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U. S. Nuclear Regulatory Commission
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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
2000 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

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 2000 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.

Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Supervisor - Licensing, at (910) 457-2073.

Sincerely,

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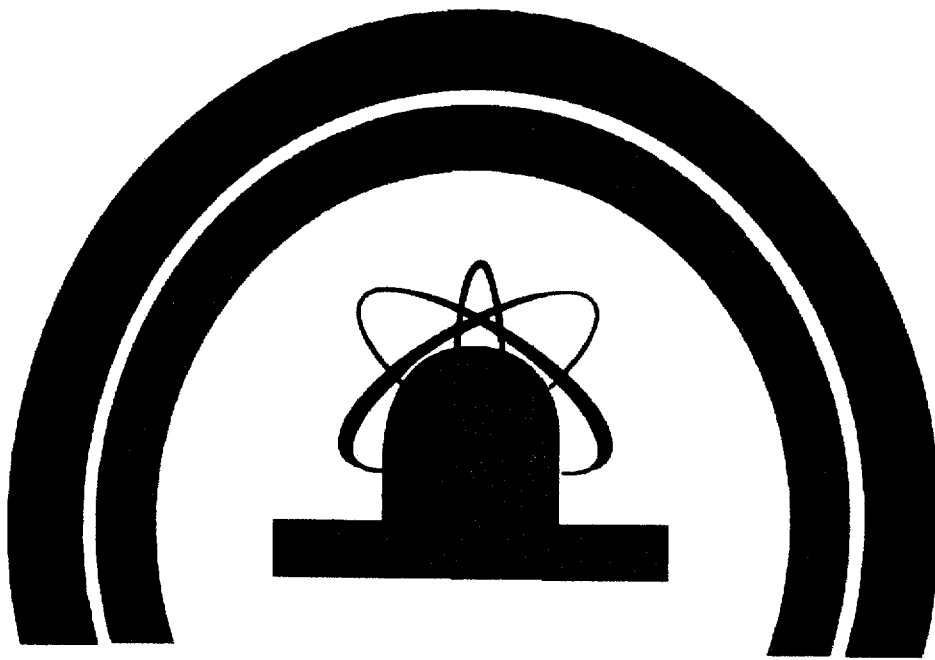
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ENCLOSURE

BRUNSWICK STEAM ELECTRIC PLANT
2000 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

**RADIOLOGICAL
ENVIRONMENTAL OPERATING**



REPORT

2000

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

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

**RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT
FOR
BRUNSWICK STEAM ELECTRIC PLANT
JANUARY 1 THROUGH DECEMBER 31, 2000**

Prepared by:

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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) 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, 2000 through December 31, 2000.

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 1631 Megawatts electric (Mwe) (820 Mwe, Unit 1, and 811 Mwe, Unit 2).

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.

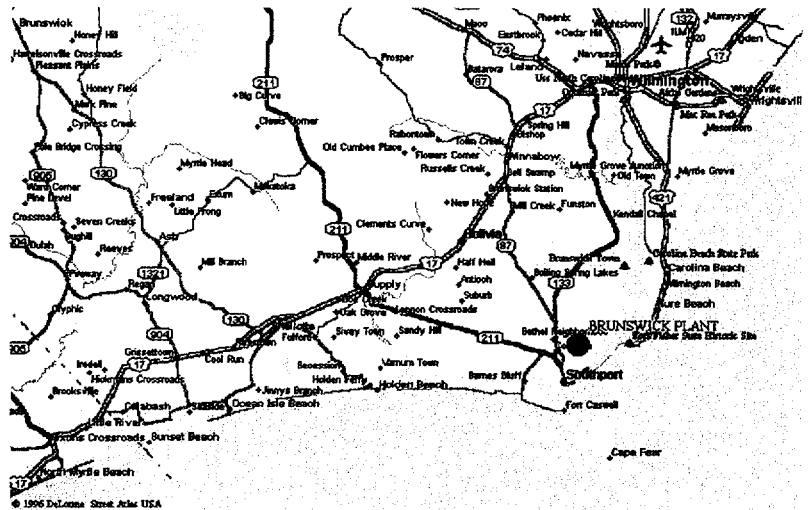


Figure 1: Location of Brunswick Steam Electric Plant

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.

BSEP consists of two boiling water reactors with a design rating of 1631 Megawatts electric (Mwe) (820 Mwe, Unit 1, and 811 Mwe, Unit 2).

This map provides a comprehensive view of the Wilmington, North Carolina region. Major highways are clearly marked with their respective numbers, including I-95, I-405, I-17, and various US and NC routes. The map shows the extensive network of roads connecting major centers like Wilmington and Brunswick to surrounding areas. Key landmarks such as the Brunswick Plant, a large airport, and several state parks are highlighted. The map also includes numerous smaller towns and villages, providing a detailed view of the local infrastructure and geography. The map is oriented with North at the top.

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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

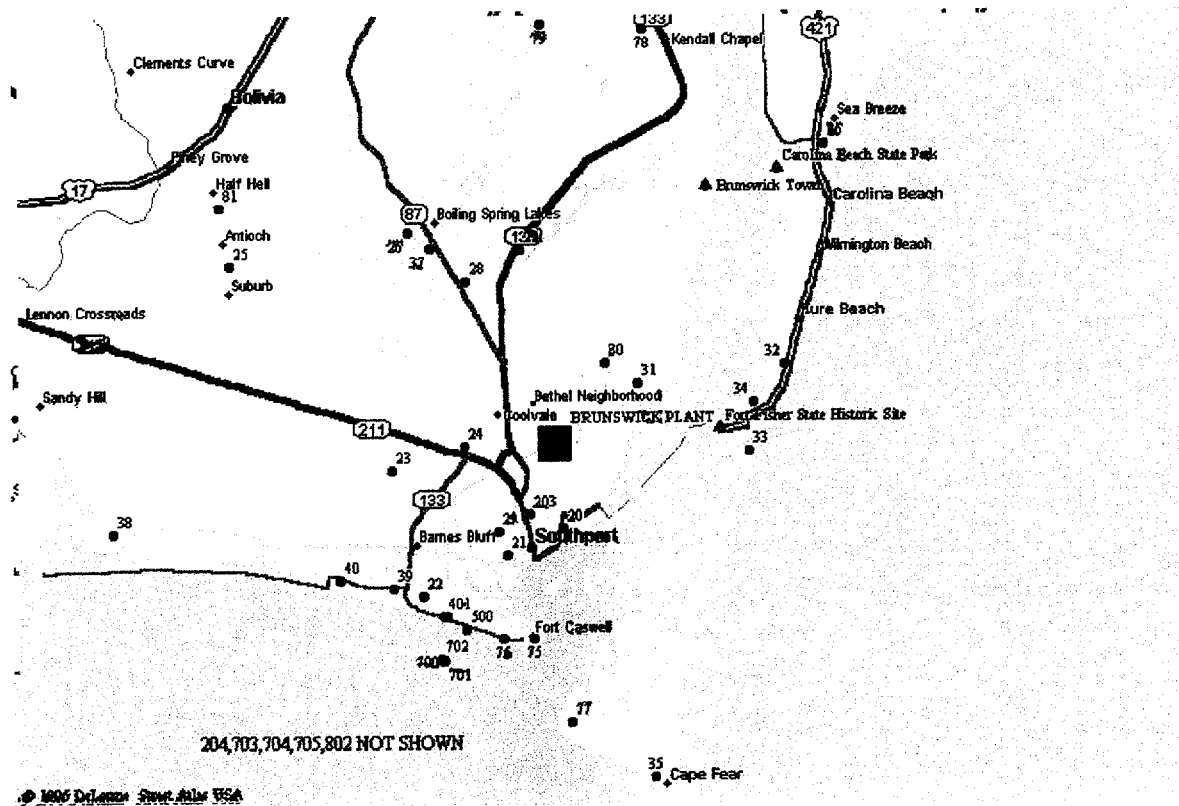


Figure 2: Radiological Sampling Locations (Distant from Plant) (Scale 1 inch = 3.08 miles)

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

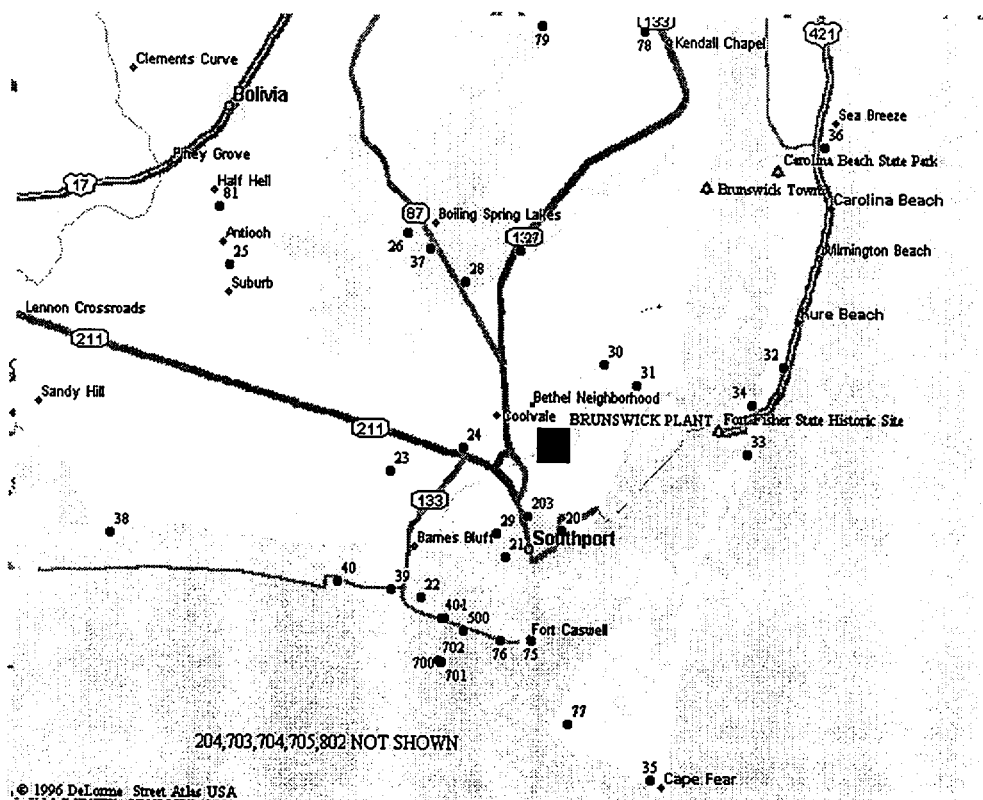


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Radiological Sampling Locations

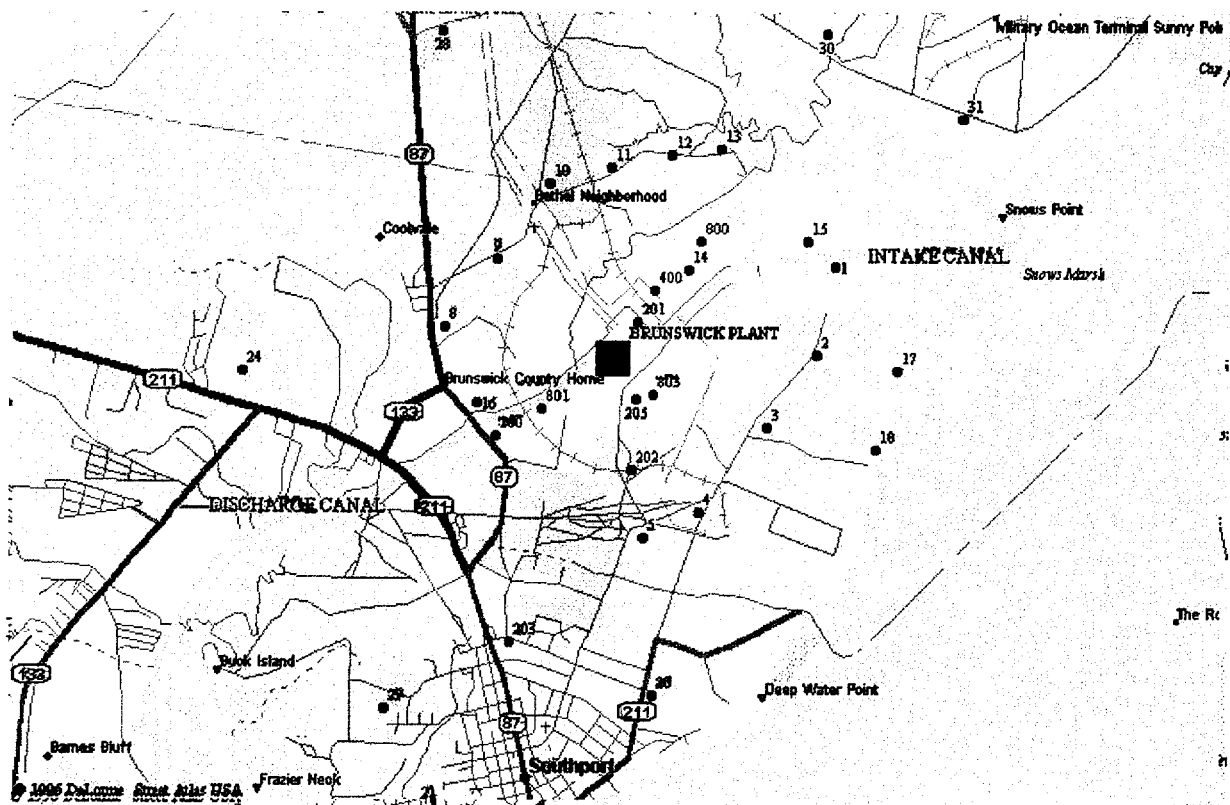


Figure 3: Radiological Sampling Locations (Nearest Plant) (Scale 1 inch = .8 miles)

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

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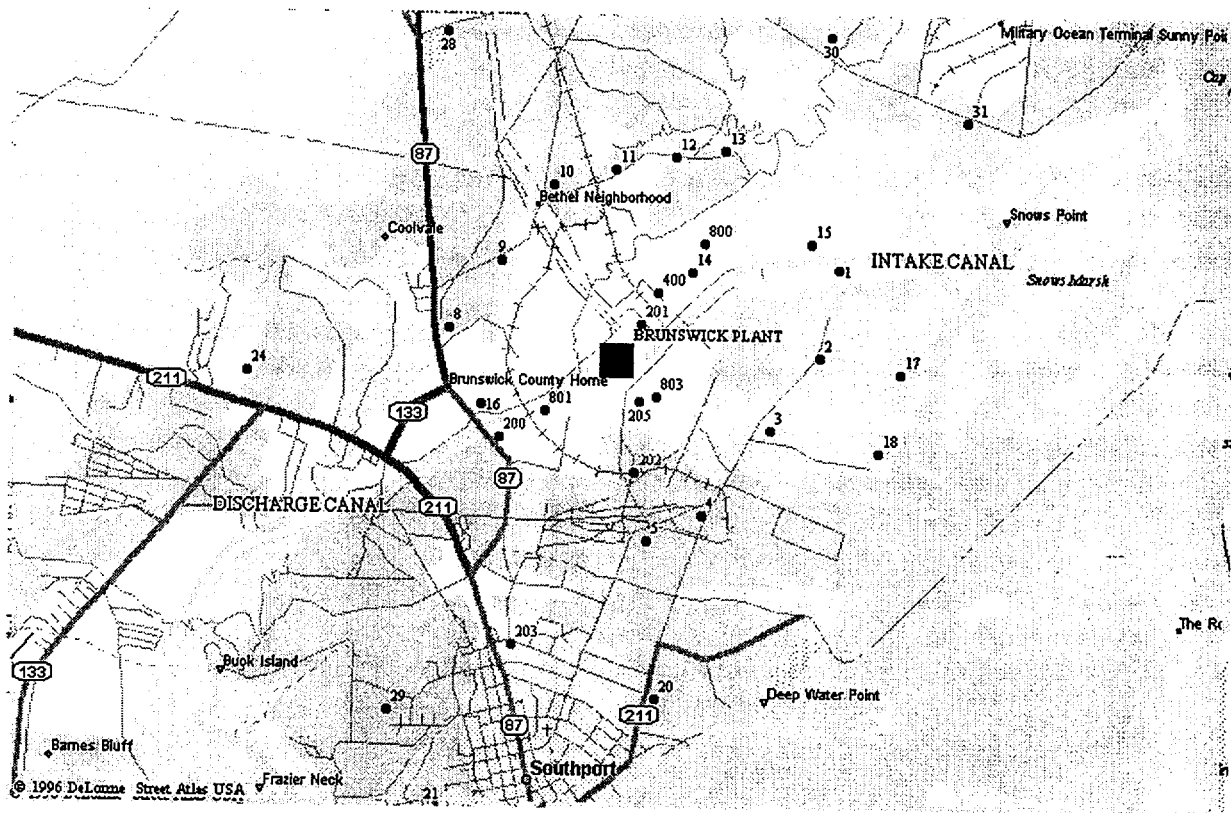


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Stations not illustrated:

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

802 (Location not specified) (Control Vegetation)

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 ³ (300 m ³)	Iodine
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 ³ (300 m ³)	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
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

Sample Type	Location & Description	Frequency	Sample Sz	Analysis
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 2000 for BSEP. The program was conducted in accordance with the ODCM, and applicable procedures.

The 2000 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 2000. 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 2000 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 2000 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 2000.

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 2000

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) ⁽¹⁾	All Indicator Locations ⁽²⁾ Mean Range	Location w/Highest Annual Mean		Control Locations Mean Range ⁽²⁾
				Name, Distance, and Direction	Mean Range ⁽²⁾	
Air Cartridge (pCi/m ³)	I-131 312 ⁽³⁾	3.0E-2	All less than LLD		All less than LLD	All less than LLD
Air Particulate (pCi/m ³)	Gross Beta 312 ⁽³⁾	3.0E-3	1.97E-2 (260/260) ⁽⁷⁾ 5.83E-3 – 5.04E-2	Southport Substation 2.3 miles SSW	2.08E-2 (52/52) ⁽⁷⁾ 5.83E-3 – 5.04E-2	2.01E-2 (52/52) ⁽⁷⁾ 8.61E-3 – 4.76E-2
	Gamma ⁽⁴⁾ 24	See Table 8	All less than LLD		All less than LLD	All less than LLD
Broadleaf Vegetation (pCi/g, wet)	Gamma ⁽⁴⁾ 48	See Table 8	All less than LLD		All less than LLD	All less than LLD
Fish and Invertebrates (pCi/g, wet)	Gamma ⁽⁴⁾ 12	See Table 8	All less than LLD		All less than LLD	All less than LLD
Sediments--Shoreline (pCi/g, dry)	Gamma ⁽⁴⁾ 2	See Table 8	All less than LLD		All less than LLD	No control
Surface Water (pCi/l)	Gamma ⁽⁴⁾ 24	See Table 8	All less than LLD		All less than LLD	All less than LLD
	Tritium 24	3.25E+2(24/24) ^{(6) (7)}	All less than LLD		All less than LLD	All less than LLD
TLD (mR per quarter) ⁽⁵⁾	TLD Readout 179 ⁽³⁾		9.69E+0 (175/176) ^{(7) 1} 6.90E+0 - 1.33E+1	Caswell Beach 4.8 miles SSW	1.22E+1 (4/4) ⁽⁷⁾ 1.11E+1 - 1.33E+1	1.11E+1 (4/4) ⁽⁷⁾ 9.50E+0 - 1.23E+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 $3.25\text{E}+2$ 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. Row Surface Water Tritium $3.25\text{E}+2$ (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 260 air particulate (AP) samples collected at indicator stations during 2000 was $1.97\text{E-}2$ picocuries per cubic meter (pCi/m^3) and the average gross beta concentration measured in 52 AP samples collected at control stations during 2000 was $2.01\text{E-}2$ pCi/m^3 . The preoperational (1973-1974) average concentration was $8.2\text{E-}2$ pCi/m^3 , while the average activity in the recent past (1995-1999) was $1.77\text{E-}2$ pCi/m^3 (Table 4). The airborne concentrations of gross beta activity in 2000 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.

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 260 indicator and 52 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 2000, 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 2000.

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 2000.

Shoreline Sediments

Two shoreline sediments in 2000 are 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 2000.

External Radiation Exposure

The environmental data on external radiation exposure for 2000 was essentially unchanged from 1989-1999 with an average exposure for all of 2000 indicator locations of 9.7 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 12.2 mR per quarter. Figure 10 depicts average inner and outer ring TLD data for each quarter of 2000. 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/m³)</u>							
	<u>Preoperational</u>		<u>Recent Operational</u>					
	<u>1973</u>	<u>1974</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>
AP-200	2.2E-2	1.4E-1	1.8E-2	1.7E-2	1.7E-2	1.8E-2	1.7E-2	2.0E-2
AP-201	3.1E-2	1.4E-1	1.9E-2	1.7E-2	1.7E-2	1.9E-2	1.8E-2	2.0E-2
AP-202	3.4E-2	1.4E-1	1.8E-2	1.7E-2	1.7E-2	1.8E-2	1.7E-2	2.0E-2
AP-203	2.4E-2	1.3E-1	1.9E-2	1.7E-2	1.7E-2	1.9E-2	1.8E-2	2.1E-2
AP-204*	2.5E-2	1.3E-1	1.9E-2	1.8E-2	1.8E-2	1.8E-2	1.8E-2	2.0E-2
AP-205	**	**	1.8E-2	1.7E-2	1.7E-2	1.8E-2	1.7E-2	1.9E-2

* Control location

** This sample point added post-operational.

TABLE 5
Brunswick Steam Electric Plant
HISTORICAL TLD RESULTS (1972-2000)

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)

*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 2000.

Food Crops / Vegetation

No food crops were grown in the vicinity of the plant in 2000; 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 2000. The missing TLD occurred:

Second Quarter - TLD 12 was missing in the field when the tree it was on was cut down.

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 $3.0\text{E-}3$ pCi/m³.

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 $3.25\text{E}+2$ 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 $3.0\text{E-}2$ pCi/m³.

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

The 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 2000, 46 analyses were completed on 12 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 46 analyses have been received from Analytics, Inc.

If Cross-Check samples or checks exceed internal controls, corrective actions are taken. Two of the 46 analyses exceeded the $\pm 20\%$ acceptable ratio to the known value as supplied by Analytics, Inc. An evaluation performance on the missed analyses to identify any recommended remedial actions and to reduce anomalous errors will be performed. The analyses that exceeded the $\pm 20\%$ do not indicate a trend and the related environmental analyses' results were not impacted. Complete documentation on the evaluation by a condition report 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

Surface Water Samples (Saline Water)	
Isotope	LLD (pCi/l)
Mn-54	6
Co-58	6
Fe-59	13
Co-60	6
Zn-65	14
Zr-Nb-95	7
Cs-134	6
Cs-137	6
Ba-La-140	9
Other Expected Gamma Emitters	4 to 166
Air Particulates (Quarterly Composite)	
Isotope	LLD (pCi/m³)
I-131	0.084
Cs-134	0.003
Cs-137	0.003
Other Expected Gamma Emitters	0.001 to 0.084
Shoreline Sediment	
Isotope	LLD (pCi/kg, dry)
Cs-134	73
Cs-137	47
Other Expected Gamma Emitters	42 to 1675
Fish	
Isotope	LLD (pCi/kg, wet)
Mn-54	50
Co-58	40
Fe-59	98
Co-60	70
Zn-65	139
Cs-134	65
Cs-137	55
Other Expected Gamma Emitters	38 to 1121
Food Products and Vegetation	
Isotope	LLD (pCi/kg, wet)
I-131	35
Cs-134	25
Cs-137	35
Other Expected Gamma Emitters	20 to 625

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.

2000 Land Use Census Results

The 1999 and 2000 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 2000 identified a change in the distance of the nearest resident from plant center in one sector. The garden portion of the census identified changes in the distances of the nearest garden in seven sectors.

A garden was deleted in the East South East (ESE) sector, and the nearest garden location changed in the North (N) sector at 0.9 miles, South (S) sector at 1.9 miles, West South West (WSW) sector at 1.2 miles, West (W) sector at 1.1 miles, West North West (WNW) sector at 1.0 mile, and the Northwest (NW) sector at 4.8 miles. No milk animals are located within the 5 miles of the plant; however, four beef cattle with pasture were located 0.9 miles from the plant in the Southeast (SE) and South South East (SSE) sectors.

The 2000 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 2000 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 (1999-2000)
NEAREST PATHWAY (MILES)

SECTOR	RESIDENT		GARDEN		MILK/MEAT ANIMALS	
	2000	1999	2000	1999	2000	1999
N	0.7	0.7	0.9*	0.7	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*	1.5	None	None
SE	0.9	0.9	None	None	None/0.9**	None
SSE	1.0	1.0	None	None	None/0.9**	None
S	1.1*	1.2	1.9*	1.2	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*	1.4	None	None
W	0.8	0.8	1.1*	0.8	None	None
WNW	0.8	0.8	1.0*	1.2	None	None
NW	0.9	0.9	4.8*	1.0	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 four beef cattle with pasture were located 0.9 miles from the plant in these sectors.

TABLE 8
Brunswick Steam Electric Plant
GARDEN CENSUS (2000)

SECTOR	DISTANCE (miles)		SECTOR	DISTANCE (miles)
N	0.9		WSW	1.4
NNE	1.2		WSW	1.8
NE	None		WSW	2.1
ENE	None		WSW	2.9
E	None		W	1.1
ESE	None		W	1.2
SE	None		W	2.4
SSE	None		W	2.6
S	1.9		WNW	1.0 -
S	1.9		WWN	1.1
S	1.9		WNW	1.1
S	2.2		NW	4.8
SSW	1.5		NNW	4.4
SSW	1.5			
SSW	1.6			
SSW	1.9			
SSW	1.9			
SSW	1.9			
SSW	2.1			
SSW	2.5			
SSW	2.7			
SSW	2.8			
SW	2.9			
WSW	1.2			

Figure 4 For BSEP From 1/1/2000 To 12/31/2000

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

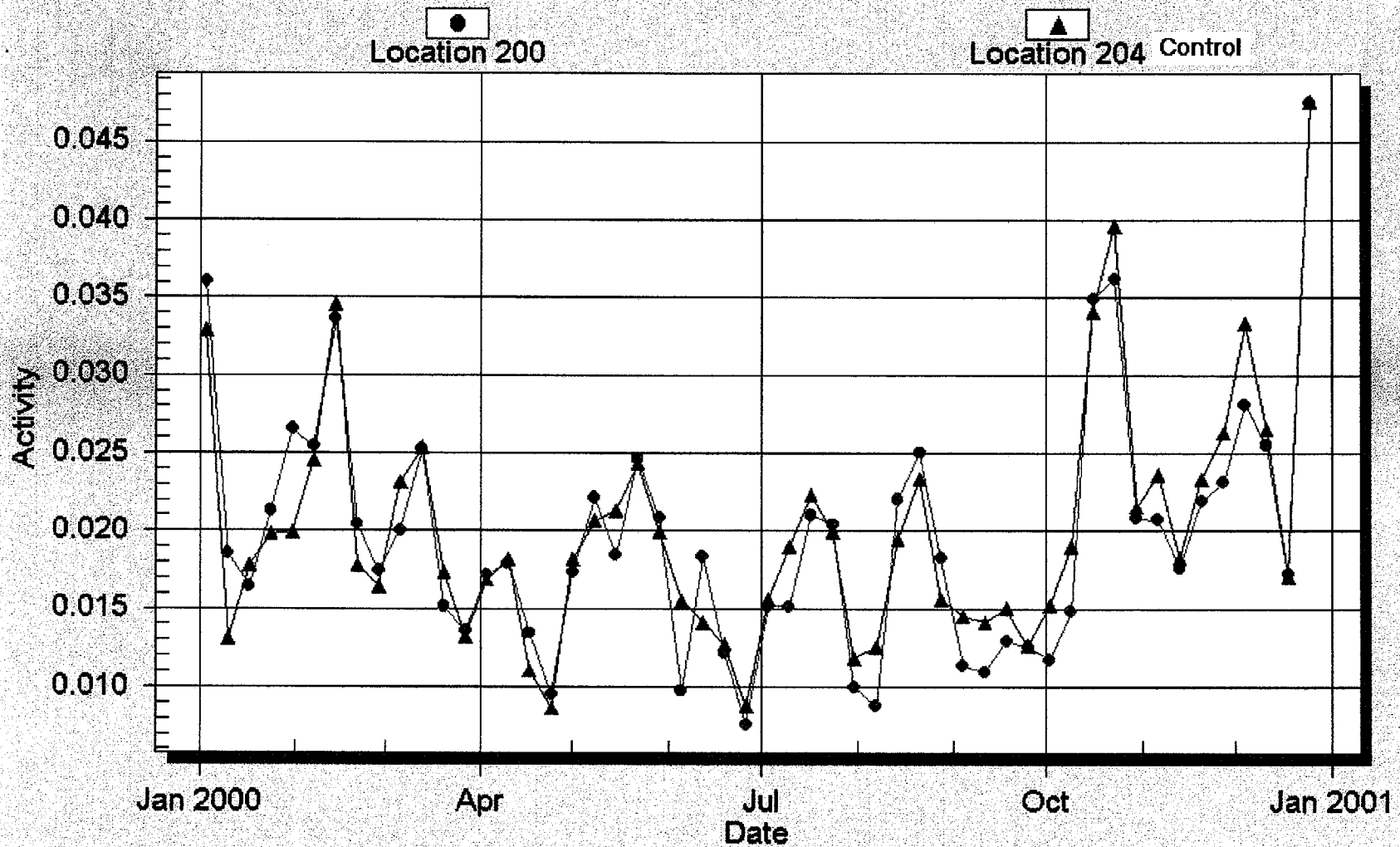


Figure 4 For BSEP From 1/1/2000 To 12/31/2000
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

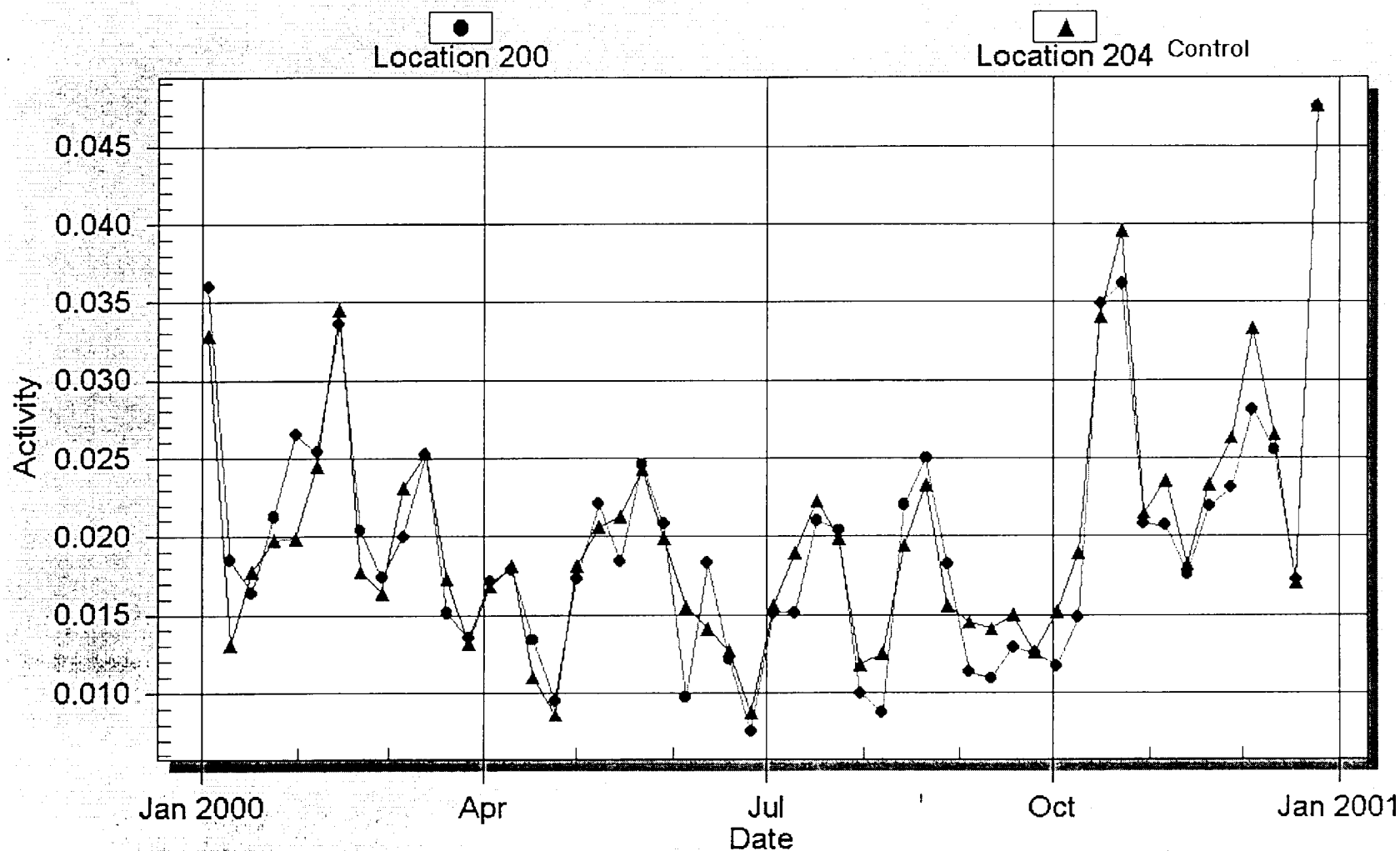


Figure 5 For BSEP From 1/1/2000 To 12/31/2000

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

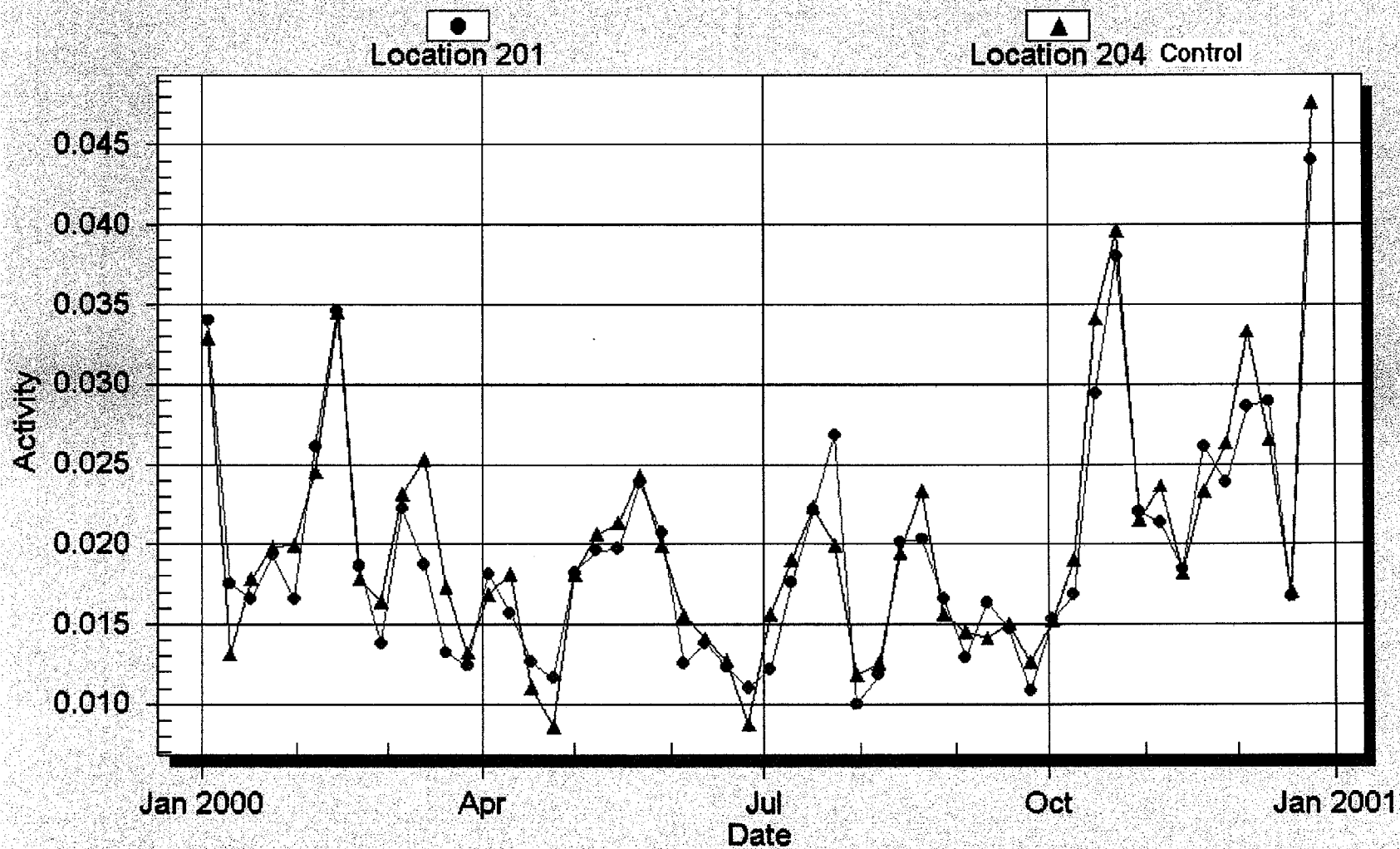


Figure 5 For BSEP From 1/1/2000 To 12/31/2000
 AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

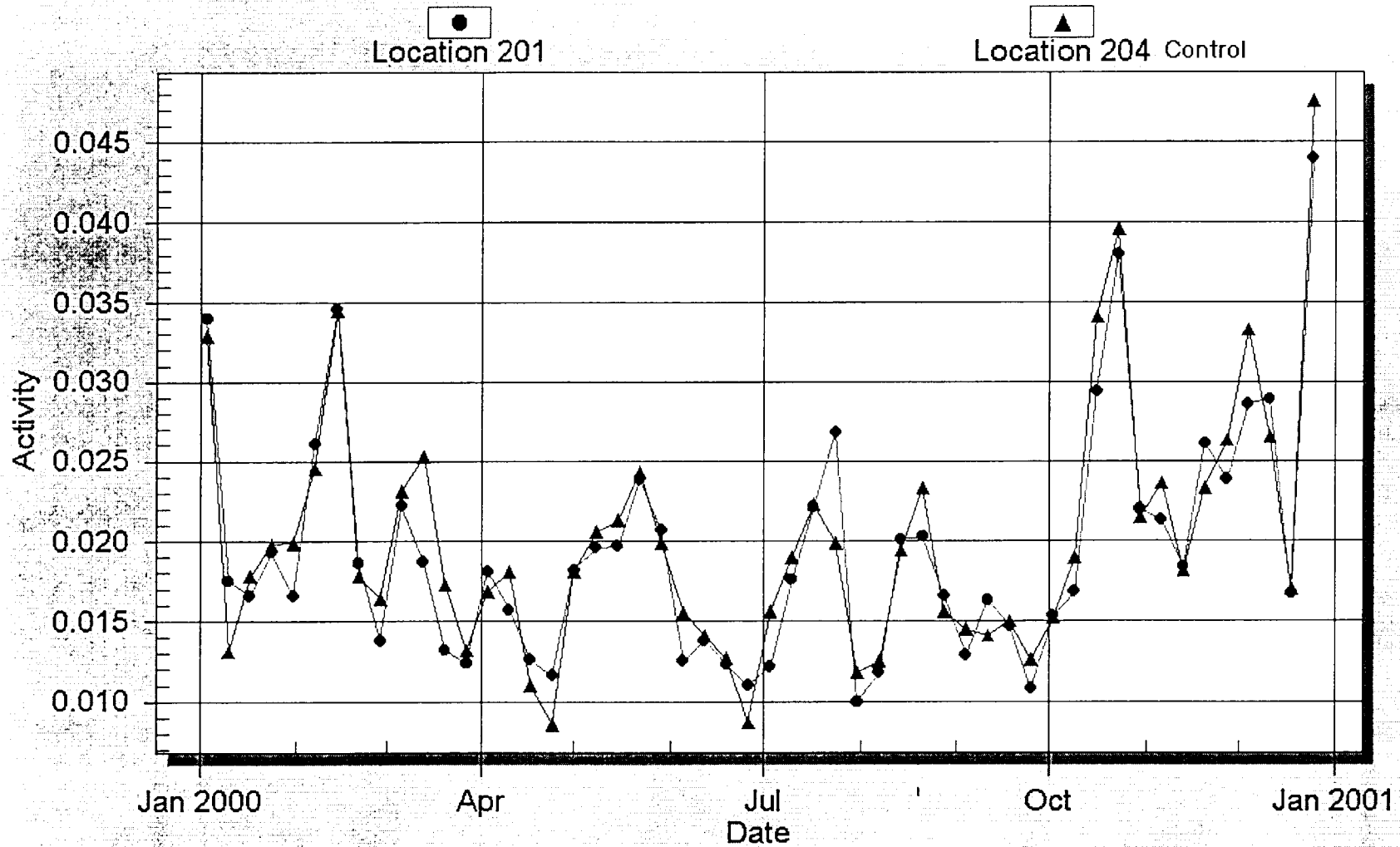


Figure 6 For BSEP From 1/1/2000 To 12/31/2000
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

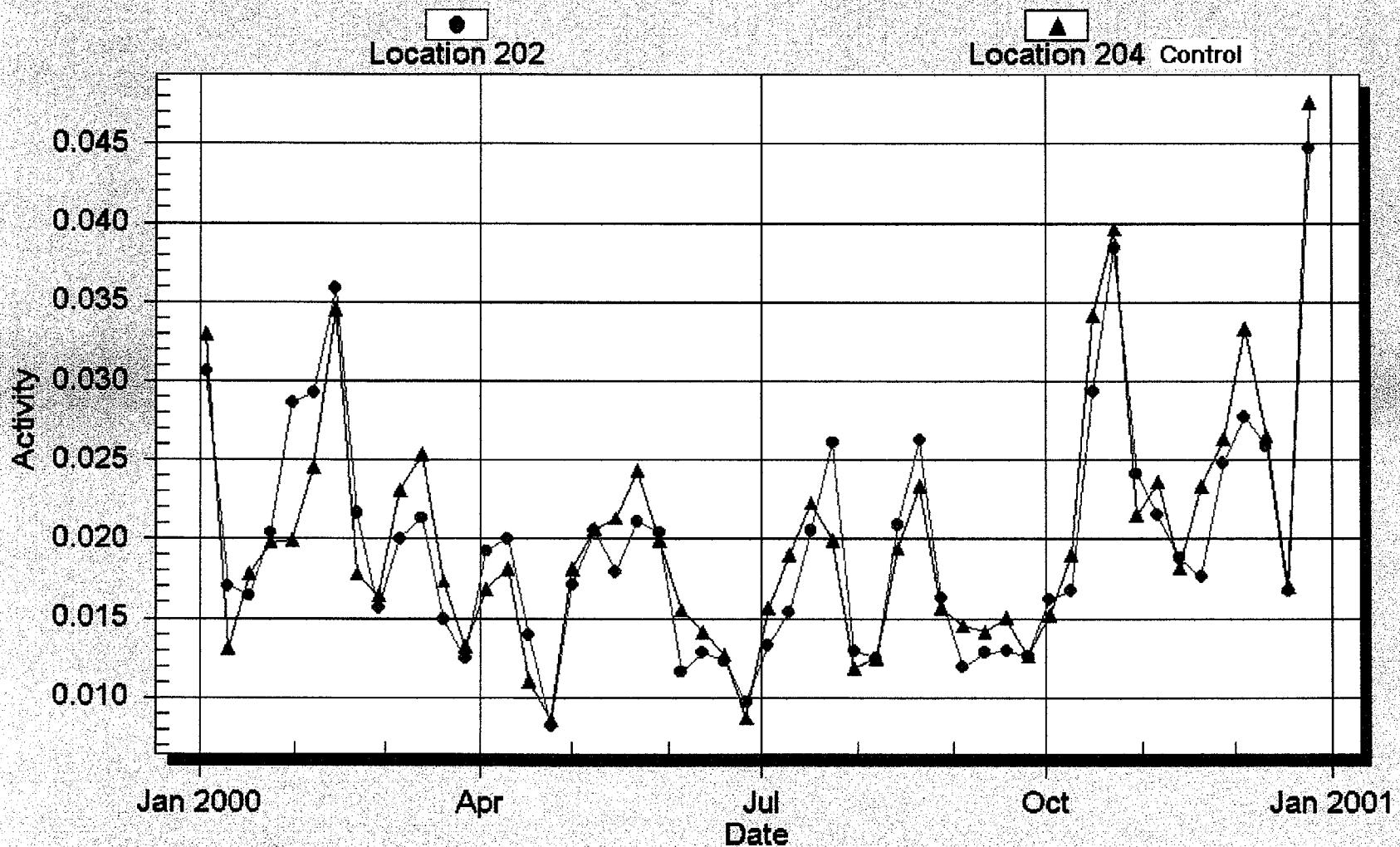


Figure 6 For BSEP From 1/1/2000 To 12/31/2000

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

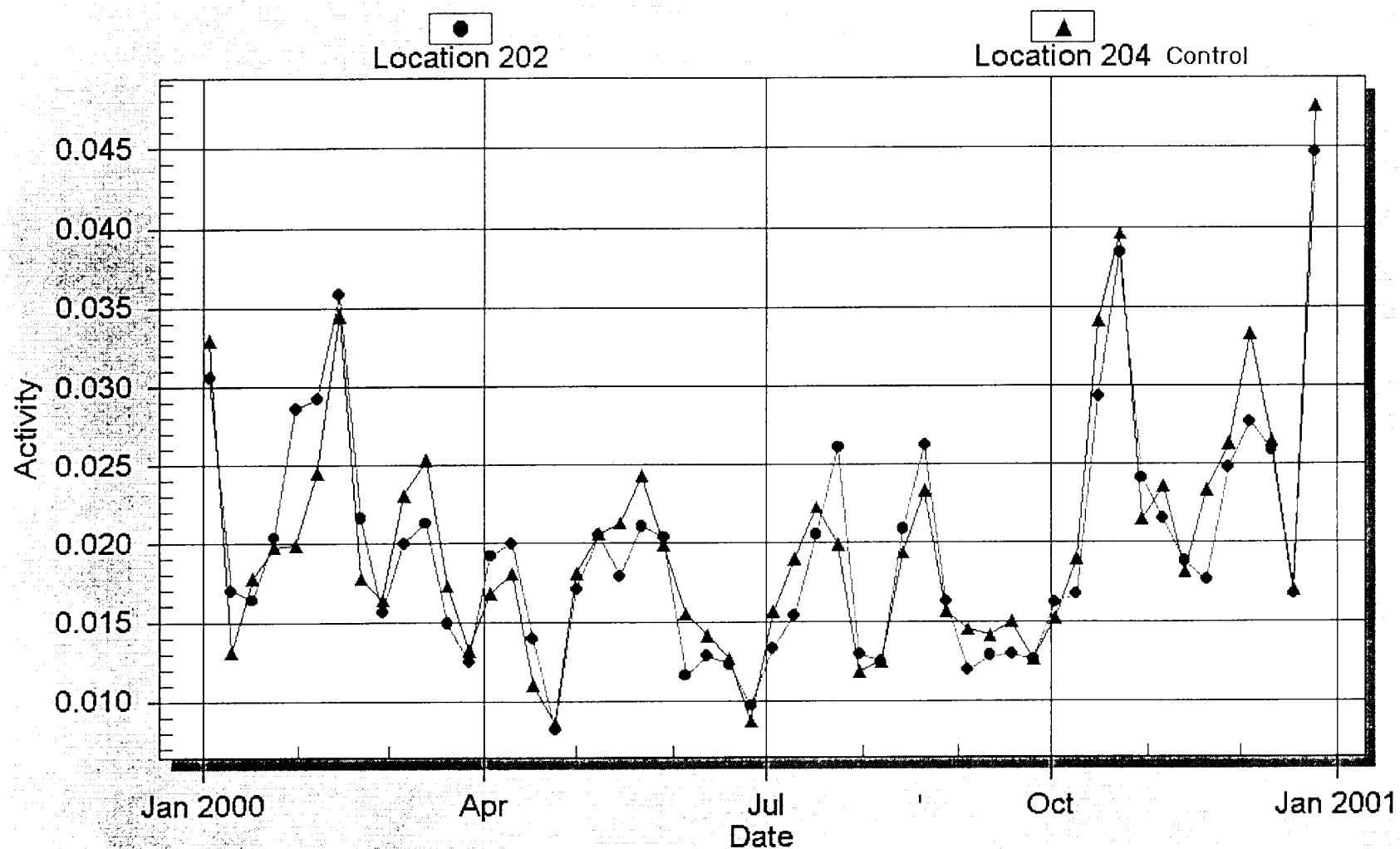


Figure 7 BSEP From 1/1/2000 To 12/31/2000
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

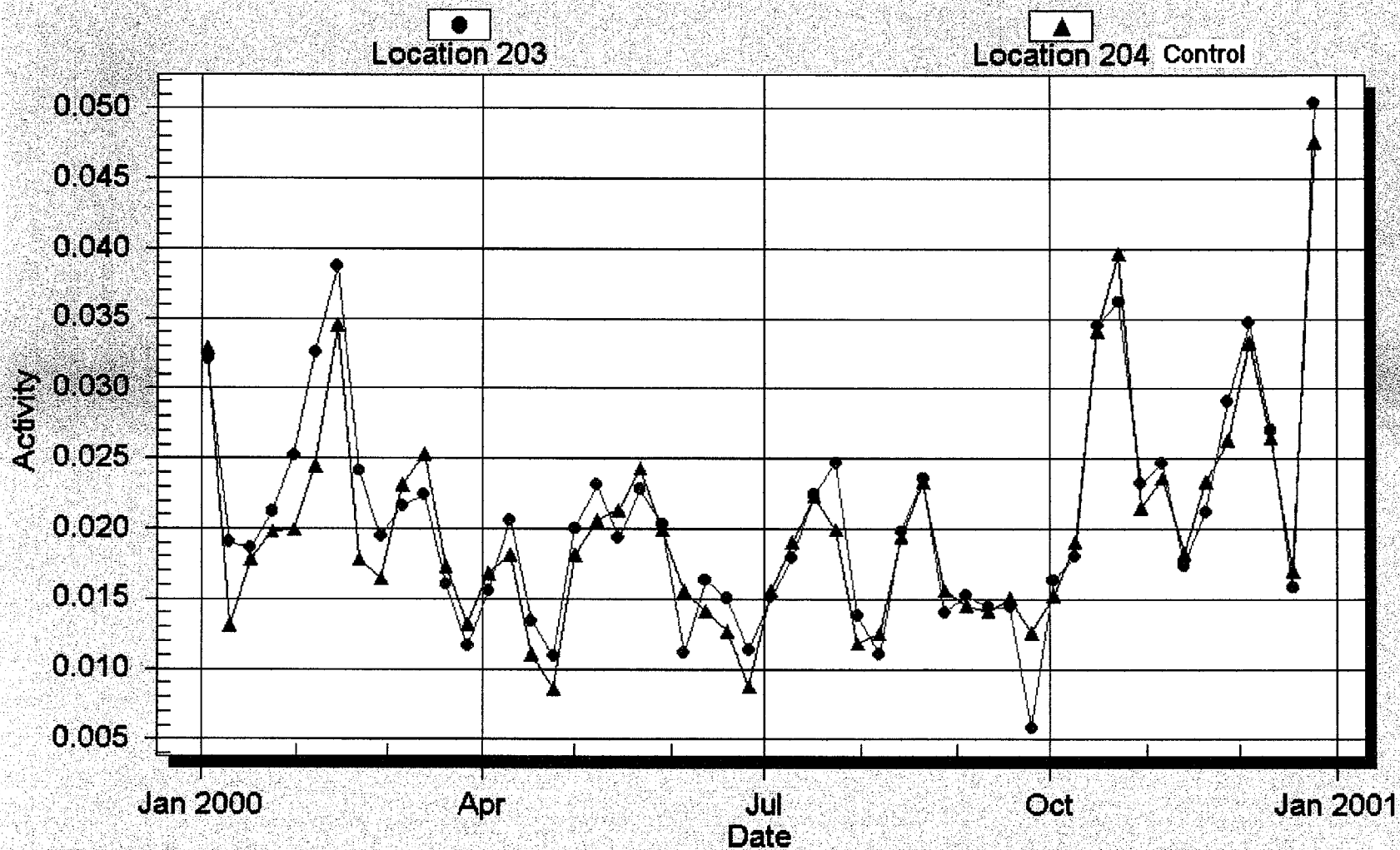


Figure 7 BSEP From 1/1/2000 To 12/31/2000
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

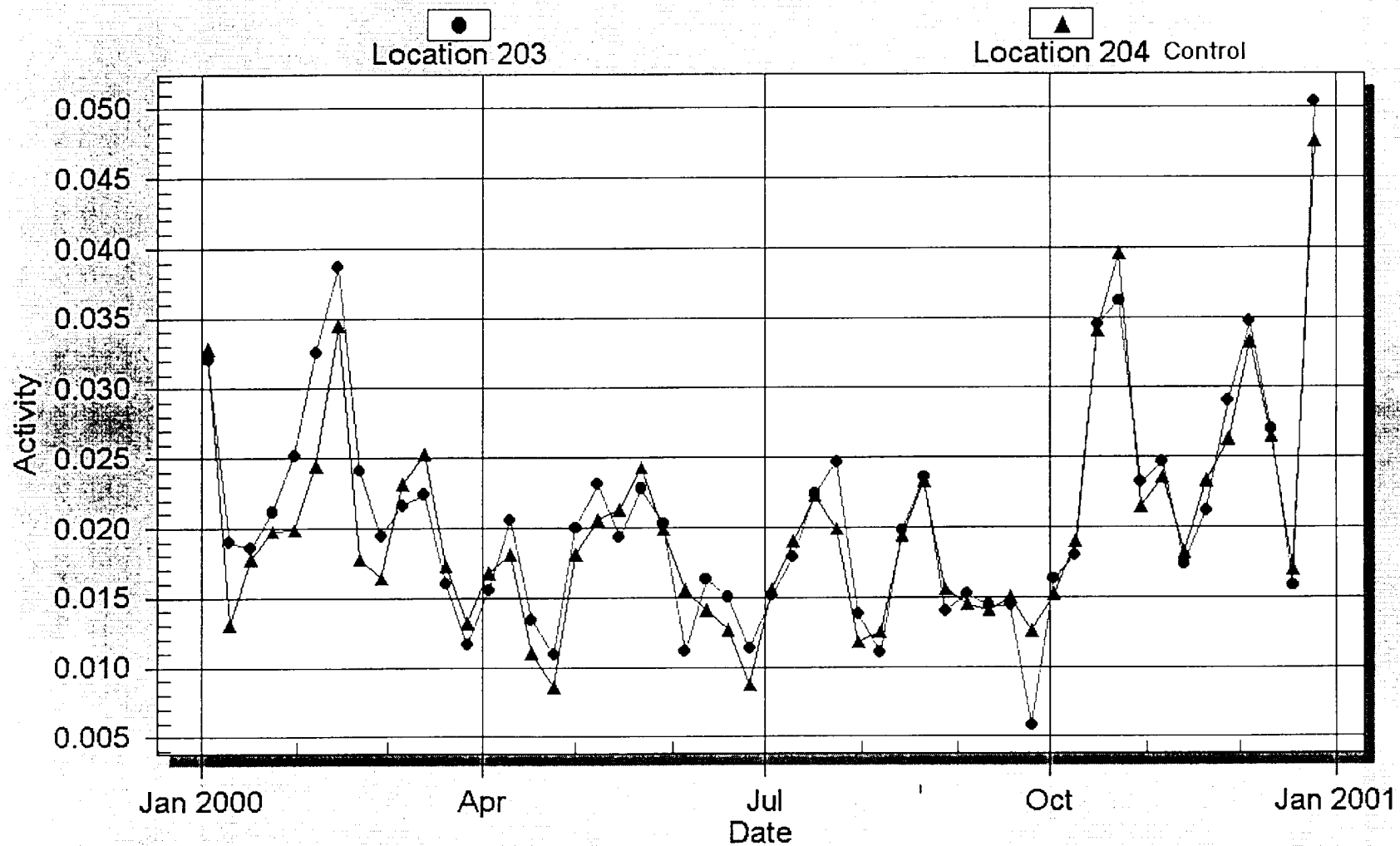


Figure 8 For BSEP From 1/1/2000 To 12/31/2000
AIR PARTICULATE for GROSS BETA - Activity (pCi/cubic meter)

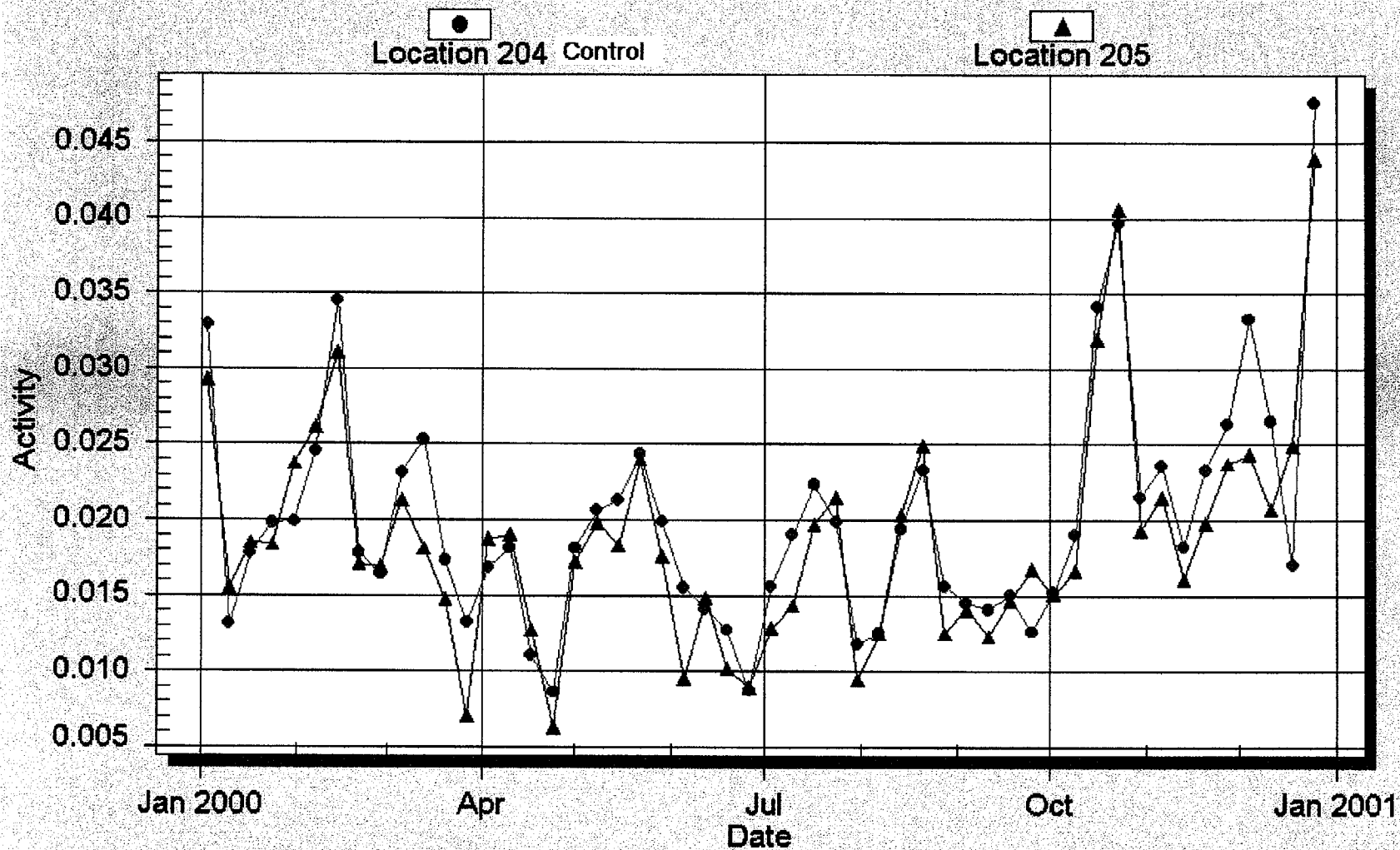


Figure 8 For BSEP From 1/1/2000 To 12/31/2000

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

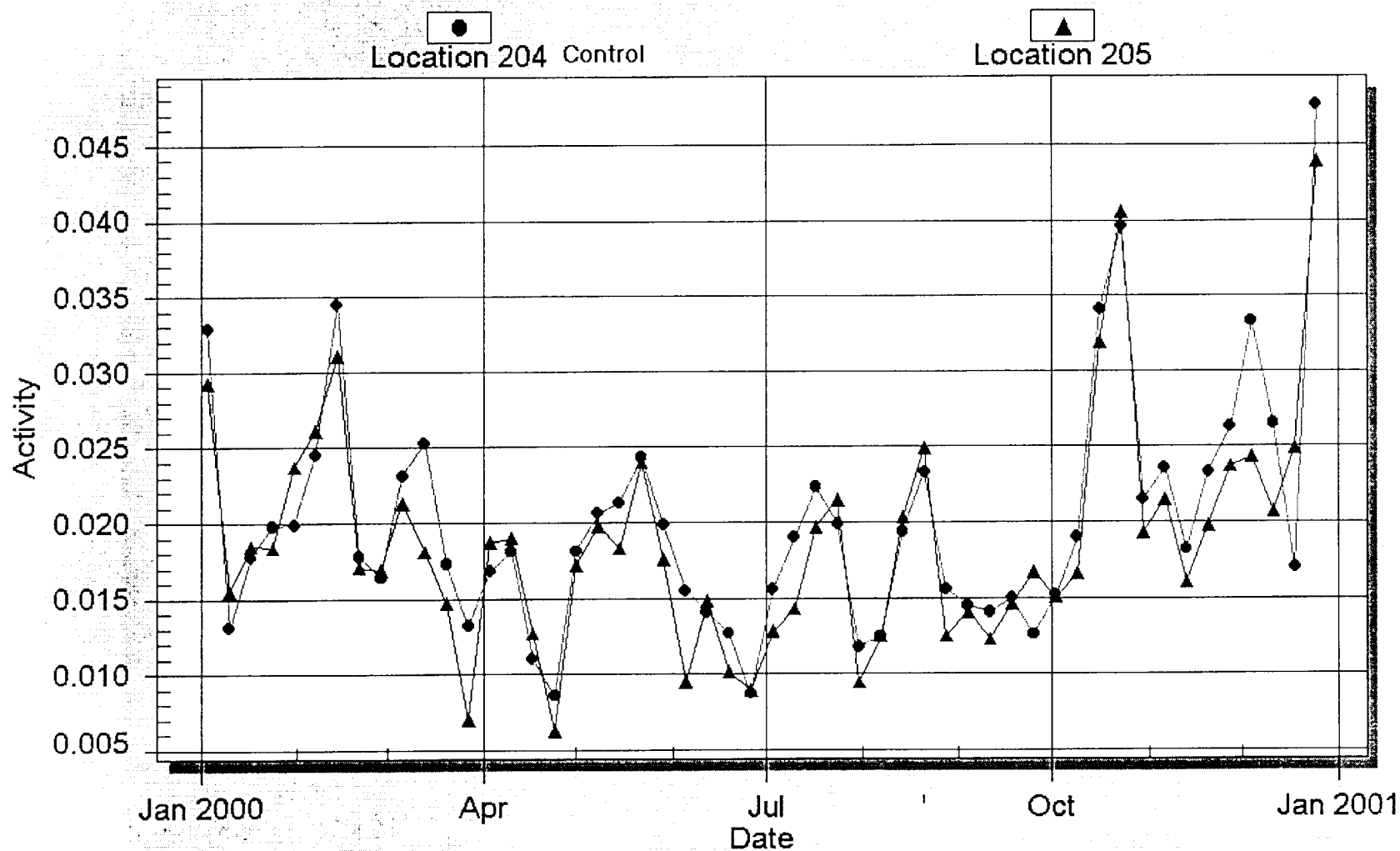


Figure 9 BSEP 2000 Surface Water Tritium

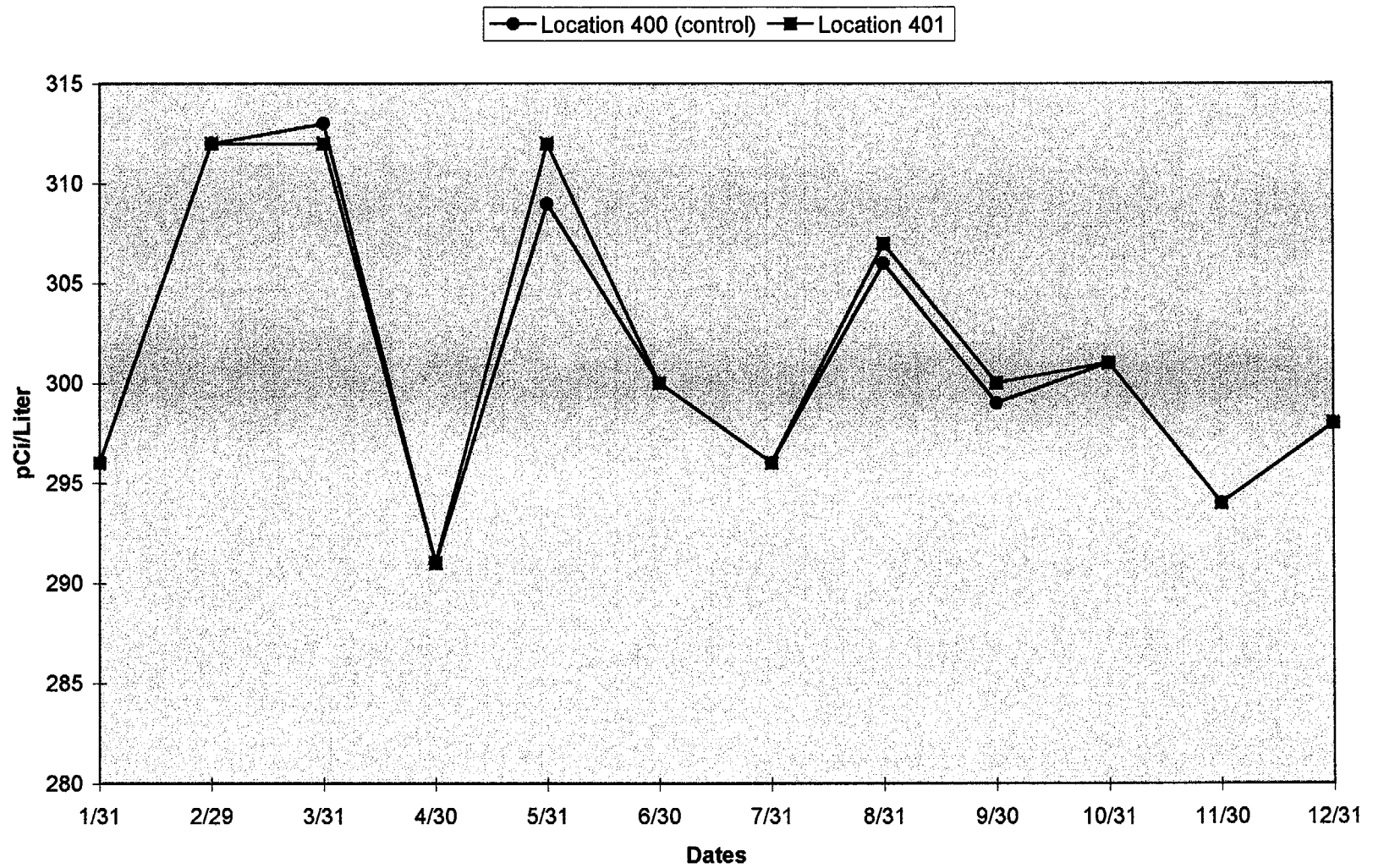


Figure 9 BSEP 2000 Surface Water Tritium

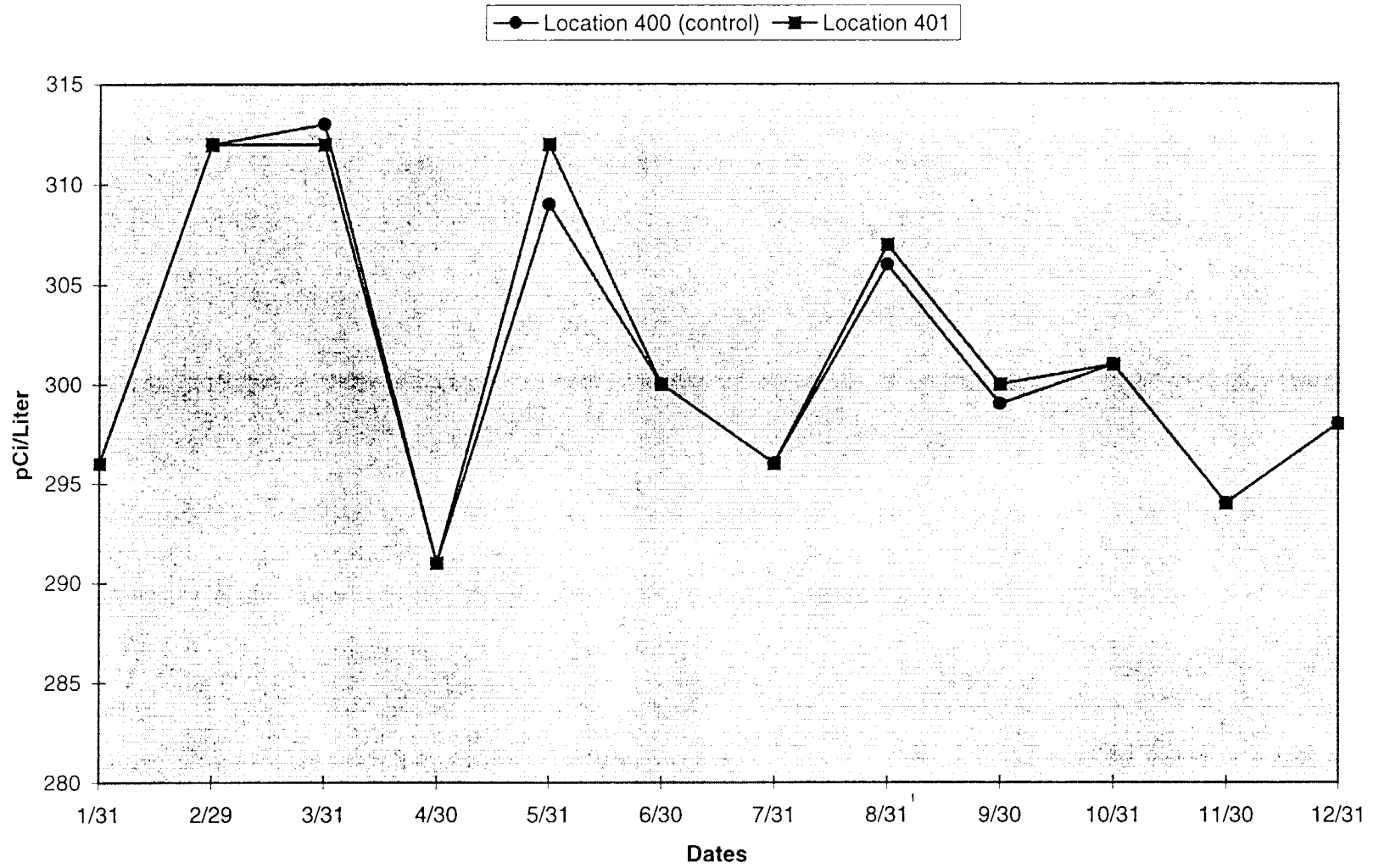


Figure 10 BSEP 2000 TLD Averages for Inner and Outer Ring Locations

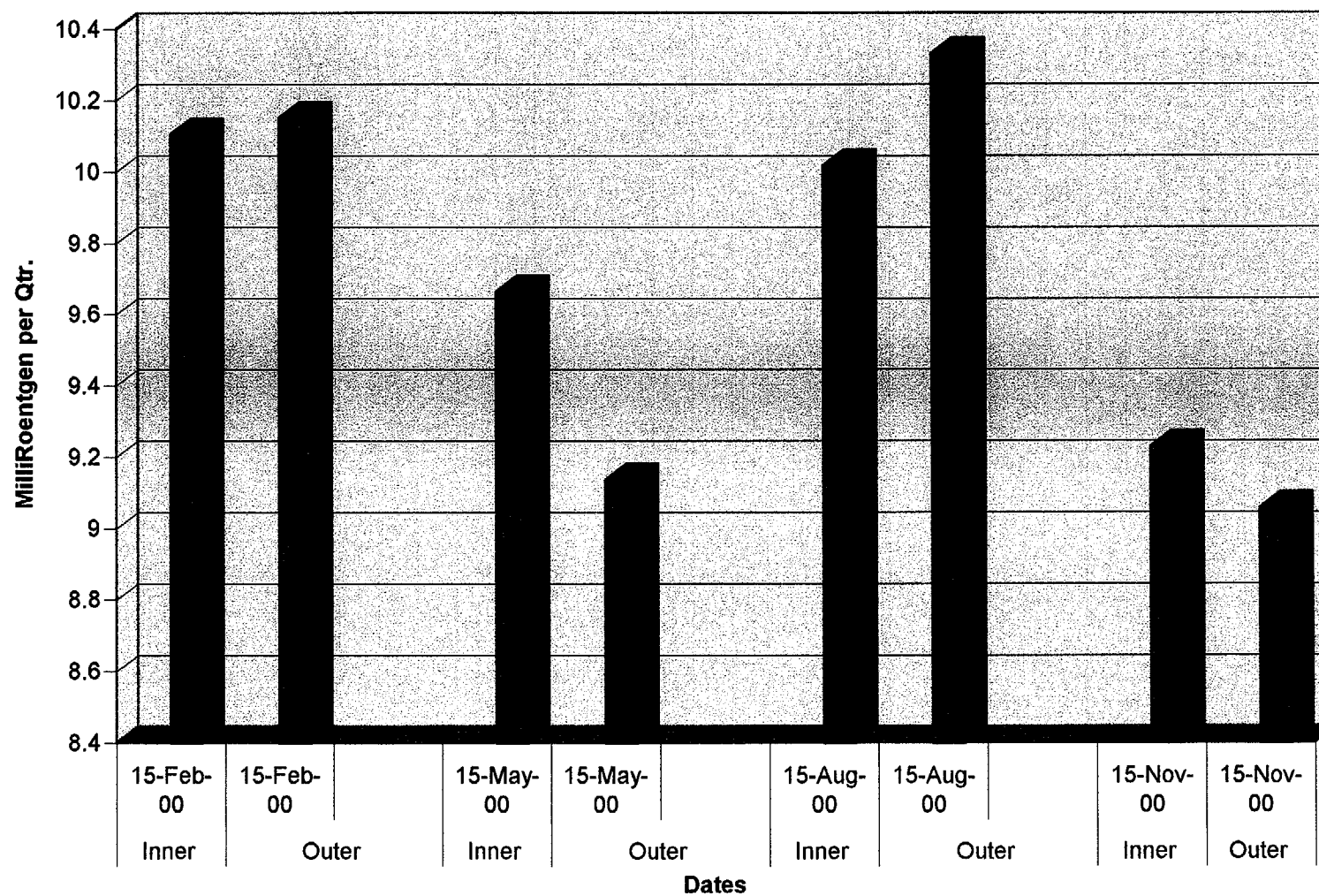
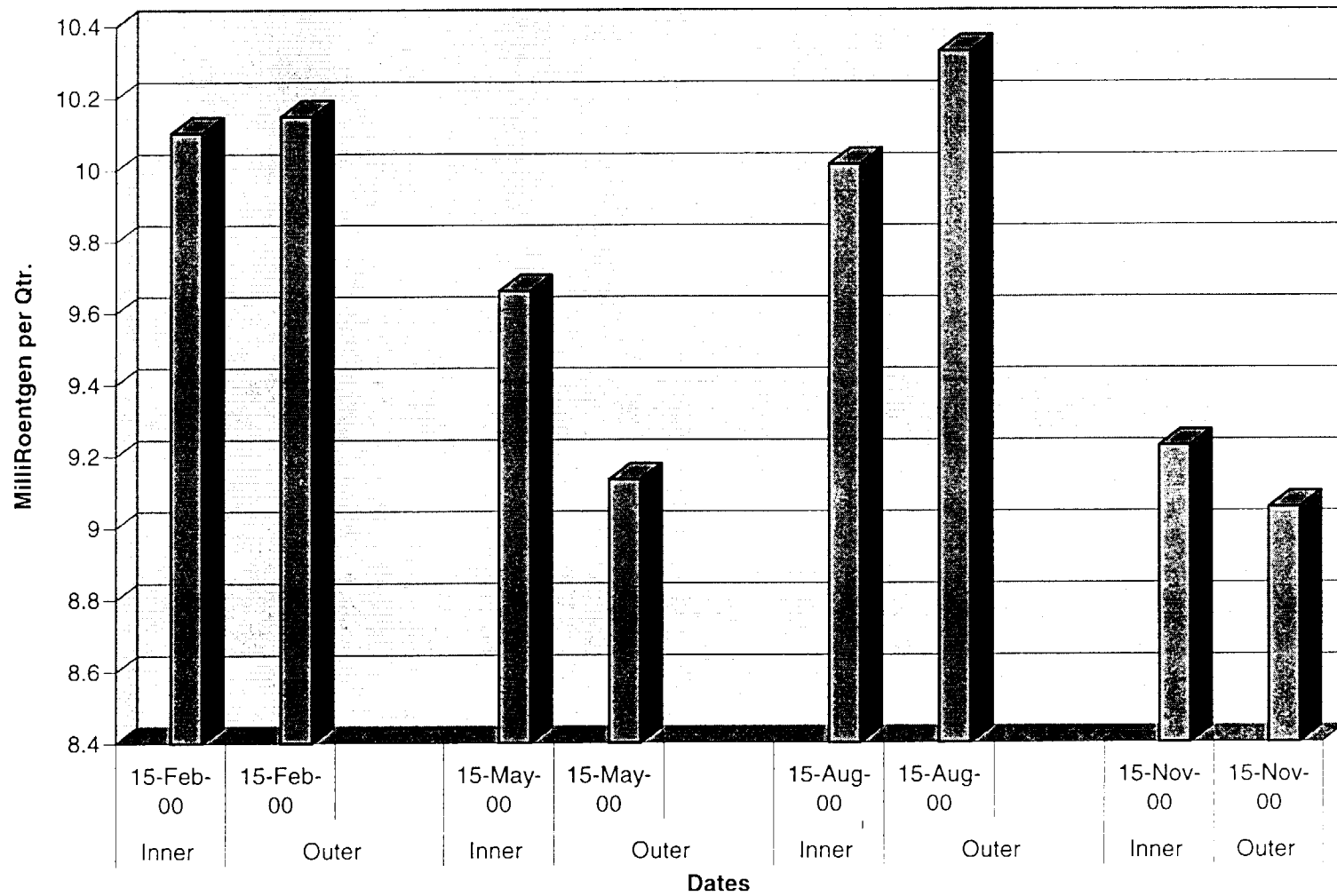


Figure 10 BSEP 2000 TLD Averages for Inner and Outer Ring Locations



CP&L

2000 Radiological Environmental

Monitoring TLD Report

Brunswick Steam Electric Plant

2000 BSEP 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 # 12 was missing Second Quarter 2000.

BSEP Radiological Environmental TLD Report

Dose: mR/std. qtr.

TLD	TLD Location Description	Sample Date	Dose	2 Sigma Error
1	1.1 MI E - MOORE ST EXTENSION	2/15/00	9.3	2.3
1	1.1 MI E - MOORE ST EXTENSION	5/15/00	9.4	1.2
1	1.1 MI E - MOORE ST EXTENSION	8/15/00	9.4	1.7
1	1.1 MI E - MOORE ST EXTENSION	11/15/00	9.0	1.6
2	1.0 MI ESE - MOORE ST EXTENSION	2/15/00	9.9	2.7
2	1.0 MI ESE - MOORE ST EXTENSION	5/15/00	10.1	1.1
2	1.0 MI ESE - MOORE ST EXTENSION	8/15/00	9.7	1.5
2	1.0 MI ESE - MOORE ST EXTENSION	11/15/00	9.2	1.8
3	0.9 MI SE - MOORE ST EXTENSION	2/15/00	8.8	2.4
3	0.9 MI SE - MOORE ST EXTENSION	5/15/00	11.1	0.8
3	0.9 MI SE - MOORE ST EXTENSION	8/15/00	9.2	1.6
3	0.9 MI SE - MOORE ST EXTENSION	11/15/00	10.3	0.8
4	1.1 MI SSE - MOORE ST EXTENSION	2/15/00	10.0	2.6
4	1.1 MI SSE - MOORE ST EXTENSION	5/15/00	10.1	0.8
4	1.1 MI SSE - MOORE ST EXTENSION	8/15/00	9.9	1.5
4	1.1 MI SSE - MOORE ST EXTENSION	11/15/00	9.2	0.8
5	1.1 MI S - LEONARD ST	2/15/00	10.0	2.4
5	1.1 MI S - LEONARD ST	5/15/00	10.0	0.9
5	1.1 MI S - LEONARD ST	8/15/00	9.9	1.9
5	1.1 MI S - LEONARD ST	11/15/00	9.5	1.2
6	1.0 MI SSW - BEMCO POWER LINE	2/15/00	8.3	2.4
6	1.0 MI SSW - BEMCO POWER LINE	5/15/00	8.5	1.0
6	1.0 MI SSW - BEMCO POWER LINE	8/15/00	8.3	1.6
6	1.0 MI SSW - BEMCO POWER LINE	11/15/00	7.6	1.1
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	2/15/00	9.3	2.7
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	5/15/00	10.7	0.9
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	8/15/00	9.7	1.7
7	1.0 MI SW - HWY 87 AT RIGHT-OF-WAY	11/15/00	9.7	0.9
8	1.2 MI W - HWY 87	2/15/00	10.1	2.4
8	1.2 MI W - HWY 87	5/15/00	10.1	0.8
8	1.2 MI W - HWY 87	8/15/00	9.6	1.6
8	1.2 MI W - HWY 87	11/15/00	9.6	0.8

BSEP Radiological Environmental TLD Report

Dose: mR/std. qtr.

TLD	TLD Location Description	Sample Date	Dose	2 Sigma Error
9	1.0 MI WNW - BETHEL CHURCH RD	2/15/00	11.0	2.4
9	1.0 MI WNW - BETHEL CHURCH RD	5/15/00	9.5	0.6
9	1.0 MI WNW - BETHEL CHURCH RD	8/15/00	11.6	1.6
9	1.0 MI WNW - BETHEL CHURCH RD	11/15/00	8.9	0.9
10	0.9 MI NW - BETHEL CHURCH RD	2/15/00	8.9	2.6
10	0.9 MI NW - BETHEL CHURCH RD	5/15/00	8.2	0.7
10	0.9 MI NW - BETHEL CHURCH RD	8/15/00	8.9	1.6
10	0.9 MI NW - BETHEL CHURCH RD	11/15/00	8.1	1.0
11	0.9 MI NNW - BETHEL CHURCH RD	2/15/00	12.5	2.7
11	0.9 MI NNW - BETHEL CHURCH RD	5/15/00	9.7	1.2
11	0.9 MI NNW - BETHEL CHURCH RD	8/15/00	12.0	1.7
11	0.9 MI NNW - BETHEL CHURCH RD	11/15/00	9.3	0.8
12	1.0 MI N - BETHEL CHURCH RD	2/15/00	9.9	2.7
12	1.0 MI N - BETHEL CHURCH RD	8/15/00	9.6	2.0
12	1.0 MI N - BETHEL CHURCH RD	11/15/00	9.0	0.8
13	1.2 MI NNE - BETHEL CHURCH RD	2/15/00	9.2	2.5
13	1.2 MI NNE - BETHEL CHURCH RD	5/15/00	8.9	0.6
13	1.2 MI NNE - BETHEL CHURCH RD	8/15/00	9.0	1.6
13	1.2 MI NNE - BETHEL CHURCH RD	11/15/00	8.1	1.0
14	0.5 MI NE - INTAKE CANAL	2/15/00	11.0	2.5
14	0.5 MI NE - INTAKE CANAL	5/15/00	10.8	0.8
14	0.5 MI NE - INTAKE CANAL	8/15/00	11.5	1.8
14	0.5 MI NE - INTAKE CANAL	11/15/00	10.2	0.9
15	0.9 MI ENE - INTAKE CANAL	2/15/00	10.6	2.7
15	0.9 MI ENE - INTAKE CANAL	5/15/00	10.8	0.7
15	0.9 MI ENE - INTAKE CANAL	8/15/00	10.6	2.0
15	0.9 MI ENE - INTAKE CANAL	11/15/00	10.6	1.4
16	1.0 MI WSW - DISCHARGE CANAL	2/15/00	10.5	3.7
16	1.0 MI WSW - DISCHARGE CANAL	5/15/00	9.6	0.7
16	1.0 MI WSW - DISCHARGE CANAL	8/15/00	9.0	1.5
16	1.0 MI WSW - DISCHARGE CANAL	11/15/00	9.2	0.9

BSEP Radiological Environmental TLD Report

Dose: mR/std. qtr.

TLD	TLD Location Description	Sample Date	Dose	2 Sigma Error
17	1.5 MI ESE - ADM PROPERTY	2/15/00	11.9	3.0
17	1.5 MI ESE - ADM PROPERTY	5/15/00	10.6	1.2
17	1.5 MI ESE - ADM PROPERTY	8/15/00	11.2	2.5
17	1.5 MI ESE - ADM PROPERTY	11/15/00	9.9	1.7
18	1.7 MI SE - ADM PROPERTY	2/15/00	10.9	2.5
18	1.7 MI SE - ADM PROPERTY	5/15/00	8.6	0.8
18	1.7 MI SE - ADM PROPERTY	8/15/00	11.6	1.8
18	1.7 MI SE - ADM PROPERTY	11/15/00	8.1	1.5
20	2.0 MI S - MOORE ST	2/15/00	7.7	2.4
20	2.0 MI S - MOORE ST	5/15/00	8.2	0.8
20	2.0 MI S - MOORE ST	8/15/00	6.9	1.7
20	2.0 MI S - MOORE ST	11/15/00	8.1	1.3
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	2/15/00	11.2	2.4
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	5/15/00	9.0	0.8
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	8/15/00	11.7	1.7
21	2.9 MI SSW - WEST ST AT SEA CAPTAIN	11/15/00	9.4	1.3
22	5.3 MI SW - CASWELL BEACH RD	2/15/00	9.8	2.4
22	5.3 MI SW - CASWELL BEACH RD	5/15/00	9.6	0.5
22	5.3 MI SW - CASWELL BEACH RD	8/15/00	12.0	2.7
22	5.3 MI SW - CASWELL BEACH RD	11/15/00	9.5	1.2
23	4.6 MI WSW - NEAR AIRPORT	2/15/00	9.9	2.4
23	4.6 MI WSW - NEAR AIRPORT	5/15/00	8.1	0.6
23	4.6 MI WSW - NEAR AIRPORT	8/15/00	10.3	1.6
23	4.6 MI WSW - NEAR AIRPORT	11/15/00	7.5	0.8
24	3.0 MI W - HWY 211	2/15/00	10.3	2.4
24	3.0 MI W - HWY 211	5/15/00	10.0	0.9
24	3.0 MI W - HWY 211	8/15/00	9.6	1.8
24	3.0 MI W - HWY 211	11/15/00	10.1	1.1
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	2/15/00	9.4	2.5
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	5/15/00	9.7	2.0
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	8/15/00	8.4	1.7
25	8.7 MI WNW - ANTIOCH BAPTIST CHURCH	11/15/00	9.8	1.0

BSEP Radiological Environmental TLD Report

Dose: mR/std. qtr.

TLD	TLD Location Description	Sample Date	Dose	2 Sigma Error
26	5.9 MI NW - W BOILING SPRING RD	2/15/00	13.1	2.8
26	5.9 MI NW - W BOILING SPRING RD	5/15/00	10.4	0.6
26	5.9 MI NW - W BOILING SPRING RD	8/15/00	12.7	1.6
26	5.9 MI NW - W BOILING SPRING RD	11/15/00	10.1	0.9
27	5.0 MI NNW - HWY 133	2/15/00	9.8	2.5
27	5.0 MI NNW - HWY 133	5/15/00	8.2	1.0
27	5.0 MI NNW - HWY 133	8/15/00	9.5	1.6
27	5.0 MI NNW - HWY 133	11/15/00	8.2	1.3
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	2/15/00	10.5	2.5
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	5/15/00	9.6	0.7
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	8/15/00	9.9	1.6
28	4.2 MI NW - AT SOUTH BRUNSWICK HS	11/15/00	9.5	1.2
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	2/15/00	8.7	2.4
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	5/15/00	8.3	1.0
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	8/15/00	9.1	1.7
29	2.6 MI SSW - SOUTHPORT ELEMENTARY SCHOOL	11/15/00	8.3	0.9
30	2.0 MI NE - SUNNY POINT MOT	2/15/00	12.5	2.7
30	2.0 MI NE - SUNNY POINT MOT	5/15/00	9.6	1.5
30	2.0 MI NE - SUNNY POINT MOT	8/15/00	12.6	1.5
30	2.0 MI NE - SUNNY POINT MOT	11/15/00	9.7	0.8
31	2.6 MI ENE - SUNNY POINT MOT	2/15/00	9.6	2.9
31	2.6 MI ENE - SUNNY POINT MOT	5/15/00	10.5	0.7
31	2.6 MI ENE - SUNNY POINT MOT	8/15/00	9.9	1.6
31	2.6 MI ENE - SUNNY POINT MOT	11/15/00	10.1	0.8
32	5.7 MI ENE - FT FISHER AFB HOUSING	2/15/00	12.0	2.4
32	5.7 MI ENE - FT FISHER AFB HOUSING	5/15/00	10.7	0.7
32	5.7 MI ENE - FT FISHER AFB HOUSING	8/15/00	12.8	1.6
32	5.7 MI ENE - FT FISHER AFB HOUSING	11/15/00	10.5	1.4
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	2/15/00	9.3	2.4
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	5/15/00	8.4	0.9
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	8/15/00	9.0	2.0
33	4.0 MI E - FERRY SLIP IN NEW HANOVER CO	11/15/00	8.1	0.8

BSEP Radiological Environmental TLD Report

Dose: mR/std. qtr.

TLD	TLD Location Description	Sample Date	Dose	2 Sigma Error
34	5.5 MI ENE - FT FISHER MUSEUM	2/15/00	8.6	2.4
34	5.5 MI ENE - FT FISHER MUSEUM	5/15/00	8.6	1.2
34	5.5 MI ENE - FT FISHER MUSEUM	8/15/00	8.9	1.7
34	5.5 MI ENE - FT FISHER MUSEUM	11/15/00	8.8	1.2
35	7.5 MI SSE - BALD HEAD ISLAND	2/15/00	7.9	2.4
35	7.5 MI SSE - BALD HEAD ISLAND	5/15/00	7.7	0.7
35	7.5 MI SSE - BALD HEAD ISLAND	8/15/00	7.6	1.6
35	7.5 MI SSE - BALD HEAD ISLAND	11/15/00	8.0	0.9
36	9.3 MI NE - CAROLINA BEACH	2/15/00	9.2	2.4
36	9.3 MI NE - CAROLINA BEACH	5/15/00	7.9	0.6
36	9.3 MI NE - CAROLINA BEACH	8/15/00	8.9	2.0
36	9.3 MI NE - CAROLINA BEACH	11/15/00	8.1	0.8
37	5.5 MI NW - BOILING SPRING LAKES	2/15/00	9.0	2.4
37	5.5 MI NW - BOILING SPRING LAKES	5/15/00	7.6	0.8
37	5.5 MI NW - BOILING SPRING LAKES	8/15/00	9.1	1.7
37	5.5 MI NW - BOILING SPRING LAKES	11/15/00	7.7	1.0
38	11.0 MI W - SUNSET HARBOR	2/15/00	8.8	2.5
38	11.0 MI W - SUNSET HARBOR	5/15/00	8.0	0.5
38	11.0 MI W - SUNSET HARBOR	8/15/00	9.2	1.5
38	11.0 MI W - SUNSET HARBOR	11/15/00	8.5	0.8
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	2/15/00	9.1	2.6
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	5/15/00	8.9	1.1
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	8/15/00	9.2	1.8
39	5.3 MI SW - OAK ISLAND COMM. SVCS. BLDG.	11/15/00	9.5	1.4
40	6.9 MI WSW - OAK ISLAND TOWN HALL	2/15/00	8.2	2.4
40	6.9 MI WSW - OAK ISLAND TOWN HALL	5/15/00	8.7	0.6
40	6.9 MI WSW - OAK ISLAND TOWN HALL	8/15/00	8.8	1.8
40	6.9 MI WSW - OAK ISLAND TOWN HALL	11/15/00	9.1	0.8
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	2/15/00	10.6	2.4
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	5/15/00	10.6	0.5
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	8/15/00	11.1	1.5
75	4.5 MI S - FT CASWELL BAPTIST ASSEMBLY	11/15/00	10.0	1.2

BSEP Radiological Environmental TLD Report

Dose: mR/std. qtr.

TLD	TLD Location Description	Sample Date	Dose	2 Sigma Error
76	4.8 MI SSW - CASWELL BEACH	2/15/00	13.2	2.5
76	4.8 MI SSW - CASWELL BEACH	5/15/00	11.1	1.0
76	4.8 MI SSW - CASWELL BEACH	8/15/00	13.3	1.8
76	4.8 MI SSW - CASWELL BEACH	11/15/00	11.1	1.2
77	5.3 MI S - BALDHEAD ISLAND	2/15/00	11.1	2.4
77	5.3 MI S - BALDHEAD ISLAND	5/15/00	8.7	0.6
77	5.3 MI S - BALDHEAD ISLAND	8/15/00	11.1	1.7
77	5.3 MI S - BALDHEAD ISLAND	11/15/00	8.4	1.1
78	10.0 MI NNE - HWY 133 AT SR 1521	2/15/00	9.7	2.4
78	10.0 MI NNE - HWY 133 AT SR 1521	5/15/00	9.4	1.3
78	10.0 MI NNE - HWY 133 AT SR 1521	8/15/00	9.9	1.8
78	10.0 MI NNE - HWY 133 AT SR 1521	11/15/00	9.3	1.1
79	9.5 MI N - SR 1539 AT SR 1521	2/15/00	12.0	2.9
79	9.5 MI N - SR 1539 AT SR 1521	5/15/00	10.1	0.8
79	9.5 MI N - SR 1539 AT SR 1521	8/15/00	12.5	1.9
79	9.5 MI N - SR 1539 AT SR 1521	11/15/00	9.4	0.9
81	10.0 MI WNW - MIDWAY RD AT SR 1508	2/15/00	12.3	2.6
81	10.0 MI WNW - MIDWAY RD AT SR 1508	5/15/00	10.3	1.1
81	10.0 MI WNW - MIDWAY RD AT SR 1508	8/15/00	12.3	1.6
81	10.0 MI WNW - MIDWAY RD AT SR 1508	11/15/00	9.5	0.8

CP&L

2000 Radiological Environmental

Monitoring

Analysis Report

Brunswick Steam Electric Plant

2000 BSEP 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

MediaType: **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/ 3/00	275.6	3.74E-001	3.60E-002	4.21E-003	3.73E-003
	1/10/00	277.9	3.74E-001	1.85E-002	3.44E-003	3.83E-003
	1/17/00	279.9	3.74E-001	1.64E-002	3.43E-003	4.07E-003
	1/24/00	267.7	3.74E-001	2.13E-002	3.59E-003	3.75E-003
	1/31/00	266.3	3.74E-001	2.65E-002	3.92E-003	3.95E-003
	2/ 7/00	269.4	3.74E-001	2.54E-002	3.77E-003	3.73E-003
	2/14/00	267.6	3.74E-001	3.36E-002	4.04E-003	3.38E-003
	2/21/00	265.9	3.74E-001	2.04E-002	3.67E-003	4.07E-003
	2/28/00	270.1	3.74E-001	1.74E-002	3.30E-003	3.58E-003
	3/ 6/00	266.2	3.77E-001	2.00E-002	3.52E-003	3.76E-003
	3/13/00	270.0	3.77E-001	2.52E-002	3.78E-003	3.82E-003
	3/20/00	267.5	3.77E-001	1.51E-002	3.13E-003	3.46E-003
	3/27/00	268.8	3.77E-001	1.35E-002	3.17E-003	3.77E-003
	4/ 3/00	268.6	3.77E-001	1.71E-002	3.37E-003	3.78E-003
	4/10/00	270.0	3.77E-001	1.79E-002	3.40E-003	3.76E-003
	4/17/00	271.2	3.77E-001	1.34E-002	3.17E-003	3.81E-003
	4/24/00	272.0	3.77E-001	9.49E-003	2.81E-003	3.52E-003
	5/ 1/00	268.5	3.77E-001	1.73E-002	3.37E-003	3.76E-003
	5/ 8/00	273.5	3.77E-001	2.21E-002	3.47E-003	3.43E-003
	5/15/00	272.4	3.77E-001	1.84E-002	3.37E-003	3.66E-003
	5/22/00	269.9	3.77E-001	2.46E-002	3.81E-003	3.98E-003
	5/29/00	272.2	3.77E-001	2.08E-002	3.47E-003	3.59E-003
	6/ 5/00	270.5	3.77E-001	9.72E-003	2.76E-003	3.37E-003
	6/12/00	270.4	3.77E-001	1.83E-002	3.39E-003	3.68E-003
	6/19/00	272.5	3.77E-001	1.21E-002	3.00E-003	3.59E-003
	6/26/00	271.1	3.77E-001	7.58E-003	2.78E-003	3.70E-003
	7/ 3/00	269.5	3.77E-001	1.51E-002	3.21E-003	3.67E-003
	7/10/00	278.5	3.77E-001	1.51E-002	3.14E-003	3.55E-003
	7/17/00	311.3	3.77E-001	2.10E-002	3.27E-003	3.41E-003
	7/24/00	423.9	3.77E-001	2.04E-002	2.59E-003	2.41E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Analysis: **Beta (Continued)**

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	7/31/00	283.1	3.77E-001	9.96E-003	2.83E-003	3.56E-003
	8/ 7/00	284.8	3.77E-001	8.73E-003	2.84E-003	3.73E-003
	8/14/00	278.7	3.77E-001	2.20E-002	3.49E-003	3.55E-003
	8/21/00	280.6	3.77E-001	2.50E-002	3.70E-003	3.76E-003
	8/28/00	262.6	3.77E-001	1.82E-002	3.58E-003	4.11E-003
	9/ 4/00	267.1	3.77E-001	1.13E-002	3.05E-003	3.78E-003
	9/11/00	261.3	3.77E-001	1.09E-002	3.09E-003	3.88E-003
	9/18/00	260.1	3.77E-001	1.29E-002	3.31E-003	4.11E-003
	9/25/00	259.2	3.77E-001	1.25E-002	3.09E-003	3.65E-003
	10/ 2/00	253.2	3.77E-001	1.17E-002	3.29E-003	4.17E-003
	10/ 9/00	246.0	3.77E-001	1.48E-002	3.54E-003	4.29E-003
	10/16/00	241.6	3.62E-001	3.49E-002	4.64E-003	4.40E-003
	10/23/00	239.7	3.77E-001	3.62E-002	4.51E-003	4.00E-003
	10/30/00	244.8	3.62E-001	2.08E-002	3.95E-003	4.39E-003
	11/ 6/00	250.4	3.62E-001	2.07E-002	3.93E-003	4.42E-003
	11/13/00	253.3	3.62E-001	1.76E-002	3.70E-003	4.29E-003
	11/20/00	253.6	3.62E-001	2.19E-002	4.01E-003	4.50E-003
	11/27/00	251.9	3.62E-001	2.31E-002	3.92E-003	4.12E-003
	12/ 4/00	250.4	3.62E-001	2.81E-002	4.18E-003	4.14E-003
	12/11/00	249.4	3.62E-001	2.55E-002	3.97E-003	3.89E-003
	12/18/00	250.0	3.62E-001	1.72E-002	3.81E-003	4.57E-003
	12/25/00	250.2	3.62E-001	4.75E-002	5.03E-003	4.17E-003
201 - 0.6 MI NE - PMAC	1/ 3/00	255.3	3.74E-001	3.40E-002	4.34E-003	4.03E-003
	1/10/00	266.6	3.74E-001	1.75E-002	3.49E-003	3.99E-003
	1/17/00	273.7	3.74E-001	1.66E-002	3.50E-003	4.16E-003
	1/24/00	269.8	3.74E-001	1.93E-002	3.46E-003	3.72E-003
	1/31/00	266.3	3.74E-001	1.66E-002	3.43E-003	3.95E-003
	2/ 7/00	269.3	3.74E-001	2.61E-002	3.80E-003	3.73E-003
	2/14/00	272.6	3.74E-001	3.46E-002	4.04E-003	3.32E-003
	2/21/00	272.9	3.74E-001	1.86E-002	3.52E-003	3.97E-003
	2/28/00	273.2	3.74E-001	1.38E-002	3.07E-003	3.53E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: **Beta (Continued)**

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD
201 - 0.6 MI NE - PMAC	3/ 6/00	274.7	3.77E-001	2.22E-002	3.55E-003	3.65E-003
	3/13/00	276.5	3.77E-001	1.87E-002	3.40E-003	3.73E-003
	3/20/00	276.2	3.77E-001	1.32E-002	2.95E-003	3.35E-003
	3/27/00	274.5	3.77E-001	1.24E-002	3.06E-003	3.70E-003
	4/ 3/00	277.0	3.77E-001	1.81E-002	3.35E-003	3.66E-003
	4/10/00	275.3	3.77E-001	1.57E-002	3.23E-003	3.69E-003
	4/17/00	275.2	3.77E-001	1.26E-002	3.09E-003	3.75E-003
	4/24/00	279.3	3.77E-001	1.16E-002	2.88E-003	3.43E-003
	5/ 1/00	273.3	3.77E-001	1.82E-002	3.37E-003	3.69E-003
	5/ 8/00	279.2	3.77E-001	1.96E-002	3.30E-003	3.36E-003
	5/15/00	282.9	3.77E-001	1.97E-002	3.35E-003	3.52E-003
	5/22/00	280.6	3.77E-001	2.38E-002	3.67E-003	3.83E-003
	5/29/00	283.5	3.77E-001	2.07E-002	3.37E-003	3.45E-003
	6/ 5/00	278.3	3.77E-001	1.25E-002	2.87E-003	3.28E-003
	6/12/00	282.4	3.77E-001	1.38E-002	3.04E-003	3.53E-003
	6/19/00	284.5	3.77E-001	1.23E-002	2.91E-003	3.43E-003
	6/26/00	281.1	3.77E-001	1.10E-002	2.90E-003	3.57E-003
	7/ 3/00	283.2	3.77E-001	1.22E-002	2.93E-003	3.49E-003
	7/10/00	292.8	3.77E-001	1.76E-002	3.16E-003	3.38E-003
	7/17/00	273.6	3.77E-001	2.21E-002	3.64E-003	3.88E-003
	7/24/00	277.6	3.77E-001	2.68E-002	3.77E-003	3.68E-003
	7/31/00	276.0	3.77E-001	9.96E-003	2.89E-003	3.65E-003
	8/ 7/00	278.4	3.77E-001	1.18E-002	3.07E-003	3.82E-003
	8/14/00	275.4	3.77E-001	2.01E-002	3.43E-003	3.59E-003
	8/21/00	281.0	3.77E-001	2.03E-002	3.48E-003	3.76E-003
	8/28/00	279.9	3.77E-001	1.66E-002	3.34E-003	3.86E-003
	9/ 4/00	287.9	3.77E-001	1.29E-002	2.96E-003	3.50E-003
	9/11/00	282.0	3.77E-001	1.63E-002	3.21E-003	3.60E-003
	9/18/00	284.2	3.77E-001	1.47E-002	3.19E-003	3.76E-003
	9/25/00	284.5	3.77E-001	1.08E-002	2.77E-003	3.32E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: **Beta (Continued)**

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD
201 - 0.6 MI NE - PMAC	10/ 2/00	280.7	3.77E-001	1.53E-002	3.23E-003	3.76E-003
	10/ 9/00	281.4	3.77E-001	1.68E-002	3.30E-003	3.75E-003
	10/16/00	278.5	3.62E-001	2.94E-002	3.98E-003	3.82E-003
	10/23/00	282.2	3.77E-001	3.80E-002	4.14E-003	3.39E-003
	10/30/00	280.5	3.62E-001	2.20E-002	3.64E-003	3.83E-003
	11/ 6/00	275.2	3.62E-001	2.13E-002	3.70E-003	4.02E-003
	11/13/00	277.8	3.62E-001	1.84E-002	3.50E-003	3.92E-003
	11/20/00	276.0	3.62E-001	2.61E-002	3.96E-003	4.14E-003
	11/27/00	271.7	3.62E-001	2.38E-002	3.75E-003	3.82E-003
	12/ 4/00	270.7	3.62E-001	2.86E-002	3.99E-003	3.83E-003
	12/11/00	272.6	3.62E-001	2.89E-002	3.90E-003	3.56E-003
	12/18/00	275.0	3.62E-001	1.67E-002	3.52E-003	4.15E-003
	12/25/00	273.2	3.62E-001	4.40E-002	4.63E-003	3.82E-003
202 - 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/ 3/00	275.4	3.74E-001	3.06E-002	3.98E-003	3.74E-003
	1/10/00	274.1	3.74E-001	1.70E-002	3.39E-003	3.89E-003
	1/17/00	273.2	3.74E-001	1.64E-002	3.49E-003	4.17E-003
	1/24/00	287.0	3.74E-001	2.04E-002	3.37E-003	3.50E-003
	1/31/00	267.8	3.74E-001	2.86E-002	4.00E-003	3.93E-003
	2/ 7/00	268.7	3.74E-001	2.92E-002	3.95E-003	3.74E-003
	2/14/00	273.6	3.74E-001	3.58E-002	4.08E-003	3.31E-003
	2/21/00	273.0	3.74E-001	2.16E-002	3.66E-003	3.97E-003
	2/28/00	279.1	3.74E-001	1.56E-002	3.13E-003	3.46E-003
	3/ 6/00	279.2	3.77E-001	2.00E-002	3.41E-003	3.59E-003
	3/13/00	280.4	3.77E-001	2.13E-002	3.50E-003	3.68E-003
	3/20/00	275.3	3.77E-001	1.49E-002	3.06E-003	3.36E-003
	3/27/00	281.9	3.77E-001	1.25E-002	3.00E-003	3.60E-003
	4/ 3/00	282.1	3.77E-001	1.92E-002	3.36E-003	3.60E-003
	4/10/00	277.3	3.77E-001	2.00E-002	3.44E-003	3.66E-003
	4/17/00	283.0	3.77E-001	1.39E-002	3.10E-003	3.65E-003
	4/24/00	284.1	3.77E-001	8.24E-003	2.64E-003	3.37E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Analysis: **Beta (Continued)**

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	5/ 1/00	282.1	3.77E-001	1.71E-002	3.24E-003	3.57E-003
	5/ 8/00	288.4	3.77E-001	2.05E-002	3.27E-003	3.25E-003
	5/15/00	284.6	3.77E-001	1.79E-002	3.24E-003	3.50E-003
	5/22/00	281.5	3.77E-001	2.11E-002	3.54E-003	3.81E-003
	5/29/00	283.0	3.77E-001	2.04E-002	3.36E-003	3.45E-003
	6/ 5/00	281.5	3.77E-001	1.16E-002	2.79E-003	3.24E-003
	6/12/00	279.5	3.77E-001	1.28E-002	3.01E-003	3.56E-003
	6/19/00	278.1	3.77E-001	1.23E-002	2.96E-003	3.51E-003
	6/26/00	280.3	3.77E-001	9.72E-003	2.83E-003	3.58E-003
	7/ 3/00	277.3	3.77E-001	1.33E-002	3.04E-003	3.57E-003
	7/10/00	288.3	3.77E-001	1.54E-002	3.07E-003	3.43E-003
	7/17/00	275.7	3.77E-001	2.05E-002	3.55E-003	3.85E-003
	7/24/00	282.5	3.77E-001	2.61E-002	3.69E-003	3.61E-003
	7/31/00	283.0	3.77E-001	1.29E-002	3.01E-003	3.56E-003
	8/ 7/00	283.8	3.77E-001	1.25E-002	3.06E-003	3.74E-003
	8/14/00	278.9	3.77E-001	2.09E-002	3.44E-003	3.55E-003
	8/21/00	283.3	3.77E-001	2.62E-002	3.74E-003	3.73E-003
	8/28/00	284.9	3.77E-001	1.63E-002	3.28E-003	3.79E-003
	9/ 4/00	290.8	3.77E-001	1.19E-002	2.89E-003	3.47E-003
	9/11/00	283.6	3.77E-001	1.28E-002	3.01E-003	3.58E-003
	9/18/00	285.2	3.77E-001	1.29E-002	3.08E-003	3.75E-003
	9/25/00	285.4	3.77E-001	1.26E-002	2.88E-003	3.31E-003
	10/ 2/00	284.0	3.77E-001	1.62E-002	3.25E-003	3.72E-003
	10/ 9/00	284.3	3.77E-001	1.67E-002	3.27E-003	3.72E-003
	10/16/00	279.1	3.62E-001	2.93E-002	3.98E-003	3.81E-003
	10/23/00	286.4	3.77E-001	3.84E-002	4.11E-003	3.34E-003
	10/30/00	283.6	3.62E-001	2.41E-002	3.71E-003	3.79E-003
	11/ 6/00	278.4	3.62E-001	2.15E-002	3.68E-003	3.97E-003
	11/13/00	282.7	3.62E-001	1.88E-002	3.47E-003	3.85E-003
	11/20/00	276.6	3.62E-001	1.76E-002	3.55E-003	4.13E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: Air Particulate

Analysis: Beta (Continued)

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	11/27/00	272.9	3.62E-001	2.48E-002	3.79E-003	3.80E-003
		12/ 4/00	271.7	3.62E-001	2.77E-002	3.95E-003	3.83E-003
		12/11/00	272.6	3.62E-001	2.59E-002	3.76E-003	3.56E-003
		12/18/00	275.3	3.62E-001	1.67E-002	3.52E-003	4.15E-003
		12/25/00	273.1	3.62E-001	4.47E-002	4.65E-003	3.82E-003
203	- 2.3 MI SSW - SOUTHPORT SUBSTATION	1/ 3/00	275.5	3.74E-001	3.21E-002	4.04E-003	3.73E-003
		1/10/00	268.4	3.74E-001	1.90E-002	3.55E-003	3.97E-003
		1/17/00	270.7	3.74E-001	1.86E-002	3.63E-003	4.21E-003
		1/24/00	266.2	3.74E-001	2.12E-002	3.59E-003	3.77E-003
		1/31/00	264.8	3.74E-001	2.52E-002	3.87E-003	3.98E-003
		2/ 7/00	267.4	3.74E-001	3.26E-002	4.12E-003	3.75E-003
		2/14/00	267.9	3.74E-001	3.87E-002	4.26E-003	3.38E-003
		2/21/00	267.0	3.74E-001	2.41E-002	3.84E-003	4.05E-003
		2/28/00	269.0	3.74E-001	1.94E-002	3.42E-003	3.59E-003
		3/ 6/00	265.0	3.77E-001	2.16E-002	3.62E-003	3.78E-003
		3/13/00	269.1	3.77E-001	2.24E-002	3.66E-003	3.84E-003
		3/20/00	264.5	3.77E-001	1.60E-002	3.21E-003	3.50E-003
		3/27/00	265.7	3.77E-001	1.16E-002	3.09E-003	3.82E-003
		4/ 3/00	261.1	3.77E-001	1.55E-002	3.35E-003	3.89E-003
		4/10/00	257.7	3.77E-001	2.06E-002	3.65E-003	3.94E-003
		4/17/00	260.4	3.77E-001	1.34E-002	3.27E-003	3.97E-003
		4/24/00	259.9	3.77E-001	1.09E-002	3.00E-003	3.69E-003
		5/ 1/00	256.3	3.77E-001	2.00E-002	3.63E-003	3.93E-003
		5/ 8/00	265.1	3.77E-001	2.31E-002	3.60E-003	3.54E-003
		5/15/00	264.3	3.77E-001	1.93E-002	3.50E-003	3.77E-003
		5/22/00	263.6	3.77E-001	2.28E-002	3.79E-003	4.07E-003
		5/29/00	264.9	3.77E-001	2.03E-002	3.51E-003	3.69E-003
		6/ 5/00	262.2	3.77E-001	1.11E-002	2.92E-003	3.48E-003
		6/12/00	261.7	3.77E-001	1.63E-002	3.36E-003	3.81E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Analysis: **Beta (Continued)**

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	6/19/00	266.4	3.77E-001	1.50E-002	3.21E-003	3.67E-003
		6/26/00	263.2	3.77E-001	1.13E-002	3.08E-003	3.81E-003
		7/ 3/00	259.6	3.77E-001	1.51E-002	3.30E-003	3.81E-003
		7/10/00	270.4	3.77E-001	1.79E-002	3.35E-003	3.66E-003
		7/17/00	269.6	3.77E-001	2.24E-002	3.70E-003	3.94E-003
		7/24/00	275.2	3.77E-001	2.47E-002	3.69E-003	3.71E-003
		7/31/00	275.6	3.77E-001	1.38E-002	3.12E-003	3.66E-003
		8/ 7/00	279.9	3.77E-001	1.10E-002	3.01E-003	3.80E-003
		8/14/00	274.6	3.77E-001	1.98E-002	3.42E-003	3.60E-003
		8/21/00	279.2	3.77E-001	2.36E-002	3.66E-003	3.78E-003
		8/28/00	284.0	3.77E-001	1.40E-002	3.17E-003	3.80E-003
		9/ 4/00	290.4	3.77E-001	1.52E-002	3.07E-003	3.47E-003
		9/11/00	283.6	3.77E-001	1.44E-002	3.09E-003	3.58E-003
		9/18/00	285.0	3.77E-001	1.44E-002	3.16E-003	3.75E-003
		9/25/00	274.4	3.77E-001	5.83E-003	2.53E-003	3.44E-003
		10/ 2/00	257.3	3.77E-001	1.63E-002	3.50E-003	4.11E-003
		10/ 9/00	256.3	3.77E-001	1.80E-002	3.60E-003	4.12E-003
		10/16/00	251.4	3.62E-001	3.45E-002	4.50E-003	4.23E-003
		10/23/00	257.8	3.77E-001	3.62E-002	4.30E-003	3.72E-003
		10/30/00	255.8	3.62E-001	2.32E-002	3.94E-003	4.20E-003
		11/ 6/00	250.4	3.62E-001	2.47E-002	4.13E-003	4.42E-003
		11/13/00	255.3	3.62E-001	1.74E-002	3.67E-003	4.26E-003
		11/20/00	249.6	3.62E-001	2.12E-002	4.02E-003	4.58E-003
		11/27/00	245.3	3.62E-001	2.91E-002	4.29E-003	4.23E-003
		12/ 4/00	245.0	3.62E-001	3.47E-002	4.55E-003	4.23E-003
		12/11/00	243.7	3.62E-001	2.70E-002	4.11E-003	3.98E-003
		12/18/00	250.4	3.62E-001	1.58E-002	3.73E-003	4.56E-003
		12/25/00	241.6	3.62E-001	5.04E-002	5.26E-003	4.32E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Analysis: **Beta (Continued)**

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/ 3/00	264.6	3.74E-001	3.29E-002	4.19E-003	3.89E-003
	1/10/00	150.8	3.74E-001	1.31E-002	5.17E-003	7.06E-003
	1/17/00	275.5	3.74E-001	1.78E-002	3.54E-003	4.14E-003
	1/24/00	281.5	3.74E-001	1.98E-002	3.38E-003	3.57E-003
	1/31/00	280.9	3.74E-001	1.99E-002	3.46E-003	3.75E-003
	2/ 7/00	288.0	3.74E-001	2.45E-002	3.56E-003	3.49E-003
	2/14/00	283.0	3.74E-001	3.45E-002	3.94E-003	3.20E-003
	2/21/00	280.7	3.74E-001	1.78E-002	3.40E-003	3.86E-003
	2/28/00	283.3	3.74E-001	1.64E-002	3.14E-003	3.41E-003
	3/ 6/00	283.2	3.77E-001	2.31E-002	3.52E-003	3.54E-003
	3/13/00	282.9	3.77E-001	2.53E-002	3.67E-003	3.65E-003
	3/20/00	282.5	3.77E-001	1.73E-002	3.13E-003	3.27E-003
	3/27/00	281.5	3.77E-001	1.32E-002	3.04E-003	3.60E-003
	4/ 3/00	281.2	3.77E-001	1.68E-002	3.24E-003	3.61E-003
	4/10/00	280.0	3.77E-001	1.81E-002	3.32E-003	3.62E-003
	4/17/00	281.6	3.77E-001	1.10E-002	2.95E-003	3.67E-003
	4/24/00	283.1	3.77E-001	8.61E-003	2.67E-003	3.38E-003
	5/ 1/00	279.4	3.77E-001	1.81E-002	3.32E-003	3.61E-003
	5/ 8/00	288.0	3.77E-001	2.06E-002	3.28E-003	3.26E-003
	5/15/00	289.6	3.77E-001	2.13E-002	3.37E-003	3.44E-003
	5/22/00	289.4	3.77E-001	2.43E-002	3.62E-003	3.71E-003
	5/29/00	291.7	3.77E-001	1.99E-002	3.26E-003	3.35E-003
	6/ 5/00	287.6	3.77E-001	1.55E-002	2.97E-003	3.17E-003
	6/12/00	291.6	3.77E-001	1.41E-002	2.99E-003	3.42E-003
	6/19/00	289.3	3.77E-001	1.27E-002	2.90E-003	3.38E-003
	6/26/00	287.6	3.77E-001	8.72E-003	2.72E-003	3.48E-003
	7/ 3/00	282.6	3.77E-001	1.56E-002	3.13E-003	3.50E-003
	7/10/00	281.5	3.77E-001	1.90E-002	3.32E-003	3.52E-003
	7/17/00	285.3	3.77E-001	2.23E-002	3.55E-003	3.72E-003
	7/24/00	288.9	3.77E-001	1.99E-002	3.34E-003	3.53E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Analysis: **Beta (Continued)**

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)	7/31/00	284.8	3.77E-001	1.18E-002	2.93E-003	3.54E-003
	8/ 7/00	289.5	3.77E-001	1.25E-002	3.01E-003	3.67E-003
	8/14/00	290.3	3.77E-001	1.94E-002	3.27E-003	3.41E-003
	8/21/00	283.6	3.77E-001	2.33E-002	3.60E-003	3.73E-003
	8/28/00	285.5	3.77E-001	1.56E-002	3.24E-003	3.78E-003
	9/ 4/00	288.4	3.77E-001	1.45E-002	3.05E-003	3.50E-003
	9/11/00	286.8	3.77E-001	1.41E-002	3.05E-003	3.54E-003
	9/18/00	288.6	3.77E-001	1.50E-002	3.16E-003	3.70E-003
	9/25/00	286.6	3.77E-001	1.26E-002	2.86E-003	3.30E-003
	10/ 2/00	283.9	3.77E-001	1.52E-002	3.19E-003	3.72E-003
	10/ 9/00	285.1	3.77E-001	1.90E-002	3.38E-003	3.71E-003
	10/16/00	283.8	3.62E-001	3.41E-002	4.14E-003	3.75E-003
	10/23/00	287.8	3.77E-001	3.96E-002	4.15E-003	3.33E-003
	10/30/00	285.2	3.62E-001	2.15E-002	3.57E-003	3.77E-003
	11/ 6/00	281.7	3.62E-001	2.36E-002	3.74E-003	3.93E-003
	11/13/00	283.8	3.62E-001	1.82E-002	3.43E-003	3.83E-003
	11/20/00	281.5	3.62E-001	2.33E-002	3.78E-003	4.06E-003
	11/27/00	277.2	3.62E-001	2.63E-002	3.82E-003	3.74E-003
	12/ 4/00	276.2	3.62E-001	3.33E-002	4.15E-003	3.76E-003
	12/11/00	276.1	3.62E-001	2.65E-002	3.76E-003	3.51E-003
	12/18/00	278.9	3.62E-001	1.70E-002	3.50E-003	4.10E-003
	12/25/00	279.0	3.62E-001	4.76E-002	4.71E-003	3.74E-003
205 - 0.6 MI SSE - SPOIL POND	1/ 3/00	291.1	3.74E-001	2.93E-002	3.78E-003	3.53E-003
	1/10/00	275.2	3.74E-001	1.55E-002	3.31E-003	3.87E-003
	1/17/00	283.8	3.74E-001	1.85E-002	3.50E-003	4.01E-003
	1/24/00	280.9	3.74E-001	1.84E-002	3.32E-003	3.57E-003
	1/31/00	277.3	3.74E-001	2.37E-002	3.68E-003	3.80E-003
	2/ 7/00	280.7	3.74E-001	2.61E-002	3.70E-003	3.58E-003
	2/14/00	285.0	3.74E-001	3.11E-002	3.77E-003	3.18E-003
	2/21/00	286.6	3.74E-001	1.71E-002	3.32E-003	3.78E-003
	2/28/00	290.4	3.74E-001	1.69E-002	3.11E-003	3.33E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Quantity: cubic meters

Activity: pCi/cubic meter

Analysis: **Beta (Continued)**

Sample Point	Sample Date	Quantity	Efficiency	Activity	2 Sigma Error	LLD
205 - 0.6 MI SSE - SPOIL POND	3/ 6/00	289.0	3.77E-001	2.13E-002	3.39E-003	3.47E-003
	3/13/00	293.6	3.77E-001	1.81E-002	3.23E-003	3.52E-003
	3/20/00	291.9	3.77E-001	1.47E-002	2.92E-003	3.17E-003
	3/27/00	212.8	3.77E-001	7.07E-003	3.40E-003	4.77E-003
	4/ 3/00	297.2	3.77E-001	1.87E-002	3.21E-003	3.41E-003
	4/10/00	295.0	3.77E-001	1.90E-002	3.24E-003	3.44E-003
	4/17/00	300.2	3.77E-001	1.27E-002	2.90E-003	3.44E-003
	4/24/00	299.2	3.77E-001	6.31E-003	2.41E-003	3.20E-003
	5/ 1/00	296.3	3.77E-001	1.72E-002	3.13E-003	3.40E-003
	5/ 8/00	302.7	3.77E-001	1.98E-002	3.13E-003	3.10E-003
	5/15/00	299.8	3.77E-001	1.83E-002	3.14E-003	3.32E-003
	5/22/00	303.2	3.77E-001	2.40E-002	3.49E-003	3.54E-003
	5/29/00	303.0	3.77E-001	1.76E-002	3.06E-003	3.22E-003
	6/ 5/00	300.1	3.77E-001	9.48E-003	2.53E-003	3.04E-003
	6/12/00	301.3	3.77E-001	1.48E-002	2.95E-003	3.31E-003
	6/19/00	301.2	3.77E-001	1.02E-002	2.66E-003	3.24E-003
	6/26/00	300.3	3.77E-001	8.91E-003	2.63E-003	3.34E-003
	7/ 3/00	299.0	3.77E-001	1.28E-002	2.85E-003	3.31E-003
	7/10/00	312.3	3.77E-001	1.43E-002	2.84E-003	3.17E-003
	7/17/00	275.2	3.77E-001	1.97E-002	3.51E-003	3.86E-003
	7/24/00	283.3	3.77E-001	2.15E-002	3.47E-003	3.60E-003
	7/31/00	282.8	3.77E-001	9.46E-003	2.81E-003	3.57E-003
	8/ 7/00	285.0	3.77E-001	1.25E-002	3.05E-003	3.73E-003
	8/14/00	281.8	3.77E-001	2.03E-002	3.38E-003	3.51E-003
	8/21/00	286.4	3.77E-001	2.49E-002	3.65E-003	3.69E-003
	8/28/00	280.8	3.77E-001	1.25E-002	3.12E-003	3.84E-003
	9/ 4/00	286.4	3.77E-001	1.41E-002	3.05E-003	3.52E-003
	9/11/00	281.3	3.77E-001	1.23E-002	3.00E-003	3.61E-003
	9/18/00	282.3	3.77E-001	1.46E-002	3.20E-003	3.78E-003
	9/25/00	131.6	3.77E-001	1.67E-002	5.58E-003	7.18E-003

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Particulate**

Analysis: **Beta (Continued)**

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	10/ 2/00	281.5	3.77E-001	1.51E-002	3.21E-003	3.75E-003
	10/ 9/00	279.9	3.77E-001	1.66E-002	3.30E-003	3.77E-003
	10/16/00	276.0	3.62E-001	3.19E-002	4.12E-003	3.85E-003
	10/23/00	124.9	3.77E-001	4.06E-002	7.26E-003	7.67E-003
	10/30/00	279.0	3.62E-001	1.93E-002	3.51E-003	3.85E-003
	11/ 6/00	257.2	3.62E-001	2.15E-002	3.89E-003	4.30E-003
	11/13/00	280.4	3.62E-001	1.61E-002	3.35E-003	3.88E-003
	11/20/00	196.9	3.62E-001	1.98E-002	4.74E-003	5.80E-003
	11/27/00	249.2	3.62E-001	2.37E-002	3.98E-003	4.16E-003
	12/ 4/00	250.5	3.62E-001	2.43E-002	4.00E-003	4.14E-003
	12/11/00	251.0	3.62E-001	2.07E-002	3.70E-003	3.87E-003
	12/18/00	205.0	3.62E-001	2.49E-002	4.85E-003	5.57E-003
	12/25/00	246.6	3.62E-001	4.39E-002	4.93E-003	4.23E-003

MediaType: **Air Cartridge**

Analysis: **Iodine**

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	LLD
200 - 1.0 MI SW - VISITORS CENTER	1/ 3/00	275.6	< LLD	2.42E-002
	1/10/00	277.9	< LLD	2.53E-002
	1/17/00	279.9	< LLD	2.22E-002
	1/24/00	267.7	< LLD	3.40E-002
	1/31/00	266.3	< LLD	5.74E-002
	2/ 7/00	269.4	< LLD	2.68E-002
	2/14/00	267.6	< LLD	2.81E-002
	2/21/00	265.9	< LLD	2.04E-002
	2/28/00	270.1	< LLD	2.11E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: Air Cartridge
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: Iodine (Continued)

Sample Point	Sample Date	Quantity	Activity	LLD
200 - 1.0 MI SW - VISITORS CENTER	3/ 6/00	266.2	< LLD	2.13E-002
	3/13/00	270.0	< LLD	2.40E-002
	3/20/00	267.5	< LLD	2.02E-002
	3/27/00	268.8	< LLD	1.75E-002
	4/ 3/00	268.6	< LLD	2.99E-002
	4/10/00	270.0	< LLD	2.34E-002
	4/17/00	271.2	< LLD	1.60E-002
	4/24/00	272.0	< LLD	1.63E-002
	5/ 1/00	268.5	< LLD	2.15E-002
	5/ 8/00	273.5	< LLD	2.36E-002
	5/15/00	272.4	< LLD	1.99E-002
	5/22/00	269.9	< LLD	2.06E-002
	5/29/00	272.2	< LLD	2.07E-002
	6/ 5/00	270.5	< LLD	2.65E-002
	6/12/00	270.4	< LLD	2.29E-002
	6/19/00	272.5	< LLD	2.19E-002
	6/26/00	271.1	< LLD	2.58E-002
	7/ 3/00	269.5	< LLD	2.09E-002
	7/10/00	278.5	< LLD	3.41E-002
	7/17/00	311.3	< LLD	1.96E-002
	7/24/00	423.9	< LLD	2.25E-002
	7/31/00	283.1	< LLD	2.24E-002
	8/ 7/00	284.8	< LLD	3.00E-002
	8/14/00	278.8	< LLD	3.70E-002
	8/21/00	280.6	< LLD	3.33E-002
	8/28/00	262.6	< LLD	3.24E-002
	9/ 4/00	267.1	< LLD	3.14E-002
	9/11/00	261.3	< LLD	2.21E-002
	9/18/00	260.1	< LLD	2.78E-002
	9/25/00	259.2	< LLD	2.19E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: Air Cartridge

Analysis: Iodine (Continued)

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	LLD
200 - 1.0 MI SW - VISITORS CENTER	10/ 2/00	253.2	< LLD	2.97E-002
	10/ 9/00	246.0	< LLD	3.01E-002
	10/16/00	241.6	< LLD	2.30E-002
	10/23/00	239.7	< LLD	3.05E-002
	10/30/00	244.8	< LLD	2.86E-002
	11/ 6/00	250.4	< LLD	2.64E-002
	11/13/00	253.3	< LLD	3.18E-002
	11/20/00	253.6	< LLD	2.36E-002
	11/27/00	251.9	< LLD	3.71E-002
	12/ 4/00	250.4	< LLD	3.39E-002
	12/11/00	249.4	< LLD	2.87E-002
	12/18/00	250.0	< LLD	4.74E-002
	12/25/00	250.2	< LLD	2.66E-002
	1/ 3/00	255.3	< LLD	5.09E-002
	1/10/00	266.6	< LLD	2.68E-002
	1/17/00	273.7	< LLD	3.37E-002
201 - 0.6 MI NE - PMAC	1/24/00	269.8	< LLD	3.68E-002
	1/31/00	266.3	< LLD	4.87E-002
	2/ 7/00	269.3	< LLD	3.39E-002
	2/14/00	272.6	< LLD	2.61E-002
	2/21/00	272.5	< LLD	3.17E-002
	2/28/00	273.2	< LLD	2.07E-002
	3/ 6/00	274.7	< LLD	1.75E-002
	3/13/00	276.5	< LLD	2.59E-002
	3/20/00	276.2	< LLD	2.87E-002
	3/27/00	274.5	< LLD	4.01E-002
	4/ 3/00	277.0	< LLD	3.27E-002
	4/10/00	275.3	< LLD	1.80E-002
	4/17/00	275.2	< LLD	3.76E-002
	4/24/00	279.3	< LLD	3.03E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: Air Cartridge
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: Iodine (Continued)

Sample Point	Sample Date	Quantity	Activity	LLD
201 - 0.6 MI NE - PMAC	5/ 1/00	273.3	< LLD	2.71E-002
	5/ 8/00	279.2	< LLD	2.74E-002
	5/15/00	282.9	< LLD	2.39E-002
	5/22/00	280.6	< LLD	2.76E-002
	5/29/00	283.5	< LLD	3.89E-002
	6/ 5/00	278.3	< LLD	2.75E-002
	6/12/00	282.4	< LLD	3.27E-002
	6/19/00	284.5	< LLD	3.06E-002
	6/26/00	281.1	< LLD	3.98E-002
	7/ 3/00	283.2	< LLD	2.82E-002
	7/10/00	292.8	< LLD	1.97E-002
	7/17/00	273.6	< LLD	2.44E-002
	7/24/00	277.6	< LLD	3.73E-002
	7/31/00	276.0	< LLD	3.48E-002
	8/ 7/00	278.4	< LLD	3.71E-002
	8/14/00	275.4	< LLD	3.47E-002
	8/21/00	281.0	< LLD	2.98E-002
	8/28/00	279.9	< LLD	2.64E-002
	9/ 4/00	287.9	< LLD	2.65E-002
	9/11/00	282.0	< LLD	2.54E-002
	9/18/00	284.2	< LLD	3.22E-002
	9/25/00	284.5	< LLD	2.50E-002
	10/ 2/00	280.7	< LLD	3.40E-002
	10/ 9/00	281.4	< LLD	2.51E-002
	10/16/00	278.5	< LLD	3.01E-002
	10/23/00	282.2	< LLD	3.12E-002
	10/30/00	280.5	< LLD	3.38E-002
	11/ 6/00	275.2	< LLD	3.30E-002
	11/13/00	277.8	< LLD	4.42E-002
	11/20/00	276.0	< LLD	2.92E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: Air Cartridge
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: Iodine (Continued)

Sample Point	Sample Date	Quantity	Activity	LLD
201 - 0.6 MI NE - PMAC	11/27/00	271.7	< LLD	3.16E-002
	12/ 4/00	270.7	< LLD	4.31E-002
	12/11/00	272.6	< LLD	2.71E-002
	12/18/00	275.0	< LLD	3.22E-002
	12/25/00	273.2	< LLD	3.81E-002
202 - 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	1/ 3/00	275.4	< LLD	3.82E-002
	1/10/00	274.1	< LLD	3.73E-002
	1/17/00	273.2	< LLD	2.43E-002
	1/24/00	287.0	< LLD	3.84E-002
	1/31/00	267.8	< LLD	4.08E-002
	2/ 7/00	268.7	< LLD	3.63E-002
	2/14/00	273.6	< LLD	3.77E-002
	2/21/00	273.0	< LLD	3.65E-002
	2/28/00	279.1	< LLD	3.62E-002
	3/ 6/00	279.2	< LLD	3.53E-002
	3/13/00	280.4	< LLD	2.37E-002
	3/20/00	275.3	< LLD	2.45E-002
	3/27/00	281.9	< LLD	2.05E-002
	4/ 3/00	282.1	< LLD	4.27E-002
	4/10/00	277.9	< LLD	3.62E-002
	4/17/00	283.0	< LLD	2.78E-002
	4/24/00	284.1	< LLD	2.54E-002
	5/ 1/00	282.1	< LLD	2.16E-002
	5/ 8/00	288.4	< LLD	3.06E-002
	5/15/00	284.6	< LLD	3.42E-002
	5/22/00	281.5	< LLD	3.18E-002
	5/29/00	283.0	< LLD	2.79E-002
	6/ 5/00	281.5	< LLD	2.72E-002
	6/12/00	279.5	< LLD	2.23E-002
	6/19/00	278.1	< LLD	2.97E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Cartridge**
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: **Iodine (Continued)**

Sample Point	Sample Date	Quantity	Activity	LLD
202 - 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	6/26/00	280.3	< LLD	2.47E-002
	7/ 3/00	277.3	< LLD	3.36E-002
	7/10/00	288.3	< LLD	2.81E-002
	7/17/00	275.7	< LLD	2.89E-002
	7/24/00	282.5	< LLD	4.34E-002
	7/31/00	283.0	< LLD	3.51E-002
	8/ 7/00	283.8	< LLD	4.35E-002
	8/14/00	278.9	< LLD	2.87E-002
	8/21/00	283.3	< LLD	2.59E-002
	8/28/00	284.9	< LLD	3.07E-002
	9/ 4/00	290.8	< LLD	3.64E-002
	9/11/00	283.6	< LLD	2.87E-002
	9/18/00	285.2	< LLD	3.48E-002
	9/25/00	285.4	< LLD	4.48E-002
	10/ 2/00	284.0	< LLD	4.12E-002
	10/ 9/00	284.3	< LLD	3.52E-002
	10/16/00	279.1	< LLD	3.06E-002
	10/23/00	286.4	< LLD	3.33E-002
	10/30/00	283.6	< LLD	3.10E-002
	11/ 6/00	278.4	< LLD	3.64E-002
	11/13/00	282.7	< LLD	3.72E-002
	11/20/00	276.6	< LLD	3.34E-002
	11/27/00	272.9	< LLD	2.74E-002
	12/ 4/00	271.1	< LLD	3.90E-002
	12/11/00	272.6	< LLD	3.12E-002
	12/18/00	275.3	< LLD	3.34E-002
	12/25/00	273.1	< LLD	3.55E-002
203 - 2.3 MI SSW - SOUTHPORT SUBSTATION	1/ 3/00	275.5	< LLD	1.66E-002
	1/10/00	268.4	< LLD	4.41E-002
	1/17/00	270.7	< LLD	2.15E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: Air Cartridge
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: Iodine (Continued)

Sample Point	Sample Date	Quantity	Activity	LLD
203 - 2.3 MI SSW - SOUTHPORT SUBSTATION	1/24/00	266.2	< LLD	5.08E-002
	1/31/00	264.8	< LLD	5.56E-002
	2/ 7/00	267.4	< LLD	4.87E-002
	2/14/00	267.9	< LLD	2.48E-002
	2/21/00	267.0	< LLD	4.55E-002
	2/28/00	269.0	< LLD	3.78E-002
	3/ 6/00	265.0	< LLD	2.16E-002
	3/13/00	269.1	< LLD	3.72E-002
	3/20/00	264.5	< LLD	4.11E-002
	3/27/00	265.7	< LLD	1.89E-002
	4/ 3/00	261.1	< LLD	2.58E-002
	4/10/00	257.7	< LLD	2.53E-002
	4/17/00	260.4	< LLD	3.48E-002
	4/24/00	259.9	< LLD	3.32E-002
	5/ 1/00	256.3	< LLD	4.81E-002
	5/ 8/00	265.1	< LLD	4.63E-002
	5/15/00	264.3	< LLD	4.39E-002
	5/22/00	263.6	< LLD	4.45E-002
	5/29/00	264.9	< LLD	2.67E-002
	6/ 5/00	262.2	< LLD	1.34E-002
	6/12/00	261.7	< LLD	2.50E-002
	6/19/00	266.4	< LLD	3.39E-002
	6/26/00	263.2	< LLD	3.74E-002
	7/ 3/00	259.6	< LLD	2.57E-002
	7/10/00	270.4	< LLD	2.80E-002
	7/17/00	269.6	< LLD	1.85E-002
	7/24/00	275.2	< LLD	2.56E-002
	7/31/00	275.6	< LLD	4.27E-002
	8/ 7/00	279.9	< LLD	3.80E-002
	8/14/00	274.6	< LLD	3.09E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Cartridge**

Analysis: **Iodine (Continued)**

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	LLD
203 - 2.3 MI SSW - SOUTHPORT SUBSTATION	8/21/00	279.2	< LLD	4.40E-002
	8/28/00	284.8	< LLD	3.92E-002
	9/ 4/00	290.4	< LLD	2.30E-002
	9/11/00	283.6	< LLD	3.66E-002
	9/18/00	285.0	< LLD	3.17E-002
	9/25/00	274.4	< LLD	2.32E-002
	10/ 2/00	257.3	< LLD	3.60E-002
	10/ 9/00	256.3	< LLD	4.84E-002
	10/16/00	251.4	< LLD	2.86E-002
	10/23/00	257.8	< LLD	4.63E-002
	10/30/00	255.8	< LLD	3.44E-002
	11/ 6/00	250.4	< LLD	2.50E-002
	11/13/00	255.3	< LLD	2.48E-002
	11/20/00	249.6	< LLD	2.77E-002
	11/27/00	245.3	< LLD	2.46E-002
	12/ 4/00	245.0	< LLD	4.54E-002
	12/11/00	243.7	< LLD	3.32E-002
	12/18/00	250.4	< LLD	5.29E-002
	12/25/00	241.6	< LLD	5.40E-002
204 - 23.0 MI NNE - SUTTON PLANT (CONTROL)	1/ 3/00	264.6	< LLD	3.22E-002
	1/10/00	150.8	< LLD	4.75E-002
	1/17/00	275.5	< LLD	3.05E-002
	1/24/00	281.5	< LLD	2.22E-002
	1/31/00	280.9	< LLD	5.17E-002
	2/ 7/00	282.0	< LLD	3.03E-002
	2/14/00	283.0	< LLD	2.78E-002
	2/21/00	280.7	< LLD	1.69E-002
	2/28/00	283.3	< LLD	1.68E-002
	3/ 6/00	283.2	< LLD	3.11E-002
	3/13/00	282.9	< LLD	2.32E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Cartridge**
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: **Iodine (Continued)**

Sample Point	Sample Date	Quantity	Activity	LLD
204 - 23.0 MI NNE - SUTTON PLANT (CONTROL)	3/20/00	282.5	< LLD	2.26E-002
	3/27/00	281.5	< LLD	2.02E-002
	4/ 3/00	281.2	< LLD	2.49E-002
	4/10/00	280.0	< LLD	2.08E-002
	4/17/00	281.6	< LLD	2.04E-002
	4/24/00	283.1	< LLD	2.04E-002
	5/ 1/00	279.4	< LLD	2.34E-002
	5/ 8/00	288.0	< LLD	1.82E-002
	5/15/00	289.6	< LLD	2.14E-002
	5/22/00	289.4	< LLD	2.44E-002
	5/29/00	291.7	< LLD	3.07E-002
	6/ 5/00	287.6	< LLD	2.18E-002
	6/12/00	291.6	< LLD	1.49E-002
	6/19/00	289.3	< LLD	2.62E-002
	6/26/00	287.6	< LLD	2.38E-002
	7/ 3/00	282.6	< LLD	3.07E-002
	7/10/00	281.5	< LLD	2.59E-002
	7/17/00	285.3	< LLD	2.44E-002
	7/24/00	288.9	< LLD	2.70E-002
	7/31/00	284.8	< LLD	2.61E-002
	8/ 7/00	289.5	< LLD	3.49E-002
	8/14/00	290.3	< LLD	3.22E-002
	8/21/00	283.6	< LLD	2.95E-002
	8/28/00	285.5	< LLD	2.46E-002
	9/ 4/00	288.4	< LLD	2.81E-002
	9/11/00	286.8	< LLD	1.60E-002
	9/18/00	288.6	< LLD	2.26E-002
	9/25/00	286.6	< LLD	2.59E-002
	10/ 2/00	283.9	< LLD	3.07E-002
	10/ 9/00	285.1	< LLD	1.94E-002

BSEP Radiological Environmental Monitoring Analysis Report

Media Type: **Air Cartridge**

Analysis: **Iodine (Continued)**

Quantity: cubic meters

Activity: pCi/cubic meter

Sample Point	Sample Date	Quantity	Activity	LLD
204 - 23.0 MI NNE - SUTTON PLANT (CONTROL)	10/16/00	283.8	< LLD	1.72E-002
	10/23/00	287.8	< LLD	2.95E-002
	10/30/00	285.2	< LLD	2.47E-002
	11/ 6/00	281.7	< LLD	2.50E-002
	11/13/00	283.8	< LLD	3.90E-002
	11/20/00	281.5	< LLD	3.73E-002
	11/27/00	277.2	< LLD	1.88E-002
	12/ 4/00	276.2	< LLD	3.71E-002
	12/11/00	276.1	< LLD	2.63E-002
	12/18/00	278.9	< LLD	2.91E-002
	12/25/00	279.0	< LLD	3.08E-002
205 - 0.6 MI SSE - SPOIL POND	1/ 3/00	291.1	< LLD	5.38E-002
	1/10/00	275.2	< LLD	3.49E-002
	1/17/00	283.8	< LLD	2.61E-002
	1/24/00	280.9	< LLD	3.86E-002
	1/31/00	277.3	< LLD	4.99E-002
	2/ 7/00	280.7	< LLD	3.37E-002
	2/14/00	285.0	< LLD	3.05E-002
	2/21/00	286.6	< LLD	2.87E-002
	2/28/00	290.4	< LLD	2.21E-002
	3/ 6/00	289.0	< LLD	2.35E-002
	3/13/00	293.6	< LLD	2.22E-002
	3/20/00	291.9	< LLD	2.60E-002
	3/27/00	212.8	< LLD	4.56E-002
	4/ 3/00	297.2	< LLD	4.66E-002
	4/10/00	295.0	< LLD	2.88E-002
	4/17/00	300.2	< LLD	3.07E-002
	4/24/00	299.2	< LLD	2.38E-002
	5/ 1/00	296.3	< LLD	2.73E-002
	5/ 8/00	302.7	< LLD	3.35E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Cartridge**
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: **Iodine (Continued)**

Sample Point	Sample Date	Quantity	Activity	LLD
205 - 0.6 MI SSE - SPOIL POND	5/15/00	299.8	< LLD	2.26E-002
	5/22/00	303.2	< LLD	2.32E-002
	5/29/00	303.0	< LLD	3.52E-002
	6/ 5/00	300.1	< LLD	2.26E-002
	6/12/00	301.3	< LLD	2.41E-002
	6/19/00	301.2	< LLD	2.08E-002
	6/26/00	300.3	< LLD	2.27E-002
	7/ 3/00	299.0	< LLD	3.94E-002
	7/10/00	312.3	< LLD	3.97E-002
	7/17/00	275.2	< LLD	4.41E-002
	7/24/00	283.3	< LLD	3.77E-002
	7/31/00	282.8	< LLD	3.01E-002
	8/ 7/00	285.0	< LLD	3.73E-002
	8/14/00	281.8	< LLD	4.00E-002
	8/21/00	286.4	< LLD	2.48E-002
	8/28/00	280.8	< LLD	2.15E-002
	9/ 4/00	286.4	< LLD	3.15E-002
	9/11/00	281.3	< LLD	3.03E-002
	9/18/00	282.3	< LLD	2.07E-002
	9/25/00	131.6	< LLD	6.83E-002
	10/ 2/00	281.5	< LLD	3.80E-002
	10/ 9/00	279.9	< LLD	2.95E-002
	10/16/00	276.0	< LLD	2.75E-002
	10/23/00	124.9	< LLD	4.24E-002
	10/30/00	279.0	< LLD	2.84E-002
	11/ 6/00	257.2	< LLD	4.30E-002
	11/13/00	280.4	< LLD	3.52E-002
	11/20/00	196.9	< LLD	4.16E-002
	11/27/00	249.2	< LLD	4.94E-002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Air Cartridge**
 Quantity: cubic meters
 Activity: pCi/cubic meter

Analysis: **Iodine (Continued)**

Sample Point	Sample Date	Quantity	Activity	LLD
205 - 0.6 MI SSE - SPOIL POND	12/ 4/00	250.5	< LLD	4.20E-002
	12/11/00	251.0	< LLD	1.56E-002
	12/18/00	254.8	< LLD	3.74E-002
	12/25/00	246.6	< LLD	4.20E-002

MediaType: **Surface Water**
 Quantity: Liters
 Activity: pCi/Liter

Analysis: **Tritium**

Sample Point	Sample Date	Quantity	Efficiency	Activity	LLD
400 - 0.7 MI NE - INTAKE CANAL (CONTROL)	1/31/00	0.005	2.85E-001	< LLD	2.96E+002
	2/29/00	0.005	4.32E-001	< LLD	3.12E+002
	3/31/00	0.005	4.36E-001	< LLD	3.13E+002
	4/30/00	0.005	2.88E-001	< LLD	2.91E+002
	5/31/00	0.005	4.32E-001	< LLD	3.09E+002
	6/30/00	0.005	4.38E-001	< LLD	3.00E+002
	7/31/00	0.005	2.85E-001	< LLD	2.96E+002
	8/31/00	0.005	4.36E-001	< LLD	3.06E+002
	9/30/00	0.005	4.39E-001	< LLD	2.99E+002
	10/31/00	0.005	2.82E-001	< LLD	3.01E+002
	11/30/00	0.005	4.38E-001	< LLD	2.94E+002
	12/31/00	0.005	2.88E-001	< LLD	2.98E+002
401 - 4.9 MI SSW - DISCHARGE CANAL	1/31/00	0.005	2.85E-001	< LLD	2.96E+002
	2/29/00	0.005	4.32E-001	< LLD	3.12E+002
	3/31/00	0.005	4.38E-001	< LLD	3.12E+002
	4/30/00	0.005	2.88E-001	< LLD	2.91E+002
	5/31/00	0.005	4.29E-001	< LLD	3.12E+002
	6/30/00	0.005	4.38E-001	< LLD	3.00E+002

BSEP Radiological Environmental Monitoring Analysis Report

MediaType: **Surface Water**

Analysis: **Tritium**

Quantity: Liters

Activity: pCi/Liter

Sample Point	Sample Date	Quantity	Efficiency	Activity	LLD
401 - 4.9 MI SSW - DISCHARGE CANAL	7/31/00	0.005	2.85E-001	< LLD	2.96E+002
	8/31/00	0.005	4.35E-001	< LLD	3.07E+002
	9/30/00	0.005	4.38E-001	< LLD	3.00E+002
	10/31/00	0.005	2.82E-001	< LLD	3.01E+002
	11/30/00	0.005	4.38E-001	< LLD	2.94E+002
	12/31/00	0.005	2.88E-001	< LLD	2.98E+002

CP&L

2000 Radiological Environmental

Monitoring Gamma Isotopic

Report

Brunswick Steam Electric Plant

2000 BSEP Radiological Environmental Monitoring Gamma Isotopic Report Comments

- All AC and AP samples were available.

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: AIR PARTICULATE

Quantity: CUBIC METERS

Activity: pCi/cubic meter

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
200 - 1.0 MI SW - VISITORS CENTER	2/15/00	3512.9	BE-7	1.26E-001	2.12E-002
	5/15/00	3522.8	BE-7	1.20E-001	1.62E-002
	8/15/00	3720.7	BE-7	8.84E-002	1.24E-002
	11/15/00	3234.5	BE-7	7.60E-002	1.42E-002
201 - 0.6 MI NE - PMAC	2/15/00	3521.2	BE-7	1.53E-001	1.99E-002
	5/15/00	3632.6	BE-7	1.32E-001	1.97E-002
	8/15/00	3656.5	BE-7	8.77E-002	1.40E-002
	11/15/00	3595.5	BE-7	9.63E-002	1.52E-002
	11/15/00	3595.5	BI-214	6.25E-003	1.99E-003
	11/15/00	3595.5	PB-214	7.15E-003	1.68E-003
202 - 1.0 MI S - SUBSTATION ON CONSTRUCTION RD	2/15/00	3588.7	BE-7	1.31E-001	1.81E-002
	5/15/00	3666.1	BE-7	1.14E-001	1.35E-002
	5/15/00	3666.1	K-40	1.77E-002	8.93E-003
	5/15/00	3666.1	PB-214	1.50E-003	1.02E-003
	8/15/00	3682.7	BE-7	1.06E-001	1.72E-002
	11/15/00	3620.7	BE-7	8.92E-002	1.52E-002
	11/15/00	3620.7	PB-214	2.06E-003	1.33E-003
	11/15/00	3620.7	PB-214	2.06E-003	1.33E-003
203 - 2.3 MI SSW - SOUTHPORT SUBSTATION	2/15/00	3481.2	BE-7	1.41E-001	1.64E-002
	2/15/00	3481.2	K-40	1.62E-002	9.36E-003
	2/15/00	3481.2	PB-212	1.40E-003	7.54E-004
	5/15/00	3406.8	BE-7	1.11E-001	1.85E-002
	8/15/00	3602.3	BE-7	1.04E-001	1.79E-002
	8/15/00	3602.3	K-40	6.25E-002	1.52E-002
	11/15/00	3259.9	BE-7	9.22E-002	1.20E-002
	11/15/00	3259.9	BE-7	9.22E-002	1.20E-002

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: AIR PARTICULATE (Continued)

Quantity: CUBIC METERS

Activity: pCi/cubic meter

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
204 - 23.0 MI NNE - SUTTON PLANT (CONTROL)	2/15/00	3512.4	BE-7	1.39E-001	2.02E-002
	2/15/00	3512.4	K-40	2.91E-002	1.13E-002
	5/15/00	3720.1	BE-7	1.09E-001	1.62E-002
	8/15/00	3722.4	BE-7	9.64E-002	1.21E-002
	11/15/00	3660.2	BE-7	8.58E-002	1.52E-002
	11/15/00	3660.2	TL-208	1.30E-003	9.67E-004
	11/15/00	3660.2	BI-214	3.96E-003	2.04E-003
	11/15/00	3660.2	PB-214	3.71E-003	1.53E-003
	2/15/00	3638.3	BE-7	1.30E-001	1.79E-002
205 - 0.6 MI SSE - SPOIL POND	5/15/00	3899.5	BE-7	9.91E-002	1.32E-002
	5/15/00	3899.5	TL-208	1.16E-003	6.15E-004
	5/15/00	3899.5	PB-212	1.52E-003	7.76E-004
	8/15/00	3568.2	BE-7	9.04E-002	1.44E-002
	11/15/00	3178.1	BE-7	8.47E-002	1.86E-002
	11/15/00	3178.1	PB-212	1.58E-003	1.37E-003
	11/15/00	3178.1	PB-214	2.57E-003	1.71E-003

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: Broadleaf Vegetation

Media: Cherry

Quantity: GRAMS (wet)

Activity: pCi/gm wet

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
800 - 0.7 MI NE - INTAKE CANAL	8/ 1/00	555.5	BE-7	1.39E+000	2.20E-001
	8/ 1/00	555.5	K-40	1.69E+000	3.48E-001
	9/ 1/00	588.8	BE-7	4.57E-001	1.54E-001
	9/ 1/00	588.8	K-40	2.41E+000	3.34E-001
	11/ 1/00	463.2	BE-7	6.81E-001	2.36E-001
	11/ 1/00	463.2	K-40	3.88E+000	5.71E-001
	11/ 1/00	463.2	BI-214	1.01E-001	4.78E-002
	11/ 1/00	463.2	PB-214	8.48E-002	4.72E-002
801 - 0.6 MI SW - DISCHARGE CANAL	8/ 1/00	564.2	BE-7	8.87E-001	2.01E-001
	8/ 1/00	564.2	K-40	3.04E+000	4.66E-001
	9/ 1/00	543.2	BE-7	1.02E+000	1.82E-001
	9/ 1/00	543.2	K-40	2.40E+000	4.17E-001
	11/ 1/00	359.1	BE-7	1.26E+000	2.81E-001
	11/ 1/00	359.1	K-40	2.11E+000	5.58E-001
802 - 10.0 MI - NOT SPECIFIED (CONTROL)	8/ 1/00	591.3	BE-7	7.54E-001	1.86E-001
	8/ 1/00	591.3	K-40	2.82E+000	4.39E-001
	9/ 1/00	731.4	BE-7	3.25E-001	1.30E-001
	9/ 1/00	731.4	K-40	2.75E+000	3.40E-001
	11/ 1/00	404.5	BE-7	5.56E-001	2.31E-001
	11/ 1/00	404.5	K-40	2.88E+000	6.30E-001
	11/ 1/00	404.5	RA-226	6.71E-001	4.75E-001
803 - 0.6 MI SSE - SPOIL POND	8/ 1/00	522.6	BE-7	9.22E-001	2.11E-001
	8/ 1/00	522.6	K-40	3.25E+000	4.63E-001
	9/ 1/00	554.7	BE-7	1.05E+000	1.75E-001
	9/ 1/00	554.7	K-40	2.57E+000	3.67E-001
	11/ 1/00	362.2	BE-7	9.93E-001	2.72E-001
	11/ 1/00	362.2	K-40	2.56E+000	6.16E-001

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: Broadleaf Vegetation

Media: Wax Myrtle

Quantity: GRAMS (wet)

Activity: pCi/gm wet

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
800 - 0.7 MI NE - INTAKE CANAL	1/ 1/00	417.0	BE-7	3.30E+000	2.83E-001
	1/ 1/00	417.0	K-40	1.69E+000	4.59E-001
	2/ 1/00	391.1	BE-7	2.29E+000	3.41E-001
	2/ 1/00	391.1	K-40	2.35E+000	5.41E-001
	3/ 1/00	474.1	BE-7	1.31E+000	1.98E-001
	3/ 1/00	474.1	K-40	1.32E+000	3.00E-001
	4/ 2/00	440.7	BE-7	2.30E+000	2.34E-001
	4/ 2/00	440.7	K-40	2.22E+000	4.35E-001
	5/ 1/00	620.2	BE-7	4.75E-001	1.32E-001
	5/ 1/00	620.2	K-40	2.63E+000	3.28E-001
	6/ 1/00	372.8	BE-7	7.78E-001	2.26E-001
	6/ 1/00	372.8	K-40	3.65E+000	6.44E-001
	7/ 4/00	522.6	BE-7	2.69E-001	1.24E-001
	7/ 4/00	522.6	K-40	1.56E+000	3.26E-001
	10/ 2/00	433.6	BE-7	1.59E+000	2.59E-001
	10/ 2/00	433.6	K-40	1.75E+000	4.80E-001
	10/ 2/00	433.6	BI-214	5.00E-002	4.27E-002
	12/ 2/00	428.7	BE-7	2.88E+000	3.46E-001
	12/ 2/00	428.7	K-40	1.30E+000	4.34E-001
801 - 0.6 MI SW - DISCHARGE CANAL	1/ 1/00	419.3	BE-7	9.06E-001	2.60E-001
	1/ 1/00	419.3	K-40	1.66E+000	4.25E-001
	2/ 1/00	458.8	BE-7	2.25E+000	2.92E-001
	2/ 1/00	458.8	K-40	1.84E+000	4.21E-001
	3/ 1/00	435.3	BE-7	9.31E-001	1.93E-001
	3/ 1/00	435.3	K-40	2.01E+000	4.89E-001
	4/ 2/00	510.8	BE-7	6.57E-001	1.70E-001
	4/ 2/00	510.8	K-40	2.42E+000	4.57E-001
	4/ 2/00	510.8	TL-208	1.72E-002	1.64E-002

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: Broadleaf Vegetation

Media: Wax Myrtle (Continued)

Quantity: GRAMS (wet)

Activity: pCi/gm wet

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
801 - 0.6 MI SW - DISCHARGE CANAL	5/ 1/00	566.5	BE-7	1.15E+000	1.77E-001
	5/ 1/00	566.5	K-40	2.47E+000	4.63E-001
	5/ 1/00	566.5	RA-226	3.81E-001	3.16E-001
	6/ 1/00	407.6	BE-7	6.95E-001	2.22E-001
	6/ 1/00	407.6	K-40	2.31E+000	5.02E-001
	7/ 4/00	515.0	BE-7	4.08E-001	1.40E-001
	7/ 4/00	515.0	K-40	3.21E+000	4.75E-001
	10/ 2/00	437.8	BE-7	1.22E+000	2.16E-001
	10/ 2/00	437.8	K-40	1.61E+000	4.11E-001
	12/ 2/00	430.8	BE-7	4.66E-001	2.02E-001
	12/ 2/00	430.8	K-40	2.04E+000	4.53E-001
802 - 10.0 MI - NOT SPECIFIED (CONTROL)	1/ 1/00	409.2	BE-7	1.68E+000	3.08E-001
	1/ 1/00	409.2	K-40	1.16E+000	4.46E-001
	2/ 1/00	536.8	BE-7	1.37E+000	2.49E-001
	2/ 1/00	536.8	K-40	1.28E+000	3.62E-001
	3/ 1/00	477.1	BE-7	1.17E+000	2.63E-001
	3/ 1/00	477.1	K-40	1.85E+000	3.64E-001
	4/ 2/00	499.9	BE-7	1.87E+000	3.05E-001
	4/ 2/00	499.9	K-40	2.15E+000	4.32E-001
	5/ 1/00	824.0	BE-7	5.98E-001	1.65E-001
	5/ 1/00	824.0	K-40	1.90E+000	2.90E-001
	6/ 1/00	430.1	BE-7	5.61E-001	2.00E-001
	6/ 1/00	430.1	K-40	2.54E+000	5.83E-001
	6/ 1/00	430.1	PB-212	4.41E-002	3.11E-002
	7/ 4/00	556.5	BE-7	6.94E-001	2.14E-001
	7/ 4/00	556.5	K-40	1.63E+000	3.54E-001
	10/ 2/00	453.3	BE-7	6.72E-001	1.80E-001
	10/ 2/00	453.3	K-40	2.00E+000	3.59E-001
	12/ 2/00	460.0	BE-7	1.07E+000	2.05E-001
	12/ 2/00	460.0	K-40	1.20E+000	3.46E-001

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: Broadleaf Vegetation

Media: Wax Myrtle (Continued)

Quantity: GRAMS (wet)

Activity: pCi/gm wet

Sample Point

803 - 0.6 MI SSE - SPOIL POND

SampleDate	Quantity	Isotope	Activity	2 SigmaError
1/ 1/00	359.3	BE-7	2.21E+000	3.75E-001
1/ 1/00	359.3	K-40	1.49E+000	4.95E-001
2/ 1/00	430.7	BE-7	1.46E+000	2.47E-001
2/ 1/00	430.7	K-40	2.45E+000	5.55E-001
3/ 1/00	468.1	BE-7	1.56E+002	2.59E-001
3/ 1/00	468.1	K-40	1.48E+000	4.27E-001
4/ 2/00	478.5	BE-7	1.28E+000	2.27E-001
4/ 2/00	478.5	K-40	2.29E+000	4.90E-001
5/ 1/00	584.3	BE-7	8.94E-001	1.58E-001
5/ 1/00	584.3	K-40	2.69E+000	4.35E-001
6/ 1/00	361.7	BE-7	2.78E-001	1.39E-001
6/ 1/00	361.7	K-40	2.84E+000	5.04E-001
7/ 4/00	509.1	BE-7	4.48E-001	1.23E-001
7/ 4/00	509.1	K-40	2.51E+000	3.90E-001
10/ 2/00	452.3	BE-7	8.67E-001	1.93E-001
10/ 2/00	452.3	K-40	8.53E-001	3.50E-001
10/ 2/00	452.3	PB-214	4.28E-002	3.49E-002
12/ 2/00	478.1	BE-7	2.61E-001	1.69E-001
12/ 2/00	478.1	K-40	1.76E+000	4.21E-001

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: **Fish and Invertebrates**

Quantity: GRAMS (wet)

Activity: pCi/gm wet

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
700 - 5.5 MI SSW - FREE SWIMMERS AT DISCHARGE	5/26/00	598.3	K-40	5.10E+000	1.01E+000
	10/25/00	567.3	K-40	3.57E+000	1.15E+000
701 - 5.5 MI SSW - BOTTOM FEEDER AT DISCHARGE	5/26/00	605.8	K-40	4.51E+000	1.12E+000
	10/25/00	618.3	K-40	4.43E+000	1.08E+000
703 - FREE SWIMMERS - ATLANTIC OCEAN (CONTROL)	5/26/00	535.5	K-40	1.01E+000	9.33E-001
	10/25/00	532.9	K-40	2.78E+000	9.48E-001
704 - BOTTOM FEEDER - ATLANTIC OCEAN (CONTROL)	5/26/00	404.0	K-40	1.92E+000	1.28E+000
	10/25/00	507.6	K-40	2.62E+000	9.57E-001

MediaType: **Invertebrates**

Quantity: GRAMS (wet)

Activity: pCi/gm wet

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
702 - 5.5 MI SSW - SH/BO* AT DISCHARGE	5/26/00	613.5	K-40	1.37E+000	6.99E-001
	10/25/00	846.4	K-40	1.24E+000	5.31E-001
705 - SH/BO* - ATLANTIC OCEAN (CONTROL)	5/26/00	619.0	K-40	1.03E+000	6.53E-001
	10/25/00	786.6	K-40	1.40E+000	5.28E-001

* Shellfish/Benthic Organisms

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: **Shoreline Sediment**

Quantity: GRAMS (dry)

Activity: pCi/gm dry

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
500 - 4.9 MI SSW - DISCHARGE	6/ 1/00	1463.8	K-40	1.30E+000	4.27E-001
	6/ 1/00	1463.8	TL-208	8.65E-002	3.16E-002
	6/ 1/00	1463.8	PB-212	1.94E-001	4.53E-002
	6/ 1/00	1463.8	BI-214	2.26E-001	8.35E-002
	6/ 1/00	1463.8	AC-228	2.60E-001	8.38E-002
	11/ 1/00	1451.0	K-40	1.40E+000	5.69E-001
	11/ 1/00	1451.0	TL-208	6.01E-001	8.46E-002
	11/ 1/00	1451.0	PB-212	1.75E+000	1.22E-001
	11/ 1/00	1451.0	BI-214	1.92E+000	1.94E-001
	11/ 1/00	1451.0	PB-214	2.11E+000	1.84E-001
	11/ 1/00	1451.0	RA-226	4.76E+000	1.36E+000
	11/ 1/00	1451.0	AC-228	1.71E+000	2.73E-001

MediaType: **Surface Water**

Quantity: Liters

Activity: pCi/L

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
400 - 0.7 MI NE - INTAKE CANAL (CONTROL)	1/31/00	1.0	K-40	2.32E+002	8.77E+001
	2/29/00	1.0	K-40	9.29E+001	8.16E+001
	3/31/00	1.0	K-40	1.76E+002	7.42E+001
	4/30/00	1.0	K-40	2.35E+002	1.08E+002
	5/31/00	1.0	K-40	2.03E+002	8.34E+001
	6/30/00	1.0	K-40	2.67E+002	1.14E+002
	7/31/00	1.0	K-40	3.72E+002	1.21E+002
	8/31/00	1.0 ¹	K-40	2.04E+002	9.34E+001
	9/30/00	1.0	K-40	3.58E+002	1.20E+002
	9/30/00	1.0	TL-208	1.30E+001	6.49E+000
	10/31/00	1.0	K-40	2.37E+002	1.00E+002

BSEP Radiological Environmental Monitoring Gamma Isotopic Report

MediaType: Surface Water (Continued)

Quantity: Liters

Activity: pCi/L

Sample Point	SampleDate	Quantity	Isotope	Activity	2 SigmaError
400 - 0.7 MI NE - INTAKE CANAL (CONTROL)	11/30/00	1.0	K-40	3.36E+002	1.02E+002
	11/30/00	1.0	BI-214	3.34E+001	1.48E+001
	11/30/00	1.0	PB-214	2.10E+001	1.42E+001
	12/31/00	1.0	K-40	2.19E+002	1.04E+002
401 - 4.9 MI SSW - DISCHARGE CANAL	1/31/00	1.0	K-40	3.63E+002	1.13E+002
	2/29/00	1.0	NO-ACT		
	3/31/00	1.0	K-40	3.32E+002	1.07E+002
	4/30/00	1.0	K-40	2.53E+002	1.12E+002
	5/31/00	1.0	K-40	2.76E+002	1.12E+002
	6/30/00	1.0	K-40	2.97E+002	9.24E+001
	7/31/00	1.0	K-40	3.36E+002	1.13E+002
	8/31/00	1.0	K-40	2.20E+002	1.06E+002
	9/30/00	1.0	K-40	1.34E+002	9.75E+001
	10/31/00	1.0	K-40	2.72E+002	1.08E+002
	11/30/00	1.0	K-40	2.47E+002	1.18E+002
	11/30/00	1.0	BI-214	5.72E+001	1.52E+001
	11/30/00	1.0	PB-214	4.07E+001	1.30E+001
	12/31/00	1.0	K-40	3.76E+002	1.26E+002