and AR 50067 documenting the evaluation will be available and will be provided to the NRC upon request.

### **Lower Limits of Detection**

All samples analyzed met the LLD required by ODCM Table 7.3.15-3. Typical "a priori" LLD values for the samples analyzed are listed in Table 6.

**TABLE 6**  
**TYPICAL LOWER LIMITS OF DETECTION (A PRIORI)**  
**GAMMA SPECTROMETRY**

<b>Surface Water Samples (Saline Water)</b>	
<b>Isotope</b>	<b>LLD (pCi/l)</b>
Mn-54	7
Co-58	6
Fe-59	14
Co-60	8
Zn-65	14
Zr-Nb-95	7
Cs-134	7
Cs-137	6
Ba-La-140	10
Other Expected Gamma Emitters	4 to 132
<b>Air Particulates (Quarterly Composite)</b>	
<b>Isotope</b>	<b>LLD (pCi/m<sup>3</sup>)</b>
Cs-134	0.001
Cs-137	0.001
Other Expected Gamma Emitters	0.001 to 0.047
<b>Shoreline Sediment</b>	
<b>Isotope</b>	<b>LLD (pCi/kg, dry)</b>
Cs-134	60
Cs-137	52
Other Expected Gamma Emitters	42 to 989
<b>Fish</b>	
<b>Isotope</b>	<b>LLD (pCi/kg, wet)</b>
Mn-54	58
Co-58	38
Fe-59	116
Co-60	56
Zn-65	162
Cs-134	70
Cs-137	71
Other Expected Gamma Emitters	29 to 1430
<b>Food Products and Vegetation</b>	
<b>Isotope</b>	<b>LLD (pCi/kg, wet)</b>
I-131	38
Cs-134	41
Cs-137	29
Other Expected Gamma Emitters	23 to 278

# LAND USE CENSUS

## PURPOSE OF THE LAND USE CENSUS

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

The pathways that are evaluated are:

- Ingestion Pathway - Results from eating food crops that may have radioactive materials deposited on them from the soil or atmosphere. Another pathway is through drinking milk from local cows or goats if these are present. The grass used to feed these animals may have incorporated or had deposited on it radioactive materials that can be transferred to the milk.
- Direct Radiation Exposure Pathway- Results from deposition of radioactive materials on the ground or from passage of these radioactive materials in the air.
- Inhalation Pathway- Results from breathing radioactive materials transported in the air.

## **Methodology**

The following must be identified within the five-mile radius of the plant for each of the 16 meteorological sectors (compass direction from which the winds may blow, for example NNE [North North East]):

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

The primary method is visual inspection from roadside within the five-mile radius, with the exception of the Sunny Point MOT. This information is supplemented with data from aerial photographs, information from county extension agents, and farm supply businesses.

## **2001 Land Use Census Results**

The 2000 and 2001 results of the survey for the nearest resident, garden, milk and meat animals in each sector are compared in Table 7.

The resident portion of the census conducted in June of 2001 did not identify a change in the distance of the nearest resident from plant center from 2000. The garden portion of the census identified changes in the distances of the nearest garden in two sectors.

The nearest garden location changed in the South (S) sector at 1.1 miles and the Northwest (NW) sector at 1.0 mile. No milk animals are located within the 5 miles of the plant; however, three beef cattle with pasture were located 0.9 miles from the plant in the Southeast (SE) and South South East (SSE) sectors.

The 2001 Garden Census was conducted within 3 miles of BSEP and identifies all gardens of greater than 500 square feet that were found in the survey area. Results of the garden census are located in Table 8.

Results of the 2001 Land Use and Garden Census indicate stable use of land, confirming that current control locations are appropriate, and no changes are needed for dose assessment and environmental monitoring.

**TABLE 7**  
**Brunswick Steam Electric Plant**  
**LAND USE CENSUS COMPARISONS (2000-2001)**  
**NEAREST PATHWAY (MILES)**

SECTOR	RESIDENT		GARDEN		MILK/MEAT ANIMALS	
	2001	2000	2001	2000	2001	2000
N	0.7	0.7	0.9	0.9	None	None
NNE	0.8	0.8	1.2	1.2	None	None
NE	None	None	None	None	None	None
ENE	None	None	None	None	None	None
E	None	None	None	None	None	None
ESE	1.5	1.5	None	None	None	None
SE	0.9	0.9	None	None	None/0.9**	None/0.9**
SSE	1.0	1.0	None	None	None/0.9**	None/0.9**
S	1.1	1.2	1.1*	1.9	None	None
SSW	1.2	1.2	1.5	1.5	None	None
SW	1.0	1.0	2.9	2.9	None	None
WSW	1.2	1.2	1.2	1.2	None	None
W	0.8	0.8	1.1	1.1	None	None
WNW	0.8	0.8	1.0	1.0	None	None
NW	0.9	0.9	1.0*	4.8	None	None
NNW	0.8	0.8	4.4	4.4	None	None

\* Represents a change from the previous year.

\*\* In the SE and SSE sectors no milk animals were found, but three beef cattle with pasture were located 0.9 miles from the plant in these sectors.



**TABLE 8**  
**Brunswick Steam Electric Plant**  
**GARDEN CENSUS (2001)**

SECTOR	DISTANCE (miles)		SECTOR	DISTANCE (miles)
N	0.9		WSW	2.9
N	1.0		WSW	2.9
NNE	1.2		W	1.1
NE	None		W	1.2
ENE	None		W	2.5
E	None		W	2.6
ESE	None		WNW	1.0
SE	None		WNW	1.1
SSE	None		NW	1.0
S	1.1		NW	2.9
S	2.2		NW	4.3
SSW	1.5		NW	4.8
SSW	1.5		NNW	4.4
SSW	1.8			
SSW	1.9			
SSW	1.9			
SSW	1.9			
SSW	1.9			
SSW	2.8			
SW	2.9			
WSW	1.2			
WSW	1.4			
WSW	1.8			
WSW	2.1			
WSW	2.4			

Figure 4 For BSEP From 1/1/2001 To 12/31/2001  
 AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

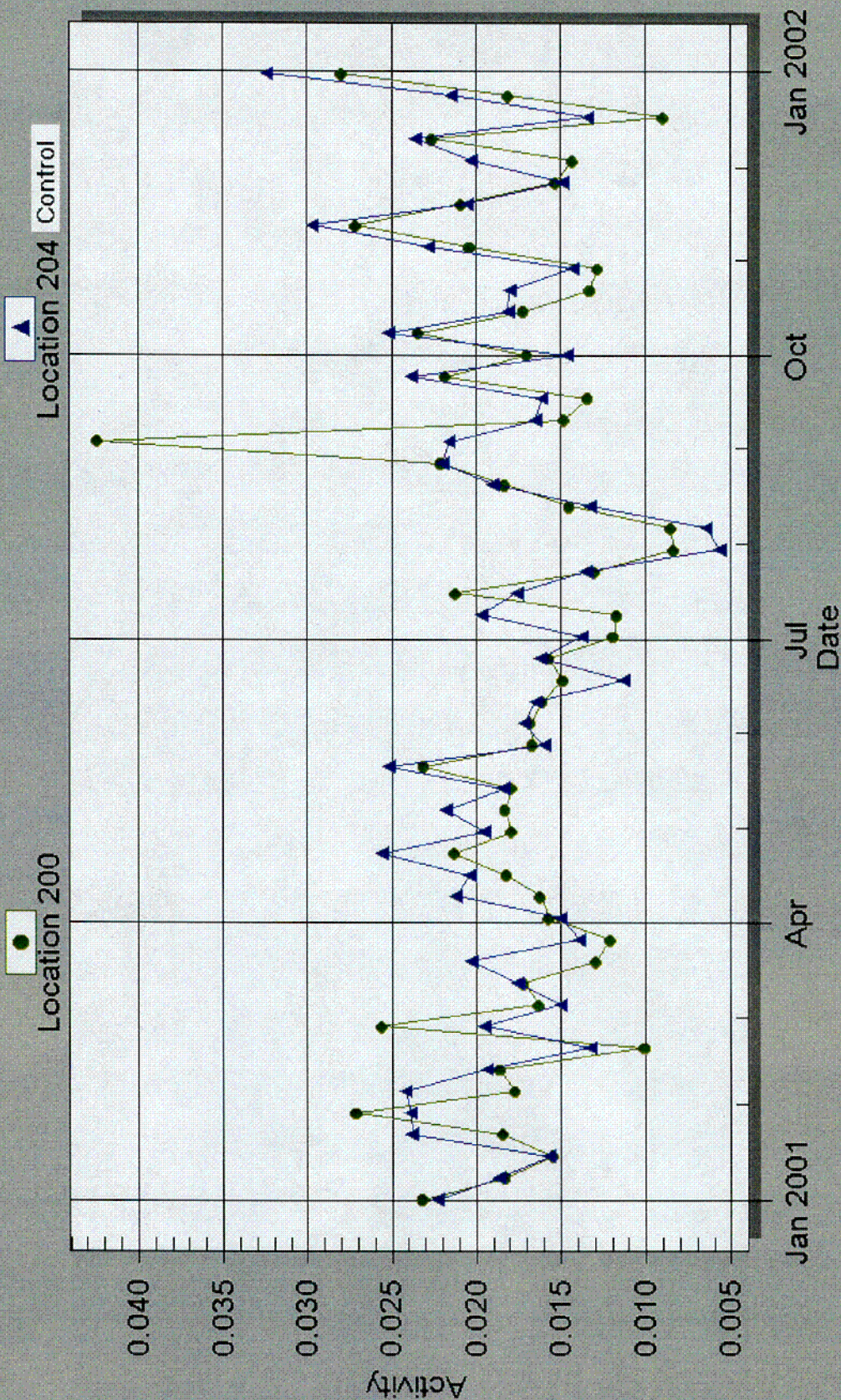
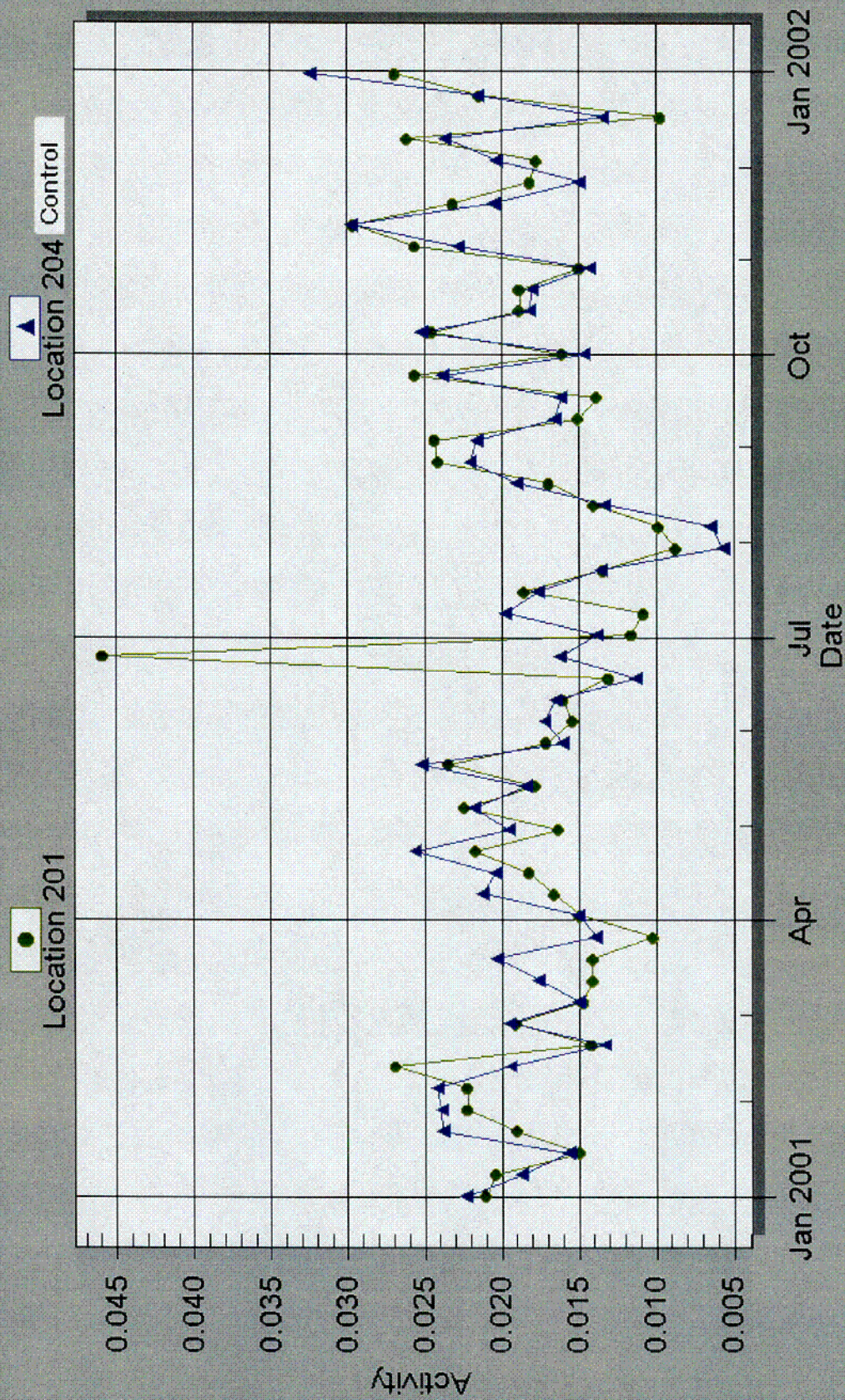


Figure 5 For BSEP From 1/1/2001 To 12/31/2001

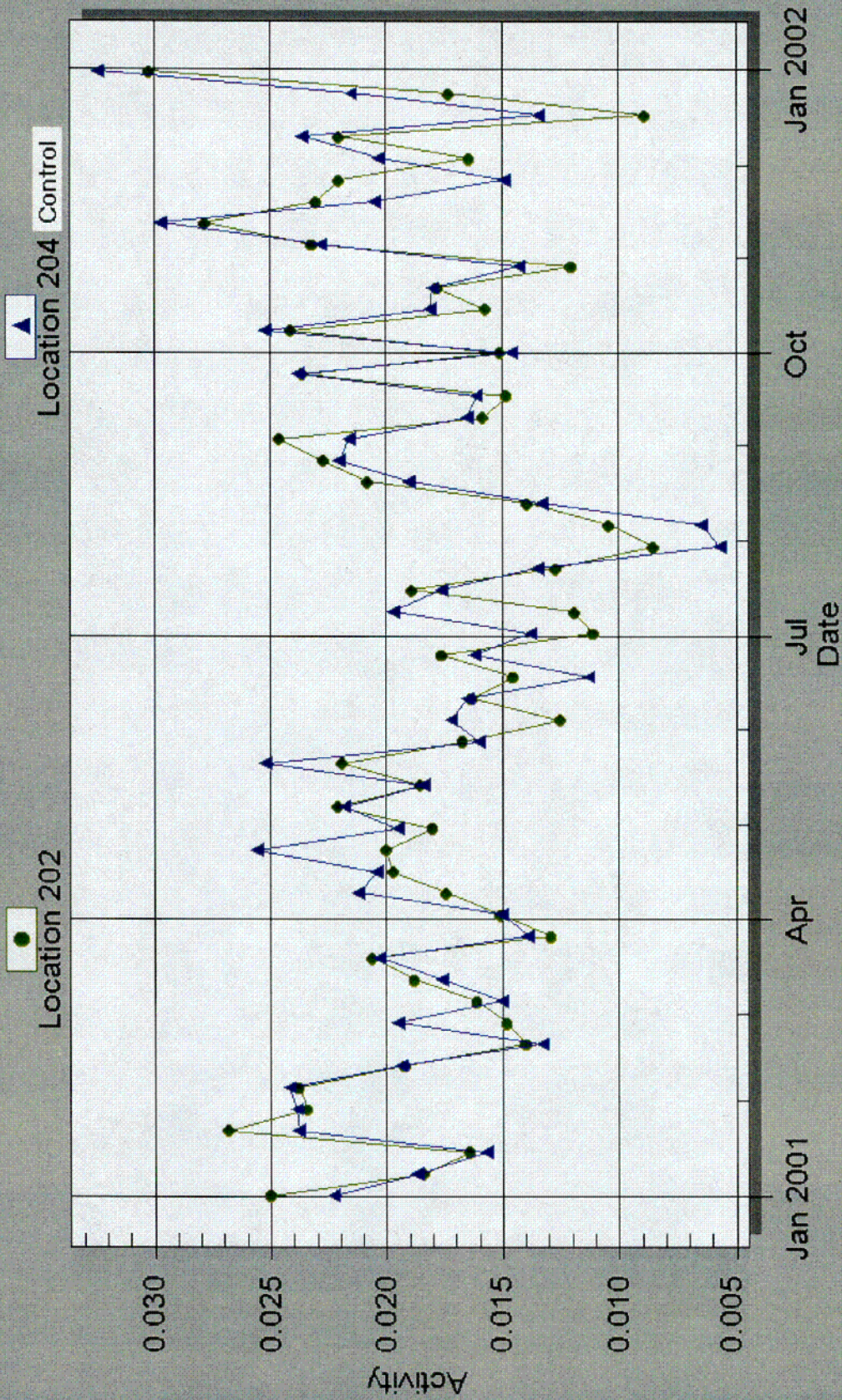
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)



C02

Figure 6 For BSEP From 1/1/2001 To 12/31/2001

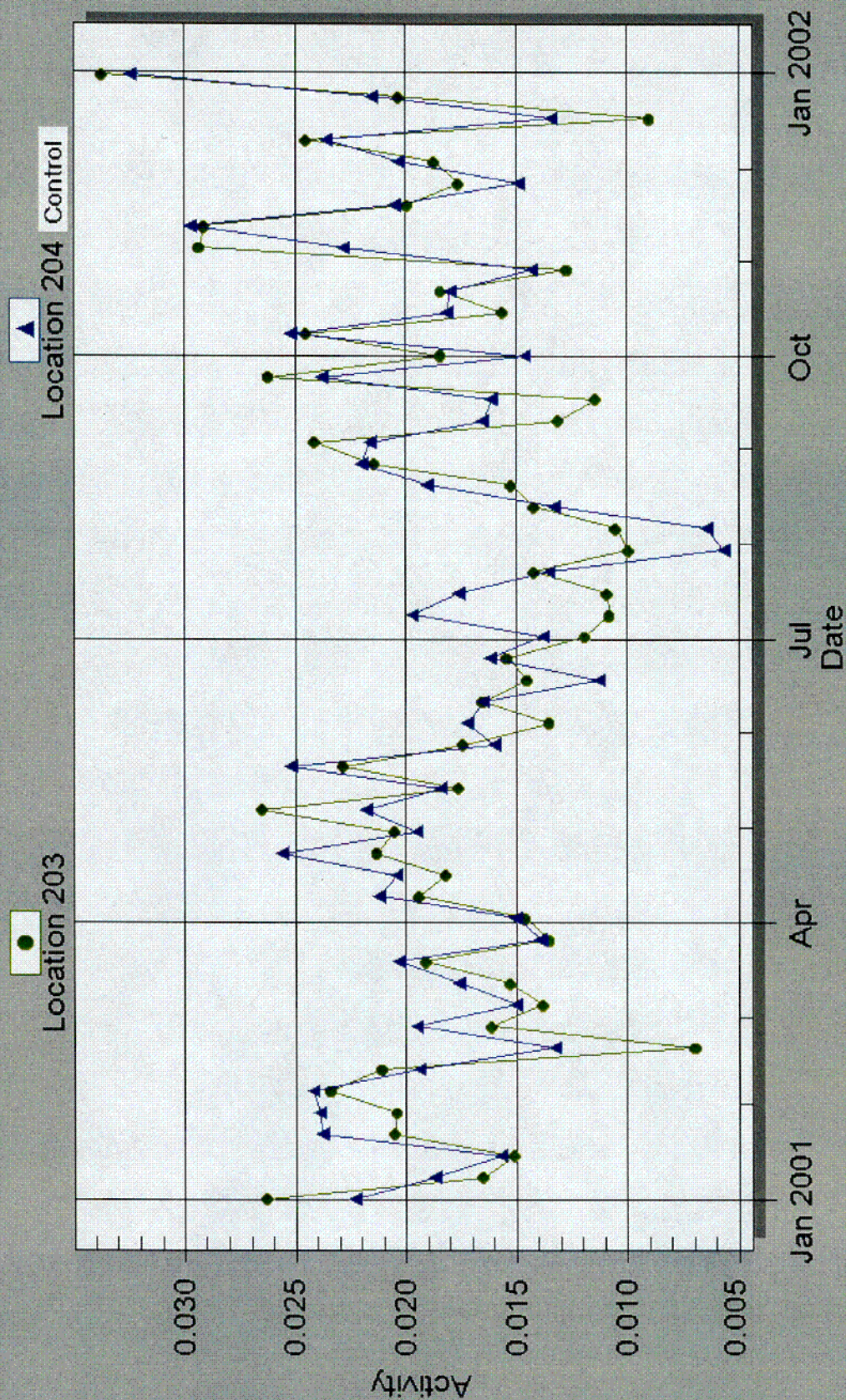
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)



C03

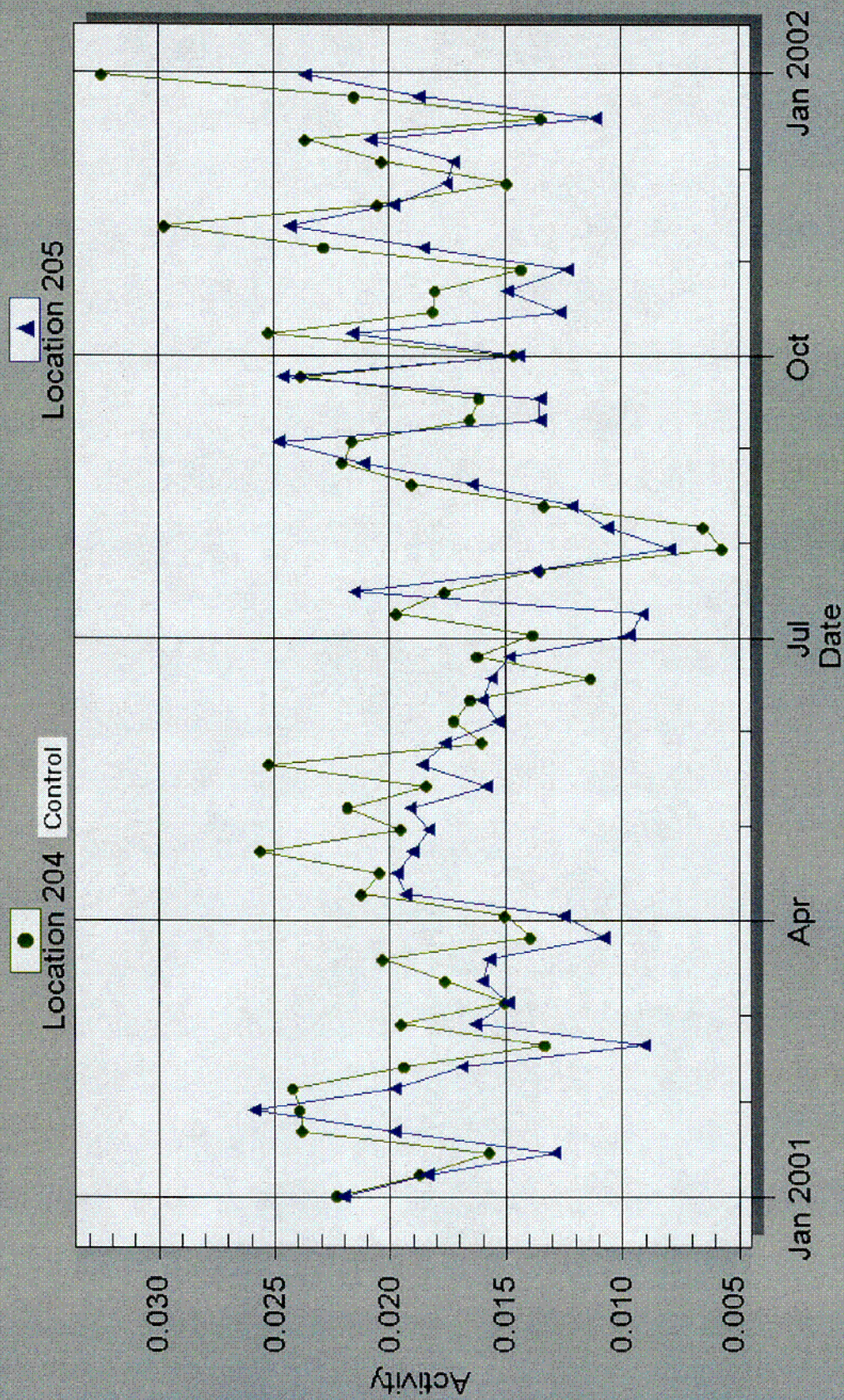
Figure 7 For BSEP From 1/1/2001 To 12/31/2001

AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)



C04

**Figure 8 For BSEP From 1/1/2001 To 12/31/2001**  
 AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)



C05

Figure 9 BSEP 2001 Surface Water Tritium

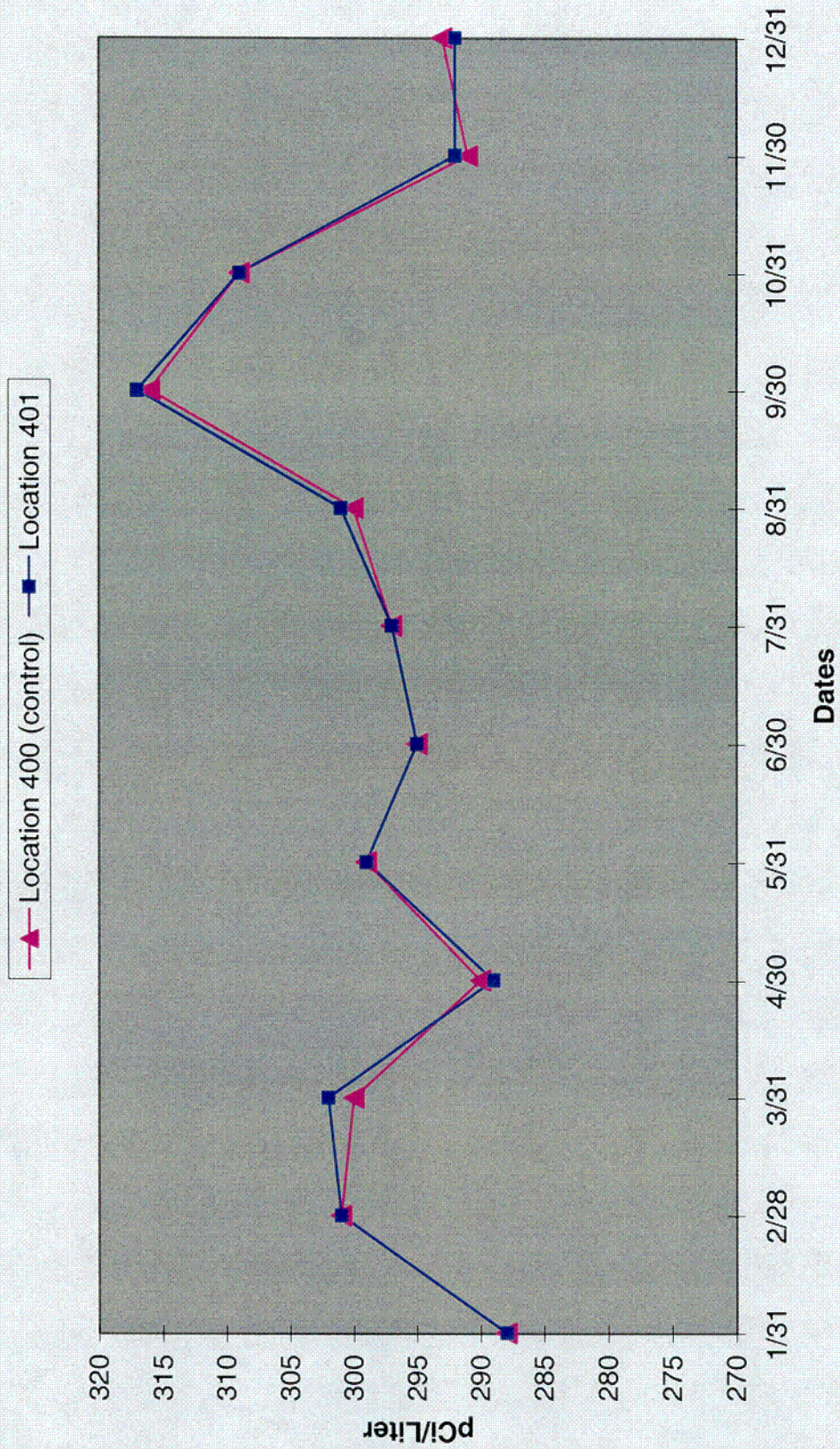
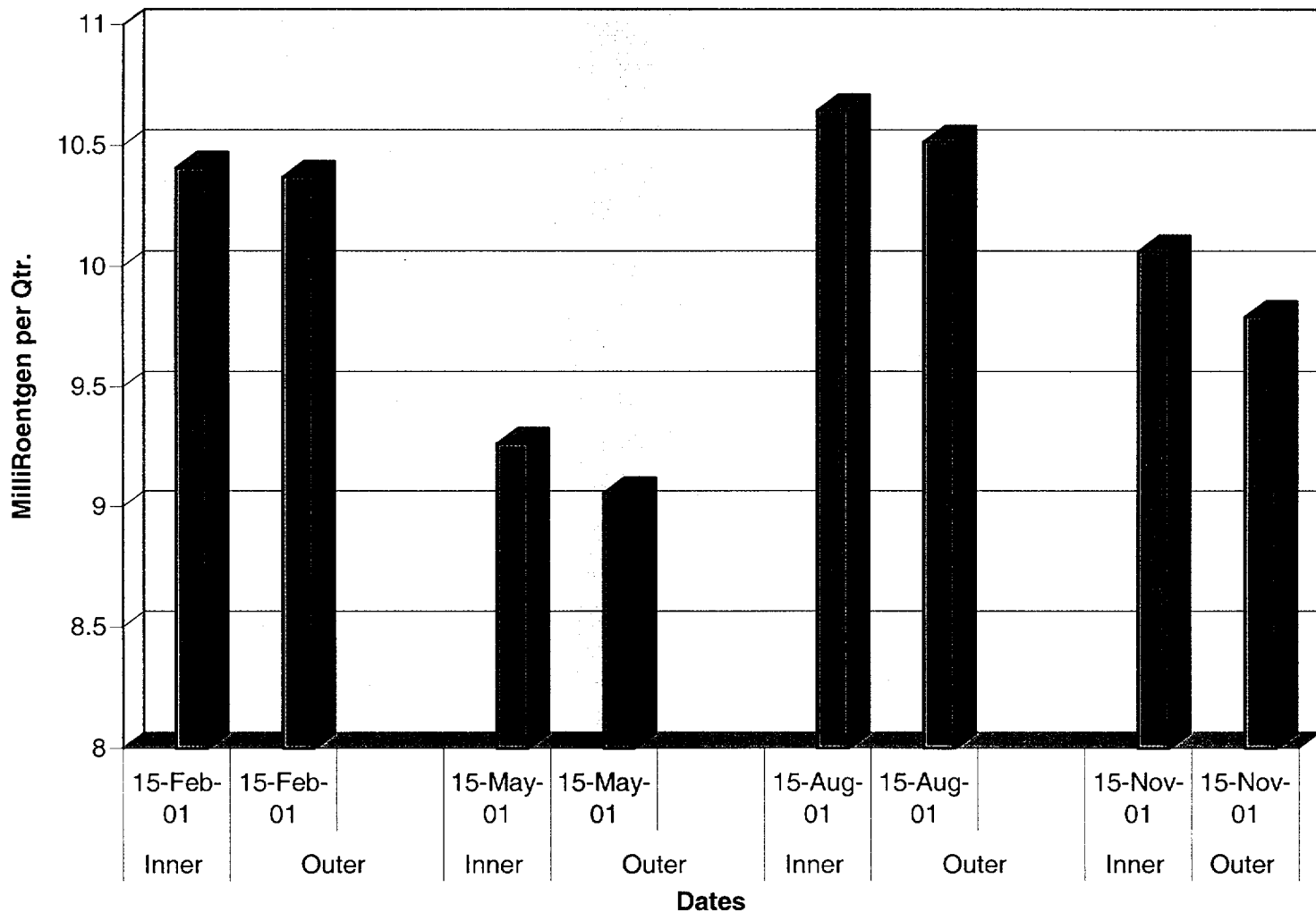


Figure 10 BSEP 2001 TLD Averages for Inner and Outer Ring Locations





**2001 BSEP**  
**A Progress Energy Company**  
**Radiological Environmental Monitoring**  
**TLD Report**  
**Comments**

- TLD points 41 thru 74 are not ODCM TLD sample points and are not listed.
- TLD sample points 19 and 80 have been retired and are not used.
- TLD # 6 was missing Fourth Quarter 2001.

## *BNP Radiological Environmental Monitoring TLD Report*

<i>TLD</i>	<i>Dose: mR/std, qtr.</i> <i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
1	1.1 MI E - MOORE ST EXTENSION	8/15/01	9.7	1.1
1	1.1 MI E - MOORE ST EXTENSION	5/15/01	8.6	0.7
1	1.1 MI E - MOORE ST EXTENSION	2/15/01	9.6	1.9
1	1.1 MI E - MOORE ST EXTENSION	11/15/01	10.1	0.5
2	1.0 MI ESE - MOORE ST EXTENSION	5/15/01	9.1	1.4
2	1.0 MI ESE - MOORE ST EXTENSION	2/15/01	10.4	2
2	1.0 MI ESE - MOORE ST EXTENSION	8/15/01	10.8	0.7
2	1.0 MI ESE - MOORE ST EXTENSION	11/15/01	9.9	1.3
3	0.9 MI SE - MOORE ST EXTENSION	2/15/01	9.6	2.1
3	0.9 MI SE - MOORE ST EXTENSION	5/15/01	10.4	0.5
3	0.9 MI SE - MOORE ST EXTENSION	8/15/01	10	1.4
3	0.9 MI SE - MOORE ST EXTENSION	11/15/01	11	0.6
4	1.1 MI SSE - MOORE ST EXTENSION	5/15/01	9	1.4
4	1.1 MI SSE - MOORE ST EXTENSION	2/15/01	10	1.9
4	1.1 MI SSE - MOORE ST EXTENSION	8/15/01	10.8	0.7
4	1.1 MI SSE - MOORE ST EXTENSION	11/15/01	9.7	0.6
5	1.1 MI S - LEONARD ST	2/15/01	10.4	1.9
5	1.1 MI S - LEONARD ST	11/15/01	9.4	0.6
5	1.1 MI S - LEONARD ST	8/15/01	10.8	1
5	1.1 MI S - LEONARD ST	5/15/01	9.1	1.7
6	1.0 MI SSW - BEMCO POWER LINE	5/15/01	8.1	1.1
6	1.0 MI SSW - BEMCO POWER LINE	8/15/01	9.3	1.2

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
6	1.0 MI SSW - BEMCO POWER LINE	2/15/01	9	2
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	5/15/01	9.8	0.8
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	2/15/01	9.7	2.2
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	8/15/01	10	1
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	11/15/01	10.4	0.8
8	1.2 MI W - HWY 87	2/15/01	10.5	1.9
8	1.2 MI W - HWY 87	5/15/01	9.4	0.7
8	1.2 MI W - HWY 87	8/15/01	10.7	1.3
8	1.2 MI W - HWY 87	11/15/01	10.1	0.8
9	1.0 MI WNW - BETHEL CHURCH RD	2/15/01	11.6	1.9
9	1.0 MI WNW - BETHEL CHURCH RD	11/15/01	10.1	1
9	1.0 MI WNW - BETHEL CHURCH RD	8/15/01	12	0.9
9	1.0 MI WNW - BETHEL CHURCH RD	5/15/01	9.1	0.8
10	0.9 MI NW - BETHEL CHURCH RD	8/15/01	8.9	0.9
10	0.9 MI NW - BETHEL CHURCH RD	11/15/01	8.7	0.6
10	0.9 MI NW - BETHEL CHURCH RD	2/15/01	8.4	1.9
10	0.9 MI NW - BETHEL CHURCH RD	5/15/01	7.6	0.6
11	0.9 MI NNW - BETHEL CHURCH RD	5/15/01	9.3	0.7
11	0.9 MI NNW - BETHEL CHURCH RD	11/15/01	9.9	0.7
11	0.9 MI NNW - BETHEL CHURCH RD	8/15/01	12.1	0.6
11	0.9 MI NNW - BETHEL CHURCH RD	2/15/01	11.6	2.3
12	1.0 MI N - BETHEL CHURCH RD	2/15/01	10	1.8
12	1.0 MI N - BETHEL CHURCH RD	5/15/01	9.7	1.1
12	1.0 MI N - BETHEL CHURCH RD	8/15/01	10.3	0.9

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
12	1.0 MI N - BETHEL CHURCH RD	11/15/01	10.2	1.4
13	1.2 MI NNE - BETHEL CHURCH RD	8/15/01	9.6	0.6
13	1.2 MI NNE - BETHEL CHURCH RD	11/15/01	9.4	0.6
13	1.2 MI NNE - BETHEL CHURCH RD	2/15/01	9.7	1.9
13	1.2 MI NNE - BETHEL CHURCH RD	5/15/01	8.7	0.9
14	0.5 MI NE - INTAKE CANAL	5/15/01	10.3	0.5
14	0.5 MI NE - INTAKE CANAL	8/15/01	11.4	0.6
14	0.5 MI NE - INTAKE CANAL	11/15/01	10.5	0.9
14	0.5 MI NE - INTAKE CANAL	2/15/01	10.7	2.2
15	0.9 MI ENE - INTAKE CANAL	2/15/01	10.9	1.9
15	0.9 MI ENE - INTAKE CANAL	5/15/01	10.2	0.5
15	0.9 MI ENE - INTAKE CANAL	8/15/01	10.8	0.9
15	0.9 MI ENE - INTAKE CANAL	11/15/01	11.6	2.1
16	1.0 MI WSW - DISCHARGE CANAL	11/15/01	10.1	0.7
16	1.0 MI WSW - DISCHARGE CANAL	8/15/01	10.3	0.9
16	1.0 MI WSW - DISCHARGE CANAL	2/15/01	10.4	1.8
16	1.0 MI WSW - DISCHARGE CANAL	5/15/01	9.4	1.2
17	1.5 MI ESE - ADM PROPERTY	11/15/01	11.3	0.6
17	1.5 MI ESE - ADM PROPERTY	5/15/01	10	1.1
17	1.5 MI ESE - ADM PROPERTY	8/15/01	12.3	1.8
17	1.5 MI ESE - ADM PROPERTY	2/15/01	12.6	1.9
18	1.7 MI SE - ADM PROPERTY	11/15/01	9.9	0.7
18	1.7 MI SE - ADM PROPERTY	2/15/01	11.7	2
18	1.7 MI SE - ADM PROPERTY	5/15/01	8.6	0.6

<i>Dose: mR/std. qtr.</i>				
<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
18	1.7 MI SE - ADM PROPERTY	8/15/01	11.4	1
20	2.0 MI S - MOORE ST	11/15/01	8.8	0.6
20	2.0 MI S - MOORE ST	2/15/01	7.7	1.9
20	2.0 MI S - MOORE ST	5/15/01	8.4	0.6
20	2.0 MI S - MOORE ST	8/15/01	10.7	1
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	11/15/01	9.3	1
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	2/15/01	11.7	1.9
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	5/15/01	9	0.9
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	8/15/01	10.3	0.6
22	5.3 MI SW - CASWELL BEACH RD	5/15/01	9.6	0.5
22	5.3 MI SW - CASWELL BEACH RD	8/15/01	9.6	1.2
22	5.3 MI SW - CASWELL BEACH RD	2/15/01	10.5	1.8
22	5.3 MI SW - CASWELL BEACH RD	11/15/01	9.7	1.1
23	4.6 MI WSW - NEAR AIRPORT	8/15/01	9.7	0.8
23	4.6 MI WSW - NEAR AIRPORT	5/15/01	7.4	0.5
23	4.6 MI WSW - NEAR AIRPORT	2/15/01	10	1.8
23	4.6 MI WSW - NEAR AIRPORT	11/15/01	8.1	0.9
24	3.0 MI W - HWY 211	2/15/01	11.4	2
24	3.0 MI W - HWY 211	11/15/01	10.8	1
24	3.0 MI W - HWY 211	5/15/01	9.8	0.5
24	3.0 MI W - HWY 211	8/15/01	11	0.8
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	5/15/01	10.1	1.2
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	2/15/01	9.7	1.9
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	8/15/01	10.3	0.6

<i>TLD</i>	<i>Dose: mR/std. qtr.</i> <i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	11/15/01	10.9	1.1
26	5.9 MI NW - W BOILING SPRINGS RD	2/15/01	13.1	2
26	5.9 MI NW - W BOILING SPRINGS RD	5/15/01	10.2	0.7
26	5.9 MI NW - W BOILING SPRINGS RD	8/15/01	13.3	0.8
26	5.9 MI NW - W BOILING SPRINGS RD	11/15/01	11.2	1.1
27	5.0 MI NNW - HWY 133	11/15/01	8.7	0.9
27	5.0 MI NNW - HWY 133	8/15/01	10.5	0.6
27	5.0 MI NNW - HWY 133	5/15/01	8.2	1.1
27	5.0 MI NNW - HWY 133	2/15/01	10.3	1.9
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	11/15/01	9.9	1.3
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	8/15/01	10.3	0.7
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	5/15/01	8.8	0.5
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	2/15/01	10.3	1.8
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	8/15/01	9.4	0.5
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	11/15/01	9.3	0.9
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	5/15/01	8.6	0.7
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	2/15/01	9.4	1.8
30	2.0 MI NE - SUNNY POINT MOT	5/15/01	10.4	0.5
30	2.0 MI NE - SUNNY POINT MOT	2/15/01	12.8	1.9
30	2.0 MI NE - SUNNY POINT MOT	8/15/01	12.9	1.4
30	2.0 MI NE - SUNNY POINT MOT	11/15/01	10.6	0.9
31	2.6 MI ENE - SUNNY POINT MOT	8/15/01	10.3	0.6
31	2.6 MI ENE - SUNNY POINT MOT	11/15/01	10.5	0.8
31	2.6 MI ENE - SUNNY POINT MOT	2/15/01	10.1	2.1

<i>TLD</i>	<i>Dose: mR/std. qtr.</i> <i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
31	2.6 MI ENE - SUNNY POINT MOT	5/15/01	10.2	1.1
32	5.7 MI ENE - FT FISHER AFB HOUSING	11/15/01	11.2	1.4
32	5.7 MI ENE - FT FISHER AFB HOUSING	5/15/01	10.5	0.7
32	5.7 MI ENE - FT FISHER AFB HOUSING	2/15/01	11.8	1.9
32	5.7 MI ENE - FT FISHER AFB HOUSING	8/15/01	11.9	0.7
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	8/15/01	9.6	0.7
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	2/15/01	9.9	1.9
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	5/15/01	8.3	0.5
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	11/15/01	9	0.9
34	5.5 MI ENE - FT FISHER MUSEUM	11/15/01	9.8	1.1
34	5.5 MI ENE - FT FISHER MUSEUM	8/15/01	9.3	0.8
34	5.5 MI ENE - FT FISHER MUSEUM	2/15/01	9.2	1.9
34	5.5 MI ENE - FT FISHER MUSEUM	5/15/01	9.1	0.7
35	7.5 MI SSE - BALD HEAD ISLAND	5/15/01	7.9	0.6
35	7.5 MI SSE - BALD HEAD ISLAND	8/15/01	8.4	0.8
35	7.5 MI SSE - BALD HEAD ISLAND	2/15/01	8.4	1.8
35	7.5 MI SSE - BALD HEAD ISLAND	11/15/01	8.8	0.8
36	9.3 MI NE - CAROLINA BEACH	8/15/01	9	0.8
36	9.3 MI NE - CAROLINA BEACH	11/15/01	8.9	1.1
36	9.3 MI NE - CAROLINA BEACH	5/15/01	8.7	1.1
36	9.3 MI NE - CAROLINA BEACH	2/15/01	8.9	2
37	5.5 MI NW - BOILING SPRING LAKES	11/15/01	8.6	1.4
37	5.5 MI NW - BOILING SPRING LAKES	8/15/01	8.9	0.9
37	5.5 MI NW - BOILING SPRING LAKES	5/15/01	8.4	0.7

*Dose: mR/std. qtr.*

<i>TLD</i>	<i>TLD Location Description</i>	<i>Sample Date</i>	<i>Dose</i>	<i>2 Sigma Error</i>
37	5.5 MI NW - BOILING SPRING LAKES	2/15/01	8.5	1.9
38	11.0 MI W - SUNSET HARBOR	2/15/01	8.9	1.9
38	11.0 MI W - SUNSET HARBOR	5/15/01	8.3	0.8
38	11.0 MI W - SUNSET HARBOR	11/15/01	8.9	0.6
38	11.0 MI W - SUNSET HARBOR	8/15/01	9	1.4
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	5/15/01	9.1	0.8
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	8/15/01	9.5	0.8
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	11/15/01	9.9	1.2
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	2/15/01	9.2	1.9
40	6.9 MI WSW - OAK ISLAND TOWN HALL	5/15/01	8.7	0.7
40	6.9 MI WSW - OAK ISLAND TOWN HALL	11/15/01	9.8	1.1
40	6.9 MI WSW - OAK ISLAND TOWN HALL	8/15/01	9	0.8
40	6.9 MI WSW - OAK ISLAND TOWN HALL	2/15/01	8.6	1.9
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	2/15/01	11.3	1.9
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	5/15/01	10.9	0.7
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	8/15/01	11.9	0.9
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	11/15/01	11.9	1.2
76	4.8 MI SSW - CASWELL BEACH	5/15/01	10	0.9
76	4.8 MI SSW - CASWELL BEACH	11/15/01	11.2	0.9
76	4.8 MI SSW - CASWELL BEACH	2/15/01	13.4	2
76	4.8 MI SSW - CASWELL BEACH	8/15/01	13.5	1.1
77	5.3 MI S - BALDHEAD ISLAND	8/15/01	11.2	0.6
77	5.3 MI S - BALDHEAD ISLAND	5/15/01	8.4	1.1
77	5.3 MI S - BALDHEAD ISLAND	11/15/01	9.4	0.9



*Dose: mR/std. qtr.*

<b>TLD</b>	<b>TLD Location Description</b>	<b>Sample Date</b>	<b>Dose</b>	<b>2 Sigma Error</b>
77	5.3 MI S - BALDHEAD ISLAND	2/15/01	11.1	2
78	10.0 MI NNE - HWY 133 AT SR 1521	5/15/01	8.8	0.6
78	10.0 MI NNE - HWY 133 AT SR 1521	8/15/01	10.5	1.2
78	10.0 MI NNE - HWY 133 AT SR 1521	11/15/01	9.5	0.7
78	10.0 MI NNE - HWY 133 AT SR 1521	2/15/01	10.3	1.8
79	9.5 MI N - SR 1539 AT SR 1521	11/15/01	10.3	0.8
79	9.5 MI N - SR 1539 AT SR 1521	8/15/01	13	1.3
79	9.5 MI N - SR 1539 AT SR 1521	2/15/01	12.2	2.3
79	9.5 MI N - SR 1539 AT SR 1521	5/15/01	9.3	0.9
81	10.0 MI WNW - MIDWAY RD AT SR 1508	8/15/01	12.2	0.7
81	10.0 MI WNW - MIDWAY RD AT SR 1508	5/15/01	9.2	0.9
81	10.0 MI WNW - MIDWAY RD AT SR 1508	2/15/01	12.1	2.4
81	10.0 MI WNW - MIDWAY RD AT SR 1508	11/15/01	10	0.5

**2001 BSEP**  
**A Progress Energy Company**  
**Radiological Environmental Monitoring**  
**Analysis Report**  
**Comments**

- Efficiency values are not included for AC samples requiring radioiodine analysis (I-131), because gamma software does not report these values.
- The Less than LLD (<LLD) represents that no activity was present, but lists the LLD values.
- There are no 2 sigma error values reported when activity is <LLD.

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
200	1.0 MI SW - VISITORS CENTER	1/1/01	245.4	3.77E-01	2.32E-02	3.95E-03	4.23E-03
200	1.0 MI SW - VISITORS CENTER	1/8/01	257.7	3.62E-01	1.83E-02	3.77E-03	4.41E-03
200	1.0 MI SW - VISITORS CENTER	1/15/01	257.8	3.62E-01	1.55E-02	3.59E-03	4.31E-03
200	1.0 MI SW - VISITORS CENTER	1/22/01	260.4	3.62E-01	1.84E-02	3.68E-03	4.20E-03
200	1.0 MI SW - VISITORS CENTER	1/29/01	257.9	3.62E-01	2.71E-02	4.19E-03	4.38E-03
200	1.0 MI SW - VISITORS CENTER	2/5/01	283.2	3.62E-01	1.77E-02	3.39E-03	3.78E-03
200	1.0 MI SW - VISITORS CENTER	2/12/01	281.6	3.62E-01	1.86E-02	3.45E-03	3.80E-03
200	1.0 MI SW - VISITORS CENTER	2/19/01	283.7	3.62E-01	1.01E-02	3.06E-03	3.98E-03
200	1.0 MI SW - VISITORS CENTER	2/26/01	86.6	3.62E-01	2.56E-02	9.46E-03	1.28E-02
200	1.0 MI SW - VISITORS CENTER	3/5/01	283.8	3.59E-01	1.63E-02	3.37E-03	3.91E-03
200	1.0 MI SW - VISITORS CENTER	3/12/01	280.6	3.59E-01	1.72E-02	3.36E-03	3.73E-03
200	1.0 MI SW - VISITORS CENTER	3/19/01	282.8	3.59E-01	1.29E-02	3.27E-03	4.07E-03
200	1.0 MI SW - VISITORS CENTER	3/26/01	285.3	3.59E-01	1.21E-02	3.16E-03	3.95E-03
200	1.0 MI SW - VISITORS CENTER	4/2/01	281.1	3.59E-01	1.57E-02	3.35E-03	3.90E-03
200	1.0 MI SW - VISITORS CENTER	4/9/01	286.9	3.59E-01	1.62E-02	3.24E-03	3.62E-03
200	1.0 MI SW - VISITORS CENTER	4/16/01	287.6	3.59E-01	1.82E-02	3.48E-03	3.94E-03
200	1.0 MI SW - VISITORS CENTER	4/23/01	287	3.59E-01	2.13E-02	3.56E-03	3.76E-03
200	1.0 MI SW - VISITORS CENTER	4/30/01	288.2	3.59E-01	1.79E-02	3.38E-03	3.76E-03
200	1.0 MI SW - VISITORS CENTER	5/7/01	287.4	3.59E-01	1.83E-02	3.43E-03	3.82E-03
200	1.0 MI SW - VISITORS CENTER	5/14/01	289.2	3.59E-01	1.79E-02	3.21E-03	3.33E-03
200	1.0 MI SW - VISITORS CENTER	5/21/01	288.4	3.59E-01	2.31E-02	3.56E-03	3.56E-03
200	1.0 MI SW - VISITORS CENTER	5/28/01	291	3.59E-01	1.67E-02	3.34E-03	3.83E-03
200	1.0 MI SW - VISITORS CENTER	6/4/01	287.7	3.59E-01	1.68E-02	3.22E-03	3.50E-03
200	1.0 MI SW - VISITORS CENTER	6/11/01	278.9	3.59E-01	1.61E-02	3.44E-03	4.04E-03
200	1.0 MI SW - VISITORS CENTER	6/18/01	287.2	3.59E-01	1.49E-02	3.26E-03	3.82E-03
200	1.0 MI SW - VISITORS CENTER	6/25/01	286.9	3.59E-01	1.57E-02	3.17E-03	3.53E-03
200	1.0 MI SW - VISITORS CENTER	7/2/01	288.6	3.59E-01	1.19E-02	3.01E-03	3.65E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point		Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD
200	1.0 MI SW - VISITORS CENTER	7/9/01	288.4	3.59E-01	1.17E-02	3.09E-03	3.85E-03
200	1.0 MI SW - VISITORS CENTER	7/16/01	287.9	3.59E-01	2.12E-02	3.62E-03	3.94E-03
200	1.0 MI SW - VISITORS CENTER	7/23/01	287.4	3.59E-01	1.30E-02	3.15E-03	3.82E-03
200	1.0 MI SW - VISITORS CENTER	7/30/01	288.1	3.59E-01	8.36E-03	2.94E-03	3.94E-03
200	1.0 MI SW - VISITORS CENTER	8/6/01	289.8	3.59E-01	8.57E-03	2.93E-03	3.91E-03
200	1.0 MI SW - VISITORS CENTER	8/13/01	289.7	3.59E-01	1.45E-02	3.30E-03	4.00E-03
200	1.0 MI SW - VISITORS CENTER	8/20/01	289.1	3.59E-01	1.83E-02	3.50E-03	4.00E-03
200	1.0 MI SW - VISITORS CENTER	8/27/01	288.1	3.59E-01	2.21E-02	3.49E-03	3.49E-03
200	1.0 MI SW - VISITORS CENTER	9/3/01	104.8	3.59E-01	4.24E-02	8.82E-03	1.00E-02
200	1.0 MI SW - VISITORS CENTER	9/10/01	289.5	3.59E-01	1.48E-02	3.18E-03	3.68E-03
200	1.0 MI SW - VISITORS CENTER	9/17/01	287.6	3.59E-01	1.34E-02	3.22E-03	3.94E-03
200	1.0 MI SW - VISITORS CENTER	9/24/01	289	3.59E-01	2.18E-02	3.48E-03	3.50E-03
200	1.0 MI SW - VISITORS CENTER	10/1/01	285	3.59E-01	1.70E-02	3.25E-03	3.53E-03
200	1.0 MI SW - VISITORS CENTER	10/8/01	288.4	3.59E-01	2.34E-02	3.56E-03	3.51E-03
200	1.0 MI SW - VISITORS CENTER	10/15/01	286.6	3.59E-01	1.72E-02	3.23E-03	3.46E-03
200	1.0 MI SW - VISITORS CENTER	10/22/01	282.8	3.59E-01	1.33E-02	3.10E-03	3.65E-03
200	1.0 MI SW - VISITORS CENTER	10/29/01	287.8	3.59E-01	1.28E-02	3.10E-03	3.72E-03
200	1.0 MI SW - VISITORS CENTER	11/5/01	281.7	3.59E-01	2.04E-02	3.62E-03	3.98E-03
200	1.0 MI SW - VISITORS CENTER	11/12/01	285.9	3.59E-01	2.71E-02	3.87E-03	3.86E-03
200	1.0 MI SW - VISITORS CENTER	11/19/01	282.3	3.59E-01	2.09E-02	3.59E-03	3.84E-03
200	1.0 MI SW - VISITORS CENTER	11/26/01	284.2	3.59E-01	1.53E-02	3.27E-03	3.79E-03
200	1.0 MI SW - VISITORS CENTER	12/3/01	288.5	3.59E-01	1.43E-02	3.12E-03	3.60E-03
200	1.0 MI SW - VISITORS CENTER	12/10/01	283.3	3.59E-01	2.26E-02	3.56E-03	3.55E-03
200	1.0 MI SW - VISITORS CENTER	12/17/01	282.9	3.59E-01	8.96E-03	3.01E-03	3.99E-03
200	1.0 MI SW - VISITORS CENTER	12/24/01	283.5	3.59E-01	1.81E-02	3.46E-03	3.89E-03
200	1.0 MI SW - VISITORS CENTER	12/31/01	276.5	3.59E-01	2.80E-02	4.00E-03	3.99E-03
201	0.6 MI NE - PMAC	1/1/01	267.6	3.77E-01	2.10E-02	3.61E-03	3.88E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
201	0.6 MI NE - PMAC	1/8/01	269	3.62E-01	2.04E-02	3.76E-03	4.22E-03
201	0.6 MI NE - PMAC	1/15/01	271.5	3.62E-01	1.49E-02	3.42E-03	4.10E-03
201	0.6 MI NE - PMAC	1/22/01	272.3	3.62E-01	1.90E-02	3.59E-03	4.02E-03
201	0.6 MI NE - PMAC	1/29/01	276.6	3.62E-01	2.22E-02	3.76E-03	4.09E-03
201	0.6 MI NE - PMAC	2/5/01	283.5	3.62E-01	2.22E-02	3.61E-03	3.77E-03
201	0.6 MI NE - PMAC	2/12/01	114	3.62E-01	2.69E-02	7.47E-03	9.38E-03
201	0.6 MI NE - PMAC	2/19/01	278.5	3.62E-01	1.42E-02	3.34E-03	4.06E-03
201	0.6 MI NE - PMAC	2/26/01	278.2	3.62E-01	1.91E-02	3.56E-03	3.98E-03
201	0.6 MI NE - PMAC	3/5/01	280.4	3.59E-01	1.47E-02	3.32E-03	3.96E-03
201	0.6 MI NE - PMAC	3/12/01	275.5	3.59E-01	1.41E-02	3.23E-03	3.80E-03
201	0.6 MI NE - PMAC	3/19/01	279.6	3.59E-01	1.41E-02	3.36E-03	4.12E-03
201	0.6 MI NE - PMAC	3/26/01	277.6	3.59E-01	1.02E-02	3.13E-03	4.06E-03
201	0.6 MI NE - PMAC	4/2/01	276.6	3.59E-01	1.49E-02	3.35E-03	3.97E-03
201	0.6 MI NE - PMAC	4/9/01	280.9	3.59E-01	1.66E-02	3.31E-03	3.70E-03
201	0.6 MI NE - PMAC	4/16/01	278.8	3.59E-01	1.82E-02	3.56E-03	4.07E-03
201	0.6 MI NE - PMAC	4/23/01	275.3	3.59E-01	2.17E-02	3.68E-03	3.92E-03
201	0.6 MI NE - PMAC	4/30/01	273.5	3.59E-01	1.63E-02	3.43E-03	3.97E-03
201	0.6 MI NE - PMAC	5/7/01	277.1	3.59E-01	2.24E-02	3.73E-03	3.96E-03
201	0.6 MI NE - PMAC	5/14/01	275.8	3.59E-01	1.78E-02	3.32E-03	3.50E-03
201	0.6 MI NE - PMAC	5/21/01	280	3.59E-01	2.34E-02	3.65E-03	3.66E-03
201	0.6 MI NE - PMAC	5/28/01	278.6	3.59E-01	1.71E-02	3.47E-03	4.00E-03
201	0.6 MI NE - PMAC	6/4/01	283.4	3.59E-01	1.54E-02	3.18E-03	3.55E-03
201	0.6 MI NE - PMAC	6/11/01	275	3.59E-01	1.60E-02	3.47E-03	4.10E-03
201	0.6 MI NE - PMAC	6/18/01	277.9	3.59E-01	1.31E-02	3.24E-03	3.95E-03
201	0.6 MI NE - PMAC	6/25/01	281.3	3.59E-01	4.59E-02	4.60E-03	3.60E-03
201	0.6 MI NE - PMAC	7/2/01	272.6	3.59E-01	1.16E-02	3.12E-03	3.86E-03
201	0.6 MI NE - PMAC	7/9/01	272.8	3.59E-01	1.08E-02	3.17E-03	4.07E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
201	0.6 MI NE - PMAC	7/16/01	276.3	3.59E-01	1.85E-02	3.60E-03	4.10E-03
201	0.6 MI NE - PMAC	7/23/01	275.1	3.59E-01	1.34E-02	3.28E-03	3.99E-03
201	0.6 MI NE - PMAC	7/30/01	272.6	3.59E-01	8.75E-03	3.10E-03	4.16E-03
201	0.6 MI NE - PMAC	8/6/01	280.3	3.59E-01	9.85E-03	3.09E-03	4.04E-03
201	0.6 MI NE - PMAC	8/13/01	280.3	3.59E-01	1.40E-02	3.36E-03	4.13E-03
201	0.6 MI NE - PMAC	8/20/01	288.9	3.59E-01	1.69E-02	3.44E-03	4.01E-03
201	0.6 MI NE - PMAC	8/27/01	284.5	3.59E-01	2.41E-02	3.62E-03	3.54E-03
201	0.6 MI NE - PMAC	9/3/01	288.1	3.59E-01	2.43E-02	3.66E-03	3.65E-03
201	0.6 MI NE - PMAC	9/10/01	282.8	3.59E-01	1.50E-02	3.25E-03	3.77E-03
201	0.6 MI NE - PMAC	9/17/01	284.1	3.59E-01	1.38E-02	3.28E-03	3.99E-03
201	0.6 MI NE - PMAC	9/24/01	283.8	3.59E-01	2.56E-02	3.71E-03	3.57E-03
201	0.6 MI NE - PMAC	10/1/01	257.7	3.59E-01	1.60E-02	3.44E-03	3.90E-03
201	0.6 MI NE - PMAC	10/8/01	274.6	3.59E-01	2.45E-02	3.74E-03	3.69E-03
201	0.6 MI NE - PMAC	10/15/01	270.7	3.59E-01	1.88E-02	3.45E-03	3.67E-03
201	0.6 MI NE - PMAC	10/22/01	273.4	3.59E-01	1.88E-02	3.49E-03	3.78E-03
201	0.6 MI NE - PMAC	10/29/01	272.7	3.59E-01	1.49E-02	3.34E-03	3.93E-03
201	0.6 MI NE - PMAC	11/5/01	270.8	3.59E-01	2.56E-02	3.98E-03	4.14E-03
201	0.6 MI NE - PMAC	11/12/01	268.7	3.59E-01	2.96E-02	4.16E-03	4.11E-03
201	0.6 MI NE - PMAC	11/19/01	268.8	3.59E-01	2.31E-02	3.82E-03	4.03E-03
201	0.6 MI NE - PMAC	11/26/01	269.7	3.59E-01	1.81E-02	3.56E-03	4.00E-03
201	0.6 MI NE - PMAC	12/3/01	271.8	3.59E-01	1.77E-02	3.45E-03	3.82E-03
201	0.6 MI NE - PMAC	12/10/01	272.7	3.59E-01	2.61E-02	3.83E-03	3.69E-03
201	0.6 MI NE - PMAC	12/17/01	269.1	3.59E-01	9.70E-03	3.18E-03	4.19E-03
201	0.6 MI NE - PMAC	12/24/01	268.5	3.59E-01	2.14E-02	3.77E-03	4.11E-03
201	0.6 MI NE - PMAC	12/31/01	269.3	3.59E-01	2.69E-02	4.03E-03	4.10E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/1/01	263.4	3.77E-01	2.50E-02	3.85E-03	3.94E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/8/01	276.9	3.62E-01	1.84E-02	3.58E-03	4.10E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/15/01	280.1	3.62E-01	1.64E-02	3.41E-03	3.97E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/22/01	156.9	3.62E-01	2.68E-02	5.91E-03	6.97E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/29/01	275.6	3.62E-01	2.34E-02	3.83E-03	4.10E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/5/01	294	3.62E-01	2.38E-02	3.60E-03	3.64E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/12/01	296.6	3.62E-01	1.92E-02	3.35E-03	3.60E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/19/01	299	3.62E-01	1.40E-02	3.15E-03	3.78E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/26/01	300.1	3.62E-01	1.48E-02	3.15E-03	3.69E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/5/01	302	3.59E-01	1.61E-02	3.21E-03	3.67E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/12/01	297.2	3.59E-01	1.88E-02	3.30E-03	3.52E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/19/01	300.2	3.59E-01	2.06E-02	3.51E-03	3.84E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/26/01	300.5	3.59E-01	1.29E-02	3.08E-03	3.75E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/2/01	296.7	3.59E-01	1.51E-02	3.19E-03	3.70E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/9/01	302.8	3.59E-01	1.74E-02	3.18E-03	3.43E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/16/01	305.2	3.59E-01	1.97E-02	3.40E-03	3.71E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/23/01	306	3.59E-01	2.00E-02	3.34E-03	3.52E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/30/01	306.5	3.59E-01	1.80E-02	3.24E-03	3.54E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/7/01	304.1	3.59E-01	2.21E-02	3.48E-03	3.61E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/14/01	309.1	3.59E-01	1.85E-02	3.10E-03	3.12E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/21/01	308.6	3.59E-01	2.19E-02	3.34E-03	3.33E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/28/01	311.4	3.59E-01	1.67E-02	3.18E-03	3.58E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/4/01	308.1	3.59E-01	1.25E-02	2.83E-03	3.27E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/11/01	311.9	3.59E-01	1.63E-02	3.17E-03	3.62E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/18/01	307.9	3.59E-01	1.45E-02	3.07E-03	3.56E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/25/01	311.9	3.59E-01	1.76E-02	3.09E-03	3.25E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/2/01	312.7	3.59E-01	1.11E-02	2.78E-03	3.37E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/9/01	309.1	3.59E-01	1.19E-02	2.94E-03	3.59E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/16/01	312.6	3.59E-01	1.89E-02	3.30E-03	3.63E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/23/01	313.2	3.59E-01	1.27E-02	2.93E-03	3.50E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/30/01	313.2	3.59E-01	8.49E-03	2.75E-03	3.62E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/6/01	314.2	3.59E-01	1.04E-02	2.85E-03	3.61E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/13/01	280.1	3.59E-01	1.39E-02	3.36E-03	4.13E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/20/01	171.5	3.59E-01	2.08E-02	5.38E-03	6.75E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/27/01	268.5	3.59E-01	2.27E-02	3.70E-03	3.75E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/3/01	274.8	3.59E-01	2.46E-02	3.79E-03	3.83E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/10/01	272.9	3.59E-01	1.58E-02	3.38E-03	3.90E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/17/01	271.7	3.59E-01	1.48E-02	3.45E-03	4.17E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/24/01	273.3	3.59E-01	2.36E-02	3.70E-03	3.71E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/1/01	268	3.59E-01	1.51E-02	3.29E-03	3.75E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/8/01	270.2	3.59E-01	2.41E-02	3.76E-03	3.75E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/15/01	268.5	3.59E-01	1.57E-02	3.30E-03	3.70E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/22/01	265.7	3.59E-01	1.78E-02	3.50E-03	3.89E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/29/01	270.4	3.59E-01	1.20E-02	3.20E-03	3.96E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/5/01	264.4	3.59E-01	2.32E-02	3.93E-03	4.24E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/12/01	268	3.59E-01	2.78E-02	4.08E-03	4.12E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/19/01	263.3	3.59E-01	2.30E-02	3.87E-03	4.12E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/26/01	266	3.59E-01	2.20E-02	3.79E-03	4.05E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/3/01	268.9	3.59E-01	1.64E-02	3.41E-03	3.87E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/10/01	267.4	3.59E-01	2.20E-02	3.67E-03	3.76E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/17/01	265.1	3.59E-01	8.90E-03	3.17E-03	4.25E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/24/01	265	3.59E-01	1.73E-02	3.60E-03	4.16E-03
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/31/01	257.7	3.59E-01	3.02E-02	4.30E-03	4.28E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	1/1/01	235.5	3.77E-01	2.63E-02	4.22E-03	4.41E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	1/8/01	235	3.62E-01	1.65E-02	3.95E-03	4.84E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	1/15/01	239.9	3.62E-01	1.51E-02	3.77E-03	4.64E-03



# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
203	2.3 MI SSW - SOUTHPORT SUBSTATION	1/22/01	247.8	3.62E-01	2.05E-02	3.93E-03	4.42E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	1/29/01	240	3.62E-01	2.04E-02	4.08E-03	4.71E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	2/5/01	283.6	3.62E-01	2.34E-02	3.67E-03	3.77E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	2/12/01	283.8	3.62E-01	2.11E-02	3.56E-03	3.77E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	2/19/01	192.5	3.62E-01	6.98E-03	4.04E-03	5.87E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	2/26/01	287.1	3.62E-01	1.61E-02	3.33E-03	3.85E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	3/5/01	286.1	3.59E-01	1.38E-02	3.22E-03	3.88E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	3/12/01	284.9	3.59E-01	1.53E-02	3.22E-03	3.67E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	3/19/01	285.4	3.59E-01	1.91E-02	3.57E-03	4.04E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	3/26/01	286.8	3.59E-01	1.35E-02	3.23E-03	3.93E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	4/2/01	282.2	3.59E-01	1.46E-02	3.28E-03	3.89E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	4/9/01	287.7	3.59E-01	1.94E-02	3.40E-03	3.61E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	4/16/01	288.9	3.59E-01	1.82E-02	3.47E-03	3.92E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	4/23/01	288	3.59E-01	2.13E-02	3.55E-03	3.74E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	4/30/01	287.5	3.59E-01	2.05E-02	3.52E-03	3.77E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	5/7/01	198.6	3.59E-01	2.65E-02	4.97E-03	5.52E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	5/14/01	289.2	3.59E-01	1.76E-02	3.20E-03	3.33E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	5/21/01	288.8	3.59E-01	2.28E-02	3.54E-03	3.55E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	5/28/01	291.9	3.59E-01	1.74E-02	3.37E-03	3.82E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	6/4/01	289	3.59E-01	1.35E-02	3.03E-03	3.48E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	6/11/01	291.8	3.59E-01	1.65E-02	3.34E-03	3.86E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	6/18/01	290.9	3.59E-01	1.45E-02	3.20E-03	3.77E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	6/25/01	290.8	3.59E-01	1.54E-02	3.13E-03	3.48E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	7/2/01	292.8	3.59E-01	1.19E-02	2.97E-03	3.59E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	7/9/01	287.2	3.59E-01	1.08E-02	3.05E-03	3.86E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	7/16/01	204.6	3.59E-01	1.09E-02	4.08E-03	5.54E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	7/23/01	292	3.59E-01	1.42E-02	3.17E-03	3.76E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
203	2.3 MI SSW - SOUTHPORT SUBSTATION	7/30/01	292.5	3.59E-01	9.95E-03	2.99E-03	3.88E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	8/6/01	292.6	3.59E-01	1.05E-02	3.02E-03	3.87E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	8/13/01	285	3.59E-01	1.42E-02	3.33E-03	4.06E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	8/20/01	284.9	3.59E-01	1.52E-02	3.38E-03	4.06E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	8/27/01	282.6	3.59E-01	2.14E-02	3.50E-03	3.56E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	9/3/01	285.9	3.59E-01	2.41E-02	3.67E-03	3.68E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	9/10/01	282.7	3.59E-01	1.31E-02	3.15E-03	3.77E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	9/17/01	281.1	3.59E-01	1.14E-02	3.17E-03	4.03E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	9/24/01	282.1	3.59E-01	2.62E-02	3.75E-03	3.59E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	10/1/01	276.6	3.59E-01	1.84E-02	3.40E-03	3.64E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	10/8/01	280.3	3.59E-01	2.45E-02	3.69E-03	3.61E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	10/15/01	278.2	3.59E-01	1.56E-02	3.21E-03	3.57E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	10/22/01	274.6	3.59E-01	1.84E-02	3.45E-03	3.76E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	10/29/01	280.3	3.59E-01	1.27E-02	3.15E-03	3.82E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	11/5/01	271.8	3.59E-01	2.93E-02	4.13E-03	4.13E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	11/12/01	275.8	3.59E-01	2.91E-02	4.06E-03	4.00E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	11/19/01	272	3.59E-01	1.99E-02	3.63E-03	3.99E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	11/26/01	274.4	3.59E-01	1.76E-02	3.48E-03	3.93E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/3/01	279.3	3.59E-01	1.87E-02	3.44E-03	3.72E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/10/01	273.9	3.59E-01	2.45E-02	3.73E-03	3.67E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/17/01	273.6	3.59E-01	8.99E-03	3.09E-03	4.12E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/24/01	273.7	3.59E-01	2.03E-02	3.66E-03	4.03E-03
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/31/01	266.8	3.59E-01	3.37E-02	4.36E-03	4.14E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/1/01	269	3.77E-01	2.23E-02	3.66E-03	3.86E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/8/01	270.8	3.62E-01	1.87E-02	3.66E-03	4.20E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/15/01	275.4	3.62E-01	1.57E-02	3.42E-03	4.04E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/22/01	278.7	3.62E-01	2.38E-02	3.76E-03	3.93E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/29/01	275.5	3.62E-01	2.39E-02	3.85E-03	4.10E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/5/01	276.7	3.62E-01	2.42E-02	3.77E-03	3.86E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/12/01	277.9	3.62E-01	1.94E-02	3.52E-03	3.85E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/19/01	279	3.62E-01	1.33E-02	3.28E-03	4.05E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/26/01	278.9	3.62E-01	1.95E-02	3.57E-03	3.97E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/5/01	280.8	3.59E-01	1.50E-02	3.33E-03	3.95E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/12/01	275.7	3.59E-01	1.76E-02	3.42E-03	3.79E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/19/01	281.6	3.59E-01	2.03E-02	3.66E-03	4.09E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/26/01	277.7	3.59E-01	1.39E-02	3.33E-03	4.06E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/2/01	277.1	3.59E-01	1.50E-02	3.35E-03	3.96E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/9/01	282.7	3.59E-01	2.12E-02	3.54E-03	3.68E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/16/01	287.4	3.59E-01	2.04E-02	3.59E-03	3.94E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/23/01	282.2	3.59E-01	2.56E-02	3.81E-03	3.82E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/30/01	284.4	3.59E-01	1.95E-02	3.50E-03	3.81E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/7/01	286.7	3.59E-01	2.18E-02	3.61E-03	3.83E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/14/01	287.2	3.59E-01	1.84E-02	3.26E-03	3.36E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/21/01	288.2	3.59E-01	2.52E-02	3.67E-03	3.56E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/28/01	291.7	3.59E-01	1.60E-02	3.30E-03	3.82E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	6/4/01	286.9	3.59E-01	1.72E-02	3.25E-03	3.51E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	6/11/01	292	3.59E-01	1.65E-02	3.34E-03	3.86E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	6/18/01	290.6	3.59E-01	1.13E-02	3.03E-03	3.77E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	6/25/01	292.5	3.59E-01	1.62E-02	3.16E-03	3.46E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	7/2/01	292.4	3.59E-01	1.38E-02	3.08E-03	3.60E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	7/9/01	290	3.59E-01	1.97E-02	3.50E-03	3.83E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	7/16/01	292.9	3.59E-01	1.76E-02	3.40E-03	3.87E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	7/23/01	291	3.59E-01	1.35E-02	3.14E-03	3.77E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	7/30/01	290.4	3.59E-01	5.70E-03	2.75E-03	3.90E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

<b>Sample Point</b>	<b>Sample Date</b>	<b>Quantity</b>	<b>Efficiency</b>	<b>Activity</b>	<b>2 Sigma Error</b>	<b>LLD</b>	
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	8/6/01	291.1	3.59E-01	6.47E-03	2.80E-03	3.89E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	8/13/01	285.3	3.59E-01	1.33E-02	3.28E-03	4.06E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	8/20/01	286.5	3.59E-01	1.90E-02	3.56E-03	4.04E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	8/27/01	285.8	3.59E-01	2.20E-02	3.50E-03	3.52E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	9/3/01	286.7	3.59E-01	2.16E-02	3.54E-03	3.67E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	9/10/01	284.6	3.59E-01	1.65E-02	3.31E-03	3.74E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	9/17/01	283.6	3.59E-01	1.61E-02	3.40E-03	4.00E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	9/24/01	285.6	3.59E-01	2.38E-02	3.61E-03	3.55E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	10/1/01	281.1	3.59E-01	1.46E-02	3.15E-03	3.58E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	10/8/01	283.8	3.59E-01	2.52E-02	3.69E-03	3.57E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	10/15/01	282.9	3.59E-01	1.81E-02	3.31E-03	3.51E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	10/22/01	282.3	3.59E-01	1.80E-02	3.36E-03	3.66E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	10/29/01	283.4	3.59E-01	1.43E-02	3.21E-03	3.78E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	11/5/01	281.8	3.59E-01	2.28E-02	3.74E-03	3.98E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	11/12/01	279.5	3.59E-01	2.97E-02	4.05E-03	3.95E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	11/19/01	279.4	3.59E-01	2.05E-02	3.59E-03	3.88E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	11/26/01	279.7	3.59E-01	1.49E-02	3.29E-03	3.85E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/3/01	281.1	3.59E-01	2.03E-02	3.50E-03	3.70E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/10/01	280	3.59E-01	2.36E-02	3.63E-03	3.59E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/17/01	279.7	3.59E-01	1.34E-02	3.28E-03	4.03E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/24/01	204.4	3.59E-01	2.15E-02	4.61E-03	5.40E-03
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/31/01	265.6	3.59E-01	3.24E-02	4.31E-03	4.15E-03
205	0.6 MI SSE - SPOIL POND	1/1/01	242.2	3.77E-01	2.20E-02	3.93E-03	4.29E-03
205	0.6 MI SSE - SPOIL POND	1/8/01	275.2	3.62E-01	1.84E-02	3.59E-03	4.13E-03
205	0.6 MI SSE - SPOIL POND	1/15/01	280.9	3.62E-01	1.29E-02	3.22E-03	3.96E-03
205	0.6 MI SSE - SPOIL POND	1/22/01	285.1	3.62E-01	1.98E-02	3.51E-03	3.84E-03
205	0.6 MI SSE - SPOIL POND	1/29/01	280.9	3.62E-01	2.59E-02	3.89E-03	4.02E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
205	0.6 MI SSE - SPOIL POND	2/5/01	289	3.62E-01	1.98E-02	3.44E-03	3.70E-03
205	0.6 MI SSE - SPOIL POND	2/12/01	292.4	3.62E-01	1.69E-02	3.27E-03	3.66E-03
205	0.6 MI SSE - SPOIL POND	2/19/01	294.5	3.62E-01	9.04E-03	2.91E-03	3.84E-03
205	0.6 MI SSE - SPOIL POND	2/26/01	294.2	3.62E-01	1.63E-02	3.28E-03	3.76E-03
205	0.6 MI SSE - SPOIL POND	3/5/01	294.7	3.59E-01	1.49E-02	3.21E-03	3.76E-03
205	0.6 MI SSE - SPOIL POND	3/12/01	287.7	3.59E-01	1.60E-02	3.23E-03	3.64E-03
205	0.6 MI SSE - SPOIL POND	3/19/01	295.9	3.59E-01	1.57E-02	3.30E-03	3.89E-03
205	0.6 MI SSE - SPOIL POND	3/26/01	295.7	3.59E-01	1.08E-02	3.00E-03	3.81E-03
205	0.6 MI SSE - SPOIL POND	4/2/01	292.4	3.59E-01	1.25E-02	3.08E-03	3.75E-03
205	0.6 MI SSE - SPOIL POND	4/9/01	298.8	3.59E-01	1.93E-02	3.31E-03	3.48E-03
205	0.6 MI SSE - SPOIL POND	4/16/01	300.6	3.59E-01	1.97E-02	3.44E-03	3.77E-03
205	0.6 MI SSE - SPOIL POND	4/23/01	299.5	3.59E-01	1.90E-02	3.34E-03	3.60E-03
205	0.6 MI SSE - SPOIL POND	4/30/01	295.6	3.59E-01	1.83E-02	3.34E-03	3.67E-03
205	0.6 MI SSE - SPOIL POND	5/7/01	300	3.59E-01	1.91E-02	3.36E-03	3.66E-03
205	0.6 MI SSE - SPOIL POND	5/14/01	302.7	3.59E-01	1.58E-02	3.00E-03	3.19E-03
205	0.6 MI SSE - SPOIL POND	5/21/01	302.1	3.59E-01	1.86E-02	3.23E-03	3.40E-03
205	0.6 MI SSE - SPOIL POND	5/28/01	304.4	3.59E-01	1.76E-02	3.28E-03	3.66E-03
205	0.6 MI SSE - SPOIL POND	6/4/01	300.6	3.59E-01	1.53E-02	3.04E-03	3.35E-03
205	0.6 MI SSE - SPOIL POND	6/11/01	289.4	3.59E-01	1.60E-02	3.34E-03	3.90E-03
205	0.6 MI SSE - SPOIL POND	6/18/01	302	3.59E-01	1.56E-02	3.17E-03	3.63E-03
205	0.6 MI SSE - SPOIL POND	6/25/01	302.8	3.59E-01	1.48E-02	3.00E-03	3.34E-03
205	0.6 MI SSE - SPOIL POND	7/2/01	304.2	3.59E-01	9.65E-03	2.76E-03	3.46E-03
205	0.6 MI SSE - SPOIL POND	7/9/01	303.7	3.59E-01	9.09E-03	2.81E-03	3.65E-03
205	0.6 MI SSE - SPOIL POND	7/16/01	304.7	3.59E-01	2.15E-02	3.49E-03	3.72E-03
205	0.6 MI SSE - SPOIL POND	7/23/01	302.7	3.59E-01	1.37E-02	3.06E-03	3.62E-03
205	0.6 MI SSE - SPOIL POND	7/30/01	303.7	3.59E-01	7.93E-03	2.79E-03	3.73E-03
205	0.6 MI SSE - SPOIL POND	8/6/01	184.4	3.59E-01	1.06E-02	4.44E-03	6.15E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Particulate

Analysis: Beta

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD	
205	0.6 MI SSE - SPOIL POND	8/13/01	281	3.59E-01	1.21E-02	3.25E-03	4.12E-03
205	0.6 MI SSE - SPOIL POND	8/20/01	285.1	3.59E-01	1.64E-02	3.44E-03	4.06E-03
205	0.6 MI SSE - SPOIL POND	8/27/01	283.9	3.59E-01	2.11E-02	3.48E-03	3.54E-03
205	0.6 MI SSE - SPOIL POND	9/3/01	285.8	3.59E-01	2.48E-02	3.70E-03	3.68E-03
205	0.6 MI SSE - SPOIL POND	9/10/01	283.5	3.59E-01	1.35E-02	3.16E-03	3.76E-03
205	0.6 MI SSE - SPOIL POND	9/17/01	285	3.59E-01	1.35E-02	3.25E-03	3.98E-03
205	0.6 MI SSE - SPOIL POND	9/24/01	285.6	3.59E-01	2.46E-02	3.64E-03	3.55E-03
205	0.6 MI SSE - SPOIL POND	10/1/01	282.2	3.59E-01	1.44E-02	3.13E-03	3.56E-03
205	0.6 MI SSE - SPOIL POND	10/8/01	194.8	3.59E-01	2.16E-02	4.59E-03	5.20E-03
205	0.6 MI SSE - SPOIL POND	10/15/01	280	3.59E-01	1.26E-02	3.03E-03	3.54E-03
205	0.6 MI SSE - SPOIL POND	10/22/01	282.9	3.59E-01	1.49E-02	3.19E-03	3.65E-03
205	0.6 MI SSE - SPOIL POND	10/29/01	283.3	3.59E-01	1.23E-02	3.10E-03	3.78E-03
205	0.6 MI SSE - SPOIL POND	11/5/01	280.9	3.59E-01	1.85E-02	3.53E-03	3.99E-03
205	0.6 MI SSE - SPOIL POND	11/12/01	283.6	3.59E-01	2.43E-02	3.77E-03	3.89E-03
205	0.6 MI SSE - SPOIL POND	11/19/01	279.4	3.59E-01	1.98E-02	3.56E-03	3.88E-03
205	0.6 MI SSE - SPOIL POND	11/26/01	281.9	3.59E-01	1.75E-02	3.41E-03	3.82E-03
205	0.6 MI SSE - SPOIL POND	12/3/01	283.8	3.59E-01	1.72E-02	3.32E-03	3.66E-03
205	0.6 MI SSE - SPOIL POND	12/10/01	282.4	3.59E-01	2.08E-02	3.47E-03	3.56E-03
205	0.6 MI SSE - SPOIL POND	12/17/01	281.5	3.59E-01	1.11E-02	3.14E-03	4.01E-03
205	0.6 MI SSE - SPOIL POND	12/24/01	280.9	3.59E-01	1.87E-02	3.51E-03	3.93E-03
205	0.6 MI SSE - SPOIL POND	12/31/01	274.1	3.59E-01	2.36E-02	3.82E-03	4.02E-03

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
200 1.0 MI SW - VISITORS CENTER	1/1/01	245.4	<LLD	3.02E-02
200 1.0 MI SW - VISITORS CENTER	1/8/01	257.7	<LLD	3.49E-02
200 1.0 MI SW - VISITORS CENTER	1/15/01	257.8	<LLD	3.88E-02
200 1.0 MI SW - VISITORS CENTER	1/22/01	260.4	<LLD	4.34E-02
200 1.0 MI SW - VISITORS CENTER	1/29/01	257.9	<LLD	3.01E-02
200 1.0 MI SW - VISITORS CENTER	2/5/01	283.2	<LLD	1.98E-02
200 1.0 MI SW - VISITORS CENTER	2/12/01	281.6	<LLD	2.58E-02
200 1.0 MI SW - VISITORS CENTER	2/19/01	283.7	<LLD	2.41E-02
200 1.0 MI SW - VISITORS CENTER	2/26/01	86.6	<LLD	6.79E-02
200 1.0 MI SW - VISITORS CENTER	3/5/01	283.8	<LLD	2.26E-02
200 1.0 MI SW - VISITORS CENTER	3/12/01	280.6	<LLD	3.11E-02
200 1.0 MI SW - VISITORS CENTER	3/19/01	282.8	<LLD	2.50E-02
200 1.0 MI SW - VISITORS CENTER	3/26/01	285.3	<LLD	2.72E-02
200 1.0 MI SW - VISITORS CENTER	4/2/01	281.1	<LLD	1.98E-02
200 1.0 MI SW - VISITORS CENTER	4/9/01	286.9	<LLD	2.58E-02
200 1.0 MI SW - VISITORS CENTER	4/16/01	287.6	<LLD	1.61E-02
200 1.0 MI SW - VISITORS CENTER	4/23/01	287.0	<LLD	1.13E-02
200 1.0 MI SW - VISITORS CENTER	4/30/01	288.2	<LLD	1.30E-02
200 1.0 MI SW - VISITORS CENTER	5/7/01	287.4	<LLD	2.29E-02
200 1.0 MI SW - VISITORS CENTER	5/14/01	289.2	<LLD	1.75E-02
200 1.0 MI SW - VISITORS CENTER	5/21/01	288.4	<LLD	2.60E-02
200 1.0 MI SW - VISITORS CENTER	5/28/01	291.0	<LLD	3.87E-02
200 1.0 MI SW - VISITORS CENTER	6/4/01	287.7	<LLD	2.18E-02
200 1.0 MI SW - VISITORS CENTER	6/11/01	278.9	<LLD	2.82E-02
200 1.0 MI SW - VISITORS CENTER	6/18/01	287.2	<LLD	2.21E-02
200 1.0 MI SW - VISITORS CENTER	6/25/01	286.9	<LLD	2.79E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
200 1.0 MI SW - VISITORS CENTER	7/2/01	288.6	<LLD	2.34E-02
200 1.0 MI SW - VISITORS CENTER	7/9/01	288.4	<LLD	2.23E-02
200 1.0 MI SW - VISITORS CENTER	7/16/01	287.9	<LLD	1.70E-02
200 1.0 MI SW - VISITORS CENTER	7/23/01	287.4	<LLD	1.94E-02
200 1.0 MI SW - VISITORS CENTER	7/30/01	288.1	<LLD	2.66E-02
200 1.0 MI SW - VISITORS CENTER	8/6/01	289.8	<LLD	1.90E-02
200 1.0 MI SW - VISITORS CENTER	8/13/01	289.7	<LLD	2.48E-02
200 1.0 MI SW - VISITORS CENTER	8/20/01	289.1	<LLD	1.80E-02
200 1.0 MI SW - VISITORS CENTER	8/27/01	288.1	<LLD	2.36E-02
200 1.0 MI SW - VISITORS CENTER	9/3/01	104.8	<LLD	6.39E-02
200 1.0 MI SW - VISITORS CENTER	9/10/01	289.5	<LLD	2.01E-02
200 1.0 MI SW - VISITORS CENTER	9/17/01	287.6	<LLD	2.88E-02
200 1.0 MI SW - VISITORS CENTER	9/24/01	289.0	<LLD	2.05E-02
200 1.0 MI SW - VISITORS CENTER	10/1/01	285.0	<LLD	2.61E-02
200 1.0 MI SW - VISITORS CENTER	10/8/01	288.4	<LLD	2.35E-02
200 1.0 MI SW - VISITORS CENTER	10/15/01	286.6	<LLD	2.80E-02
200 1.0 MI SW - VISITORS CENTER	10/22/01	282.8	<LLD	2.33E-02
200 1.0 MI SW - VISITORS CENTER	10/29/01	287.8	<LLD	2.27E-02
200 1.0 MI SW - VISITORS CENTER	11/5/01	281.7	<LLD	2.14E-02
200 1.0 MI SW - VISITORS CENTER	11/12/01	285.9	<LLD	2.38E-02
200 1.0 MI SW - VISITORS CENTER	11/19/01	282.3	<LLD	3.11E-02
200 1.0 MI SW - VISITORS CENTER	11/26/01	284.2	<LLD	3.12E-02
200 1.0 MI SW - VISITORS CENTER	12/3/01	288.5	<LLD	2.71E-02
200 1.0 MI SW - VISITORS CENTER	12/10/01	283.3	<LLD	1.90E-02
200 1.0 MI SW - VISITORS CENTER	12/17/01	282.9	<LLD	2.23E-02
200 1.0 MI SW - VISITORS CENTER	12/24/01	283.5	<LLD	1.85E-02



# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD	
200	1.0 MI SW - VISITORS CENTER	12/31/01	276.5	<LLD	3.79E-02
201	0.6 MI NE - PMAC	1/1/01	267.6	<LLD	4.21E-02
201	0.6 MI NE - PMAC	1/8/01	269.0	<LLD	3.52E-02
201	0.6 MI NE - PMAC	1/15/01	271.5	<LLD	4.22E-02
201	0.6 MI NE - PMAC	1/22/01	272.3	<LLD	4.52E-02
201	0.6 MI NE - PMAC	1/29/01	276.6	<LLD	3.47E-02
201	0.6 MI NE - PMAC	2/5/01	283.5	<LLD	2.06E-02
201	0.6 MI NE - PMAC	2/12/01	114.0	<LLD	6.04E-02
201	0.6 MI NE - PMAC	2/19/01	278.5	<LLD	2.19E-02
201	0.6 MI NE - PMAC	2/26/01	278.2	<LLD	2.51E-02
201	0.6 MI NE - PMAC	3/5/01	280.4	<LLD	2.28E-02
201	0.6 MI NE - PMAC	3/12/01	275.5	<LLD	3.15E-02
201	0.6 MI NE - PMAC	3/19/01	279.6	<LLD	2.69E-02
201	0.6 MI NE - PMAC	3/26/01	277.6	<LLD	3.25E-02
201	0.6 MI NE - PMAC	4/2/01	276.6	<LLD	2.87E-02
201	0.6 MI NE - PMAC	4/9/01	280.9	<LLD	3.10E-02
201	0.6 MI NE - PMAC	4/16/01	278.8	<LLD	2.20E-02
201	0.6 MI NE - PMAC	4/23/01	275.3	<LLD	3.51E-02
201	0.6 MI NE - PMAC	4/30/01	273.5	<LLD	2.96E-02
201	0.6 MI NE - PMAC	5/7/01	277.1	<LLD	2.94E-02
201	0.6 MI NE - PMAC	5/14/01	275.8	<LLD	2.90E-02
201	0.6 MI NE - PMAC	5/21/01	280.0	<LLD	3.56E-02
201	0.6 MI NE - PMAC	5/28/01	278.6	<LLD	4.85E-02
201	0.6 MI NE - PMAC	6/4/01	283.4	<LLD	2.63E-02
201	0.6 MI NE - PMAC	6/11/01	275.0	<LLD	3.47E-02
201	0.6 MI NE - PMAC	6/18/01	277.9	<LLD	4.67E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
201 0.6 MI NE - PMAC	6/25/01	281.3	<LLD	3.17E-02
201 0.6 MI NE - PMAC	7/2/01	272.6	<LLD	4.05E-02
201 0.6 MI NE - PMAC	7/9/01	272.8	<LLD	4.44E-02
201 0.6 MI NE - PMAC	7/16/01	276.3	<LLD	3.49E-02
201 0.6 MI NE - PMAC	7/23/01	275.1	<LLD	3.56E-02
201 0.6 MI NE - PMAC	7/30/01	272.6	<LLD	4.39E-02
201 0.6 MI NE - PMAC	8/6/01	280.3	<LLD	3.69E-02
201 0.6 MI NE - PMAC	8/13/01	280.3	<LLD	3.28E-02
201 0.6 MI NE - PMAC	8/20/01	288.9	<LLD	3.30E-02
201 0.6 MI NE - PMAC	8/27/01	284.5	<LLD	2.09E-02
201 0.6 MI NE - PMAC	9/3/01	288.1	<LLD	3.76E-02
201 0.6 MI NE - PMAC	9/10/01	282.8	<LLD	3.50E-02
201 0.6 MI NE - PMAC	9/17/01	284.1	<LLD	3.52E-02
201 0.6 MI NE - PMAC	9/24/01	283.8	<LLD	3.65E-02
201 0.6 MI NE - PMAC	10/1/01	257.7	<LLD	4.20E-02
201 0.6 MI NE - PMAC	10/8/01	274.6	<LLD	3.36E-02
201 0.6 MI NE - PMAC	10/15/01	270.7	<LLD	3.11E-02
201 0.6 MI NE - PMAC	10/22/01	273.4	<LLD	3.57E-02
201 0.6 MI NE - PMAC	10/29/01	272.7	<LLD	4.83E-02
201 0.6 MI NE - PMAC	11/5/01	270.8	<LLD	3.86E-02
201 0.6 MI NE - PMAC	11/12/01	268.7	<LLD	2.83E-02
201 0.6 MI NE - PMAC	11/19/01	268.8	<LLD	3.99E-02
201 0.6 MI NE - PMAC	11/26/01	269.7	<LLD	3.17E-02
201 0.6 MI NE - PMAC	12/3/01	271.8	<LLD	3.65E-02
201 0.6 MI NE - PMAC	12/10/01	272.7	<LLD	2.46E-02
201 0.6 MI NE - PMAC	12/17/01	269.1	<LLD	3.67E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD	
201	0.6 MI NE - PMAC	12/24/01	268.5	<LLD	5.48E-02
201	0.6 MI NE - PMAC	12/31/01	269.3	<LLD	5.30E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/1/01	263.4	<LLD	3.52E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/8/01	276.9	<LLD	3.52E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/15/01	280.1	<LLD	4.04E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/22/01	156.9	<LLD	5.29E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/29/01	275.6	<LLD	3.88E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/5/01	294.0	<LLD	3.58E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/12/01	296.6	<LLD	3.50E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/19/01	299.0	<LLD	2.81E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/26/01	300.1	<LLD	4.51E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/5/01	302.0	<LLD	3.73E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/12/01	297.2	<LLD	1.73E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/19/01	300.2	<LLD	2.32E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	3/26/01	300.5	<LLD	4.14E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/2/01	296.7	<LLD	3.18E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/9/01	302.8	<LLD	3.66E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/16/01	305.2	<LLD	2.90E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/23/01	306.0	<LLD	3.02E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	4/30/01	306.5	<LLD	3.57E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/7/01	304.1	<LLD	3.56E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/14/01	309.1	<LLD	3.41E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/21/01	308.6	<LLD	2.08E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/28/01	311.4	<LLD	3.26E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/4/01	308.1	<LLD	3.31E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/11/01	311.9	<LLD	2.34E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD	
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/18/01	307.9	<LLD	3.16E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/25/01	311.9	<LLD	3.63E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/2/01	312.7	<LLD	3.81E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/9/01	309.1	<LLD	1.67E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/16/01	312.6	<LLD	3.04E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/23/01	313.2	<LLD	3.62E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	7/30/01	313.2	<LLD	2.56E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/6/01	314.2	<LLD	3.85E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/13/01	280.1	<LLD	3.65E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/20/01	171.5	<LLD	5.72E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/27/01	268.5	<LLD	3.07E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/3/01	274.8	<LLD	3.96E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/10/01	272.9	<LLD	3.48E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/17/01	271.7	<LLD	4.91E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	9/24/01	273.3	<LLD	3.56E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/1/01	268.0	<LLD	4.90E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/8/01	270.2	<LLD	3.61E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/15/01	268.5	<LLD	4.39E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/22/01	265.7	<LLD	3.54E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	10/29/01	270.4	<LLD	2.71E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/5/01	264.4	<LLD	3.74E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/12/01	268.0	<LLD	4.23E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/19/01	263.3	<LLD	4.31E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/26/01	266.0	<LLD	3.07E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/3/01	268.9	<LLD	4.52E-02
202	1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/10/01	267.4	<LLD	2.64E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/17/01	265.1	<LLD	4.37E-02
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/24/01	265.0	<LLD	2.42E-02
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	12/31/01	257.7	<LLD	2.83E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	1/1/01	235.5	<LLD	5.38E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	1/8/01	235.0	<LLD	4.67E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	1/15/01	239.9	<LLD	4.35E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	1/22/01	247.8	<LLD	5.43E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	1/29/01	240.0	<LLD	3.02E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	2/5/01	283.6	<LLD	2.74E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	2/12/01	283.8	<LLD	2.43E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	2/19/01	192.5	<LLD	5.70E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	2/26/01	287.1	<LLD	2.48E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	3/5/01	286.1	<LLD	3.86E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	3/12/01	284.9	<LLD	2.62E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	3/19/01	285.4	<LLD	3.80E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	3/26/01	286.8	<LLD	2.42E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	4/2/01	282.2	<LLD	2.85E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	4/9/01	287.7	<LLD	3.85E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	4/16/01	288.9	<LLD	1.68E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	4/23/01	288.0	<LLD	2.27E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	4/30/01	287.5	<LLD	3.44E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	5/7/01	198.6	<LLD	3.70E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	5/14/01	289.2	<LLD	1.88E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	5/21/01	288.8	<LLD	3.74E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	5/28/01	291.9	<LLD	3.82E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	6/4/01	289.0	<LLD	3.38E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
203 2.3 MI SSW - SOUTHPORT SUBSTATION	6/11/01	291.8	<LLD	3.24E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	6/18/01	290.9	<LLD	4.46E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	6/25/01	290.8	<LLD	2.26E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	7/2/01	292.8	<LLD	2.67E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	7/9/01	287.2	<LLD	4.07E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	7/16/01	204.6	<LLD	3.91E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	7/23/01	292.0	<LLD	2.34E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	7/30/01	292.5	<LLD	2.09E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	8/6/01	292.6	<LLD	2.93E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	8/13/01	285.0	<LLD	2.55E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	8/20/01	284.9	<LLD	2.21E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	8/27/01	282.6	<LLD	3.76E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	9/3/01	285.9	<LLD	3.50E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	9/10/01	282.7	<LLD	2.82E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	9/17/01	281.1	<LLD	2.26E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	9/24/01	282.1	<LLD	2.41E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	10/1/01	276.6	<LLD	2.05E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	10/8/01	280.3	<LLD	2.49E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	10/15/01	278.2	<LLD	2.02E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	10/22/01	274.6	<LLD	2.21E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	10/29/01	280.3	<LLD	4.88E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/5/01	271.8	<LLD	2.71E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/12/01	275.8	<LLD	1.73E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/19/01	272.0	<LLD	3.79E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/26/01	274.4	<LLD	2.46E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	12/3/01	279.3	<LLD	2.85E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD	
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/10/01	273.9	<LLD	2.41E-02
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/17/01	273.6	<LLD	2.62E-02
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/24/01	273.7	<LLD	2.75E-02
203	2.3 MI SSW - SOUTHPORT SUBSTATION	12/31/01	266.8	<LLD	4.70E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/1/01	269.0	<LLD	3.63E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/8/01	270.8	<LLD	2.88E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/15/01	275.4	<LLD	3.55E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/22/01	278.7	<LLD	3.28E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	1/29/01	275.5	<LLD	4.26E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/5/01	276.7	<LLD	3.11E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/12/01	277.9	<LLD	3.42E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/19/01	279.0	<LLD	1.77E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	2/26/01	278.9	<LLD	3.37E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/5/01	280.8	<LLD	2.82E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/12/01	275.7	<LLD	3.06E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/19/01	281.6	<LLD	2.77E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	3/26/01	277.7	<LLD	3.67E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/2/01	277.1	<LLD	3.37E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/9/01	282.7	<LLD	1.75E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/16/01	287.4	<LLD	2.90E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/23/01	282.2	<LLD	2.95E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	4/30/01	284.4	<LLD	3.08E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/7/01	286.7	<LLD	2.46E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/14/01	287.3	<LLD	3.34E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/21/01	288.2	<LLD	3.40E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	5/28/01	291.7	<LLD	3.86E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	6/4/01	286.9	<LLD	1.73E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	6/11/01	292.0	<LLD	3.10E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	6/18/01	290.6	<LLD	2.70E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	6/25/01	292.5	<LLD	3.01E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	7/2/01	292.4	<LLD	3.81E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	7/9/01	290.0	<LLD	2.53E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	7/16/01	292.9	<LLD	2.78E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	7/23/01	291.0	<LLD	3.74E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	7/30/01	290.4	<LLD	3.41E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	8/6/01	291.1	<LLD	3.16E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	8/13/01	285.3	<LLD	3.92E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	8/20/01	286.5	<LLD	3.04E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	8/27/01	285.8	<LLD	1.71E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	9/3/01	286.7	<LLD	3.24E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	9/10/01	284.6	<LLD	3.48E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	9/17/01	283.6	<LLD	3.73E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	9/24/01	285.6	<LLD	3.64E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	10/1/01	281.1	<LLD	3.99E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	10/8/01	283.8	<LLD	3.54E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	10/15/01	282.8	<LLD	3.72E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	10/22/01	282.3	<LLD	2.38E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	10/29/01	283.4	<LLD	2.26E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/5/01	281.8	<LLD	4.03E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/12/01	279.5	<LLD	3.61E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/19/01	279.4	<LLD	3.15E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/26/01	279.7	<LLD	3.80E-02



# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD	
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/3/01	281.1	<LLD	3.21E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/10/01	280.0	<LLD	1.33E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/17/01	279.7	<LLD	3.67E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/24/01	204.4	<LLD	4.76E-02
204	23.0 MI NNE - SUTTON PLANT (CONTROL)	12/31/01	265.6	<LLD	4.72E-02
205	0.6 MI SSE - SPOIL POND	1/1/01	242.2	<LLD	4.77E-02
205	0.6 MI SSE - SPOIL POND	1/8/01	275.2	<LLD	3.66E-02
205	0.6 MI SSE - SPOIL POND	1/15/01	280.9	<LLD	4.98E-02
205	0.6 MI SSE - SPOIL POND	1/22/01	285.1	<LLD	3.76E-02
205	0.6 MI SSE - SPOIL POND	1/29/01	280.9	<LLD	3.58E-02
205	0.6 MI SSE - SPOIL POND	2/5/01	289.0	<LLD	3.91E-02
205	0.6 MI SSE - SPOIL POND	2/12/01	292.4	<LLD	4.43E-02
205	0.6 MI SSE - SPOIL POND	2/19/01	294.5	<LLD	3.14E-02
205	0.6 MI SSE - SPOIL POND	2/26/01	294.2	<LLD	2.83E-02
205	0.6 MI SSE - SPOIL POND	3/5/01	294.7	<LLD	2.86E-02
205	0.6 MI SSE - SPOIL POND	3/12/01	287.7	<LLD	3.49E-02
205	0.6 MI SSE - SPOIL POND	3/19/01	295.9	<LLD	2.70E-02
205	0.6 MI SSE - SPOIL POND	3/26/01	295.7	<LLD	3.24E-02
205	0.6 MI SSE - SPOIL POND	4/2/01	292.4	<LLD	3.02E-02
205	0.6 MI SSE - SPOIL POND	4/9/01	298.8	<LLD	2.54E-02
205	0.6 MI SSE - SPOIL POND	4/16/01	300.6	<LLD	3.13E-02
205	0.6 MI SSE - SPOIL POND	4/23/01	299.5	<LLD	3.18E-02
205	0.6 MI SSE - SPOIL POND	4/30/01	295.6	<LLD	2.39E-02
205	0.6 MI SSE - SPOIL POND	5/7/01	300.0	<LLD	3.45E-02
205	0.6 MI SSE - SPOIL POND	5/14/01	302.7	<LLD	3.46E-02
205	0.6 MI SSE - SPOIL POND	5/21/01	302.1	<LLD	2.54E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

Sample Point	Sample Date	Quantity	Activity	LLD
205 0.6 MI SSE - SPOIL POND	5/28/01	304.4	<LLD	3.83E-02
205 0.6 MI SSE - SPOIL POND	6/4/01	300.6	<LLD	2.72E-02
205 0.6 MI SSE - SPOIL POND	6/11/01	289.4	<LLD	3.52E-02
205 0.6 MI SSE - SPOIL POND	6/18/01	302.0	<LLD	3.24E-02
205 0.6 MI SSE - SPOIL POND	6/25/01	302.8	<LLD	2.86E-02
205 0.6 MI SSE - SPOIL POND	7/2/01	304.2	<LLD	2.43E-02
205 0.6 MI SSE - SPOIL POND	7/9/01	303.7	<LLD	3.60E-02
205 0.6 MI SSE - SPOIL POND	7/16/01	304.7	<LLD	3.57E-02
205 0.6 MI SSE - SPOIL POND	7/23/01	302.7	<LLD	1.51E-02
205 0.6 MI SSE - SPOIL POND	7/30/01	303.7	<LLD	2.60E-02
205 0.6 MI SSE - SPOIL POND	8/6/01	184.4	<LLD	2.96E-02
205 0.6 MI SSE - SPOIL POND	8/13/01	280.9	<LLD	3.70E-02
205 0.6 MI SSE - SPOIL POND	8/20/01	285.1	<LLD	3.59E-02
205 0.6 MI SSE - SPOIL POND	8/27/01	283.9	<LLD	3.98E-02
205 0.6 MI SSE - SPOIL POND	9/3/01	285.8	<LLD	3.26E-02
205 0.6 MI SSE - SPOIL POND	9/10/01	283.5	<LLD	4.38E-02
205 0.6 MI SSE - SPOIL POND	9/17/01	285.0	<LLD	4.52E-02
205 0.6 MI SSE - SPOIL POND	9/24/01	285.6	<LLD	3.98E-02
205 0.6 MI SSE - SPOIL POND	10/1/01	282.2	<LLD	4.36E-02
205 0.6 MI SSE - SPOIL POND	10/8/01	194.8	<LLD	5.53E-02
205 0.6 MI SSE - SPOIL POND	10/15/01	280.0	<LLD	3.53E-02
205 0.6 MI SSE - SPOIL POND	10/22/01	282.9	<LLD	3.30E-02
205 0.6 MI SSE - SPOIL POND	10/29/01	283.3	<LLD	4.16E-02
205 0.6 MI SSE - SPOIL POND	11/5/01	280.9	<LLD	3.67E-02
205 0.6 MI SSE - SPOIL POND	11/12/01	283.6	<LLD	4.65E-02
205 0.6 MI SSE - SPOIL POND	11/19/01	279.4	<LLD	3.39E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Air Cartridge

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: Iodine

<i>Sample Point</i>		<i>Sample Date</i>	<i>Quantity</i>	<i>Activity</i>	<i>LLD</i>
205	0.6 MI SSE - SPOIL POND	11/26/01	281.9	<LLD	4.32E-02
205	0.6 MI SSE - SPOIL POND	12/3/01	283.8	<LLD	4.48E-02
205	0.6 MI SSE - SPOIL POND	12/10/01	282.4	<LLD	2.20E-02
205	0.6 MI SSE - SPOIL POND	12/17/01	281.5	<LLD	3.29E-02
205	0.6 MI SSE - SPOIL POND	12/24/01	280.9	<LLD	4.16E-02
205	0.6 MI SSE - SPOIL POND	12/31/01	274.1	<LLD	4.66E-02

# BSEP Radiological Environmental Monitoring Analysis Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/Liter

Analysis: Tritium

Sample Point	Sample Date	Quantity	Efficiency	Activity	LLD
400 0.7 MI NE - INTAKE CANAL (CONTROL)	1/31/01	0.005	2.90E-01	<LLD	2.88E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	2/28/01	0.005	4.41E-01	<LLD	3.01E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	3/31/01	0.005	4.41E-01	<LLD	3.00E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	4/30/01	0.005	4.40E-01	<LLD	2.90E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	5/31/01	0.005	4.37E-01	<LLD	2.99E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	6/30/01	0.005	4.37E-01	<LLD	2.95E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	7/31/01	0.005	4.36E-01	<LLD	2.97E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	8/31/01	0.005	4.37E-01	<LLD	3.00E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	9/30/01	0.005	4.38E-01	<LLD	3.16E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	10/31/01	0.005	2.86E-01	<LLD	3.09E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	11/30/01	0.005	4.40E-01	<LLD	2.91E+02
400 0.7 MI NE - INTAKE CANAL (CONTROL)	12/31/01	0.005	4.38E-01	<LLD	2.93E+02
401 4.9 MI SSW - DISCHARGE CANAL	1/31/01	0.005	2.90E-01	<LLD	2.88E+02
401 4.9 MI SSW - DISCHARGE CANAL	2/28/01	0.005	4.41E-01	<LLD	3.01E+02
401 4.9 MI SSW - DISCHARGE CANAL	3/31/01	0.005	4.39E-01	<LLD	3.02E+02
401 4.9 MI SSW - DISCHARGE CANAL	4/30/01	0.005	4.41E-01	<LLD	2.89E+02
401 4.9 MI SSW - DISCHARGE CANAL	5/31/01	0.005	4.37E-01	<LLD	2.99E+02
401 4.9 MI SSW - DISCHARGE CANAL	6/30/01	0.005	4.37E-01	<LLD	2.95E+02
401 4.9 MI SSW - DISCHARGE CANAL	7/31/01	0.005	4.36E-01	<LLD	2.97E+02
401 4.9 MI SSW - DISCHARGE CANAL	8/31/01	0.005	4.36E-01	<LLD	3.01E+02
401 4.9 MI SSW - DISCHARGE CANAL	9/30/01	0.005	4.37E-01	<LLD	3.17E+02
401 4.9 MI SSW - DISCHARGE CANAL	10/31/01	0.005	2.86E-01	<LLD	3.09E+02
401 4.9 MI SSW - DISCHARGE CANAL	11/30/01	0.005	4.39E-01	<LLD	2.92E+02
401 4.9 MI SSW - DISCHARGE CANAL	12/31/01	0.005	4.39E-01	<LLD	2.92E+02

**2001 BSEP**  
**A Progress Energy Company**  
**Radiological Environmental Monitoring**  
**Gamma Isotopic Report**  
**Comments**

- All AC and AP samples were available.
- Aquatic organism monitoring includes fish (free swimmers and bottom feeders), invertebrates (shellfish – (SH)), and Benthic organisms (BO). Invertebrates in the Gamma Isotopic data are represented by SH/BO\*.

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
200 1.0 MI SW - VISITORS CENTER	2/15/01	3346.8	K-40	1.42E-02	1.11E-02
200 1.0 MI SW - VISITORS CENTER	2/15/01	3346.8	PB-212	9.09E-04	6.50E-04
200 1.0 MI SW - VISITORS CENTER	2/15/01	3346.8	BE-7	7.37E-02	1.33E-02
200 1.0 MI SW - VISITORS CENTER	5/15/01	3727.5	BE-7	1.18E-01	1.82E-02
200 1.0 MI SW - VISITORS CENTER	5/15/01	3727.5	PB-214	1.93E-03	1.48E-03
200 1.0 MI SW - VISITORS CENTER	8/15/01	3568	BE-7	1.18E-01	1.50E-02
200 1.0 MI SW - VISITORS CENTER	11/15/01	3979.4	BE-7	1.13E-01	7.10E-03
201 0.6 MI NE - PMAC	2/15/01	3424.3	BE-7	1.04E-01	1.29E-02
201 0.6 MI NE - PMAC	2/15/01	3424.3	PB-214	1.54E-03	1.24E-03
201 0.6 MI NE - PMAC	5/15/01	3614.2	BE-7	1.33E-01	1.52E-02
201 0.6 MI NE - PMAC	5/15/01	3614.2	PB-214	2.81E-03	1.19E-03
201 0.6 MI NE - PMAC	8/15/01	3642.2	BE-7	9.94E-02	1.35E-02
201 0.6 MI NE - PMAC	11/15/01	3778.5	BE-7	1.04E-01	7.30E-03
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/15/01	3642.5	BE-7	1.08E-01	1.51E-02
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/15/01	3642.5	BI-214	2.87E-03	1.37E-03
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/15/01	3642.5	PB-214	2.22E-03	1.82E-03
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/15/01	3990.2	K-40	4.63E-02	1.15E-02
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	5/15/01	3990.2	BE-7	1.20E-01	1.79E-02
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	8/15/01	3687.8	BE-7	1.10E-01	1.80E-02
202 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	11/15/01	3728.6	BE-7	1.21E-01	8.00E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	2/15/01	3388.5	BE-7	1.09E-01	1.49E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	5/15/01	3665.3	BE-7	1.11E-01	1.56E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	8/15/01	3646	BE-7	9.61E-02	1.72E-02
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/15/01	2651.3	BE-7	1.60E-01	8.80E-03

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Air Particulate

Quantity: CUBIC METERS

Concentration (Activity): pCi/cubic meter

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/15/01	2651.3	K-40	4.09E-02	6.19E-03
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/15/01	2651.3	TL-208	3.63E-04	3.44E-04
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/15/01	2651.3	PB-212	1.22E-03	3.25E-04
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/15/01	2651.3	BI-214	2.99E-03	8.57E-04
203 2.3 MI SSW - SOUTHPORT SUBSTATION	11/15/01	2651.3	PB-214	2.61E-03	7.99E-04
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	2/15/01	3597.7	BE-7	9.72E-02	1.35E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	5/15/01	3729.6	BE-7	1.23E-01	1.38E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	5/15/01	3729.6	PB-214	1.98E-03	1.28E-03
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	8/15/01	3745.9	BE-7	1.22E-01	1.83E-02
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	8/15/01	3745.9	PB-214	3.44E-03	2.01E-03
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/15/01	3844.6	BE-7	1.13E-01	8.00E-03
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/15/01	3844.6	BI-214	4.24E-03	8.61E-04
204 23.0 MI NNE - SUTTON PLANT (CONTROL)	11/15/01	3844.6	PB-214	4.31E-03	8.14E-04
205 0.6 MI SSE - SPOIL POND	2/15/01	3708.4	K-40	4.71E-02	1.70E-02
205 0.6 MI SSE - SPOIL POND	2/15/01	3708.4	BE-7	7.84E-02	1.59E-02
205 0.6 MI SSE - SPOIL POND	5/15/01	3890.9	BE-7	1.19E-01	1.54E-02
205 0.6 MI SSE - SPOIL POND	8/15/01	3693.3	BE-7	9.69E-02	2.22E-02
205 0.6 MI SSE - SPOIL POND	11/15/01	3851.7	PB-212	6.01E-04	4.60E-04
205 0.6 MI SSE - SPOIL POND	11/15/01	3851.7	BE-7	1.12E-01	7.50E-03

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: Cherry

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
800	0.7 MI NE - INTAKE CANAL	6/2/01	385.7	K-40	2.26E+00	5.58E-01
800	0.7 MI NE - INTAKE CANAL	6/2/01	385.7	BE-7	6.88E-01	2.55E-01
800	0.7 MI NE - INTAKE CANAL	7/1/01	538.9	BE-7	4.61E-01	1.68E-01
800	0.7 MI NE - INTAKE CANAL	7/1/01	538.9	K-40	3.73E+00	4.90E-01
800	0.7 MI NE - INTAKE CANAL	8/1/01	500.7	BE-7	6.83E-01	2.33E-01
800	0.7 MI NE - INTAKE CANAL	8/1/01	500.7	K-40	1.82E+00	4.09E-01
800	0.7 MI NE - INTAKE CANAL	9/1/01	636.7	K-40	4.34E+00	4.03E-01
800	0.7 MI NE - INTAKE CANAL	10/1/01	422.6	BE-7	8.95E-01	2.01E-01
800	0.7 MI NE - INTAKE CANAL	10/1/01	422.6	K-40	2.38E+00	4.29E-01
800	0.7 MI NE - INTAKE CANAL	11/1/01	504.1	K-40	1.68E+00	3.77E-01
800	0.7 MI NE - INTAKE CANAL	11/1/01	504.1	BE-7	9.07E-01	2.01E-01
801	0.6 MI SW - DISCHARGE CANAL	6/2/01	380.6	BE-7	4.90E-01	1.71E-01
801	0.6 MI SW - DISCHARGE CANAL	6/2/01	380.6	K-40	3.50E+00	5.65E-01
801	0.6 MI SW - DISCHARGE CANAL	7/1/01	484.1	BE-7	4.32E-01	1.31E-01
801	0.6 MI SW - DISCHARGE CANAL	7/1/01	484.1	K-40	3.76E+00	4.64E-01
801	0.6 MI SW - DISCHARGE CANAL	8/1/01	452.7	K-40	2.79E+00	4.73E-01
801	0.6 MI SW - DISCHARGE CANAL	8/1/01	452.7	BE-7	6.33E-01	1.86E-01
801	0.6 MI SW - DISCHARGE CANAL	9/1/01	515.8	K-40	2.35E+00	4.49E-01
801	0.6 MI SW - DISCHARGE CANAL	9/1/01	515.8	BE-7	5.69E-01	2.32E-01
801	0.6 MI SW - DISCHARGE CANAL	10/1/01	521.4	K-40	1.87E+00	4.20E-01
801	0.6 MI SW - DISCHARGE CANAL	10/1/01	521.4	BE-7	5.31E-01	1.91E-01
801	0.6 MI SW - DISCHARGE CANAL	11/1/01	549.4	K-40	3.31E+00	4.97E-01
801	0.6 MI SW - DISCHARGE CANAL	11/1/01	549.4	BE-7	5.35E-01	1.73E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	6/2/01	530.5	BE-7	3.65E-01	1.80E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	6/2/01	530.5	K-40	4.43E+00	5.09E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	7/1/01	558.8	BE-7	3.31E-01	1.23E-01



# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: Cherry

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
802	10.0 MI - NOT SPECIFIED (CONTROL)	7/1/01	558.8	K-40	3.95E+00	4.87E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	8/1/01	641.2	TL-208	2.40E-02	1.42E-02
802	10.0 MI - NOT SPECIFIED (CONTROL)	8/1/01	641.2	K-40	3.93E+00	3.98E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	9/1/01	471.5	RA-226	5.66E-01	4.87E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	9/1/01	471.5	BE-7	4.92E-01	2.16E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	9/1/01	471.5	K-40	4.32E+00	5.30E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	10/1/01	563.5	BE-7	6.85E-01	1.85E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	10/1/01	563.5	K-40	4.64E+00	4.64E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	11/1/01	554.7	BE-7	9.09E-01	1.94E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	11/1/01	554.7	K-40	3.57E+00	4.30E-01
803	0.6 MI SSE - SPOIL POND	6/2/01	405.7	BE-7	3.77E-01	1.99E-01
803	0.6 MI SSE - SPOIL POND	6/2/01	405.7	K-40	3.28E+00	5.25E-01
803	0.6 MI SSE - SPOIL POND	7/1/01	515.7	K-40	4.08E+00	4.52E-01
803	0.6 MI SSE - SPOIL POND	8/1/01	483.9	K-40	3.15E+00	5.04E-01
803	0.6 MI SSE - SPOIL POND	8/1/01	483.9	BE-7	2.47E-01	1.60E-01
803	0.6 MI SSE - SPOIL POND	9/1/01	497.7	K-40	4.14E+00	5.04E-01
803	0.6 MI SSE - SPOIL POND	9/1/01	497.7	BE-7	3.43E-01	1.80E-01
803	0.6 MI SSE - SPOIL POND	10/1/01	472.7	PB-214	1.22E-01	3.49E-02
803	0.6 MI SSE - SPOIL POND	10/1/01	472.7	K-40	3.24E+00	4.85E-01
803	0.6 MI SSE - SPOIL POND	10/1/01	472.7	BE-7	4.69E-01	1.43E-01
803	0.6 MI SSE - SPOIL POND	11/1/01	500.9	K-40	3.47E+00	4.88E-01
803	0.6 MI SSE - SPOIL POND	11/1/01	500.9	BE-7	5.41E-01	2.25E-01

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: Wax Myrtle

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
800	0.7 MI NE - INTAKE CANAL	1/1/01	513.2	K-40	2.14E+00	4.11E-01
800	0.7 MI NE - INTAKE CANAL	1/1/01	513.2	BE-7	9.39E-01	1.98E-01
800	0.7 MI NE - INTAKE CANAL	2/1/01	483.1	BE-7	1.32E+00	2.46E-01
800	0.7 MI NE - INTAKE CANAL	2/1/01	483.1	K-40	1.90E+00	4.21E-01
800	0.7 MI NE - INTAKE CANAL	3/1/01	388.1	BE-7	1.08E+00	1.95E-01
800	0.7 MI NE - INTAKE CANAL	3/1/01	388.1	K-40	2.06E+00	4.03E-01
800	0.7 MI NE - INTAKE CANAL	4/2/01	449.1	RA-226	4.35E-01	2.61E-01
800	0.7 MI NE - INTAKE CANAL	4/2/01	449.1	K-40	2.24E+00	3.76E-01
800	0.7 MI NE - INTAKE CANAL	4/2/01	449.1	BE-7	1.46E+00	2.08E-01
800	0.7 MI NE - INTAKE CANAL	5/1/01	387.6	BE-7	1.88E+00	2.36E-01
800	0.7 MI NE - INTAKE CANAL	5/1/01	387.6	RA-226	3.67E-01	3.20E-01
800	0.7 MI NE - INTAKE CANAL	5/1/01	387.6	K-40	2.66E+00	5.00E-01
800	0.7 MI NE - INTAKE CANAL	12/1/01	412.2	BE-7	7.44E-01	1.72E-01
800	0.7 MI NE - INTAKE CANAL	12/1/01	412.2	K-40	2.02E+00	4.54E-01
801	0.6 MI SW - DISCHARGE CANAL	1/1/01	500.1	BE-7	3.97E-01	1.72E-01
801	0.6 MI SW - DISCHARGE CANAL	1/1/01	500.1	K-40	1.81E+00	4.24E-01
801	0.6 MI SW - DISCHARGE CANAL	2/1/01	444.6	BE-7	5.16E-01	1.83E-01
801	0.6 MI SW - DISCHARGE CANAL	2/1/01	444.6	K-40	1.55E+00	3.98E-01
801	0.6 MI SW - DISCHARGE CANAL	3/1/01	492	K-40	1.59E+00	4.60E-01
801	0.6 MI SW - DISCHARGE CANAL	3/1/01	492	BE-7	6.26E-01	1.94E-01
801	0.6 MI SW - DISCHARGE CANAL	4/2/01	554.2	K-40	2.16E+00	4.09E-01
801	0.6 MI SW - DISCHARGE CANAL	4/2/01	554.2	BE-7	8.29E-01	2.18E-01
801	0.6 MI SW - DISCHARGE CANAL	5/1/01	386.6	BE-7	5.82E-01	1.89E-01
801	0.6 MI SW - DISCHARGE CANAL	5/1/01	386.6	K-40	2.80E+00	5.63E-01
801	0.6 MI SW - DISCHARGE CANAL	12/1/01	444.8	BI-214	7.88E-02	5.17E-02
801	0.6 MI SW - DISCHARGE CANAL	12/1/01	444.8	BE-7	5.73E-01	1.41E-01

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Broadleaf Vegetation

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Media: Wax Myrtle

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
801	0.6 MI SW - DISCHARGE CANAL	12/1/01	444.8	K-40	1.64E+00	3.70E-01
801	0.6 MI SW - DISCHARGE CANAL	12/1/01	444.8	PB-212	2.50E-02	1.98E-02
802	10.0 MI - NOT SPECIFIED (CONTROL)	1/1/01	534.8	K-40	2.18E+00	4.01E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	1/1/01	534.8	BE-7	1.13E+00	2.31E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	2/1/01	459.5	K-40	1.32E+00	3.39E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	2/1/01	459.5	BE-7	8.81E-01	2.46E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	3/1/01	512.2	K-40	1.43E+00	3.39E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	3/1/01	512.2	BE-7	8.68E-01	2.05E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	4/2/01	500.2	BE-7	1.37E+00	2.68E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	4/2/01	500.2	K-40	2.31E+00	4.26E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	5/1/01	416.2	K-40	2.98E+00	5.18E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	5/1/01	416.2	BE-7	3.51E-01	2.50E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	12/1/01	450.9	BE-7	9.02E-01	2.19E-01
802	10.0 MI - NOT SPECIFIED (CONTROL)	12/1/01	450.9	K-40	2.55E+00	4.62E-01
803	0.6 MI SSE - SPOIL POND	1/1/01	527.4	K-40	2.24E+00	4.35E-01
803	0.6 MI SSE - SPOIL POND	1/1/01	527.4	BE-7	7.47E-01	1.83E-01
803	0.6 MI SSE - SPOIL POND	2/1/01	495.3	BE-7	6.23E-01	2.40E-01
803	0.6 MI SSE - SPOIL POND	2/1/01	495.3	K-40	1.81E+00	4.46E-01
803	0.6 MI SSE - SPOIL POND	3/1/01	439.8	BE-7	7.21E-01	1.98E-01
803	0.6 MI SSE - SPOIL POND	3/1/01	439.8	K-40	1.72E+00	5.02E-01
803	0.6 MI SSE - SPOIL POND	4/2/01	483	BE-7	1.08E+00	2.32E-01
803	0.6 MI SSE - SPOIL POND	4/2/01	483	K-40	2.32E+00	3.99E-01
803	0.6 MI SSE - SPOIL POND	5/1/01	454.8	BE-7	8.52E-01	1.88E-01
803	0.6 MI SSE - SPOIL POND	5/1/01	454.8	K-40	3.93E+00	4.60E-01
803	0.6 MI SSE - SPOIL POND	12/1/01	408.6	K-40	2.57E+00	3.93E-01
803	0.6 MI SSE - SPOIL POND	12/1/01	408.6	BE-7	7.36E-01	2.78E-01

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Fish and Invertebrates

Quantity: GRAMS (wet)

Concentration (Activity): pCi/gm wet

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
700	5.5 MI SSW - FREE SWIMMERS AT DISCHARGE	5/15/01	624.1	K-40	3.36E+00	1.06E+00
700	5.5 MI SSW - FREE SWIMMERS AT DISCHARGE	10/19/01	560.2	K-40	4.39E+00	9.30E-01
701	5.5 MI SSW - BOTTOM FEEDER AT DISCHARGE	5/15/01	500.9	K-40	3.49E+00	9.25E-01
701	5.5 MI SSW - BOTTOM FEEDER AT DISCHARGE	10/15/01	441.6	K-40	2.06E+00	1.22E+00
702	5.5 MI SSW - SH/BO* AT DISCHARGE	5/16/01	573	K-40	1.42E+00	9.08E-01
702	5.5 MI SSW - SH/BO* AT DISCHARGE	10/19/01	669	K-40	2.52E+00	6.80E-01
703	FREE SWIMMERS - ATLANTIC OCEAN (CONTROL)	5/15/01	638.3	K-40	4.89E+00	1.06E+00
703	FREE SWIMMERS - ATLANTIC OCEAN (CONTROL)	10/19/01	396.9	K-40	5.02E+00	1.24E+00
704	BOTTOM FEEDER - ATLANTIC OCEAN (CONTROL)	5/15/01	354.4	K-40	4.88E+00	1.16E+00
704	BOTTOM FEEDER - ATLANTIC OCEAN (CONTROL)	10/15/01	417.9	K-40	3.04E+00	1.05E+00
705	SH/BO* - ATLANTIC OCEAN (CONTROL)	5/15/01	500.6	K-40	2.88E+00	1.14E+00
705	SH/BO* - ATLANTIC OCEAN (CONTROL)	10/19/01	746.4	K-40	1.61E+00	6.31E-01

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

*Media Type: Shoreline Sediment*

*Quantity: GRAMS (dry)*

*Concentration (Activity): pCi/gm dry*

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
500 4.9 MI SSW - DISCHARGE	5/21/01	1378.3	PB-214	1.36E-01	4.77E-02
500 4.9 MI SSW - DISCHARGE	5/21/01	1378.3	TL-208	3.48E-02	2.13E-02
500 4.9 MI SSW - DISCHARGE	5/21/01	1378.3	K-40	9.91E-01	3.82E-01
500 4.9 MI SSW - DISCHARGE	10/22/01	1439.6	PB-214	1.85E-01	5.35E-02
500 4.9 MI SSW - DISCHARGE	10/22/01	1439.6	BI-214	1.77E-01	6.59E-02
500 4.9 MI SSW - DISCHARGE	10/22/01	1439.6	K-40	1.84E+00	4.07E-01

# BSEP Radiological Environmental Monitoring Gamma Isotopic Report

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

Sample Point	Sample Date	Quantity	Isotope	Activity	2 Sigma Error	
400	0.7 MI NE - INTAKE CANAL (CONTROL)	1/31/01	1	K-40	3.37E+02	1.11E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	2/28/01	1	K-40	2.28E+02	1.08E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	3/31/01	1	K-40	1.82E+02	1.02E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	4/30/01	1	K-40	1.18E+02	8.65E+01
400	0.7 MI NE - INTAKE CANAL (CONTROL)	5/31/01	1	K-40	2.87E+02	8.91E+01
400	0.7 MI NE - INTAKE CANAL (CONTROL)	6/30/01	1	K-40	2.69E+02	1.03E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	6/30/01	1	BI-214	4.57E+01	1.42E+01
400	0.7 MI NE - INTAKE CANAL (CONTROL)	6/30/01	1	PB-214	2.02E+01	1.37E+01
400	0.7 MI NE - INTAKE CANAL (CONTROL)	7/31/01	1	BI-214	1.11E+01	9.93E+00
400	0.7 MI NE - INTAKE CANAL (CONTROL)	7/31/01	1	K-40	2.93E+02	1.17E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	8/31/01	1	K-40	3.13E+02	1.10E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	9/30/01	1	K-40	3.71E+02	1.13E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	10/31/01	1	K-40	3.44E+02	1.15E+02
400	0.7 MI NE - INTAKE CANAL (CONTROL)	10/31/01	1	PB-212	8.12E+00	7.05E+00
400	0.7 MI NE - INTAKE CANAL (CONTROL)	11/30/01	1	K-40	3.28E+02	8.23E+01
400	0.7 MI NE - INTAKE CANAL (CONTROL)	11/30/01	1	RA-226	1.39E+02	6.70E+01
400	0.7 MI NE - INTAKE CANAL (CONTROL)	12/31/01	1	K-40	3.39E+02	1.22E+02
401	4.9 MI SSW - DISCHARGE CANAL	1/31/01	1	K-40	2.98E+02	1.10E+02
401	4.9 MI SSW - DISCHARGE CANAL	2/28/01	1	K-40	2.47E+02	1.10E+02
401	4.9 MI SSW - DISCHARGE CANAL	3/31/01	1	K-40	2.40E+02	1.08E+02
401	4.9 MI SSW - DISCHARGE CANAL	4/30/01	1	K-40	6.26E+02	9.90E+01
401	4.9 MI SSW - DISCHARGE CANAL	5/31/01	1	K-40	3.68E+02	1.16E+02
401	4.9 MI SSW - DISCHARGE CANAL	6/30/01	1	K-40	2.77E+02	8.56E+01
401	4.9 MI SSW - DISCHARGE CANAL	6/30/01	1	RA-226	1.50E+02	1.34E+02
401	4.9 MI SSW - DISCHARGE CANAL	6/30/01	1	BI-214	1.76E+01	1.26E+01
401	4.9 MI SSW - DISCHARGE CANAL	7/31/01	1	K-40	2.82E+02	1.13E+02

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

Media Type: Surface Water

Quantity: Liters

Concentration (Activity): pCi/L

<b><i>Sample Point</i></b>	<b><i>Sample Date</i></b>	<b><i>Quantity</i></b>	<b><i>Isotope</i></b>	<b><i>Activity</i></b>	<b><i>2 Sigma Error</i></b>
401 4.9 MI SSW - DISCHARGE CANAL	8/31/01	1	K-40	6.69E+02	1.38E+02
401 4.9 MI SSW - DISCHARGE CANAL	9/30/01	1	K-40	1.64E+02	1.05E+02
401 4.9 MI SSW - DISCHARGE CANAL	10/31/01	1	K-40	3.27E+02	1.12E+02
401 4.9 MI SSW - DISCHARGE CANAL	11/30/01	1	K-40	3.18E+02	1.22E+02
401 4.9 MI SSW - DISCHARGE CANAL	12/31/01	1	K-40	3.19E+02	1.17E+02