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U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. DPR-71 and DPR-62  
Docket Nos. 50-325 and 50-324  
Annual Radiological Environmental Operating Report - 2017

Ladies and Gentlemen:

In accordance with Technical Specification (TS) 5.6.2 for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, Duke Energy Progress, LLC, is submitting the enclosed Radiological Environmental Operating Report for 2017.

No regulatory commitments are contained in this submittal. Please refer any questions regarding this submittal to Mr. Lee Grzeck, Manager - Regulatory Affairs, at (910) 832-2487.

Sincerely,

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MAT/mat

Enclosure: Annual Radiological Environmental Operating Report - 2017

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Annual Radiological Environmental Operating  
Report - 2017



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# **ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT**

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**DUKE ENERGY PROGRESS, LLC  
BRUNSWICK STEAM ELECTRIC PLANT**

**2017**



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## LIST OF ACRONYMS USED IN THIS TEXT *(in alphabetical order)*

A	Annually
ADM	Archer Daniels Midland Chemical Company
AP	Air Particulate
AR	Air Radioiodine = Air Cartridge
AREOR	Annual Radiological Environmental Operating Report
BO	Benthic Organisms
BSEP	Brunswick Steam Electric Plant
C	Control
CR	Condition Report - Corrective Action Program
ERA	Environmental Resource Associates
EZA	Eckert & Ziegler Analytics, Inc.
FSS	Fleet Scientific Services
GEL	General Engineering Laboratories, LLC.
GPS	Global Positioning System
GW	Ground water
I	Indicator
IR	Inner Ring - TLDs
ISFSI	Independent Spent Fuel Storage Installation
LLD	Lower Limit of Detection
M	Monthly
MDA	Minimum Detectable Activity
mrem	Millirem
MSL	Mean sea level
MW	megawatts
NIST	National Institute of Standards and Technology
NRC	Nuclear Regulatory Commission
OD	Ocean discharge
ODCM	Offsite Dose Calculation Manual
OR	Outer Ring - TLDs
pCi/kg	picocurie per kilogram
pCi/l	picocurie per liter
pCi/m <sup>3</sup>	picocurie per cubic meter
PMAC	Projected Maximum Annual Concentration
Q	Quarterly
REMP	Radiological Environmental Monitoring Program
SA	Semiannually
SDSP	Storm Drain Stabilization Pond
SH	Shellfish
SI	Special Interest - TLDs
SW	Surface Water
TLD	Thermoluminescent Dosimeter
W	Weekly

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# 1.0 EXECUTIVE SUMMARY

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The Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, is operated by Duke Energy Progress, LLC under licenses granted by the Nuclear Regulatory Commission (NRC). Provisions of the Nuclear Regulatory Commission's Regulatory Guide 4.8, BSEP Plant Technical Specifications 5.6.2, and the BSEP Offsite Dose Calculation Manual (ODCM) establish the requirements of the Radiological Environmental Monitoring Program (REMP). This report describes the BSEP REMP and the program results for January 1, 2017, through December 31, 2017.

Included in the report are the identification of sampling locations, descriptions of environmental sampling and analysis procedures, comparisons of present environmental radioactivity levels and pre-operational environmental data, analysis of trends in environmental radiological data as potentially affected by plant operations, and a summary of environmental radiological sampling results. Quality assurance practices, sampling deviations, unavailable samples, and program changes are also discussed.

Sampling activities were conducted as prescribed by the BSEP ODCM. Required analyses were performed and detection capabilities were met for the collected samples required by the ODCM other than that stated in Appendix D - Analytical Deviations (NCR # 02128415). One thousand seven hundred sixty-six samples were analyzed comprising 1,766 test results in order to compile data for the 2017 BSEP Annual Radiological Environmental Operating Report (AREOR). Based on the annual BSEP land use census, the current number of sampling sites for BSEP is sufficient.

Concentrations observed in the environment in 2017 for plant related radionuclides were within the ranges of concentrations observed in the past. Inspection of the data showed that radioactivity concentrations were as expected and positively identified measurements attributable to plant operation were within limits as specified in the BSEP ODCM.

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



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## 2.0 INTRODUCTION

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### 2.1 SITE DESCRIPTION AND SAMPLE LOCATIONS

Duke Energy's Brunswick Steam Electric Plant (BSEP) consists of two boiling water reactors with a design rating of 2923 megawatts (MWe) thermal. Commercial production was initiated by Unit 2 on November 3, 1975 and by Unit 1 on March 18, 1977. BSEP is located in Brunswick County, North Carolina. The site is along state route 87 approximately two and a half miles north of Southport, North Carolina. 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.

The Cape Fear River is east of the plant and cooling water is drawn from the river through a canal. The cooling water and plant liquid effluents are both 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 (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 Capital Power, Inc. This solid fuels-fired cogeneration facility (wood residuals, tire-derived fuel, and coal) burns alternate fuels with a rated capacity at 88 MW and provides steam to the nearby Archer Daniels Midland Company.

Although the contribution to background radiation is small, Duke Energy Progress, LLC has established the Radiological Environmental Monitoring Program (REMP) to measure the exposure pathways to man. An exposure pathway describes the source of the radiological exposure. The primary forms of radiological emissions from the plant are airborne and liquid discharge. The following pathways are monitored: external dose, ingestion of radioactive materials, and the inhalation of radioactive material. Specific methods and different environmental media are required to assess each pathway.

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 the operation of the plant.

Figures 2.1-1 through 2.1-15 are maps depicting the BSEP sampling locations and the BSEP Thermoluminescent Dosimeter (TLD) monitoring locations. The location numbers shown on these maps correspond to those listed in Tables 2.1-A, 2.1-B, and 2.1-C.

## **2.2 SCOPE AND REQUIREMENTS OF THE REMP**

The Radiological Environmental Monitoring Program (REMP) was established in 1973 at the Brunswick Steam Electric Plant (BSEP). Radiation and radioactivity in various environmental media have been monitored for 43 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 allows comparison of data collected at locations near the BSEP which could potentially be impacted by its operations.

This monitoring program is based on NRC guidance as reflected in the BSEP Offsite Dose Calculation Manual (ODCM), with regards to sample media, sampling locations, sampling frequency and analytical sensitivity requirements. Indicator and control locations were established for comparison purposes to distinguish radioactivity of plant origin from natural or other “man-made” environmental radioactivity. The environmental monitoring program also verifies projected and anticipated radionuclide concentrations in the environment and related exposures from releases of radionuclides from BSEP. This program satisfies the requirements of Section IV.B.2 of Appendix I to 10 CFR 50 and provides surveillance of all appropriate critical exposure pathways to man and protects vital interests of the company, public and state and federal agencies concerned with the environment. Reporting levels for activity found in environmental samples are listed in Table 2.2-A. Tables 2.2-B and 2.2-C list the REMP analysis and frequency schedule.

The Annual Land Use Census, required by the BSEP ODCM, is performed to ensure that changes in the use of areas at or beyond the site boundary are identified and that modifications to the REMP are made if required by changes in the land use. This census satisfies the requirements of Section IV.B.3 of Appendix I to 10 CFR 50. Results are shown in Table 3.8-A and 3.8-B.

Participation in an interlaboratory comparison program is performed in fulfillment of BSEP ODCM Operational Requirement provides for independent checks on the precision and accuracy of measurements of radioactive material in REMP sample matrices. Such checks are performed as part of the quality assurance program for environmental monitoring in order to demonstrate that the results are valid for the purposes of Section IV.B.2 of Appendix I to 10 CFR 50. A summary of the results obtained as part of this comparison program are in Section 4 of this annual report.

## **2.3 STATISTICAL AND CALCULATIONAL METHODOLOGY**

### **2.3.1 ESTIMATION OF THE MEAN VALUE**

There was one (1) basic statistical calculation performed on the raw data resulting from the environmental sample analysis program. The calculation involved the determination of the mean value for the indicator and the control samples for each sample medium. The mean is a widely used statistic. This value was used in the reduction of the data generated by the sampling and analysis of the various media in the Radiological Environmental Monitoring Program. "Net activity (or concentration)" is the activity (or concentration) determined to be present in the sample. No "Minimum Detectable Activity", "Lower Limit of Detection", "Less Than Level", or negative activities or concentrations are included in the calculation of the mean. The following equation was used to estimate the mean (reference 6.8):

$$\bar{x} = \frac{\sum_{i=1}^N x_i}{N}$$

Where:

$\bar{x}$  = estimate of the mean,

i = individual sample,

N = total number of samples with a net activity (or concentration),

$x_i$  = net activity (or concentration) for sample i.

### **2.3.2 LOWER LIMIT OF DETECTION AND MINIMUM DETECTABLE ACTIVITY**

The Lower Limit of Detection (LLD) and Minimum Detectable Activity (MDA) are used throughout the REMP.

**LLD** - The LLD, as defined in the Offsite Dose Calculation Manual (ODCM), is the smallest concentration of radioactive material in an unknown sample that will yield a net count, above the system background, that will be detected with 95% probability with a 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is an *a priori* lower limit of detection. The actual LLD is dependent upon the standard deviation of the background counting rate, the counting efficiency, the sample size (mass or volume), the radiochemical yield and the radioactive decay of the sample between sample collection and counting. The "required" LLD's for each sample medium and selected radionuclides are given in the ODCMs and are listed in Table 2.2-D.

**MDA** - The MDA is the net counting rate (sample after subtraction of background) that must be surpassed before a sample is considered to contain a scientifically measurable amount of a radioactive material exceeding background amounts. The MDA is calculated using a sample background and may be thought of as an "actual" LLD for a particular sample measurement. Certain gross counting measurements display a calculated negative value, indicating background is greater than sample activity.

### **2.3.3 TREND IDENTIFICATION**

One of the purposes of an environmental monitoring program is to determine if there is a buildup of radionuclides in the environment due to the operation of the nuclear station. Visual inspection of tabular or graphical presentations of data (including preoperational) is used to determine if a trend exists. A decrease in a particular radionuclide's concentration in an environmental medium does not indicate that reactor operations are removing radioactivity from the environment but that reactor operations are not adding that radionuclide to the environment in quantities exceeding the preoperational level and that the normal removal processes (radioactive decay, deposition, resuspension, etc.) are influencing the concentration.

Substantial increases or decreases in the amount of a particular radionuclide's release from the nuclear plant will greatly affect the resulting environmental levels; therefore, a knowledge of the release of a radionuclide from the nuclear plant is necessary to completely interpret the trends, or lack of trends, determined from the environmental data. Factors that may affect environmental levels of radionuclides include prevailing weather conditions (periods of drought, solar cycles or heavier than normal precipitation), construction in or around either the nuclear plant or the sampling location, and addition or deletion of other sources of radioactive materials (such as the 1986 Chernobyl accident and the 2011 Japan earthquake and tsunami, which triggered the Fukushima Dai-ichi Nuclear Power Plant incident). Some of these factors may be obvious while others are sometimes unknown. Therefore, how trends are identified will include some judgment by plant personnel.

Figure 2.1-1

BSEP Environmental Sampling Locations - One mile radius

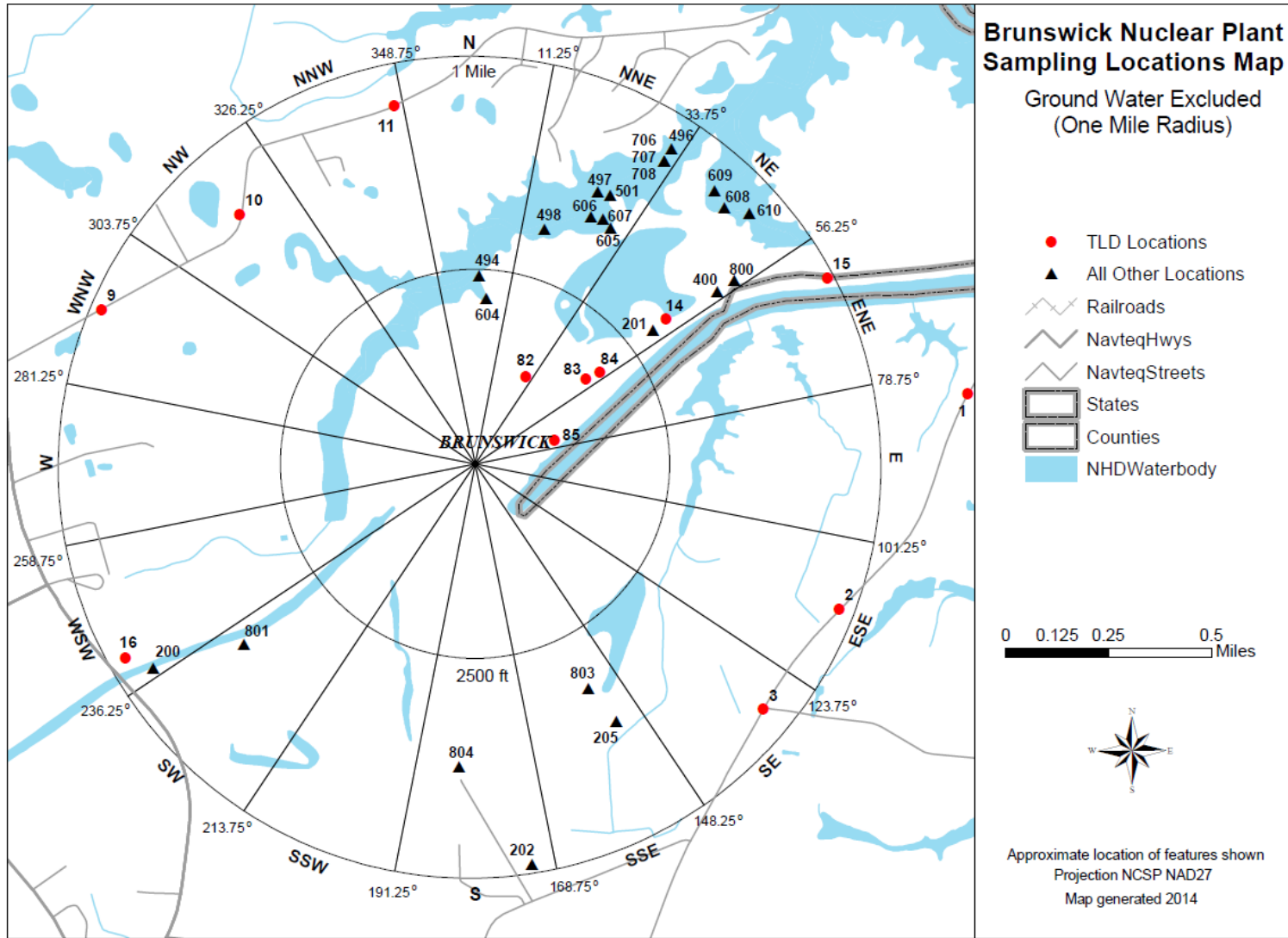


Figure 2.1-2

BSEP Environmental Sampling Locations (Ground Water Only) - One mile radius

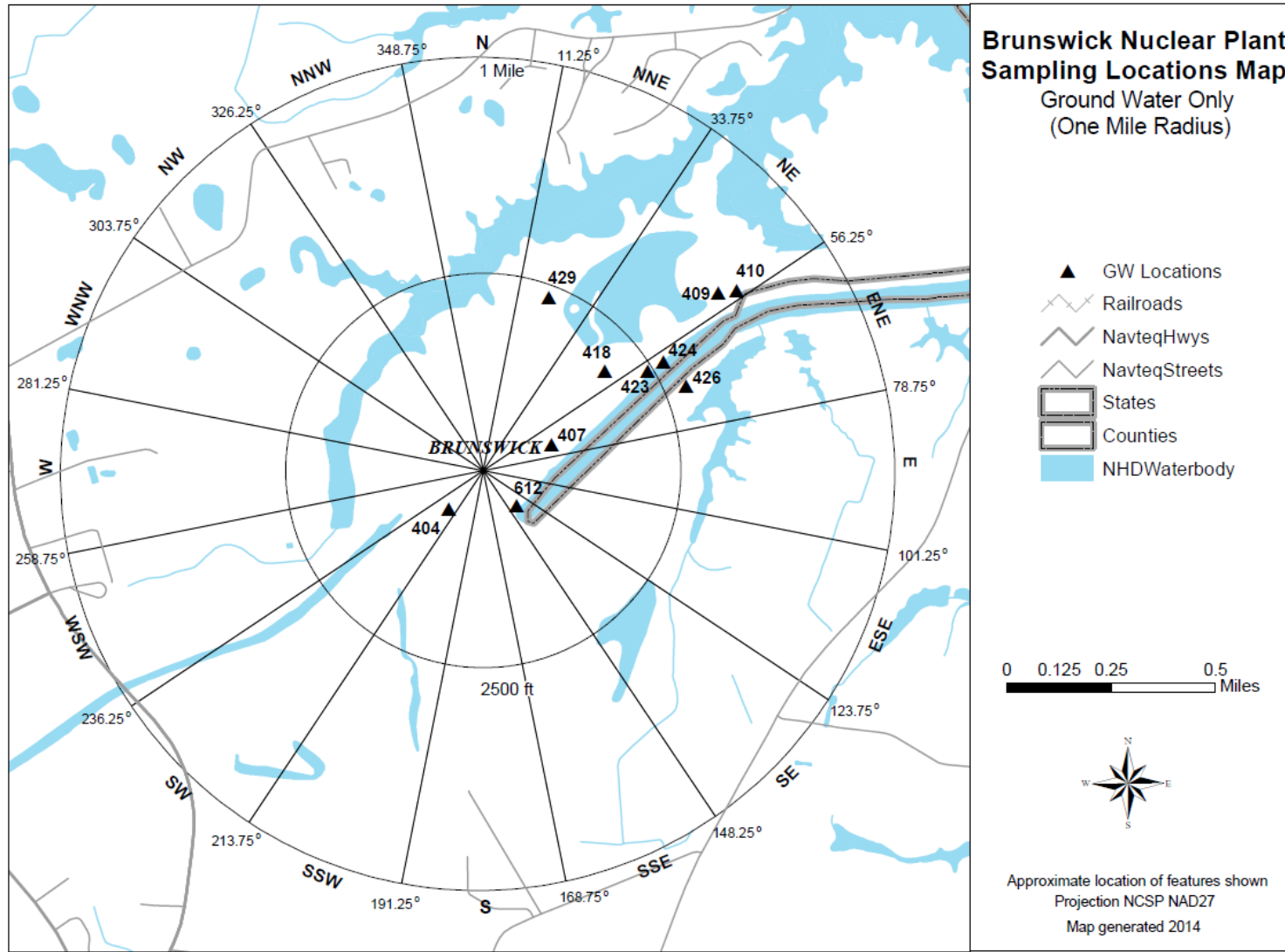


Figure 2.1-3

BSEP Environmental Sample Locations - Ten mile radius

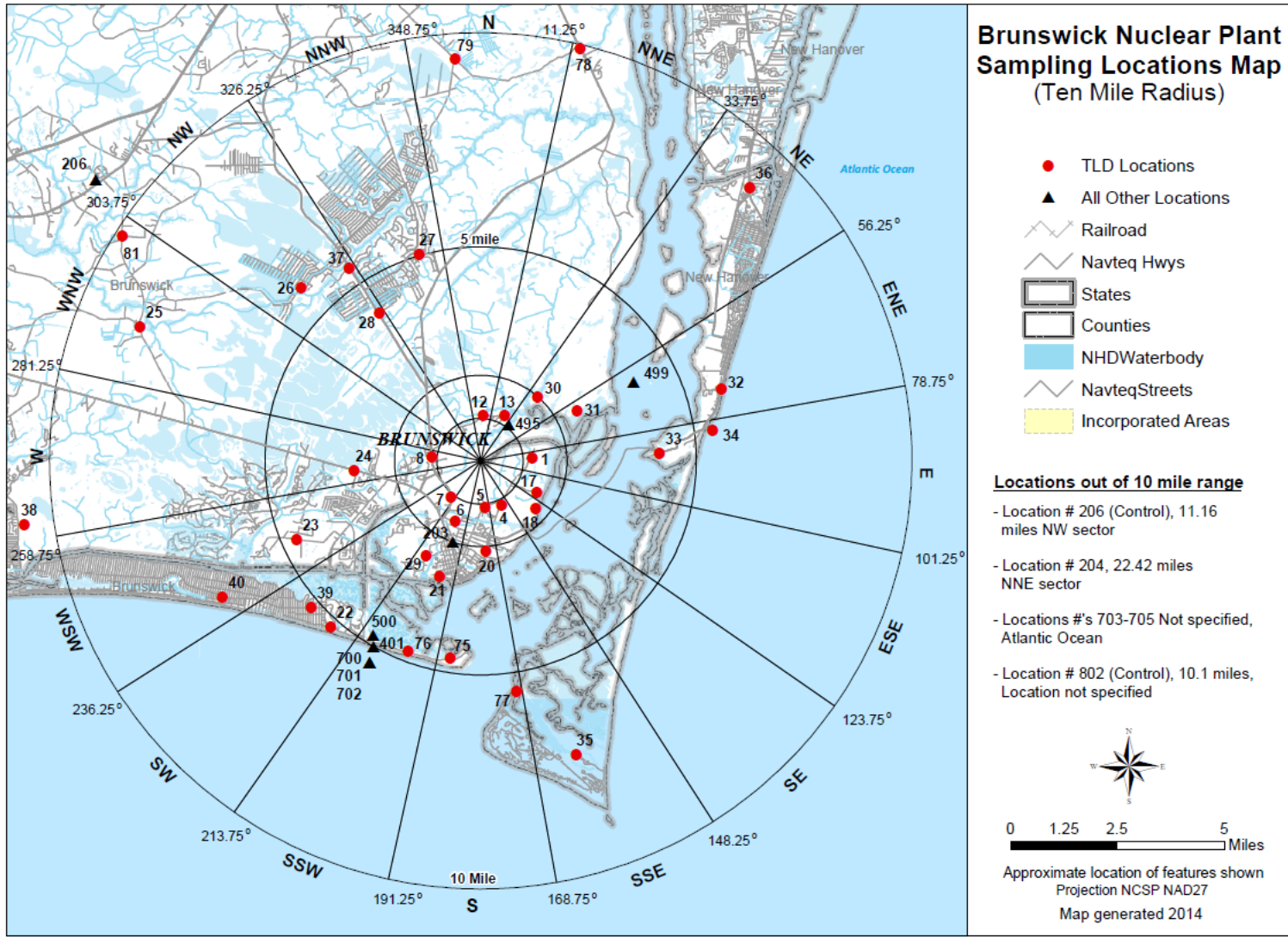


Figure 2.1-4

**BSEP Radiological Environmental Sampling Locations  
Independent Spent Fuel Storage Installation (ISFSI) TLDs**





Figure 2.1-5

Radiological Environmental Sampling Locations



Figure 2.1-6

Radiological Environmental Sampling Locations (Continued)

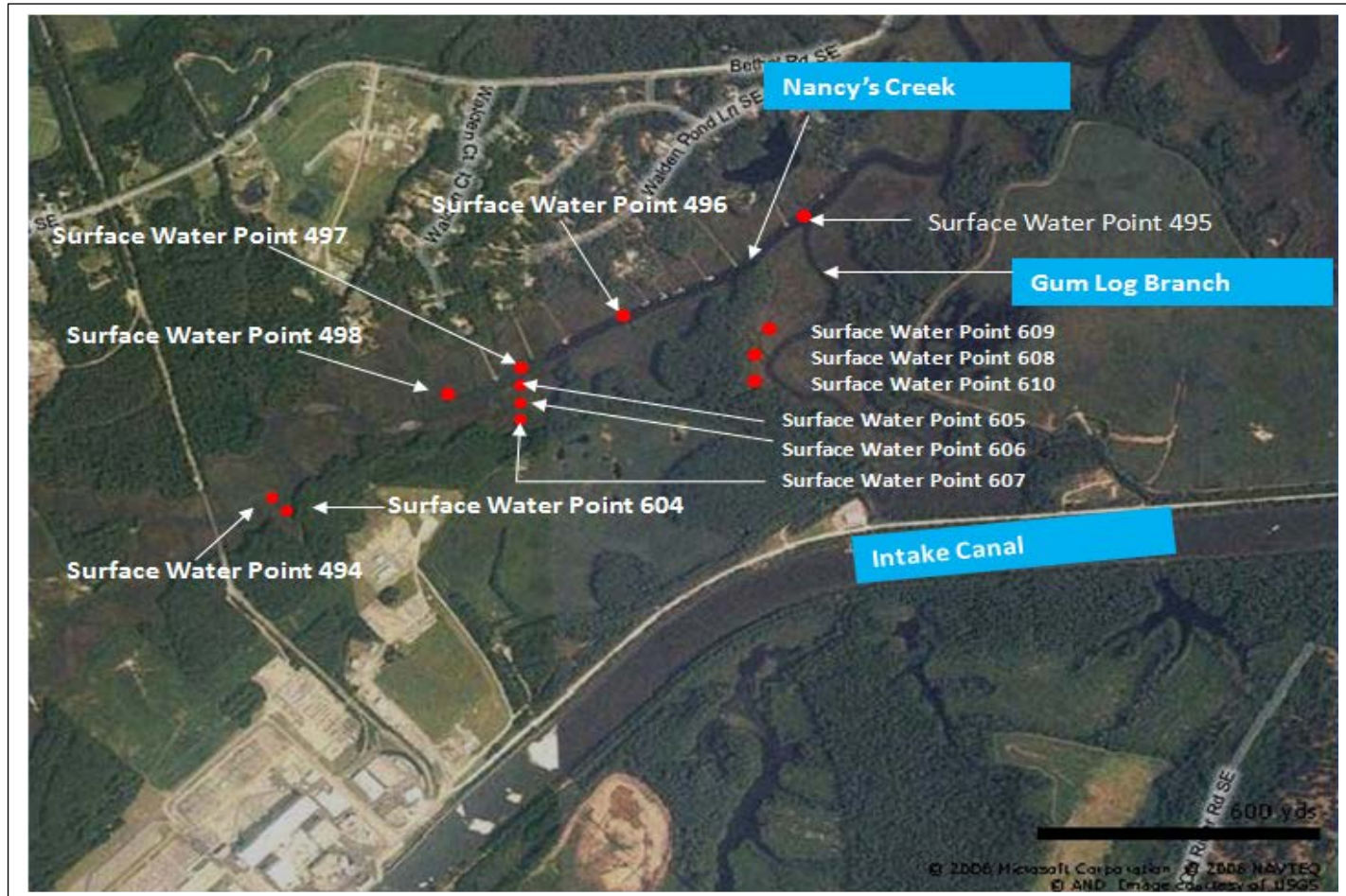


Figure 2.1-7

Radiological Environmental Sampling Locations (Continued)

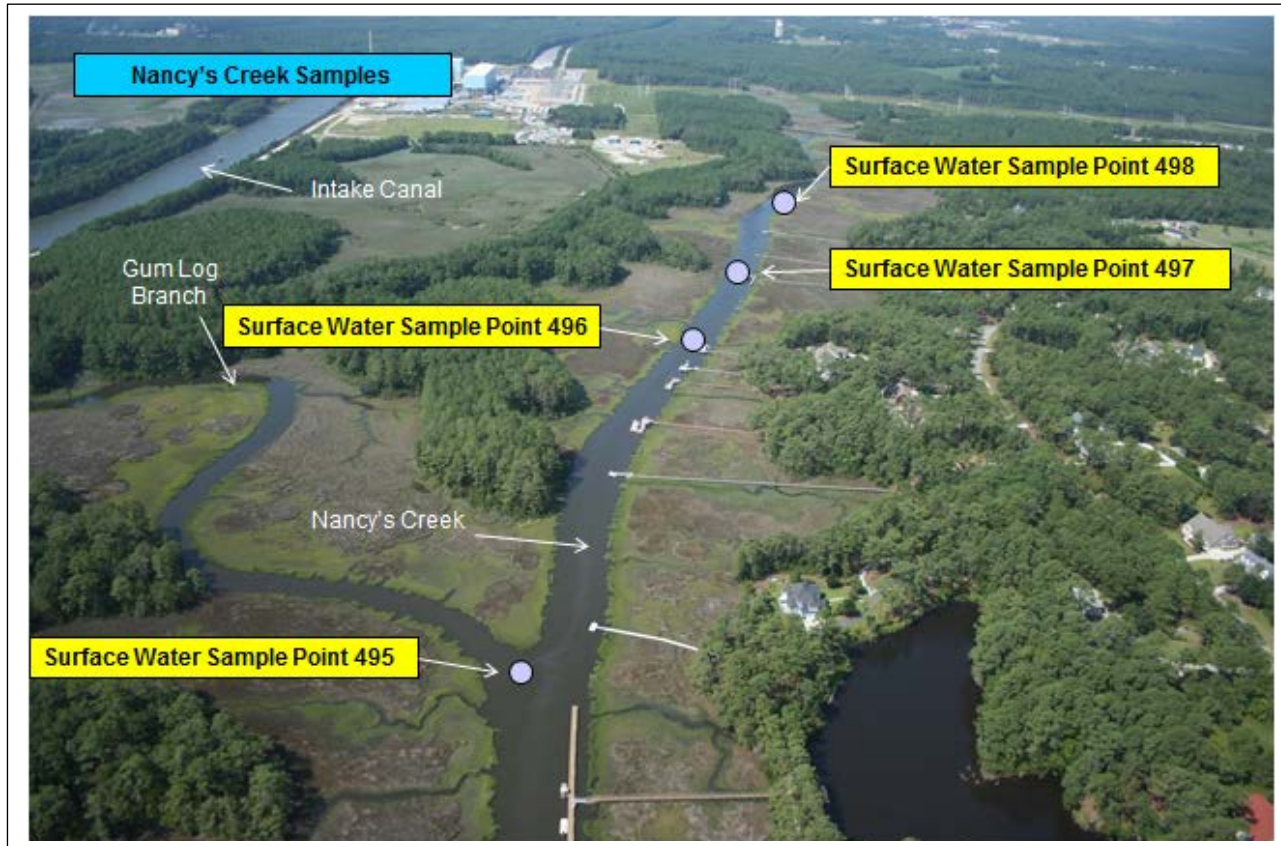


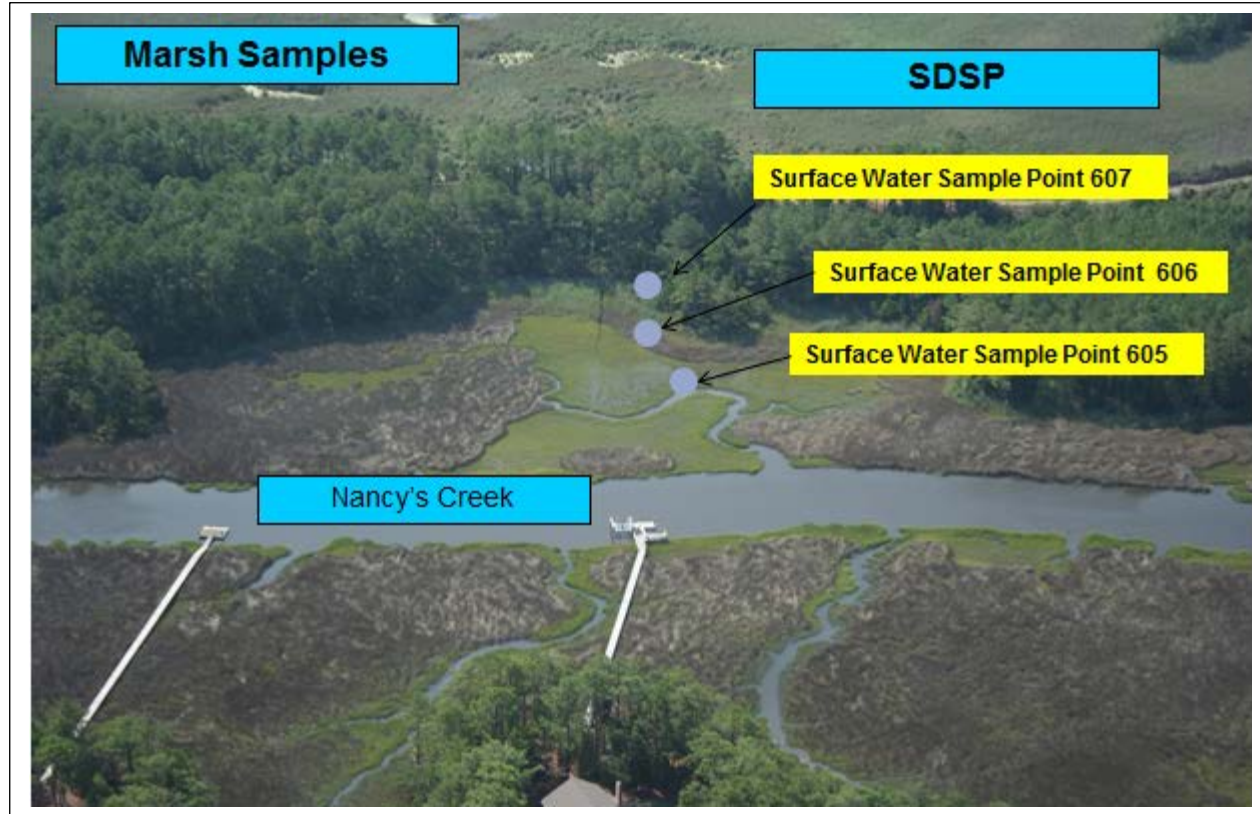
Figure 2.1-8

Radiological Environmental Sampling Locations (Continued)



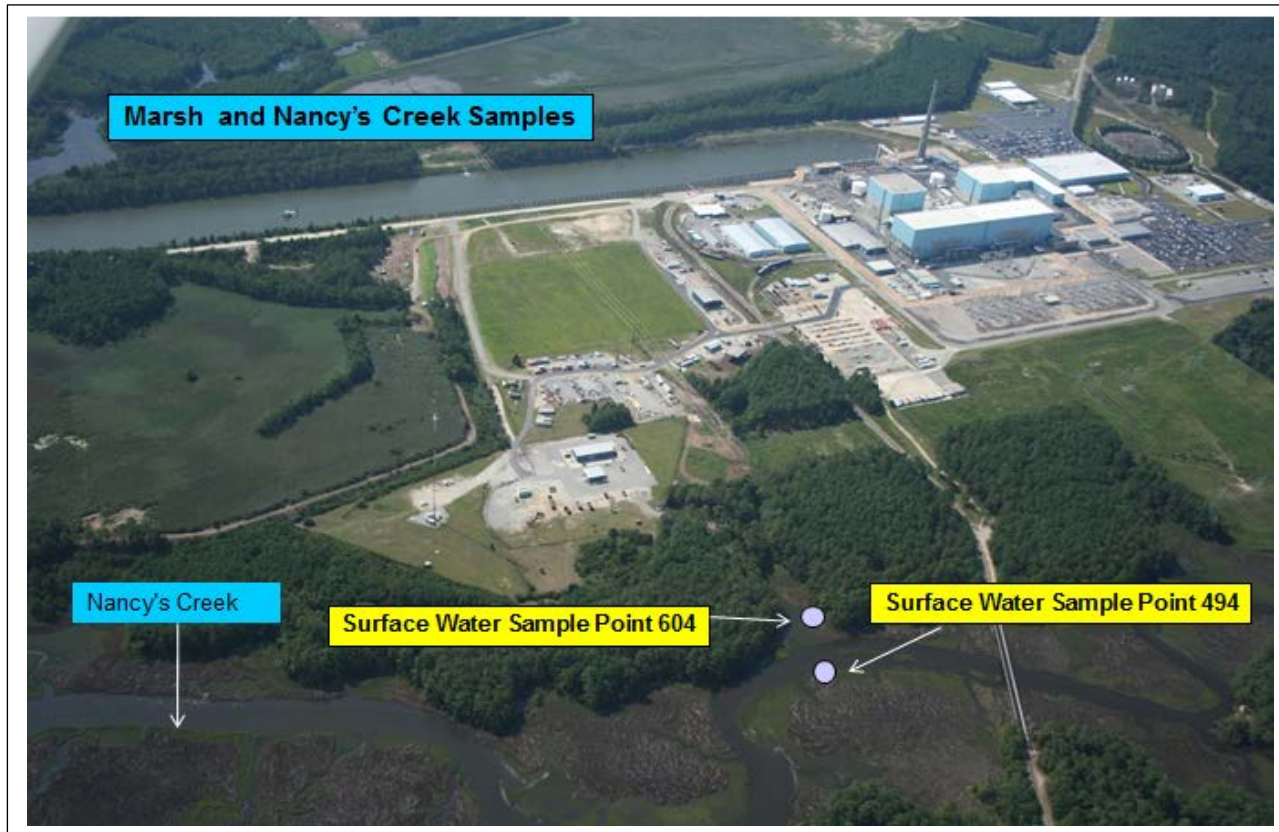
Figure 2.1-9

Radiological Environmental Sampling Locations (Continued)



**Figure 2.1-10**

**Radiological Environmental Sampling Locations (Continued)**



**Figure 2.1-11**

**Radiological Environmental Sampling Locations (Continued)**



SDSP: Storm Drain Stabilization Pond

Figure 2.1-12

Radiological Environmental Sampling Locations - Wells

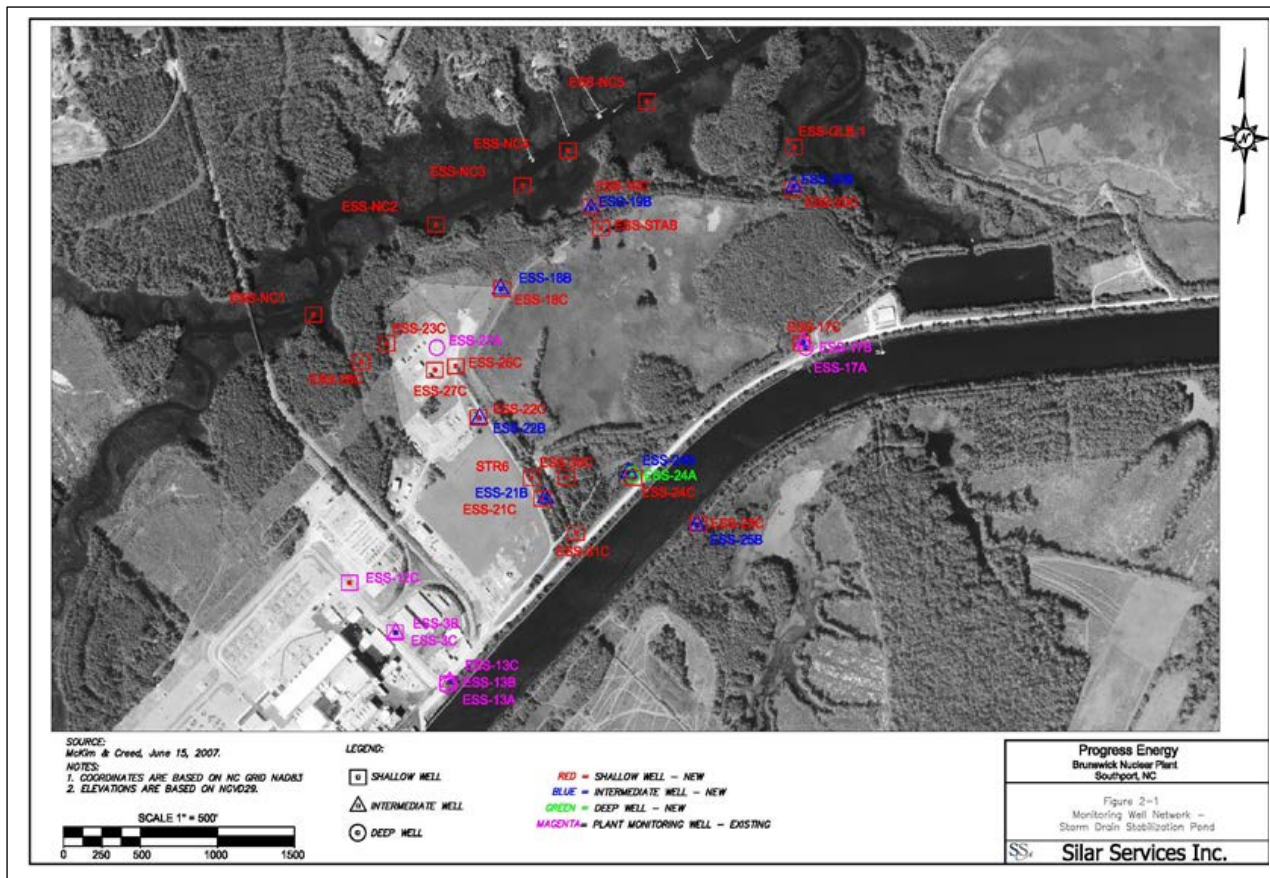




Figure 2.1-13

Radiological Environmental Sampling Locations – Wells (Continued)

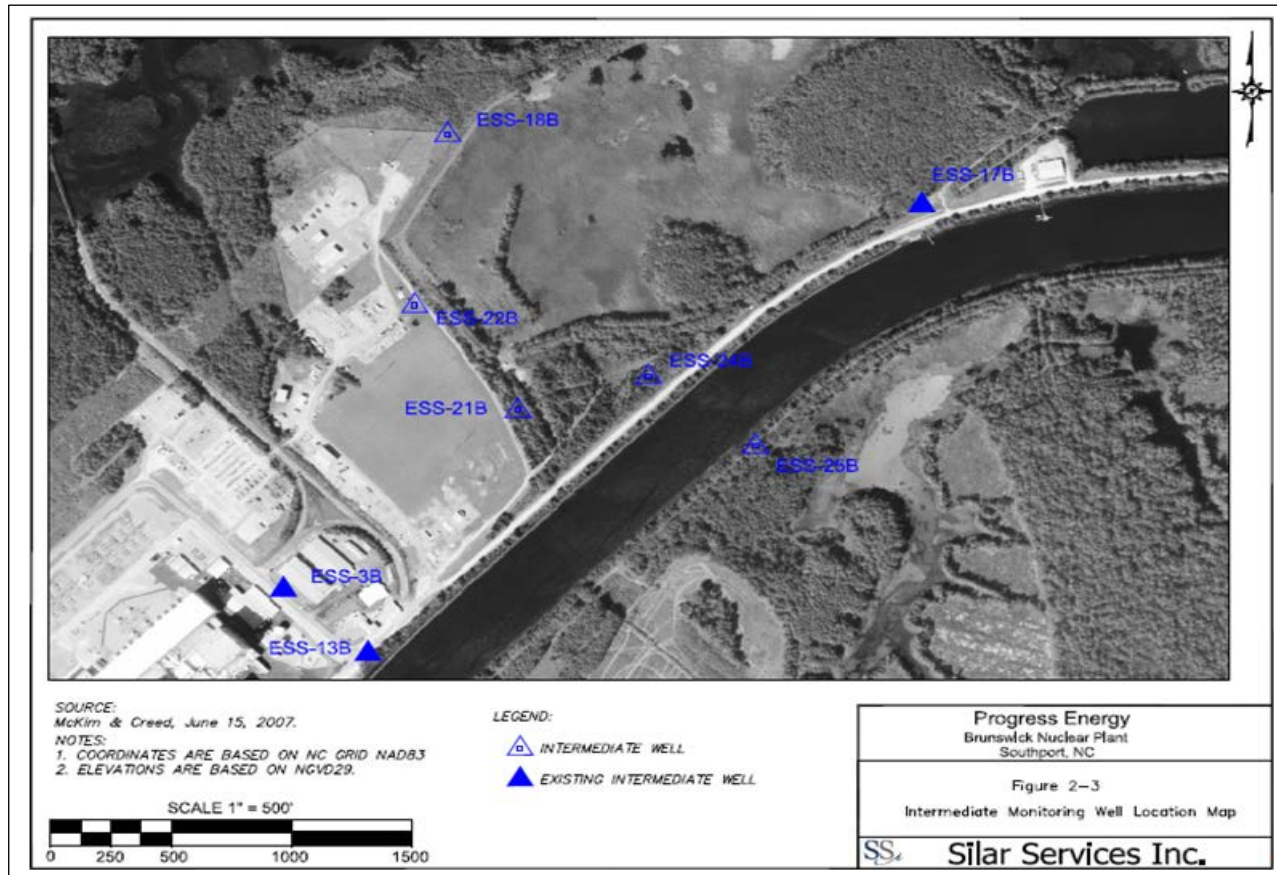
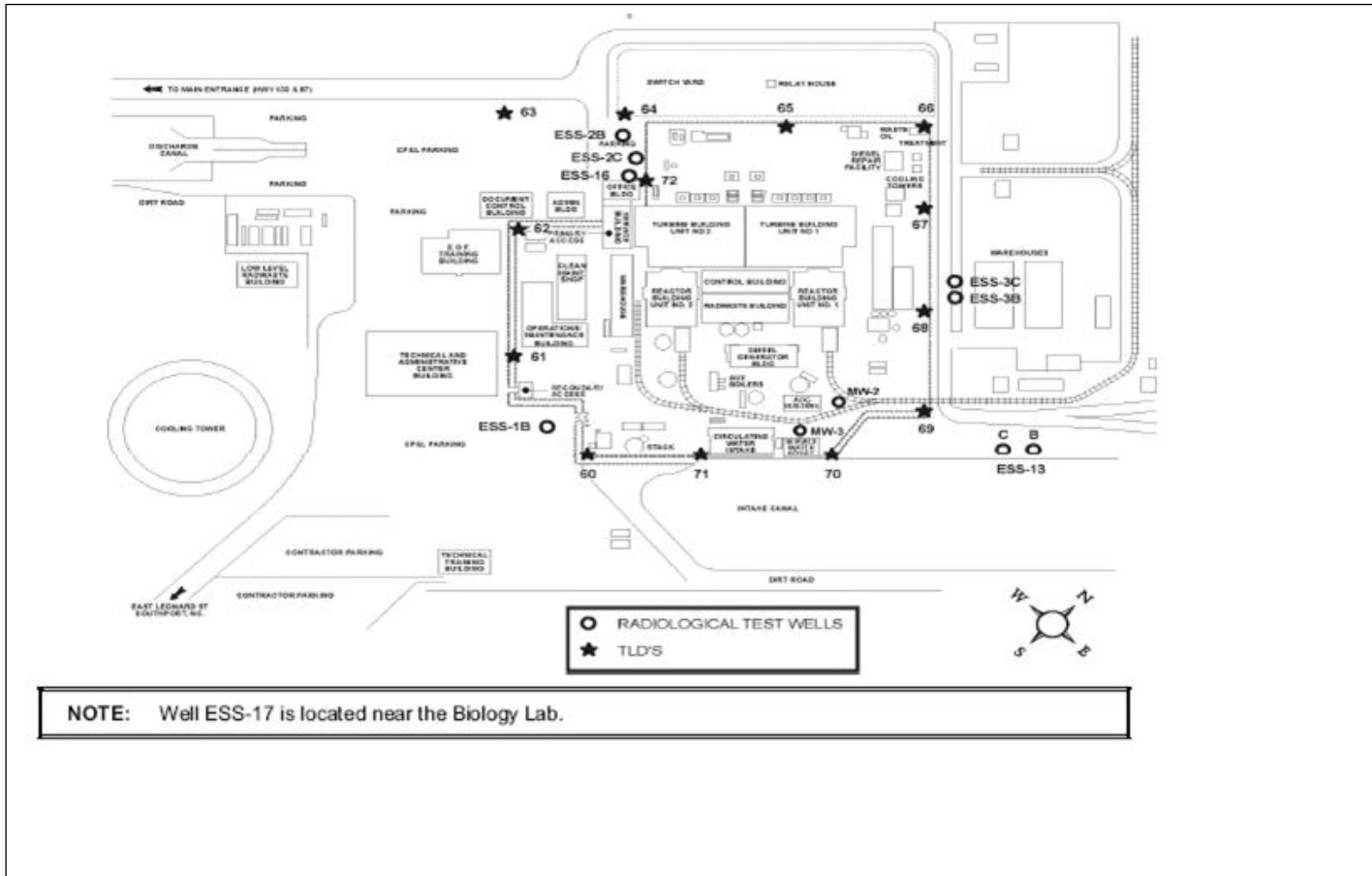


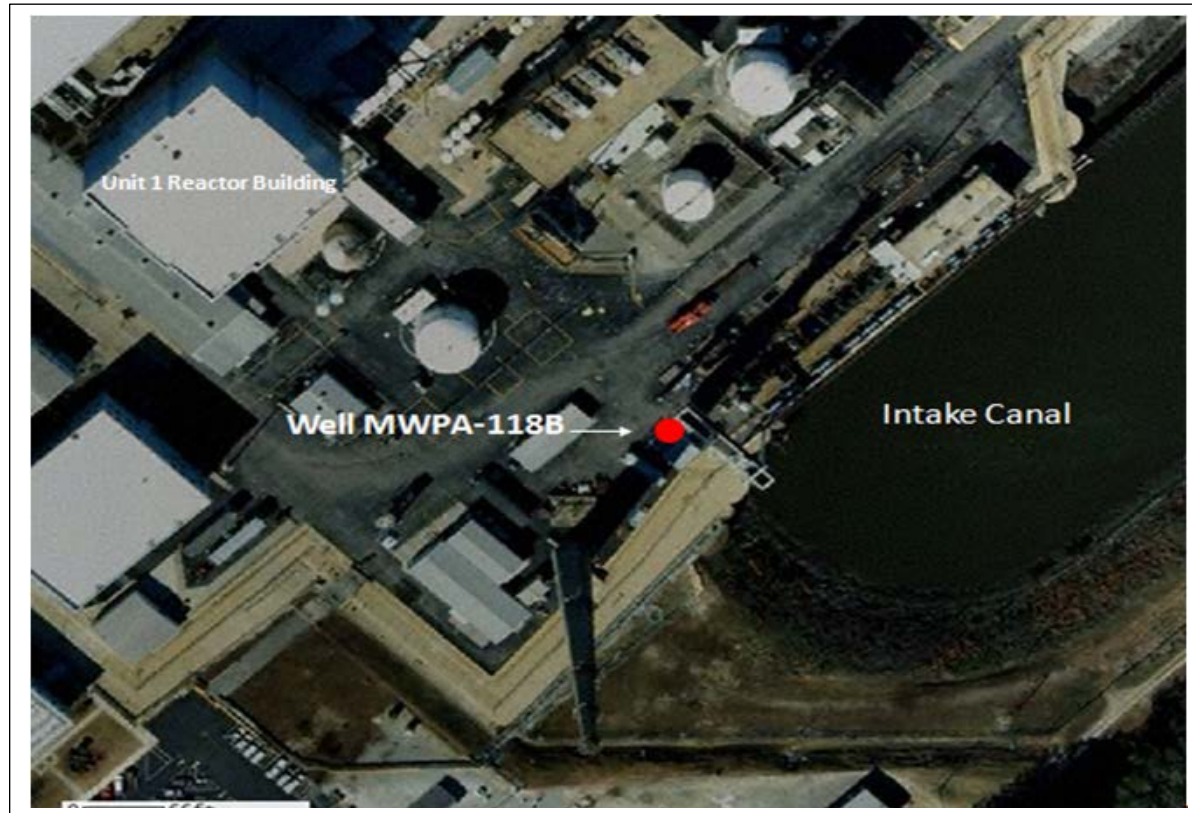
Figure 2.1-14

Radiological Environmental Sampling Locations – Wells (Continued)



**Figure 2.1-15**

**Radiological Environmental Sampling Locations – Wells (Continued)**



**TABLE 2.1-A**

**BRUNSWICK STEAM ELECTRIC PLANT (BSEP) ODCM Rev. 37  
RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS**

Table 2.1-A Codes			
W	Weekly	SA	Semiannually
M	Monthly	A	Annually
Q	Quarterly		
C	Control	I	Indicator

Site #	Type	Location Description*	Air Radioidine & Air Particulate	Surface Water	Shoreline Sediment	Fish (FI)	Broadleaf Vegetation	Ground Water
200	I	1.0 miles WSW – Visitors Center	W/Q					
201	I	0.5 miles NE – Bio Lab Rd. – Projected Maximum Annual Concentration (PMAC)	W/Q					
202	I	1.0 mile S – Substation, Construction Rd.	W/Q					
203	I	2.0 miles SSW – Southport Substation	W/Q					
204	C	22.4 miles NNE – Sutton Plant (Historical Control)	W/Q					
205	I	0.6 miles SSE – Spoil Pond	W/Q					
206	C	11.3 miles NW – Brunswick County Complex	W/Q					
400	C	0.6 miles NE – Intake Canal		M				
401	I	4.9 miles SSW – Discharge Canal @ OD Pumps		M				
404	I	0.16 miles SW, Monitoring Well ESS-1B						Q/SA
407	I	0.06 miles ENE, Monitoring Well ESS-13B						Q/SA
409	I	0.65 miles NE, Monitoring Well ESS-17A						Q/SA
410	I	0.65 miles NE, Monitoring Well ESS-17B						Q/SA
418	I	Monitoring Well ESS-21B, Near SDSP						Q/SA
423	I	Monitoring Well ESS-24A, Near SDSP						Q/SA
424	I	Monitoring Well ESS-24B, Near SDSP						Q/SA
426	I	Monitoring Well ESS-25B, Near SDSP						Q/SA
429	I	Monitoring Well ESS-27A, Near SDSP						Q/SA
494	I	Nancy’s Creek Marsh Area – WP-106**		W				
495	I	Nancy’s Creek – WP-52		W/M				
496	I	Nancy’s Creek – WP-53		W/M				
497	I	Nancy’s Creek – WP-55		W/M				
498	I	Nancy’s Creek – WP-57		W/M				
499	C	Cape Fear River – WP-61		W/M				
500	I	5.0 miles SSW – Discharge – Beach near OD Pumps			SA			
501	I	Nancy’s Creek, Adjacent to WP-55, Near SDSP			A			
604	I	Nancy’s Creek Marsh Area – WP-92**		W				
605	I	Nancy’s Creek Marsh Area – WP-72**		W				
606	I	Nancy’s Creek Marsh Area – WP-74**		W				
607	I	Nancy’s Creek Marsh Area – WP-76**		W				
608	I	Nancy’s Creek Marsh Area – WP-82**		W				
609	I	Nancy’s Creek Marsh Area – WP-84**		W				
610	I	Nancy’s Creek Marsh Area – WP-88**		W				
612	I	Monitoring Well ESS MWPA-118B, Near Intake Canal and Plant Stack						Q/SA
700	I	5.5 miles SSW – Atlantic Ocean @ discharge (Free Swimmer)				SA <sup>(b)(c)</sup>		
701	I	5.5 miles SSW – Atlantic Ocean @ discharge (Bottom Feeders)				SA <sup>(b)(c)</sup>		
702	I	5.5 miles SSW – Atlantic Ocean @ discharge (Shellfish/Invertebrates)				SA <sup>(b)(c)</sup>		
703	C	Atlantic Ocean; location not specified (Free Swimmer)				SA <sup>(b)(c)</sup>		
704	C	Atlantic Ocean; location not specified (Bottom Feeder)				SA <sup>(b)(c)</sup>		
705	C	Atlantic Ocean; location not specified (Shellfish/Invertebrates)				SA <sup>(b)(c)</sup>		

**TABLE 2.1-A (Continued)**

Site #	Type	Location Description*	Air Radiiodine & Air Particulate	Surface Water	Shoreline Sediment	Fish (FI)	Broadleaf Vegetation	Ground Water
706	I	Nancy's Creek; location not specified (Free Swimmer)				A <sup>(b)</sup>		
707	I	Nancy's Creek; location not specified (Bottom Feeder)				A <sup>(b)</sup>		
708	I	Nancy's Creek; location not specified (Shellfish/Invertebrates)				A <sup>(b)</sup>		
800	I	0.7 miles NE – Intake Canal					M <sup>(a)</sup>	
801	I	0.8 miles SW – Discharge Canal					M <sup>(a)</sup>	
802	C	10.1 miles – Location not Specified					M <sup>(a)</sup>	
803	I	0.6 miles SSE – Spoil Pond					M <sup>(a)</sup>	
804	I	0.7 miles S – Leonard Street plant exit adjacent to RR tracks					M <sup>(a)</sup>	

(a) When Available

(b) Edible Portions

(c) When in Season

\* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

SDSP: Storm Drain Stabilization Pond

\*\* Refers to SW-494, 604 – 610 and how composited weekly as indicated below for gamma analysis and Sample ID number in Appendix E.

ODCM Sample and Description	Composite Frequency/Analysis/Data ID
SW-494 (Nancy's Creek Marsh Area – WP-106)	Composited weekly as Waypoint Comp / Gamma analysis / Sample ID #1067 in data section – Appendix E
SW-604 (Nancy's Creek Marsh Area – WP-92)	
SW-605 (Nancy's Creek Marsh Area – WP-72)	Composited weekly as Waypoint Comp (70) / Gamma analysis / Sample ID #1065 in data section – Appendix E
SW-606 (Nancy's Creek Marsh Area – WP-74)	
SW-607 (Nancy's Creek Marsh Area – WP-76)	
SW-608 (Nancy's Creek Marsh Area – WP-82)	Composited weekly as Waypoint Comp (80) / Gamma analysis / Sample ID #1066 in data section – Appendix E
SW-609 (Nancy's Creek Marsh Area – WP-84)	
SW-610 (Nancy's Creek Marsh Area – WP-88)	

**TABLE 2.1-B**

**BRUNSWICK STEAM ELECTRIC PLANT (BSEP) ODCM Rev. 38  
RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS**

Table 2.1-B Codes			
W	Weekly	SA	Semiannually
M	Monthly	A	Annually
Q	Quarterly		
C	Control	I	Indicator

Site #	Type	Location Description*	Air Radioidine & Air Particulate	Surface Water	Shoreline Sediment	Fish (FI)	Broadleaf Vegetation	Ground Water
200	I	1.0 miles WSW – Visitors Center	W/Q					
201	I	0.5 miles NE – Bio Lab Rd. – Projected Maximum Annual Concentration (PMAC)	W/Q					
202	I	1.0 mile S – Substation, Construction Rd.	W/Q					
203	I	2.0 miles SSW – Southport Substation	W/Q					
204	C	22.4 miles NNE – Sutton Plant (Historical Control)	W/Q					
205	I	0.6 miles SSE – Spoil Pond	W/Q					
206	C	11.3 miles NW – Brunswick County Complex	W/Q					
400	C	0.6 miles NE – Intake Canal		M				
401	I	4.9 miles SSW – Discharge Canal @ OD Pumps		M				
404	I	0.16 miles SW, Monitoring Well ESS-1B						Q/SA
407	I	0.06 miles ENE, Monitoring Well ESS-13B						Q/SA
409	I	0.65 miles NE, Monitoring Well ESS-17A						Q/SA
410	I	0.65 miles NE, Monitoring Well ESS-17B						Q/SA
418	I	Monitoring Well ESS-21B, Near SDSP						Q/SA
423	I	Monitoring Well ESS-24A, Near SDSP						Q/SA
424	I	Monitoring Well ESS-24B, Near SDSP						Q/SA
426	I	Monitoring Well ESS-25B, Near SDSP						Q/SA
429	I	Monitoring Well ESS-27A, Near SDSP						Q/SA
494	I	Nancy’s Creek March Area – WP-106		M				
495	I	Nancy’s Creek – WP-52		M				
496	I	Nancy’s Creek – WP-53		M				
497	I	Nancy’s Creek – WP-55		M				
498	I	Nancy’s Creek – WP-57		M				
499	C	Cape Fear River – WP-61		M				
500	I	5.0 miles SSW – Discharge – Beach near OD Pumps			SA			
501	I	Nancy’s Creek, Adjacent to WP-55, Near SDSP			A			
604	I	Nancy’s Creek Marsh Area – WP-92		M				
607	I	Nancy’s Creek Marsh Area – WP-76		M				
609	I	Nancy’s Creek Marsh Area – WP-84		M				
612	I	Monitoring Well ESS MWPA-118B, Near Intake Canal and Plant Stack						Q/SA
700	I	5.5 miles SSW – Atlantic Ocean @ discharge (Free Swimmer)				SA <sup>(b)(c)</sup>		
701	I	5.5 miles SSW – Atlantic Ocean @ discharge (Bottom Feeders)				SA <sup>(b)(c)</sup>		
702	I	5.5 miles SSW – Atlantic Ocean @ discharge (Shellfish/Invertebrates)				SA <sup>(b)(c)</sup>		
703	C	Atlantic Ocean; location not specified (Free Swimmer)				SA <sup>(b)(c)</sup>		
704	C	Atlantic Ocean; location not specified (Bottom Feeder)				SA <sup>(b)(c)</sup>		
705	C	Atlantic Ocean; location not specified (Shellfish/Invertebrates)				SA <sup>(b)(c)</sup>		

**TABLE 2.1-B (Continued)**

Site #	Type	Location Description*	Air Radiiodine & Air Particulate	Surface Water	Shoreline Sediment	Fish (FI)	Broadleaf Vegetation	Ground Water
706	I	Nancy's Creek; location not specified (Free Swimmer)				A <sup>(b)</sup>		
707	I	Nancy's Creek; location not specified (Bottom Feeder)				A <sup>(b)</sup>		
708	I	Nancy's Creek; location not specified (Shellfish/Invertebrates)				A <sup>(b)</sup>		
800	I	0.7 miles NE – Intake Canal					M <sup>(a)</sup>	
801	I	0.8 miles SW – Discharge Canal					M <sup>(a)</sup>	
802	C	10.1 miles – Location not Specified					M <sup>(a)</sup>	
803	I	0.6 miles SSE – Spoil Pond					M <sup>(a)</sup>	
804	I	0.7 miles S – Leonard Street plant exit adjacent to RR tracks					M <sup>(a)</sup>	

(a) When Available

(b) Edible Portions

(c) When in Season

\* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.

SDSP: Storm Drain Stabilization Pond

**TABLE 2.1-C**

**BRUNSWICK STEAM ELECTRIC PLANT (BSEP)**

**RADIOLOGICAL MONITORING PROGRAM SAMPLING LOCATIONS (TLD SITES)**

Table 2.1-C Codes			
IR	Inner Ring	OR	Outer Ring
ISFSI	Independent Spent Fuel Storage Installation		
C	Control	SI	Special Interest

Site #	Measure Type	Location*	Distance (miles)	Sector	Site #	Measure Type	Location*	Distance (miles)	Sector
1	IR	1.1 miles E	1.1	E	27	OR	5.1 miles NNW	5.1	NNW
2	IR	0.9 miles ESE	0.9	ESE	28	OR	4.2 miles NW	4.2	NW
3	IR	0.9 miles SE	0.9	SE	29	IR	2.6 miles SSW	2.6	SSW
4	IR	1.1 miles SSE	1.1	SSE	30	IR	2.0 miles NE	2.0	NE
5	IR	1.1 miles S	1.1	S	31	IR	2.5 miles ENE	2.5	ENE
6	IR	1.6 miles SSW	1.6	SSW	32	OR	5.8 miles ENE	5.8	ENE
7	IR	1.1 miles SW	1.1	SW	33	OR	4.1 miles E	4.1	E
8	IR	1.2 miles W	1.2	W	34	OR	5.4 miles E	5.4	E
9	IR	1.0 miles WNW	1.0	WNW	35	OR	7.3 miles SSE	7.3	SSE
10	IR	0.8 miles NW	0.8	NW	36	OR	8.9 miles NE	8.9	NE
11	IR	0.9 miles NNW	0.9	NNW	37	OR	5.5 miles NW	5.5	NW
12	IR	1.1 miles N	1.1	N	38	OR	11.0 miles W	11.0	W
13	IR	1.2 miles NNE	1.2	NNE	39	OR	5.3 miles SW	5.3	SW
14	IR	0.5 miles NE	0.5	NE	40	OR	6.9 miles WSW	6.9	WSW
15	IR	0.9 miles ENE	0.9	ENE	75	OR	4.7 miles S	4.7	S
16	IR	1.0 miles WSW	1.0	WSW	76	OR	4.8 miles SSW	4.8	SSW
17	IR	1.4 miles ESE	1.4	ESE	77	OR	5.4 miles S	5.4	S
18	IR	1.7 miles	1.7		78	OR	9.9 miles NNE	9.9	NNE
20	IR	2.1 miles S	2.1	S	79	OR	9.5 miles N	9.5	N
21	IR	2.9 miles SSW	2.9	SSW	81	C	9.9 miles WNW	9.9	WNW
22	OR	5.3 miles SW	5.3	SW	82	ISFSI	0.17 miles NNE @ SW corner of ISFSI	0.17	NNE
23	OR	4.6 miles WSW	4.6	WSW	83	ISFSI	0.27 miles NE @ NW corner ISFSI	0.27	NE
24	IR	3.0 miles W	3.0	W	84	ISFSI	0.27 miles NE @ NE corner of ISFSI	0.27	NE
25	OR	8.6 miles WNW	8.6	WNW	85	ISFSI	0.09 miles ENE @ SE corner of ISFSI	0.09	ENE
26	OR	5.9 miles NW	5.9	NW					

\* GPS data reflect approximate accuracy to within 2-5 meters. GPS field measurements were taken as close as possible to the item of interest.



**TABLE 2.2-A**

**REPORTING LEVELS FOR RADIOACTIVITY  
CONCENTRATIONS IN ENVIRONMENTAL SAMPLES**

Analysis	Water (pCi/liter)	Airborne Particulate and Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg, wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg)
H-3	30,000				
Mn-54	1,000		30,000		
Fe-59	400		10,000		
Co-58	1,000		30,000		
Co-60	300		10,000		
Zn-65	300		20,000		
Zr-Nb-95	400				
I-131	2	0.9		3	100
Cs-134	30	10	1,000	60	1,000
Cs-137	50	20	2,000	70	2,000
Ba-La-140	200			300	

**TABLE 2.2-B**

**REMP ANALYSIS FREQUENCY - ODCM Rev. 37**

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Gross Beta	TLD
Air Radioiodine	Weekly	X			
Air Particulate	Weekly			X	
	Quarterly	X			
Direct Radiation (TLD)	Quarterly				X
Surface Water	Monthly Composite (400 & 401)	X	X		
	Weekly Grab (495 – 499)		X		
	Monthly Comp. of Weekly Grab	X			
	Weekly Grab (494, 604 – 610)	X	X		
Ground Water	Quarterly Grab		X		
	Semiannual Grab	X			
Shoreline Sediment	Semiannually (500)	X			
	Annually (501)	X			
Fish and Shellfish/Invertebrates <sup>(a)</sup>	Semiannually (700 – 705)	X			
	Annually (706 – 708)	X			
Broadleaf Vegetation <sup>(b)</sup>	Monthly <sup>(b)</sup>	X			

- (a) Edible portions
- (b) When available

**TABLE 2.2-C**

**REMP ANALYSIS FREQUENCY - ODCM Rev. 38**

Sample Medium	Analysis Schedule	Gamma Isotopic	Tritium	Gross Beta	TLD
Air Radioiodine	Weekly	X			
Air Particulate	Weekly			X	
	Quarterly	X			
Direct Radiation (TLD)	Quarterly				X
Surface Water	Monthly Composite (400 & 401)	X	X		
	Monthly Grab (494 - 499, 604, 607, & 609)	X	X		
Ground Water	Quarterly Grab		X		
	Semiannual Grab	X			
Shoreline Sediment	Semiannually (500)	X			
	Annually (501)	X			
Fish and Shellfish/Invertebrates <sup>(a)</sup>	Semiannually (700 – 705)	X			
	Annually (706 – 708)	X			
Broadleaf Vegetation <sup>(b)</sup>	Monthly <sup>(b)</sup>	X			

- (c) Edible portions
- (d) When available

**TABLE 2.2-D**

**DETECTION CAPABILITIES FOR THE *A PRIORI* LOWER LIMIT OF DETECTION<sup>(a)(b)(d)</sup>**

Analysis	Water (pCi/liter)	Airborne Particulates or Gases (pCi/m <sup>3</sup> )	Fish (pCi/kg, wet)	Milk (pCi/liter)	Broadleaf Vegetation (pCi/kg, wet)	Sediment (pCi/kg, dry)
Gross Beta	4	0.01				
H-3	3000					
Mn-54	15		130			
Fe-59	30		260			
Co-58, 60	15		130			
Zn-65	30		260			
Zr-Nb-95	15					
I-131	1 <sup>(c)</sup>	0.07		1	60	
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-La-140	15			15		

- (a) This list does not mean that only these nuclides are to be considered. Other peaks that are identifiable, together with these of the above nuclides, shall be analyzed and reported in the AREOR.
- (b) The LLD is defined in the BSEP ODCM.
- (c) LLD for drinking water samples. If no drinking water pathway exists, a value of 15 pCi/L may be used.
- (d) The LLD for each analysis is specified, with the exception of the Nancy's Creek Marsh Area principal gamma isotopic and I-131. The LLD for the Nancy's Creek Marsh Area gamma isotopic is 5x10<sup>-7</sup>µCi/ml for Principal Gamma Emitters and 1x10<sup>-6</sup>µCi/ml for I-131.

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## **3.0 INTERPRETATION OF RESULTS**

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The following section depicts and explains the review of the REMP results conducted during 2017 for the Brunswick Steam Electric Plant (BSEP) and fulfills the reporting requirements of Technical Specifications 5.6.2, BSEP ODCM 7.4.1, and applicable procedures. Review of the 2017 REMP analysis results was performed to identify changes in environmental levels as a result of BSEP operations. Sample data for 2017 was compared to preoperational and historical data. Summary tables containing 2017 information required by Technical Specification 5.6.2 are located in Appendix B.

Evaluation for significant trends was performed for radionuclides that are listed as required within BSEP ODCM. The radionuclides include: H-3, Mn-54, Fe-59, Co-58, Co-60, Zn-65, Zr-95, Nb-95, I-131, Cs-134, Cs-137, Ba-140 and La-140. Gross beta analysis results were trended for air particulates and tritium results for surface water samples.

BSEP ODCM addresses actions to be taken if radionuclides other than those required are detected in samples collected. The occurrences of these radionuclides could be the result of BSEP liquid effluents which contained the radionuclides.

Review of the 2017 data presented in this section supports the conclusion that there were no significant changes in environmental sample radionuclide concentrations of samples collected and analyzed from BSEP and surrounding areas that were attributable to plant operations. The radiological environmental data for 2017 indicates that radioactivity concentrations were not higher than expected and all positively identified measurements attributable to BSEP operations in 2017 were within limits as specified in the BSEP ODCM, thus presenting no significant impact on the environment or public health and safety.

A statistical summary of the BSEP data for 2017 has been compiled and summarized in Appendix B along with any plant-derived activity detected within the scope of the REMP.

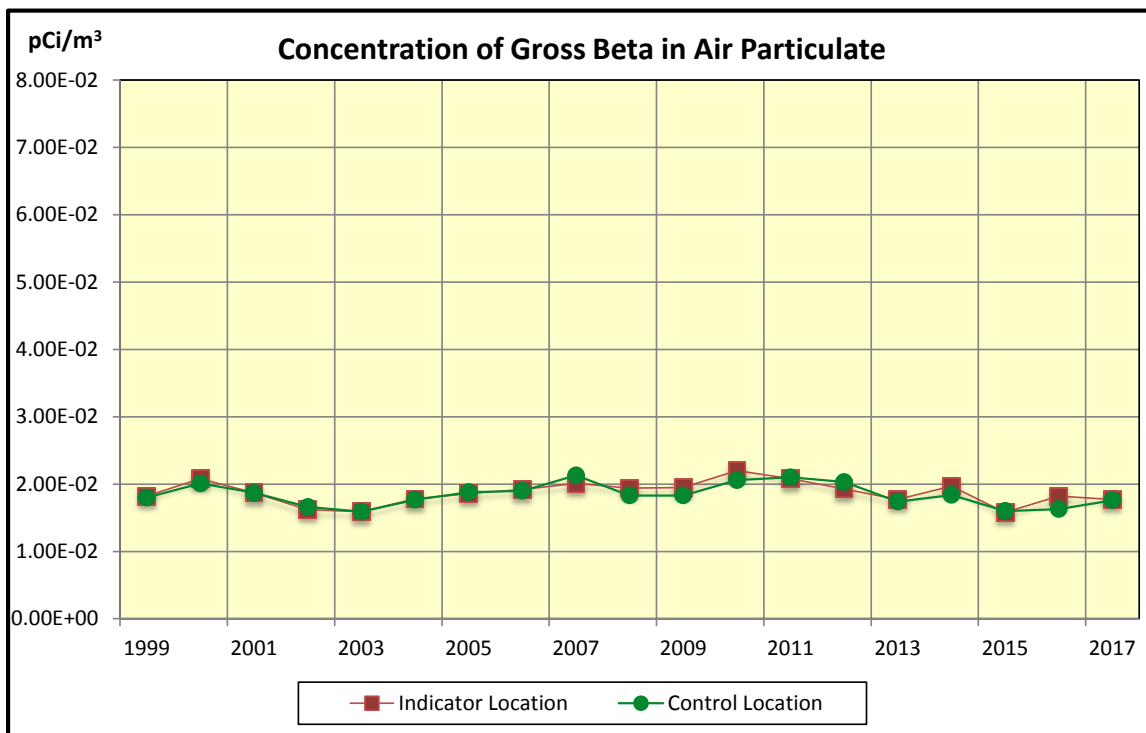
### **3.1 AIRBORNE RADIOIODINE AND PARTICULATES**

The 371 air cartridge/radioiodine (AR) samples from the indicator (265 samples) and the control (106 samples) stations had Iodine-131 (I-131) concentrations less than the ODCM LLD of  $7.00E-2$  pCi/m<sup>3</sup>. The air samplers operated for a total of 99.90% availability for the 2017 year. No I-131 activity due to BSEP operations was identified in any indicator or control samples in 2017. However, I-131 was detected in air samples following the Fukushima Dai-ichi Nuclear Power Plant incident after the March 11, 2011, earthquake and tsunami (NCR # 0456564). Refer to Table 3.1-2 for the highest annual mean indicator location and control location I-131 concentrations since 1999 to 2017.

For the period of January 1, 2017, to December 31, 2017, the gross beta activity was detectable in the airborne particulate (AP) samples, with acceptable runtime, from the five indicator locations and the two control locations. The 265 indicator AP samples had an average concentration of 1.72E-2 pCi/m<sup>3</sup> (a value lower than the preoperational data) and the 106 control AP samples had an average gross beta concentration of 1.76E-2 pCi/m<sup>3</sup> in 2017. The preoperational (1973 – 1974) average concentration was 8.2E-2 pCi/m<sup>3</sup>. The airborne concentrations of gross beta activity in 2017 are indicative of natural background and do not indicate any activities originating from the nuclear operations at BSEP. Figure 3.1 and Table 3.1-1 provide individual sample gross beta results for the highest annual mean indicator location and the control locations concentration since 1999 to 2017 (refer to Appendix B). The two sample locations' results are similar in concentration and have negligible variance. No plant-related gamma activity was observed for any air particulate filters analyzed during 2016. Natural gamma concentrations identified are typical of the natural environment and are not attributed to plant operations. Refer to Appendix C or Appendix D for deviations and unavailable samples in the 2017 collection year.

No plant-related gamma activity was detected in quarterly composite filter samples from either the indicator or control locations during 2017. An additional gamma analysis was performed on the final 2017 air particulate sample set for calendar reconciliation purposes (NCR # 02174810). BSEP ODCM LLDs and reporting levels for air particulates are contained in Section 2.0 in Table 2.2-D and 2.2-A respectively.

**Figure 3.1**



**Table 3.1-1 Mean Concentration of Gross Beta in Air Particulate**

Year	Indicator Location (pCi/m <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
1999	1.82E-2	1.80E-2
2000	2.08E-2	2.01E-2
2001	1.87E-2	1.87E-2
2002	1.62E-2	1.66E-2
2003	1.59E-2	1.59E-2
2004	1.78E-2	1.77E-2
2005	1.86E-2	1.88E-2
2006	1.92E-2	1.90E-2
2007	2.01E-2	2.13E-2
2008	1.94E-2	1.83E-2
2009	1.95E-2	1.83E-2
2010	2.20E-2	2.06E-2
2011	2.08E-2	2.10E-2
2012	1.93E-2	2.03E-2
2013	1.77E-2	1.74E-2
2014	1.97E-2	1.84E-2
2015	1.58E-2	1.60E-2
2016	1.82E-2	1.63E-2
2017	1.77E-2	1.76E-2

**Table 3.1-2 Mean Concentration of Air Radioiodine (I-131)**

Year	Indicator Location (pCi/m <sup>3</sup> )	Control Location (pCi/m <sup>3</sup> )
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0
2006 <sup>(1)</sup>	5.31E-2	0.00E+0
2007	0.00E+0	0.00E+0
2008	0.00E+0	0.00E+0
2009	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0
2011 <sup>(2)</sup>	1.31E-1	1.00E-1
2012	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0
2014 <sup>(3)</sup>	0.00E+0	0.00E+0
2015	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2006 concentration affected by plant conditions (NCR # 0211934).

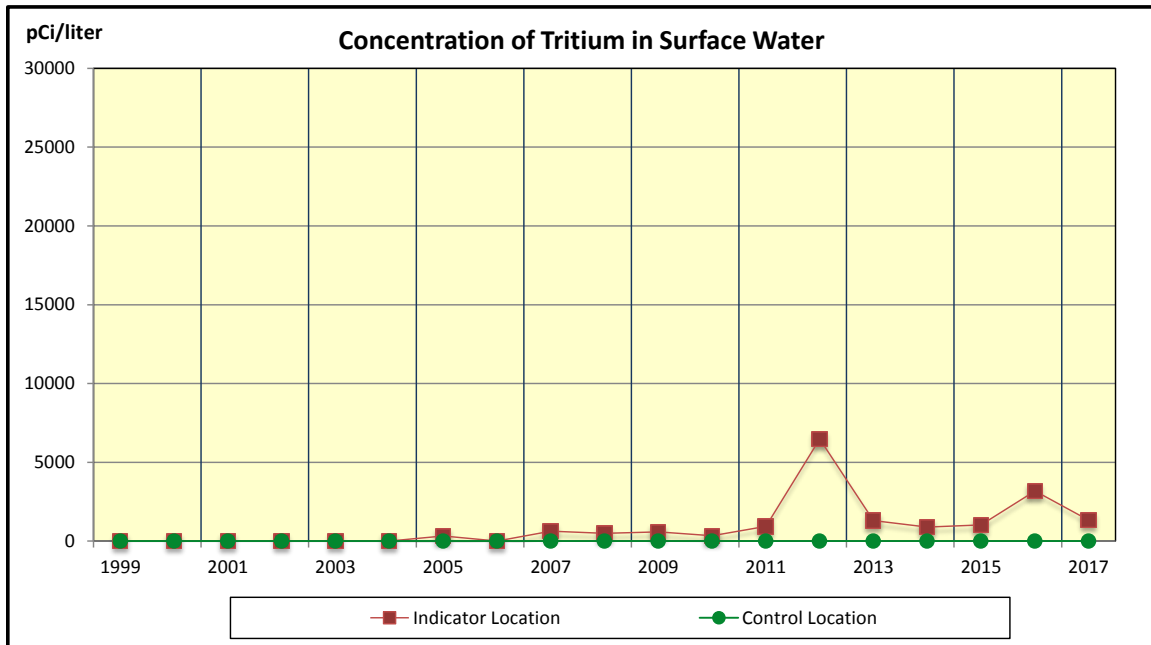
(2) 2011 concentrations affected by Fukushima Dai-ichi

(3) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

## 3.2 SURFACE WATER

Surface water (SW) is sampled monthly from the intake and discharge canal, while Nancy's Creek samples and Nancy's Creek Marsh Area samples are sampled weekly per BSEP ODCM Revision 37. Refer to Table 2.2-B for REMP Analysis Frequency - ODCM Rev. 37. These samples are analyzed for gamma-emitting radionuclides and for tritium. Tritium analysis is performed weekly on the Nancy's Creek samples. Sampling and compositing, of the Nancy's Creek samples, for gamma emitters is weekly and the gamma analysis is performed monthly on the samples composited weekly. The current BSEP ODCM (Revision 37) effective date of October 29, 2013, states for the Nancy's Creek Marsh Area that samples are collected weekly and are analyzed weekly for tritium, while ODCM sample location 494 and 604 are composited weekly and the composite (Waypoint Comp – sample ID #1067) are analyzed weekly for gamma emitters. Nancy's Creek Marsh Area surface water samples 605, 606, and 607 are collected weekly and composited (Waypoint Comp (70) – sample ID #1065) for gamma analysis along with surface water samples 608, 609, and 610 (Waypoint Comp (80) – sample ID #1066). Per BSEP ODCM Revision 38 effective date of August 1, 2017; the Nancy's Creek samples and the Nancy's Creek Marsh Area samples are sampled monthly (grab samples) and analyzed for gamma-emitting radionuclides and tritium. Refer to Table 2.2-C for REMP Analysis Frequency - ODCM Rev. 38. The gamma analyses indicated that no detectable concentrations of gamma emitting radionuclides relating to plant effluents appeared in any of the surface water indicator or control samples. None of the control samples (SW-400 or 499) indicated the presence of tritium. However, 28 out of 412 indicator samples indicated the presence of tritium in 2017. The predominate indicator locations indicating tritium in 2017 were at Nancy's Creek Marsh Area and the discharge canal. Two of the twelve samples from the historical discharge canal (SW-401) indicated the presence of tritium, while 26 out of 260 samples from Nancy's Creek Marsh Area indicated the presence of tritium. The tritium activity detected in SW-401 (the discharge canal composite sample) had an average tritium concentration of  $3.36\text{E}+2$  pCi/L, which was expected due to plant operations at the time of sampling. The indicator samples from Nancy's Creek and Nancy's Creek Marsh Area had an average concentration of  $9.43\text{E}+2$  pCi/L of tritium activity. The reporting limit for tritium in environmental samples is  $3.00\text{E}+4$  pCi/L (30,000 pCi/L); therefore, per BSEP's ODCM requirements (7.13.15 c and d), all of the detected values are below the reportable limit. The total level of radioactivity as the result of plant effluents in each environmental sampling medium at a required location shall be less than the limit specified when averaged over the calendar quarter. Three surface water composite samples (Waypoint Comp (70) – sample ID #1065, Waypoint Comp (80) – sample ID #1066, and Waypoint Comp – sample ID #1067) collected May 23, 2017 per BSEP ODCM Table 7.3.15-1 were not analyzed for gamma-emitting radionuclides by BSEP Laboratory (Bio-Lab) in the required timeframe stated in the BSEP ODCM (NCR # 02128415). Refer to Appendix D, Analytical Deviations for additional information. Figure 3.2 displays the tritium results for the highest annual mean indicator and control locations concentrations since 1999 to 2017. Table 3.2 lists the highest annual mean concentrations for indicator and control locations. Refer to Appendix B for additional surface water results.

**Figure 3.2**



There is no reporting level for tritium in surface water; however, if no drinking water pathway exists, a value of 30,000 pCi/l may be used.

**Table 3.2 Mean Concentration of Tritium in Surface Water**

Year	Indicator Location (pCi/l)	Control Location (pCi/l)
1999	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0
2005	3.22E+2	0.00E+0
2006	0.00E+0	0.00E+0
2007	6.30E+2	0.00E+0
2008	4.85E+2	0.00E+0
2009	5.75E+2	0.00E+0
2010	3.39E+2	0.00E+0
2011	9.28E+2	0.00E+0
2012	6.47E+3	0.00E+0
2013	1.29E+3	0.00E+0
2014	8.80E+2	0.00E+0
2015	1.02E+3	0.00E+0
2016	3.18E+3	0.00E+0
2017	1.33E+3	0.00E+0

0.00E+0 indicates no detectable measurements

### **3.3 GROUND WATER**

Ground water (GW) is sampled quarterly and semiannually from ten indicator sample sites. These samples are analyzed for gamma-emitting radionuclides (at least semiannually) and for tritium (at least quarterly). The analyses indicated that no detectable concentrations of gamma emitting radionuclides relating to plant effluents appeared in any of the indicator samples in 2017. The tritium analyses indicated detectable concentrations of tritium in three out of forty indicator samples analyzed in 2017 for an average tritium concentration of 3.76E+2 pCi/L. Refer to Appendix B for additional ground water results. Table 3.3 lists the tritium results for the highest annual mean concentrations for indicator and control locations since 1999 to 2017.

The county of Brunswick utilizes water from the Cape Fear River, which is processed at the Northwest Water Treatment Plant, and groundwater that is pumped from the Castle Hayne Aquifer, which is processed at the 211 Water Treatment Plant in Southport. The 211 Water Treatment Plant supplies drinking water to Southport, Oak Island, and St. James Plantation. The 211 Water Treatment Plant uses ground water from fourteen wells screened in the Castle Hayne formation approximately 175 feet below the ground's surface and is located approximately 4 miles northwest, up gradient, of the site according to the North Carolina Department of Environmental Quality (NCDEQ) Public Water Supply Section and the Brunswick County Public Utilities Water Distribution Division. The City of Southport has a network of ground water supply wells installed in the Castle Hayne and PeeDee aquifers, within two miles of the BNP Storm Drain Stabilization Pond (SDSP) area; however, these wells are only maintained as emergency or backup supply wells. Between the Ground Water Program at BSEP, the BSEP REMP, the information provided by the Castle Hayne Aquifer/ formation, and Silar Services, Inc.; the drinking water source for the public is sufficiently monitored and a control point for sampling drinking water is not needed.



**Table 3.3 Mean Concentration of Tritium in Ground Water**

<b>Year</b>	<b>Indicator Location (pCi/l)</b>	<b>Control Location (pCi/l)</b>
1999	N/A	N/A
2000	N/A	N/A
2001	N/A	N/A
2002	N/A	N/A
2003	N/A	N/A
2004	N/A	N/A
2005	N/A	N/A
2006	N/A	N/A
2007	N/A	N/A
2008	1.50E+6	No Control
2009	6.48E+5	No Control
2010	5.66E+5	No Control
2011	3.10E+2	No Control
2012	4.00E+2	No Control
2013	4.66E+2	No Control
2014	6.54E+2	No Control
2015	4.02E+2	No Control
2016	0.00E+0	No Control
2017	3.76E+2	No Control

0.00E+0 indicates no detectable measurements

N/A indicates that Ground Water samples were not part of the BSEP REMP until 2008.

### **3.4 MILK/BROADLEAF VEGETATION**

No milk (milch) sampling locations are currently identified in BSEP environs; therefore, no sampling of this media was available in 2017.

Food crops were not grown in the vicinity of the plant in 2017 and this media was represented by indigenous vegetation samples consisting primarily of wax myrtle leaves. Forty-eight samples were collected from indicator locations and twelve samples from the control location. No detectable activities relating to plant effluents were detected in any of the indicator or control broadleaf vegetation sample media in 2017. No other gamma activity was detected in any sample other than naturally occurring gamma activity. Figure 3.4 displays the highest annual mean indicator and control location concentrations for Cs-137 in broadleaf vegetation since 1999 to 2017. Table 3.4 lists the highest annual mean concentrations for indicator and control locations for Cs-134, Cs-137, Co-60, and I-131 in broadleaf vegetation since 1999 to 2017.

Figure 3.4

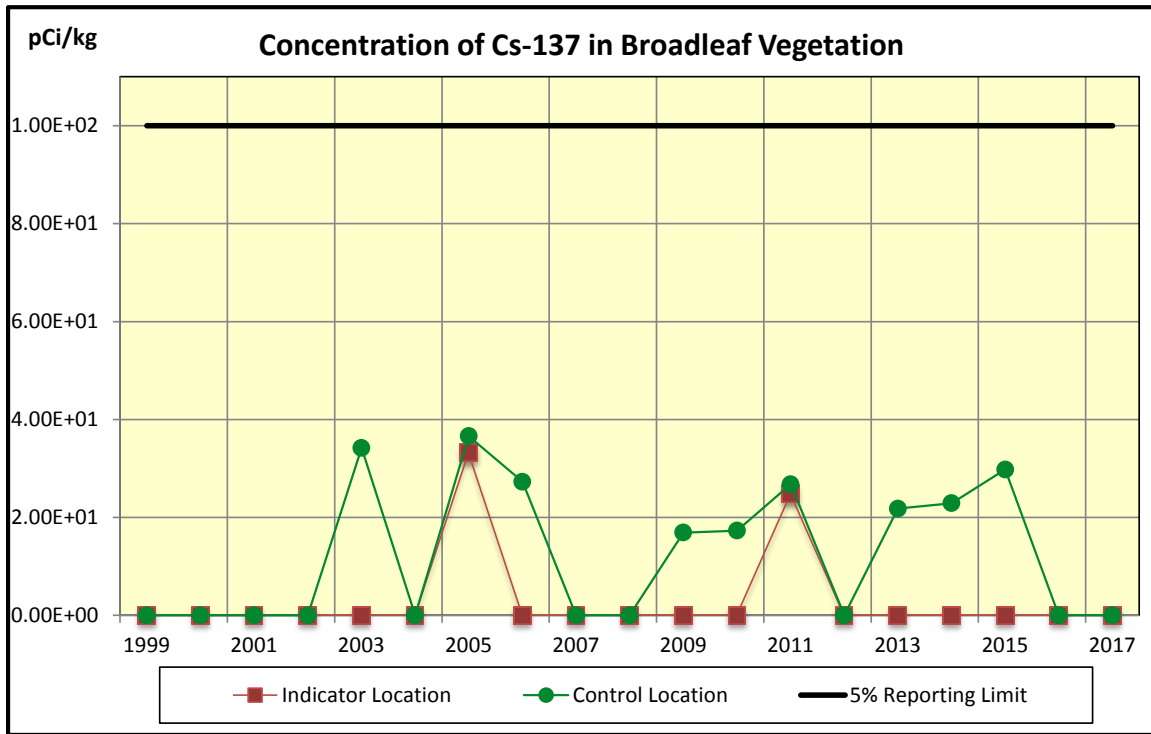


Table 3.4 Mean Concentrations of Radionuclides in Broadleaf Vegetation (pCi/kg)

Year	Cs-134 Indicator	Cs-134 Control	Cs-137 Indicator	Cs-137 Control	Co-60 Indicator	Co-60 Control	I-131 Indicator	I-131 Control
1999	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2000	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2001	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2002	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2003	0.00E+0	0.00E+0	0.00E+0	3.42E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2004	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2005	0.00E+0	0.00E+0	3.32E+1	3.66E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2006	0.00E+0	0.00E+0	0.00E+0	2.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2007	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2008	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2009	0.00E+0	0.00E+0	0.00E+0	1.69E+1	4.94E+1	0.00E+0	0.00E+0	0.00E+0
2010	0.00E+0	0.00E+0	0.00E+0	1.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2011 <sup>(1)</sup>	2.60E+1	1.64E+1	2.48E+1	2.68E+1	0.00E+0	0.00E+0	2.20E+2	1.48E+2
2012	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2013	0.00E+0	0.00E+0	0.00E+0	2.18E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2014 <sup>(2)</sup>	0.00E+0	0.00E+0	0.00E+0	2.29E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2015	0.00E+0	0.00E+0	0.00E+0	2.98E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2016	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
2017	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0

0.00E+0 indicates no detectable measurements

(1) 2011 concentration affected by Fukushima Dai-ichi

(2) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

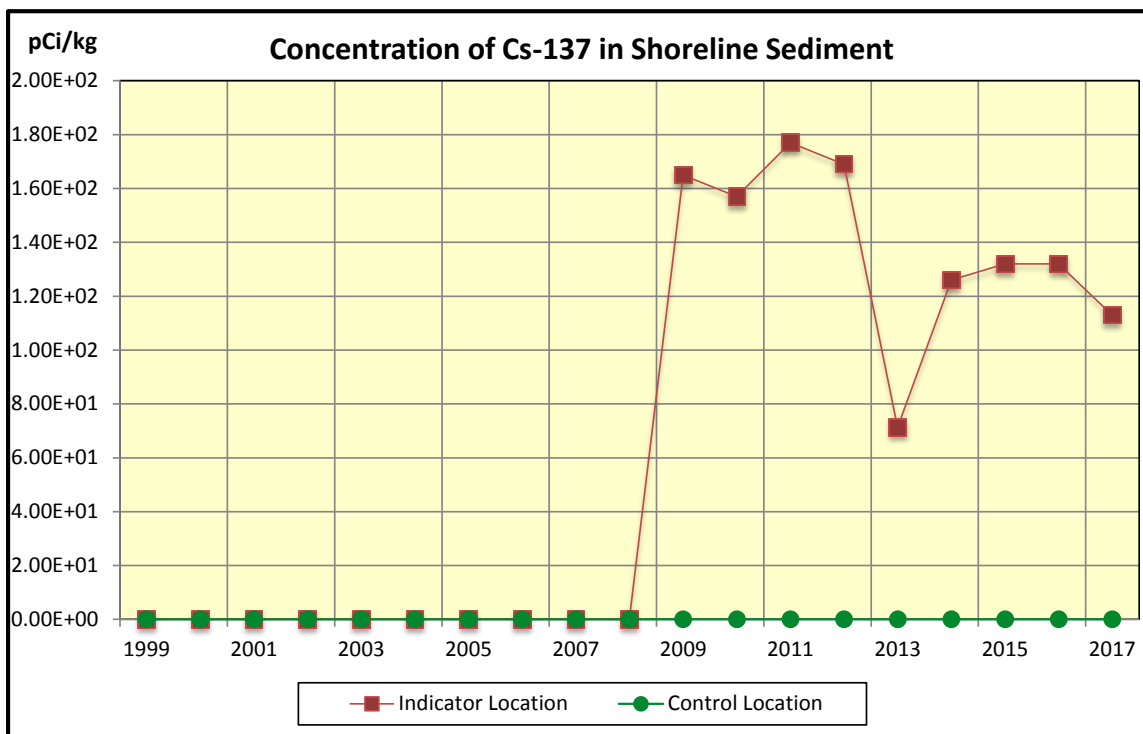
### **3.5 FISH and INVERTEBRATES**

Fish (free swimmers and bottom feeders), invertebrate (SH), and benthic organism (BO) samples are collected semiannually from three 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 and (3) annually from three locations on Nancy's Creek (Figure 2.1-5). Fifteen samples were collected from indicator and control locations during 2017. No detectable activities relating to plant effluents were detected in the indicator or control fish and invertebrate sample media in 2017.

### **3.6 SHORELINE SEDIMENT**

Four shoreline sediment (SS) indicator samples were collected in 2017. All of the radionuclides indicative of plant effluents were determined to be less than the respective LLDs for gamma-emitting radionuclides in both samples from the beach area near the pumping station location at Caswell Beach and one sample from the Nancy's Creek area. Two shoreline sediment samples in 2017 were drawn from Nancy's Creek adjacent to WP-55 near the Storm Drain Stabilization Pond (SDSP), where one of the indicator samples contained Cesium (Cs)-137 activity (Single Value: 1.13E+2 pCi/kg, dry). The Nancy's Creek sample that indicated Cs-137 activity was analyzed for Iron (Fe)-55, Strontium (Sr)-89, Strontium (Sr)-90, and Nickel (Ni)-63 by General Engineering Laboratories, LLC (GEL) where all the results were less than the respective LLDs. Per BSEP ODCM revision 37 and revision 38; if plant activity is detected, then Sr-89, 90, and Fe-55 analyses are to be performed on the shoreline sediment sample and the frequency of sampling for the shoreline sediment sample from Nancy's Creek will increase to semi-annually for the next sampling year. Figure 3.6 displays the highest annual mean indicator concentrations for Cs-137 in shoreline sediment since 1999 to 2017. Table 3.6 lists the highest annual mean concentrations for the indicator locations for Cs-137 in shoreline sediment since 1999 to 2017.

Figure 3.6



**Table 3.6 Mean Concentration of Radionuclides in Shoreline Sediment**

YEAR	Cs-137 Indicator (pCi/kg)
1999	0.00E+0
2000	0.00E+0
2001	0.00E+0
2002	0.00E+0
2003	0.00E+0
2004	0.00E+0
2005	0.00E+0
2006	0.00E+0
2007	0.00E+0
2008	0.00E+0
2009	1.65E+2
2010	1.57E+2
2011	1.77E+2
2012	1.69E+2
2013	7.13E+1
2014 <sup>(1)</sup>	1.26E+2
2015	1.32E+2
2016	1.32E+2
2017	1.13E+2

0.00E+0 indicates no detectable measurements

There is no control location for Shoreline Sediments.

(1) 2014 Gamma spectroscopy system was replaced 10JUL2014. Gamma spectroscopy system hardware, detector cooling apparatus, software, electronics, nuclide identification libraries, and analytical test matrix components for test matrices were modified (NCR # 0739995). No analytical changes were noted due to the 2014 gamma spectroscopy system change.

## **3.7 DIRECT GAMMA RADIATION**

### **3.7.1 ENVIRONMENTAL TLD**

In 2017, 177 TLDs were analyzed, 173 at indicator locations and 4 at the control location. TLDs are collected and analyzed quarterly. There were three missing TLDs during the BSEP 2017 collection period, refer to Appendix C for information.

Thermoluminescent dosimeters (TLDs) were used to monitor ambient radiation exposures in the plant environs. The environmental data on external radiation exposure for 2017 was essentially unchanged from 1989-2016, with an average exposure for all of 2017 indicator locations of 10.1 mR per std. 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 3.7-3 provides a comparison of recent data with the preoperational and historical data.

The average quarterly exposure at the indicator and control locations was 10.1 mR/Std. Qtr. and 10.8 mR/Std. Qtr. respectively. The highest indicator location was 3.0 miles W of the plant and its average was 14.6 mR/Std. Qtr. The differences among these locations are attributed to variations in soils, local geology, and are not the result of plant operations.

Comparison of the average annual TLD exposure between the inner and outer ring TLD data and the control TLD data for 1999 to 2017 is presented in Figure 3.7 and Table 3.7-1.

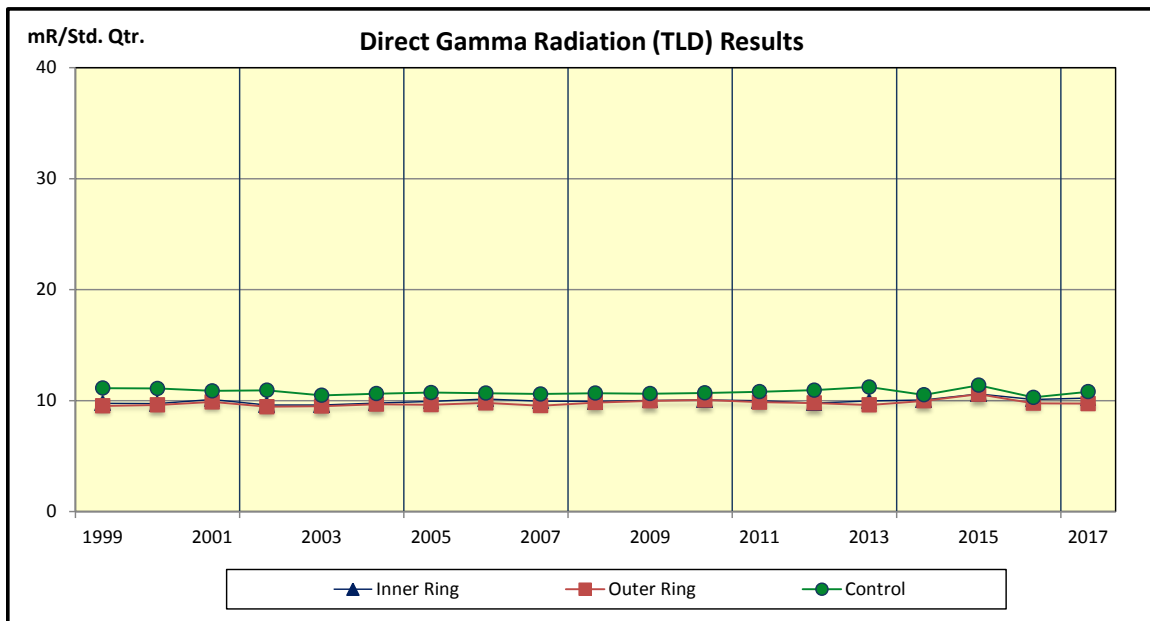
TLD averages per Appendix B do include a separate line for the four ISFSI TLDs that were added to the program as of 3<sup>rd</sup> Quarter 2010. These TLDs are not indicative of the plant's environmental monitoring program's TLDs, so they will be handled separately. The ISFSI TLD data is included with the environmental data results as a separate section. Comparison of the 2017 ISFSI TLD data after loaded fuel with preoperational data (2008 – 3<sup>rd</sup> Quarter 2010) indicates that the average pre-op TLD dose levels were about the same as the average after fuel was loaded (See Table 3.7-2). Dry fuel storage radiation measurements have been monitored since 2008 and additional information can be found in the BSEP 2017 Annual Release Report.

As of first quarter 2014, the environmental TLDs that are placed in the field for REMP are Harshaw TLDs. Panasonic TLDs were the type of environmental TLDs for BSEP REMP monitoring prior to 2014. This change was a merger initiative in order to achieve fleet standardization of the TLD program. This change in environmental TLDs for the REMP indicates a step change in activity as mentioned in NCR # 01982479 between the Panasonic TLD readings prior to 2014 and the Harshaw TLD readings from 2014 to present. There are three factors that can be attributed to the step increase that was observed: (1) the annealing method levels employed were lower for the Panasonic TLDs, (2) transit control subtraction

differences, and (3) the calculation/method of fade correction (fixed fade control - vs - actual in field TLDs). Starting in 2016, enhanced analytical methods will be evaluated for future implementation when sufficient data is available. The new methods will improve data transparency and interpretation.

A TLD Intercomparison Program is conducted as part of the quality assurance program. Results of this program are included in Section 4.7.

**Figure 3.7**



There is no reporting level for Direct Radiation (TLD)

**Table 3.7-1 Direct Gamma Radiation (TLD) Results**

Year	Inner Ring Average (mR/Std. Qtr.)	Outer Ring Average (mR/Std. Qtr.)	Control Average (mR/Std. Qtr.)
1999	9.76E+0	9.53E+0	1.11E+1
2000	9.75E+0	9.61E+0	1.11E+1
2001	1.01E+1	9.88E+0	1.09E+1
2002	9.65E+0	9.45E+0	1.09E+1
2003	9.60E+0	9.51E+0	1.05E+1
2004	9.78E+0	9.68E+0	1.06E+1
2005	9.94E+0	9.64E+0	1.07E+1
2006	1.02E+1	9.80E+0	1.07E+1
2007	9.96E+0	9.55E+0	1.06E+1
2008	9.93E+0	9.83E+0	1.07E+1
2009	1.00E+1	9.98E+0	1.06E+1
2010	1.01E+1	1.01E+1	1.07E+1
2011	1.00E+1	9.86E+0	1.08E+1
2012	9.78E+0	9.79E+0	1.10E+1
2013	9.98E+0	9.61E+0	1.12E+1
2014	1.01E+1	9.98E+0	1.05E+1
2015	1.06E+1	1.06E+1	1.14E+1
2016	1.01E+1	9.76E+0	1.03E+1
2017	1.03E+1	9.73E+0	1.08E+1

**Table 3.7-2**

**ISFSI TLD Dose (mR/Std. Qtr.)**

	TLD # 82	TLD # 83	TLD # 84	TLD # 85
Average Pre-Op (1 <sup>st</sup> Qtr. 2008 to 3 <sup>rd</sup> Qtr. 2010)	30.1 ± 3.1	22.4 ± 2.1	16.7 ± 1.6	53.2 ± 7.6
Average after Fuel Loaded (4 <sup>th</sup> Qtr. 2010 to 4 <sup>th</sup> Qtr. 2017)	30.1	24.3	18.3	40.6

**Table 3.7-3**

**Brunswick Steam Electric Plant  
HISTORICAL TLD RESULTS (1972-2017)**

<b>Year</b>	<b>Average Exposure of All TLD Monitoring Locations (mR per week)</b>
1972 (4th Qtr.)	0.80
1973	1.25
1974	0.97
1975 (1st, 2nd Qtr)	0.80
1976	0.98
1977	1.32
1978	1.24
1979	0.93
1980	0.90
1981	0.96
1982	1.18
1983	1.21
1984	0.98
1985	1.03
1986	0.89
1987	0.92
1988	0.86
1989	0.75
1990	0.76
1991	0.76
1992	0.75
1993	0.78
1994	0.77
1995	10.1 (mR per quarter)*
1996	10.1 (mR per quarter)
1997	10.1 (mR per quarter)
1998	9.7 (mR per quarter)
1999	9.7 (mR per quarter)
2000	9.7 (mR per quarter)
2001	10.0 (mR per quarter)
2002	9.6 (mR per quarter)
2003	9.6 (mR per quarter)
2004	9.7 (mR per quarter)
2005	9.8 (mR per quarter)
2006	10.0 (mR per quarter)
2007	9.8 (mR per quarter)
2008	9.9 (mR per quarter)
2009	10.0 (mR per quarter)
2010	10.1 (mR per quarter)
2011	9.9 (mR per quarter)
2012	9.8 (mR per quarter)
2013	9.8 (mR per quarter)
2014	10.0 (mR per quarter)
2015	10.7 (mR per quarter)
2016	10.0 (mR per quarter)
2017	10.1 (mR per quarter)

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



## **3.8 LAND USE CENSUS**

The 2017 BSEP Annual Land Use Census was conducted during June of 2017 as required by the BSEP ODCM. Table 3.8-A summarizes the BSEP 2017 census results. No environmental program changes were required as a result of the 2017 Land Use Census.

### **3.8.1 PURPOSE OF 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 (8 kilometer) distance of the plant is completed during the growing season each year. This information is used for dose assessment and to identify changes to the stations sampled and the type of samples. These results ensure that the Radiological Environmental Monitoring Program (REMP) is based upon current data regarding human activity in the vicinity of the plant. Therefore, the purpose of the land use census is to ensure the monitoring program is current, as well as provide data for the calculation of estimated radiation exposure.

The pathways evaluated are:

- Ingestion Pathway – Results from eating food crops that may have radioactive materials deposited on them, incorporated radioactive materials from the soil or atmosphere. Another pathway is through drinking milk from local cows or goats, if these are present. The grass used to feed these animals may have had radioactive materials deposited on them, that can then 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.

### **3.8.2 METHODOLOGY**

The following must be identified within the five-mile (8 kilometer) radius of the plant for each of the sixteen meteorological sectors (compass direction the winds may blow, for example NNE [North North East]):

- The nearest resident
- The nearest garden of greater than 500 square feet, producing broadleaf vegetation

- The nearest milk animal

The following must also be identified (for elevated releases) within the three-mile radius of the plant for each of the 16 meteorological sectors:

- The location of all milk animals
- The location of all gardens of greater than 500 square feet, producing broadleaf vegetation

The primary method is visual inspection from the roadside within the five (5) mile radius, with the exception of the Sunny Point Military Ocean Terminal. This information may be supplemented with data from aerial photographs and a Global Positioning System (GPS) to determine distance and direction from the plant. Distances from the plant are accurate to within one tenth of a mile.

### **3.8.3 LAND USE CENSUS RESULTS**

The 2016 and 2017 results of the survey for the nearest resident, garden, milk and meat animals in each sector are compared in Table 3.8-A.

The resident portion of the census conducted in June of 2017 did not identify any new residents closer to the plant; therefore, no changes from the 2016 land use census. The garden portion of the census identified changes in the distance of the nearest garden in three sectors during the 2017 census.

The nearest garden locations changed in the North (N) sector from 1.0 mile to no garden, SW from 2.2 miles to 2.8 miles, and in the NNW sector from 0.9 miles to 0.8 miles. No milk animals were located within 5 miles of the plant in 2017.

The 2017 Garden Census was conducted within three (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 3.8-B.

Results of the 2017 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 3.8-A**

**Brunswick Steam Electric Plant**

**Land Use Census Comparison (2016 – 2017)**

**Nearest Pathway (Miles)**

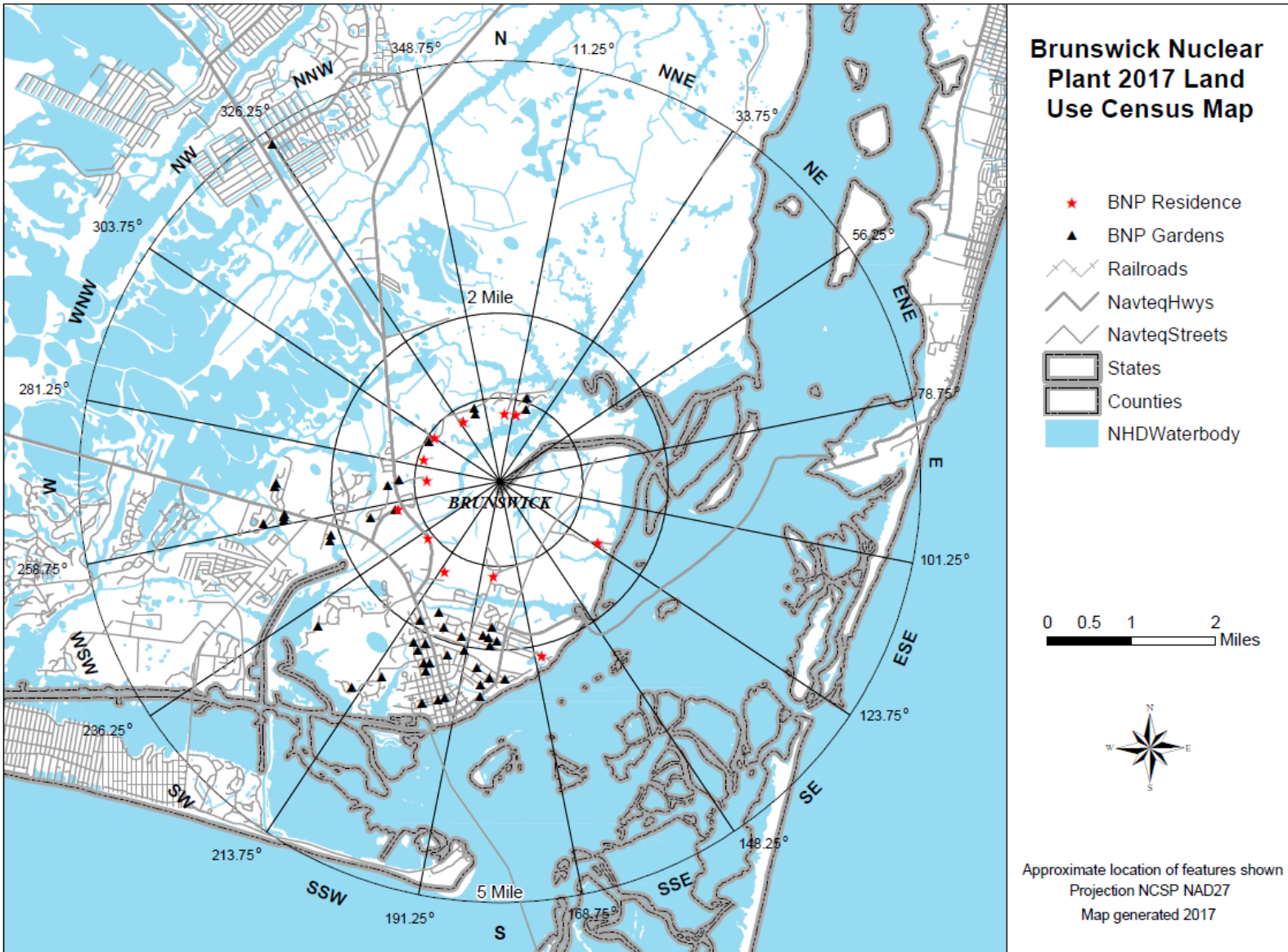
SECTOR	RESIDENT		GARDEN		MILK/MEAT ANIMALS	
	2016	2017	2016	2017	2016	2017
N	0.7	0.7	1.0	None*	None	None
NNE	0.8	0.8	0.9	0.9	None	None
NE	None	None	None	None	None	None
ENE	None	None	None	None	None	None
E	None	None	None	None	None	None
ESE	1.4	1.4	None	None	None	None
SE	None	None	None	None	None	None
SSE	2.1	2.1	None	None	None	None
S	1.1	1.1	1.7	1.7	None	None
SSW	1.2	1.2	1.7	1.7	None	None
SW	1.1	1.1	2.2	2.8*	None	None
WSW	1.2	1.2	1.3	1.3	None	None
W	0.9	0.9	1.2	1.2	None	None
WNW	0.9	0.9	1.0	1.0	None	None
NW	0.9	0.9	4.9	4.9	None	None
NNW	0.8	0.8	0.9	0.8*	None	None

\* Represents a change from the previous year.  
Sector and distance determined by Global Positioning System.

**Table 3.8-B**  
**Brunswick Steam Electric Plant**  
**Garden Census – 2017**

<b>SECTOR</b>	<b>DISTANCE (miles)</b>		<b>SECTOR</b>	<b>DISTANCE (miles)</b>
N	None		SSW	2.2
NNE	0.9		SSW	2.3
NNE	1.0		SSW	2.3
NE	None		SSW	2.4
ENE	None		SSW	2.6
E	None		SSW	2.7
ESE	None		SSW	2.7
SE	None		SSW	2.8
SSE	None		SSW	2.8
S	1.7		SW	2.8
S	1.8		SW	3.0
S	1.9		WSW	1.3
S	1.9		WSW	1.6
S	2.0		WSW	2.1
S	2.2		WSW	2.1
S	2.3		W	1.2
S	2.3		W	1.3
S	2.4		W	2.6
S	2.6		W	2.6
SSW	1.7		W	2.6
SSW	1.8		W	2.7
SSW	1.9		W	2.7
SSW	1.9		W	2.8
SSW	2.1		WNW	1.0
SSW	2.1		NW	4.9
SSW	2.1		NNW	0.8
SSW	2.2		NNW	0.9

Figure 3.8-1



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## **4.0 QUALITY ASSURANCE**

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### **4.1 SAMPLE COLLECTION**

Environmental sample collection at BSEP was performed by BSEP Chemistry personnel in 2017 along with the Environmental Water Resources Group as specified by approved sample collection procedures.

### **4.2 SAMPLE ANALYSIS**

EnRad Laboratories performed the environmental sample analyses as specified by approved analysis procedures. EnRad Laboratories is located in Huntersville, North Carolina, at Duke Energy's Environmental Center. The ground water samples and most of the surface water samples requiring gamma and tritium analyses were analyzed by the BSEP laboratory through September 2017 and then by EnRad Laboratories. The shoreline sediment samples requiring hard-to-detects (Fe-55, Ni-63, and Sr-89/90) during 2017, were analyzed by a vendor laboratory; General Engineering Laboratory, LLC (GEL); as specified by approved analysis procedures.

### **4.3 DOSIMETRY ANALYSIS**

The Radiation Dosimetry and Records group performed the environmental dosimetry measurements as specified by approved dosimetry analysis procedures.

### **4.4 LABORATORY EQUIPMENT QUALITY ASSURANCE**

#### **4.4.1 DAILY QUALITY CONTROL**

BSEP and EnRad Laboratories all have an internal quality assurance program which monitors each type of instrumentation for reliability and accuracy. Quality control checks are performed to ensure that instruments are in proper working order and these checks are used to monitor instrument performance.

#### **4.4.2 CALIBRATION VERIFICATION**

National Institute of Standards and Technology (NIST) standards that represent counting geometries are analyzed as unknowns at various frequencies ranging from weekly to annually to verify that efficiency calibrations are valid. The frequency is dependent upon instrument use and performance. Investigations are performed and documented should calibration verification data fall outside of the acceptable limits.

#### **4.4.3 BATCH PROCESSING**

Method quality control samples are analyzed with sample analyses that are processed in batches. These include tritium analyses in ground water and surface water samples.

### **4.5 DUKE ENERGY INTERLABORATORY COMPARISON PROGRAM**

In 2017 Duke Energy Environmental Laboratory (EnRad) participated in an interlaboratory program to satisfy Radiological Environmental Monitoring Program requirements in Duke Energy nuclear plant Offsite Dose Calculation Manuals and Selected Licensee Commitments Manuals, as applicable. The EnRad organization, in 2017, elected to voluntarily withdraw its North Carolina State Drinking Water Certification with the North Carolina Department of Health and Human Services, State Laboratory of Public Health. It was determined that there was no longer a business case for maintaining this certification (NCR # 02093302). Samples requiring this certification are sent to General Engineering Laboratories, LLC (GEL), which maintains the necessary certifications to meet regulatory commitments for drinking water.

EnRad Laboratory participated in an interlaboratory program with Eckert & Ziegler Analytics (EZA) in 2017. EZA results were evaluated against the NRC Inspection Manual Procedure 84750 (IP 84750) acceptance criteria stated in EnRad Procedure 515, Cross Check Program Administration. All regulatory requirements continue to be met by the EZA Cross Check Program.

#### **4.5.1 DUKE ENERGY INTERLABORATORY PROGRAM**

EnRad Laboratories made the determination in 2017 to discontinue its participation in the Duke Energy Fleet Scientific Services (FSS) Interlaboratory Program, as EnRad already maintains a sufficient cross check program through EZA. Historically, Duke Energy FSS has maintained its own Interlaboratory Program supporting the Duke Energy fleet. At EnRad, this has been a supplement to EnRad's participation in the EZA Cross Check Program. In 2017, FSS determined that shifting business needs had reduced the need for the FSS Interlaboratory Program and the majority of the Interlaboratory Program has been discontinued.

#### **4.5.2 ECKERT & ZIEGLER ANALYTICS CROSS CHECK PROGRAM**

EnRad Laboratories participated in the Eckert & Ziegler Analytics (EZA) Cross Check Program during 2017. Cross check samples including mixed gamma in liquid, mixed gamma in vegetation, low-level I-131 in liquid, mixed gamma air filters (single and composites), mixed gamma and I-131 air cartridges, strontium in water, gross alpha and beta in water, gross alpha and beta in filters, and tritium in water were analyzed at various times of the year. A summary of the EnRad Laboratory program results for 2017 is documented in Table 4.0-A.

Interlaboratory cross check samples from EZA were received and analyzed in all four quarters of 2017. Table 4.0-A lists the performance for specific samples. Eighty-seven nuclide results were reported to EZA of which eighty-six (98.9%) met the acceptance criteria based on IP 84750. One EZA cross check nuclide result did exhibit a high bias and EnRad proactively initiated an NCR to investigate this bias (NCR # 02138003).

In the second quarter of 2017, a mixed gamma in filter cross check (E11890) yielded a disagreement on only the Zinc 65 nuclide value (ratio to the known of 130%). An overall high bias was noted across all other nuclides, primarily in the high energy range. NCR # 02138003 was written to investigate and document the failure. It was determined that the geometry used for gamma filter counting contained compounding biases, leading to consistently high results in the upper energy range. Following the implementation of a new filter geometry, an equivalent filter cross check (E12011) was analyzed in the fourth quarter of 2017. The cross check passed with reduced biases, and a Zinc-65 nuclide value of 111% of the known.

The BSEP Chemistry Laboratory participated in the Analytical Environmental Cross Check Program administered by Eckert & Ziegler Analytics, Inc. during 2017. Cross check samples including tritium in water, gammas in solids, and other sample media were analyzed in 2017. A summary of the applicable BSEP Laboratory program results for 2017 is documented in Table 4.0-D. BSEP cross check results not appearing in Table 4.0-D will be supplied upon request.

#### **4.5.3 ERA PROFICIENCY TESTING**

EnRad Laboratories made the determination in 2017 to discontinue its participation in the Environmental Resource Associates (ERA) Proficiency Testing program, as this program's participation was solely for the purpose of maintaining EnRad's North Carolina State Drinking Water Certification requirements (NCR # 02093302).

### **4.6 STATE OF NORTH CAROLINA INTERCOMPARISON PROGRAM**

EnRad Laboratories routinely participates with the North Carolina Department of Health and Human Services in an intercomparison program. EnRad Laboratories sends BSEP Radiological Environmental Monitoring Program air, surface water, fish and invertebrates, broadleaf vegetation, and shoreline sediment samples to the North Carolina Department of Health and Human Services, Division of Public Health for intercomparison analysis.

### **4.7 TLD INTERCOMPARISON PROGRAM**

#### **4.7.1 NUCLEAR TECHNOLOGY SERVICES INTERCOMPARISON PROGRAM**

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA.



Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to the Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. A summary of the 2017 Nuclear Technology Services Intercomparison Report is documented in Table 4.0-B.

The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors. During first quarter of 2017 an environmental external TLD cross check failed and NCR # 02147847 was written to document the failure of the four individual TLDs; however, the overall result fell within both the Duke Energy and Nuclear Technology Services, Inc. acceptance criteria. To prevent recurrence, the four TLDs were pulled and visually inspected for abnormalities in the elements and overall integrity of the TLDs and no abnormalities were found. The four TLDs were checked per procedure and TLDs # 533830 and 103632 were both removed from service. Complete documentation of any evaluation will be available and provided to the NRC upon request.

#### **4.7.2 INTERNAL CROSS CHECK (DUKE ENERGY)**

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimeters quarterly and submits them for analysis of the unknown estimated delivered exposure. A summary of the 2017 Internal Cross Check (Duke Energy) Program is documented in Table 4.0-B.

### **4.8 GENERAL ENGINEERING LABORATORY, LLC (GEL)**

General Engineering Laboratory, LLC (GEL) participated in various Quality Assurance Programs for Inter-laboratory, Intra-laboratory, Third Party Cross Check programs, and a number of proficiency testing programs during 2017. A summary of the GEL quality assurance program results for the sample media types sent to GEL during 2017 is documented in Table 4.0-C. GEL Quality Assurance Program results not appearing in Table 4.0-C will be supplied upon request.

# TABLE 4.0-A

## ECKERT & ZIEGLER ANALYTICS

### CROSS CHECK PROGRAM

#### 2017 Cross Check Results for EnRad Laboratories

Interlaboratory cross check samples from EZA were received and analyzed in all four quarters of 2017. Results are reported directly to Eckert & Ziegler Analytics. Environmental cross check samples were analyzed in replicate, and the result closest to the mean is reported to Eckert & Ziegler Analytics. The acceptance criteria for the program was based on the NRC Inspection Manual Procedure 84750 (IP 84750). Table 4.0-A lists the performance for specific samples. Eighty-seven nuclide results were reported to EZA of which eighty-six (98.9%) met the acceptance criteria based on IP 84750.

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Beta Filter in Planchet	E11755	Cs-137	1	pCi	247	244	1.01	Agreement
	E11925A	Cs-137	3	pCi	191	199	0.96	Agreement
Gamma in Cartridge	E11924	Ce-141	3	pCi	58.8	60.0	0.98	Agreement
		Co-58	3	pCi	81.0	80.7	1.00	Agreement
		Co-60	3	pCi	182	181	1.01	Agreement
		Cr-51	3	pCi	144	150	0.96	Agreement
		Cs-134	3	pCi	132	138	0.95	Agreement
		Cs-137	3	pCi	123	119	1.04	Agreement
		Fe-59	3	pCi	88.3	86.5	1.02	Agreement
		Mn-54	3	pCi	89.7	84.7	1.06	Agreement
Zn-65	3	pCi	141	127	1.11	Agreement		
LLI-131 in Water	E12007	I-131	4	pCi/L	58.8	57.7	1.02	Agreement
LLI-131 in Milk	E11889	I-131	2	pCi/L	95.4	96.3	0.99	Agreement
I-131 in Charcoal Cartridge	E11754	I-131	1	pCi	98.1	93.5	1.05	Agreement
	E12003	I-131	3	pCi	64.7	64.5	1.00	Agreement
Gamma in Simulated Vegetation (Coffee Grounds)	E12010	Ce-141	4	pCi/g	0.202	0.195	1.04	Agreement
		Co-58	4	pCi/g	0.181	0.178	1.02	Agreement
		Co-60	4	pCi/g	0.334	0.342	0.98	Agreement
		Cr-51	4	pCi/g	0.423	0.479	0.88	Agreement
		Cs-134	4	pCi/g	0.220	0.247	0.89	Agreement
		Cs-137	4	pCi/g	0.281	0.280	1.00	Agreement
		Fe-59	4	pCi/g	0.227	0.224	1.01	Agreement
		Mn-54	4	pCi/g	0.337	0.318	1.06	Agreement
Zn-65	4	pCi/g	0.447	0.418	1.07	Agreement		

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Composite Filter	E11752	Ce-141	1	pCi	101	97.3	1.04	Agreement
		Cr-51	1	pCi	202	195	1.04	Agreement
		Cs-134	1	pCi	90.4	80.5	1.12	Agreement
		Cs-137	1	pCi	99.8	93.9	1.06	Agreement
		Co-58	1	pCi	106	100	1.06	Agreement
		Mn-54	1	pCi	126	110	1.14	Agreement
		Fe-59	1	pCi	101	86.4	1.17	Agreement
		Zn-65	1	pCi	164	134	1.22	Agreement
		Co-60	1	pCi	132	123	1.08	Agreement-
Gamma in Water	E11753	I-131	1	pCi/L	101	97.8	1.03	Agreement
		Ce-141	1	pCi/L	149	145	1.03	Agreement
		Cr-51	1	pCi/L	282	291	0.97	Agreement
		Cs-134	1	pCi/L	117	120	0.97	Agreement
		Cs-137	1	pCi/L	142	140	1.01	Agreement
		Co-58	1	pCi/L	154	150	1.03	Agreement
		Mn-54	1	pCi/L	174	165	1.06	Agreement
		Fe-59	1	pCi/L	139	129	1.08	Agreement
		Zn-65	1	pCi/L	226	200	1.13	Agreement
		Co-60	1	pCi/L	189	183	1.03	Agreement
Gamma in Water	E12006	I-131	3	pCi/L	71.8	79.2	0.91	Agreement
		Ce-141	3	pCi/L	105	99.5	1.06	Agreement
		Cr-51	3	pCi/L	240	248	0.97	Agreement
		Cs-134	3	pCi/L	208	229	0.91	Agreement
		Cs-137	3	pCi/L	202	196	1.03	Agreement
		Co-58	3	pCi/L	135	134	1.01	Agreement
		Mn-54	3	pCi/L	148	140	1.05	Agreement
		Fe-59	3	pCi/L	148	143	1.03	Agreement
		Zn-65	3	pCi/L	238	210	1.13	Agreement
		Co-60	3	pCi/L	294	299	0.98	Agreement

## TABLE 4.0-A (Cont.)

Sample	Sample ID	Nuclide	Quarter	Units	EnRad Value	EZA Value	EnRad/EZA Ratio	Evaluation
Gamma in Filter (Falcon)	E11890	Ce-141	2	pCi	119	114	1.04	Agreement
		Co-58	2	pCi	124	117	1.06	Agreement
		Co-60	2	pCi	150	144	1.04	Agreement
		Cr-51	2	pCi	240	238	1.01	Agreement
		Cs-134	2	pCi	148	142	1.04	Agreement
		Cs-137	2	pCi	122	113	1.08	Agreement
		Fe-59	2	pCi	107	87.0	1.23	Agreement
		Mn-54	2	pCi	146	130	1.13	Agreement
		Zn-65	2	pCi	200	154	1.30	Non-Agreement <sup>1</sup>
Gamma in Filter (Falcon)	E12011	Ce-141	4	pCi	82.5	76.2	1.08	Agreement
		Co-58	4	pCi	70.8	69.6	1.02	Agreement
		Co-60	4	pCi	144	134	1.07	Agreement
		Cr-51	4	pCi	202	188	1.08	Agreement
		Cs-134	4	pCi	97.4	96.7	1.01	Agreement
		Cs-137	4	pCi	119	110	1.09	Agreement
		Fe-59	4	pCi	98.5	87.9	1.12	Agreement
		Mn-54	4	pCi	132	125	1.06	Agreement
		Zn-65	4	pCi	181	164	1.11	Agreement
Gamma in Milk	E11756	I-131	1	pCi/L	105	97.9	1.07	Agreement
		Ce-141	1	pCi/L	149	145	1.03	Agreement
		Cr-51	1	pCi/L	331	290	1.14	Agreement
		Cs-134	1	pCi/L	116	120	0.97	Agreement
		Cs-137	1	pCi/L	150	140	1.07	Agreement
		Co-58	1	pCi/L	152	150	1.02	Agreement
		Mn-54	1	pCi/L	177	164	1.08	Agreement
		Fe-59	1	pCi/L	148	129	1.15	Agreement
		Zn-65	1	pCi/L	224	199	1.12	Agreement
		Co-60	1	pCi/L	194	183	1.06	Agreement
Gross Beta in Water	E11892	Cs-137	2	pCi/L	255	270	0.94	Agreement
	E12009	Cs-137	4	pCi/L	250	265	0.94	Agreement
Tritium in Water	E11891	H-3	2	pCi/L	14300	14000	1.02	Agreement
	E12008	H-3	4	pCi/L	13200	13400	0.98	Agreement

1) NCR # 02138003

# TABLE 4.0-B

## 2017 ENVIRONMENTAL DOSIMETER CROSS CHECK RESULTS

### Nuclear Technology Services

Radiation Dosimetry and Records participates in a quarterly TLD intercomparison program administered by Nuclear Technology Services, Inc. of Roswell, GA. Nuclear Technology Services irradiates environmental dosimeters quarterly and sends them to Radiation Dosimetry and Records group for analysis of the unknown estimated delivered exposure. The individual measurements were evaluated and results falling outside the acceptable ratio criteria had an evaluation performed to identify any recommended remedial actions and to reduce anomalous errors. Complete documentation of any evaluation will be available and provided to the NRC upon request.

1st Quarter 2017						2nd Quarter 2017					
TLD	Reported	Delivered	Bias	Pass/Fail		TLD	Reported	Delivered	Bias	Pass/Fail	
Number	(mR)	(mR)	(% diff)	Criteria	Pass/Fail	Number	(mR)	(mR)	(% diff)	Criteria	Pass/Fail
103469	79.16	72.16	9.70	<+/-15%	Pass	103126	20.33	18.90	7.57	<+/-15%	Pass
103632	83.94	72.16	16.32	<+/-15%	**Fail	103068	20.20	18.90	6.88	<+/-15%	Pass
103636	76.22	72.16	5.63	<+/-15%	Pass	103065	19.51	18.90	3.23	<+/-15%	Pass
103637	77.82	72.16	7.84	<+/-15%	Pass	102830	20.64	18.90	9.21	<+/-15%	Pass
103642	79.08	72.16	9.59	<+/-15%	Pass	103002	20.18	18.90	6.77	<+/-15%	Pass
Average Bias (B)			9.82			Average Bias (B)			6.73		
Standard Deviation (S)			4.00			Standard Deviation (S)			2.19		
Measure Performance  B +S			13.81	<15%	Pass	Measure Performance  B +S			8.92	<15%	Pass
3rd Quarter 2017						4th Quarter 2017					
TLD	Reported	Delivered	Bias	Pass/Fail		TLD	Reported	Delivered	Bias	Pass/Fail	
Number	(mR)	(mR)	(% diff)	Criteria	Pass/Fail	Number	(mR)	(mR)	(% diff)	Criteria	Pass/Fail
102253	60.07	60.04	0.05	<+/-15%	Pass	102343	72.30	70.02	3.26	<+/-15%	Pass
101122	62.80	60.04	4.60	<+/-15%	Pass	102265	72.85	70.02	4.04	<+/-15%	Pass
103099	60.78	60.04	1.23	<+/-15%	Pass	102340	71.25	70.02	1.76	<+/-15%	Pass
102288	61.20	60.04	1.93	<+/-15%	Pass	103972	66.99	70.02	-4.33	<+/-15%	Pass
100163	59.82	60.04	-0.37	<+/-15%	Pass	103921	68.54	70.02	-2.11	<+/-15%	Pass
Average Bias (B)			1.49			Average Bias (B)			0.52		
Standard Deviation (S)			1.96			Standard Deviation (S)			3.60		
Measure Performance  B +S			3.45	<15%	Pass	Measure Performance  B +S			4.12	<15%	Pass

Fail\*\* refers to NCR #02147847

# TABLE 4.0-B (Cont.)

## 2017 ENVIRONMENTAL DOSIMETER

### CROSS CHECK RESULTS

#### Internal Crosscheck (Duke Energy)

Radiation Dosimetry and Records participates in a quarterly TLD internal comparison program administered internally by the Dosimetry Lab. The Dosimetry Lab Staff irradiates environmental dosimetry quarterly and submits them for analysis of the unknown estimated delivered exposure.

1st Quarter 2017						2nd Quarter 2017					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
102207	49.22	48.0	2.54	<+/-15%	Pass	102519	46.79	43.0	8.81	<+/-15%	Pass
102208	47.57	48.0	-0.90	<+/-15%	Pass	102870	49.18	43.0	14.37	<+/-15%	Pass
103410	52.06	48.0	8.46	<+/-15%	Pass	103537	46.05	43.0	7.09	<+/-15%	Pass
102167	49.65	48.0	3.44	<+/-15%	Pass	103541	47.33	43.0	10.07	<+/-15%	Pass
102079	51.39	48.0	7.06	<+/-15%	Pass	103111	48.21	43.0	12.12	<+/-15%	Pass
103409	50.33	48.0	4.85	<+/-15%	Pass	102304	45.04	43.0	4.74	<+/-15%	Pass
102209	49.32	48.0	2.75	<+/-15%	Pass	102873	47.59	43.0	10.67	<+/-15%	Pass
102214	49.46	48.0	3.04	<+/-15%	Pass	102872	47.85	43.0	11.28	<+/-15%	Pass
102117	49.94	48.0	4.04	<+/-15%	Pass	102871	47.80	43.0	11.16	<+/-15%	Pass
102201	49.83	48.0	3.81	<+/-15%	Pass	102861	48.11	43.0	11.88	<+/-15%	Pass
Average Bias (B)			3.91			Average Bias (B)			10.22		
Standard Deviation (S)			2.56			Standard Deviation (S)			2.74		
Measure Performance  B +S			6.47	<15%	Pass	Measure Performance  B +S			12.96	<15%	Pass
3rd Quarter 2017						4th Quarter 2017					
TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail	TLD Number	Reported (mR)	Delivered (mR)	Bias (% diff)	Pass/Fail Criteria	Pass/Fail
101195	19.81	18.8	5.15	<+/-15%	Pass	103951	50.92	50.0	1.84	<+/-15%	Pass
103731	19.45	18.8	3.24	<+/-15%	Pass	103949	51.06	50.0	2.12	<+/-15%	Pass
101190	19.90	18.8	5.63	<+/-15%	Pass	103950	51.04	50.0	2.08	<+/-15%	Pass
103532	20.61	18.8	9.39	<+/-15%	Pass	104011	51.38	50.0	2.76	<+/-15%	Pass
100314	19.70	18.8	4.56	<+/-15%	Pass	103931	51.10	50.0	2.20	<+/-15%	Pass
101264	18.93	18.8	0.48	<+/-15%	Pass	104004	50.74	50.0	1.48	<+/-15%	Pass
101345	19.18	18.8	1.80	<+/-15%	Pass	103996	49.63	50.0	-0.74	<+/-15%	Pass
101397	20.06	18.8	6.48	<+/-15%	Pass	103963	52.97	50.0	5.94	<+/-15%	Pass
100868	20.45	18.8	8.55	<+/-15%	Pass	103947	49.17	50.0	-1.66	<+/-15%	Pass
103078	20.51	18.8	8.86	<+/-15%	Pass	103929	49.88	50.0	-0.24	<+/-15%	Pass
Average Bias (B)			5.41			Average Bias (B)			1.58		
Standard Deviation (S)			3.01			Standard Deviation (S)			2.12		
Measure Performance  B +S			8.43	<15%	Pass	Measure Performance  B +S			3.70	<15%	Pass

# TABLE 4.0-C

## 2017 ANNUAL QUALITY ASSURANCE REPORT

### for the RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

#### for GEL Laboratories, LLC (GEL)

Sample	Nuclide	Quarter	Units	GEL Value	Known Value	Acceptance Range/Ratio	Evaluation
<b>HTD in Soil</b>							
MAPEP-17-MaS36	Fe-55	2	Bq/Kg	804	812	568 - 1056	Agreement
	Ni-63	2	Bq/Kg	-46	N/A	False Pos Test	Agreement
	Sr-90	2	Bq/Kg	548	624	437- 811	Agreement
MAPEP-17-MaS37	Fe-55	4	Bq/kg	933	1010	707 - 1313	Agreement
	Ni-63	4	Bq/kg	1240	1220	854 - 1586	Agreement
	Sr-90	4	Bq/kg	240	289	202 - 376	Agreement
<b>I-131 in Milk with EZA</b>							
E11820	I-131	1	pCi/L	95.7	96.8	0.99	Agreement
E11875	I-131	2	pCi/L	99.3	93.6	1.06	Agreement
E11928	I-131	3	pCi/L	73.5	71.0	1.04	Agreement
E12069	I-131	4	pCi/L	65.9	57.8	1.14	Agreement

Other GEL 2016 Annual Environmental Quality Assurance Report results will be supplied upon request.

**TABLE 4.0-D**  
**ECKERT & ZIEGLER ANALYTICS**  
**CROSS CHECK PROGRAM**

**2017 Cross Check Results for BSEP Laboratories**

Sample	Nuclide	Quarter	Units	BSEP Value	EZA Value	BSEP/EZA Ratio	Evaluation
<b>Tritium in Water</b>							
A32492	H-3	1	μCi/cc	8.70E-04	9.00E-04	0.97	Agreement
<b>Gamma Solid</b>							
	Ce-141	3	μCi	1.78E-02	1.76E-02	1.01	Agreement
A33040	Cr-51	3	μCi	5.15E-02	4.98E-02	1.03	Agreement
	Cs-134	3	μCi	1.88E-02	2.03E-02	0.93	Agreement
	Cs-137	3	μCi	1.76E-02	1.69E-02	1.04	Agreement
	Co-58	3	μCi	1.64E-02	1.60E-02	1.02	Agreement
	Mn-54	3	μCi	1.40E-02	1.30E-02	1.08	Agreement
	Fe-59	3	μCi	2.32E-02	2.09E-02	1.11	Agreement
	Zn-65	3	μCi	2.06E-02	1.99E-02	1.04	Agreement
	Co-60	3	μCi	2.62E-02	2.60E-02	1.01	Agreement



**APPENDIX A**

**ENVIRONMENTAL SAMPLING**  
**&**  
**ANALYSIS PROCEDURES**

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# APPENDIX A

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## ENVIRONMENTAL SAMPLING AND ANALYSIS PROCEDURES

Adherence to established procedures for sampling and analysis of environmental media at the Brunswick Steam Electric Plant (BSEP) was required to ensure compliance with provisions of the Nuclear Regulatory Commission's Regulatory Guide 4.8, BSEP Technical Specifications, and the BSEP Offsite Dose Calculation Manual (ODCM). Analytical procedures were employed to ensure that the ODCM detection capabilities were achieved at all laboratories (BSEP, EnRad, and GEL).

Environmental sampling was performed by BSEP and Environmental Water Resources Group; while the analyses were performed by BSEP, EnRad Laboratories, General Engineering Laboratory, LLC (GEL) (for special analyses), and Dosimetry and Records.

This appendix describes the environmental sampling frequencies and analysis procedures by media type that each laboratory conducted in 2017.

### I. CHANGE OF SAMPLING PROCEDURES

The collection frequency was changed for BSEP Surface Water locations SW-495, SW-496, SW-497, SW-498, and SW-499 to a monthly grab sample for tritium and gamma per BSEP ODCM Rev. 38 Table 4.0-1 effective August 1, 2017. The frequency was listed as a weekly grab sample for tritium analysis and a monthly grab sample for gamma analysis in the previous BSEP ODCM revision.

Sample locations SW-605, SW-606, SW-608, and SW-610 were deleted from sampling per BSEP ODCM Rev. 38 Table 4.0-1 effective August 1, 2017.

The collection frequency was changed for BSEP Surface Water locations SW-494, SW-604, SW-607, and SW-609 to a monthly grab sample for tritium and gamma per BSEP ODCM Rev. 38 Table 4.0-1 effective August 1, 2017. The frequency was listed as a weekly grab sample for tritium and gamma in the previous BSEP ODCM revision.

Deleted the weekly composite gamma on Waypoint Composite (70) [B1065], Waypoint Composite (80) [B1066], and Waypoint Composite [B1067] per BSEP ODCM Rev. 38 Table 4.0-1 effective August 1, 2017.

## **II. DESCRIPTION OF ANALYSIS PROCEDURES**

Gamma spectroscopy analyses are performed using high purity germanium gamma detectors and Canberra analytical software. Designated sample volumes are transferred to appropriate counting geometries and analyzed by gamma spectroscopy. Perishable samples such as fish, invertebrates, and broadleaf vegetation are ground to achieve a homogeneous mixture and then transferred to an appropriate counting geometry. Soil and sediment samples are dried, sifted to remove foreign objects (rocks, clams, glass, etc.), and then transferred to an appropriate counting geometry container. Once prepared for counting, EnRad's samples (fish, invertebrates, broadleaf vegetation, soils, and sediments) are analyzed by gamma spectroscopy.

Tritium analyses are performed weekly and monthly by EnRad using low-level environmental liquid scintillation analysis technique on a Perkin-Elmer 2900TR liquid scintillation system or a Perkin-Elmer 3100TR liquid scintillation system. Tritium samples are distilled and batch processed with a laboratory fortified blank, matrix spike, matrix spike duplicate, and blank to verify instrument performance and sample preparation technique are acceptable.

Gross beta analysis is performed weekly on air particulate filter samples by Tennelec XLB Series 5 gas-flow proportional counters. Samples are batch processed with a blank to ensure sample contamination has not occurred.

BSEP and GEL Laboratories follow their facility approved procedures to meet the required BSEP ODCM LLDs.

## **III. CHANGE OF ANALYSIS PROCEDURES**

The tritium preparation procedure was modified during 2017 to align with ASTM method D4107-08, Standard Test Method for Tritium in Drinking Water: Water and Environmental Technology. Volume 11.02. 2014 Edition. Tritium dark adaption times were also reduced (NCR # 02134015).

## **IV. SAMPLING AND ANALYSIS PROCEDURES**

### **A.1 AIRBORNE PARTICULATE AND RADIOIODINE**

Air particulate and radioiodine samples at each of seven locations were composited continuously by means of continuous air samplers. Air particulates were collected on a particulate filter and radioiodines were collected in a charcoal cartridge positioned behind the filter in the sample head. The samplers are designed to operate at a constant flow rate (in order to compensate for any filter loading) and are set to sample approximately 2 cubic feet per minute. Filters and cartridges were collected weekly. A separate weekly gamma analysis

was performed on each charcoal cartridge. A weekly gross beta analysis was performed on each filter and then the filters, by location, were composited to produce quarterly filter samples for gamma analysis. The continuous composite samples were collected from the locations listed below.

Location 200	=	1.0 miles WSW Visitors Center
Location 201	=	0.5 miles NE Bio Lab Rd. – Projected Maximum Annual Concentration (PMAC)
Location 202	=	1.0 miles S Substation, Construction Rd.
Location 203	=	2.0 miles SSW Southport substation
Location 204	=	22.4 miles NNE Sutton Plant (Historical Control)
Location 205	=	0.6 miles SSE Spoil Pond
Location 206	=	11.3 miles NW Brunswick County Complex (Control)

## **A.2 SURFACE WATER**

A total of fifteen Surface Water samples are collected at different intervals as stated in the BSEP ODCM Rev. 37. Monthly composite surface water samples were collected from two locations (SW-400 and 401) for gamma and tritium analyses. Weekly and Monthly grab samples were collected from five locations (SW-495 – 499). The weekly grab samples were analyzed for tritium, while the monthly grab samples were analyzed for gamma emitters. Weekly grab samples were collected from eight locations (SW-494, 604 – 610) and analyzed for tritium and ODCM specific sample combination composite samples for gamma analysis. Surface water locations #605, #606, #608, and #610 were deleted from the BSEP REMP per BSEP ODCM Revision 38 effective August 1, 2017. The combination Waypoint Composite samples were also deleted with this revision; therefore, the total of eleven Surface Water samples are collected monthly. The samples are collected from the locations listed below.

Location 400	=	0.6 miles NE – Intake Canal (Control)
Location 401	=	4.9 miles SSW – Discharge Canal @ OD Pumps
Location 494	=	Nancy’s Creek Marsh Area – WP-106
Location 495	=	Nancy’s Creek – WP-52
Location 496	=	Nancy’s Creek – WP-53
Location 497	=	Nancy’s Creek – WP-55
Location 498	=	Nancy’s Creek – WP-57
Location 499	=	Nancy’s Creek – WP-61 (Control)
Location 604	=	Nancy’s Creek Marsh Area – WP-92
Location 605	=	Nancy’s Creek Marsh Area – WP-72 (Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)
Location 606	=	Nancy’s Creek Marsh Area – WP-74 (Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)
Location 607	=	Nancy’s Creek Marsh Area – WP-76
Location 608	=	Nancy’s Creek Marsh Area – WP-82 (Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)
Location 609	=	Nancy’s Creek Marsh Area – WP-84
Location 610	=	Nancy’s Creek Marsh Area – WP-88 (Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)

Location 1065	=	Waypoint Composite (70) of Locations 605, 606, 607 <small>(Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)</small>
Location 1066	=	Waypoint Composite (80) of Locations 608, 609, 610 <small>(Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)</small>
Location 1067	=	Waypoint Composite of Locations 494 and 604 <small>(Removed from REMP per BSEP ODCM Rev. 38 Effective 8/1/17)</small>

### **A.3 GROUND WATER**

Grab samples were collected quarterly and semiannually from ground water wells at ten locations. A tritium analysis was performed quarterly and a gamma analysis was performed semiannually on each sample. The samples were collected from the locations listed below.

Location 404	=	Monitoring Well ESS-1B - 0.16 miles SW
Location 407	=	Monitoring Well ESS-13B - 0.06 miles ENE
Location 409	=	Monitoring Well ESS-17A - 0.65 miles NE
Location 410	=	Monitoring Well ESS-17B - 0.65 miles NE
Location 418	=	Monitoring Well ESS-21B – Near SDSP
Location 423	=	Monitoring Well ESS-24A – Near SDSP
Location 424	=	Monitoring Well ESS-24B – Near SDSP
Location 426	=	Monitoring Well ESS-25B – Near SDSP
Location 429	=	Monitoring Well ESS-27A – Near SDSP
Location 612	=	Monitoring Well ESS MWPA-118B – Near Intake Canal & Plant Stack

**Note:** SDSP = Storm Drain Stabilization Pond

### **A.4 BROADLEAF VEGETATION**

Monthly samples were collected at each of five locations during 2017. A gamma analysis was performed on each sample. The samples were collected from the locations listed below.

Location 800	=	0.7 miles NE – Intake Canal
Location 801	=	0.8 miles SW – Discharge Canal
Location 802	=	10.1 miles – location not specified (Control)
Location 803	=	0.6 miles SSE – Spoil Pond
Location 804	=	0.7 miles S – Leonard Street plant exit adjacent to RR tracks

## **A.5 FISH and INVERTEBRATES**

Fish (free swimmers and bottom feeders) and Invertebrates (shell fish and/or benthic organisms) samples are collected semiannually from two locations (near the Atlantic Ocean discharge pipe at Caswell Beach and a control location in the Atlantic Ocean not influenced by plant operations) and annually from three locations on Nancy's Creek (see Figure 2.1-5). A gamma analysis was performed on the edible portions of each sample. The samples were collected from the locations listed below.

Location 700	=	5.5 miles SSW - Atlantic Ocean @ discharge (free swimmers)
Location 701	=	5.5 miles SSW – Atlantic Ocean @ discharge (bottom feeders)
Location 702	=	5.5 miles SSW – Atlantic Ocean @ discharge (shellfish/ Invertebrates)
Location 703	=	Atlantic Ocean; location not specified (free swimmer) – (Control)
Location 704	=	Atlantic Ocean; location not specified (bottom feeders) – (Control)
Location 705	=	Atlantic Ocean; location not specified (shellfish/ Invertebrates)
Location 706	=	Nancy's Creek; location not specified (free swimmer)
Location 707	=	Nancy's Creek; location not specified (bottom feeders)
Location 708	=	Nancy's Creek; location not specified (shellfish/ Invertebrates)

## **A.6 SHORELINE SEDIMENT**

Semiannual samples were collected at one location (SS-500), while an annual sample was collected at another location (SS-501). A gamma analysis was performed on each sample following the drying and removal of rocks and clams. If activity attributed to plant operations is detected in the annual shoreline sediment gamma analysis for SS-501, then the sample is analyzed for Hard-to-detect radionuclides (Fe-55 and Sr-89, 90) by a vendor laboratory (GEL) and the sample frequency is increased to semiannually. The samples were collected from the locations listed below.

Location 500	=	5.0 miles SSW – Discharge; Beach near Ocean Discharge (OD) pumps
Location 501	=	Nancy's Creek, Adjacent to WP-55, Near Storm Drain Stabilization Pond

## **A.7 DIRECT GAMMA RADIATION (TLD)**

Thermoluminescent dosimeters (TLD) were collected quarterly at forty-five locations and four quarterly ISFSI TLDs. A gamma exposure rate was determined for each TLD. TLD locations are listed in Table 2.1-C. The TLDs were placed as indicated below.

- \* An inner ring of 24 TLDs, one in each meteorological sector in the general area of the site boundary.
- \* An outer ring of 20 TLDs, one in each meteorological sector at 8 kilometers or greater from the site.
- \* The remaining TLDs were placed in special interest areas such as population centers, residential areas, schools, and at one control location.

## **A.8 ANNUAL LAND USE CENSUS**

An Annual Land Use Census was conducted to identify within a distance of 5.0 miles (8 kilometers) from the plant, the nearest location from the site boundary in each of the sixteen meteorological sectors, the following:

- The Nearest Residence
- The Nearest Garden greater than 50 square meters or 500 square feet, producing broadleaf vegetation
- The Nearest Milk-giving Animal (cow, goat, etc.)

The Annual Land Use Census must also identify (for elevated releases) within the three-mile (4.8 kilometer) radius of the plant (a garden census) for each of the 16 meteorological sectors for the following:

- The location of all milk animals
- The location of all gardens of greater than 500 square feet (or 50 square meters), producing broadleaf vegetation.

The census was conducted during the growing season from June 2 through 29, 2017. Results are shown in Tables 3.8-A and 3.8-B. No changes were made to the sampling procedures during 2017 as a result of the 2017 BSEP census.

**APPENDIX B**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM**

**SUMMARY OF RESULTS**

**2017**



**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: 2017

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	Location w/Highest Annual Mean <sup>(2)</sup>		Control Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>		
Air Particulate (pCi/m <sup>3</sup> )	Gross Beta 371 <sup>(4)(9)</sup>	See Table 2.2-C	1.72E-2 (265/265) 5.72E-3 – 3.37E-2	Loc. # 203 Southport Substation 2.0 miles SSW	1.77E-2 (53/53) 7.62E-3 – 3.37E-2	Loc. # 204 & 206 1.76E-2 (106/106) 8.31E-3 – 3.32E-2	0
	Gamma <sup>(5)</sup> 35 <sup>(9)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Air Radioiodine (pCi/m <sup>3</sup> )	I-131 371 <sup>(4)(9)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Broadleaf Vegetation (pCi/kg, wet)	Gamma <sup>(5)</sup> 60 <sup>(4)</sup>	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Fish and Invertebrates (pCi/kg, wet)	Gamma <sup>(5)</sup> 15	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
Sediments -- Shoreline (pCi/kg, dry)	Gamma <sup>(5)</sup> 4 Cs-137	See Table 2.2-C	1.13E+2 (1/4) Single Value	Loc. # 501 Nancy's Creek adjacent to WP-55 near SDSP	1.13E+2 (1/2) Single Value	No Control	0
	Hard-to-detects (Fe-55, Ni-63, Sr-89/90) 4	-----	All less than LLD	----	----	No Control	0

**BRUNSWICK STEAM ELECTRIC PLANT  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DATA SUMMARY (cont.)**

Brunswick Steam Electric Plant  
Brunswick County, North Carolina

Docket Numbers: 50-324 and 325  
Calendar Year: 2017

Medium or Pathway Sampled or Measured (Unit of Measurement)	Type and Total No. of Measurements Performed	Lower Limit of Detection (LLD) <sup>(1)</sup>	All Indicator Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	Location w/Highest Annual Mean <sup>(2)</sup>		Control Locations Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>	No. of Non-Routine Report Meas.
				Name, Distance, and Direction	Mean <sup>(2)(3)</sup> Range <sup>(2)</sup>		
Surface Water (pCi/l)	Gamma <sup>(5)</sup> 194	See Table 2.2-C	All less than LLD	----	----	All less than LLD	0
	Tritium 459	3,000 <sup>(7)</sup>	8.99E+2 (28/412) 2.29E+2 – 5.60E+3	Loc. # 494 Nancy's Creek Marsh Area WP-106	1.33E+3 (3/35) 2.29E+2 – 3.45E+3	All less than LLD	0
Ground Water (pCi/l)	Gamma <sup>(5)</sup> 20	See Table 2.2-C	All less than LLD	----	----	No Control	0
	Tritium 40	3,000 <sup>(7)</sup>	3.76E+2 (3/40) 3.06E+2 – 4.28E+2	Loc. # 407 Monitoring Well ESS-13B 0.06 miles ENE	3.76E+2 (3/4) 3.06E+2 – 4.28E+2	No Control	0
Direct Radiation (TLD) (mR per std. quarter) <sup>(6)</sup>	TLD Readout 177 <sup>(4)</sup>	----	1.01E+1 (173/173) 5.60E+0 – 1.64E+1	Loc. # 24 3.0 miles W	1.46E+1 (4/4) 1.29E+1 – 1.63E+1	Loc. #81 1.08E+1 (4/4) 9.20E+0 – 1.20E+1	0
Direct Radiation ISFSI (TLD - ISFSI) (mR per std. quarter) <sup>(6)</sup>	TLD Readout 16	----	2.23E+1 (16/16) 1.67E+1 – 2.90E+1	Loc. # 85 SE Corner of ISFSI 0.09 miles ENE	2.57E+1 (4/4) 2.43E+1 – 2.78E+1	No Control	0

## Footnotes to Appendix B

1. The Lower Limit of Detection (LLD) is the smallest concentration of radioactive material in a sample that will yield a net count above system background which will be detected with 95 percent probability and with only 5 percent probability of falsely concluding that a blank observation represents a "real" signal. Due to counting statistics and varying volumes, occasionally lower LLDs are achieved. Refer to Section 2.3.2 for an explanation of how LLD values were derived.
2. Mean and range are based on detectable measurements only.
3. The fractions of all samples with detectable activities at specific locations are indicated in parentheses.
4. Missing samples or surveillances are discussed in Appendix C or Appendix D.
5. Summary of gamma analysis results in this report does not include the following naturally occurring isotopes since most environmental samples contained some or all of these: Be-7, K-40, Tl-208, Pb-212, Bi-214, Pb-214, and Ra-226.
6. TLD exposure is reported in milliroentgen (mR) per standard quarter (91 days).
7. Tritium Lower Limit of Detection (LLD) is approximately  $2.00\text{E}+2$  pCi/L for samples that typically demonstrate activity less than the LLD.
8. The tritium reporting limit for Fish per General Engineering Laboratories (GEL) is  $4.0\text{E}+3$  pCi/kilogram.
9. Gamma filter composite calendar reconciliation period, 2017 (NCR # 02174810).

**APPENDIX C**

**SAMPLING DEVIATIONS  
&  
UNAVAILABLE ANALYSES**

# APPENDIX C

## BRUNSWICK NUCLEAR PLANT SAMPLING DEVIATIONS & UNAVAILABLE ANALYSES

DEVIATIONS & UNAVAILABLE REASON CODES					
BF	Blown Fuse	OT	Other	SM	Motor / Rotor Seized
CN	Construction	PI	Power Interrupt	SU	Seasonal Unavailability
FZ	Sample Frozen	PM	Preventative Maintenance	TF	Torn Filter
IV	Insufficient Volume	PO	Power Outage	VN	Vandalism
IW	Inclement Weather	PS	Power out of service / Undergoing Repair		
LC	Line Clog to Sampler	SL	Sample Loss / Lost due to Lab Accident		

### C.1 SAMPLING DEVIATIONS

#### Air Particulate and Air Radioiodines

REMP weekly air samples (Air Particulate (AP) or Air Radioiodine (AR)) that experience any downtime during a surveillance period are reported as a Deviation and classified as a “Sampling Deviation”. The sample is counted and the data reported; whereas, a Deviation with no available sample is classified as an “Unavailable Analyses” and does not have any data reported. The BSEP REMP air samplers operated for a total of 99.90% availability in 2017.

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
202	1/03/17 – 1/10/17	PI	5.4 hrs. downtime due to power interruption caused by work on a transformer substation.	NCR # 02089971
206	2/21/17 – 2/28/17	PI	2.9 hrs. downtime due to power interruption caused by a blown fuse on the air sampler.	NCR # 02103422
202	2/28/17 – 3/07/17	PI	2.5 hrs. downtime due to power interruption caused by blown fuse on the air sampler.	NCR # 02104511
202	2/28/17 – 3/07/17	PI	24.8 hrs. downtime due to substation work (planned work, but took longer than anticipated).	NCR # 02105184
203	5/23/17 – 5/30/17	PI	1.2 hrs. downtime due to power interruption due to severe thunderstorms in the area.	NCR # 02127499
201	8/15/17 – 8/22/17	PS	No noted downtime. The air sampler pump was running, but sampler had no flow. Motor continued to run. Sampler replaced.	NCR # 02145478
206	10/24/17 – 10/31/17	PI	0.80 hrs. downtime due to power interruption due to thunderstorms in the area.	NCR # 02162766
205	12/05/17 – 12/12/17	PI	20.5 hrs. downtime due to power interruption due to a tripped breaker.	NCR # 02171576
205	12/12/17 – 12/19/17	PI	3.9 hrs. downtime due to power interruption due to a tripped breaker.	NCR # 02171929

## C.2 UNAVAILABLE ANALYSES

### TLD

Location	Scheduled Collection Dates	Code	Description & Action to Prevent Recurrence	Corrective Action
30	4/4/17 – 7/7/17 (2 <sup>nd</sup> Qtr. 2017)	OT	The TLD was located on a power pole that was removed when power was run underground. The area was searched, but the TLD could not be located.	NCR # 02135452
22	7/7/17 – 10/4/17 (3 <sup>rd</sup> Qtr. 2017)	OT	Power Pole that the TLD was located on was painted. The TLD was found on the ground beside the power pole it had been attached to. The TLD was not in its designated location - TLD not valid.	NCR # 02155997
76	7/7/17 – 10/4/17 (3 <sup>rd</sup> Qtr. 2017)	OT	The TLD was missing from its designated location, a power pole. The power pole had been painted. The area was searched, but the TLD was not found.	NCR # 02155715

**APPENDIX D**

**ANALYTICAL DEVIATIONS**

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# APPENDIX D

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## BRUNSWICK NUCLEAR PLANT

### ANALYTICAL DEVIATIONS

While BSEP was analyzing weekly waterborne surface water composite samples per BSEP ODCM Revision 37 at the BSEP Bio-Lab, it was identified that three surface water composite samples (see table below) collected per BSEP ODCM Table 7.3.15-1 were not analyzed by BSEP in the required timeframe stated in the BSEP ODCM (NCR # 02128415). This occurrence was due to equipment malfunctions. The instrument needed to analyze these samples at the BSEP Bio-Lab was out of service during this timeframe and unable to perform the required gamma analysis. This resulted in the samples collected on 5/23/17 exceeding the stated time limit for the weekly gamma analysis (7 days  $\pm$  25% [1.75 days] = 8.75 days). The samples typically analyzed at the BSEP Bio-Lab are being analyzed at the BSEP RCA Chemistry Lab until the malfunctioning equipment in the BSEP Bio-Lab is repaired. This is not a reportable event per verification with BSEP Regulatory Affairs.

Sample Manager ID	ODCM - Sample Point Description	Collection Date	Analysis Date
444197	Waypoint Composite (70) <sup>(1)</sup> - B1065	5/23/17	6/1/17
444198	Waypoint Composite (80) <sup>(2)</sup> - B1066	5/23/17	6/1/17
444199	Waypoint Composite <sup>(3)</sup> - B1067	5/23/17	6/5/17

(1) Waypoint Composite (70) - (B1065) of ODCM samples #605 (Nancy's Creek Marsh Area - WP-72), sample #606 (Nancy's Creek Marsh Area - WP-74), and sample #607 (Nancy's Creek Marsh Area - WP-76).

(2) Waypoint Composite (80) - (B1066) of ODCM samples #608 (Nancy's Creek Marsh Area - WP-82), sample #609 (Nancy's Creek Marsh Area - WP-84), and sample #610 (Nancy's Creek Marsh Area - WP-88).

(3) Waypoint Composite - (B1067) of ODCM samples #494 (Nancy's Creek Marsh Area - WP-106) and sample #604 (Nancy's Creek Marsh Area - WP-92).

This sampling program is implemented to fulfill sampling requirements described in the Brunswick Steam Electric Plant (BNP) OFF-SITE DOSE CALCULATION MANUAL (ODCM) Section 4.0 (Radiological Environmental Monitoring Program); Sections 7.3, 7.3.15 (ODCM Specifications for Radiological Environmental Monitoring Program), and Table 7.3.15-1. Sampling program deviations such as these are documented in the BSEP Annual Radiological Environmental Operating Report (AREOR) each year in Appendix D - Analytical Deviations (NCR # 02128415).



**APPENDIX E**

**RADIOLOGICAL  
ENVIRONMENTAL MONITORING  
PROGRAM RESULTS**

**2017**

This appendix includes sample analysis report summaries and supportive data generated from each sample medium for 2017.

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432162	12/27/2016 - 1/3/2017	Beta	1.84E-02	5.13E-03	6.89E-03
432867	1/3/2017 - 1/10/2017	Beta	1.63E-02	4.61E-03	6.34E-03
433267	1/10/2017 - 1/17/2017	Beta	1.33E-02	4.80E-03	6.83E-03
433684	1/17/2017 - 1/24/2017	Beta	1.14E-02	3.99E-03	5.68E-03
434419	1/24/2017 - 1/31/2017	Beta	2.02E-02	5.16E-03	6.71E-03
435063	1/31/2017 - 2/7/2017	Beta	1.98E-02	4.89E-03	6.09E-03
435773	2/7/2017 - 2/14/2017	Beta	1.46E-02	4.41E-03	6.14E-03
436223	2/14/2017 - 2/21/2017	Beta	1.23E-02	5.00E-03	7.39E-03
436674	2/21/2017 - 2/28/2017	Beta	1.04E-02	4.68E-03	6.99E-03
437535	2/28/2017 - 3/7/2017	Beta	1.63E-02	4.39E-03	5.90E-03
438265	3/7/2017 - 3/14/2017	Beta	1.20E-02	4.69E-03	6.86E-03
438768	3/14/2017 - 3/21/2017	Beta	1.78E-02	4.36E-03	5.63E-03
439111	3/21/2017 - 3/28/2017	Beta	2.31E-02	5.01E-03	6.09E-03
439118	12/27/2016 - 3/28/2017	Cs-134	<1.10E-03	0.00E+00	1.10E-03
		Cs-137	<8.72E-04	0.00E+00	8.72E-04
		Be-7	1.57E-01	3.13E-02	1.85E-02
		K-40	1.28E-02	8.59E-03	3.85E-03
439964	3/28/2017 - 4/4/2017	Beta	1.12E-02	3.91E-03	5.59E-03
440562	4/4/2017 - 4/11/2017	Beta	1.62E-02	4.60E-03	6.04E-03
441376	4/11/2017 - 4/18/2017	Beta	2.03E-02	5.12E-03	6.73E-03
441821	4/18/2017 - 4/25/2017	Beta	1.66E-02	3.94E-03	4.92E-03
442249	4/25/2017 - 5/2/2017	Beta	1.30E-02	4.64E-03	6.64E-03
442835	5/2/2017 - 5/9/2017	Beta	1.86E-02	4.83E-03	6.39E-03
443263	5/9/2017 - 5/16/2017	Beta	2.29E-02	4.08E-03	4.33E-03
443821	5/16/2017 - 5/23/2017	Beta	1.88E-02	4.72E-03	6.04E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
444215	5/23/2017 - 5/30/2017	Beta	1.53E-02	4.08E-03	5.47E-03
445285	5/30/2017 - 6/6/2017	Beta	1.87E-02	4.93E-03	6.53E-03
446284	6/6/2017 - 6/13/2017	Beta	1.05E-02	3.79E-03	5.47E-03
446788	6/13/2017 - 6/20/2017	Beta	1.53E-02	3.87E-03	4.97E-03
447114	6/20/2017 - 6/27/2017	Beta	1.20E-02	4.33E-03	6.14E-03
447121	3/28/2017 - 6/27/2017	Cs-134	<1.53E-03	0.00E+00	1.53E-03
		Cs-137	<7.48E-04	0.00E+00	7.48E-04
		Be-7	1.60E-01	3.27E-02	2.19E-02
		K-40	<1.85E-02	0.00E+00	1.85E-02
447767	6/27/2017 - 7/4/2017	Beta	1.37E-02	4.92E-03	7.20E-03
448231	7/4/2017 - 7/11/2017	Beta	1.56E-02	4.44E-03	5.91E-03
448857	7/11/2017 - 7/18/2017	Beta	7.48E-03	4.05E-03	6.25E-03
449173	7/18/2017 - 7/25/2017	Beta	1.43E-02	4.45E-03	6.11E-03
449912	7/25/2017 - 8/1/2017	Beta	1.50E-02	4.16E-03	5.66E-03
450157	8/1/2017 - 8/8/2017	Beta	1.34E-02	3.89E-03	5.28E-03
450690	8/8/2017 - 8/15/2017	Beta	1.04E-02	3.66E-03	5.21E-03
451141	8/15/2017 - 8/22/2017	Beta	1.59E-02	3.81E-03	4.78E-03
451503	8/22/2017 - 8/29/2017	Beta	1.49E-02	4.53E-03	6.14E-03
452307	8/29/2017 - 9/5/2017	Beta	1.46E-02	4.85E-03	6.92E-03
452750	9/5/2017 - 9/12/2017	Beta	1.73E-02	4.13E-03	5.26E-03
453396	9/12/2017 - 9/19/2017	Beta	2.00E-02	4.42E-03	5.59E-03
454155	9/19/2017 - 9/26/2017	Beta	2.27E-02	4.62E-03	5.75E-03
454162	6/27/2017 - 9/26/2017	Cs-134	<2.31E-03	0.00E+00	2.31E-03
		Cs-137	<2.66E-03	0.00E+00	2.66E-03
		Be-7	1.23E-01	4.59E-02	4.58E-02
		K-40	<6.00E-02	0.00E+00	6.00E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
455022	9/26/2017 - 10/3/2017	Beta	1.93E-02	4.49E-03	5.75E-03
455377	10/3/2017 - 10/10/2017	Beta	1.55E-02	4.61E-03	6.30E-03
455994	10/10/2017 - 10/17/2017	Beta	9.55E-03	3.87E-03	5.51E-03
461378	10/17/2017 - 10/24/2017	Beta	1.60E-02	4.62E-03	6.20E-03
461924	10/24/2017 - 10/31/2017	Beta	1.90E-02	4.38E-03	5.63E-03
462560	10/31/2017 - 11/7/2017	Beta	2.28E-02	4.30E-03	4.89E-03
463044	11/7/2017 - 11/14/2017	Beta	2.02E-02	4.87E-03	6.16E-03
463468	11/14/2017 - 11/21/2017	Beta	2.76E-02	5.26E-03	6.01E-03
464127	11/21/2017 - 11/28/2017	Beta	2.62E-02	5.50E-03	6.74E-03
464657	11/28/2017 - 12/5/2017	Beta	2.80E-02	5.36E-03	6.33E-03
464918	12/5/2017 - 12/12/2017	Beta	1.80E-02	5.30E-03	7.38E-03
465173	12/12/2017 - 12/19/2017	Beta	2.61E-02	5.47E-03	6.73E-03
465548	12/19/2017 - 12/26/2017	Beta	2.67E-02	4.93E-03	5.35E-03
465555	9/26/2017 - 12/26/2017	Cs-134	<3.14E-03	0.00E+00	3.14E-03
		Cs-137	<3.37E-03	0.00E+00	3.37E-03
		Be-7	1.16E-01	5.00E-02	5.80E-02
		K-40	<4.33E-02	0.00E+00	4.33E-02
465935	12/26/2017 - 1/2/2018	Beta	3.25E-02	5.94E-03	6.95E-03
		Cs-134	<3.11E-02	0.00E+00	3.11E-02
		Cs-137	<2.42E-02	0.00E+00	2.42E-02
		Be-7	2.59E-01	1.73E-01	2.52E-01
		K-40	<4.08E-01	0.00E+00	4.08E-01

## Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432163	12/27/2016 - 1/3/2017	Beta	1.70E-02	5.02E-03	6.84E-03
432868	1/3/2017 - 1/10/2017	Beta	1.41E-02	4.45E-03	6.29E-03
433268	1/10/2017 - 1/17/2017	Beta	1.52E-02	4.90E-03	6.78E-03
433685	1/17/2017 - 1/24/2017	Beta	1.36E-02	4.12E-03	5.65E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434420	1/24/2017 - 1/31/2017	Beta	2.20E-02	5.24E-03	6.69E-03
435064	1/31/2017 - 2/7/2017	Beta	2.42E-02	5.17E-03	6.07E-03
435774	2/7/2017 - 2/14/2017	Beta	1.62E-02	4.48E-03	6.10E-03
436224	2/14/2017 - 2/21/2017	Beta	1.36E-02	5.05E-03	7.34E-03
436675	2/21/2017 - 2/28/2017	Beta	1.15E-02	4.73E-03	6.96E-03
437536	2/28/2017 - 3/7/2017	Beta	1.42E-02	4.27E-03	5.90E-03
438266	3/7/2017 - 3/14/2017	Beta	1.01E-02	4.53E-03	6.78E-03
438769	3/14/2017 - 3/21/2017	Beta	1.65E-02	4.20E-03	5.49E-03
439112	3/21/2017 - 3/28/2017	Beta	2.37E-02	5.06E-03	6.11E-03
439119	12/27/2016 - 3/28/2017	Cs-134	<1.00E-03	0.00E+00	1.00E-03
		Cs-137	<1.12E-03	0.00E+00	1.12E-03
		Be-7	1.42E-01	3.20E-02	2.58E-02
		K-40	<2.51E-02	0.00E+00	2.51E-02
439965	3/28/2017 - 4/4/2017	Beta	8.96E-03	3.80E-03	5.65E-03
440563	4/4/2017 - 4/11/2017	Beta	1.36E-02	4.42E-03	6.05E-03
441377	4/11/2017 - 4/18/2017	Beta	1.84E-02	5.07E-03	6.83E-03
441822	4/18/2017 - 4/25/2017	Beta	1.45E-02	3.88E-03	5.03E-03
442250	4/25/2017 - 5/2/2017	Beta	9.90E-03	4.56E-03	6.86E-03
442836	5/2/2017 - 5/9/2017	Beta	1.63E-02	4.77E-03	6.52E-03
443264	5/9/2017 - 5/16/2017	Beta	2.78E-02	4.45E-03	4.44E-03
443822	5/16/2017 - 5/23/2017	Beta	2.13E-02	5.01E-03	6.26E-03
444216	5/23/2017 - 5/30/2017	Beta	1.38E-02	4.09E-03	5.66E-03
445286	5/30/2017 - 6/6/2017	Beta	1.52E-02	4.85E-03	6.76E-03
446285	6/6/2017 - 6/13/2017	Beta	8.05E-03	3.73E-03	5.65E-03
446789	6/13/2017 - 6/20/2017	Beta	1.09E-02	3.69E-03	5.15E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
447115	6/20/2017 - 6/27/2017	Beta	1.35E-02	4.56E-03	6.37E-03
447122	3/28/2017 - 6/27/2017	Cs-134	<1.25E-03	0.00E+00	1.25E-03
		Cs-137	<5.55E-04	0.00E+00	5.55E-04
		Be-7	1.20E-01	2.59E-02	1.72E-02
		K-40	<2.34E-02	0.00E+00	2.34E-02
447768	6/27/2017 - 7/4/2017	Beta	1.67E-02	5.21E-03	7.40E-03
448232	7/4/2017 - 7/11/2017	Beta	1.44E-02	4.56E-03	6.23E-03
448858	7/11/2017 - 7/18/2017	Beta	8.92E-03	4.29E-03	6.48E-03
449174	7/18/2017 - 7/25/2017	Beta	6.34E-03	4.04E-03	6.35E-03
449913	7/25/2017 - 8/1/2017	Beta	1.23E-02	4.12E-03	5.86E-03
450158	8/1/2017 - 8/8/2017	Beta	1.32E-02	4.00E-03	5.47E-03
450691	8/8/2017 - 8/15/2017	Beta	9.34E-03	3.70E-03	5.41E-03
451142	8/15/2017 - 8/22/2017	Beta	1.38E-02	5.14E-03	7.33E-03
451504	8/22/2017 - 8/29/2017	Beta	1.43E-02	4.56E-03	6.28E-03
452308	8/29/2017 - 9/5/2017	Beta	1.39E-02	4.86E-03	7.00E-03
452751	9/5/2017 - 9/12/2017	Beta	1.55E-02	4.05E-03	5.31E-03
453397	9/12/2017 - 9/19/2017	Beta	1.86E-02	4.36E-03	5.65E-03
454156	9/19/2017 - 9/26/2017	Beta	2.21E-02	4.62E-03	5.80E-03
454163	6/27/2017 - 9/26/2017	Cs-134	<2.51E-03	0.00E+00	2.51E-03
		Cs-137	<3.83E-03	0.00E+00	3.83E-03
		Be-7	8.46E-02	4.23E-02	5.07E-02
		K-40	<5.04E-02	0.00E+00	5.04E-02
455023	9/26/2017 - 10/3/2017	Beta	1.73E-02	4.26E-03	5.56E-03
455378	10/3/2017 - 10/10/2017	Beta	1.72E-02	4.75E-03	6.37E-03
455995	10/10/2017 - 10/17/2017	Beta	1.25E-02	4.13E-03	5.59E-03
461379	10/17/2017 - 10/24/2017	Beta	2.37E-02	5.14E-03	6.29E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461925	10/24/2017 - 10/31/2017	Beta	1.15E-02	3.97E-03	5.68E-03
462561	10/31/2017 - 11/7/2017	Beta	2.42E-02	4.42E-03	4.98E-03
463045	11/7/2017 - 11/14/2017	Beta	1.84E-02	4.78E-03	6.20E-03
463469	11/14/2017 - 11/21/2017	Beta	2.53E-02	5.15E-03	6.06E-03
464128	11/21/2017 - 11/28/2017	Beta	2.52E-02	5.47E-03	6.80E-03
464658	11/28/2017 - 12/5/2017	Beta	2.89E-02	5.46E-03	6.42E-03
464919	12/5/2017 - 12/12/2017	Beta	1.73E-02	5.33E-03	7.50E-03
465174	12/12/2017 - 12/19/2017	Beta	2.87E-02	5.61E-03	6.75E-03
465549	12/19/2017 - 12/26/2017	Beta	3.00E-02	5.16E-03	5.40E-03
465556	9/26/2017 - 12/26/2017	Cs-134	<4.03E-03	0.00E+00	4.03E-03
		Cs-137	<2.64E-03	0.00E+00	2.64E-03
		Be-7	1.17E-01	5.00E-02	5.99E-02
		K-40	<4.38E-02	0.00E+00	4.38E-02
465936	12/26/2017 - 1/2/2018	Beta	2.80E-02	5.72E-03	6.95E-03
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	2.26E-01	1.47E-01	2.09E-01
		K-40	<4.87E-01	0.00E+00	4.87E-01

## Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432164	12/27/2016 - 1/3/2017	Beta	1.28E-02	4.81E-03	6.95E-03
432869	1/3/2017 - 1/10/2017	Beta	1.30E-02	4.57E-03	6.62E-03
433269	1/10/2017 - 1/17/2017	Beta	1.84E-02	5.15E-03	6.86E-03
433686	1/17/2017 - 1/24/2017	Beta	1.60E-02	4.29E-03	5.71E-03
434421	1/24/2017 - 1/31/2017	Beta	1.66E-02	4.97E-03	6.77E-03
435065	1/31/2017 - 2/7/2017	Beta	2.63E-02	5.35E-03	6.16E-03
435775	2/7/2017 - 2/14/2017	Beta	1.91E-02	4.71E-03	6.19E-03
436225	2/14/2017 - 2/21/2017	Beta	1.52E-02	5.23E-03	7.46E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436676	2/21/2017 - 2/28/2017	Beta	1.59E-02	5.05E-03	7.02E-03
437537	2/28/2017 - 3/7/2017	Beta	1.61E-02	4.90E-03	6.76E-03
438267	3/7/2017 - 3/14/2017	Beta	1.01E-02	4.52E-03	6.79E-03
438770	3/14/2017 - 3/21/2017	Beta	1.89E-02	4.38E-03	5.57E-03
439113	3/21/2017 - 3/28/2017	Beta	2.05E-02	4.88E-03	6.12E-03
439120	12/27/2016 - 3/28/2017	Cs-134	<9.38E-04	0.00E+00	9.38E-04
		Cs-137	<9.62E-04	0.00E+00	9.62E-04
		Be-7	1.83E-01	3.40E-02	2.14E-02
		K-40	1.94E-02	1.38E-02	1.83E-02
439966	3/28/2017 - 4/4/2017	Beta	1.03E-02	3.88E-03	5.64E-03
440564	4/4/2017 - 4/11/2017	Beta	1.56E-02	4.57E-03	6.06E-03
441378	4/11/2017 - 4/18/2017	Beta	2.11E-02	5.21E-03	6.79E-03
441823	4/18/2017 - 4/25/2017	Beta	1.68E-02	3.99E-03	5.00E-03
442251	4/25/2017 - 5/2/2017	Beta	1.16E-02	4.62E-03	6.79E-03
442837	5/2/2017 - 5/9/2017	Beta	1.52E-02	4.70E-03	6.50E-03
443265	5/9/2017 - 5/16/2017	Beta	2.53E-02	4.29E-03	4.43E-03
443823	5/16/2017 - 5/23/2017	Beta	2.16E-02	4.97E-03	6.17E-03
444217	5/23/2017 - 5/30/2017	Beta	1.73E-02	4.25E-03	5.59E-03
445287	5/30/2017 - 6/6/2017	Beta	1.63E-02	4.83E-03	6.61E-03
446286	6/6/2017 - 6/13/2017	Beta	9.11E-03	3.82E-03	5.67E-03
446790	6/13/2017 - 6/20/2017	Beta	1.58E-02	3.96E-03	5.08E-03
447116	6/20/2017 - 6/27/2017	Beta	1.68E-02	4.71E-03	6.28E-03
447123	3/28/2017 - 6/27/2017	Cs-134	<1.19E-03	0.00E+00	1.19E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.35E-01	2.89E-02	2.12E-02
		K-40	2.32E-02	1.44E-02	1.78E-02





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447769	6/27/2017 - 7/4/2017	Beta	8.77E-03	4.74E-03	7.39E-03
448233	7/4/2017 - 7/11/2017	Beta	1.30E-02	4.37E-03	6.06E-03
448859	7/11/2017 - 7/18/2017	Beta	9.32E-03	4.26E-03	6.40E-03
449175	7/18/2017 - 7/25/2017	Beta	5.72E-03	2.14E-03	3.08E-03
449914	7/25/2017 - 8/1/2017	Beta	1.31E-02	4.12E-03	5.79E-03
450159	8/1/2017 - 8/8/2017	Beta	1.32E-02	3.94E-03	5.40E-03
450692	8/8/2017 - 8/15/2017	Beta	8.87E-03	3.63E-03	5.33E-03
451143	8/15/2017 - 8/22/2017	Beta	1.57E-02	3.87E-03	4.91E-03
451505	8/22/2017 - 8/29/2017	Beta	1.60E-02	4.68E-03	6.30E-03
452309	8/29/2017 - 9/5/2017	Beta	1.15E-02	4.73E-03	7.05E-03
452752	9/5/2017 - 9/12/2017	Beta	1.99E-02	4.35E-03	5.38E-03
453398	9/12/2017 - 9/19/2017	Beta	1.83E-02	4.39E-03	5.72E-03
454157	9/19/2017 - 9/26/2017	Beta	2.31E-02	4.71E-03	5.87E-03
454164	6/27/2017 - 9/26/2017	Cs-134	<3.00E-03	0.00E+00	3.00E-03
		Cs-137	<3.22E-03	0.00E+00	3.22E-03
		Be-7	3.34E-02	4.99E-02	8.33E-02
		K-40	<4.82E-02	0.00E+00	4.82E-02
455024	9/26/2017 - 10/3/2017	Beta	1.70E-02	4.31E-03	5.66E-03
455379	10/3/2017 - 10/10/2017	Beta	1.41E-02	4.60E-03	6.43E-03
455996	10/10/2017 - 10/17/2017	Beta	1.13E-02	4.08E-03	5.65E-03
461380	10/17/2017 - 10/24/2017	Beta	1.91E-02	4.88E-03	6.34E-03
461926	10/24/2017 - 10/31/2017	Beta	1.40E-02	4.17E-03	5.78E-03
462562	10/31/2017 - 11/7/2017	Beta	2.36E-02	4.41E-03	5.02E-03
463046	11/7/2017 - 11/14/2017	Beta	1.98E-02	4.92E-03	6.29E-03
463470	11/14/2017 - 11/21/2017	Beta	2.43E-02	5.15E-03	6.15E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464129	11/21/2017 - 11/28/2017	Beta	2.69E-02	5.63E-03	6.88E-03
464659	11/28/2017 - 12/5/2017	Beta	3.17E-02	5.64E-03	6.47E-03
464920	12/5/2017 - 12/12/2017	Beta	1.78E-02	5.39E-03	7.56E-03
465175	12/12/2017 - 12/19/2017	Beta	3.24E-02	5.90E-03	6.88E-03
465550	12/19/2017 - 12/26/2017	Beta	3.07E-02	5.26E-03	5.48E-03
465557	9/26/2017 - 12/26/2017	Cs-134	<2.10E-03	0.00E+00	2.10E-03
		Cs-137	<2.81E-03	0.00E+00	2.81E-03
		Be-7	1.14E-01	4.90E-02	5.67E-02
		K-40	5.96E-02	2.93E-02	9.50E-03
465937	12/26/2017 - 1/2/2018	Beta	2.44E-02	5.58E-03	7.07E-03
		Cs-134	<3.43E-02	0.00E+00	3.43E-02
		Cs-137	<2.83E-02	0.00E+00	2.83E-02
		Be-7	<2.70E-01	0.00E+00	2.70E-01
		K-40	4.06E-01	2.13E-01	2.00E-01

## Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432165	12/27/2016 - 1/3/2017	Beta	1.51E-02	5.08E-03	7.13E-03
432870	1/3/2017 - 1/10/2017	Beta	1.66E-02	4.79E-03	6.64E-03
433270	1/10/2017 - 1/17/2017	Beta	1.70E-02	4.94E-03	6.64E-03
433687	1/17/2017 - 1/24/2017	Beta	1.41E-02	4.05E-03	5.49E-03
434422	1/24/2017 - 1/31/2017	Beta	2.15E-02	5.56E-03	7.26E-03
435066	1/31/2017 - 2/7/2017	Beta	3.37E-02	6.41E-03	7.16E-03
435776	2/7/2017 - 2/14/2017	Beta	1.43E-02	4.34E-03	6.05E-03
436226	2/14/2017 - 2/21/2017	Beta	1.37E-02	5.01E-03	7.25E-03
436677	2/21/2017 - 2/28/2017	Beta	1.83E-02	5.20E-03	7.02E-03
437538	2/28/2017 - 3/7/2017	Beta	1.53E-02	4.23E-03	5.71E-03
438268	3/7/2017 - 3/14/2017	Beta	1.06E-02	4.60E-03	6.85E-03
438771	3/14/2017 - 3/21/2017	Beta	2.12E-02	4.54E-03	5.60E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439114	3/21/2017 - 3/28/2017	Beta	2.57E-02	5.22E-03	6.18E-03
439121	12/27/2016 - 3/28/2017	Cs-134	<9.85E-04	0.00E+00	9.85E-04
		Cs-137	<1.18E-03	0.00E+00	1.18E-03
		Be-7	1.79E-01	3.50E-02	2.42E-02
		K-40	<2.47E-02	0.00E+00	2.47E-02
439967	3/28/2017 - 4/4/2017	Beta	1.20E-02	4.01E-03	5.69E-03
440565	4/4/2017 - 4/11/2017	Beta	1.45E-02	4.53E-03	6.12E-03
441379	4/11/2017 - 4/18/2017	Beta	1.78E-02	5.06E-03	6.87E-03
441824	4/18/2017 - 4/25/2017	Beta	1.61E-02	3.97E-03	5.05E-03
442252	4/25/2017 - 5/2/2017	Beta	7.62E-03	4.40E-03	6.83E-03
442838	5/2/2017 - 5/9/2017	Beta	1.70E-02	4.84E-03	6.56E-03
443266	5/9/2017 - 5/16/2017	Beta	2.56E-02	4.33E-03	4.46E-03
443824	5/16/2017 - 5/23/2017	Beta	2.17E-02	5.02E-03	6.23E-03
444218	5/23/2017 - 5/30/2017	Beta	1.43E-02	4.13E-03	5.67E-03
445288	5/30/2017 - 6/6/2017	Beta	1.57E-02	4.87E-03	6.75E-03
446287	6/6/2017 - 6/13/2017	Beta	1.26E-02	4.02E-03	5.65E-03
446791	6/13/2017 - 6/20/2017	Beta	1.26E-02	3.77E-03	5.12E-03
447117	6/20/2017 - 6/27/2017	Beta	1.29E-02	4.49E-03	6.33E-03
447124	3/28/2017 - 6/27/2017	Cs-134	<1.40E-03	0.00E+00	1.40E-03
		Cs-137	<1.23E-03	0.00E+00	1.23E-03
		Be-7	1.16E-01	2.90E-02	3.03E-02
		K-40	<2.11E-02	0.00E+00	2.11E-02
447770	6/27/2017 - 7/4/2017	Beta	1.47E-02	5.11E-03	7.43E-03
448234	7/4/2017 - 7/11/2017	Beta	1.54E-02	4.55E-03	6.09E-03
448860	7/11/2017 - 7/18/2017	Beta	8.19E-03	4.21E-03	6.43E-03
449176	7/18/2017 - 7/25/2017	Beta	1.33E-02	4.48E-03	6.28E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
449915	7/25/2017 - 8/1/2017	Beta	1.36E-02	4.17E-03	5.82E-03
450160	8/1/2017 - 8/8/2017	Beta	1.54E-02	4.10E-03	5.42E-03
450693	8/8/2017 - 8/15/2017	Beta	9.18E-03	3.66E-03	5.36E-03
451144	8/15/2017 - 8/22/2017	Beta	1.29E-02	3.72E-03	4.94E-03
451506	8/22/2017 - 8/29/2017	Beta	1.76E-02	4.79E-03	6.31E-03
452310	8/29/2017 - 9/5/2017	Beta	1.24E-02	4.82E-03	7.12E-03
452753	9/5/2017 - 9/12/2017	Beta	1.70E-02	4.19E-03	5.38E-03
453399	9/12/2017 - 9/19/2017	Beta	1.66E-02	4.32E-03	5.74E-03
454158	9/19/2017 - 9/26/2017	Beta	2.20E-02	4.67E-03	5.89E-03
454165	6/27/2017 - 9/26/2017	Cs-134	<3.21E-03	0.00E+00	3.21E-03
		Cs-137	<2.34E-03	0.00E+00	2.34E-03
		Be-7	1.86E-01	5.73E-02	5.08E-02
		K-40	<6.86E-02	0.00E+00	6.86E-02
455025	9/26/2017 - 10/3/2017	Beta	1.38E-02	4.11E-03	5.67E-03
455380	10/3/2017 - 10/10/2017	Beta	9.49E-03	4.31E-03	6.45E-03
455997	10/10/2017 - 10/17/2017	Beta	1.49E-02	4.34E-03	5.67E-03
461381	10/17/2017 - 10/24/2017	Beta	2.01E-02	4.97E-03	6.37E-03
461927	10/24/2017 - 10/31/2017	Beta	1.93E-02	4.48E-03	5.79E-03
462563	10/31/2017 - 11/7/2017	Beta	2.49E-02	4.51E-03	5.06E-03
463047	11/7/2017 - 11/14/2017	Beta	2.08E-02	5.00E-03	6.31E-03
463471	11/14/2017 - 11/21/2017	Beta	2.23E-02	5.04E-03	6.16E-03
464130	11/21/2017 - 11/28/2017	Beta	2.86E-02	5.73E-03	6.90E-03
464660	11/28/2017 - 12/5/2017	Beta	3.23E-02	5.70E-03	6.51E-03
464921	12/5/2017 - 12/12/2017	Beta	2.29E-02	5.69E-03	7.58E-03
465176	12/12/2017 - 12/19/2017	Beta	3.24E-02	5.91E-03	6.89E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465551	12/19/2017 - 12/26/2017	Beta	2.59E-02	4.97E-03	5.49E-03
465558	9/26/2017 - 12/26/2017	Cs-134	<4.05E-03	0.00E+00	4.05E-03
		Cs-137	<3.10E-03	0.00E+00	3.10E-03
		Be-7	1.75E-01	6.00E-02	6.70E-02
		K-40	<4.74E-02	0.00E+00	4.74E-02
465938	12/26/2017 - 1/2/2018	Beta	2.30E-02	5.49E-03	7.05E-03
		Cs-134	<2.45E-02	0.00E+00	2.45E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	<3.61E-01	0.00E+00	3.61E-01

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432166	12/27/2016 - 1/3/2017	Beta	1.63E-02	5.10E-03	7.06E-03
432871	1/3/2017 - 1/10/2017	Beta	1.52E-02	4.59E-03	6.43E-03
433271	1/10/2017 - 1/17/2017	Beta	1.51E-02	4.95E-03	6.87E-03
433688	1/17/2017 - 1/24/2017	Beta	1.37E-02	4.19E-03	5.76E-03
434423	1/24/2017 - 1/31/2017	Beta	1.70E-02	5.02E-03	6.83E-03
435067	1/31/2017 - 2/7/2017	Beta	2.73E-02	5.42E-03	6.18E-03
435777	2/7/2017 - 2/14/2017	Beta	1.31E-02	4.37E-03	6.22E-03
436227	2/14/2017 - 2/21/2017	Beta	1.75E-02	5.37E-03	7.48E-03
436678	2/21/2017 - 2/28/2017	Beta	1.10E-02	4.75E-03	7.07E-03
437539	2/28/2017 - 3/7/2017	Beta	1.75E-02	4.35E-03	5.66E-03
438269	3/7/2017 - 3/14/2017	Beta	1.18E-02	4.65E-03	6.82E-03
438772	3/14/2017 - 3/21/2017	Beta	2.17E-02	4.53E-03	5.54E-03
439115	3/21/2017 - 3/28/2017	Beta	2.20E-02	4.97E-03	6.14E-03
439122	12/27/2016 - 3/28/2017	Cs-134	<1.28E-03	0.00E+00	1.28E-03
		Cs-137	<8.32E-04	0.00E+00	8.32E-04
		Be-7	1.64E-01	3.12E-02	1.87E-02
		K-40	2.03E-02	1.20E-02	1.23E-02
439968	3/28/2017 - 4/4/2017	Beta	8.36E-03	3.77E-03	5.66E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
440566	4/4/2017 - 4/11/2017	Beta	1.56E-02	4.54E-03	6.04E-03
441380	4/11/2017 - 4/18/2017	Beta	2.37E-02	5.36E-03	6.81E-03
441825	4/18/2017 - 4/25/2017	Beta	1.26E-02	3.72E-03	5.01E-03
442253	4/25/2017 - 5/2/2017	Beta	1.21E-02	4.65E-03	6.77E-03
442839	5/2/2017 - 5/9/2017	Beta	1.66E-02	4.82E-03	6.57E-03
443267	5/9/2017 - 5/16/2017	Beta	2.46E-02	4.23E-03	4.40E-03
443825	5/16/2017 - 5/23/2017	Beta	2.46E-02	5.13E-03	6.13E-03
444219	5/23/2017 - 5/30/2017	Beta	1.40E-02	4.11E-03	5.64E-03
445289	5/30/2017 - 6/6/2017	Beta	1.72E-02	4.93E-03	6.69E-03
446288	6/6/2017 - 6/13/2017	Beta	1.19E-02	3.97E-03	5.64E-03
446792	6/13/2017 - 6/20/2017	Beta	1.49E-02	3.89E-03	5.05E-03
447118	6/20/2017 - 6/27/2017	Beta	1.24E-02	4.45E-03	6.31E-03
447125	3/28/2017 - 6/27/2017	Cs-134	<1.22E-03	0.00E+00	1.22E-03
		Cs-137	<1.10E-03	0.00E+00	1.10E-03
		Be-7	1.32E-01	2.76E-02	1.93E-02
		K-40	<2.63E-02	0.00E+00	2.63E-02
447771	6/27/2017 - 7/4/2017	Beta	1.17E-02	4.91E-03	7.38E-03
448235	7/4/2017 - 7/11/2017	Beta	1.22E-02	4.33E-03	6.10E-03
448861	7/11/2017 - 7/18/2017	Beta	1.02E-02	4.32E-03	6.40E-03
449177	7/18/2017 - 7/25/2017	Beta	1.72E-02	4.70E-03	6.25E-03
449916	7/25/2017 - 8/1/2017	Beta	1.42E-02	4.18E-03	5.77E-03
450161	8/1/2017 - 8/8/2017	Beta	1.59E-02	4.10E-03	5.40E-03
450694	8/8/2017 - 8/15/2017	Beta	1.06E-02	3.72E-03	5.31E-03
451145	8/15/2017 - 8/22/2017	Beta	2.02E-02	4.14E-03	4.90E-03
451507	8/22/2017 - 8/29/2017	Beta	1.47E-02	4.57E-03	6.24E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
452311	8/29/2017 - 9/5/2017	Beta	1.03E-02	4.67E-03	7.07E-03
452754	9/5/2017 - 9/12/2017	Beta	1.64E-02	4.14E-03	5.35E-03
453400	9/12/2017 - 9/19/2017	Beta	1.72E-02	4.30E-03	5.66E-03
454159	9/19/2017 - 9/26/2017	Beta	2.01E-02	4.52E-03	5.82E-03
454166	6/27/2017 - 9/26/2017	Cs-134	<3.65E-03	0.00E+00	3.65E-03
		Cs-137	<3.36E-03	0.00E+00	3.36E-03
		Be-7	1.37E-01	5.44E-02	6.35E-02
		K-40	2.71E-02	2.25E-02	2.92E-02
455026	9/26/2017 - 10/3/2017	Beta	1.88E-02	4.37E-03	5.59E-03
455381	10/3/2017 - 10/10/2017	Beta	9.50E-03	4.28E-03	6.40E-03
455998	10/10/2017 - 10/17/2017	Beta	1.17E-02	4.09E-03	5.62E-03
461382	10/17/2017 - 10/24/2017	Beta	2.12E-02	4.98E-03	6.29E-03
461928	10/24/2017 - 10/31/2017	Beta	1.80E-02	4.40E-03	5.76E-03
462564	10/31/2017 - 11/7/2017	Beta	2.42E-02	4.44E-03	4.98E-03
463048	11/7/2017 - 11/14/2017	Beta	1.34E-02	4.46E-03	6.20E-03
463472	11/14/2017 - 11/21/2017	Beta	2.86E-02	5.37E-03	6.10E-03
464131	11/21/2017 - 11/28/2017	Beta	2.46E-02	5.45E-03	6.82E-03
464661	11/28/2017 - 12/5/2017	Beta	3.31E-02	5.77E-03	6.56E-03
464922	12/5/2017 - 12/12/2017	Beta	2.28E-02	5.58E-03	7.40E-03
465177	12/12/2017 - 12/19/2017	Beta	2.65E-02	5.53E-03	6.80E-03
465552	12/19/2017 - 12/26/2017	Beta	2.64E-02	5.01E-03	5.50E-03
465559	9/26/2017 - 12/26/2017	Cs-134	<2.41E-03	0.00E+00	2.41E-03
		Cs-137	<2.99E-03	0.00E+00	2.99E-03
		Be-7	1.28E-01	4.75E-02	4.94E-02
		K-40	<4.83E-02	0.00E+00	4.83E-02
465939	12/26/2017 - 1/2/2018	Beta	3.03E-02	5.79E-03	6.86E-03
		Cs-134	<2.62E-02	0.00E+00	2.62E-02
		Cs-137	<2.12E-02	0.00E+00	2.12E-02
		Be-7	<2.45E-01	0.00E+00	2.45E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465939	12/26/2017 - 1/2/2018	K-40	<4.14E-01	0.00E+00	4.14E-01

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432167	12/27/2016 - 1/3/2017	Beta	1.75E-02	4.98E-03	6.71E-03
432872	1/3/2017 - 1/10/2017	Beta	1.65E-02	4.52E-03	6.18E-03
433272	1/10/2017 - 1/17/2017	Beta	1.16E-02	4.59E-03	6.65E-03
433689	1/17/2017 - 1/24/2017	Beta	1.30E-02	4.01E-03	5.54E-03
434424	1/24/2017 - 1/31/2017	Beta	1.55E-02	4.76E-03	6.54E-03
435068	1/31/2017 - 2/7/2017	Beta	2.45E-02	5.14E-03	5.99E-03
435778	2/7/2017 - 2/14/2017	Beta	1.60E-02	4.43E-03	6.03E-03
436228	2/14/2017 - 2/21/2017	Beta	1.50E-02	5.11E-03	7.28E-03
436679	2/21/2017 - 2/28/2017	Beta	1.38E-02	4.83E-03	6.88E-03
437540	2/28/2017 - 3/7/2017	Beta	1.77E-02	4.39E-03	5.75E-03
438270	3/7/2017 - 3/14/2017	Beta	1.15E-02	4.70E-03	6.91E-03
438773	3/14/2017 - 3/21/2017	Beta	2.06E-02	4.54E-03	5.67E-03
439116	3/21/2017 - 3/28/2017	Beta	2.16E-02	5.01E-03	6.23E-03
439123	12/27/2016 - 3/28/2017	Cs-134	<1.26E-03	0.00E+00	1.26E-03
		Cs-137	<1.00E-03	0.00E+00	1.00E-03
		Be-7	1.71E-01	3.09E-02	1.13E-02
		K-40	<2.46E-02	0.00E+00	2.46E-02
439969	3/28/2017 - 4/4/2017	Beta	1.17E-02	4.03E-03	5.75E-03
440567	4/4/2017 - 4/11/2017	Beta	1.43E-02	4.55E-03	6.17E-03
441381	4/11/2017 - 4/18/2017	Beta	1.75E-02	5.09E-03	6.93E-03
441826	4/18/2017 - 4/25/2017	Beta	1.50E-02	3.95E-03	5.10E-03
442254	4/25/2017 - 5/2/2017	Beta	9.79E-03	4.60E-03	6.94E-03
442840	5/2/2017 - 5/9/2017	Beta	1.76E-02	4.93E-03	6.66E-03





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
443268	5/9/2017 - 5/16/2017	Beta	2.71E-02	4.46E-03	4.56E-03
443826	5/16/2017 - 5/23/2017	Beta	1.79E-02	4.86E-03	6.36E-03
444220	5/23/2017 - 5/30/2017	Beta	1.27E-02	4.09E-03	5.76E-03
445290	5/30/2017 - 6/6/2017	Beta	1.92E-02	5.14E-03	6.83E-03
446289	6/6/2017 - 6/13/2017	Beta	8.93E-03	3.90E-03	5.86E-03
446793	6/13/2017 - 6/20/2017	Beta	1.28E-02	3.89E-03	5.28E-03
447119	6/20/2017 - 6/27/2017	Beta	1.40E-02	4.68E-03	6.53E-03
447126	3/28/2017 - 6/27/2017	Cs-134	<9.79E-04	0.00E+00	9.79E-04
		Cs-137	<9.00E-04	0.00E+00	9.00E-04
		Be-7	1.22E-01	2.73E-02	1.80E-02
		K-40	1.75E-02	1.02E-02	3.94E-03
447772	6/27/2017 - 7/4/2017	Beta	1.34E-02	5.19E-03	7.69E-03
448236	7/4/2017 - 7/11/2017	Beta	1.30E-02	4.50E-03	6.30E-03
448862	7/11/2017 - 7/18/2017	Beta	8.19E-03	4.34E-03	6.66E-03
449178	7/18/2017 - 7/25/2017	Beta	1.08E-02	4.44E-03	6.51E-03
449917	7/25/2017 - 8/1/2017	Beta	1.41E-02	4.34E-03	6.06E-03
450162	8/1/2017 - 8/8/2017	Beta	1.57E-02	4.24E-03	5.65E-03
450695	8/8/2017 - 8/15/2017	Beta	8.13E-03	3.71E-03	5.58E-03
451146	8/15/2017 - 8/22/2017	Beta	1.70E-02	4.11E-03	5.17E-03
451508	8/22/2017 - 8/29/2017	Beta	1.83E-02	5.00E-03	6.60E-03
452312	8/29/2017 - 9/5/2017	Beta	1.54E-02	5.18E-03	7.43E-03
452755	9/5/2017 - 9/12/2017	Beta	1.73E-02	4.33E-03	5.62E-03
453401	9/12/2017 - 9/19/2017	Beta	1.86E-02	4.57E-03	6.00E-03
454160	9/19/2017 - 9/26/2017	Beta	1.83E-02	4.62E-03	6.16E-03
454167	6/27/2017 - 9/26/2017	Cs-134	<4.08E-03	0.00E+00	4.08E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
454167	6/27/2017 - 9/26/2017	Cs-137	<3.13E-03	0.00E+00	3.13E-03
		Be-7	7.57E-02	4.83E-02	6.85E-02
		K-40	<6.04E-02	0.00E+00	6.04E-02
455027	9/26/2017 - 10/3/2017	Beta	1.47E-02	4.34E-03	5.96E-03
455382	10/3/2017 - 10/10/2017	Beta	9.19E-03	4.46E-03	6.75E-03
455999	10/10/2017 - 10/17/2017	Beta	1.29E-02	4.35E-03	5.94E-03
461383	10/17/2017 - 10/24/2017	Beta	1.81E-02	5.00E-03	6.65E-03
461929	10/24/2017 - 10/31/2017	Beta	1.52E-02	4.40E-03	6.04E-03
462565	10/31/2017 - 11/7/2017	Beta	2.37E-02	4.57E-03	5.26E-03
463049	11/7/2017 - 11/14/2017	Beta	2.19E-02	5.26E-03	6.62E-03
463473	11/14/2017 - 11/21/2017	Beta	2.65E-02	5.45E-03	6.44E-03
464132	11/21/2017 - 11/28/2017	Beta	2.85E-02	5.91E-03	7.21E-03
464662	11/28/2017 - 12/5/2017	Beta	2.53E-02	5.49E-03	6.79E-03
464923	12/5/2017 - 12/12/2017	Beta	1.63E-02	6.13E-03	8.99E-03
465178	12/12/2017 - 12/19/2017	Beta	2.81E-02	5.94E-03	7.34E-03
465553	12/19/2017 - 12/26/2017	Beta	2.85E-02	5.27E-03	5.72E-03
465560	9/26/2017 - 12/26/2017	Cs-134	<2.75E-03	0.00E+00	2.75E-03
		Cs-137	<3.17E-03	0.00E+00	3.17E-03
		Be-7	1.70E-01	5.96E-02	6.36E-02
		K-40	<6.97E-02	0.00E+00	6.97E-02
465940	12/26/2017 - 1/2/2018	Beta	2.97E-02	6.08E-03	7.40E-03
		Cs-134	<3.15E-02	0.00E+00	3.15E-02
		Cs-137	<2.90E-02	0.00E+00	2.90E-02
		Be-7	<2.80E-01	0.00E+00	2.80E-01
		K-40	5.99E-01	3.19E-01	4.04E-01

## Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
432168	12/27/2016 - 1/3/2017	Beta	1.54E-02	5.16E-03	7.23E-03
432873	1/3/2017 - 1/10/2017	Beta	1.59E-02	4.71E-03	6.56E-03
433273	1/10/2017 - 1/17/2017	Beta	1.93E-02	5.34E-03	7.07E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
433690	1/17/2017 - 1/24/2017	Beta	1.34E-02	4.20E-03	5.81E-03
434425	1/24/2017 - 1/31/2017	Beta	1.67E-02	5.02E-03	6.86E-03
435069	1/31/2017 - 2/7/2017	Beta	2.01E-02	5.04E-03	6.30E-03
435779	2/7/2017 - 2/14/2017	Beta	1.62E-02	4.65E-03	6.39E-03
436229	2/14/2017 - 2/21/2017	Beta	1.38E-02	5.33E-03	7.79E-03
436680	2/21/2017 - 2/28/2017	Beta	1.34E-02	4.96E-03	7.13E-03
437541	2/28/2017 - 3/7/2017	Beta	1.79E-02	3.93E-03	4.94E-03
438271	3/7/2017 - 3/14/2017	Beta	1.17E-02	4.48E-03	6.53E-03
438774	3/14/2017 - 3/21/2017	Beta	1.75E-02	4.30E-03	5.54E-03
439117	3/21/2017 - 3/28/2017	Beta	2.08E-02	4.93E-03	6.18E-03
439124	12/27/2016 - 3/28/2017	Cs-134	<1.42E-03	0.00E+00	1.42E-03
		Cs-137	<1.03E-03	0.00E+00	1.03E-03
		Be-7	1.57E-01	3.26E-02	2.32E-02
		K-40	<2.72E-02	0.00E+00	2.72E-02
439970	3/28/2017 - 4/4/2017	Beta	1.13E-02	3.95E-03	5.66E-03
440568	4/4/2017 - 4/11/2017	Beta	1.57E-02	4.58E-03	6.09E-03
441382	4/11/2017 - 4/18/2017	Beta	2.10E-02	5.26E-03	6.90E-03
441827	4/18/2017 - 4/25/2017	Beta	1.32E-02	3.79E-03	5.06E-03
442255	4/25/2017 - 5/2/2017	Beta	1.13E-02	4.64E-03	6.83E-03
442841	5/2/2017 - 5/9/2017	Beta	1.51E-02	4.78E-03	6.66E-03
443269	5/9/2017 - 5/16/2017	Beta	2.50E-02	4.29E-03	4.47E-03
443827	5/16/2017 - 5/23/2017	Beta	2.25E-02	5.06E-03	6.22E-03
444221	5/23/2017 - 5/30/2017	Beta	1.49E-02	4.21E-03	5.74E-03
445291	5/30/2017 - 6/6/2017	Beta	2.27E-02	5.34E-03	6.82E-03
446290	6/6/2017 - 6/13/2017	Beta	8.31E-03	3.82E-03	5.76E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446794	6/13/2017 - 6/20/2017	Beta	1.53E-02	3.96E-03	5.15E-03
447120	6/20/2017 - 6/27/2017	Beta	1.13E-02	4.45E-03	6.45E-03
447127	3/28/2017 - 6/27/2017	Cs-134	<7.27E-04	0.00E+00	7.27E-04
		Cs-137	<1.02E-03	0.00E+00	1.02E-03
		Be-7	1.50E-01	3.05E-02	1.97E-02
		K-40	<2.49E-02	0.00E+00	2.49E-02
447773	6/27/2017 - 7/4/2017	Beta	9.99E-03	4.91E-03	7.55E-03
448237	7/4/2017 - 7/11/2017	Beta	1.22E-02	4.43E-03	6.26E-03
448863	7/11/2017 - 7/18/2017	Beta	1.10E-02	4.48E-03	6.58E-03
449179	7/18/2017 - 7/25/2017	Beta	1.32E-02	4.55E-03	6.42E-03
449918	7/25/2017 - 8/1/2017	Beta	2.04E-02	4.65E-03	5.96E-03
450163	8/1/2017 - 8/8/2017	Beta	1.47E-02	4.14E-03	5.56E-03
450696	8/8/2017 - 8/15/2017	Beta	1.21E-02	3.94E-03	5.50E-03
451147	8/15/2017 - 8/22/2017	Beta	1.68E-02	4.04E-03	5.08E-03
451509	8/22/2017 - 8/29/2017	Beta	1.71E-02	4.88E-03	6.47E-03
452313	8/29/2017 - 9/5/2017	Beta	1.46E-02	5.08E-03	7.32E-03
452756	9/5/2017 - 9/12/2017	Beta	1.70E-02	4.28E-03	5.53E-03
453402	9/12/2017 - 9/19/2017	Beta	1.75E-02	4.43E-03	5.86E-03
454161	9/19/2017 - 9/26/2017	Beta	2.30E-02	4.81E-03	6.02E-03
454168	6/27/2017 - 9/26/2017	Cs-134	<3.69E-03	0.00E+00	3.69E-03
		Cs-137	<3.00E-03	0.00E+00	3.00E-03
		Be-7	1.36E-01	6.55E-02	8.86E-02
		K-40	6.43E-02	3.80E-02	4.70E-02
455028	9/26/2017 - 10/3/2017	Beta	1.79E-02	4.42E-03	5.79E-03
455383	10/3/2017 - 10/10/2017	Beta	1.26E-02	4.62E-03	6.61E-03
456000	10/10/2017 - 10/17/2017	Beta	1.31E-02	4.32E-03	5.82E-03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR PARTICULATE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
461384	10/17/2017 - 10/24/2017	Beta	2.34E-02	5.26E-03	6.50E-03
461930	10/24/2017 - 10/31/2017	Beta	1.95E-02	4.60E-03	5.97E-03
462566	10/31/2017 - 11/7/2017	Beta	3.03E-02	4.87E-03	5.14E-03
463050	11/7/2017 - 11/14/2017	Beta	1.70E-02	4.83E-03	6.44E-03
463474	11/14/2017 - 11/21/2017	Beta	2.69E-02	5.41E-03	6.34E-03
464133	11/21/2017 - 11/28/2017	Beta	2.51E-02	5.64E-03	7.07E-03
464663	11/28/2017 - 12/5/2017	Beta	3.32E-02	5.92E-03	6.80E-03
464924	12/5/2017 - 12/12/2017	Beta	2.02E-02	5.60E-03	7.67E-03
465179	12/12/2017 - 12/19/2017	Beta	2.93E-02	5.81E-03	7.01E-03
465554	12/19/2017 - 12/26/2017	Beta	2.69E-02	5.16E-03	5.69E-03
465561	9/26/2017 - 12/26/2017	Cs-134	<2.54E-03	0.00E+00	2.54E-03
		Cs-137	<2.69E-03	0.00E+00	2.69E-03
		Be-7	1.17E-01	5.26E-02	6.62E-02
		K-40	<5.86E-02	0.00E+00	5.86E-02
465941	12/26/2017 - 1/2/2018	Beta	2.84E-02	5.85E-03	7.15E-03
		Cs-134	<3.00E-02	0.00E+00	3.00E-02
		Cs-137	<2.35E-02	0.00E+00	2.35E-02
		Be-7	<2.35E-01	0.00E+00	2.35E-01
		K-40	1.22E-01	2.75E-01	4.79E-01

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
432169	12/27/2016 - 1/3/2017	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	7.34E-01	2.59E-01	5.85E-02
432874	1/3/2017 - 1/10/2017	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<3.05E-03	0.00E+00	3.05E-03
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	6.65E-01	2.79E-01	2.41E-01
433274	1/10/2017 - 1/17/2017	I-131	<2.22E-02	0.00E+00	2.22E-02
		Cs-134	<1.99E-02	0.00E+00	1.99E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.88E-02	0.00E+00	9.88E-02
		K-40	1.03E+00	3.25E-01	6.49E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433691	1/17/2017 - 1/24/2017	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<9.66E-02	0.00E+00	9.66E-02
		K-40	8.10E-01	2.92E-01	2.30E-01
434426	1/24/2017 - 1/31/2017	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<8.57E-02	0.00E+00	8.57E-02
		K-40	6.32E-01	2.74E-01	2.42E-01
435070	1/31/2017 - 2/7/2017	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.86E-02	0.00E+00	1.86E-02
		Be-7	<1.46E-01	0.00E+00	1.46E-01
		K-40	9.33E-01	3.74E-01	4.13E-01
435780	2/7/2017 - 2/14/2017	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<9.70E-03	0.00E+00	9.70E-03
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	8.17E-01	3.10E-01	2.92E-01
436230	2/14/2017 - 2/21/2017	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	8.10E-01	3.42E-01	3.73E-01
436681	2/21/2017 - 2/28/2017	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.51E-01	0.00E+00	1.51E-01
		K-40	6.25E-01	2.93E-01	3.18E-01
437542	2/28/2017 - 3/7/2017	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	9.00E-01	3.09E-01	2.34E-01
438272	3/7/2017 - 3/14/2017	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	9.59E-01	3.08E-01	6.19E-02
438775	3/14/2017 - 3/21/2017	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.58E-02	0.00E+00	1.58E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	1.03E+00	3.18E-01	6.09E-02
439125	3/21/2017 - 3/28/2017	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439125	3/21/2017 - 3/28/2017	Cs-137	<9.33E-03	0.00E+00	9.33E-03
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	8.22E-01	3.15E-01	3.06E-01
439971	3/28/2017 - 4/4/2017	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<8.01E-02	0.00E+00	8.01E-02
		K-40	9.23E-01	2.98E-01	6.10E-02
440569	4/4/2017 - 4/11/2017	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.26E-01	0.00E+00	1.26E-01
		K-40	6.20E-01	2.67E-01	2.72E-01
441383	4/11/2017 - 4/18/2017	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<7.00E-02	0.00E+00	7.00E-02
		K-40	9.52E-01	2.88E-01	5.37E-02
441828	4/18/2017 - 4/25/2017	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<7.11E-02	0.00E+00	7.11E-02
		K-40	<5.55E-01	0.00E+00	5.55E-01
442256	4/25/2017 - 5/2/2017	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.86E-02	0.00E+00	1.86E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.82E-01	2.61E-01	1.99E-01
442842	5/2/2017 - 5/9/2017	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	6.25E-01	2.56E-01	2.37E-01
443270	5/9/2017 - 5/16/2017	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	8.94E-01	2.97E-01	2.22E-01
443828	5/16/2017 - 5/23/2017	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<7.56E-03	0.00E+00	7.56E-03
		Cs-137	<9.39E-03	0.00E+00	9.39E-03
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	7.30E-01	2.59E-01	5.82E-02
444222	5/23/2017 - 5/30/2017	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<7.21E-02	0.00E+00	7.21E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
444222	5/23/2017 - 5/30/2017	K-40	<4.19E-01	0.00E+00	4.19E-01
445292	5/30/2017 - 6/6/2017	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<7.62E-02	0.00E+00	7.62E-02
		K-40	5.21E-01	2.82E-01	3.56E-01
446291	6/6/2017 - 6/13/2017	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<9.32E-02	0.00E+00	9.32E-02
		K-40	<4.31E-01	0.00E+00	4.31E-01
446795	6/13/2017 - 6/20/2017	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<4.18E-01	0.00E+00	4.18E-01
447128	6/20/2017 - 6/27/2017	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.07E-02	0.00E+00	1.07E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	8.30E-01	2.72E-01	5.63E-02
447774	6/27/2017 - 7/4/2017	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<3.78E-01	0.00E+00	3.78E-01
448238	7/4/2017 - 7/11/2017	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<9.01E-02	0.00E+00	9.01E-02
		K-40	2.97E-01	1.93E-01	2.32E-01
448864	7/11/2017 - 7/18/2017	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<9.48E-03	0.00E+00	9.48E-03
		Cs-137	<2.30E-02	0.00E+00	2.30E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	1.90E-01	1.73E-01	2.48E-01
449180	7/18/2017 - 7/25/2017	I-131	<9.58E-03	0.00E+00	9.58E-03
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	2.96E-01	1.84E-01	2.02E-01
449919	7/25/2017 - 8/1/2017	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	<3.98E-01	0.00E+00	3.98E-01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450164	8/1/2017 - 8/8/2017	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.53E-02	0.00E+00	1.53E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<6.94E-02	0.00E+00	6.94E-02
		K-40	3.40E-01	2.09E-01	2.64E-01
450697	8/8/2017 - 8/15/2017	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	2.46E-01	1.91E-01	2.66E-01
451148	8/15/2017 - 8/22/2017	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02
		Be-7	<9.94E-02	0.00E+00	9.94E-02
		K-40	7.56E-01	2.54E-01	5.39E-02
451510	8/22/2017 - 8/29/2017	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	<4.43E-01	0.00E+00	4.43E-01
452314	8/29/2017 - 9/5/2017	I-131	<1.55E-02	0.00E+00	1.55E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<2.04E-02	0.00E+00	2.04E-02
		Be-7	<8.25E-02	0.00E+00	8.25E-02
		K-40	2.24E-01	1.82E-01	2.54E-01
452757	9/5/2017 - 9/12/2017	I-131	<1.29E-02	0.00E+00	1.29E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<8.36E-02	0.00E+00	8.36E-02
		K-40	<4.11E-01	0.00E+00	4.11E-01
453403	9/12/2017 - 9/19/2017	I-131	<1.83E-02	0.00E+00	1.83E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<7.86E-02	0.00E+00	7.86E-02
		K-40	<3.32E-01	0.00E+00	3.32E-01
454169	9/19/2017 - 9/26/2017	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.42E-01	2.36E-01	2.63E-01
455029	9/26/2017 - 10/3/2017	I-131	<3.91E-02	0.00E+00	3.91E-02
		Cs-134	<3.31E-02	0.00E+00	3.31E-02
		Cs-137	<2.73E-02	0.00E+00	2.73E-02
		Be-7	<1.55E-01	0.00E+00	1.55E-01
		K-40	8.48E-01	3.69E-01	4.27E-01
455384	10/3/2017 - 10/10/2017	I-131	<3.05E-02	0.00E+00	3.05E-02
		Cs-134	<2.98E-02	0.00E+00	2.98E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
455384	10/3/2017 - 10/10/2017	Cs-137	<2.85E-02	0.00E+00	2.85E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	<5.50E-01	0.00E+00	5.50E-01
456001	10/10/2017 - 10/17/2017	I-131	<3.64E-02	0.00E+00	3.64E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	3.83E-01	2.50E-01	3.28E-01
461385	10/17/2017 - 10/24/2017	I-131	<4.02E-02	0.00E+00	4.02E-02
		Cs-134	<3.12E-02	0.00E+00	3.12E-02
		Cs-137	<3.58E-02	0.00E+00	3.58E-02
		Be-7	<2.25E-01	0.00E+00	2.25E-01
		K-40	1.01E+00	3.67E-01	3.37E-01
461931	10/24/2017 - 10/31/2017	I-131	<5.45E-02	0.00E+00	5.45E-02
		Cs-134	<2.85E-02	0.00E+00	2.85E-02
		Cs-137	<3.09E-02	0.00E+00	3.09E-02
		Be-7	<2.26E-01	0.00E+00	2.26E-01
		K-40	8.72E-01	3.06E-01	2.78E-01
462567	10/31/2017 - 11/7/2017	I-131	<3.85E-02	0.00E+00	3.85E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<3.56E-02	0.00E+00	3.56E-02
		Be-7	<2.23E-01	0.00E+00	2.23E-01
		K-40	7.30E-01	3.80E-01	4.98E-01
463051	11/7/2017 - 11/14/2017	I-131	<4.87E-02	0.00E+00	4.87E-02
		Cs-134	<3.60E-02	0.00E+00	3.60E-02
		Cs-137	<3.38E-02	0.00E+00	3.38E-02
		Be-7	<2.55E-01	0.00E+00	2.55E-01
		K-40	8.68E-01	3.79E-01	4.37E-01
463475	11/14/2017 - 11/21/2017	I-131	<5.31E-02	0.00E+00	5.31E-02
		Cs-134	<2.68E-02	0.00E+00	2.68E-02
		Cs-137	<2.70E-02	0.00E+00	2.70E-02
		Be-7	<2.15E-01	0.00E+00	2.15E-01
		K-40	7.99E-01	3.06E-01	3.53E-01
464134	11/21/2017 - 11/28/2017	I-131	<5.22E-02	0.00E+00	5.22E-02
		Cs-134	<3.03E-02	0.00E+00	3.03E-02
		Cs-137	<3.38E-02	0.00E+00	3.38E-02
		Be-7	<2.17E-01	0.00E+00	2.17E-01
		K-40	1.42E+00	4.46E-01	4.03E-01
464664	11/28/2017 - 12/5/2017	I-131	<4.49E-02	0.00E+00	4.49E-02
		Cs-134	<3.62E-02	0.00E+00	3.62E-02
		Cs-137	<3.47E-02	0.00E+00	3.47E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	9.80E-01	3.69E-01	3.64E-01
464925	12/5/2017 - 12/12/2017	I-131	<4.44E-02	0.00E+00	4.44E-02
		Cs-134	<3.68E-02	0.00E+00	3.68E-02
		Cs-137	<4.25E-02	0.00E+00	4.25E-02
		Be-7	<2.54E-01	0.00E+00	2.54E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 200 [ INDICATOR - WSW @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464925	12/5/2017 - 12/12/2017	K-40	9.50E-01	3.43E-01	2.58E-01
465180	12/12/2017 - 12/19/2017	I-131	<4.58E-02	0.00E+00	4.58E-02
		Cs-134	<3.08E-02	0.00E+00	3.08E-02
		Cs-137	<3.89E-02	0.00E+00	3.89E-02
		Be-7	<2.72E-01	0.00E+00	2.72E-01
		K-40	8.55E-01	4.13E-01	5.28E-01
465562	12/19/2017 - 12/26/2017	I-131	<5.53E-02	0.00E+00	5.53E-02
		Cs-134	<2.82E-02	0.00E+00	2.82E-02
		Cs-137	<2.89E-02	0.00E+00	2.89E-02
		Be-7	<2.41E-01	0.00E+00	2.41E-01
		K-40	8.27E-01	3.53E-01	4.32E-01
465942	12/26/2017 - 1/2/2018	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<2.66E-02	0.00E+00	2.66E-02
		Cs-137	<3.25E-02	0.00E+00	3.25E-02
		Be-7	<2.46E-01	0.00E+00	2.46E-01
		K-40	9.31E-01	3.54E-01	4.34E-01

## Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432170	12/27/2016 - 1/3/2017	I-131	<1.90E-02	0.00E+00	1.90E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	9.82E-01	3.32E-01	2.47E-01
432875	1/3/2017 - 1/10/2017	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<2.22E-02	0.00E+00	2.22E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	1.00E+00	3.14E-01	6.16E-02
433275	1/10/2017 - 1/17/2017	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.39E-02	0.00E+00	1.39E-02
		Be-7	<8.95E-02	0.00E+00	8.95E-02
		K-40	8.33E-01	2.95E-01	2.21E-01
433692	1/17/2017 - 1/24/2017	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.62E-02	0.00E+00	1.62E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	5.95E-01	2.92E-01	3.52E-01
434427	1/24/2017 - 1/31/2017	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<9.22E-03	0.00E+00	9.22E-03
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	8.61E-01	2.83E-01	5.83E-02
435071	1/31/2017 - 2/7/2017	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<7.51E-02	0.00E+00	7.51E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435071	1/31/2017 - 2/7/2017	K-40	9.25E-01	3.11E-01	2.22E-01
435781	2/7/2017 - 2/14/2017	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	4.21E-01	2.53E-01	3.27E-01
436231	2/14/2017 - 2/21/2017	I-131	<1.08E-02	0.00E+00	1.08E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	7.88E-01	2.69E-01	5.77E-02
436682	2/21/2017 - 2/28/2017	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	1.10E+00	3.22E-01	5.74E-02
437543	2/28/2017 - 3/7/2017	I-131	<2.19E-02	0.00E+00	2.19E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.88E-02	0.00E+00	1.88E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	7.72E-01	3.06E-01	3.04E-01
438273	3/7/2017 - 3/14/2017	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	6.13E-01	2.57E-01	2.39E-01
438776	3/14/2017 - 3/21/2017	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.19E-02	0.00E+00	1.19E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	9.97E-01	3.53E-01	3.43E-01
439126	3/21/2017 - 3/28/2017	I-131	<2.15E-02	0.00E+00	2.15E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<8.81E-02	0.00E+00	8.81E-02
		K-40	8.46E-01	2.81E-01	5.88E-02
439972	3/28/2017 - 4/4/2017	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	7.01E-01	2.62E-01	1.96E-01
440570	4/4/2017 - 4/11/2017	I-131	<2.12E-02	0.00E+00	2.12E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	8.23E-01	3.24E-01	3.23E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
441384	4/11/2017 - 4/18/2017	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<9.38E-02	0.00E+00	9.38E-02
		K-40	1.01E+00	3.03E-01	5.60E-02
441829	4/18/2017 - 4/25/2017	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.07E-02	0.00E+00	1.07E-02
		Cs-137	<1.33E-02	0.00E+00	1.33E-02
		Be-7	<8.53E-02	0.00E+00	8.53E-02
		K-40	8.46E-01	3.15E-01	3.11E-01
442257	4/25/2017 - 5/2/2017	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	7.01E-01	2.65E-01	2.10E-01
442843	5/2/2017 - 5/9/2017	I-131	<1.87E-02	0.00E+00	1.87E-02
		Cs-134	<1.71E-02	0.00E+00	1.71E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	7.23E-01	2.63E-01	6.12E-02
443271	5/9/2017 - 5/16/2017	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.10E-02	0.00E+00	1.10E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	9.20E-01	3.38E-01	3.35E-01
443829	5/16/2017 - 5/23/2017	I-131	<1.45E-02	0.00E+00	1.45E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.55E-02	0.00E+00	1.55E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<4.33E-01	0.00E+00	4.33E-01
444223	5/23/2017 - 5/30/2017	I-131	<1.48E-02	0.00E+00	1.48E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<2.20E-02	0.00E+00	2.20E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	3.41E-01	1.92E-01	2.00E-01
445293	5/30/2017 - 6/6/2017	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	2.14E-01	1.70E-01	2.26E-01
446292	6/6/2017 - 6/13/2017	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	2.88E-01	1.83E-01	1.97E-01
446796	6/13/2017 - 6/20/2017	I-131	<2.31E-02	0.00E+00	2.31E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446796	6/13/2017 - 6/20/2017	Cs-137	<2.54E-02	0.00E+00	2.54E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	5.40E-01	2.21E-01	5.85E-02
447129	6/20/2017 - 6/27/2017	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.74E-02	0.00E+00	9.74E-02
		K-40	3.90E-01	2.12E-01	2.25E-01
447775	6/27/2017 - 7/4/2017	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.61E-02	0.00E+00	1.61E-02
		Cs-137	<2.12E-02	0.00E+00	2.12E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	3.38E-01	2.15E-01	2.64E-01
448239	7/4/2017 - 7/11/2017	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	<5.33E-01	0.00E+00	5.33E-01
448865	7/11/2017 - 7/18/2017	I-131	<2.36E-02	0.00E+00	2.36E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<2.38E-02	0.00E+00	2.38E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<5.44E-01	0.00E+00	5.44E-01
449181	7/18/2017 - 7/25/2017	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<2.30E-02	0.00E+00	2.30E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	5.02E-01	2.35E-01	2.21E-01
449920	7/25/2017 - 8/1/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<8.77E-03	0.00E+00	8.77E-03
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	<4.25E-01	0.00E+00	4.25E-01
450165	8/1/2017 - 8/8/2017	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.19E-02	0.00E+00	1.19E-02
		Cs-137	<1.96E-02	0.00E+00	1.96E-02
		Be-7	<9.53E-02	0.00E+00	9.53E-02
		K-40	3.04E-01	2.07E-01	2.71E-01
450698	8/8/2017 - 8/15/2017	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.62E-02	0.00E+00	1.62E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	4.97E-01	2.12E-01	5.86E-02
451149	8/15/2017 - 8/22/2017	I-131	<2.60E-02	0.00E+00	2.60E-02
		Cs-134	<2.60E-02	0.00E+00	2.60E-02
		Cs-137	<3.36E-02	0.00E+00	3.36E-02
		Be-7	<1.91E-01	0.00E+00	1.91E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
451149	8/15/2017 - 8/22/2017	K-40	5.55E-01	2.96E-01	2.89E-01
451511	8/22/2017 - 8/29/2017	I-131	<1.20E-02	0.00E+00	1.20E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<1.38E-01	0.00E+00	1.38E-01
		K-40	<3.67E-01	0.00E+00	3.67E-01
452315	8/29/2017 - 9/5/2017	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<8.19E-02	0.00E+00	8.19E-02
		K-40	3.04E-01	1.80E-01	1.96E-01
452758	9/5/2017 - 9/12/2017	I-131	<2.33E-02	0.00E+00	2.33E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<8.74E-02	0.00E+00	8.74E-02
		K-40	4.33E-01	2.17E-01	2.12E-01
453404	9/12/2017 - 9/19/2017	I-131	<1.58E-02	0.00E+00	1.58E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	3.45E-01	2.02E-01	2.34E-01
454170	9/19/2017 - 9/26/2017	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.03E-02	0.00E+00	1.03E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	2.92E-01	1.73E-01	1.81E-01
455030	9/26/2017 - 10/3/2017	I-131	<3.08E-02	0.00E+00	3.08E-02
		Cs-134	<2.76E-02	0.00E+00	2.76E-02
		Cs-137	<2.98E-02	0.00E+00	2.98E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	5.37E-01	2.45E-01	2.03E-01
455385	10/3/2017 - 10/10/2017	I-131	<3.30E-02	0.00E+00	3.30E-02
		Cs-134	<2.57E-02	0.00E+00	2.57E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<2.17E-01	0.00E+00	2.17E-01
		K-40	1.48E-01	2.76E-01	4.74E-01
456002	10/10/2017 - 10/17/2017	I-131	<2.51E-02	0.00E+00	2.51E-02
		Cs-134	<2.83E-02	0.00E+00	2.83E-02
		Cs-137	<2.31E-02	0.00E+00	2.31E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	<5.80E-01	0.00E+00	5.80E-01
461386	10/17/2017 - 10/24/2017	I-131	<4.53E-02	0.00E+00	4.53E-02
		Cs-134	<3.31E-02	0.00E+00	3.31E-02
		Cs-137	<3.63E-02	0.00E+00	3.63E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	1.14E+00	3.94E-01	3.59E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461932	10/24/2017 - 10/31/2017	I-131	<5.49E-02	0.00E+00	5.49E-02
		Cs-134	<2.53E-02	0.00E+00	2.53E-02
		Cs-137	<2.67E-02	0.00E+00	2.67E-02
		Be-7	<1.81E-01	0.00E+00	1.81E-01
		K-40	1.34E+00	6.83E-01	2.23E-01
462568	10/31/2017 - 11/7/2017	I-131	<4.09E-02	0.00E+00	4.09E-02
		Cs-134	<3.92E-02	0.00E+00	3.92E-02
		Cs-137	<3.88E-02	0.00E+00	3.88E-02
		Be-7	<2.33E-01	0.00E+00	2.33E-01
		K-40	9.53E-01	3.77E-01	3.96E-01
463052	11/7/2017 - 11/14/2017	I-131	<4.50E-02	0.00E+00	4.50E-02
		Cs-134	<3.87E-02	0.00E+00	3.87E-02
		Cs-137	<3.69E-02	0.00E+00	3.69E-02
		Be-7	<2.68E-01	0.00E+00	2.68E-01
		K-40	1.05E+00	4.15E-01	4.65E-01
463476	11/14/2017 - 11/21/2017	I-131	<5.59E-02	0.00E+00	5.59E-02
		Cs-134	<3.07E-02	0.00E+00	3.07E-02
		Cs-137	<2.92E-02	0.00E+00	2.92E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	6.67E-01	2.86E-01	3.33E-01
464135	11/21/2017 - 11/28/2017	I-131	<4.80E-02	0.00E+00	4.80E-02
		Cs-134	<3.63E-02	0.00E+00	3.63E-02
		Cs-137	<4.04E-02	0.00E+00	4.04E-02
		Be-7	<2.32E-01	0.00E+00	2.32E-01
		K-40	1.01E+00	4.19E-01	4.91E-01
464665	11/28/2017 - 12/5/2017	I-131	<4.42E-02	0.00E+00	4.42E-02
		Cs-134	<4.02E-02	0.00E+00	4.02E-02
		Cs-137	<3.24E-02	0.00E+00	3.24E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	7.64E-01	3.81E-01	4.87E-01
464926	12/5/2017 - 12/12/2017	I-131	<4.47E-02	0.00E+00	4.47E-02
		Cs-134	<2.80E-02	0.00E+00	2.80E-02
		Cs-137	<3.30E-02	0.00E+00	3.30E-02
		Be-7	<2.65E-01	0.00E+00	2.65E-01
		K-40	1.00E+00	3.73E-01	3.38E-01
465181	12/12/2017 - 12/19/2017	I-131	<4.82E-02	0.00E+00	4.82E-02
		Cs-134	<3.24E-02	0.00E+00	3.24E-02
		Cs-137	<3.72E-02	0.00E+00	3.72E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	9.64E-01	4.14E-01	4.92E-01
465563	12/19/2017 - 12/26/2017	I-131	<5.56E-02	0.00E+00	5.56E-02
		Cs-134	<2.50E-02	0.00E+00	2.50E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<2.10E-01	0.00E+00	2.10E-01
		K-40	8.59E-01	2.58E-01	2.13E-01
465943	12/26/2017 - 1/2/2018	I-131	<4.71E-02	0.00E+00	4.71E-02
		Cs-134	<2.00E-02	0.00E+00	2.00E-02





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 201 [ INDICATOR - NE @ 0.5 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465943	12/26/2017 - 1/2/2018	Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.63E-01	0.00E+00	1.63E-01
		K-40	1.11E+00	2.71E-01	2.11E-01

## Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432171	12/27/2016 - 1/3/2017	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	6.62E-01	2.65E-01	2.23E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432876	1/3/2017 - 1/10/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	6.69E-01	2.55E-01	6.25E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433276	1/10/2017 - 1/17/2017	I-131	<1.43E-02	0.00E+00	1.43E-02
		Cs-134	<1.22E-02	0.00E+00	1.22E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	6.87E-01	2.83E-01	2.71E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433693	1/17/2017 - 1/24/2017	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	1.01E+00	3.44E-01	2.86E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434428	1/24/2017 - 1/31/2017	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	1.27E+00	3.60E-01	6.25E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435072	1/31/2017 - 2/7/2017	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	7.90E-01	2.97E-01	2.31E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435782	2/7/2017 - 2/14/2017	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.36E-02	0.00E+00	9.36E-02
		K-40	5.57E-01	3.19E-01	4.24E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436232	2/14/2017 - 2/21/2017	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	9.97E-01	3.46E-01	2.99E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436683	2/21/2017 - 2/28/2017	I-131	<1.60E-02	0.00E+00	1.60E-02
		Cs-134	<1.69E-02	0.00E+00	1.69E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436683	2/21/2017 - 2/28/2017	Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	9.99E-01	3.71E-01	3.89E-01
437544	2/28/2017 - 3/7/2017	I-131	<2.61E-02	0.00E+00	2.61E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<2.00E-02	0.00E+00	2.00E-02
		Be-7	<2.11E-01	0.00E+00	2.11E-01
		K-40	1.22E+00	4.04E-01	3.32E-01
438274	3/7/2017 - 3/14/2017	I-131	<2.21E-02	0.00E+00	2.21E-02
		Cs-134	<7.95E-03	0.00E+00	7.95E-03
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.39E-02	0.00E+00	9.39E-02
		K-40	9.43E-01	3.28E-01	2.65E-01
438777	3/14/2017 - 3/21/2017	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	8.13E-01	2.71E-01	5.65E-02
439127	3/21/2017 - 3/28/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<8.90E-03	0.00E+00	8.90E-03
		Cs-137	<1.68E-02	0.00E+00	1.68E-02
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	7.55E-01	2.81E-01	2.43E-01
439973	3/28/2017 - 4/4/2017	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	8.63E-01	2.83E-01	5.85E-02
440571	4/4/2017 - 4/11/2017	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	5.93E-01	2.72E-01	3.03E-01
441385	4/11/2017 - 4/18/2017	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<7.73E-03	0.00E+00	7.73E-03
		Cs-137	<1.21E-02	0.00E+00	1.21E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	7.91E-01	3.13E-01	3.13E-01
441830	4/18/2017 - 4/25/2017	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	6.89E-01	2.69E-01	2.20E-01
442258	4/25/2017 - 5/2/2017	I-131	<1.49E-02	0.00E+00	1.49E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.29E-02	0.00E+00	1.29E-02
		Be-7	<7.24E-02	0.00E+00	7.24E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
442258	4/25/2017 - 5/2/2017	K-40	7.24E-01	2.91E-01	2.93E-01
442844	5/2/2017 - 5/9/2017	I-131	<2.25E-02	0.00E+00	2.25E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<9.68E-02	0.00E+00	9.68E-02
		K-40	8.06E-01	3.03E-01	2.78E-01
443272	5/9/2017 - 5/16/2017	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.12E-02	0.00E+00	1.12E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	9.14E-01	2.87E-01	5.63E-02
443830	5/16/2017 - 5/23/2017	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	6.07E-01	2.51E-01	2.25E-01
444224	5/23/2017 - 5/30/2017	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<1.41E-02	0.00E+00	1.41E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	4.91E-01	2.33E-01	2.17E-01
445294	5/30/2017 - 6/6/2017	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	<3.72E-01	0.00E+00	3.72E-01
446293	6/6/2017 - 6/13/2017	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	4.21E-01	2.06E-01	1.86E-01
446797	6/13/2017 - 6/20/2017	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<9.11E-02	0.00E+00	9.11E-02
		K-40	<4.52E-01	0.00E+00	4.52E-01
447130	6/20/2017 - 6/27/2017	I-131	<1.33E-02	0.00E+00	1.33E-02
		Cs-134	<1.32E-02	0.00E+00	1.32E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<9.90E-02	0.00E+00	9.90E-02
		K-40	<3.61E-01	0.00E+00	3.61E-01
447776	6/27/2017 - 7/4/2017	I-131	<1.26E-02	0.00E+00	1.26E-02
		Cs-134	<1.95E-02	0.00E+00	1.95E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<8.10E-02	0.00E+00	8.10E-02
		K-40	<4.92E-01	0.00E+00	4.92E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448240	7/4/2017 - 7/11/2017	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<2.06E-02	0.00E+00	2.06E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	3.14E-01	2.28E-01	3.17E-01
448866	7/11/2017 - 7/18/2017	I-131	<1.98E-02	0.00E+00	1.98E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.82E-02	0.00E+00	1.82E-02
		Be-7	<9.45E-02	0.00E+00	9.45E-02
		K-40	<3.25E-01	0.00E+00	3.25E-01
449182	7/18/2017 - 7/25/2017	I-131	<1.08E-02	0.00E+00	1.08E-02
		Cs-134	<9.47E-03	0.00E+00	9.47E-03
		Cs-137	<1.18E-02	0.00E+00	1.18E-02
		Be-7	<5.75E-02	0.00E+00	5.75E-02
		K-40	3.33E-01	1.46E-01	1.67E-01
449921	7/25/2017 - 8/1/2017	I-131	<2.55E-02	0.00E+00	2.55E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	5.23E-01	2.33E-01	2.01E-01
450166	8/1/2017 - 8/8/2017	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.78E-02	0.00E+00	1.78E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.26E-02	0.00E+00	9.26E-02
		K-40	2.92E-01	1.64E-01	6.08E-02
450699	8/8/2017 - 8/15/2017	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<8.72E-03	0.00E+00	8.72E-03
		Cs-137	<1.94E-02	0.00E+00	1.94E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.37E-01	2.02E-01	1.61E-01
451150	8/15/2017 - 8/22/2017	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.12E-02	0.00E+00	1.12E-02
		Cs-137	<1.64E-02	0.00E+00	1.64E-02
		Be-7	<9.15E-02	0.00E+00	9.15E-02
		K-40	<4.36E-01	0.00E+00	4.36E-01
451512	8/22/2017 - 8/29/2017	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<2.19E-02	0.00E+00	2.19E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	4.07E-01	1.90E-01	5.81E-02
452316	8/29/2017 - 9/5/2017	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<3.65E-01	0.00E+00	3.65E-01
452759	9/5/2017 - 9/12/2017	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
452759	9/5/2017 - 9/12/2017	Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	2.85E-01	2.11E-01	2.92E-01
453405	9/12/2017 - 9/19/2017	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	<4.78E-01	0.00E+00	4.78E-01
454171	9/19/2017 - 9/26/2017	I-131	<1.74E-02	0.00E+00	1.74E-02
		Cs-134	<2.26E-02	0.00E+00	2.26E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	<4.94E-01	0.00E+00	4.94E-01
455031	9/26/2017 - 10/3/2017	I-131	<3.54E-02	0.00E+00	3.54E-02
		Cs-134	<3.72E-02	0.00E+00	3.72E-02
		Cs-137	<3.21E-02	0.00E+00	3.21E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	3.46E-01	2.56E-01	3.55E-01
455386	10/3/2017 - 10/10/2017	I-131	<3.23E-02	0.00E+00	3.23E-02
		Cs-134	<3.56E-02	0.00E+00	3.56E-02
		Cs-137	<2.85E-02	0.00E+00	2.85E-02
		Be-7	<1.73E-01	0.00E+00	1.73E-01
		K-40	5.39E-01	2.56E-01	2.43E-01
456003	10/10/2017 - 10/17/2017	I-131	<2.80E-02	0.00E+00	2.80E-02
		Cs-134	<3.37E-02	0.00E+00	3.37E-02
		Cs-137	<3.12E-02	0.00E+00	3.12E-02
		Be-7	<1.86E-01	0.00E+00	1.86E-01
		K-40	5.55E-01	2.87E-01	3.36E-01
461387	10/17/2017 - 10/24/2017	I-131	<4.42E-02	0.00E+00	4.42E-02
		Cs-134	<3.96E-02	0.00E+00	3.96E-02
		Cs-137	<3.38E-02	0.00E+00	3.38E-02
		Be-7	<2.24E-01	0.00E+00	2.24E-01
		K-40	1.00E+00	3.93E-01	4.21E-01
461933	10/24/2017 - 10/31/2017	I-131	<5.28E-02	0.00E+00	5.28E-02
		Cs-134	<2.13E-02	0.00E+00	2.13E-02
		Cs-137	<2.49E-02	0.00E+00	2.49E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	8.97E-01	2.99E-01	3.27E-01
462569	10/31/2017 - 11/7/2017	I-131	<4.19E-02	0.00E+00	4.19E-02
		Cs-134	<3.32E-02	0.00E+00	3.32E-02
		Cs-137	<2.71E-02	0.00E+00	2.71E-02
		Be-7	<2.09E-01	0.00E+00	2.09E-01
		K-40	6.64E-01	3.28E-01	3.86E-01
463053	11/7/2017 - 11/14/2017	I-131	<4.64E-02	0.00E+00	4.64E-02
		Cs-134	<2.75E-02	0.00E+00	2.75E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<2.36E-01	0.00E+00	2.36E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 202 [ INDICATOR - S @ 1 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463053	11/7/2017 - 11/14/2017	K-40	9.29E-01	4.21E-01	5.20E-01
463477	11/14/2017 - 11/21/2017	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.79E-02	0.00E+00	2.79E-02
		Cs-137	<2.59E-02	0.00E+00	2.59E-02
		Be-7	<1.97E-01	0.00E+00	1.97E-01
		K-40	1.02E+00	3.10E-01	2.88E-01
464136	11/21/2017 - 11/28/2017	I-131	<4.36E-02	0.00E+00	4.36E-02
		Cs-134	<2.75E-02	0.00E+00	2.75E-02
		Cs-137	<3.45E-02	0.00E+00	3.45E-02
		Be-7	<3.13E-01	0.00E+00	3.13E-01
		K-40	1.02E+00	3.59E-01	2.72E-01
464666	11/28/2017 - 12/5/2017	I-131	<4.14E-02	0.00E+00	4.14E-02
		Cs-134	<2.29E-02	0.00E+00	2.29E-02
		Cs-137	<3.26E-02	0.00E+00	3.26E-02
		Be-7	<2.31E-01	0.00E+00	2.31E-01
		K-40	9.43E-01	4.07E-01	4.85E-01
464927	12/5/2017 - 12/12/2017	I-131	<4.41E-02	0.00E+00	4.41E-02
		Cs-134	<3.00E-02	0.00E+00	3.00E-02
		Cs-137	<3.00E-02	0.00E+00	3.00E-02
		Be-7	<2.60E-01	0.00E+00	2.60E-01
		K-40	1.04E+00	3.97E-01	4.00E-01
465182	12/12/2017 - 12/19/2017	I-131	<4.85E-02	0.00E+00	4.85E-02
		Cs-134	<3.99E-02	0.00E+00	3.99E-02
		Cs-137	<2.69E-02	0.00E+00	2.69E-02
		Be-7	<2.38E-01	0.00E+00	2.38E-01
		K-40	1.20E+00	4.50E-01	4.94E-01
465564	12/19/2017 - 12/26/2017	I-131	<5.37E-02	0.00E+00	5.37E-02
		Cs-134	<2.73E-02	0.00E+00	2.73E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.93E-01	0.00E+00	1.93E-01
		K-40	1.03E+00	2.77E-01	2.06E-01
465944	12/26/2017 - 1/2/2018	I-131	<5.49E-02	0.00E+00	5.49E-02
		Cs-134	<2.01E-02	0.00E+00	2.01E-02
		Cs-137	<3.09E-02	0.00E+00	3.09E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	1.13E+00	3.44E-01	3.11E-01

## Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432172	12/27/2016 - 1/3/2017	I-131	<2.13E-02	0.00E+00	2.13E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<8.17E-02	0.00E+00	8.17E-02
		K-40	9.95E-01	3.36E-01	2.51E-01
432877	1/3/2017 - 1/10/2017	I-131	<2.16E-02	0.00E+00	2.16E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02
		Be-7	<1.50E-01	0.00E+00	1.50E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432877	1/3/2017 - 1/10/2017	K-40	9.39E-01	3.16E-01	6.70E-02
433277	1/10/2017 - 1/17/2017	I-131	<2.10E-02	0.00E+00	2.10E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.83E-02	0.00E+00	1.83E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	1.24E+00	3.93E-01	3.55E-01
433694	1/17/2017 - 1/24/2017	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.43E-02	0.00E+00	1.43E-02
		Be-7	<9.32E-02	0.00E+00	9.32E-02
		K-40	6.05E-01	2.61E-01	2.62E-01
434429	1/24/2017 - 1/31/2017	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.82E-02	0.00E+00	1.82E-02
		Cs-137	<2.03E-02	0.00E+00	2.03E-02
		Be-7	<6.48E-02	0.00E+00	6.48E-02
		K-40	6.43E-01	3.37E-01	4.34E-01
435073	1/31/2017 - 2/7/2017	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.59E-01	0.00E+00	1.59E-01
		K-40	6.77E-01	2.96E-01	2.76E-01
435783	2/7/2017 - 2/14/2017	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	7.33E-01	2.78E-01	2.34E-01
436233	2/14/2017 - 2/21/2017	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.13E-02	0.00E+00	1.13E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	7.99E-01	2.84E-01	2.08E-01
436684	2/21/2017 - 2/28/2017	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	5.68E-01	3.28E-01	4.51E-01
437545	2/28/2017 - 3/7/2017	I-131	<2.06E-02	0.00E+00	2.06E-02
		Cs-134	<1.65E-02	0.00E+00	1.65E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	7.84E-01	2.86E-01	2.26E-01
438275	3/7/2017 - 3/14/2017	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<8.38E-02	0.00E+00	8.38E-02
		K-40	7.96E-01	3.01E-01	2.44E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438778	3/14/2017 - 3/21/2017	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<2.27E-02	0.00E+00	2.27E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01
		K-40	7.05E-01	2.80E-01	2.51E-01
439128	3/21/2017 - 3/28/2017	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	9.44E-01	3.27E-01	2.60E-01
439974	3/28/2017 - 4/4/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	7.00E-01	2.80E-01	2.72E-01
440572	4/4/2017 - 4/11/2017	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<1.69E-02	0.00E+00	1.69E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	8.92E-01	3.17E-01	2.66E-01
441386	4/11/2017 - 4/18/2017	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<8.55E-02	0.00E+00	8.55E-02
		K-40	6.67E-01	2.42E-01	5.65E-02
441831	4/18/2017 - 4/25/2017	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	9.80E-01	3.14E-01	2.22E-01
442259	4/25/2017 - 5/2/2017	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.97E-02	0.00E+00	1.97E-02
		Be-7	<1.28E-01	0.00E+00	1.28E-01
		K-40	8.51E-01	2.74E-01	5.49E-02
442845	5/2/2017 - 5/9/2017	I-131	<1.34E-02	0.00E+00	1.34E-02
		Cs-134	<1.34E-02	0.00E+00	1.34E-02
		Cs-137	<1.10E-02	0.00E+00	1.10E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	7.92E-01	2.81E-01	2.16E-01
443273	5/9/2017 - 5/16/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.90E-02	0.00E+00	1.90E-02
		Cs-137	<1.26E-02	0.00E+00	1.26E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	6.40E-01	2.48E-01	6.20E-02
443831	5/16/2017 - 5/23/2017	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443831	5/16/2017 - 5/23/2017	Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	6.38E-01	2.87E-01	3.26E-01
444225	5/23/2017 - 5/30/2017	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<8.39E-02	0.00E+00	8.39E-02
		K-40	1.63E-01	1.61E-01	2.39E-01
445295	5/30/2017 - 6/6/2017	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.36E-02	0.00E+00	1.36E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.69E-01	2.59E-01	3.19E-01
446294	6/6/2017 - 6/13/2017	I-131	<2.47E-02	0.00E+00	2.47E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<5.12E-01	0.00E+00	5.12E-01
446798	6/13/2017 - 6/20/2017	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<6.99E-03	0.00E+00	6.99E-03
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<9.18E-02	0.00E+00	9.18E-02
		K-40	3.31E-01	2.12E-01	2.70E-01
447131	6/20/2017 - 6/27/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.34E-02	0.00E+00	9.34E-02
		K-40	<4.63E-01	0.00E+00	4.63E-01
447777	6/27/2017 - 7/4/2017	I-131	<1.53E-02	0.00E+00	1.53E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	1.09E+00	3.21E-01	5.82E-02
448241	7/4/2017 - 7/11/2017	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.25E-02	0.00E+00	1.25E-02
		Be-7	<9.97E-02	0.00E+00	9.97E-02
		K-40	4.83E-01	2.18E-01	1.95E-01
448867	7/11/2017 - 7/18/2017	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<4.06E-01	0.00E+00	4.06E-01
449183	7/18/2017 - 7/25/2017	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
449183	7/18/2017 - 7/25/2017	K-40	3.23E-01	2.07E-01	2.59E-01
449922	7/25/2017 - 8/1/2017	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.27E-02	0.00E+00	1.27E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	4.76E-01	2.03E-01	5.61E-02
450167	8/1/2017 - 8/8/2017	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	<4.03E-01	0.00E+00	4.03E-01
450700	8/8/2017 - 8/15/2017	I-131	<2.05E-02	0.00E+00	2.05E-02
		Cs-134	<9.15E-03	0.00E+00	9.15E-03
		Cs-137	<3.32E-03	0.00E+00	3.32E-03
		Be-7	<1.18E-01	0.00E+00	1.18E-01
		K-40	<4.41E-01	0.00E+00	4.41E-01
451151	8/15/2017 - 8/22/2017	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<7.26E-02	0.00E+00	7.26E-02
		K-40	2.40E-01	1.91E-01	2.65E-01
451513	8/22/2017 - 8/29/2017	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.02E-02	0.00E+00	1.02E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<4.42E-01	0.00E+00	4.42E-01
452317	8/29/2017 - 9/5/2017	I-131	<2.17E-02	0.00E+00	2.17E-02
		Cs-134	<1.91E-02	0.00E+00	1.91E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	<5.49E-01	0.00E+00	5.49E-01
452760	9/5/2017 - 9/12/2017	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.96E-02	0.00E+00	1.96E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<9.54E-02	0.00E+00	9.54E-02
		K-40	4.48E-01	2.14E-01	1.93E-01
453406	9/12/2017 - 9/19/2017	I-131	<1.40E-02	0.00E+00	1.40E-02
		Cs-134	<1.09E-02	0.00E+00	1.09E-02
		Cs-137	<1.66E-02	0.00E+00	1.66E-02
		Be-7	<8.74E-02	0.00E+00	8.74E-02
		K-40	3.40E-01	1.89E-01	1.81E-01
454172	9/19/2017 - 9/26/2017	I-131	<1.57E-02	0.00E+00	1.57E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<9.20E-02	0.00E+00	9.20E-02
		K-40	<4.65E-01	0.00E+00	4.65E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
455032	9/26/2017 - 10/3/2017	I-131	<3.32E-02	0.00E+00	3.32E-02
		Cs-134	<3.07E-02	0.00E+00	3.07E-02
		Cs-137	<2.39E-02	0.00E+00	2.39E-02
		Be-7	<1.78E-01	0.00E+00	1.78E-01
		K-40	<6.52E-01	0.00E+00	6.52E-01
455387	10/3/2017 - 10/10/2017	I-131	<3.47E-02	0.00E+00	3.47E-02
		Cs-134	<3.35E-02	0.00E+00	3.35E-02
		Cs-137	<3.23E-02	0.00E+00	3.23E-02
		Be-7	<1.85E-01	0.00E+00	1.85E-01
		K-40	1.04E+00	3.58E-01	2.93E-01
456004	10/10/2017 - 10/17/2017	I-131	<3.72E-02	0.00E+00	3.72E-02
		Cs-134	<3.74E-02	0.00E+00	3.74E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<2.07E-01	0.00E+00	2.07E-01
		K-40	1.08E+00	3.43E-01	6.95E-02
461388	10/17/2017 - 10/24/2017	I-131	<4.54E-02	0.00E+00	4.54E-02
		Cs-134	<3.98E-02	0.00E+00	3.98E-02
		Cs-137	<3.68E-02	0.00E+00	3.68E-02
		Be-7	<2.55E-01	0.00E+00	2.55E-01
		K-40	1.27E+00	4.11E-01	3.45E-01
461934	10/24/2017 - 10/31/2017	I-131	<5.51E-02	0.00E+00	5.51E-02
		Cs-134	<3.04E-02	0.00E+00	3.04E-02
		Cs-137	<2.52E-02	0.00E+00	2.52E-02
		Be-7	<1.74E-01	0.00E+00	1.74E-01
		K-40	1.06E+00	3.14E-01	2.73E-01
462570	10/31/2017 - 11/7/2017	I-131	<4.66E-02	0.00E+00	4.66E-02
		Cs-134	<3.74E-02	0.00E+00	3.74E-02
		Cs-137	<3.49E-02	0.00E+00	3.49E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	<7.16E-01	0.00E+00	7.16E-01
463054	11/7/2017 - 11/14/2017	I-131	<4.75E-02	0.00E+00	4.75E-02
		Cs-134	<3.82E-02	0.00E+00	3.82E-02
		Cs-137	<3.42E-02	0.00E+00	3.42E-02
		Be-7	<2.37E-01	0.00E+00	2.37E-01
		K-40	<7.95E-01	0.00E+00	7.95E-01
463478	11/14/2017 - 11/21/2017	I-131	<5.18E-02	0.00E+00	5.18E-02
		Cs-134	<2.76E-02	0.00E+00	2.76E-02
		Cs-137	<2.19E-02	0.00E+00	2.19E-02
		Be-7	<1.84E-01	0.00E+00	1.84E-01
		K-40	1.03E+00	3.26E-01	3.61E-01
464137	11/21/2017 - 11/28/2017	I-131	<4.16E-02	0.00E+00	4.16E-02
		Cs-134	<3.69E-02	0.00E+00	3.69E-02
		Cs-137	<3.46E-02	0.00E+00	3.46E-02
		Be-7	<2.66E-01	0.00E+00	2.66E-01
		K-40	7.48E-01	3.78E-01	4.78E-01
464667	11/28/2017 - 12/5/2017	I-131	<4.35E-02	0.00E+00	4.35E-02
		Cs-134	<3.85E-02	0.00E+00	3.85E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 203 [ INDICATOR - SSW @ 2 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464667	11/28/2017 - 12/5/2017	Cs-137	<3.48E-02	0.00E+00	3.48E-02
		Be-7	<2.56E-01	0.00E+00	2.56E-01
		K-40	9.53E-01	3.85E-01	4.19E-01
464928	12/5/2017 - 12/12/2017	I-131	<5.06E-02	0.00E+00	5.06E-02
		Cs-134	<3.50E-02	0.00E+00	3.50E-02
		Cs-137	<3.44E-02	0.00E+00	3.44E-02
		Be-7	<2.67E-01	0.00E+00	2.67E-01
		K-40	7.53E-01	4.35E-01	6.05E-01
465183	12/12/2017 - 12/19/2017	I-131	<4.81E-02	0.00E+00	4.81E-02
		Cs-134	<3.60E-02	0.00E+00	3.60E-02
		Cs-137	<3.89E-02	0.00E+00	3.89E-02
		Be-7	<2.38E-01	0.00E+00	2.38E-01
		K-40	9.20E-01	3.93E-01	4.44E-01
465565	12/19/2017 - 12/26/2017	I-131	<5.52E-02	0.00E+00	5.52E-02
		Cs-134	<3.01E-02	0.00E+00	3.01E-02
		Cs-137	<2.72E-02	0.00E+00	2.72E-02
		Be-7	<1.98E-01	0.00E+00	1.98E-01
		K-40	8.08E-01	2.62E-01	2.55E-01
465945	12/26/2017 - 1/2/2018	I-131	<5.36E-02	0.00E+00	5.36E-02
		Cs-134	<2.83E-02	0.00E+00	2.83E-02
		Cs-137	<2.85E-02	0.00E+00	2.85E-02
		Be-7	<2.20E-01	0.00E+00	2.20E-01
		K-40	9.87E-01	2.92E-01	1.89E-01

## Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432173	12/27/2016 - 1/3/2017	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.44E-01	0.00E+00	1.44E-01
		K-40	7.98E-01	2.90E-01	2.24E-01
432878	1/3/2017 - 1/10/2017	I-131	<2.29E-02	0.00E+00	2.29E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<6.92E-02	0.00E+00	6.92E-02
		K-40	7.10E-01	2.70E-01	6.64E-02
433278	1/10/2017 - 1/17/2017	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	1.13E+00	3.64E-01	3.20E-01
433695	1/17/2017 - 1/24/2017	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.35E-02	0.00E+00	1.35E-02
		Cs-137	<1.54E-02	0.00E+00	1.54E-02
		Be-7	<9.99E-02	0.00E+00	9.99E-02
		K-40	9.02E-01	2.93E-01	5.97E-02
434430	1/24/2017 - 1/31/2017	I-131	<1.35E-02	0.00E+00	1.35E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434430	1/24/2017 - 1/31/2017	Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	1.06E+00	3.53E-01	2.94E-01
435074	1/31/2017 - 2/7/2017	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<9.07E-02	0.00E+00	9.07E-02
		K-40	7.86E-01	2.91E-01	2.23E-01
435784	2/7/2017 - 2/14/2017	I-131	<2.18E-02	0.00E+00	2.18E-02
		Cs-134	<9.63E-03	0.00E+00	9.63E-03
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	7.83E-01	2.88E-01	2.15E-01
436234	2/14/2017 - 2/21/2017	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.36E-02	0.00E+00	1.36E-02
		Cs-137	<1.81E-02	0.00E+00	1.81E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	7.68E-01	3.01E-01	2.82E-01
436685	2/21/2017 - 2/28/2017	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<1.53E-02	0.00E+00	1.53E-02
		Be-7	<1.09E-01	0.00E+00	1.09E-01
		K-40	9.88E-01	3.08E-01	5.95E-02
437546	2/28/2017 - 3/7/2017	I-131	<1.24E-02	0.00E+00	1.24E-02
		Cs-134	<1.87E-02	0.00E+00	1.87E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.04E-01	0.00E+00	1.04E-01
		K-40	9.63E-01	3.06E-01	6.07E-02
438276	3/7/2017 - 3/14/2017	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	7.70E-01	3.00E-01	2.95E-01
438779	3/14/2017 - 3/21/2017	I-131	<1.37E-02	0.00E+00	1.37E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<2.15E-02	0.00E+00	2.15E-02
		Be-7	<8.11E-02	0.00E+00	8.11E-02
		K-40	1.11E+00	3.72E-01	3.35E-01
439129	3/21/2017 - 3/28/2017	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.21E-02	0.00E+00	1.21E-02
		Cs-137	<1.16E-02	0.00E+00	1.16E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	8.62E-01	2.79E-01	5.70E-02
439975	3/28/2017 - 4/4/2017	I-131	<1.94E-02	0.00E+00	1.94E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439975	3/28/2017 - 4/4/2017	K-40	6.46E-01	2.39E-01	5.65E-02
440573	4/4/2017 - 4/11/2017	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02
		Cs-137	<1.98E-02	0.00E+00	1.98E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	7.51E-01	2.56E-01	5.50E-02
441387	4/11/2017 - 4/18/2017	I-131	<1.67E-02	0.00E+00	1.67E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.60E-02	0.00E+00	1.60E-02
		Be-7	<9.32E-02	0.00E+00	9.32E-02
		K-40	7.44E-01	2.89E-01	2.46E-01
441832	4/18/2017 - 4/25/2017	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.68E-02	0.00E+00	1.68E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<1.19E-01	0.00E+00	1.19E-01
		K-40	6.85E-01	2.53E-01	5.98E-02
442260	4/25/2017 - 5/2/2017	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<9.15E-03	0.00E+00	9.15E-03
		Cs-137	<1.73E-02	0.00E+00	1.73E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	6.19E-01	2.32E-01	5.59E-02
442846	5/2/2017 - 5/9/2017	I-131	<1.22E-02	0.00E+00	1.22E-02
		Cs-134	<8.90E-03	0.00E+00	8.90E-03
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	8.39E-01	2.90E-01	2.16E-01
443274	5/9/2017 - 5/16/2017	I-131	<1.72E-02	0.00E+00	1.72E-02
		Cs-134	<9.16E-03	0.00E+00	9.16E-03
		Cs-137	<9.02E-03	0.00E+00	9.02E-03
		Be-7	<9.48E-02	0.00E+00	9.48E-02
		K-40	8.26E-01	2.70E-01	5.60E-02
443832	5/16/2017 - 5/23/2017	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<8.69E-02	0.00E+00	8.69E-02
		K-40	8.28E-01	2.93E-01	2.24E-01
444226	5/23/2017 - 5/30/2017	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<2.14E-02	0.00E+00	2.14E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	2.51E-01	1.67E-01	1.94E-01
445296	5/30/2017 - 6/6/2017	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<9.10E-03	0.00E+00	9.10E-03
		Cs-137	<8.97E-03	0.00E+00	8.97E-03
		Be-7	<1.37E-01	0.00E+00	1.37E-01
		K-40	6.16E-01	2.31E-01	5.57E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446295	6/6/2017 - 6/13/2017	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<9.03E-03	0.00E+00	9.03E-03
		Cs-137	<1.30E-02	0.00E+00	1.30E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	2.57E-01	1.84E-01	2.37E-01
446799	6/13/2017 - 6/20/2017	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<1.13E-01	0.00E+00	1.13E-01
		K-40	1.06E+00	3.29E-01	2.15E-01
447132	6/20/2017 - 6/27/2017	I-131	<1.95E-02	0.00E+00	1.95E-02
		Cs-134	<1.13E-02	0.00E+00	1.13E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	3.45E-01	2.28E-01	2.97E-01
447778	6/27/2017 - 7/4/2017	I-131	<1.84E-02	0.00E+00	1.84E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<2.27E-02	0.00E+00	2.27E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<3.76E-01	0.00E+00	3.76E-01
448242	7/4/2017 - 7/11/2017	I-131	<1.59E-02	0.00E+00	1.59E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<2.07E-02	0.00E+00	2.07E-02
		Be-7	<1.10E-01	0.00E+00	1.10E-01
		K-40	4.70E-01	2.01E-01	5.54E-02
448868	7/11/2017 - 7/18/2017	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<1.63E-02	0.00E+00	1.63E-02
		Be-7	<8.70E-02	0.00E+00	8.70E-02
		K-40	3.25E-01	1.92E-01	2.10E-01
449184	7/18/2017 - 7/25/2017	I-131	<1.93E-02	0.00E+00	1.93E-02
		Cs-134	<1.47E-02	0.00E+00	1.47E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.25E-01	0.00E+00	1.25E-01
		K-40	2.64E-01	1.63E-01	1.64E-01
449923	7/25/2017 - 8/1/2017	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.26E-02	0.00E+00	1.26E-02
		Cs-137	<2.37E-02	0.00E+00	2.37E-02
		Be-7	<1.01E-01	0.00E+00	1.01E-01
		K-40	<4.28E-01	0.00E+00	4.28E-01
450168	8/1/2017 - 8/8/2017	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<2.31E-02	0.00E+00	2.31E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	<4.37E-01	0.00E+00	4.37E-01
450701	8/8/2017 - 8/15/2017	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA	
450701	8/8/2017 - 8/15/2017	Cs-137	<1.98E-02	0.00E+00	1.98E-02	
		Be-7	<9.29E-02	0.00E+00	9.29E-02	
		K-40	<4.92E-01	0.00E+00	4.92E-01	
451152	8/15/2017 - 8/22/2017	I-131	<2.54E-02	0.00E+00	2.54E-02	
		Cs-134	<1.37E-02	0.00E+00	1.37E-02	
		Cs-137	<1.70E-02	0.00E+00	1.70E-02	
		Be-7	<1.01E-01	0.00E+00	1.01E-01	
		K-40	3.48E-01	2.13E-01	2.56E-01	
451514	8/22/2017 - 8/29/2017	I-131	<1.71E-02	0.00E+00	1.71E-02	
		Cs-134	<1.26E-02	0.00E+00	1.26E-02	
		Cs-137	<1.28E-02	0.00E+00	1.28E-02	
		Be-7	<9.29E-02	0.00E+00	9.29E-02	
		K-40	2.54E-01	1.69E-01	1.96E-01	
452318	8/29/2017 - 9/5/2017	I-131	<2.09E-02	0.00E+00	2.09E-02	
		Cs-134	<1.57E-02	0.00E+00	1.57E-02	
		Cs-137	<1.65E-02	0.00E+00	1.65E-02	
		Be-7	<1.01E-01	0.00E+00	1.01E-01	
		K-40	2.09E-01	2.00E-01	3.04E-01	
452761	9/5/2017 - 9/12/2017	I-131	<2.40E-02	0.00E+00	2.40E-02	
		Cs-134	<1.68E-02	0.00E+00	1.68E-02	
		Cs-137	<2.09E-02	0.00E+00	2.09E-02	
		Be-7	<1.29E-01	0.00E+00	1.29E-01	
		K-40	<4.60E-01	0.00E+00	4.60E-01	
453407	9/12/2017 - 9/19/2017	I-131	<2.04E-02	0.00E+00	2.04E-02	
		Cs-134	<1.49E-02	0.00E+00	1.49E-02	
		Cs-137	<1.64E-02	0.00E+00	1.64E-02	
		Be-7	<1.26E-01	0.00E+00	1.26E-01	
		K-40	3.79E-01	1.77E-01	5.41E-02	
454173	9/19/2017 - 9/26/2017	I-131	<1.60E-02	0.00E+00	1.60E-02	
		Cs-134	<2.14E-02	0.00E+00	2.14E-02	
		Cs-137	<1.99E-02	0.00E+00	1.99E-02	
		Be-7	<1.23E-01	0.00E+00	1.23E-01	
		K-40	<4.13E-01	0.00E+00	4.13E-01	
455033	9/26/2017 - 10/3/2017	I-131	<2.91E-02	0.00E+00	2.91E-02	
		Cs-134	<2.22E-02	0.00E+00	2.22E-02	
		Cs-137	<3.00E-02	0.00E+00	3.00E-02	
		Be-7	<1.87E-01	0.00E+00	1.87E-01	
		K-40	6.66E-01	2.58E-01	6.45E-02	
455388	10/3/2017 - 10/10/2017	I-131	<2.80E-02	0.00E+00	2.80E-02	
		Cs-134	<3.11E-02	0.00E+00	3.11E-02	
		Cs-137	<3.63E-02	0.00E+00	3.63E-02	
		Be-7	<1.64E-01	0.00E+00	1.64E-01	
		K-40	6.21E-01	2.76E-01	2.73E-01	
456005	10/10/2017 - 10/17/2017	I-131	<3.23E-02	0.00E+00	3.23E-02	
		Cs-134	<3.14E-02	0.00E+00	3.14E-02	
		Cs-137	<2.84E-02	0.00E+00	2.84E-02	
		Be-7	<1.64E-01	0.00E+00	1.64E-01	





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
456005	10/10/2017 - 10/17/2017	K-40	5.16E-01	3.06E-01	4.02E-01
461389	10/17/2017 - 10/24/2017	I-131	<4.03E-02	0.00E+00	4.03E-02
		Cs-134	<3.82E-02	0.00E+00	3.82E-02
		Cs-137	<3.72E-02	0.00E+00	3.72E-02
		Be-7	<2.02E-01	0.00E+00	2.02E-01
		K-40	8.41E-01	4.08E-01	5.26E-01
461935	10/24/2017 - 10/31/2017	I-131	<5.14E-02	0.00E+00	5.14E-02
		Cs-134	<2.16E-02	0.00E+00	2.16E-02
		Cs-137	<2.50E-02	0.00E+00	2.50E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	6.28E-01	2.59E-01	3.37E-01
462571	10/31/2017 - 11/7/2017	I-131	<4.41E-02	0.00E+00	4.41E-02
		Cs-134	<3.30E-02	0.00E+00	3.30E-02
		Cs-137	<3.53E-02	0.00E+00	3.53E-02
		Be-7	<2.28E-01	0.00E+00	2.28E-01
		K-40	1.01E+00	3.98E-01	4.34E-01
463055	11/7/2017 - 11/14/2017	I-131	<4.28E-02	0.00E+00	4.28E-02
		Cs-134	<4.53E-02	0.00E+00	4.53E-02
		Cs-137	<3.94E-02	0.00E+00	3.94E-02
		Be-7	<2.79E-01	0.00E+00	2.79E-01
		K-40	1.00E+00	3.77E-01	3.64E-01
463479	11/14/2017 - 11/21/2017	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<2.41E-02	0.00E+00	2.41E-02
		Cs-137	<2.66E-02	0.00E+00	2.66E-02
		Be-7	<2.13E-01	0.00E+00	2.13E-01
		K-40	8.33E-01	2.86E-01	3.12E-01
464138	11/21/2017 - 11/28/2017	I-131	<4.64E-02	0.00E+00	4.64E-02
		Cs-134	<3.77E-02	0.00E+00	3.77E-02
		Cs-137	<2.88E-02	0.00E+00	2.88E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	8.60E-01	3.81E-01	4.44E-01
464668	11/28/2017 - 12/5/2017	I-131	<4.88E-02	0.00E+00	4.88E-02
		Cs-134	<4.11E-02	0.00E+00	4.11E-02
		Cs-137	<3.41E-02	0.00E+00	3.41E-02
		Be-7	<2.64E-01	0.00E+00	2.64E-01
		K-40	1.00E+00	4.32E-01	5.27E-01
464929	12/5/2017 - 12/12/2017	I-131	<4.99E-02	0.00E+00	4.99E-02
		Cs-134	<3.55E-02	0.00E+00	3.55E-02
		Cs-137	<2.78E-02	0.00E+00	2.78E-02
		Be-7	<2.50E-01	0.00E+00	2.50E-01
		K-40	7.87E-01	3.46E-01	3.71E-01
465184	12/12/2017 - 12/19/2017	I-131	<4.49E-02	0.00E+00	4.49E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<4.10E-02	0.00E+00	4.10E-02
		Be-7	<2.29E-01	0.00E+00	2.29E-01
		K-40	8.05E-01	3.83E-01	4.68E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 204 [ CONTROL - NNE @ 22.4 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465566	12/19/2017 - 12/26/2017	I-131	<5.27E-02	0.00E+00	5.27E-02
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<2.22E-02	0.00E+00	2.22E-02
		Be-7	<1.60E-01	0.00E+00	1.60E-01
		K-40	1.06E+00	2.72E-01	2.72E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
465946	12/26/2017 - 1/2/2018	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.82E-02	0.00E+00	2.82E-02
		Cs-137	<2.98E-02	0.00E+00	2.98E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	9.59E-01	2.81E-01	2.31E-01

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432174	12/27/2016 - 1/3/2017	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.64E-02	0.00E+00	1.64E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.27E-01	0.00E+00	1.27E-01
		K-40	<6.10E-01	0.00E+00	6.10E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432879	1/3/2017 - 1/10/2017	I-131	<1.13E-02	0.00E+00	1.13E-02
		Cs-134	<1.38E-02	0.00E+00	1.38E-02
		Cs-137	<2.47E-02	0.00E+00	2.47E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	7.73E-01	3.05E-01	2.88E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433279	1/10/2017 - 1/17/2017	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.50E-02	0.00E+00	1.50E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	9.18E-01	2.92E-01	5.79E-02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433696	1/17/2017 - 1/24/2017	I-131	<1.63E-02	0.00E+00	1.63E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	7.02E-01	3.42E-01	4.28E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434431	1/24/2017 - 1/31/2017	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.39E-01	0.00E+00	1.39E-01
		K-40	9.68E-01	3.78E-01	4.20E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435075	1/31/2017 - 2/7/2017	I-131	<2.01E-02	0.00E+00	2.01E-02
		Cs-134	<1.66E-02	0.00E+00	1.66E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.33E-01	0.00E+00	1.33E-01
		K-40	9.71E-01	3.30E-01	2.44E-01

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435785	2/7/2017 - 2/14/2017	I-131	<2.43E-02	0.00E+00	2.43E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.05E-02	0.00E+00	2.05E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<6.27E-01	0.00E+00	6.27E-01

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436235	2/14/2017 - 2/21/2017	I-131	<1.89E-02	0.00E+00	1.89E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<1.79E-02	0.00E+00	1.79E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<6.49E-01	0.00E+00	6.49E-01
436686	2/21/2017 - 2/28/2017	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.52E-01	0.00E+00	1.52E-01
		K-40	8.97E-01	3.13E-01	2.26E-01
437547	2/28/2017 - 3/7/2017	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<9.45E-03	0.00E+00	9.45E-03
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	8.74E-01	2.83E-01	5.78E-02
438277	3/7/2017 - 3/14/2017	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.84E-02	0.00E+00	1.84E-02
		Cs-137	<1.85E-02	0.00E+00	1.85E-02
		Be-7	<9.15E-02	0.00E+00	9.15E-02
		K-40	7.06E-01	2.94E-01	2.90E-01
438780	3/14/2017 - 3/21/2017	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<9.68E-03	0.00E+00	9.68E-03
		Cs-137	<1.56E-02	0.00E+00	1.56E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	8.31E-01	2.78E-01	5.92E-02
439130	3/21/2017 - 3/28/2017	I-131	<1.82E-02	0.00E+00	1.82E-02
		Cs-134	<1.57E-02	0.00E+00	1.57E-02
		Cs-137	<1.28E-02	0.00E+00	1.28E-02
		Be-7	<1.17E-01	0.00E+00	1.17E-01
		K-40	6.29E-01	2.48E-01	6.31E-02
439976	3/28/2017 - 4/4/2017	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.17E-02	0.00E+00	1.17E-02
		Cs-137	<1.76E-02	0.00E+00	1.76E-02
		Be-7	<1.30E-01	0.00E+00	1.30E-01
		K-40	7.59E-01	2.85E-01	2.07E-01
440574	4/4/2017 - 4/11/2017	I-131	<1.86E-02	0.00E+00	1.86E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	7.47E-01	2.61E-01	5.78E-02
441388	4/11/2017 - 4/18/2017	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.04E-02	0.00E+00	1.04E-02
		Cs-137	<1.11E-02	0.00E+00	1.11E-02
		Be-7	<1.02E-01	0.00E+00	1.02E-01
		K-40	7.77E-01	3.19E-01	3.54E-01
441833	4/18/2017 - 4/25/2017	I-131	<1.61E-02	0.00E+00	1.61E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
441833	4/18/2017 - 4/25/2017	Cs-137	<1.57E-02	0.00E+00	1.57E-02
		Be-7	<9.35E-02	0.00E+00	9.35E-02
		K-40	9.06E-01	2.99E-01	2.08E-01
442261	4/25/2017 - 5/2/2017	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.00E-02	0.00E+00	1.00E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	1.13E+00	3.35E-01	6.12E-02
442847	5/2/2017 - 5/9/2017	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.49E-02	0.00E+00	1.49E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<8.57E-02	0.00E+00	8.57E-02
		K-40	7.61E-01	2.63E-01	5.73E-02
443275	5/9/2017 - 5/16/2017	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.63E-02	0.00E+00	1.63E-02
		Cs-137	<1.46E-02	0.00E+00	1.46E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	1.05E+00	3.24E-01	2.11E-01
443833	5/16/2017 - 5/23/2017	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.75E-02	0.00E+00	1.75E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.56E-01	0.00E+00	1.56E-01
		K-40	<5.57E-01	0.00E+00	5.57E-01
444227	5/23/2017 - 5/30/2017	I-131	<2.27E-02	0.00E+00	2.27E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	7.21E-01	2.55E-01	5.74E-02
445297	5/30/2017 - 6/6/2017	I-131	<1.52E-02	0.00E+00	1.52E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<2.36E-02	0.00E+00	2.36E-02
		Be-7	<1.15E-01	0.00E+00	1.15E-01
		K-40	<3.82E-01	0.00E+00	3.82E-01
446296	6/6/2017 - 6/13/2017	I-131	<2.41E-02	0.00E+00	2.41E-02
		Cs-134	<1.72E-02	0.00E+00	1.72E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.21E-01	0.00E+00	1.21E-01
		K-40	7.78E-01	2.65E-01	5.70E-02
446800	6/13/2017 - 6/20/2017	I-131	<2.37E-02	0.00E+00	2.37E-02
		Cs-134	<1.31E-02	0.00E+00	1.31E-02
		Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.45E-01	0.00E+00	1.45E-01
		K-40	3.97E-01	2.15E-01	2.16E-01
447133	6/20/2017 - 6/27/2017	I-131	<1.75E-02	0.00E+00	1.75E-02
		Cs-134	<1.52E-02	0.00E+00	1.52E-02
		Cs-137	<2.10E-02	0.00E+00	2.10E-02
		Be-7	<1.35E-01	0.00E+00	1.35E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447133	6/20/2017 - 6/27/2017	K-40	<4.78E-01	0.00E+00	4.78E-01
447779	6/27/2017 - 7/4/2017	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.49E-02	0.00E+00	1.49E-02
		Be-7	<8.80E-02	0.00E+00	8.80E-02
		K-40	7.09E-01	2.94E-01	3.01E-01
448243	7/4/2017 - 7/11/2017	I-131	<2.09E-02	0.00E+00	2.09E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<2.61E-02	0.00E+00	2.61E-02
		Be-7	<9.37E-02	0.00E+00	9.37E-02
		K-40	<4.68E-01	0.00E+00	4.68E-01
448869	7/11/2017 - 7/18/2017	I-131	<1.73E-02	0.00E+00	1.73E-02
		Cs-134	<1.37E-02	0.00E+00	1.37E-02
		Cs-137	<1.70E-02	0.00E+00	1.70E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	6.00E-01	2.30E-01	5.61E-02
449185	7/18/2017 - 7/25/2017	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.20E-02	0.00E+00	1.20E-02
		Cs-137	<1.95E-02	0.00E+00	1.95E-02
		Be-7	<9.72E-02	0.00E+00	9.72E-02
		K-40	<3.71E-01	0.00E+00	3.71E-01
449924	7/25/2017 - 8/1/2017	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<1.93E-02	0.00E+00	1.93E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	<4.22E-01	0.00E+00	4.22E-01
450169	8/1/2017 - 8/8/2017	I-131	<1.47E-02	0.00E+00	1.47E-02
		Cs-134	<1.29E-02	0.00E+00	1.29E-02
		Cs-137	<1.84E-02	0.00E+00	1.84E-02
		Be-7	<8.61E-02	0.00E+00	8.61E-02
		K-40	<4.49E-01	0.00E+00	4.49E-01
450702	8/8/2017 - 8/15/2017	I-131	<1.66E-02	0.00E+00	1.66E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<2.37E-02	0.00E+00	2.37E-02
		Be-7	<1.05E-01	0.00E+00	1.05E-01
		K-40	<5.52E-01	0.00E+00	5.52E-01
451153	8/15/2017 - 8/22/2017	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.48E-02	0.00E+00	1.48E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	4.75E-01	2.32E-01	2.22E-01
451515	8/22/2017 - 8/29/2017	I-131	<2.02E-02	0.00E+00	2.02E-02
		Cs-134	<2.99E-03	0.00E+00	2.99E-03
		Cs-137	<2.39E-02	0.00E+00	2.39E-02
		Be-7	<9.52E-02	0.00E+00	9.52E-02
		K-40	<6.12E-01	0.00E+00	6.12E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
452319	8/29/2017 - 9/5/2017	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<1.43E-02	0.00E+00	1.43E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<8.86E-02	0.00E+00	8.86E-02
		K-40	5.95E-01	2.48E-01	2.00E-01
452762	9/5/2017 - 9/12/2017	I-131	<2.08E-02	0.00E+00	2.08E-02
		Cs-134	<1.60E-02	0.00E+00	1.60E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<1.29E-01	0.00E+00	1.29E-01
		K-40	7.01E-01	2.59E-01	6.12E-02
453408	9/12/2017 - 9/19/2017	I-131	<1.56E-02	0.00E+00	1.56E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<1.78E-02	0.00E+00	1.78E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	3.21E-01	1.85E-01	1.82E-01
454174	9/19/2017 - 9/26/2017	I-131	<2.11E-02	0.00E+00	2.11E-02
		Cs-134	<1.97E-02	0.00E+00	1.97E-02
		Cs-137	<1.48E-02	0.00E+00	1.48E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01
		K-40	4.01E-01	2.21E-01	2.29E-01
455034	9/26/2017 - 10/3/2017	I-131	<4.14E-02	0.00E+00	4.14E-02
		Cs-134	<3.64E-02	0.00E+00	3.64E-02
		Cs-137	<3.27E-02	0.00E+00	3.27E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	<6.06E-01	0.00E+00	6.06E-01
455389	10/3/2017 - 10/10/2017	I-131	<3.66E-02	0.00E+00	3.66E-02
		Cs-134	<3.39E-02	0.00E+00	3.39E-02
		Cs-137	<3.37E-02	0.00E+00	3.37E-02
		Be-7	<1.77E-01	0.00E+00	1.77E-01
		K-40	4.59E-01	2.43E-01	2.45E-01
456006	10/10/2017 - 10/17/2017	I-131	<3.11E-02	0.00E+00	3.11E-02
		Cs-134	<3.56E-02	0.00E+00	3.56E-02
		Cs-137	<2.92E-02	0.00E+00	2.92E-02
		Be-7	<2.05E-01	0.00E+00	2.05E-01
		K-40	5.73E-01	2.76E-01	2.43E-01
461390	10/17/2017 - 10/24/2017	I-131	<4.83E-02	0.00E+00	4.83E-02
		Cs-134	<3.64E-02	0.00E+00	3.64E-02
		Cs-137	<4.11E-02	0.00E+00	4.11E-02
		Be-7	<1.80E-01	0.00E+00	1.80E-01
		K-40	1.05E+00	3.70E-01	2.89E-01
461936	10/24/2017 - 10/31/2017	I-131	<5.60E-02	0.00E+00	5.60E-02
		Cs-134	<2.77E-02	0.00E+00	2.77E-02
		Cs-137	<3.34E-02	0.00E+00	3.34E-02
		Be-7	<2.33E-01	0.00E+00	2.33E-01
		K-40	1.06E+00	3.57E-01	3.87E-01
462572	10/31/2017 - 11/7/2017	I-131	<4.36E-02	0.00E+00	4.36E-02
		Cs-134	<3.63E-02	0.00E+00	3.63E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 205 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
462572	10/31/2017 - 11/7/2017	Cs-137	<3.83E-02	0.00E+00	3.83E-02
		Be-7	<2.59E-01	0.00E+00	2.59E-01
		K-40	8.79E-01	3.53E-01	3.35E-01
463056	11/7/2017 - 11/14/2017	I-131	<5.01E-02	0.00E+00	5.01E-02
		Cs-134	<3.58E-02	0.00E+00	3.58E-02
		Cs-137	<3.74E-02	0.00E+00	3.74E-02
		Be-7	<2.55E-01	0.00E+00	2.55E-01
		K-40	1.18E+00	3.73E-01	7.46E-02
463480	11/14/2017 - 11/21/2017	I-131	<5.50E-02	0.00E+00	5.50E-02
		Cs-134	<2.71E-02	0.00E+00	2.71E-02
		Cs-137	<3.11E-02	0.00E+00	3.11E-02
		Be-7	<1.96E-01	0.00E+00	1.96E-01
		K-40	1.07E+00	2.83E-01	1.86E-01
464139	11/21/2017 - 11/28/2017	I-131	<4.61E-02	0.00E+00	4.61E-02
		Cs-134	<3.25E-02	0.00E+00	3.25E-02
		Cs-137	<4.01E-02	0.00E+00	4.01E-02
		Be-7	<2.40E-01	0.00E+00	2.40E-01
		K-40	9.05E-01	3.75E-01	3.88E-01
464669	11/28/2017 - 12/5/2017	I-131	<4.73E-02	0.00E+00	4.73E-02
		Cs-134	<3.17E-02	0.00E+00	3.17E-02
		Cs-137	<3.21E-02	0.00E+00	3.21E-02
		Be-7	<2.36E-01	0.00E+00	2.36E-01
		K-40	9.64E-01	3.80E-01	3.82E-01
464930	12/5/2017 - 12/12/2017	I-131	<3.87E-02	0.00E+00	3.87E-02
		Cs-134	<2.67E-02	0.00E+00	2.67E-02
		Cs-137	<2.77E-02	0.00E+00	2.77E-02
		Be-7	<2.34E-01	0.00E+00	2.34E-01
		K-40	1.22E+00	3.47E-01	3.43E-01
465185	12/12/2017 - 12/19/2017	I-131	<4.77E-02	0.00E+00	4.77E-02
		Cs-134	<3.52E-02	0.00E+00	3.52E-02
		Cs-137	<4.51E-02	0.00E+00	4.51E-02
		Be-7	<2.92E-01	0.00E+00	2.92E-01
		K-40	1.59E+00	4.62E-01	2.96E-01
465567	12/19/2017 - 12/26/2017	I-131	<5.26E-02	0.00E+00	5.26E-02
		Cs-134	<2.37E-02	0.00E+00	2.37E-02
		Cs-137	<2.03E-02	0.00E+00	2.03E-02
		Be-7	<1.70E-01	0.00E+00	1.70E-01
		K-40	8.68E-01	2.75E-01	3.29E-01
465947	12/26/2017 - 1/2/2018	I-131	<5.07E-02	0.00E+00	5.07E-02
		Cs-134	<2.52E-02	0.00E+00	2.52E-02
		Cs-137	<2.44E-02	0.00E+00	2.44E-02
		Be-7	<1.95E-01	0.00E+00	1.95E-01
		K-40	1.06E+00	2.74E-01	2.32E-01

## Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432175	12/27/2016 - 1/3/2017	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.73E-02	0.00E+00	1.73E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m<sup>3</sup>

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432175	12/27/2016 - 1/3/2017	Cs-137	<2.15E-02	0.00E+00	2.15E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	8.09E-01	3.34E-01	3.43E-01
432880	1/3/2017 - 1/10/2017	I-131	<2.32E-02	0.00E+00	2.32E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.99E-02	0.00E+00	1.99E-02
		Be-7	<9.30E-02	0.00E+00	9.30E-02
		K-40	<6.64E-01	0.00E+00	6.64E-01
433280	1/10/2017 - 1/17/2017	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.74E-02	0.00E+00	1.74E-02
		Cs-137	<2.16E-02	0.00E+00	2.16E-02
		Be-7	<1.48E-01	0.00E+00	1.48E-01
		K-40	9.80E-01	3.35E-01	2.30E-01
433697	1/17/2017 - 1/24/2017	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.39E-02	0.00E+00	1.39E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	8.00E-01	2.86E-01	6.57E-02
434432	1/24/2017 - 1/31/2017	I-131	<1.76E-02	0.00E+00	1.76E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<2.01E-02	0.00E+00	2.01E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	5.60E-01	2.85E-01	3.40E-01
435076	1/31/2017 - 2/7/2017	I-131	<1.36E-02	0.00E+00	1.36E-02
		Cs-134	<1.42E-02	0.00E+00	1.42E-02
		Cs-137	<9.94E-03	0.00E+00	9.94E-03
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	1.05E+00	3.21E-01	6.17E-02
435786	2/7/2017 - 2/14/2017	I-131	<2.57E-02	0.00E+00	2.57E-02
		Cs-134	<1.98E-02	0.00E+00	1.98E-02
		Cs-137	<1.77E-02	0.00E+00	1.77E-02
		Be-7	<1.36E-01	0.00E+00	1.36E-01
		K-40	8.44E-01	2.98E-01	6.73E-02
436236	2/14/2017 - 2/21/2017	I-131	<1.91E-02	0.00E+00	1.91E-02
		Cs-134	<1.44E-02	0.00E+00	1.44E-02
		Cs-137	<1.27E-02	0.00E+00	1.27E-02
		Be-7	<6.47E-02	0.00E+00	6.47E-02
		K-40	<6.89E-01	0.00E+00	6.89E-01
436687	2/21/2017 - 2/28/2017	I-131	<1.46E-02	0.00E+00	1.46E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.42E-02	0.00E+00	1.42E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	9.31E-01	2.98E-01	6.01E-02
437548	2/28/2017 - 3/7/2017	I-131	<2.46E-02	0.00E+00	2.46E-02
		Cs-134	<1.59E-02	0.00E+00	1.59E-02
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.16E-01	0.00E+00	1.16E-01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
437548	2/28/2017 - 3/7/2017	K-40	7.40E-01	2.51E-01	5.42E-02
438278	3/7/2017 - 3/14/2017	I-131	<1.28E-02	0.00E+00	1.28E-02
		Cs-134	<1.40E-02	0.00E+00	1.40E-02
		Cs-137	<1.52E-02	0.00E+00	1.52E-02
		Be-7	<9.98E-02	0.00E+00	9.98E-02
		K-40	1.01E+00	2.98E-01	5.37E-02
438781	3/14/2017 - 3/21/2017	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.77E-02	0.00E+00	1.77E-02
		Cs-137	<2.08E-02	0.00E+00	2.08E-02
		Be-7	<1.34E-01	0.00E+00	1.34E-01
		K-40	5.89E-01	2.61E-01	2.33E-01
439131	3/21/2017 - 3/28/2017	I-131	<1.39E-02	0.00E+00	1.39E-02
		Cs-134	<1.76E-02	0.00E+00	1.76E-02
		Cs-137	<1.92E-02	0.00E+00	1.92E-02
		Be-7	<1.31E-01	0.00E+00	1.31E-01
		K-40	9.95E-01	3.01E-01	5.62E-02
439977	3/28/2017 - 4/4/2017	I-131	<2.26E-02	0.00E+00	2.26E-02
		Cs-134	<1.41E-02	0.00E+00	1.41E-02
		Cs-137	<1.75E-02	0.00E+00	1.75E-02
		Be-7	<1.12E-01	0.00E+00	1.12E-01
		K-40	4.59E-01	2.34E-01	2.57E-01
440575	4/4/2017 - 4/11/2017	I-131	<2.00E-02	0.00E+00	2.00E-02
		Cs-134	<1.16E-02	0.00E+00	1.16E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.22E-01	0.00E+00	1.22E-01
		K-40	<6.54E-01	0.00E+00	6.54E-01
441389	4/11/2017 - 4/18/2017	I-131	<1.80E-02	0.00E+00	1.80E-02
		Cs-134	<9.49E-03	0.00E+00	9.49E-03
		Cs-137	<1.67E-02	0.00E+00	1.67E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	1.04E+00	3.49E-01	3.08E-01
441834	4/18/2017 - 4/25/2017	I-131	<2.03E-02	0.00E+00	2.03E-02
		Cs-134	<1.28E-02	0.00E+00	1.28E-02
		Cs-137	<1.59E-02	0.00E+00	1.59E-02
		Be-7	<1.11E-01	0.00E+00	1.11E-01
		K-40	9.11E-01	3.44E-01	3.66E-01
442262	4/25/2017 - 5/2/2017	I-131	<1.25E-02	0.00E+00	1.25E-02
		Cs-134	<1.05E-02	0.00E+00	1.05E-02
		Cs-137	<1.71E-02	0.00E+00	1.71E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	<5.79E-01	0.00E+00	5.79E-01
442848	5/2/2017 - 5/9/2017	I-131	<1.88E-02	0.00E+00	1.88E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.61E-02	0.00E+00	1.61E-02
		Be-7	<1.57E-01	0.00E+00	1.57E-01
		K-40	9.41E-01	3.32E-01	2.83E-01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443276	5/9/2017 - 5/16/2017	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.70E-02	0.00E+00	1.70E-02
		Cs-137	<1.74E-02	0.00E+00	1.74E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	7.93E-01	2.91E-01	2.13E-01
443834	5/16/2017 - 5/23/2017	I-131	<2.04E-02	0.00E+00	2.04E-02
		Cs-134	<1.54E-02	0.00E+00	1.54E-02
		Cs-137	<1.91E-02	0.00E+00	1.91E-02
		Be-7	<1.03E-01	0.00E+00	1.03E-01
		K-40	6.93E-01	2.97E-01	3.27E-01
444228	5/23/2017 - 5/30/2017	I-131	<2.35E-02	0.00E+00	2.35E-02
		Cs-134	<1.80E-02	0.00E+00	1.80E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.23E-01	0.00E+00	1.23E-01
		K-40	3.73E-01	2.06E-01	2.07E-01
445298	5/30/2017 - 6/6/2017	I-131	<1.07E-02	0.00E+00	1.07E-02
		Cs-134	<1.15E-02	0.00E+00	1.15E-02
		Cs-137	<1.89E-02	0.00E+00	1.89E-02
		Be-7	<1.41E-01	0.00E+00	1.41E-01
		K-40	5.94E-01	2.27E-01	5.55E-02
446297	6/6/2017 - 6/13/2017	I-131	<1.69E-02	0.00E+00	1.69E-02
		Cs-134	<1.46E-02	0.00E+00	1.46E-02
		Cs-137	<2.25E-02	0.00E+00	2.25E-02
		Be-7	<1.40E-01	0.00E+00	1.40E-01
		K-40	4.98E-01	2.55E-01	2.87E-01
446801	6/13/2017 - 6/20/2017	I-131	<1.54E-02	0.00E+00	1.54E-02
		Cs-134	<1.30E-02	0.00E+00	1.30E-02
		Cs-137	<1.45E-02	0.00E+00	1.45E-02
		Be-7	<9.40E-02	0.00E+00	9.40E-02
		K-40	8.64E-01	2.89E-01	6.16E-02
447134	6/20/2017 - 6/27/2017	I-131	<1.19E-02	0.00E+00	1.19E-02
		Cs-134	<1.55E-02	0.00E+00	1.55E-02
		Cs-137	<2.16E-02	0.00E+00	2.16E-02
		Be-7	<1.32E-01	0.00E+00	1.32E-01
		K-40	<4.90E-01	0.00E+00	4.90E-01
447780	6/27/2017 - 7/4/2017	I-131	<1.79E-02	0.00E+00	1.79E-02
		Cs-134	<1.51E-02	0.00E+00	1.51E-02
		Cs-137	<1.44E-02	0.00E+00	1.44E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	4.66E-01	2.22E-01	1.87E-01
448244	7/4/2017 - 7/11/2017	I-131	<1.85E-02	0.00E+00	1.85E-02
		Cs-134	<1.67E-02	0.00E+00	1.67E-02
		Cs-137	<1.34E-02	0.00E+00	1.34E-02
		Be-7	<1.47E-01	0.00E+00	1.47E-01
		K-40	<4.72E-01	0.00E+00	4.72E-01
448870	7/11/2017 - 7/18/2017	I-131	<1.50E-02	0.00E+00	1.50E-02
		Cs-134	<1.06E-02	0.00E+00	1.06E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448870	7/11/2017 - 7/18/2017	Cs-137	<1.14E-02	0.00E+00	1.14E-02
		Be-7	<1.20E-01	0.00E+00	1.20E-01
		K-40	4.00E-01	2.20E-01	2.49E-01
449186	7/18/2017 - 7/25/2017	I-131	<1.99E-02	0.00E+00	1.99E-02
		Cs-134	<1.08E-02	0.00E+00	1.08E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	<4.25E-01	0.00E+00	4.25E-01
449925	7/25/2017 - 8/1/2017	I-131	<1.70E-02	0.00E+00	1.70E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<1.80E-02	0.00E+00	1.80E-02
		Be-7	<1.07E-01	0.00E+00	1.07E-01
		K-40	2.32E-01	1.48E-01	6.28E-02
450170	8/1/2017 - 8/8/2017	I-131	<1.92E-02	0.00E+00	1.92E-02
		Cs-134	<1.24E-02	0.00E+00	1.24E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02
		Be-7	<8.98E-02	0.00E+00	8.98E-02
		K-40	5.16E-01	2.34E-01	2.01E-01
450703	8/8/2017 - 8/15/2017	I-131	<1.71E-02	0.00E+00	1.71E-02
		Cs-134	<1.11E-02	0.00E+00	1.11E-02
		Cs-137	<2.33E-02	0.00E+00	2.33E-02
		Be-7	<9.95E-02	0.00E+00	9.95E-02
		K-40	4.99E-01	2.27E-01	1.87E-01
451154	8/15/2017 - 8/22/2017	I-131	<1.96E-02	0.00E+00	1.96E-02
		Cs-134	<1.45E-02	0.00E+00	1.45E-02
		Cs-137	<2.09E-02	0.00E+00	2.09E-02
		Be-7	<1.54E-01	0.00E+00	1.54E-01
		K-40	3.50E-01	2.29E-01	3.05E-01
451516	8/22/2017 - 8/29/2017	I-131	<1.77E-02	0.00E+00	1.77E-02
		Cs-134	<1.33E-02	0.00E+00	1.33E-02
		Cs-137	<1.65E-02	0.00E+00	1.65E-02
		Be-7	<1.06E-01	0.00E+00	1.06E-01
		K-40	<4.01E-01	0.00E+00	4.01E-01
452320	8/29/2017 - 9/5/2017	I-131	<2.14E-02	0.00E+00	2.14E-02
		Cs-134	<1.01E-02	0.00E+00	1.01E-02
		Cs-137	<2.03E-02	0.00E+00	2.03E-02
		Be-7	<1.24E-01	0.00E+00	1.24E-01
		K-40	3.54E-01	2.02E-01	2.07E-01
452763	9/5/2017 - 9/12/2017	I-131	<1.51E-02	0.00E+00	1.51E-02
		Cs-134	<9.11E-03	0.00E+00	9.11E-03
		Cs-137	<2.03E-02	0.00E+00	2.03E-02
		Be-7	<8.62E-02	0.00E+00	8.62E-02
		K-40	<4.80E-01	0.00E+00	4.80E-01
453409	9/12/2017 - 9/19/2017	I-131	<1.78E-02	0.00E+00	1.78E-02
		Cs-134	<7.97E-03	0.00E+00	7.97E-03
		Cs-137	<1.90E-02	0.00E+00	1.90E-02
		Be-7	<9.35E-02	0.00E+00	9.35E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
453409	9/12/2017 - 9/19/2017	K-40	4.08E-01	1.95E-01	6.14E-02
454175	9/19/2017 - 9/26/2017	I-131	<1.65E-02	0.00E+00	1.65E-02
		Cs-134	<1.81E-02	0.00E+00	1.81E-02
		Cs-137	<1.51E-02	0.00E+00	1.51E-02
		Be-7	<1.14E-01	0.00E+00	1.14E-01
		K-40	3.19E-01	1.67E-01	5.76E-02
455035	9/26/2017 - 10/3/2017	I-131	<3.70E-02	0.00E+00	3.70E-02
		Cs-134	<3.49E-02	0.00E+00	3.49E-02
		Cs-137	<2.16E-02	0.00E+00	2.16E-02
		Be-7	<2.03E-01	0.00E+00	2.03E-01
		K-40	<6.67E-01	0.00E+00	6.67E-01
455390	10/3/2017 - 10/10/2017	I-131	<3.89E-02	0.00E+00	3.89E-02
		Cs-134	<3.22E-02	0.00E+00	3.22E-02
		Cs-137	<2.47E-02	0.00E+00	2.47E-02
		Be-7	<2.04E-01	0.00E+00	2.04E-01
		K-40	6.49E-01	3.33E-01	4.01E-01
456007	10/10/2017 - 10/17/2017	I-131	<2.99E-02	0.00E+00	2.99E-02
		Cs-134	<2.94E-02	0.00E+00	2.94E-02
		Cs-137	<2.26E-02	0.00E+00	2.26E-02
		Be-7	<1.95E-01	0.00E+00	1.95E-01
		K-40	<5.28E-01	0.00E+00	5.28E-01
461391	10/17/2017 - 10/24/2017	I-131	<4.11E-02	0.00E+00	4.11E-02
		Cs-134	<3.27E-02	0.00E+00	3.27E-02
		Cs-137	<3.47E-02	0.00E+00	3.47E-02
		Be-7	<2.56E-01	0.00E+00	2.56E-01
		K-40	<8.55E-01	0.00E+00	8.55E-01
461937	10/24/2017 - 10/31/2017	I-131	<5.58E-02	0.00E+00	5.58E-02
		Cs-134	<2.72E-02	0.00E+00	2.72E-02
		Cs-137	<2.67E-02	0.00E+00	2.67E-02
		Be-7	<2.26E-01	0.00E+00	2.26E-01
		K-40	1.15E+00	3.26E-01	2.66E-01
462573	10/31/2017 - 11/7/2017	I-131	<4.19E-02	0.00E+00	4.19E-02
		Cs-134	<4.05E-02	0.00E+00	4.05E-02
		Cs-137	<4.00E-02	0.00E+00	4.00E-02
		Be-7	<2.15E-01	0.00E+00	2.15E-01
		K-40	9.07E-01	4.17E-01	5.19E-01
463057	11/7/2017 - 11/14/2017	I-131	<5.19E-02	0.00E+00	5.19E-02
		Cs-134	<3.48E-02	0.00E+00	3.48E-02
		Cs-137	<3.53E-02	0.00E+00	3.53E-02
		Be-7	<2.22E-01	0.00E+00	2.22E-01
		K-40	1.10E+00	3.54E-01	7.26E-02
463481	11/14/2017 - 11/21/2017	I-131	<5.54E-02	0.00E+00	5.54E-02
		Cs-134	<2.54E-02	0.00E+00	2.54E-02
		Cs-137	<2.57E-02	0.00E+00	2.57E-02
		Be-7	<2.00E-01	0.00E+00	2.00E-01
		K-40	1.36E+00	3.21E-01	4.55E-02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: AIR RADIOIODINE Concentration (Activity): pCi/m3

Sample Point 206 [ CONTROL - NW @ 11.3 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
464140	11/21/2017 - 11/28/2017		I-131	<4.53E-02	0.00E+00	4.53E-02
			Cs-134	<3.50E-02	0.00E+00	3.50E-02
			Cs-137	<3.44E-02	0.00E+00	3.44E-02
			Be-7	<1.98E-01	0.00E+00	1.98E-01
			K-40	1.23E+00	4.43E-01	4.56E-01
464670	11/28/2017 - 12/5/2017		I-131	<5.55E-02	0.00E+00	5.55E-02
			Cs-134	<3.37E-02	0.00E+00	3.37E-02
			Cs-137	<3.60E-02	0.00E+00	3.60E-02
			Be-7	<2.41E-01	0.00E+00	2.41E-01
			K-40	1.02E+00	3.67E-01	3.87E-01
464931	12/5/2017 - 12/12/2017		I-131	<5.28E-02	0.00E+00	5.28E-02
			Cs-134	<3.38E-02	0.00E+00	3.38E-02
			Cs-137	<3.88E-02	0.00E+00	3.88E-02
			Be-7	<2.32E-01	0.00E+00	2.32E-01
			K-40	1.08E+00	3.83E-01	3.15E-01
465186	12/12/2017 - 12/19/2017		I-131	<4.58E-02	0.00E+00	4.58E-02
			Cs-134	<3.20E-02	0.00E+00	3.20E-02
			Cs-137	<4.31E-02	0.00E+00	4.31E-02
			Be-7	<2.22E-01	0.00E+00	2.22E-01
			K-40	8.07E-01	3.70E-01	4.26E-01
465568	12/19/2017 - 12/26/2017		I-131	<4.92E-02	0.00E+00	4.92E-02
			Cs-134	<2.14E-02	0.00E+00	2.14E-02
			Cs-137	<2.54E-02	0.00E+00	2.54E-02
			Be-7	<1.77E-01	0.00E+00	1.77E-01
			K-40	1.00E+00	3.09E-01	3.57E-01
465948	12/26/2017 - 1/2/2018		I-131	<5.59E-02	0.00E+00	5.59E-02
			Cs-134	<3.02E-02	0.00E+00	3.02E-02
			Cs-137	<2.86E-02	0.00E+00	2.86E-02
			Be-7	<2.05E-01	0.00E+00	2.05E-01
			K-40	9.86E-01	2.92E-01	2.70E-01

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 700 [ INDICATOR - SSW @ 5.5 miles ]

Sample ID:	Sample Dates:		Nuclide	Activity	2 Sigma Error	MDA
445250	5/18/2017 - 5/18/2017	FREESWIM	Mn-54	<1.15E+01	0.00E+00	1.15E+01
			Co-58	<2.03E+01	0.00E+00	2.03E+01
			Fe-59	<3.03E+01	0.00E+00	3.03E+01
			Co-60	<2.39E+01	0.00E+00	2.39E+01
			Zn-65	<5.98E+01	0.00E+00	5.98E+01
			Nb-95	<2.40E+01	0.00E+00	2.40E+01
			I-131	<4.86E+01	0.00E+00	4.86E+01
			Cs-134	<3.35E+01	0.00E+00	3.35E+01
			Cs-137	<2.34E+01	0.00E+00	2.34E+01
			Be-7	<1.85E+02	0.00E+00	1.85E+02
			K-40	3.80E+03	6.94E+02	4.23E+02
			Ag-110M	<2.46E+01	0.00E+00	2.46E+01
			Sb-122	<6.66E+02	0.00E+00	6.66E+02
			Sb-125	<5.97E+01	0.00E+00	5.97E+01
464779	11/16/2017 - 11/16/2017	FREESWIM	Mn-54	<3.93E+01	0.00E+00	3.93E+01
			Co-58	<5.53E+01	0.00E+00	5.53E+01
			Fe-59	<1.03E+02	0.00E+00	1.03E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 700 [ INDICATOR - SSW @ 5.5 miles ]

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Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
464779	11/16/2017 - 11/16/2017		Co-60	<5.67E+01	0.00E+00	5.67E+01
			Zn-65	<1.13E+02	0.00E+00	1.13E+02
			Nb-95	<6.31E+01	0.00E+00	6.31E+01
			I-131	<9.82E+01	0.00E+00	9.82E+01
			Cs-134	<5.29E+01	0.00E+00	5.29E+01
			Cs-137	<4.87E+01	0.00E+00	4.87E+01
			Be-7	<3.07E+02	0.00E+00	3.07E+02
			K-40	3.59E+03	9.20E+02	1.43E+02
			Ag-110M	<5.73E+01	0.00E+00	5.73E+01
			Sb-122	<1.11E+03	0.00E+00	1.11E+03
			Sb-125	<6.67E+01	0.00E+00	6.67E+01

## Sample Point 701 [ INDICATOR - SSW @ 5.5 miles ]

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Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
445251	5/18/2017 - 5/18/2017		Mn-54	<2.08E+01	0.00E+00	2.08E+01
			Co-58	<1.72E+01	0.00E+00	1.72E+01
			Fe-59	<5.49E+01	0.00E+00	5.49E+01
			Co-60	<2.52E+01	0.00E+00	2.52E+01
			Zn-65	<4.05E+01	0.00E+00	4.05E+01
			Nb-95	<2.61E+01	0.00E+00	2.61E+01
			I-131	<4.78E+01	0.00E+00	4.78E+01
			Cs-134	<2.45E+01	0.00E+00	2.45E+01
			Cs-137	<2.09E+01	0.00E+00	2.09E+01
			Be-7	<1.47E+02	0.00E+00	1.47E+02
			K-40	2.97E+03	5.63E+02	2.41E+02
			Ag-110M	<1.68E+01	0.00E+00	1.68E+01
			Sb-122	<4.50E+02	0.00E+00	4.50E+02
			Sb-125	<4.32E+01	0.00E+00	4.32E+01

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Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
464780	11/16/2017 - 11/16/2017		Mn-54	<2.95E+01	0.00E+00	2.95E+01
			Co-58	<3.97E+01	0.00E+00	3.97E+01
			Fe-59	<5.99E+01	0.00E+00	5.99E+01
			Co-60	<2.61E+01	0.00E+00	2.61E+01
			Zn-65	<5.87E+01	0.00E+00	5.87E+01
			Nb-95	<4.00E+01	0.00E+00	4.00E+01
			I-131	<6.64E+01	0.00E+00	6.64E+01
			Cs-134	<2.93E+01	0.00E+00	2.93E+01
			Cs-137	<2.50E+01	0.00E+00	2.50E+01
			Be-7	<2.73E+02	0.00E+00	2.73E+02
			K-40	2.69E+03	6.86E+02	4.22E+02
			Ag-110M	<2.79E+01	0.00E+00	2.79E+01
			Sb-122	<7.56E+02	0.00E+00	7.56E+02
			Sb-125	<8.42E+01	0.00E+00	8.42E+01

## Sample Point 702 [ INDICATOR - SSW @ 5.5 miles ]

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Sample ID:	Sample Dates:	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
445252	5/18/2017 - 5/18/2017		Mn-54	<1.45E+01	0.00E+00	1.45E+01
			Co-58	<1.22E+01	0.00E+00	1.22E+01
			Fe-59	<4.19E+01	0.00E+00	4.19E+01
			Co-60	<2.26E+01	0.00E+00	2.26E+01
			Zn-65	<4.36E+01	0.00E+00	4.36E+01
			Nb-95	<2.14E+01	0.00E+00	2.14E+01
			I-131	<3.92E+01	0.00E+00	3.92E+01
			Cs-134	<1.89E+01	0.00E+00	1.89E+01
			Cs-137	<1.37E+01	0.00E+00	1.37E+01
			Be-7	<1.28E+02	0.00E+00	1.28E+02
			K-40	3.42E+03	5.74E+02	2.41E+02
			Ag-110M	<1.48E+01	0.00E+00	1.48E+01
			Sb-122	<3.69E+02	0.00E+00	3.69E+02
			Sb-125	<3.75E+01	0.00E+00	3.75E+01

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 702 [ INDICATOR - SSW @ 5.5 miles ]

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Sample ID:	464781	Sample Dates:	11/16/2017 - 11/16/2017	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.05E+01	0.00E+00	2.05E+01
					Co-58	<2.85E+01	0.00E+00	2.85E+01
					Fe-59	<6.95E+01	0.00E+00	6.95E+01
					Co-60	<3.82E+01	0.00E+00	3.82E+01
					Zn-65	<6.10E+01	0.00E+00	6.10E+01
					Nb-95	<3.82E+01	0.00E+00	3.82E+01
					I-131	<5.59E+01	0.00E+00	5.59E+01
					Cs-134	<2.93E+01	0.00E+00	2.93E+01
					Cs-137	<2.73E+01	0.00E+00	2.73E+01
					Be-7	<2.45E+02	0.00E+00	2.45E+02
					K-40	3.06E+03	6.72E+02	8.63E+01
					Ag-110M	<2.87E+01	0.00E+00	2.87E+01
					Sb-122	<7.63E+02	0.00E+00	7.63E+02
					Sb-125	<4.66E+01	0.00E+00	4.66E+01

## Sample Point 703 [ CONTROL - -- @ 0 miles ]

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Sample ID:	445253	Sample Dates:	5/18/2017 - 5/18/2017	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<1.80E+01	0.00E+00	1.80E+01
					Co-58	<1.51E+01	0.00E+00	1.51E+01
					Fe-59	<4.25E+01	0.00E+00	4.25E+01
					Co-60	<2.29E+01	0.00E+00	2.29E+01
					Zn-65	<5.39E+01	0.00E+00	5.39E+01
					Nb-95	<2.64E+01	0.00E+00	2.64E+01
					I-131	<5.62E+01	0.00E+00	5.62E+01
					Cs-134	<2.49E+01	0.00E+00	2.49E+01
					Cs-137	<2.25E+01	0.00E+00	2.25E+01
					Be-7	<1.76E+02	0.00E+00	1.76E+02
					K-40	4.09E+03	6.88E+02	2.74E+02
					Ag-110M	<1.83E+01	0.00E+00	1.83E+01
					Sb-122	<6.63E+02	0.00E+00	6.63E+02
					Sb-125	<4.63E+01	0.00E+00	4.63E+01

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Sample ID:	464782	Sample Dates:	11/16/2017 - 11/16/2017	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.95E+01	0.00E+00	2.95E+01
					Co-58	<3.46E+01	0.00E+00	3.46E+01
					Fe-59	<4.73E+01	0.00E+00	4.73E+01
					Co-60	<4.26E+01	0.00E+00	4.26E+01
					Zn-65	<4.65E+01	0.00E+00	4.65E+01
					Nb-95	<3.04E+01	0.00E+00	3.04E+01
					I-131	<7.61E+01	0.00E+00	7.61E+01
					Cs-134	<2.93E+01	0.00E+00	2.93E+01
					Cs-137	<3.05E+01	0.00E+00	3.05E+01
					Be-7	<2.25E+02	0.00E+00	2.25E+02
					K-40	3.19E+03	7.25E+02	9.62E+01
					Ag-110M	<2.55E+01	0.00E+00	2.55E+01
					Sb-122	<9.01E+02	0.00E+00	9.01E+02
					Sb-125	<6.33E+01	0.00E+00	6.33E+01

## Sample Point 704 [ CONTROL - -- @ 0 miles ]

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Sample ID:	445254	Sample Dates:	5/18/2017 - 5/18/2017	BOTMFEDER	Nuclide	Activity	2 Sigma Error	MDA
					Mn-54	<2.72E+01	0.00E+00	2.72E+01
					Co-58	<2.32E+01	0.00E+00	2.32E+01
					Fe-59	<4.02E+01	0.00E+00	4.02E+01
					Co-60	<6.33E+00	0.00E+00	6.33E+00
					Zn-65	<3.89E+01	0.00E+00	3.89E+01
					Nb-95	<2.71E+01	0.00E+00	2.71E+01
					I-131	<4.18E+01	0.00E+00	4.18E+01
					Cs-134	<2.55E+01	0.00E+00	2.55E+01
					Cs-137	<2.80E+01	0.00E+00	2.80E+01
					Be-7	<1.84E+02	0.00E+00	1.84E+02
					K-40	3.83E+03	7.06E+02	4.04E+02

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 704 [ CONTROL - -- @ 0 miles ]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
445254	5/18/2017 - 5/18/2017		Ag-110M	<1.86E+01	0.00E+00	1.86E+01
			Sb-122	<7.96E+02	0.00E+00	7.96E+02
			Sb-125	<5.09E+01	0.00E+00	5.09E+01

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
464783	11/16/2017 - 11/16/2017		Mn-54	<3.48E+01	0.00E+00	3.48E+01
			Co-58	<3.73E+01	0.00E+00	3.73E+01
			Fe-59	<7.75E+01	0.00E+00	7.75E+01
			Co-60	<9.63E+00	0.00E+00	9.63E+00
			Zn-65	<7.61E+01	0.00E+00	7.61E+01
			Nb-95	<3.72E+01	0.00E+00	3.72E+01
			I-131	<6.56E+01	0.00E+00	6.56E+01
			Cs-134	<3.85E+01	0.00E+00	3.85E+01
			Cs-137	<2.17E+01	0.00E+00	2.17E+01
			Be-7	<2.26E+02	0.00E+00	2.26E+02
			K-40	2.85E+03	6.79E+02	9.65E+01
			Ag-110M	<1.98E+01	0.00E+00	1.98E+01
			Sb-122	<7.73E+02	0.00E+00	7.73E+02
			Sb-125	<6.83E+01	0.00E+00	6.83E+01

Sample Point 705 [ CONTROL - -- @ 0 miles ]

Sample ID:	Sample Dates:	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
445255	5/18/2017 - 5/18/2017		Mn-54	<1.70E+01	0.00E+00	1.70E+01
			Co-58	<1.40E+01	0.00E+00	1.40E+01
			Fe-59	<4.48E+01	0.00E+00	4.48E+01
			Co-60	<2.24E+01	0.00E+00	2.24E+01
			Zn-65	<4.87E+01	0.00E+00	4.87E+01
			Nb-95	<1.99E+01	0.00E+00	1.99E+01
			I-131	<4.08E+01	0.00E+00	4.08E+01
			Cs-134	<2.00E+01	0.00E+00	2.00E+01
			Cs-137	<1.60E+01	0.00E+00	1.60E+01
			Be-7	<1.28E+02	0.00E+00	1.28E+02
			K-40	3.18E+03	5.43E+02	2.35E+02
			Ag-110M	<1.25E+01	0.00E+00	1.25E+01
			Sb-122	<4.04E+02	0.00E+00	4.04E+02
			Sb-125	<2.83E+01	0.00E+00	2.83E+01

Sample ID:	Sample Dates:	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
464784	11/16/2017 - 11/16/2017		Mn-54	<3.00E+01	0.00E+00	3.00E+01
			Co-58	<2.64E+01	0.00E+00	2.64E+01
			Fe-59	<7.82E+01	0.00E+00	7.82E+01
			Co-60	<3.05E+01	0.00E+00	3.05E+01
			Zn-65	<7.68E+01	0.00E+00	7.68E+01
			Nb-95	<3.45E+01	0.00E+00	3.45E+01
			I-131	<6.65E+01	0.00E+00	6.65E+01
			Cs-134	<3.04E+01	0.00E+00	3.04E+01
			Cs-137	<2.60E+01	0.00E+00	2.60E+01
			Be-7	<2.88E+02	0.00E+00	2.88E+02
			K-40	2.84E+03	7.39E+02	6.48E+02
			Ag-110M	<2.59E+01	0.00E+00	2.59E+01
			Sb-122	<5.71E+02	0.00E+00	5.71E+02
			Sb-125	<6.68E+01	0.00E+00	6.68E+01

Sample Point 706 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
464785	9/19/2017 - 11/7/2017		Mn-54	<3.65E+01	0.00E+00	3.65E+01
			Co-58	<3.58E+01	0.00E+00	3.58E+01
			Fe-59	<8.37E+01	0.00E+00	8.37E+01
			Co-60	<3.49E+01	0.00E+00	3.49E+01
			Zn-65	<7.84E+01	0.00E+00	7.84E+01
			Nb-95	<6.95E+01	0.00E+00	6.95E+01





**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: FISH Concentration (Activity): pCi/kg wet

Sample Point 706 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	FREESWIM	Nuclide	Activity	2 Sigma Error	MDA
464785	9/19/2017 - 11/7/2017		I-131	<1.37E+03	0.00E+00	1.37E+03
			Cs-134	<4.92E+01	0.00E+00	4.92E+01
			Cs-137	<3.45E+01	0.00E+00	3.45E+01
			Be-7	<4.17E+02	0.00E+00	4.17E+02
			K-40	2.32E+03	6.62E+02	4.88E+02
			Ag-110M	<3.69E+01	0.00E+00	3.69E+01
			Sb-122	<3.61E+06	0.00E+00	3.61E+06
			Sb-125	<7.26E+01	0.00E+00	7.26E+01

Sample Point 707 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	BOTMFEEDER	Nuclide	Activity	2 Sigma Error	MDA
464786	9/19/2017 - 10/17/2017		Mn-54	<3.34E+01	0.00E+00	3.34E+01
			Co-58	<4.49E+01	0.00E+00	4.49E+01
			Fe-59	<1.41E+02	0.00E+00	1.41E+02
			Co-60	<2.72E+01	0.00E+00	2.72E+01
			Zn-65	<8.83E+01	0.00E+00	8.83E+01
			Nb-95	<9.11E+01	0.00E+00	9.11E+01
			I-131	<2.63E+03	0.00E+00	2.63E+03
			Cs-134	<2.70E+01	0.00E+00	2.70E+01
			Cs-137	<3.14E+01	0.00E+00	3.14E+01
			Be-7	<4.97E+02	0.00E+00	4.97E+02
			K-40	2.44E+03	6.29E+02	9.88E+01
			Ag-110M	<3.48E+01	0.00E+00	3.48E+01
			Sb-122	<5.51E+07	0.00E+00	5.51E+07
			Sb-125	<6.70E+01	0.00E+00	6.70E+01

Sample Point 708 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	INVERTEBRA	Nuclide	Activity	2 Sigma Error	MDA
464787	9/19/2017 - 10/17/2017		Mn-54	<3.39E+01	0.00E+00	3.39E+01
			Co-58	<5.08E+01	0.00E+00	5.08E+01
			Fe-59	<1.87E+02	0.00E+00	1.87E+02
			Co-60	<3.46E+01	0.00E+00	3.46E+01
			Zn-65	<8.92E+01	0.00E+00	8.92E+01
			Nb-95	<9.93E+01	0.00E+00	9.93E+01
			I-131	<3.65E+03	0.00E+00	3.65E+03
			Cs-134	<3.54E+01	0.00E+00	3.54E+01
			Cs-137	<3.85E+01	0.00E+00	3.85E+01
			Be-7	<3.39E+02	0.00E+00	3.39E+02
			K-40	2.40E+03	6.90E+02	5.73E+02
			Ag-110M	<3.28E+01	0.00E+00	3.28E+01
			Sb-122	<4.27E+07	0.00E+00	4.27E+07
			Sb-125	<1.06E+02	0.00E+00	1.06E+02

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 404 [ INDICATOR - SW @ 0.16 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438890	3/9/2017 - 3/9/2017	H3GW	<-9.7E+01	0.00E+00	2.52E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448195	6/28/2017 - 6/28/2017	Mn-54	<7.16E+00	0.00E+00	7.16E+00
		Co-58	<7.40E+00	0.00E+00	7.40E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<4.21E+00	0.00E+00	4.21E+00
		Zn-65	<1.55E+01	0.00E+00	1.55E+01
		Zr-95	<1.27E+01	0.00E+00	1.27E+01
		Nb-95	<1.04E+01	0.00E+00	1.04E+01
		I-131	<1.26E+01	0.00E+00	1.26E+01
		Cs-134	<7.39E+00	0.00E+00	7.39E+00
		Cs-137	<7.14E+00	0.00E+00	7.15E+00
		La-140	<1.79E+02	0.00E+00	1.79E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 404 [ INDICATOR - SW @ 0.16 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448195	6/28/2017 - 6/28/2017	Ba-140	<3.94E+01	0.00E+00	3.94E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.2E+02	0.00E+00	2.28E+02
450505	9/14/2017 - 9/14/2017	H3GW	<-5.6E+01	0.00E+00	1.95E+02
463817	12/13/2017 - 12/13/2017	Mn-54	<5.04E+00	0.00E+00	5.04E+00
		Co-58	<6.58E+00	0.00E+00	6.58E+00
		Fe-59	<1.31E+01	0.00E+00	1.31E+01
		Co-60	<5.37E+00	0.00E+00	5.37E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<9.95E+00	0.00E+00	9.95E+00
		Nb-95	<6.67E+00	0.00E+00	6.67E+00
		I-131	<7.75E+00	0.00E+00	7.75E+00
		Cs-134	<5.34E+00	0.00E+00	5.34E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<8.89E+00	0.00E+00	8.89E+00
		Total-Gam	0.00E+00		
		H3GW	<-1.9E+02	0.00E+00	1.95E+02

## Sample Point 407 [ INDICATOR - ENE @ 0.06 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439721	3/22/2017 - 3/22/2017	H3GW	<-1.5E+02	0.00E+00	2.48E+02
448197	6/28/2017 - 6/28/2017	Mn-54	<8.77E+00	0.00E+00	8.77E+00
		Co-58	<6.77E+00	0.00E+00	6.77E+00
		Fe-59	<1.81E+01	0.00E+00	1.81E+01
		Co-60	<8.42E+00	0.00E+00	8.42E+00
		Zn-65	<1.27E+01	0.00E+00	1.27E+01
		Zr-95	<1.27E+01	0.00E+00	1.27E+01
		Nb-95	<9.01E+00	0.00E+00	9.01E+00
		I-131	<1.23E+01	0.00E+00	1.23E+01
		Cs-134	<7.57E+00	0.00E+00	7.57E+00
		Cs-137	<7.93E+00	0.00E+00	7.93E+00
		La-140	<1.33E+02	0.00E+00	1.33E+02
		Ba-140	<3.34E+01	0.00E+00	3.34E+01
		Total-Gam	0.00E+00		
H3GW	3.95E+02	1.42E+02	2.30E+02		
450506	9/21/2017 - 9/21/2017	H3GW	3.06E+02	1.23E+02	1.96E+02
463818	12/14/2017 - 12/14/2017	Mn-54	<5.71E+00	0.00E+00	5.71E+00
		Co-58	<5.53E+00	0.00E+00	5.53E+00
		Fe-59	<8.94E+00	0.00E+00	8.94E+00
		Co-60	<6.39E+00	0.00E+00	6.39E+00
		Zn-65	<1.01E+01	0.00E+00	1.01E+01
		Zr-95	<9.66E+00	0.00E+00	9.66E+00
		Nb-95	<6.57E+00	0.00E+00	6.57E+00
		I-131	<8.46E+00	0.00E+00	8.46E+00
		Cs-134	<6.76E+00	0.00E+00	6.76E+00
		Cs-137	<3.61E+00	0.00E+00	3.61E+00
		BaLa-140	<9.80E+00	0.00E+00	9.80E+00
		Total-Gam	0.00E+00		
		H3GW	4.28E+02	1.21E+02	1.84E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 409 [ INDICATOR - NE @ 0.65 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438880	3/6/2017 - 3/6/2017	H3GW	<-9.9E+01	0.00E+00	2.44E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446553	6/5/2017 - 6/5/2017	Mn-54	<7.92E+00	0.00E+00	7.92E+00
		Co-58	<4.56E+00	0.00E+00	4.56E+00
		Fe-59	<1.47E+01	0.00E+00	1.47E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<1.44E+01	0.00E+00	1.44E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<8.63E+00	0.00E+00	8.63E+00
		I-131	<7.36E+00	0.00E+00	7.36E+00
		Cs-134	<6.42E+00	0.00E+00	6.43E+00
		Cs-137	<9.50E+00	0.00E+00	9.50E+00
		La-140	<2.23E+01	0.00E+00	2.23E+01
		Ba-140	<2.85E+01	0.00E+00	2.85E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.1E+02	0.00E+00	2.54E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450507	9/18/2017 - 9/18/2017	H3GW	<-6.1E+01	0.00E+00	1.97E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463819	12/12/2017 - 12/12/2017	Mn-54	<5.91E+00	0.00E+00	5.91E+00
		Co-58	<6.67E+00	0.00E+00	6.67E+00
		Fe-59	<1.28E+01	0.00E+00	1.28E+01
		Co-60	<6.89E+00	0.00E+00	6.89E+00
		Zn-65	<1.33E+01	0.00E+00	1.33E+01
		Zr-95	<1.00E+01	0.00E+00	1.00E+01
		Nb-95	<6.47E+00	0.00E+00	6.47E+00
		I-131	<9.68E+00	0.00E+00	9.68E+00
		Cs-134	<6.18E+00	0.00E+00	6.18E+00
		Cs-137	<5.90E+00	0.00E+00	5.90E+00
		BaLa-140	<9.48E+00	0.00E+00	9.48E+00
		Total-Gam	0.00E+00		
		H3GW	<-1.1E+02	0.00E+00	1.95E+02

Sample Point 410 [ INDICATOR - NE @ 0.65 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438881	3/6/2017 - 3/6/2017	H3GW	<-1.3E+02	0.00E+00	2.44E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446554	6/5/2017 - 6/5/2017	Mn-54	<1.08E+01	0.00E+00	1.08E+01
		Co-58	<7.64E+00	0.00E+00	7.64E+00
		Fe-59	<1.68E+01	0.00E+00	1.68E+01
		Co-60	<7.28E+00	0.00E+00	7.28E+00
		Zn-65	<1.35E+01	0.00E+00	1.35E+01
		Zr-95	<1.30E+01	0.00E+00	1.30E+01
		Nb-95	<1.05E+01	0.00E+00	1.05E+01
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<8.19E+00	0.00E+00	8.19E+00
		Cs-137	<9.50E+00	0.00E+00	9.50E+00
		La-140	<2.44E+01	0.00E+00	2.44E+01
		Ba-140	<3.19E+01	0.00E+00	3.19E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.1E+02	0.00E+00	2.55E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450508	9/18/2017 - 9/18/2017	H3GW	<-8.5E+01	0.00E+00	1.99E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463820	12/12/2017 - 12/12/2017	Mn-54	<4.57E+00	0.00E+00	4.57E+00
		Co-58	<4.74E+00	0.00E+00	4.74E+00
		Fe-59	<9.89E+00	0.00E+00	9.89E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 410 [ INDICATOR - NE @ 0.65 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463820	12/12/2017 - 12/12/2017	Co-60	<5.23E+00	0.00E+00	5.23E+00
		Zn-65	<9.29E+00	0.00E+00	9.29E+00
		Zr-95	<7.65E+00	0.00E+00	7.65E+00
		Nb-95	<5.63E+00	0.00E+00	5.63E+00
		I-131	<7.72E+00	0.00E+00	7.72E+00
		Cs-134	<5.57E+00	0.00E+00	5.57E+00
		Cs-137	<5.20E+00	0.00E+00	5.20E+00
		BaLa-140	<1.09E+01	0.00E+00	1.09E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.7E+02	0.00E+00	1.95E+02

## Sample Point 418 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438883	3/6/2017 - 3/6/2017	H3GW	<1.04E+01	0.00E+00	2.44E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447440	6/20/2017 - 6/20/2017	Mn-54	<8.41E+00	0.00E+00	8.41E+00
		Co-58	<7.83E+00	0.00E+00	7.83E+00
		Fe-59	<1.30E+01	0.00E+00	1.30E+01
		Co-60	<8.40E+00	0.00E+00	8.40E+00
		Zn-65	<2.04E+01	0.00E+00	2.04E+01
		Zr-95	<1.63E+01	0.00E+00	1.63E+01
		Nb-95	<8.24E+00	0.00E+00	8.24E+00
		I-131	<7.99E+00	0.00E+00	7.99E+00
		Cs-134	<7.53E+00	0.00E+00	7.53E+00
		Cs-137	<8.86E+00	0.00E+00	8.86E+00
		La-140	<1.14E+01	0.00E+00	1.14E+01
		Ba-140	<2.49E+01	0.00E+00	2.49E+01
		Total-Gam	0.00E+00		
		H3GW	<5.12E+01	0.00E+00	2.39E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450515	9/11/2017 - 9/11/2017	H3GW	<1.07E+02	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463828	12/18/2017 - 12/18/2017	Mn-54	<6.05E+00	0.00E+00	6.05E+00
		Co-58	<4.79E+00	0.00E+00	4.79E+00
		Fe-59	<9.64E+00	0.00E+00	9.64E+00
		Co-60	<6.05E+00	0.00E+00	6.05E+00
		Zn-65	<1.37E+01	0.00E+00	1.37E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<6.13E+00	0.00E+00	6.13E+00
		I-131	<7.53E+00	0.00E+00	7.53E+00
		Cs-134	<7.01E+00	0.00E+00	7.01E+00
		Cs-137	<6.91E+00	0.00E+00	6.91E+00
		BaLa-140	<4.38E+00	0.00E+00	4.38E+00
		Total-Gam	0.00E+00		
		H3GW	<1.55E+02	0.00E+00	1.84E+02

## Sample Point 423 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438895	3/7/2017 - 3/7/2017	H3GW	<-8.2E+01	0.00E+00	2.56E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447939	6/26/2017 - 6/26/2017	Mn-54	<6.45E+00	0.00E+00	6.45E+00
		Co-58	<8.81E+00	0.00E+00	8.81E+00
		Fe-59	<1.71E+01	0.00E+00	1.71E+01
		Co-60	<7.10E+00	0.00E+00	7.10E+00
		Zn-65	<2.04E+01	0.00E+00	2.04E+01
		Zr-95	<1.42E+01	0.00E+00	1.42E+01
		Nb-95	<7.00E+00	0.00E+00	7.00E+00
		I-131	<8.92E+00	0.00E+00	8.93E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 423 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447939	6/26/2017 - 6/26/2017	Cs-134	<6.42E+00	0.00E+00	6.42E+00
		Cs-137	<7.67E+00	0.00E+00	7.67E+00
		La-140	<1.27E+01	0.00E+00	1.27E+01
		Ba-140	<3.14E+01	0.00E+00	3.14E+01
		Total-Gam	0.00E+00		
		H3GW	<6.61E+01	0.00E+00	2.40E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450517	9/14/2017 - 9/14/2017	H3GW	<-3.3E+01	0.00E+00	1.95E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463833	12/19/2017 - 12/19/2017	Mn-54	<6.35E+00	0.00E+00	6.35E+00
		Co-58	<4.98E+00	0.00E+00	4.98E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<7.70E+00	0.00E+00	7.70E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<9.68E+00	0.00E+00	9.68E+00
		Nb-95	<6.73E+00	0.00E+00	6.73E+00
		I-131	<9.38E+00	0.00E+00	9.38E+00
		Cs-134	<6.39E+00	0.00E+00	6.39E+00
		Cs-137	<4.84E+00	0.00E+00	4.84E+00
		BaLa-140	<1.19E+01	0.00E+00	1.19E+01
		Total-Gam	0.00E+00		
				H3GW	<-1.4E+02

Sample Point 424 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438896	3/7/2017 - 3/7/2017	H3GW	<-1.7E+02	0.00E+00	2.57E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447940	6/26/2017 - 6/26/2017	Mn-54	<7.07E+00	0.00E+00	7.07E+00
		Co-58	<9.70E+00	0.00E+00	9.70E+00
		Fe-59	<1.45E+01	0.00E+00	1.45E+01
		Co-60	<8.40E+00	0.00E+00	8.40E+00
		Zn-65	<1.97E+01	0.00E+00	1.97E+01
		Zr-95	<1.19E+01	0.00E+00	1.19E+01
		Nb-95	<9.73E+00	0.00E+00	9.73E+00
		I-131	<8.55E+00	0.00E+00	8.55E+00
		Cs-134	<7.53E+00	0.00E+00	7.53E+00
		Cs-137	<7.41E+00	0.00E+00	7.41E+00
		La-140	<1.32E+01	0.00E+00	1.32E+01
		Ba-140	<3.27E+01	0.00E+00	3.27E+01
		Total-Gam	0.00E+00		
		H3GW	<3.42E+01	0.00E+00	2.41E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450518	9/14/2017 - 9/14/2017	H3GW	<-1.4E+02	0.00E+00	1.96E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463834	1/10/2018 - 1/10/2018	Mn-54	<6.56E+00	0.00E+00	6.56E+00
		Co-58	<5.38E+00	0.00E+00	5.38E+00
		Fe-59	<1.28E+01	0.00E+00	1.28E+01
		Co-60	<3.29E+00	0.00E+00	3.29E+00
		Zn-65	<1.12E+01	0.00E+00	1.12E+01
		Zr-95	<7.39E+00	0.00E+00	7.39E+00
		Nb-95	<5.87E+00	0.00E+00	5.87E+00
		I-131	<7.14E+00	0.00E+00	7.14E+00
		Cs-134	<4.65E+00	0.00E+00	4.65E+00
		Cs-137	<6.40E+00	0.00E+00	6.40E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Total-Gam	0.00E+00		
				H3GW	<-5.6E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 426 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439270	3/16/2017 - 3/16/2017	H3GW	<-3.3E+01	0.00E+00	2.51E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448198	6/29/2017 - 6/29/2017	Mn-54	<6.54E+00	0.00E+00	6.54E+00
		Co-58	<9.80E+00	0.00E+00	9.80E+00
		Fe-59	<1.94E+01	0.00E+00	1.94E+01
		Co-60	<7.88E+00	0.00E+00	7.87E+00
		Zn-65	<1.79E+01	0.00E+00	1.79E+01
		Zr-95	<1.46E+01	0.00E+00	1.46E+01
		Nb-95	<9.24E+00	0.00E+00	9.24E+00
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<6.65E+00	0.00E+00	6.65E+00
		Cs-137	<9.50E+00	0.00E+00	9.50E+00
		La-140	<1.24E+02	0.00E+00	1.24E+02
		Ba-140	<3.60E+01	0.00E+00	3.60E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.5E+01	0.00E+00	2.30E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450520	9/14/2017 - 9/14/2017	H3GW	<-4.5E+01	0.00E+00	2.00E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463836	12/13/2017 - 12/13/2017	Mn-54	<5.67E+00	0.00E+00	5.67E+00
		Co-58	<6.01E+00	0.00E+00	6.01E+00
		Fe-59	<1.12E+01	0.00E+00	1.12E+01
		Co-60	<4.32E+00	0.00E+00	4.32E+00
		Zn-65	<1.18E+01	0.00E+00	1.18E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<6.75E+00	0.00E+00	6.75E+00
		I-131	<9.82E+00	0.00E+00	9.82E+00
		Cs-134	<6.15E+00	0.00E+00	6.15E+00
		Cs-137	<5.50E+00	0.00E+00	5.50E+00
		BaLa-140	<1.20E+01	0.00E+00	1.20E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.3E+02	0.00E+00	1.95E+02

Sample Point 429 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438884	3/6/2017 - 3/6/2017	H3GW	<-5.7E+01	0.00E+00	2.44E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447442	6/20/2017 - 6/20/2017	Mn-54	<1.02E+01	0.00E+00	1.02E+01
		Co-58	<9.99E+00	0.00E+00	9.99E+00
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<7.86E+00	0.00E+00	7.86E+00
		Zn-65	<1.61E+01	0.00E+00	1.61E+01
		Zr-95	<1.87E+01	0.00E+00	1.87E+01
		Nb-95	<1.31E+01	0.00E+00	1.31E+01
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<9.09E+00	0.00E+00	9.09E+00
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<2.01E+01	0.00E+00	2.01E+01
		Ba-140	<3.64E+01	0.00E+00	3.64E+01
		Total-Gam	0.00E+00		
		H3GW	<-1.8E+02	0.00E+00	2.39E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450521	9/11/2017 - 9/11/2017	H3GW	<-1.6E+02	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463837	12/15/2017 - 12/15/2017	Mn-54	<7.47E+00	0.00E+00	7.47E+00
		Co-58	<7.07E+00	0.00E+00	7.07E+00
		Fe-59	<1.55E+01	0.00E+00	1.55E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: GROUND WATER Concentration (Activity): pCi/l

Sample Point 429 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463837	12/15/2017 - 12/15/2017	Co-60	<7.50E+00	0.00E+00	7.50E+00
		Zn-65	<1.52E+01	0.00E+00	1.52E+01
		Zr-95	<9.52E+00	0.00E+00	9.52E+00
		Nb-95	<6.98E+00	0.00E+00	6.98E+00
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<8.96E+00	0.00E+00	8.96E+00
		Cs-137	<5.36E+00	0.00E+00	5.36E+00
		BaLa-140	<1.12E+01	0.00E+00	1.12E+01
		Total-Gam	0.00E+00		
		H3GW	<0.00E+00	0.00E+00	1.84E+02

Sample Point 612 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439605	3/21/2017 - 3/21/2017	H3GW	<-1.5E+02	0.00E+00	2.55E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448199	6/28/2017 - 6/28/2017	Mn-54	<8.54E+00	0.00E+00	8.54E+00
		Co-58	<6.48E+00	0.00E+00	6.48E+00
		Fe-59	<1.61E+01	0.00E+00	1.61E+01
		Co-60	<7.61E+00	0.00E+00	7.61E+00
		Zn-65	<1.64E+01	0.00E+00	1.64E+01
		Zr-95	<1.81E+01	0.00E+00	1.81E+01
		Nb-95	<9.95E+00	0.00E+00	9.95E+00
		I-131	<1.61E+01	0.00E+00	1.61E+01
		Cs-134	<8.39E+00	0.00E+00	8.39E+00
		Cs-137	<8.86E+00	0.00E+00	8.86E+00
		La-140	<2.36E+02	0.00E+00	2.36E+02
		Ba-140	<3.39E+01	0.00E+00	3.39E+01
		Total-Gam	0.00E+00		
		H3GW	<1.89E+02	0.00E+00	2.31E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450522	9/20/2017 - 9/20/2017	H3GW	<5.38E+01	0.00E+00	1.96E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
463839	12/14/2017 - 12/14/2017	Mn-54	<5.77E+00	0.00E+00	5.77E+00
		Co-58	<6.41E+00	0.00E+00	6.41E+00
		Fe-59	<1.20E+01	0.00E+00	1.20E+01
		Co-60	<4.15E+00	0.00E+00	4.15E+00
		Zn-65	<1.26E+01	0.00E+00	1.26E+01
		Zr-95	<1.04E+01	0.00E+00	1.04E+01
		Nb-95	<6.32E+00	0.00E+00	6.32E+00
		I-131	<8.95E+00	0.00E+00	8.95E+00
		Cs-134	<6.69E+00	0.00E+00	6.69E+00
		Cs-137	<5.60E+00	0.00E+00	5.60E+00
		BaLa-140	<8.23E+00	0.00E+00	8.23E+00
		Total-Gam	0.00E+00		
		H3GW	<8.93E+01	0.00E+00	1.84E+02

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

Sample Point 500 [ INDICATOR - SSW @ 5 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
445247	5/19/2017 - 5/19/2017	Mn-54	<1.30E+01	0.00E+00	1.30E+01
		Co-58	<1.32E+01	0.00E+00	1.32E+01
		Fe-59	<2.43E+01	0.00E+00	2.43E+01
		Co-60	<1.34E+01	0.00E+00	1.34E+01
		Zn-65	<2.60E+01	0.00E+00	2.60E+01
		Zr-95	<2.65E+01	0.00E+00	2.65E+01
		Nb-95	<1.34E+01	0.00E+00	1.34E+01
		I-131	<2.50E+01	0.00E+00	2.50E+01
		Cs-134	<1.62E+01	0.00E+00	1.62E+01

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

Sample Point 500 [ INDICATOR - SSW @ 5 miles ]

Sample ID: 445247 Sample Dates: 5/19/2017 - 5/19/2017

Nuclide	Activity	2 Sigma Error	MDA
Cs-137	<1.23E+01	0.00E+00	1.23E+01
Be-7	<1.49E+02	0.00E+00	1.49E+02
K-40	1.29E+03	2.68E+02	1.29E+02
Co-57	<8.38E+00	0.00E+00	8.38E+00
Mo-99	<1.71E+03	0.00E+00	1.71E+03
Ag-110M	<1.12E+01	0.00E+00	1.12E+01
Sb-122	<3.08E+02	0.00E+00	3.08E+02
Sb-125	<2.67E+01	0.00E+00	2.67E+01

Sample ID: 463859 Sample Dates: 11/14/2017 - 11/14/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.71E+01	0.00E+00	1.71E+01
Co-58	<1.16E+01	0.00E+00	1.16E+01
Fe-59	<2.96E+01	0.00E+00	2.96E+01
Co-60	<1.46E+01	0.00E+00	1.46E+01
Zn-65	<2.57E+01	0.00E+00	2.57E+01
Zr-95	<2.80E+01	0.00E+00	2.80E+01
Nb-95	<1.47E+01	0.00E+00	1.47E+01
I-131	<2.19E+01	0.00E+00	2.19E+01
Cs-134	<1.91E+01	0.00E+00	1.91E+01
Cs-137	<1.44E+01	0.00E+00	1.44E+01
Be-7	<1.31E+02	0.00E+00	1.31E+02
K-40	1.46E+03	3.10E+02	1.28E+02
Co-57	<1.01E+01	0.00E+00	1.01E+01
Mo-99	<5.15E+02	0.00E+00	5.15E+02
Ag-110M	<1.69E+01	0.00E+00	1.69E+01
Sb-122	<5.74E+01	0.00E+00	5.74E+01
Sb-125	<3.62E+01	0.00E+00	3.62E+01

Sample Point 501 [ INDICATOR - -- @ 0 miles ]

Sample ID: 446422 Sample Dates: 5/30/2017 - 5/30/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.10E+01	0.00E+00	7.10E+01
Co-58	<7.67E+01	0.00E+00	7.67E+01
Fe-59	<1.71E+02	0.00E+00	1.71E+02
Co-60	<5.43E+01	0.00E+00	5.43E+01
Zn-65	<1.12E+02	0.00E+00	1.12E+02
Zr-95	<1.22E+02	0.00E+00	1.22E+02
Nb-95	<9.85E+01	0.00E+00	9.85E+01
I-131	<1.62E+02	0.00E+00	1.62E+02
Cs-134	<7.15E+01	0.00E+00	7.15E+01
Cs-137	<1.41E+02	0.00E+00	1.41E+02
Be-7	2.81E+02	4.22E+02	7.05E+02
K-40	9.74E+03	1.81E+03	1.12E+03
Co-57	<5.22E+01	0.00E+00	5.22E+01
Mo-99	<1.31E+04	0.00E+00	1.31E+04
Ag-110M	<5.59E+01	0.00E+00	5.59E+01
Sb-122	<1.81E+03	0.00E+00	1.81E+03
Sb-125	<1.82E+02	0.00E+00	1.82E+02

Sample ID: 464825 Sample Dates: 11/21/2017 - 11/21/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<6.72E+01	0.00E+00	6.72E+01
Co-58	<6.98E+01	0.00E+00	6.98E+01
Fe-59	<1.62E+02	0.00E+00	1.62E+02
Co-60	<4.72E+01	0.00E+00	4.72E+01
Zn-65	<1.24E+02	0.00E+00	1.24E+02
Zr-95	<1.58E+02	0.00E+00	1.58E+02
Nb-95	<9.19E+01	0.00E+00	9.19E+01
I-131	<2.05E+02	0.00E+00	2.05E+02
Cs-134	<8.94E+01	0.00E+00	8.94E+01
Cs-137	1.13E+02	8.04E+01	1.21E+02
Be-7	2.03E+02	5.40E+02	9.36E+02
K-40	1.30E+04	2.19E+03	1.10E+03
Co-57	<4.70E+01	0.00E+00	4.70E+01
Mo-99	<2.42E+04	0.00E+00	2.42E+04





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SEDIMENT\_SHORE Concentration (Activity): pCi/kg dry

Sample Point 501 [ INDICATOR - -- @ 0 miles ]

Sample ID: 464825 Sample Dates: 11/21/2017 - 11/21/2017

Nuclide	Activity	2 Sigma Error	MDA
Ag-110M	<5.48E+01	0.00E+00	5.48E+01
Sb-122	<3.74E+03	0.00E+00	3.74E+03
Sb-125	<1.05E+02	0.00E+00	1.05E+02
Fe-55	<1.15E+05	0.00E+00	1.15E+05
Ni-63	<4.83E+04	0.00E+00	4.83E+04
Sr-89	<2.20E+02	0.00E+00	2.20E+02
Sr-90	<1.39E+02	0.00E+00	1.39E+02

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [ CONTROL - NE @ 0.6 miles ]

Sample ID: 432881 Sample Dates: 1/3/2017 - 2/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<7.97E-01	0.00E+00	7.97E-01
Co-58	<9.74E-01	0.00E+00	9.74E-01
Fe-59	<2.15E+00	0.00E+00	2.15E+00
Co-60	<7.91E-01	0.00E+00	7.91E-01
Zn-65	<1.68E+00	0.00E+00	1.68E+00
Zr-95	<1.69E+00	0.00E+00	1.69E+00
Nb-95	<1.28E+00	0.00E+00	1.28E+00
I-131	<4.27E+00	0.00E+00	4.27E+00
Cs-134	<9.50E-01	0.00E+00	9.50E-01
Cs-137	<8.90E-01	0.00E+00	8.90E-01
BaLa-140	<2.11E+00	0.00E+00	2.11E+00
H3SW	<7.09E+01	0.00E+00	1.87E+02

Sample ID: 435077 Sample Dates: 2/1/2017 - 3/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.89E+00	0.00E+00	1.89E+00
Co-58	<2.35E+00	0.00E+00	2.35E+00
Fe-59	<5.74E+00	0.00E+00	5.74E+00
Co-60	<1.89E+00	0.00E+00	1.89E+00
Zn-65	<5.96E+00	0.00E+00	5.96E+00
Zr-95	<4.44E+00	0.00E+00	4.44E+00
Nb-95	<3.30E+00	0.00E+00	3.30E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<2.08E+00	0.00E+00	2.08E+00
Cs-137	<2.54E+00	0.00E+00	2.54E+00
BaLa-140	<5.28E+00	0.00E+00	5.28E+00
H3SW	<3.88E+01	0.00E+00	1.88E+02

Sample ID: 437549 Sample Dates: 3/1/2017 - 4/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.09E+00	0.00E+00	2.09E+00
Co-58	<2.58E+00	0.00E+00	2.58E+00
Fe-59	<5.56E+00	0.00E+00	5.56E+00
Co-60	<2.40E+00	0.00E+00	2.40E+00
Zn-65	<4.59E+00	0.00E+00	4.59E+00
Zr-95	<4.16E+00	0.00E+00	4.16E+00
Nb-95	<3.36E+00	0.00E+00	3.36E+00
I-131	<1.07E+01	0.00E+00	1.07E+01
Cs-134	<2.49E+00	0.00E+00	2.49E+00
Cs-137	<1.87E+00	0.00E+00	1.87E+00
BaLa-140	<6.57E+00	0.00E+00	6.57E+00
H3SW	<-2.6E+01	0.00E+00	1.93E+02

Sample ID: 439978 Sample Dates: 4/1/2017 - 5/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.43E+00	0.00E+00	2.43E+00
Co-58	<3.35E+00	0.00E+00	3.35E+00
Fe-59	<6.99E+00	0.00E+00	6.99E+00
Co-60	<2.41E+00	0.00E+00	2.41E+00
Zn-65	<5.39E+00	0.00E+00	5.39E+00
Zr-95	<5.31E+00	0.00E+00	5.31E+00
Nb-95	<3.34E+00	0.00E+00	3.34E+00
I-131	<1.13E+01	0.00E+00	1.13E+01
Cs-134	<3.21E+00	0.00E+00	3.21E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [ CONTROL - NE @ 0.6 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439978	4/1/2017 - 5/1/2017	Cs-137	<2.49E+00	0.00E+00	2.49E+00
		BaLa-140	<8.31E+00	0.00E+00	8.31E+00
		H3SW	<-6.3E+01	0.00E+00	1.92E+02
444234	5/1/2017 - 6/1/2017	Mn-54	<1.79E+00	0.00E+00	1.79E+00
		Co-58	<2.23E+00	0.00E+00	2.23E+00
		Fe-59	<4.87E+00	0.00E+00	4.87E+00
		Co-60	<1.83E+00	0.00E+00	1.83E+00
		Zn-65	<3.85E+00	0.00E+00	3.85E+00
		Zr-95	<3.81E+00	0.00E+00	3.81E+00
		Nb-95	<2.65E+00	0.00E+00	2.65E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.01E+00	0.00E+00	3.01E+00
		Cs-137	<1.96E+00	0.00E+00	1.96E+00
		BaLa-140	<6.23E+00	0.00E+00	6.23E+00
		H3SW	<-8.8E+01	0.00E+00	2.02E+02
		447140	6/1/2017 - 7/2/2017	Mn-54	<1.50E+00
Co-58	<1.81E+00			0.00E+00	1.81E+00
Fe-59	<3.91E+00			0.00E+00	3.91E+00
Co-60	<1.66E+00			0.00E+00	1.66E+00
Zn-65	<3.04E+00			0.00E+00	3.04E+00
Zr-95	<3.43E+00			0.00E+00	3.43E+00
Nb-95	<2.46E+00			0.00E+00	2.46E+00
I-131	<1.20E+01			0.00E+00	1.20E+01
Cs-134	<1.74E+00			0.00E+00	1.74E+00
Cs-137	<1.58E+00			0.00E+00	1.58E+00
BaLa-140	<5.59E+00			0.00E+00	5.59E+00
H3SW	<-3.5E+01			0.00E+00	1.98E+02
449192	7/2/2017 - 8/1/2017			Mn-54	<2.56E+00
		Co-58	<3.53E+00	0.00E+00	3.53E+00
		Fe-59	<7.06E+00	0.00E+00	7.06E+00
		Co-60	<2.66E+00	0.00E+00	2.66E+00
		Zn-65	<6.17E+00	0.00E+00	6.17E+00
		Zr-95	<4.81E+00	0.00E+00	4.81E+00
		Nb-95	<3.76E+00	0.00E+00	3.76E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<3.24E+00	0.00E+00	3.24E+00
		Cs-137	<2.76E+00	0.00E+00	2.76E+00
		BaLa-140	<4.27E+00	0.00E+00	4.27E+00
		H3SW	<-6.1E+01	0.00E+00	1.84E+02
		451160	8/1/2017 - 9/5/2017	Mn-54	<1.90E+00
Co-58	<2.16E+00			0.00E+00	2.16E+00
Fe-59	<5.57E+00			0.00E+00	5.57E+00
Co-60	<2.15E+00			0.00E+00	2.15E+00
Zn-65	<5.11E+00			0.00E+00	5.11E+00
Zr-95	<4.33E+00			0.00E+00	4.33E+00
Nb-95	<2.42E+00			0.00E+00	2.42E+00
I-131	<1.05E+01			0.00E+00	1.05E+01
Cs-134	<2.42E+00			0.00E+00	2.42E+00
Cs-137	<2.02E+00			0.00E+00	2.02E+00
BaLa-140	<6.46E+00			0.00E+00	6.46E+00
H3SW	<-1.2E+02			0.00E+00	2.01E+02
453415	9/5/2017 - 10/1/2017			Mn-54	<3.07E+00
		Co-58	<2.60E+00	0.00E+00	2.60E+00
		Fe-59	<7.33E+00	0.00E+00	7.33E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 400 [ CONTROL - NE @ 0.6 miles ]

Sample ID: 453415 Sample Dates: 9/5/2017 - 10/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Co-60	<3.10E+00	0.00E+00	3.10E+00
Zn-65	<4.34E+00	0.00E+00	4.34E+00
Zr-95	<6.03E+00	0.00E+00	6.03E+00
Nb-95	<3.83E+00	0.00E+00	3.83E+00
I-131	<1.04E+01	0.00E+00	1.04E+01
Cs-134	<3.07E+00	0.00E+00	3.07E+00
Cs-137	<2.78E+00	0.00E+00	2.78E+00
BaLa-140	<5.13E+00	0.00E+00	5.13E+00
H3SW	<-7.6E+01	0.00E+00	1.99E+02

Sample ID: 456013 Sample Dates: 10/1/2017 - 11/2/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.85E+00	0.00E+00	1.85E+00
Co-58	<2.15E+00	0.00E+00	2.15E+00
Fe-59	<4.80E+00	0.00E+00	4.80E+00
Co-60	<1.91E+00	0.00E+00	1.91E+00
Zn-65	<3.89E+00	0.00E+00	3.89E+00
Zr-95	<3.31E+00	0.00E+00	3.31E+00
Nb-95	<2.74E+00	0.00E+00	2.74E+00
I-131	<1.18E+01	0.00E+00	1.18E+01
Cs-134	<2.05E+00	0.00E+00	2.05E+00
Cs-137	<2.09E+00	0.00E+00	2.09E+00
BaLa-140	<6.00E+00	0.00E+00	6.00E+00
H3SW	<3.09E+01	0.00E+00	1.84E+02

Sample ID: 463063 Sample Dates: 11/2/2017 - 12/3/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.72E+00	0.00E+00	2.72E+00
Co-58	<2.74E+00	0.00E+00	2.74E+00
Fe-59	<7.95E+00	0.00E+00	7.95E+00
Co-60	<2.40E+00	0.00E+00	2.40E+00
Zn-65	<6.15E+00	0.00E+00	6.15E+00
Zr-95	<5.51E+00	0.00E+00	5.51E+00
Nb-95	<4.31E+00	0.00E+00	4.31E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<3.65E+00	0.00E+00	3.65E+00
Cs-137	<2.39E+00	0.00E+00	2.39E+00
BaLa-140	<6.84E+00	0.00E+00	6.84E+00
H3SW	<-7.3E+01	0.00E+00	1.93E+02

Sample ID: 464937 Sample Dates: 12/3/2017 - 1/1/2018

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.98E+00	0.00E+00	1.98E+00
Co-58	<3.19E+00	0.00E+00	3.19E+00
Fe-59	<5.75E+00	0.00E+00	5.75E+00
Co-60	<3.02E+00	0.00E+00	3.02E+00
Zn-65	<6.75E+00	0.00E+00	6.75E+00
Zr-95	<6.24E+00	0.00E+00	6.24E+00
Nb-95	<3.77E+00	0.00E+00	3.77E+00
I-131	<1.16E+01	0.00E+00	1.16E+01
Cs-134	<4.09E+00	0.00E+00	4.09E+00
Cs-137	<2.53E+00	0.00E+00	2.53E+00
BaLa-140	<6.54E+00	0.00E+00	6.54E+00
H3SW	<-7.1E+00	0.00E+00	1.77E+02

Sample Point 401 [ INDICATOR - SSW @ 4.9 miles ]

Sample ID: 432882 Sample Dates: 1/3/2017 - 2/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.77E+00	0.00E+00	2.77E+00
Co-58	<2.85E+00	0.00E+00	2.85E+00
Fe-59	<5.56E+00	0.00E+00	5.56E+00
Co-60	<3.10E+00	0.00E+00	3.10E+00
Zn-65	<4.79E+00	0.00E+00	4.79E+00
Zr-95	<4.45E+00	0.00E+00	4.45E+00
Nb-95	<2.91E+00	0.00E+00	2.91E+00
I-131	<1.20E+01	0.00E+00	1.20E+01
Cs-134	<2.59E+00	0.00E+00	2.59E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 401 [ INDICATOR - SSW @ 4.9 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432882	1/3/2017 - 2/1/2017	Cs-137	<2.16E+00	0.00E+00	2.16E+00
		BaLa-140	<6.27E+00	0.00E+00	6.27E+00
		H3SW	2.39E+02	1.15E+02	1.84E+02
435078	2/1/2017 - 3/1/2017	Mn-54	<2.22E+00	0.00E+00	2.22E+00
		Co-58	<2.49E+00	0.00E+00	2.49E+00
		Fe-59	<5.51E+00	0.00E+00	5.51E+00
		Co-60	<2.37E+00	0.00E+00	2.37E+00
		Zn-65	<4.17E+00	0.00E+00	4.17E+00
		Zr-95	<4.78E+00	0.00E+00	4.78E+00
		Nb-95	<2.83E+00	0.00E+00	2.83E+00
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<2.41E+00	0.00E+00	2.41E+00
		Cs-137	<2.42E+00	0.00E+00	2.42E+00
		BaLa-140	<6.18E+00	0.00E+00	6.18E+00
		H3SW	<1.88E+02	0.00E+00	1.90E+02
		437550	3/1/2017 - 4/1/2017	Mn-54	<2.04E+00
Co-58	<2.43E+00			0.00E+00	2.43E+00
Fe-59	<5.68E+00			0.00E+00	5.68E+00
Co-60	<2.41E+00			0.00E+00	2.41E+00
Zn-65	<5.74E+00			0.00E+00	5.74E+00
Zr-95	<4.24E+00			0.00E+00	4.24E+00
Nb-95	<3.42E+00			0.00E+00	3.42E+00
I-131	<1.20E+01			0.00E+00	1.20E+01
Cs-134	<2.56E+00			0.00E+00	2.56E+00
Cs-137	<2.50E+00			0.00E+00	2.50E+00
BaLa-140	<4.59E+00			0.00E+00	4.59E+00
H3SW	4.33E+02			1.23E+02	1.91E+02
439979	4/1/2017 - 5/1/2017			Mn-54	<3.02E+00
		Co-58	<3.40E+00	0.00E+00	3.40E+00
		Fe-59	<8.23E+00	0.00E+00	8.23E+00
		Co-60	<2.49E+00	0.00E+00	2.49E+00
		Zn-65	<7.14E+00	0.00E+00	7.14E+00
		Zr-95	<7.20E+00	0.00E+00	7.20E+00
		Nb-95	<4.51E+00	0.00E+00	4.51E+00
		I-131	<1.16E+01	0.00E+00	1.16E+01
		Cs-134	<3.19E+00	0.00E+00	3.19E+00
		Cs-137	<3.46E+00	0.00E+00	3.46E+00
		BaLa-140	<5.30E+00	0.00E+00	5.30E+00
		H3SW	<7.51E+01	0.00E+00	1.93E+02
		444235	5/1/2017 - 6/1/2017	Mn-54	<1.98E+00
Co-58	<2.02E+00			0.00E+00	2.02E+00
Fe-59	<4.45E+00			0.00E+00	4.45E+00
Co-60	<1.72E+00			0.00E+00	1.72E+00
Zn-65	<3.86E+00			0.00E+00	3.86E+00
Zr-95	<4.15E+00			0.00E+00	4.15E+00
Nb-95	<3.07E+00			0.00E+00	3.07E+00
I-131	<1.09E+01			0.00E+00	1.09E+01
Cs-134	<2.04E+00			0.00E+00	2.04E+00
Cs-137	<2.21E+00			0.00E+00	2.21E+00
BaLa-140	<7.35E+00			0.00E+00	7.35E+00
H3SW	<9.8E+00			0.00E+00	2.01E+02
447141	6/1/2017 - 7/2/2017			Mn-54	<1.41E+00
		Co-58	<1.50E+00	0.00E+00	1.50E+00
		Fe-59	<3.04E+00	0.00E+00	3.04E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 401 [ INDICATOR - SSW @ 4.9 miles ]

Sample ID: 447141 Sample Dates: 6/1/2017 - 7/2/2017

Nuclide	Activity	2 Sigma Error	MDA
Co-60	<1.17E+00	0.00E+00	1.17E+00
Zn-65	<3.07E+00	0.00E+00	3.07E+00
Zr-95	<3.66E+00	0.00E+00	3.66E+00
Nb-95	<2.34E+00	0.00E+00	2.34E+00
I-131	<1.05E+01	0.00E+00	1.05E+01
Cs-134	<1.81E+00	0.00E+00	1.81E+00
Cs-137	<1.64E+00	0.00E+00	1.64E+00
BaLa-140	<4.77E+00	0.00E+00	4.77E+00
H3SW	<-5.7E+01	0.00E+00	1.98E+02

Sample ID: 449193 Sample Dates: 7/2/2017 - 8/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.74E+00	0.00E+00	1.74E+00
Co-58	<2.19E+00	0.00E+00	2.19E+00
Fe-59	<4.75E+00	0.00E+00	4.75E+00
Co-60	<1.93E+00	0.00E+00	1.93E+00
Zn-65	<3.97E+00	0.00E+00	3.97E+00
Zr-95	<3.71E+00	0.00E+00	3.71E+00
Nb-95	<2.55E+00	0.00E+00	2.55E+00
I-131	<1.17E+01	0.00E+00	1.17E+01
Cs-134	<1.69E+00	0.00E+00	1.69E+00
Cs-137	<1.92E+00	0.00E+00	1.92E+00
BaLa-140	<7.11E+00	0.00E+00	7.11E+00
H3SW	<-1.4E+01	0.00E+00	1.84E+02

Sample ID: 451161 Sample Dates: 8/1/2017 - 9/5/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.61E+00	0.00E+00	2.61E+00
Co-58	<2.47E+00	0.00E+00	2.47E+00
Fe-59	<6.26E+00	0.00E+00	6.26E+00
Co-60	<2.24E+00	0.00E+00	2.24E+00
Zn-65	<5.56E+00	0.00E+00	5.56E+00
Zr-95	<4.04E+00	0.00E+00	4.04E+00
Nb-95	<4.20E+00	0.00E+00	4.20E+00
I-131	<1.19E+01	0.00E+00	1.19E+01
Cs-134	<2.56E+00	0.00E+00	2.56E+00
Cs-137	<2.92E+00	0.00E+00	2.92E+00
BaLa-140	<5.80E+00	0.00E+00	5.80E+00
H3SW	<-1.1E+02	0.00E+00	2.01E+02

Sample ID: 453416 Sample Dates: 9/5/2017 - 10/1/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<2.74E+00	0.00E+00	2.74E+00
Co-58	<4.48E+00	0.00E+00	4.48E+00
Fe-59	<8.19E+00	0.00E+00	8.19E+00
Co-60	<4.13E+00	0.00E+00	4.13E+00
Zn-65	<6.28E+00	0.00E+00	6.28E+00
Zr-95	<7.72E+00	0.00E+00	7.72E+00
Nb-95	<4.58E+00	0.00E+00	4.58E+00
I-131	<1.14E+01	0.00E+00	1.14E+01
Cs-134	<4.19E+00	0.00E+00	4.19E+00
Cs-137	<4.01E+00	0.00E+00	4.01E+00
BaLa-140	<6.80E+00	0.00E+00	6.80E+00
H3SW	<-5.9E+01	0.00E+00	1.98E+02

Sample ID: 456014 Sample Dates: 10/1/2017 - 11/2/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.87E+00	0.00E+00	1.87E+00
Co-58	<2.45E+00	0.00E+00	2.45E+00
Fe-59	<5.18E+00	0.00E+00	5.18E+00
Co-60	<1.53E+00	0.00E+00	1.53E+00
Zn-65	<2.99E+00	0.00E+00	2.99E+00
Zr-95	<4.13E+00	0.00E+00	4.13E+00
Nb-95	<2.92E+00	0.00E+00	2.92E+00
I-131	<1.12E+01	0.00E+00	1.12E+01
Cs-134	<2.19E+00	0.00E+00	2.19E+00
Cs-137	<1.72E+00	0.00E+00	1.72E+00
BaLa-140	<6.69E+00	0.00E+00	6.69E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 401 [ INDICATOR - SSW @ 4.9 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
456014	10/1/2017 - 11/2/2017	H3SW	<1.69E+02	0.00E+00	1.84E+02
463064	11/2/2017 - 12/3/2017	Mn-54	<1.86E+00	0.00E+00	1.86E+00
		Co-58	<2.17E+00	0.00E+00	2.17E+00
		Fe-59	<4.40E+00	0.00E+00	4.40E+00
		Co-60	<2.03E+00	0.00E+00	2.03E+00
		Zn-65	<3.85E+00	0.00E+00	3.85E+00
		Zr-95	<4.19E+00	0.00E+00	4.19E+00
		Nb-95	<3.10E+00	0.00E+00	3.10E+00
		I-131	<1.13E+01	0.00E+00	1.13E+01
		Cs-134	<2.25E+00	0.00E+00	2.25E+00
		Cs-137	<2.37E+00	0.00E+00	2.37E+00
		BaLa-140	<4.70E+00	0.00E+00	4.70E+00
		H3SW	<6.35E+01	0.00E+00	1.87E+02
464938	12/3/2017 - 1/1/2018	Mn-54	<2.61E+00	0.00E+00	2.61E+00
		Co-58	<3.54E+00	0.00E+00	3.54E+00
		Fe-59	<9.53E+00	0.00E+00	9.53E+00
		Co-60	<3.65E+00	0.00E+00	3.65E+00
		Zn-65	<5.82E+00	0.00E+00	5.82E+00
		Zr-95	<6.09E+00	0.00E+00	6.09E+00
		Nb-95	<4.05E+00	0.00E+00	4.05E+00
		I-131	<1.15E+01	0.00E+00	1.15E+01
		Cs-134	<3.59E+00	0.00E+00	3.59E+00
		Cs-137	<3.22E+00	0.00E+00	3.22E+00
		BaLa-140	<8.34E+00	0.00E+00	8.34E+00
		H3SW	<8.51E+01	0.00E+00	1.77E+02

## Sample Point 494 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432850	1/4/2017 - 1/4/2017	H3SW	<-1.6E+02	0.00E+00	2.56E+02
433252	1/10/2017 - 1/10/2017	H3SW	<-1.1E+03	0.00E+00	3.10E+02
433669	1/17/2017 - 1/17/2017	H3SW	<1.90E+02	0.00E+00	2.50E+02
434404	1/25/2017 - 1/25/2017	H3SW	<8.70E+01	0.00E+00	2.41E+02
435048	1/31/2017 - 1/31/2017	H3SW	<-1.0E+02	0.00E+00	2.52E+02
435758	2/8/2017 - 2/8/2017	H3SW	3.45E+03	1.94E+02	2.31E+02
436208	2/14/2017 - 2/14/2017	H3SW	<2.17E+02	0.00E+00	2.47E+02
436659	2/21/2017 - 2/21/2017	H3SW	<5.03E+01	0.00E+00	2.46E+02
437520	2/28/2017 - 2/28/2017	H3SW	<-5.4E+01	0.00E+00	2.43E+02
438250	3/7/2017 - 3/7/2017	H3SW	<-5.1E+00	0.00E+00	2.31E+02
438753	3/14/2017 - 3/14/2017	H3SW	<-8.4E+03	0.00E+00	5.66E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 494 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
439096	3/21/2017 - 3/21/2017	H3SW	<-1.1E+02	0.00E+00	2.49E+02
439949	3/28/2017 - 3/28/2017	H3SW	<-1.2E+02	0.00E+00	2.53E+02
440521	4/4/2017 - 4/4/2017	H3SW	<7.48E+01	0.00E+00	2.29E+02
441361	4/11/2017 - 4/11/2017	H3SW	<8.56E+00	0.00E+00	2.25E+02
441772	4/18/2017 - 4/18/2017	H3SW	3.00E+02	1.43E+02	2.34E+02
442219	4/25/2017 - 4/25/2017	H3SW	<2.08E+02	0.00E+00	2.34E+02
442810	5/2/2017 - 5/2/2017	H3SW	<-4.9E+01	0.00E+00	2.41E+02
443248	5/9/2017 - 5/9/2017	H3SW	<-2.1E+01	0.00E+00	2.41E+02
443806	5/16/2017 - 5/16/2017	H3SW	<-4.7E+01	0.00E+00	2.32E+02
444200	5/23/2017 - 5/23/2017	H3SW	<-2.6E+02	0.00E+00	2.45E+02
445270	5/30/2017 - 5/30/2017	H3SW	<2.04E+01	0.00E+00	2.28E+02
446269	6/6/2017 - 6/6/2017	H3SW	<1.20E+01	0.00E+00	2.31E+02
446773	6/13/2017 - 6/13/2017	H3SW	<-1.3E+02	0.00E+00	2.43E+02
447099	6/21/2017 - 6/21/2017	H3SW	<2.47E+01	0.00E+00	2.42E+02
447752	6/27/2017 - 6/27/2017	H3SW	<6.95E+01	0.00E+00	2.26E+02
448216	7/5/2017 - 7/5/2017	H3SW	<-1.4E+01	0.00E+00	2.28E+02
448842	7/11/2017 - 7/11/2017	H3SW	<1.96E+02	0.00E+00	2.30E+02
449155	7/18/2017 - 7/18/2017	H3SW	<1.96E+02	0.00E+00	2.26E+02
449892	7/25/2017 - 7/25/2017	H3SW	2.29E+02	1.38E+02	2.29E+02
450561	8/7/2017 - 8/7/2017	Mn-54	<1.94E+01	0.00E+00	1.94E+01
		Co-58	<1.62E+01	0.00E+00	1.62E+01
		Fe-59	<2.42E+01	0.00E+00	2.42E+01
		Co-60	<1.61E+01	0.00E+00	1.61E+01
		Zn-65	<2.17E+01	0.00E+00	2.17E+01
		Zr-95	<1.80E+01	0.00E+00	1.80E+01
		Nb-95	<1.57E+01	0.00E+00	1.57E+01
		I-131	<1.21E+01	0.00E+00	1.21E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.68E+01	0.00E+00	1.68E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 494 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450561	8/7/2017 - 8/7/2017	La-140	<3.54E+01	0.00E+00	3.54E+01
		Ba-140	<3.81E+01	0.00E+00	3.81E+01
		Total-Gam	0.00E+00		
		H3SW	<1.72E+01	0.00E+00	2.61E+02
451601	9/7/2017 - 9/7/2017	Mn-54	<1.07E+01	0.00E+00	1.07E+01
		Co-58	<1.09E+01	0.00E+00	1.09E+01
		Fe-59	<2.53E+01	0.00E+00	2.53E+01
		Co-60	<1.40E+01	0.00E+00	1.40E+01
		Zn-65	<3.09E+01	0.00E+00	3.09E+01
		Zr-95	<1.86E+01	0.00E+00	1.86E+01
		Nb-95	<1.89E+01	0.00E+00	1.89E+01
		I-131	<1.78E+01	0.00E+00	1.78E+01
		Cs-134	<1.38E+01	0.00E+00	1.38E+01
		Cs-137	<2.06E+01	0.00E+00	2.06E+01
		La-140	<8.65E+01	0.00E+00	8.65E+01
		Ba-140	<5.49E+01	0.00E+00	5.49E+01
		Total-Gam	0.00E+00		
		H3SW	<2.02E+02	0.00E+00	2.40E+02
461265	10/10/2017 - 10/10/2017	Mn-54	<5.81E+00	0.00E+00	5.81E+00
		Co-58	<3.94E+00	0.00E+00	3.94E+00
		Fe-59	<1.00E+01	0.00E+00	1.00E+01
		Co-60	<7.56E+00	0.00E+00	7.56E+00
		Zn-65	<1.28E+01	0.00E+00	1.28E+01
		Zr-95	<9.45E+00	0.00E+00	9.45E+00
		Nb-95	<4.91E+00	0.00E+00	4.91E+00
		I-131	<3.80E+00	0.00E+00	3.80E+00
		Cs-134	<5.72E+00	0.00E+00	5.72E+00
		Cs-137	<5.52E+00	0.00E+00	5.52E+00
		BaLa-140	<8.78E+00	0.00E+00	8.78E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.2E+01	0.00E+00	2.06E+02
		461913	11/6/2017 - 11/6/2017	Mn-54	<4.37E+00
Co-58	<5.07E+00			0.00E+00	5.07E+00
Fe-59	<1.10E+01			0.00E+00	1.10E+01
Co-60	<6.37E+00			0.00E+00	6.37E+00
Zn-65	<8.46E+00			0.00E+00	8.46E+00
Zr-95	<8.81E+00			0.00E+00	8.81E+00
Nb-95	<5.64E+00			0.00E+00	5.64E+00
I-131	<4.85E+00			0.00E+00	4.85E+00
Cs-134	<5.00E+00			0.00E+00	5.00E+00
Cs-137	<6.16E+00			0.00E+00	6.16E+00
BaLa-140	<6.98E+00			0.00E+00	6.98E+00
Total-Gam	0.00E+00				
H3SW	<-5.1E+01			0.00E+00	1.78E+02
464230	12/12/2017 - 12/12/2017			Mn-54	<6.21E+00
		Co-58	<6.43E+00	0.00E+00	6.43E+00
		Fe-59	<1.19E+01	0.00E+00	1.19E+01
		Co-60	<7.30E+00	0.00E+00	7.30E+00
		Zn-65	<1.24E+01	0.00E+00	1.24E+01
		Zr-95	<9.30E+00	0.00E+00	9.30E+00
		Nb-95	<6.39E+00	0.00E+00	6.39E+00
		I-131	<8.14E+00	0.00E+00	8.14E+00
		Cs-134	<6.75E+00	0.00E+00	6.75E+00
		Cs-137	<5.17E+00	0.00E+00	5.17E+00
		BaLa-140	<7.48E+00	0.00E+00	7.48E+00
		Total-Gam	0.00E+00		





**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 494 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	464230	Sample Dates:	12/12/2017 - 12/12/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-3.3E+01	0.00E+00	1.88E+02

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Sample Point 495 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	432851	Sample Dates:	1/4/2017 - 1/4/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<1.85E+02	0.00E+00	2.41E+02
Sample ID:	433253	Sample Dates:	1/10/2017 - 1/10/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<8.56E+01	0.00E+00	2.50E+02
Sample ID:	433670	Sample Dates:	1/17/2017 - 1/17/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<1.31E+02	0.00E+00	2.33E+02
Sample ID:	434405	Sample Dates:	1/25/2017 - 1/25/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<1.82E+02	0.00E+00	2.40E+02
Sample ID:	434396	Sample Dates:	1/4/2017 - 1/31/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<7.88E+00	0.00E+00	7.88E+00
				Co-58	<7.72E+00	0.00E+00	7.72E+00
				Fe-59	<1.71E+01	0.00E+00	1.71E+01
				Co-60	<9.44E+00	0.00E+00	9.44E+00
				Zn-65	<1.76E+01	0.00E+00	1.76E+01
				Zr-95	<1.56E+01	0.00E+00	1.56E+01
				Nb-95	<9.66E+00	0.00E+00	9.66E+00
				I-131	<2.54E+01	0.00E+00	2.54E+01
				Cs-134	<7.80E+00	0.00E+00	7.80E+00
				Cs-137	<7.93E+00	0.00E+00	7.93E+00
				La-140	<5.76E+03	0.00E+00	5.76E+03
				Ba-140	<5.43E+01	0.00E+00	5.43E+01
				Total-Gam	0.00E+00		
Sample ID:	435049	Sample Dates:	1/31/2017 - 1/31/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-2.4E+02	0.00E+00	2.62E+02
Sample ID:	435759	Sample Dates:	2/8/2017 - 2/8/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<6.18E+01	0.00E+00	2.41E+02
Sample ID:	436209	Sample Dates:	2/14/2017 - 2/14/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<1.65E+02	0.00E+00	2.28E+02
Sample ID:	436660	Sample Dates:	2/21/2017 - 2/21/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-1.5E+02	0.00E+00	2.55E+02
Sample ID:	436651	Sample Dates:	2/8/2017 - 2/28/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.91E+00	0.00E+00	6.91E+00
				Co-58	<9.38E+00	0.00E+00	9.38E+00
				Fe-59	<1.75E+01	0.00E+00	1.75E+01
				Co-60	<7.62E+00	0.00E+00	7.62E+00
				Zn-65	<1.65E+01	0.00E+00	1.65E+01
				Zr-95	<1.47E+01	0.00E+00	1.47E+01
				Nb-95	<9.32E+00	0.00E+00	9.32E+00
				I-131	<2.13E+01	0.00E+00	2.13E+01
				Cs-134	<8.72E+00	0.00E+00	8.72E+00
				Cs-137	<7.93E+00	0.00E+00	7.93E+00
				La-140	<5.63E+02	0.00E+00	5.63E+02
				Ba-140	<5.35E+01	0.00E+00	5.35E+01
				Total-Gam	0.00E+00		
Sample ID:	437521	Sample Dates:	2/28/2017 - 2/28/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-1.6E+01	0.00E+00	2.42E+02
Sample ID:	438251	Sample Dates:	3/7/2017 - 3/7/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-7.9E+01	0.00E+00	2.37E+02

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438754	3/14/2017 - 3/14/2017	H3SW	<-1.3E+02	0.00E+00	2.40E+02
439097	3/21/2017 - 3/21/2017	H3SW	<-1.5E+02	0.00E+00	2.46E+02
439453	3/7/2017 - 3/28/2017	Mn-54	<7.81E+00	0.00E+00	7.81E+00
		Co-58	<9.75E+00	0.00E+00	9.75E+00
		Fe-59	<1.78E+01	0.00E+00	1.78E+01
		Co-60	<5.96E+00	0.00E+00	5.96E+00
		Zn-65	<1.66E+01	0.00E+00	1.66E+01
		Zr-95	<1.39E+01	0.00E+00	1.39E+01
		Nb-95	<1.12E+01	0.00E+00	1.12E+01
		I-131	<2.01E+01	0.00E+00	2.01E+01
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<8.41E+00	0.00E+00	8.41E+00
		La-140	<1.08E+03	0.00E+00	1.08E+03
		Ba-140	<3.96E+01	0.00E+00	3.96E+01
		Total-Gam	0.00E+00		
439950	3/28/2017 - 3/28/2017	H3SW	<-8.8E+01	0.00E+00	2.53E+02
440522	4/4/2017 - 4/4/2017	H3SW	<-6.2E+01	0.00E+00	2.34E+02
441362	4/11/2017 - 4/11/2017	H3SW	<1.21E+01	0.00E+00	2.24E+02
441773	4/18/2017 - 4/18/2017	H3SW	<1.51E+02	0.00E+00	2.39E+02
442206	4/4/2017 - 4/25/2017	Mn-54	<8.34E+00	0.00E+00	8.34E+00
		Co-58	<9.14E+00	0.00E+00	9.14E+00
		Fe-59	<1.76E+01	0.00E+00	1.76E+01
		Co-60	<8.08E+00	0.00E+00	8.08E+00
		Zn-65	<1.81E+01	0.00E+00	1.81E+01
		Zr-95	<1.62E+01	0.00E+00	1.62E+01
		Nb-95	<9.94E+00	0.00E+00	9.94E+00
		I-131	<2.02E+01	0.00E+00	2.02E+01
		Cs-134	<8.57E+00	0.00E+00	8.57E+00
		Cs-137	<6.27E+00	0.00E+00	6.27E+00
		La-140	<7.00E+02	0.00E+00	7.00E+02
		Ba-140	<4.95E+01	0.00E+00	4.95E+01
		Total-Gam	0.00E+00		
442220	4/25/2017 - 4/25/2017	H3SW	<1.49E+02	0.00E+00	2.53E+02
442811	5/2/2017 - 5/2/2017	H3SW	<4.16E+01	0.00E+00	2.43E+02
443249	5/9/2017 - 5/9/2017	H3SW	<1.01E+02	0.00E+00	2.62E+02
443807	5/16/2017 - 5/16/2017	H3SW	<2.68E+01	0.00E+00	2.43E+02
444201	5/23/2017 - 5/23/2017	H3SW	<-1.0E+02	0.00E+00	2.42E+02
444192	5/2/2017 - 5/30/2017	Mn-54	<9.98E+00	0.00E+00	9.98E+00
		Co-58	<9.73E+00	0.00E+00	9.73E+00
		Fe-59	<1.95E+01	0.00E+00	1.95E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
444192	5/2/2017 - 5/30/2017	Co-60	<8.46E+00	0.00E+00	8.46E+00
		Zn-65	<1.52E+01	0.00E+00	1.52E+01
		Zr-95	<1.12E+01	0.00E+00	1.12E+01
		Nb-95	<1.09E+01	0.00E+00	1.09E+01
		I-131	<4.03E+01	0.00E+00	4.03E+01
		Cs-134	<8.09E+00	0.00E+00	8.09E+00
		Cs-137	<7.42E+00	0.00E+00	7.42E+00
		La-140	<2.50E+04	0.00E+00	2.50E+04
		Ba-140	<7.55E+01	0.00E+00	7.55E+01
		Total-Gam	0.00E+00		
445271	5/30/2017 - 5/30/2017	H3SW	<-4.6E+01	0.00E+00	2.35E+02
446270	6/6/2017 - 6/6/2017	H3SW	<-4.4E+01	0.00E+00	2.48E+02
446774	6/13/2017 - 6/13/2017	H3SW	<-6.8E+01	0.00E+00	2.48E+02
447100	6/21/2017 - 6/21/2017	H3SW	<2.24E+02	0.00E+00	2.26E+02
447417	6/6/2017 - 6/27/2017	Mn-54	<7.81E+00	0.00E+00	7.81E+00
		Co-58	<7.42E+00	0.00E+00	7.42E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<5.16E+00	0.00E+00	5.16E+00
		Zn-65	<1.66E+01	0.00E+00	1.66E+01
		Zr-95	<1.28E+01	0.00E+00	1.28E+01
		Nb-95	<9.24E+00	0.00E+00	9.24E+00
		I-131	<2.11E+01	0.00E+00	2.11E+01
		Cs-134	<7.25E+00	0.00E+00	7.25E+00
		Cs-137	<7.68E+00	0.00E+00	7.68E+00
		La-140	<7.27E+02	0.00E+00	7.27E+02
		Ba-140	<3.52E+01	0.00E+00	3.52E+01
		Total-Gam	0.00E+00		
447753	6/27/2017 - 6/27/2017	H3SW	<-4.9E+01	0.00E+00	2.33E+02
448217	7/5/2017 - 7/5/2017	H3SW	<5.60E+01	0.00E+00	2.23E+02
448843	7/11/2017 - 7/11/2017	H3SW	<1.40E+02	0.00E+00	2.21E+02
449156	7/18/2017 - 7/18/2017	H3SW	<1.93E+02	0.00E+00	2.27E+02
449882	7/5/2017 - 7/25/2017	Mn-54	<7.54E+00	0.00E+00	7.54E+00
		Co-58	<6.75E+00	0.00E+00	6.75E+00
		Fe-59	<1.63E+01	0.00E+00	1.63E+01
		Co-60	<6.67E+00	0.00E+00	6.67E+00
		Zn-65	<1.58E+01	0.00E+00	1.58E+01
		Zr-95	<1.40E+01	0.00E+00	1.40E+01
		Nb-95	<1.08E+01	0.00E+00	1.08E+01
		I-131	<2.36E+01	0.00E+00	2.36E+01
		Cs-134	<8.42E+00	0.00E+00	8.42E+00
		Cs-137	<8.87E+00	0.00E+00	8.87E+00
		La-140	<1.32E+03	0.00E+00	1.32E+03
		Ba-140	<6.01E+01	0.00E+00	6.01E+01
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
449893	7/25/2017 - 7/25/2017	H3SW	<1.87E+02	0.00E+00	2.29E+02
450562	8/7/2017 - 8/7/2017	Mn-54	<7.34E+00	0.00E+00	7.34E+00
		Co-58	<6.94E+00	0.00E+00	6.94E+00
		Fe-59	<1.50E+01	0.00E+00	1.50E+01
		Co-60	<4.20E+00	0.00E+00	4.20E+00
		Zn-65	<1.76E+01	0.00E+00	1.76E+01
		Zr-95	<1.48E+01	0.00E+00	1.48E+01
		Nb-95	<7.64E+00	0.00E+00	7.64E+00
		I-131	<7.62E+00	0.00E+00	7.62E+00
		Cs-134	<4.81E+00	0.00E+00	4.81E+00
		Cs-137	<8.17E+00	0.00E+00	8.17E+00
		La-140	<8.78E+00	0.00E+00	8.78E+00
		Ba-140	<2.57E+01	0.00E+00	2.57E+01
		Total-Gam	0.00E+00		
		H3SW	<5.18E+01	0.00E+00	2.33E+02
451602	9/7/2017 - 9/7/2017	Mn-54	<5.43E+00	0.00E+00	5.43E+00
		Co-58	<7.20E+00	0.00E+00	7.20E+00
		Fe-59	<1.89E+01	0.00E+00	1.89E+01
		Co-60	<7.60E+00	0.00E+00	7.60E+00
		Zn-65	<1.78E+01	0.00E+00	1.78E+01
		Zr-95	<1.42E+01	0.00E+00	1.42E+01
		Nb-95	<9.20E+00	0.00E+00	9.20E+00
		I-131	<9.58E+00	0.00E+00	9.58E+00
		Cs-134	<6.64E+00	0.00E+00	6.63E+00
		Cs-137	<7.41E+00	0.00E+00	7.41E+00
		La-140	<4.18E+01	0.00E+00	4.18E+01
		Ba-140	<2.73E+01	0.00E+00	2.73E+01
		Total-Gam	0.00E+00		
		H3SW	<1.58E+02	0.00E+00	2.35E+02
461266	10/10/2017 - 10/10/2017	Mn-54	<4.67E+00	0.00E+00	4.67E+00
		Co-58	<5.11E+00	0.00E+00	5.11E+00
		Fe-59	<1.25E+01	0.00E+00	1.25E+01
		Co-60	<5.06E+00	0.00E+00	5.06E+00
		Zn-65	<1.29E+01	0.00E+00	1.29E+01
		Zr-95	<8.87E+00	0.00E+00	8.87E+00
		Nb-95	<5.17E+00	0.00E+00	5.17E+00
		I-131	<7.00E+00	0.00E+00	7.00E+00
		Cs-134	<5.25E+00	0.00E+00	5.25E+00
		Cs-137	<5.97E+00	0.00E+00	5.97E+00
		BaLa-140	<6.68E+00	0.00E+00	6.68E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.7E+02	0.00E+00	2.06E+02
461914	11/6/2017 - 11/6/2017	Mn-54	<5.84E+00	0.00E+00	5.84E+00
		Co-58	<4.83E+00	0.00E+00	4.83E+00
		Fe-59	<1.03E+01	0.00E+00	1.03E+01
		Co-60	<5.82E+00	0.00E+00	5.82E+00
		Zn-65	<9.51E+00	0.00E+00	9.51E+00
		Zr-95	<7.11E+00	0.00E+00	7.11E+00
		Nb-95	<5.50E+00	0.00E+00	5.50E+00
		I-131	<5.95E+00	0.00E+00	5.95E+00
		Cs-134	<4.61E+00	0.00E+00	4.61E+00
		Cs-137	<4.52E+00	0.00E+00	4.52E+00
		BaLa-140	<6.61E+00	0.00E+00	6.61E+00
		Total-Gam	0.00E+00		
		H3SW	<2.82E+01	0.00E+00	1.79E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 495 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464231	12/12/2017 - 12/12/2017	Mn-54	<5.77E+00	0.00E+00	5.77E+00
		Co-58	<5.38E+00	0.00E+00	5.38E+00
		Fe-59	<1.14E+01	0.00E+00	1.14E+01
		Co-60	<7.02E+00	0.00E+00	7.02E+00
		Zn-65	<1.08E+01	0.00E+00	1.08E+01
		Zr-95	<1.16E+01	0.00E+00	1.16E+01
		Nb-95	<5.50E+00	0.00E+00	5.50E+00
		I-131	<8.94E+00	0.00E+00	8.94E+00
		Cs-134	<5.35E+00	0.00E+00	5.35E+00
		Cs-137	<6.10E+00	0.00E+00	6.10E+00
		BaLa-140	<6.43E+00	0.00E+00	6.43E+00
		Total-Gam	0.00E+00		
H3SW	<-8.7E+01	0.00E+00	1.88E+02		

Sample Point 496 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432852	1/4/2017 - 1/4/2017	H3SW	<-1.1E+01	0.00E+00	2.52E+02
433254	1/10/2017 - 1/10/2017	H3SW	<9.54E+00	0.00E+00	2.51E+02
433671	1/17/2017 - 1/17/2017	H3SW	<1.22E+02	0.00E+00	2.32E+02
434406	1/25/2017 - 1/25/2017	H3SW	<8.58E+01	0.00E+00	2.40E+02
434397	1/4/2017 - 1/31/2017	Mn-54	<8.69E+00	0.00E+00	8.69E+00
		Co-58	<7.72E+00	0.00E+00	7.73E+00
		Fe-59	<1.72E+01	0.00E+00	1.72E+01
		Co-60	<8.09E+00	0.00E+00	8.09E+00
		Zn-65	<1.68E+01	0.00E+00	1.68E+01
		Zr-95	<1.47E+01	0.00E+00	1.47E+01
		Nb-95	<9.33E+00	0.00E+00	9.33E+00
		I-131	<3.04E+01	0.00E+00	3.04E+01
		Cs-134	<7.45E+00	0.00E+00	7.45E+00
		Cs-137	<8.64E+00	0.00E+00	8.64E+00
		La-140	<5.09E+03	0.00E+00	5.09E+03
		Ba-140	<5.62E+01	0.00E+00	5.62E+01
		Total-Gam	0.00E+00		
435050	1/31/2017 - 1/31/2017	H3SW	<-2.1E+02	0.00E+00	2.62E+02
435760	2/8/2017 - 2/8/2017	H3SW	<1.58E+02	0.00E+00	2.41E+02
436210	2/14/2017 - 2/14/2017	H3SW	<8.04E+01	0.00E+00	2.27E+02
436661	2/21/2017 - 2/21/2017	H3SW	<-9.4E+01	0.00E+00	2.54E+02
436652	2/8/2017 - 2/28/2017	Mn-54	<9.33E+00	0.00E+00	9.33E+00
		Co-58	<7.04E+00	0.00E+00	7.04E+00
		Fe-59	<1.95E+01	0.00E+00	1.95E+01
		Co-60	<4.22E+00	0.00E+00	4.22E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<9.38E+00	0.00E+00	9.38E+00
		Nb-95	<1.06E+01	0.00E+00	1.06E+01
		I-131	<2.10E+01	0.00E+00	2.10E+01
		Cs-134	<7.60E+00	0.00E+00	7.60E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436652	2/8/2017 - 2/28/2017	Cs-137	<7.15E+00	0.00E+00	7.15E+00
		La-140	<4.83E+02	0.00E+00	4.83E+02
		Ba-140	<5.37E+01	0.00E+00	5.37E+01
		Total-Gam	0.00E+00		
437522	2/28/2017 - 2/28/2017	H3SW	<-3.6E+01	0.00E+00	2.42E+02
438252	3/7/2017 - 3/7/2017	H3SW	<4.66E+01	0.00E+00	2.35E+02
438755	3/14/2017 - 3/14/2017	H3SW	<-1.6E+01	0.00E+00	2.41E+02
439098	3/21/2017 - 3/21/2017	H3SW	<-1.6E+02	0.00E+00	2.49E+02
439454	3/7/2017 - 3/28/2017	Mn-54	<9.08E+00	0.00E+00	9.08E+00
		Co-58	<7.02E+00	0.00E+00	7.02E+00
		Fe-59	<1.76E+01	0.00E+00	1.76E+01
		Co-60	<8.52E+00	0.00E+00	8.52E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<1.48E+01	0.00E+00	1.48E+01
		Nb-95	<1.10E+01	0.00E+00	1.10E+01
		I-131	<1.90E+01	0.00E+00	1.90E+01
		Cs-134	<6.27E+00	0.00E+00	6.27E+00
		Cs-137	<7.15E+00	0.00E+00	7.15E+00
		La-140	<6.54E+02	0.00E+00	6.54E+02
		Ba-140	<5.64E+01	0.00E+00	5.64E+01
		Total-Gam	0.00E+00		
439951	3/28/2017 - 3/28/2017	H3SW	<-2.3E+02	0.00E+00	2.54E+02
440523	4/4/2017 - 4/4/2017	H3SW	<-5.7E+01	0.00E+00	2.34E+02
441363	4/11/2017 - 4/11/2017	H3SW	<2.76E+01	0.00E+00	2.24E+02
441774	4/18/2017 - 4/18/2017	H3SW	<9.44E+01	0.00E+00	2.39E+02
442207	4/4/2017 - 4/25/2017	Mn-54	<7.53E+00	0.00E+00	7.53E+00
		Co-58	<8.06E+00	0.00E+00	8.07E+00
		Fe-59	<1.32E+01	0.00E+00	1.32E+01
		Co-60	<6.67E+00	0.00E+00	6.67E+00
		Zn-65	<1.57E+01	0.00E+00	1.57E+01
		Zr-95	<1.49E+01	0.00E+00	1.49E+01
		Nb-95	<1.22E+01	0.00E+00	1.22E+01
		I-131	<2.13E+01	0.00E+00	2.13E+01
		Cs-134	<7.94E+00	0.00E+00	7.94E+00
		Cs-137	<7.42E+00	0.00E+00	7.42E+00
		La-140	<8.25E+02	0.00E+00	8.25E+02
		Ba-140	<4.62E+01	0.00E+00	4.62E+01
		Total-Gam	0.00E+00		
442221	4/25/2017 - 4/25/2017	H3SW	<9.00E+01	0.00E+00	2.54E+02
442812	5/2/2017 - 5/2/2017	H3SW	<1.79E+02	0.00E+00	2.46E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443250	5/9/2017 - 5/9/2017	H3SW	<3.46E+01	0.00E+00	2.64E+02
443808	5/16/2017 - 5/16/2017	H3SW	<1.72E+01	0.00E+00	2.43E+02
444202	5/23/2017 - 5/23/2017	H3SW	<-1.1E+02	0.00E+00	2.42E+02
444193	5/2/2017 - 5/30/2017	Mn-54	<7.40E+00	0.00E+00	7.40E+00
		Co-58	<8.57E+00	0.00E+00	8.58E+00
		Fe-59	<1.63E+01	0.00E+00	1.63E+01
		Co-60	<7.92E+00	0.00E+00	7.92E+00
		Zn-65	<1.53E+01	0.00E+00	1.53E+01
		Zr-95	<1.92E+01	0.00E+00	1.92E+01
		Nb-95	<1.28E+01	0.00E+00	1.28E+01
		I-131	<4.84E+01	0.00E+00	4.84E+01
		Cs-134	<5.73E+00	0.00E+00	5.73E+00
		Cs-137	<9.09E+00	0.00E+00	9.09E+00
		La-140	<8.97E+04	0.00E+00	8.97E+04
		Ba-140	<8.09E+01	0.00E+00	8.09E+01
		Total-Gam	0.00E+00		
445272	5/30/2017 - 5/30/2017	H3SW	<-1.9E+01	0.00E+00	2.30E+02
446271	6/6/2017 - 6/6/2017	H3SW	<-2.3E+01	0.00E+00	2.48E+02
446775	6/13/2017 - 6/13/2017	H3SW	<-5.1E+01	0.00E+00	2.43E+02
447101	6/21/2017 - 6/21/2017	H3SW	<7.36E+01	0.00E+00	2.26E+02
447418	6/6/2017 - 6/27/2017	Mn-54	<4.67E+00	0.00E+00	4.67E+00
		Co-58	<5.93E+00	0.00E+00	5.93E+00
		Fe-59	<1.95E+01	0.00E+00	1.95E+01
		Co-60	<8.52E+00	0.00E+00	8.52E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<1.81E+01	0.00E+00	1.81E+01
		Nb-95	<1.04E+01	0.00E+00	1.04E+01
		I-131	<1.92E+01	0.00E+00	1.92E+01
		Cs-134	<8.02E+00	0.00E+00	8.02E+00
		Cs-137	<7.93E+00	0.00E+00	7.93E+00
		La-140	<1.26E+03	0.00E+00	1.26E+03
		Ba-140	<3.71E+01	0.00E+00	3.71E+01
		Total-Gam	0.00E+00		
447754	6/27/2017 - 6/27/2017	H3SW	<-3.2E+01	0.00E+00	2.33E+02
448218	7/5/2017 - 7/5/2017	H3SW	<1.10E+02	0.00E+00	2.22E+02
448844	7/11/2017 - 7/11/2017	H3SW	<4.89E+01	0.00E+00	2.20E+02
449157	7/18/2017 - 7/18/2017	H3SW	<2.09E+02	0.00E+00	2.40E+02
449883	7/5/2017 - 7/25/2017	Mn-54	<6.94E+00	0.00E+00	6.94E+00
		Co-58	<8.72E+00	0.00E+00	8.72E+00
		Fe-59	<1.96E+01	0.00E+00	1.96E+01



**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
449883	7/5/2017 - 7/25/2017	Co-60	<9.33E+00	0.00E+00	9.33E+00
		Zn-65	<1.97E+01	0.00E+00	1.97E+01
		Zr-95	<1.69E+01	0.00E+00	1.69E+01
		Nb-95	<1.18E+01	0.00E+00	1.18E+01
		I-131	<2.32E+01	0.00E+00	2.32E+01
		Cs-134	<7.60E+00	0.00E+00	7.60E+00
		Cs-137	<8.41E+00	0.00E+00	8.41E+00
		La-140	<1.11E+03	0.00E+00	1.11E+03
		Ba-140	<5.28E+01	0.00E+00	5.28E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
449894	7/25/2017 - 7/25/2017	H3SW	<2.15E+02	0.00E+00	2.22E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
450563	8/7/2017 - 8/7/2017	Mn-54	<8.15E+00	0.00E+00	8.15E+00
		Co-58	<8.97E+00	0.00E+00	8.97E+00
		Fe-59	<1.11E+01	0.00E+00	1.11E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<1.24E+01	0.00E+00	1.24E+01
		Zr-95	<1.44E+01	0.00E+00	1.44E+01
		Nb-95	<6.89E+00	0.00E+00	6.89E+00
		I-131	<7.67E+00	0.00E+00	7.67E+00
		Cs-134	<7.60E+00	0.00E+00	7.60E+00
		Cs-137	<9.08E+00	0.00E+00	9.08E+00
		La-140	<9.90E+00	0.00E+00	9.90E+00
		Ba-140	<2.77E+01	0.00E+00	2.77E+01
		Total-Gam	0.00E+00		
		H3SW	<-3.2E+01	0.00E+00	2.32E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
451603	9/7/2017 - 9/7/2017	Mn-54	<8.47E+00	0.00E+00	8.47E+00
		Co-58	<8.56E+00	0.00E+00	8.57E+00
		Fe-59	<1.51E+01	0.00E+00	1.51E+01
		Co-60	<9.86E+00	0.00E+00	9.86E+00
		Zn-65	<1.92E+01	0.00E+00	1.92E+01
		Zr-95	<1.18E+01	0.00E+00	1.18E+01
		Nb-95	<1.07E+01	0.00E+00	1.07E+01
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<8.51E+00	0.00E+00	8.51E+00
		Cs-137	<7.41E+00	0.00E+00	7.41E+00
		La-140	<4.05E+01	0.00E+00	4.05E+01
		Ba-140	<2.98E+01	0.00E+00	2.98E+01
		Total-Gam	0.00E+00		
		H3SW	<2.05E+01	0.00E+00	2.36E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461267	10/10/2017 - 10/10/2017	Mn-54	<6.34E+00	0.00E+00	6.34E+00
		Co-58	<5.23E+00	0.00E+00	5.23E+00
		Fe-59	<9.17E+00	0.00E+00	9.17E+00
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<9.43E+00	0.00E+00	9.43E+00
		Nb-95	<5.97E+00	0.00E+00	5.97E+00
		I-131	<6.32E+00	0.00E+00	6.32E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<6.04E+00	0.00E+00	6.04E+00
		BaLa-140	<6.52E+00	0.00E+00	6.52E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.0E+02	0.00E+00	2.05E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461915	11/6/2017 - 11/6/2017	Mn-54	<5.23E+00	0.00E+00	5.23E+00
		Co-58	<4.50E+00	0.00E+00	4.50E+00





**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 496 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461915	11/6/2017 - 11/6/2017	Fe-59	<8.86E+00	0.00E+00	8.86E+00
		Co-60	<6.44E+00	0.00E+00	6.44E+00
		Zn-65	<1.42E+01	0.00E+00	1.42E+01
		Zr-95	<1.01E+01	0.00E+00	1.01E+01
		Nb-95	<6.04E+00	0.00E+00	6.04E+00
		I-131	<7.04E+00	0.00E+00	7.04E+00
		Cs-134	<7.39E+00	0.00E+00	7.39E+00
		Cs-137	<5.33E+00	0.00E+00	5.33E+00
		BaLa-140	<6.14E+00	0.00E+00	6.14E+00
		Total-Gam	0.00E+00		
		H3SW	<-5.6E+01	0.00E+00	1.78E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464232	12/12/2017 - 12/12/2017	Mn-54	<5.53E+00	0.00E+00	5.53E+00
		Co-58	<5.72E+00	0.00E+00	5.72E+00
		Fe-59	<9.20E+00	0.00E+00	9.20E+00
		Co-60	<5.42E+00	0.00E+00	5.42E+00
		Zn-65	<1.10E+01	0.00E+00	1.10E+01
		Zr-95	<8.85E+00	0.00E+00	8.85E+00
		Nb-95	<4.37E+00	0.00E+00	4.37E+00
		I-131	<7.75E+00	0.00E+00	7.75E+00
		Cs-134	<5.95E+00	0.00E+00	5.95E+00
		Cs-137	<4.52E+00	0.00E+00	4.52E+00
		BaLa-140	<9.33E+00	0.00E+00	9.33E+00
		Total-Gam	0.00E+00		
H3SW	<-5.6E+01	0.00E+00	1.88E+02		

Sample Point 497 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432853	1/4/2017 - 1/4/2017	H3SW	<3.68E+01	0.00E+00	2.51E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433255	1/10/2017 - 1/10/2017	H3SW	<6.49E+01	0.00E+00	2.51E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433672	1/17/2017 - 1/17/2017	H3SW	<1.31E+02	0.00E+00	2.33E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434407	1/25/2017 - 1/25/2017	H3SW	<2.91E+01	0.00E+00	2.39E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434398	1/4/2017 - 1/31/2017	Mn-54	<9.79E+00	0.00E+00	9.79E+00
		Co-58	<8.56E+00	0.00E+00	8.56E+00
		Fe-59	<1.67E+01	0.00E+00	1.67E+01
		Co-60	<7.33E+00	0.00E+00	7.33E+00
		Zn-65	<1.71E+01	0.00E+00	1.71E+01
		Zr-95	<1.55E+01	0.00E+00	1.55E+01
		Nb-95	<1.20E+01	0.00E+00	1.20E+01
		I-131	<4.76E+01	0.00E+00	4.76E+01
		Cs-134	<7.67E+00	0.00E+00	7.67E+00
		Cs-137	<7.68E+00	0.00E+00	7.68E+00
		La-140	<4.78E+04	0.00E+00	4.78E+04
		Ba-140	<9.19E+01	0.00E+00	9.19E+01
Total-Gam	0.00E+00				

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435051	1/31/2017 - 1/31/2017	H3SW	<-2.5E+02	0.00E+00	2.64E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435761	2/8/2017 - 2/8/2017	H3SW	<1.08E+02	0.00E+00	2.41E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436211	2/14/2017 - 2/14/2017	H3SW	<2.12E+02	0.00E+00	2.37E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436662	2/21/2017 - 2/21/2017	H3SW	<-1.5E+02	0.00E+00	2.54E+02
436653	2/8/2017 - 2/28/2017	Mn-54	<7.81E+00	0.00E+00	7.81E+00
		Co-58	<9.19E+00	0.00E+00	9.19E+00
		Fe-59	<1.69E+01	0.00E+00	1.69E+01
		Co-60	<6.60E+00	0.00E+00	6.60E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<1.21E+01	0.00E+00	1.21E+01
		Nb-95	<7.86E+00	0.00E+00	7.86E+00
		I-131	<2.25E+01	0.00E+00	2.25E+01
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<6.27E+00	0.00E+00	6.27E+00
		La-140	<1.19E+03	0.00E+00	1.19E+03
		Ba-140	<5.20E+01	0.00E+00	5.20E+01
		Total-Gam	0.00E+00		
437523	2/28/2017 - 2/28/2017	H3SW	<-1.7E+01	0.00E+00	2.43E+02
438253	3/7/2017 - 3/7/2017	H3SW	<2.75E+01	0.00E+00	2.33E+02
438756	3/14/2017 - 3/14/2017	H3SW	<-1.0E+02	0.00E+00	2.40E+02
439099	3/21/2017 - 3/21/2017	H3SW	<-1.5E+02	0.00E+00	2.46E+02
439455	3/7/2017 - 3/28/2017	Mn-54	<8.61E+00	0.00E+00	8.61E+00
		Co-58	<7.42E+00	0.00E+00	7.42E+00
		Fe-59	<1.52E+01	0.00E+00	1.52E+01
		Co-60	<7.89E+00	0.00E+00	7.89E+00
		Zn-65	<1.57E+01	0.00E+00	1.57E+01
		Zr-95	<1.33E+01	0.00E+00	1.33E+01
		Nb-95	<1.07E+01	0.00E+00	1.07E+01
		I-131	<2.22E+01	0.00E+00	2.22E+01
		Cs-134	<8.57E+00	0.00E+00	8.57E+00
		Cs-137	<7.93E+00	0.00E+00	7.93E+00
		La-140	<1.13E+03	0.00E+00	1.13E+03
		Ba-140	<5.43E+01	0.00E+00	5.43E+01
		Total-Gam	0.00E+00		
439952	3/28/2017 - 3/28/2017	H3SW	<-1.5E+02	0.00E+00	2.53E+02
440524	4/4/2017 - 4/4/2017	H3SW	<6.97E+00	0.00E+00	2.36E+02
441364	4/11/2017 - 4/11/2017	H3SW	<2.76E+01	0.00E+00	2.24E+02
441775	4/18/2017 - 4/18/2017	H3SW	<-4.0E+01	0.00E+00	2.40E+02
442208	4/4/2017 - 4/25/2017	Mn-54	<8.61E+00	0.00E+00	8.61E+00
		Co-58	<1.03E+01	0.00E+00	1.03E+01
		Fe-59	<1.60E+01	0.00E+00	1.61E+01
		Co-60	<7.62E+00	0.00E+00	7.62E+00
		Zn-65	<1.39E+01	0.00E+00	1.39E+01
		Zr-95	<1.44E+01	0.00E+00	1.44E+01
		Nb-95	<1.15E+01	0.00E+00	1.15E+01
		I-131	<1.77E+01	0.00E+00	1.77E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
442208	4/4/2017 - 4/25/2017	Cs-134	<7.68E+00	0.00E+00	7.68E+00
		Cs-137	<7.68E+00	0.00E+00	7.68E+00
		La-140	<9.59E+02	0.00E+00	9.59E+02
		Ba-140	<4.39E+01	0.00E+00	4.39E+01
		Total-Gam	0.00E+00		
442222	4/25/2017 - 4/25/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<8.37E+01	0.00E+00	2.52E+02
442813	5/2/2017 - 5/2/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<1.81E+02	0.00E+00	2.46E+02
443251	5/9/2017 - 5/9/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<-1.9E+01	0.00E+00	2.63E+02
443809	5/16/2017 - 5/16/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<5.96E+01	0.00E+00	2.44E+02
444203	5/23/2017 - 5/23/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<-1.8E+02	0.00E+00	2.42E+02
444194	5/2/2017 - 5/30/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<7.38E+00	0.00E+00	7.38E+00
		Co-58	<8.49E+00	0.00E+00	8.49E+00
		Fe-59	<1.97E+01	0.00E+00	1.97E+01
		Co-60	<5.98E+00	0.00E+00	5.98E+00
		Zn-65	<1.70E+01	0.00E+00	1.70E+01
		Zr-95	<1.65E+01	0.00E+00	1.65E+01
		Nb-95	<1.18E+01	0.00E+00	1.18E+01
		I-131	<5.31E+01	0.00E+00	5.31E+01
		Cs-134	<8.01E+00	0.00E+00	8.01E+00
		Cs-137	<8.41E+00	0.00E+00	8.42E+00
		La-140	<5.27E+04	0.00E+00	5.27E+04
		Ba-140	<5.84E+01	0.00E+00	5.84E+01
Total-Gam	0.00E+00				
445273	5/30/2017 - 5/30/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<-3.8E+01	0.00E+00	2.31E+02
446272	6/6/2017 - 6/6/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<0.00E+00	0.00E+00	2.48E+02
446776	6/13/2017 - 6/13/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<-9.7E+01	0.00E+00	2.42E+02
447102	6/21/2017 - 6/21/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<3.43E+01	0.00E+00	2.26E+02
447419	6/6/2017 - 6/27/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<8.36E+00	0.00E+00	8.36E+00
		Co-58	<8.09E+00	0.00E+00	8.09E+00
		Fe-59	<1.79E+01	0.00E+00	1.79E+01
		Co-60	<7.30E+00	0.00E+00	7.30E+00
		Zn-65	<1.82E+01	0.00E+00	1.82E+01
		Zr-95	<1.44E+01	0.00E+00	1.44E+01
		Nb-95	<1.02E+01	0.00E+00	1.02E+01
		I-131	<2.32E+01	0.00E+00	2.32E+01
		Cs-134	<7.77E+00	0.00E+00	7.77E+00
		Cs-137	<9.30E+00	0.00E+00	9.30E+00
		La-140	<1.03E+03	0.00E+00	1.03E+03
		Ba-140	<4.81E+01	0.00E+00	4.81E+01
Total-Gam	0.00E+00				
447755	6/27/2017 - 6/27/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<5.27E+01	0.00E+00	2.33E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448219	7/5/2017 - 7/5/2017	H3SW	<1.15E+02	0.00E+00	2.22E+02
448845	7/11/2017 - 7/11/2017	H3SW	<1.02E+02	0.00E+00	2.22E+02
449158	7/18/2017 - 7/18/2017	H3SW	<1.45E+02	0.00E+00	2.27E+02
449884	7/5/2017 - 7/25/2017	Mn-54	<9.43E+00	0.00E+00	9.43E+00
		Co-58	<8.44E+00	0.00E+00	8.44E+00
		Fe-59	<1.83E+01	0.00E+00	1.83E+01
		Co-60	<2.99E+00	0.00E+00	2.99E+00
		Zn-65	<2.43E+01	0.00E+00	2.43E+01
		Zr-95	<1.71E+01	0.00E+00	1.72E+01
		Nb-95	<9.77E+00	0.00E+00	9.77E+00
		I-131	<3.24E+01	0.00E+00	3.24E+01
		Cs-134	<6.71E+00	0.00E+00	6.71E+00
		Cs-137	<1.01E+01	0.00E+00	1.01E+01
		La-140	<9.13E+03	0.00E+00	9.13E+03
		Ba-140	<5.92E+01	0.00E+00	5.92E+01
		Total-Gam	0.00E+00		
449895	7/25/2017 - 7/25/2017	H3SW	<1.77E+02	0.00E+00	2.21E+02
450564	8/7/2017 - 8/7/2017	Mn-54	<6.45E+00	0.00E+00	6.45E+00
		Co-58	<7.55E+00	0.00E+00	7.55E+00
		Fe-59	<1.45E+01	0.00E+00	1.45E+01
		Co-60	<7.28E+00	0.00E+00	7.27E+00
		Zn-65	<2.04E+01	0.00E+00	2.04E+01
		Zr-95	<1.46E+01	0.00E+00	1.46E+01
		Nb-95	<8.88E+00	0.00E+00	8.87E+00
		I-131	<7.10E+00	0.00E+00	7.10E+00
		Cs-134	<6.42E+00	0.00E+00	6.42E+00
		Cs-137	<1.10E+01	0.00E+00	1.10E+01
		La-140	<9.19E+00	0.00E+00	9.19E+00
		Ba-140	<2.24E+01	0.00E+00	2.24E+01
		Total-Gam	0.00E+00		
		H3SW	<1.31E+02	0.00E+00	2.34E+02
451604	9/7/2017 - 9/7/2017	Mn-54	<7.12E+00	0.00E+00	7.12E+00
		Co-58	<6.24E+00	0.00E+00	6.24E+00
		Fe-59	<1.36E+01	0.00E+00	1.36E+01
		Co-60	<8.06E+00	0.00E+00	8.06E+00
		Zn-65	<1.54E+01	0.00E+00	1.54E+01
		Zr-95	<1.33E+01	0.00E+00	1.33E+01
		Nb-95	<7.98E+00	0.00E+00	7.98E+00
		I-131	<1.11E+01	0.00E+00	1.11E+01
		Cs-134	<8.36E+00	0.00E+00	8.36E+00
		Cs-137	<6.57E+00	0.00E+00	6.57E+00
		La-140	<4.31E+01	0.00E+00	4.31E+01
		Ba-140	<3.55E+01	0.00E+00	3.55E+01
		Total-Gam	0.00E+00		
		H3SW	<1.87E+01	0.00E+00	2.35E+02
461268	10/10/2017 - 10/10/2017	Mn-54	<4.21E+00	0.00E+00	4.21E+00
		Co-58	<5.62E+00	0.00E+00	5.62E+00
		Fe-59	<8.27E+00	0.00E+00	8.27E+00
		Co-60	<6.03E+00	0.00E+00	6.03E+00
		Zn-65	<1.23E+01	0.00E+00	1.23E+01
		Zr-95	<9.76E+00	0.00E+00	9.76E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 497 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461268	10/10/2017 - 10/10/2017	Nb-95	<5.62E+00	0.00E+00	5.62E+00
		I-131	<5.80E+00	0.00E+00	5.80E+00
		Cs-134	<7.41E+00	0.00E+00	7.41E+00
		Cs-137	<6.01E+00	0.00E+00	6.01E+00
		BaLa-140	<3.89E+00	0.00E+00	3.89E+00
		Total-Gam	0.00E+00		
		H3SW	<-8.9E+01	0.00E+00	2.07E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461916	11/6/2017 - 11/6/2017	Mn-54	<5.73E+00	0.00E+00	5.73E+00
		Co-58	<5.53E+00	0.00E+00	5.53E+00
		Fe-59	<1.05E+01	0.00E+00	1.05E+01
		Co-60	<7.02E+00	0.00E+00	7.02E+00
		Zn-65	<1.04E+01	0.00E+00	1.04E+01
		Zr-95	<9.93E+00	0.00E+00	9.93E+00
		Nb-95	<5.74E+00	0.00E+00	5.74E+00
		I-131	<5.77E+00	0.00E+00	5.77E+00
		Cs-134	<7.61E+00	0.00E+00	7.61E+00
		Cs-137	<6.77E+00	0.00E+00	6.77E+00
		BaLa-140	<8.87E+00	0.00E+00	8.87E+00
		Total-Gam	0.00E+00		
		H3SW	<3.97E+01	0.00E+00	1.78E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464233	12/12/2017 - 12/12/2017	Mn-54	<4.72E+00	0.00E+00	4.72E+00
		Co-58	<4.14E+00	0.00E+00	4.14E+00
		Fe-59	<9.61E+00	0.00E+00	9.61E+00
		Co-60	<5.27E+00	0.00E+00	5.27E+00
		Zn-65	<1.19E+01	0.00E+00	1.19E+01
		Zr-95	<9.97E+00	0.00E+00	9.97E+00
		Nb-95	<5.21E+00	0.00E+00	5.21E+00
		I-131	<8.72E+00	0.00E+00	8.72E+00
		Cs-134	<6.17E+00	0.00E+00	6.17E+00
		Cs-137	<6.59E+00	0.00E+00	6.59E+00
		BaLa-140	<7.44E+00	0.00E+00	7.44E+00
		Total-Gam	0.00E+00		
		H3SW	<-9.9E+01	0.00E+00	1.88E+02

## Sample Point 498 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432854	1/4/2017 - 1/4/2017	H3SW	<8.43E+01	0.00E+00	2.52E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433256	1/10/2017 - 1/10/2017	H3SW	<2.67E+01	0.00E+00	2.51E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433673	1/17/2017 - 1/17/2017	H3SW	<-5.2E+00	0.00E+00	2.33E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434408	1/25/2017 - 1/25/2017	H3SW	<1.18E+02	0.00E+00	2.38E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434399	1/4/2017 - 1/31/2017	Mn-54	<8.23E+00	0.00E+00	8.23E+00
		Co-58	<9.38E+00	0.00E+00	9.38E+00
		Fe-59	<1.83E+01	0.00E+00	1.83E+01
		Co-60	<8.46E+00	0.00E+00	8.46E+00
		Zn-65	<1.20E+01	0.00E+00	1.20E+01
		Zr-95	<1.63E+01	0.00E+00	1.63E+01
		Nb-95	<1.12E+01	0.00E+00	1.12E+01
		I-131	<3.93E+01	0.00E+00	3.93E+01
		Cs-134	<6.93E+00	0.00E+00	6.93E+00
		Cs-137	<6.87E+00	0.00E+00	6.87E+00
		La-140	<3.54E+04	0.00E+00	3.54E+04

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 498 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434399	1/4/2017 - 1/31/2017	Ba-140	<7.35E+01	0.00E+00	7.35E+01
		Total-Gam	0.00E+00		
435052	1/31/2017 - 1/31/2017	H3SW	<-1.1E+02	0.00E+00	2.60E+02
435762	2/8/2017 - 2/8/2017	H3SW	<6.89E+00	0.00E+00	2.42E+02
436212	2/14/2017 - 2/14/2017	H3SW	<1.61E+02	0.00E+00	2.28E+02
436663	2/21/2017 - 2/21/2017	H3SW	<-1.5E+02	0.00E+00	2.53E+02
436654	2/8/2017 - 2/28/2017	Mn-54	<1.00E+01	0.00E+00	1.00E+01
		Co-58	<1.09E+01	0.00E+00	1.09E+01
		Fe-59	<1.60E+01	0.00E+00	1.60E+01
		Co-60	<7.89E+00	0.00E+00	7.89E+00
		Zn-65	<1.48E+01	0.00E+00	1.48E+01
		Zr-95	<1.44E+01	0.00E+00	1.44E+01
		Nb-95	<8.89E+00	0.00E+00	8.89E+00
		I-131	<1.95E+01	0.00E+00	1.95E+01
		Cs-134	<8.35E+00	0.00E+00	8.35E+00
		Cs-137	<7.93E+00	0.00E+00	7.93E+00
		La-140	<5.37E+02	0.00E+00	5.37E+02
		Ba-140	<4.80E+01	0.00E+00	4.80E+01
		Total-Gam	0.00E+00		
437524	2/28/2017 - 2/28/2017	H3SW	<3.78E+01	0.00E+00	2.54E+02
438254	3/7/2017 - 3/7/2017	H3SW	<3.46E+00	0.00E+00	2.35E+02
438757	3/14/2017 - 3/14/2017	H3SW	<-1.0E+02	0.00E+00	2.40E+02
439100	3/21/2017 - 3/21/2017	H3SW	<-1.6E+02	0.00E+00	2.45E+02
439456	3/7/2017 - 3/28/2017	Mn-54	<7.53E+00	0.00E+00	7.53E+00
		Co-58	<9.76E+00	0.00E+00	9.77E+00
		Fe-59	<1.95E+01	0.00E+00	1.95E+01
		Co-60	<6.67E+00	0.00E+00	6.67E+00
		Zn-65	<1.96E+01	0.00E+00	1.96E+01
		Zr-95	<1.68E+01	0.00E+00	1.68E+01
		Nb-95	<7.93E+00	0.00E+00	7.93E+00
		I-131	<1.88E+01	0.00E+00	1.88E+01
		Cs-134	<6.68E+00	0.00E+00	6.68E+00
		Cs-137	<7.68E+00	0.00E+00	7.68E+00
		La-140	<1.16E+03	0.00E+00	1.16E+03
		Ba-140	<5.23E+01	0.00E+00	5.23E+01
		Total-Gam	0.00E+00		
439953	3/28/2017 - 3/28/2017	H3SW	<-9.6E+01	0.00E+00	2.55E+02
440525	4/4/2017 - 4/4/2017	H3SW	<4.71E+01	0.00E+00	2.31E+02
441365	4/11/2017 - 4/11/2017	H3SW	<6.41E+01	0.00E+00	2.24E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 498 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
441776	4/18/2017 - 4/18/2017	H3SW	<4.45E+01	0.00E+00	2.38E+02
442209	4/4/2017 - 4/25/2017	Mn-54	<7.90E+00	0.00E+00	7.90E+00
		Co-58	<8.47E+00	0.00E+00	8.47E+00
		Fe-59	<1.75E+01	0.00E+00	1.75E+01
		Co-60	<7.14E+00	0.00E+00	7.14E+00
		Zn-65	<1.76E+01	0.00E+00	1.76E+01
		Zr-95	<1.72E+01	0.00E+00	1.72E+01
		Nb-95	<9.49E+00	0.00E+00	9.49E+00
		I-131	<3.36E+01	0.00E+00	3.36E+01
		Cs-134	<8.14E+00	0.00E+00	8.14E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		La-140	<8.04E+03	0.00E+00	8.04E+03
		Ba-140	<5.73E+01	0.00E+00	5.73E+01
		Total-Gam	0.00E+00		
442223	4/25/2017 - 4/25/2017	H3SW	<2.31E+02	0.00E+00	2.53E+02
442814	5/2/2017 - 5/2/2017	H3SW	<1.60E+02	0.00E+00	2.46E+02
443252	5/9/2017 - 5/9/2017	H3SW	<2.99E+01	0.00E+00	2.57E+02
443810	5/16/2017 - 5/16/2017	H3SW	<-9.6E+00	0.00E+00	2.44E+02
444204	5/23/2017 - 5/23/2017	H3SW	<-1.4E+02	0.00E+00	2.42E+02
444195	5/2/2017 - 5/30/2017	Mn-54	<6.74E+00	0.00E+00	6.74E+00
		Co-58	<1.07E+01	0.00E+00	1.07E+01
		Fe-59	<1.76E+01	0.00E+00	1.76E+01
		Co-60	<7.92E+00	0.00E+00	7.91E+00
		Zn-65	<2.09E+01	0.00E+00	2.09E+01
		Zr-95	<1.76E+01	0.00E+00	1.76E+01
		Nb-95	<1.22E+01	0.00E+00	1.22E+01
		I-131	<4.75E+01	0.00E+00	4.75E+01
		Cs-134	<7.12E+00	0.00E+00	7.12E+00
		Cs-137	<7.93E+00	0.00E+00	7.93E+00
		La-140	<5.50E+04	0.00E+00	5.50E+04
		Ba-140	<6.62E+01	0.00E+00	6.62E+01
		Total-Gam	0.00E+00		
445274	5/30/2017 - 5/30/2017	H3SW	<-4.3E+01	0.00E+00	2.32E+02
446273	6/6/2017 - 6/6/2017	H3SW	<-6.9E+01	0.00E+00	2.49E+02
446777	6/13/2017 - 6/13/2017	H3SW	<-1.2E+02	0.00E+00	2.43E+02
447103	6/21/2017 - 6/21/2017	H3SW	<7.02E+01	0.00E+00	2.26E+02
447420	6/6/2017 - 6/27/2017	Mn-54	<8.11E+00	0.00E+00	8.11E+00
		Co-58	<6.79E+00	0.00E+00	6.79E+00
		Fe-59	<1.73E+01	0.00E+00	1.73E+01
		Co-60	<6.67E+00	0.00E+00	6.67E+00
		Zn-65	<1.97E+01	0.00E+00	1.97E+01



**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 498 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447420	6/6/2017 - 6/27/2017	Zr-95	<1.29E+01	0.00E+00	1.29E+01
		Nb-95	<6.46E+00	0.00E+00	6.46E+00
		I-131	<2.20E+01	0.00E+00	2.20E+01
		Cs-134	<7.78E+00	0.00E+00	7.78E+00
		Cs-137	<7.68E+00	0.00E+00	7.68E+00
		La-140	<1.37E+03	0.00E+00	1.37E+03
		Ba-140	<5.31E+01	0.00E+00	5.31E+01
		Total-Gam	0.00E+00		
447756	6/27/2017 - 6/27/2017	H3SW	<7.9E+01	0.00E+00	2.34E+02
448220	7/5/2017 - 7/5/2017	H3SW	<1.44E+02	0.00E+00	2.22E+02
448846	7/11/2017 - 7/11/2017	H3SW	<5.92E+01	0.00E+00	2.21E+02
449159	7/18/2017 - 7/18/2017	H3SW	<1.76E+02	0.00E+00	2.29E+02
449885	7/5/2017 - 7/25/2017	Mn-54	<8.70E+00	0.00E+00	8.70E+00
		Co-58	<8.11E+00	0.00E+00	8.11E+00
		Fe-59	<1.74E+01	0.00E+00	1.74E+01
		Co-60	<7.32E+00	0.00E+00	7.31E+00
		Zn-65	<1.41E+01	0.00E+00	1.41E+01
		Zr-95	<1.51E+01	0.00E+00	1.51E+01
		Nb-95	<1.11E+01	0.00E+00	1.11E+01
		I-131	<3.18E+01	0.00E+00	3.18E+01
		Cs-134	<7.97E+00	0.00E+00	7.97E+00
		Cs-137	<8.18E+00	0.00E+00	8.18E+00
		La-140	<6.98E+03	0.00E+00	6.98E+03
		Ba-140	<5.46E+01	0.00E+00	5.46E+01
		Total-Gam	0.00E+00		
449896	7/25/2017 - 7/25/2017	H3SW	<2.06E+02	0.00E+00	2.21E+02
450565	8/7/2017 - 8/7/2017	Mn-54	<8.16E+00	0.00E+00	8.16E+00
		Co-58	<8.80E+00	0.00E+00	8.80E+00
		Fe-59	<1.02E+01	0.00E+00	1.02E+01
		Co-60	<5.94E+00	0.00E+00	5.94E+00
		Zn-65	<1.61E+01	0.00E+00	1.61E+01
		Zr-95	<1.51E+01	0.00E+00	1.51E+01
		Nb-95	<8.68E+00	0.00E+00	8.67E+00
		I-131	<7.01E+00	0.00E+00	7.01E+00
		Cs-134	<6.62E+00	0.00E+00	6.62E+00
		Cs-137	<8.86E+00	0.00E+00	8.86E+00
		La-140	<1.45E+01	0.00E+00	1.45E+01
		Ba-140	<3.01E+01	0.00E+00	3.01E+01
		Total-Gam	0.00E+00		
H3SW	<1.13E+02	0.00E+00	2.35E+02		
451605	9/7/2017 - 9/7/2017	Mn-54	<7.96E+00	0.00E+00	7.96E+00
		Co-58	<8.58E+00	0.00E+00	8.58E+00
		Fe-59	<1.66E+01	0.00E+00	1.66E+01
		Co-60	<9.69E+00	0.00E+00	9.69E+00
		Zn-65	<1.03E+01	0.00E+00	1.03E+01
		Zr-95	<1.28E+01	0.00E+00	1.28E+01
		Nb-95	<9.22E+00	0.00E+00	9.23E+00
		I-131	<1.00E+01	0.00E+00	1.00E+01
		Cs-134	<7.02E+00	0.00E+00	7.01E+00





**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 498 [ INDICATOR - -- @ 0 miles ]

Sample ID:	451605	Sample Dates:	9/7/2017 - 9/7/2017	Nuclide	Activity	2 Sigma Error	MDA
				Cs-137	<1.03E+01	0.00E+00	1.03E+01
				La-140	<6.59E+01	0.00E+00	6.59E+01
				Ba-140	<3.49E+01	0.00E+00	3.49E+01
				Total-Gam	0.00E+00		
				H3SW	<-2.6E+01	0.00E+00	2.36E+02

Sample ID:	461269	Sample Dates:	10/10/2017 - 10/10/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.05E+00	0.00E+00	5.05E+00
				Co-58	<6.15E+00	0.00E+00	6.15E+00
				Fe-59	<8.53E+00	0.00E+00	8.53E+00
				Co-60	<6.21E+00	0.00E+00	6.21E+00
				Zn-65	<1.15E+01	0.00E+00	1.15E+01
				Zr-95	<1.04E+01	0.00E+00	1.04E+01
				Nb-95	<5.28E+00	0.00E+00	5.28E+00
				I-131	<4.67E+00	0.00E+00	4.67E+00
				Cs-134	<6.35E+00	0.00E+00	6.35E+00
				Cs-137	<5.52E+00	0.00E+00	5.52E+00
				BaLa-140	<5.86E+00	0.00E+00	5.86E+00
				Total-Gam	0.00E+00		
				H3SW	<-9.1E+01	0.00E+00	2.06E+02

Sample ID:	461917	Sample Dates:	11/6/2017 - 11/6/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.71E+00	0.00E+00	5.71E+00
				Co-58	<6.09E+00	0.00E+00	6.09E+00
				Fe-59	<7.32E+00	0.00E+00	7.32E+00
				Co-60	<6.82E+00	0.00E+00	6.82E+00
				Zn-65	<1.14E+01	0.00E+00	1.14E+01
				Zr-95	<1.08E+01	0.00E+00	1.08E+01
				Nb-95	<6.46E+00	0.00E+00	6.46E+00
				I-131	<5.26E+00	0.00E+00	5.26E+00
				Cs-134	<6.19E+00	0.00E+00	6.19E+00
				Cs-137	<6.51E+00	0.00E+00	6.51E+00
				BaLa-140	<7.50E+00	0.00E+00	7.50E+00
				Total-Gam	0.00E+00		
				H3SW	<-2.1E+01	0.00E+00	1.79E+02

Sample ID:	464234	Sample Dates:	12/12/2017 - 12/12/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<5.83E+00	0.00E+00	5.83E+00
				Co-58	<6.69E+00	0.00E+00	6.69E+00
				Fe-59	<1.22E+01	0.00E+00	1.22E+01
				Co-60	<5.97E+00	0.00E+00	5.97E+00
				Zn-65	<9.96E+00	0.00E+00	9.96E+00
				Zr-95	<1.19E+01	0.00E+00	1.19E+01
				Nb-95	<6.16E+00	0.00E+00	6.16E+00
				I-131	<8.97E+00	0.00E+00	8.97E+00
				Cs-134	<6.70E+00	0.00E+00	6.70E+00
				Cs-137	<6.11E+00	0.00E+00	6.11E+00
				BaLa-140	<9.01E+00	0.00E+00	9.01E+00
				Total-Gam	0.00E+00		
				H3SW	<-8.0E+01	0.00E+00	1.88E+02

Sample Point 499 [ CONTROL - -- @ 0 miles ]

Sample ID:	432855	Sample Dates:	1/4/2017 - 1/4/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<7.31E+01	0.00E+00	2.41E+02

Sample ID:	433257	Sample Dates:	1/10/2017 - 1/10/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-9.6E+00	0.00E+00	2.51E+02

Sample ID:	433674	Sample Dates:	1/17/2017 - 1/17/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<1.12E+02	0.00E+00	2.33E+02

Sample ID:	434409	Sample Dates:	1/25/2017 - 1/25/2017	Nuclide	Activity	2 Sigma Error	MDA
				H3SW	<-3.4E+01	0.00E+00	2.39E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [ CONTROL - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434400	1/4/2017 - 1/31/2017	Mn-54	<9.03E+00	0.00E+00	9.03E+00
		Co-58	<9.45E+00	0.00E+00	9.45E+00
		Fe-59	<1.51E+01	0.00E+00	1.51E+01
		Co-60	<9.92E+00	0.00E+00	9.92E+00
		Zn-65	<2.08E+01	0.00E+00	2.08E+01
		Zr-95	<1.79E+01	0.00E+00	1.79E+01
		Nb-95	<9.42E+00	0.00E+00	9.42E+00
		I-131	<4.12E+01	0.00E+00	4.12E+01
		Cs-134	<7.30E+00	0.00E+00	7.31E+00
		Cs-137	<6.58E+00	0.00E+00	6.58E+00
		La-140	<3.59E+04	0.00E+00	3.59E+04
		Ba-140	<7.84E+01	0.00E+00	7.84E+01
		Total-Gam	0.00E+00		
435053	1/31/2017 - 1/31/2017	H3SW	<-4.2E+01	0.00E+00	2.60E+02
435763	2/8/2017 - 2/8/2017	H3SW	<7.58E+01	0.00E+00	2.42E+02
436213	2/14/2017 - 2/14/2017	H3SW	<1.08E+02	0.00E+00	2.36E+02
436664	2/21/2017 - 2/21/2017	H3SW	<-1.3E+02	0.00E+00	2.54E+02
436655	2/8/2017 - 2/28/2017	Mn-54	<9.35E+00	0.00E+00	9.35E+00
		Co-58	<7.78E+00	0.00E+00	7.78E+00
		Fe-59	<1.53E+01	0.00E+00	1.53E+01
		Co-60	<5.96E+00	0.00E+00	5.96E+00
		Zn-65	<2.16E+01	0.00E+00	2.16E+01
		Zr-95	<1.28E+01	0.00E+00	1.28E+01
		Nb-95	<9.32E+00	0.00E+00	9.32E+00
		I-131	<1.83E+01	0.00E+00	1.83E+01
		Cs-134	<7.43E+00	0.00E+00	7.43E+00
		Cs-137	<6.58E+00	0.00E+00	6.57E+00
		La-140	<9.93E+02	0.00E+00	9.93E+02
		Ba-140	<4.73E+01	0.00E+00	4.73E+01
		Total-Gam	0.00E+00		
437525	2/28/2017 - 2/28/2017	H3SW	<-1.5E+01	0.00E+00	2.55E+02
438255	3/7/2017 - 3/7/2017	H3SW	<-1.2E+02	0.00E+00	2.33E+02
438758	3/14/2017 - 3/14/2017	H3SW	<-1.9E+02	0.00E+00	2.41E+02
439101	3/21/2017 - 3/21/2017	H3SW	<-2.6E+02	0.00E+00	2.45E+02
439457	3/7/2017 - 3/28/2017	Mn-54	<9.20E+00	0.00E+00	9.20E+00
		Co-58	<8.14E+00	0.00E+00	8.13E+00
		Fe-59	<1.64E+01	0.00E+00	1.64E+01
		Co-60	<8.45E+00	0.00E+00	8.45E+00
		Zn-65	<1.92E+01	0.00E+00	1.92E+01
		Zr-95	<1.41E+01	0.00E+00	1.41E+01
		Nb-95	<1.29E+01	0.00E+00	1.29E+01
		I-131	<3.35E+01	0.00E+00	3.35E+01
		Cs-134	<8.61E+00	0.00E+00	8.61E+00
		Cs-137	<8.18E+00	0.00E+00	8.18E+00
		La-140	<9.10E+03	0.00E+00	9.10E+03



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [ CONTROL - -- @ 0 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
439457	3/7/2017 - 3/28/2017	Ba-140	<7.07E+01	0.00E+00	7.07E+01
		Total-Gam	0.00E+00		
439954	3/28/2017 - 3/28/2017	H3SW	<-3.0E+02	0.00E+00	2.55E+02
440526	4/4/2017 - 4/4/2017	H3SW	<-1.2E+02	0.00E+00	2.31E+02
441366	4/11/2017 - 4/11/2017	H3SW	<4.31E+01	0.00E+00	2.23E+02
441777	4/18/2017 - 4/18/2017	H3SW	<6.87E+00	0.00E+00	2.39E+02
442210	4/4/2017 - 4/25/2017	Mn-54	<7.00E+00	0.00E+00	7.00E+00
		Co-58	<5.76E+00	0.00E+00	5.76E+00
		Fe-59	<1.75E+01	0.00E+00	1.75E+01
		Co-60	<6.68E+00	0.00E+00	6.68E+00
		Zn-65	<1.76E+01	0.00E+00	1.76E+01
		Zr-95	<1.35E+01	0.00E+00	1.35E+01
		Nb-95	<1.02E+01	0.00E+00	1.02E+01
		I-131	<3.12E+01	0.00E+00	3.12E+01
		Cs-134	<7.46E+00	0.00E+00	7.46E+00
		Cs-137	<8.41E+00	0.00E+00	8.41E+00
		La-140	<8.28E+03	0.00E+00	8.28E+03
		Ba-140	<6.98E+01	0.00E+00	6.98E+01
		Total-Gam	0.00E+00		
442224	4/25/2017 - 4/25/2017	H3SW	<9.64E+01	0.00E+00	2.50E+02
442815	5/2/2017 - 5/2/2017	H3SW	<1.10E+02	0.00E+00	2.31E+02
443253	5/9/2017 - 5/9/2017	H3SW	<1.31E+01	0.00E+00	2.57E+02
443811	5/16/2017 - 5/16/2017	H3SW	<5.77E+01	0.00E+00	2.44E+02
444205	5/23/2017 - 5/23/2017	H3SW	<1.24E+02	0.00E+00	2.47E+02
444196	5/2/2017 - 5/30/2017	Mn-54	<9.30E+00	0.00E+00	9.30E+00
		Co-58	<8.86E+00	0.00E+00	8.86E+00
		Fe-59	<1.65E+01	0.00E+00	1.65E+01
		Co-60	<7.33E+00	0.00E+00	7.33E+00
		Zn-65	<1.62E+01	0.00E+00	1.62E+01
		Zr-95	<1.88E+01	0.00E+00	1.88E+01
		Nb-95	<1.32E+01	0.00E+00	1.32E+01
		I-131	<4.81E+01	0.00E+00	4.81E+01
		Cs-134	<8.01E+00	0.00E+00	8.01E+00
		Cs-137	<8.18E+00	0.00E+00	8.18E+00
		La-140	<7.28E+04	0.00E+00	7.28E+04
		Ba-140	<8.92E+01	0.00E+00	8.92E+01
		Total-Gam	0.00E+00		
445275	5/30/2017 - 5/30/2017	H3SW	<6.69E+01	0.00E+00	2.08E+02
446274	6/6/2017 - 6/6/2017	H3SW	<-1.0E+02	0.00E+00	2.48E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [ CONTROL - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446778	6/13/2017 - 6/13/2017	H3SW	<-1.9E+02	0.00E+00	2.43E+02
447104	6/21/2017 - 6/21/2017	H3SW	<8.93E+01	0.00E+00	2.26E+02
447421	6/6/2017 - 6/27/2017	Mn-54	<8.63E+00	0.00E+00	8.63E+00
		Co-58	<7.51E+00	0.00E+00	7.51E+00
		Fe-59	<1.65E+01	0.00E+00	1.65E+01
		Co-60	<8.44E+00	0.00E+00	8.44E+00
		Zn-65	<1.18E+01	0.00E+00	1.18E+01
		Zr-95	<1.58E+01	0.00E+00	1.58E+01
		Nb-95	<9.47E+00	0.00E+00	9.47E+00
		I-131	<2.40E+01	0.00E+00	2.40E+01
		Cs-134	<7.43E+00	0.00E+00	7.43E+00
		Cs-137	<8.64E+00	0.00E+00	8.64E+00
		La-140	<1.97E+03	0.00E+00	1.97E+03
		Ba-140	<6.21E+01	0.00E+00	6.21E+01
		Total-Gam	0.00E+00		
447757	6/27/2017 - 6/27/2017	H3SW	<-5.8E+01	0.00E+00	2.33E+02
448221	7/5/2017 - 7/5/2017	H3SW	<1.70E+02	0.00E+00	2.21E+02
448847	7/11/2017 - 7/11/2017	H3SW	<4.55E+01	0.00E+00	2.42E+02
449160	7/18/2017 - 7/18/2017	H3SW	<1.85E+02	0.00E+00	2.28E+02
449886	7/5/2017 - 7/25/2017	Mn-54	<8.17E+00	0.00E+00	8.17E+00
		Co-58	<8.45E+00	0.00E+00	8.45E+00
		Fe-59	<1.16E+01	0.00E+00	1.16E+01
		Co-60	<8.96E+00	0.00E+00	8.96E+00
		Zn-65	<1.99E+01	0.00E+00	1.99E+01
		Zr-95	<1.90E+01	0.00E+00	1.90E+01
		Nb-95	<1.17E+01	0.00E+00	1.17E+01
		I-131	<3.24E+01	0.00E+00	3.24E+01
		Cs-134	<7.72E+00	0.00E+00	7.72E+00
		Cs-137	<8.64E+00	0.00E+00	8.64E+00
		La-140	<4.10E+03	0.00E+00	4.10E+03
		Ba-140	<6.70E+01	0.00E+00	6.70E+01
		Total-Gam	0.00E+00		
449897	7/25/2017 - 7/25/2017	H3SW	<1.46E+02	0.00E+00	2.31E+02
450566	8/7/2017 - 8/7/2017	Mn-54	<6.77E+00	0.00E+00	6.77E+00
		Co-58	<8.81E+00	0.00E+00	8.81E+00
		Fe-59	<1.12E+01	0.00E+00	1.12E+01
		Co-60	<7.10E+00	0.00E+00	7.10E+00
		Zn-65	<1.91E+01	0.00E+00	1.91E+01
		Zr-95	<1.38E+01	0.00E+00	1.38E+01
		Nb-95	<7.53E+00	0.00E+00	7.53E+00
		I-131	<7.77E+00	0.00E+00	7.77E+00
		Cs-134	<7.95E+00	0.00E+00	7.95E+00
		Cs-137	<8.86E+00	0.00E+00	8.86E+00
		La-140	<1.00E+01	0.00E+00	1.00E+01
		Ba-140	<3.09E+01	0.00E+00	3.09E+01
		Total-Gam	0.00E+00		
		H3SW	<1.56E+02	0.00E+00	2.34E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 499 [ CONTROL - -- @ 0 miles ]

Sample ID: 451606 Sample Dates: 9/7/2017 - 9/7/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.47E+00	0.00E+00	8.47E+00
Co-58	<8.07E+00	0.00E+00	8.07E+00
Fe-59	<1.08E+01	0.00E+00	1.08E+01
Co-60	<7.11E+00	0.00E+00	7.11E+00
Zn-65	<1.78E+01	0.00E+00	1.78E+01
Zr-95	<1.33E+01	0.00E+00	1.33E+01
Nb-95	<9.46E+00	0.00E+00	9.46E+00
I-131	<9.92E+00	0.00E+00	9.92E+00
Cs-134	<7.02E+00	0.00E+00	7.02E+00
Cs-137	<7.67E+00	0.00E+00	7.67E+00
La-140	<6.10E+01	0.00E+00	6.10E+01
Ba-140	<3.19E+01	0.00E+00	3.19E+01
Total-Gam	0.00E+00		
H3SW	<6.64E+01	0.00E+00	2.36E+02

Sample ID: 461270 Sample Dates: 10/10/2017 - 10/10/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<3.63E+00	0.00E+00	3.63E+00
Co-58	<3.00E+00	0.00E+00	3.00E+00
Fe-59	<6.34E+00	0.00E+00	6.34E+00
Co-60	<4.15E+00	0.00E+00	4.15E+00
Zn-65	<8.71E+00	0.00E+00	8.71E+00
Zr-95	<6.05E+00	0.00E+00	6.05E+00
Nb-95	<3.39E+00	0.00E+00	3.39E+00
I-131	<3.78E+00	0.00E+00	3.78E+00
Cs-134	<3.76E+00	0.00E+00	3.76E+00
Cs-137	<3.70E+00	0.00E+00	3.70E+00
BaLa-140	<3.86E+00	0.00E+00	3.86E+00
Total-Gam	0.00E+00		
H3SW	<-1.4E+02	0.00E+00	2.01E+02

Sample ID: 461918 Sample Dates: 11/6/2017 - 11/6/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<4.68E+00	0.00E+00	4.68E+00
Co-58	<5.46E+00	0.00E+00	5.46E+00
Fe-59	<1.10E+01	0.00E+00	1.10E+01
Co-60	<6.04E+00	0.00E+00	6.04E+00
Zn-65	<1.12E+01	0.00E+00	1.12E+01
Zr-95	<9.48E+00	0.00E+00	9.48E+00
Nb-95	<5.64E+00	0.00E+00	5.64E+00
I-131	<4.18E+00	0.00E+00	4.18E+00
Cs-134	<5.26E+00	0.00E+00	5.26E+00
Cs-137	<5.70E+00	0.00E+00	5.70E+00
BaLa-140	<6.99E+00	0.00E+00	6.99E+00
Total-Gam	0.00E+00		
H3SW	<-3.5E+01	0.00E+00	1.79E+02

Sample ID: 464235 Sample Dates: 12/12/2017 - 12/12/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<5.80E+00	0.00E+00	5.80E+00
Co-58	<5.58E+00	0.00E+00	5.58E+00
Fe-59	<1.39E+01	0.00E+00	1.39E+01
Co-60	<6.69E+00	0.00E+00	6.69E+00
Zn-65	<1.06E+01	0.00E+00	1.06E+01
Zr-95	<9.74E+00	0.00E+00	9.74E+00
Nb-95	<6.51E+00	0.00E+00	6.51E+00
I-131	<9.54E+00	0.00E+00	9.54E+00
Cs-134	<5.79E+00	0.00E+00	5.79E+00
Cs-137	<4.80E+00	0.00E+00	4.80E+00
BaLa-140	<1.15E+01	0.00E+00	1.15E+01
Total-Gam	0.00E+00		
H3SW	<-1.3E+02	0.00E+00	1.88E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 604 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432856	1/4/2017 - 1/4/2017	H3SW	<1.75E+00	0.00E+00	2.55E+02
433258	1/10/2017 - 1/10/2017	H3SW	<-1.0E+03	0.00E+00	3.10E+02
433675	1/17/2017 - 1/17/2017	H3SW	3.78E+02	1.54E+02	2.50E+02
434410	1/25/2017 - 1/25/2017	H3SW	8.45E+02	1.60E+02	2.44E+02
435054	1/31/2017 - 1/31/2017	H3SW	<-5.2E+00	0.00E+00	2.53E+02
435764	2/8/2017 - 2/8/2017	H3SW	5.60E+03	2.22E+02	2.31E+02
436214	2/14/2017 - 2/14/2017	H3SW	6.01E+02	1.56E+02	2.45E+02
436665	2/21/2017 - 2/21/2017	H3SW	<8.98E+01	0.00E+00	2.45E+02
437526	2/28/2017 - 2/28/2017	H3SW	<3.64E+01	0.00E+00	2.43E+02
438256	3/7/2017 - 3/7/2017	H3SW	2.01E+03	1.72E+02	2.33E+02
438759	3/14/2017 - 3/14/2017	H3SW	<-7.5E+03	0.00E+00	5.64E+02
439102	3/21/2017 - 3/21/2017	H3SW	9.53E+02	1.65E+02	2.50E+02
439955	3/28/2017 - 3/28/2017	H3SW	<4.02E+01	0.00E+00	2.57E+02
440527	4/4/2017 - 4/4/2017	H3SW	8.34E+02	1.51E+02	2.30E+02
441367	4/11/2017 - 4/11/2017	H3SW	1.04E+03	1.53E+02	2.27E+02
441778	4/18/2017 - 4/18/2017	H3SW	3.45E+02	1.46E+02	2.37E+02
442225	4/25/2017 - 4/25/2017	H3SW	1.17E+03	1.59E+02	2.34E+02
442816	5/2/2017 - 5/2/2017	H3SW	<1.04E+02	0.00E+00	2.42E+02
443254	5/9/2017 - 5/9/2017	H3SW	<5.65E+01	0.00E+00	2.41E+02
443812	5/16/2017 - 5/16/2017	H3SW	5.61E+02	1.48E+02	2.33E+02
444206	5/23/2017 - 5/23/2017	H3SW	<2.27E+02	0.00E+00	2.48E+02
445276	5/30/2017 - 5/30/2017	H3SW	<1.81E+02	0.00E+00	2.31E+02
446275	6/6/2017 - 6/6/2017	H3SW	<7.58E+01	0.00E+00	2.32E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 604 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446779	6/13/2017 - 6/13/2017	H3SW	4.43E+02	1.50E+02	2.42E+02
447105	6/21/2017 - 6/21/2017	H3SW	2.60E+02	1.47E+02	2.42E+02
447758	6/27/2017 - 6/27/2017	H3SW	<6.47E+01	0.00E+00	2.27E+02
448222	7/5/2017 - 7/5/2017	H3SW	2.88E+02	1.39E+02	2.28E+02
448848	7/11/2017 - 7/11/2017	H3SW	3.34E+02	1.42E+02	2.31E+02
449161	7/18/2017 - 7/18/2017	H3SW	3.95E+02	1.49E+02	2.41E+02
449898	7/25/2017 - 7/25/2017	H3SW	5.14E+02	1.40E+02	2.22E+02
450567	8/7/2017 - 8/7/2017	Mn-54	<1.84E+01	0.00E+00	1.84E+01
		Co-58	<1.22E+01	0.00E+00	1.22E+01
		Fe-59	<3.69E+01	0.00E+00	3.69E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<3.06E+01	0.00E+00	3.06E+01
		Zr-95	<1.47E+01	0.00E+00	1.47E+01
		Nb-95	<1.68E+01	0.00E+00	1.68E+01
		I-131	<1.90E+01	0.00E+00	1.90E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.88E+01	0.00E+00	1.88E+01
		La-140	<2.54E+01	0.00E+00	2.54E+01
		Ba-140	<5.73E+01	0.00E+00	5.73E+01
		Total-Gam	0.00E+00		
		H3SW	<5.10E+01	0.00E+00	2.58E+02
451607	9/7/2017 - 9/7/2017	Mn-54	<1.07E+01	0.00E+00	1.07E+01
		Co-58	<1.54E+01	0.00E+00	1.54E+01
		Fe-59	<2.53E+01	0.00E+00	2.53E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<2.18E+01	0.00E+00	2.18E+01
		Zr-95	<2.64E+01	0.00E+00	2.64E+01
		Nb-95	<1.67E+01	0.00E+00	1.67E+01
		I-131	<1.46E+01	0.00E+00	1.46E+01
		Cs-134	<9.66E+00	0.00E+00	9.66E+00
		Cs-137	<1.57E+01	0.00E+00	1.57E+01
		La-140	<2.23E+02	0.00E+00	2.23E+02
		Ba-140	<6.74E+01	0.00E+00	6.74E+01
		Total-Gam	0.00E+00		
		H3SW	<2.05E+01	0.00E+00	2.38E+02
461271	10/10/2017 - 10/10/2017	Mn-54	<6.57E+00	0.00E+00	6.57E+00
		Co-58	<6.02E+00	0.00E+00	6.02E+00
		Fe-59	<8.84E+00	0.00E+00	8.84E+00
		Co-60	<7.15E+00	0.00E+00	7.15E+00
		Zn-65	<1.60E+01	0.00E+00	1.60E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<6.02E+00	0.00E+00	6.02E+00
		I-131	<5.83E+00	0.00E+00	5.83E+00
		Cs-134	<5.88E+00	0.00E+00	5.88E+00
		Cs-137	<7.21E+00	0.00E+00	7.21E+00
		BaLa-140	<8.98E+00	0.00E+00	8.98E+00
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 604 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461271	10/10/2017 - 10/10/2017	H3SW	2.88E+02	1.28E+02	2.05E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461919	11/6/2017 - 11/6/2017	Mn-54	<5.46E+00	0.00E+00	5.46E+00
		Co-58	<5.99E+00	0.00E+00	5.99E+00
		Fe-59	<1.09E+01	0.00E+00	1.09E+01
		Co-60	<4.45E+00	0.00E+00	4.45E+00
		Zn-65	<1.55E+01	0.00E+00	1.55E+01
		Zr-95	<8.75E+00	0.00E+00	8.75E+00
		Nb-95	<5.83E+00	0.00E+00	5.83E+00
		I-131	<4.98E+00	0.00E+00	4.98E+00
		Cs-134	<6.13E+00	0.00E+00	6.13E+00
		Cs-137	<4.72E+00	0.00E+00	4.72E+00
		BaLa-140	<6.59E+00	0.00E+00	6.59E+00
		Total-Gam	0.00E+00		
		H3SW	<1.10E+02	0.00E+00	1.78E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464236	12/12/2017 - 12/12/2017	Mn-54	<5.31E+00	0.00E+00	5.31E+00
		Co-58	<5.28E+00	0.00E+00	5.28E+00
		Fe-59	<1.27E+01	0.00E+00	1.27E+01
		Co-60	<6.22E+00	0.00E+00	6.22E+00
		Zn-65	<1.53E+01	0.00E+00	1.53E+01
		Zr-95	<9.95E+00	0.00E+00	9.95E+00
		Nb-95	<6.40E+00	0.00E+00	6.40E+00
		I-131	<9.25E+00	0.00E+00	9.25E+00
		Cs-134	<5.94E+00	0.00E+00	5.94E+00
		Cs-137	<5.70E+00	0.00E+00	5.70E+00
		BaLa-140	<1.00E+01	0.00E+00	1.00E+01
		Total-Gam	0.00E+00		
		H3SW	<8.03E+01	0.00E+00	1.88E+02

Sample Point 605 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432857	1/4/2017 - 1/4/2017	H3SW	<2.32E+02	0.00E+00	2.42E+02
433259	1/10/2017 - 1/10/2017	H3SW	<1.53E+02	0.00E+00	2.46E+02
433676	1/17/2017 - 1/17/2017	H3SW	<1.36E+02	0.00E+00	2.33E+02
434411	1/25/2017 - 1/25/2017	H3SW	<2.13E+02	0.00E+00	2.46E+02
435055	1/31/2017 - 1/31/2017	H3SW	<-3.2E+01	0.00E+00	2.59E+02
435765	2/8/2017 - 2/8/2017	H3SW	9.60E+02	1.59E+02	2.41E+02
436215	2/14/2017 - 2/14/2017	H3SW	<1.65E+02	0.00E+00	2.36E+02
436666	2/21/2017 - 2/21/2017	H3SW	<1.93E+02	0.00E+00	2.41E+02
437527	2/28/2017 - 2/28/2017	H3SW	<-5.4E+01	0.00E+00	2.56E+02
438257	3/7/2017 - 3/7/2017	H3SW	<-6.9E+00	0.00E+00	2.34E+02





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 605 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438760	3/14/2017 - 3/14/2017	H3SW	<-1.5E+02	0.00E+00	2.56E+02
439103	3/21/2017 - 3/21/2017	H3SW	<-2.8E+02	0.00E+00	2.45E+02
439956	3/28/2017 - 3/28/2017	H3SW	<-1.2E+02	0.00E+00	2.40E+02
440528	4/4/2017 - 4/4/2017	H3SW	<4.60E+01	0.00E+00	2.49E+02
441368	4/11/2017 - 4/11/2017	H3SW	<9.53E+01	0.00E+00	2.24E+02
441779	4/18/2017 - 4/18/2017	H3SW	<5.10E+01	0.00E+00	2.55E+02
442226	4/25/2017 - 4/25/2017	H3SW	<8.24E+01	0.00E+00	2.54E+02
442817	5/2/2017 - 5/2/2017	H3SW	<1.13E+02	0.00E+00	2.31E+02
443255	5/9/2017 - 5/9/2017	H3SW	<9.41E+01	0.00E+00	2.41E+02
443813	5/16/2017 - 5/16/2017	H3SW	<-1.6E+02	0.00E+00	2.44E+02
444207	5/23/2017 - 5/23/2017	H3SW	<2.32E+02	0.00E+00	2.47E+02
445277	5/30/2017 - 5/30/2017	H3SW	<-4.0E+01	0.00E+00	2.31E+02
446276	6/6/2017 - 6/6/2017	H3SW	<-2.0E+02	0.00E+00	2.46E+02
446780	6/13/2017 - 6/13/2017	H3SW	<-5.4E+01	0.00E+00	2.50E+02
447106	6/21/2017 - 6/21/2017	H3SW	<1.35E+02	0.00E+00	2.37E+02
447759	6/27/2017 - 6/27/2017	H3SW	<-1.8E+02	0.00E+00	2.51E+02
448223	7/5/2017 - 7/5/2017	H3SW	<6.83E+00	0.00E+00	2.28E+02
448849	7/11/2017 - 7/11/2017	H3SW	<-3.8E+01	0.00E+00	2.42E+02
449162	7/18/2017 - 7/18/2017	H3SW	<2.11E+02	0.00E+00	2.41E+02
449899	7/25/2017 - 7/25/2017	H3SW	<1.97E+02	0.00E+00	2.27E+02

Sample Point 606 [ INDICATOR - -- @ 0 miles ]

432858	1/4/2017 - 1/4/2017	H3SW	<-7.6E+01	0.00E+00	2.46E+02
433260	1/10/2017 - 1/10/2017	H3SW	<1.03E+02	0.00E+00	2.46E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 606 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433677	1/17/2017 - 1/17/2017	H3SW	<1.77E+02	0.00E+00	2.33E+02
434412	1/25/2017 - 1/25/2017	H3SW	<2.31E+02	0.00E+00	2.48E+02
435056	1/31/2017 - 1/31/2017	H3SW	<-3.1E+01	0.00E+00	2.60E+02
435766	2/8/2017 - 2/8/2017	H3SW	9.77E+02	1.59E+02	2.41E+02
436216	2/14/2017 - 2/14/2017	H3SW	<1.33E+02	0.00E+00	2.37E+02
436667	2/21/2017 - 2/21/2017	H3SW	<1.97E+02	0.00E+00	2.44E+02
437528	2/28/2017 - 2/28/2017	H3SW	<4.01E+01	0.00E+00	2.56E+02
438258	3/7/2017 - 3/7/2017	H3SW	<4.13E+01	0.00E+00	2.34E+02
438761	3/14/2017 - 3/14/2017	H3SW	<-2.0E+02	0.00E+00	2.55E+02
439104	3/21/2017 - 3/21/2017	H3SW	<-1.9E+02	0.00E+00	2.47E+02
439957	3/28/2017 - 3/28/2017	H3SW	<-9.0E+01	0.00E+00	2.41E+02
440529	4/4/2017 - 4/4/2017	H3SW	<-6.3E+01	0.00E+00	2.48E+02
441369	4/11/2017 - 4/11/2017	H3SW	<1.38E+02	0.00E+00	2.24E+02
441780	4/18/2017 - 4/18/2017	H3SW	<0.00E+00	0.00E+00	2.56E+02
442227	4/25/2017 - 4/25/2017	H3SW	<2.01E+02	0.00E+00	2.28E+02
442818	5/2/2017 - 5/2/2017	H3SW	<2.00E+02	0.00E+00	2.32E+02
443256	5/9/2017 - 5/9/2017	H3SW	<2.56E+01	0.00E+00	2.40E+02
443814	5/16/2017 - 5/16/2017	H3SW	<-1.7E+02	0.00E+00	2.44E+02
444208	5/23/2017 - 5/23/2017	H3SW	<-1.6E+02	0.00E+00	2.48E+02
445278	5/30/2017 - 5/30/2017	H3SW	<1.55E+01	0.00E+00	2.31E+02
446277	6/6/2017 - 6/6/2017	H3SW	<-2.8E+02	0.00E+00	2.47E+02
446781	6/13/2017 - 6/13/2017	H3SW	<-1.9E+01	0.00E+00	2.50E+02
447107	6/21/2017 - 6/21/2017	H3SW	<1.27E+02	0.00E+00	2.37E+02



## BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 606 [ INDICATOR - -- @ 0 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
447760	6/27/2017 - 6/27/2017	H3SW	<-9.5E+00	0.00E+00	2.50E+02
448224	7/5/2017 - 7/5/2017	H3SW	<1.36E+01	0.00E+00	2.27E+02
448850	7/11/2017 - 7/11/2017	H3SW	<6.09E+01	0.00E+00	2.43E+02
449163	7/18/2017 - 7/18/2017	H3SW	<7.61E+01	0.00E+00	2.36E+02
449900	7/25/2017 - 7/25/2017	H3SW	<1.88E+02	0.00E+00	2.31E+02

Sample Point 607 [ INDICATOR - -- @ 0 miles ]

Sample ID	Sample Dates	Nuclide	Activity	2 Sigma Error	MDA
432859	1/4/2017 - 1/4/2017	H3SW	<-2.5E+01	0.00E+00	2.57E+02
433261	1/10/2017 - 1/10/2017	H3SW	<1.13E+02	0.00E+00	2.47E+02
433678	1/17/2017 - 1/17/2017	H3SW	<2.02E+02	0.00E+00	2.32E+02
434413	1/25/2017 - 1/25/2017	H3SW	<2.45E+02	0.00E+00	2.48E+02
435057	1/31/2017 - 1/31/2017	H3SW	<-3.0E+01	0.00E+00	2.59E+02
435767	2/8/2017 - 2/8/2017	H3SW	1.11E+03	1.56E+02	2.30E+02
436217	2/14/2017 - 2/14/2017	H3SW	<9.79E+01	0.00E+00	2.36E+02
436668	2/21/2017 - 2/21/2017	H3SW	<1.67E+02	0.00E+00	2.42E+02
437529	2/28/2017 - 2/28/2017	H3SW	<-6.5E+01	0.00E+00	2.56E+02
438259	3/7/2017 - 3/7/2017	H3SW	<-5.5E+01	0.00E+00	2.35E+02
438762	3/14/2017 - 3/14/2017	H3SW	<-1.5E+02	0.00E+00	2.55E+02
439105	3/21/2017 - 3/21/2017	H3SW	<-2.5E+02	0.00E+00	2.47E+02
439958	3/28/2017 - 3/28/2017	H3SW	<-1.8E+02	0.00E+00	2.42E+02
440530	4/4/2017 - 4/4/2017	H3SW	<-1.6E+02	0.00E+00	2.47E+02
441370	4/11/2017 - 4/11/2017	H3SW	<1.40E+02	0.00E+00	2.24E+02
441781	4/18/2017 - 4/18/2017	H3SW	<-1.9E+00	0.00E+00	2.55E+02
442228	4/25/2017 - 4/25/2017	H3SW	<2.23E+02	0.00E+00	2.55E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 607 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
442819	5/2/2017 - 5/2/2017	H3SW	<1.97E+02	0.00E+00	2.46E+02
443257	5/9/2017 - 5/9/2017	H3SW	<1.20E+01	0.00E+00	2.41E+02
443815	5/16/2017 - 5/16/2017	H3SW	<-1.7E+02	0.00E+00	2.44E+02
444209	5/23/2017 - 5/23/2017	H3SW	<-1.2E+01	0.00E+00	2.47E+02
445279	5/30/2017 - 5/30/2017	H3SW	<-6.9E+00	0.00E+00	2.30E+02
446278	6/6/2017 - 6/6/2017	H3SW	<-1.5E+02	0.00E+00	2.47E+02
446782	6/13/2017 - 6/13/2017	H3SW	<-3.8E+00	0.00E+00	2.50E+02
447108	6/21/2017 - 6/21/2017	H3SW	<2.47E+01	0.00E+00	2.38E+02
447761	6/27/2017 - 6/27/2017	H3SW	<5.90E+01	0.00E+00	2.51E+02
448225	7/5/2017 - 7/5/2017	H3SW	<1.20E+01	0.00E+00	2.28E+02
448851	7/11/2017 - 7/11/2017	H3SW	<3.40E+01	0.00E+00	2.42E+02
449164	7/18/2017 - 7/18/2017	H3SW	<8.96E+01	0.00E+00	2.36E+02
449901	7/25/2017 - 7/25/2017	H3SW	<2.28E+02	0.00E+00	2.38E+02
450568	8/7/2017 - 8/7/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<8.66E+00	0.00E+00	8.66E+00
		Fe-59	<2.08E+01	0.00E+00	2.08E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<3.42E+01	0.00E+00	3.42E+01
		Zr-95	<2.08E+01	0.00E+00	2.08E+01
		Nb-95	<1.33E+01	0.00E+00	1.33E+01
		I-131	<1.84E+01	0.00E+00	1.84E+01
		Cs-134	<1.52E+01	0.00E+00	1.52E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<4.12E+01	0.00E+00	4.12E+01
		Ba-140	<3.82E+01	0.00E+00	3.82E+01
		Total-Gam	0.00E+00		
		H3SW	<3.21E+01	0.00E+00	2.58E+02
451608	9/7/2017 - 9/7/2017	Mn-54	<1.63E+01	0.00E+00	1.63E+01
		Co-58	<8.90E+00	0.00E+00	8.90E+00
		Fe-59	<2.06E+01	0.00E+00	2.06E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.67E+01	0.00E+00	2.67E+01
		Zr-95	<2.15E+01	0.00E+00	2.15E+01
		Nb-95	<1.54E+01	0.00E+00	1.54E+01
		I-131	<2.05E+01	0.00E+00	2.05E+01
		Cs-134	<1.37E+01	0.00E+00	1.37E+01
		Cs-137	<1.97E+01	0.00E+00	1.97E+01
		La-140	<1.19E+02	0.00E+00	1.19E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 607 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
451608	9/7/2017 - 9/7/2017	Ba-140	<6.32E+01	0.00E+00	6.32E+01
		Total-Gam	0.00E+00		
		H3SW	<1.15E+02	0.00E+00	2.40E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461272	10/10/2017 - 10/10/2017	Mn-54	<5.47E+00	0.00E+00	5.47E+00
		Co-58	<6.00E+00	0.00E+00	6.00E+00
		Fe-59	<7.80E+00	0.00E+00	7.80E+00
		Co-60	<5.82E+00	0.00E+00	5.82E+00
		Zn-65	<1.41E+01	0.00E+00	1.41E+01
		Zr-95	<7.09E+00	0.00E+00	7.09E+00
		Nb-95	<4.22E+00	0.00E+00	4.22E+00
		I-131	<5.61E+00	0.00E+00	5.61E+00
		Cs-134	<5.18E+00	0.00E+00	5.18E+00
		Cs-137	<3.06E+00	0.00E+00	3.06E+00
		BaLa-140	<6.52E+00	0.00E+00	6.52E+00
		Total-Gam	0.00E+00		
		H3SW	<-1.1E+02	0.00E+00	2.07E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461920	11/6/2017 - 11/6/2017	Mn-54	<4.84E+00	0.00E+00	4.84E+00
		Co-58	<4.35E+00	0.00E+00	4.35E+00
		Fe-59	<9.78E+00	0.00E+00	9.78E+00
		Co-60	<5.82E+00	0.00E+00	5.82E+00
		Zn-65	<1.02E+01	0.00E+00	1.02E+01
		Zr-95	<7.99E+00	0.00E+00	7.99E+00
		Nb-95	<4.91E+00	0.00E+00	4.91E+00
		I-131	<5.24E+00	0.00E+00	5.24E+00
		Cs-134	<6.15E+00	0.00E+00	6.15E+00
		Cs-137	<5.73E+00	0.00E+00	5.73E+00
		BaLa-140	<1.48E+00	0.00E+00	1.48E+00
		Total-Gam	0.00E+00		
		H3SW	<6.31E+01	0.00E+00	1.78E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464237	12/12/2017 - 12/12/2017	Mn-54	<4.08E+00	0.00E+00	4.08E+00
		Co-58	<4.61E+00	0.00E+00	4.61E+00
		Fe-59	<9.14E+00	0.00E+00	9.14E+00
		Co-60	<3.58E+00	0.00E+00	3.58E+00
		Zn-65	<8.97E+00	0.00E+00	8.97E+00
		Zr-95	<7.39E+00	0.00E+00	7.39E+00
		Nb-95	<5.11E+00	0.00E+00	5.11E+00
		I-131	<6.58E+00	0.00E+00	6.58E+00
		Cs-134	<5.13E+00	0.00E+00	5.13E+00
		Cs-137	<3.82E+00	0.00E+00	3.82E+00
		BaLa-140	<5.61E+00	0.00E+00	5.61E+00
		Total-Gam	0.00E+00		
		H3SW	<-8.7E+01	0.00E+00	1.88E+02

Sample Point 608 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432860	1/4/2017 - 1/4/2017	H3SW	<-6.7E+01	0.00E+00	2.56E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433262	1/10/2017 - 1/10/2017	H3SW	<-1.2E+03	0.00E+00	3.08E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433679	1/17/2017 - 1/17/2017	H3SW	<1.31E+02	0.00E+00	2.50E+02

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434414	1/25/2017 - 1/25/2017	H3SW	<8.34E+01	0.00E+00	2.45E+02

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 608 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435058	1/31/2017 - 1/31/2017	H3SW	<-1.3E+02	0.00E+00	2.52E+02
435768	2/8/2017 - 2/8/2017	H3SW	<2.03E+02	0.00E+00	2.30E+02
436218	2/14/2017 - 2/14/2017	H3SW	<1.92E+02	0.00E+00	2.47E+02
436669	2/21/2017 - 2/21/2017	H3SW	<2.07E+01	0.00E+00	2.44E+02
437530	2/28/2017 - 2/28/2017	H3SW	<-1.4E+02	0.00E+00	2.42E+02
438260	3/7/2017 - 3/7/2017	H3SW	<-1.1E+02	0.00E+00	2.35E+02
438763	3/14/2017 - 3/14/2017	H3SW	<-8.5E+03	0.00E+00	5.69E+02
439106	3/21/2017 - 3/21/2017	H3SW	<-6.7E+01	0.00E+00	2.51E+02
439959	3/28/2017 - 3/28/2017	H3SW	<-1.8E+02	0.00E+00	2.56E+02
440531	4/4/2017 - 4/4/2017	H3SW	<1.44E+02	0.00E+00	2.29E+02
441371	4/11/2017 - 4/11/2017	H3SW	<2.25E+01	0.00E+00	2.27E+02
441782	4/18/2017 - 4/18/2017	H3SW	<1.87E+02	0.00E+00	2.36E+02
442229	4/25/2017 - 4/25/2017	H3SW	3.31E+02	1.41E+02	2.30E+02
442820	5/2/2017 - 5/2/2017	H3SW	<-9.2E+01	0.00E+00	2.43E+02
443258	5/9/2017 - 5/9/2017	H3SW	<7.04E+01	0.00E+00	2.42E+02
443816	5/16/2017 - 5/16/2017	H3SW	<2.08E+01	0.00E+00	2.33E+02
444210	5/23/2017 - 5/23/2017	H3SW	<-3.1E+01	0.00E+00	2.46E+02
445280	5/30/2017 - 5/30/2017	H3SW	<2.77E+01	0.00E+00	2.32E+02
446279	6/6/2017 - 6/6/2017	H3SW	<9.88E+01	0.00E+00	2.33E+02
446783	6/13/2017 - 6/13/2017	H3SW	<-1.7E+02	0.00E+00	2.42E+02
447109	6/21/2017 - 6/21/2017	H3SW	<7.77E+01	0.00E+00	2.42E+02
447762	6/27/2017 - 6/27/2017	H3SW	<1.36E+01	0.00E+00	2.27E+02
448226	7/5/2017 - 7/5/2017	H3SW	<1.19E+01	0.00E+00	2.28E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 608 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448852	7/11/2017 - 7/11/2017	H3SW	<1.67E+02	0.00E+00	2.26E+02
449165	7/18/2017 - 7/18/2017	H3SW	<1.04E+02	0.00E+00	2.43E+02
449902	7/25/2017 - 7/25/2017	H3SW	<2.36E+02	0.00E+00	2.42E+02

Sample Point 609 [ INDICATOR - -- @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432861	1/4/2017 - 1/4/2017	H3SW	<-2.3E+01	0.00E+00	2.56E+02
433263	1/10/2017 - 1/10/2017	H3SW	<-1.2E+03	0.00E+00	3.12E+02
433680	1/17/2017 - 1/17/2017	H3SW	<7.78E+01	0.00E+00	2.51E+02
434415	1/25/2017 - 1/25/2017	H3SW	<1.95E+02	0.00E+00	2.45E+02
435059	1/31/2017 - 1/31/2017	H3SW	<-1.9E+02	0.00E+00	2.53E+02
435769	2/8/2017 - 2/8/2017	H3SW	<1.95E+02	0.00E+00	2.31E+02
436219	2/14/2017 - 2/14/2017	H3SW	<1.93E+02	0.00E+00	2.47E+02
436670	2/21/2017 - 2/21/2017	H3SW	<-1.6E+01	0.00E+00	2.45E+02
437531	2/28/2017 - 2/28/2017	H3SW	<-2.0E+02	0.00E+00	2.43E+02
438261	3/7/2017 - 3/7/2017	H3SW	<-9.3E+01	0.00E+00	2.33E+02
438764	3/14/2017 - 3/14/2017	H3SW	<-8.4E+03	0.00E+00	5.66E+02
439107	3/21/2017 - 3/21/2017	H3SW	<-7.7E+01	0.00E+00	2.52E+02
439960	3/28/2017 - 3/28/2017	H3SW	<-2.2E+02	0.00E+00	2.57E+02
440532	4/4/2017 - 4/4/2017	H3SW	<8.12E+01	0.00E+00	2.28E+02
441372	4/11/2017 - 4/11/2017	H3SW	<-2.4E+01	0.00E+00	2.26E+02
441783	4/18/2017 - 4/18/2017	H3SW	<1.43E+02	0.00E+00	2.37E+02
442230	4/25/2017 - 4/25/2017	H3SW	2.92E+02	1.40E+02	2.30E+02
442821	5/2/2017 - 5/2/2017	H3SW	<2.58E+01	0.00E+00	2.43E+02
443259	5/9/2017 - 5/9/2017	H3SW	<7.87E+01	0.00E+00	2.41E+02

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 609 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443817	5/16/2017 - 5/16/2017	H3SW	<-5.9E+01	0.00E+00	2.33E+02
444211	5/23/2017 - 5/23/2017	H3SW	<1.08E+02	0.00E+00	2.41E+02
445281	5/30/2017 - 5/30/2017	H3SW	<-2.9E+01	0.00E+00	2.30E+02
446280	6/6/2017 - 6/6/2017	H3SW	<1.92E+01	0.00E+00	2.35E+02
446784	6/13/2017 - 6/13/2017	H3SW	<-1.4E+02	0.00E+00	2.42E+02
447110	6/21/2017 - 6/21/2017	H3SW	<-5.1E+01	0.00E+00	2.41E+02
447763	6/27/2017 - 6/27/2017	H3SW	<-3.2E+01	0.00E+00	2.25E+02
448227	7/5/2017 - 7/5/2017	H3SW	<5.09E+01	0.00E+00	2.28E+02
448853	7/11/2017 - 7/11/2017	H3SW	<1.75E+02	0.00E+00	2.30E+02
449166	7/18/2017 - 7/18/2017	H3SW	<6.60E+01	0.00E+00	2.36E+02
449903	7/25/2017 - 7/25/2017	H3SW	<2.06E+02	0.00E+00	2.41E+02
450569	8/7/2017 - 8/7/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.50E+01	0.00E+00	1.50E+01
		Fe-59	<2.08E+01	0.00E+00	2.08E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<2.65E+01	0.00E+00	2.65E+01
		Zr-95	<1.48E+01	0.00E+00	1.48E+01
		Nb-95	<1.46E+01	0.00E+00	1.46E+01
		I-131	<2.22E+01	0.00E+00	2.22E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.68E+01	0.00E+00	1.68E+01
		La-140	<6.20E+01	0.00E+00	6.20E+01
		Ba-140	<3.83E+01	0.00E+00	3.83E+01
		Total-Gam	0.00E+00		
		H3SW	<-9.5E+00	0.00E+00	2.58E+02
451609	9/7/2017 - 9/7/2017	Mn-54	<1.38E+01	0.00E+00	1.38E+01
		Co-58	<1.09E+01	0.00E+00	1.09E+01
		Fe-59	<3.27E+01	0.00E+00	3.27E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.18E+01	0.00E+00	2.18E+01
		Zr-95	<2.64E+01	0.00E+00	2.64E+01
		Nb-95	<1.09E+01	0.00E+00	1.09E+01
		I-131	<1.68E+01	0.00E+00	1.68E+01
		Cs-134	<1.45E+01	0.00E+00	1.45E+01
		Cs-137	<1.57E+01	0.00E+00	1.57E+01
		La-140	<1.20E+02	0.00E+00	1.20E+02
		Ba-140	<8.67E+01	0.00E+00	8.67E+01
		Total-Gam	0.00E+00		
		H3SW	<-3.6E+01	0.00E+00	2.38E+02
461273	10/10/2017 - 10/10/2017	Mn-54	<5.00E+00	0.00E+00	5.00E+00





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 609 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461273	10/10/2017 - 10/10/2017	Co-58	<6.71E+00	0.00E+00	6.71E+00
		Fe-59	<9.50E+00	0.00E+00	9.50E+00
		Co-60	<5.15E+00	0.00E+00	5.15E+00
		Zn-65	<1.42E+01	0.00E+00	1.42E+01
		Zr-95	<1.05E+01	0.00E+00	1.05E+01
		Nb-95	<5.84E+00	0.00E+00	5.84E+00
		I-131	<5.69E+00	0.00E+00	5.69E+00
		Cs-134	<7.00E+00	0.00E+00	7.00E+00
		Cs-137	<5.91E+00	0.00E+00	5.91E+00
		BaLa-140	<7.96E+00	0.00E+00	7.96E+00
		Total-Gam	0.00E+00		
		H3SW	<-9.9E+01	0.00E+00	2.03E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
461921	11/6/2017 - 11/6/2017	Mn-54	<5.71E+00	0.00E+00	5.71E+00
		Co-58	<5.47E+00	0.00E+00	5.47E+00
		Fe-59	<1.23E+01	0.00E+00	1.23E+01
		Co-60	<8.09E+00	0.00E+00	8.09E+00
		Zn-65	<1.31E+01	0.00E+00	1.31E+01
		Zr-95	<1.06E+01	0.00E+00	1.06E+01
		Nb-95	<5.75E+00	0.00E+00	5.75E+00
		I-131	<6.07E+00	0.00E+00	6.07E+00
		Cs-134	<5.90E+00	0.00E+00	5.90E+00
		Cs-137	<5.14E+00	0.00E+00	5.14E+00
		BaLa-140	<7.10E+00	0.00E+00	7.10E+00
		Total-Gam	0.00E+00		
		H3SW	<-2.4E+01	0.00E+00	1.79E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
464238	12/12/2017 - 12/12/2017	Mn-54	<6.13E+00	0.00E+00	6.13E+00
		Co-58	<5.70E+00	0.00E+00	5.70E+00
		Fe-59	<1.01E+01	0.00E+00	1.01E+01
		Co-60	<5.36E+00	0.00E+00	5.36E+00
		Zn-65	<9.86E+00	0.00E+00	9.86E+00
		Zr-95	<8.86E+00	0.00E+00	8.86E+00
		Nb-95	<6.66E+00	0.00E+00	6.66E+00
		I-131	<9.04E+00	0.00E+00	9.04E+00
		Cs-134	<6.46E+00	0.00E+00	6.46E+00
		Cs-137	<4.95E+00	0.00E+00	4.95E+00
		BaLa-140	<1.06E+01	0.00E+00	1.06E+01
		Total-Gam	0.00E+00		
		H3SW	<-4.0E+01	0.00E+00	1.88E+02

## Sample Point 610 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432862	1/4/2017 - 1/4/2017	H3SW	<-1.1E+02	0.00E+00	2.53E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433264	1/10/2017 - 1/10/2017	H3SW	<-1.3E+03	0.00E+00	3.11E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433681	1/17/2017 - 1/17/2017	H3SW	<1.16E+02	0.00E+00	2.58E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434416	1/25/2017 - 1/25/2017	H3SW	<2.17E+02	0.00E+00	2.46E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435060	1/31/2017 - 1/31/2017	H3SW	<-7.7E+01	0.00E+00	2.51E+02

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435770	2/8/2017 - 2/8/2017	H3SW	<1.59E+02	0.00E+00	2.50E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 610 [ INDICATOR - -- @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436220	2/14/2017 - 2/14/2017	H3SW	<1.27E+02	0.00E+00	2.47E+02
436671	2/21/2017 - 2/21/2017	H3SW	<4.1E+01	0.00E+00	2.44E+02
437532	2/28/2017 - 2/28/2017	H3SW	<-1.9E+02	0.00E+00	2.43E+02
438262	3/7/2017 - 3/7/2017	H3SW	<5.18E+00	0.00E+00	2.35E+02
438765	3/14/2017 - 3/14/2017	H3SW	<-8.5E+03	0.00E+00	5.66E+02
439108	3/21/2017 - 3/21/2017	H3SW	<-8.6E+01	0.00E+00	2.50E+02
439961	3/28/2017 - 3/28/2017	H3SW	<-1.6E+02	0.00E+00	2.55E+02
440533	4/4/2017 - 4/4/2017	H3SW	<-3.3E+01	0.00E+00	2.28E+02
441373	4/11/2017 - 4/11/2017	H3SW	<6.54E+01	0.00E+00	2.26E+02
441784	4/18/2017 - 4/18/2017	H3SW	<3.10E+01	0.00E+00	2.38E+02
442231	4/25/2017 - 4/25/2017	H3SW	<1.83E+02	0.00E+00	2.34E+02
442822	5/2/2017 - 5/2/2017	H3SW	<-1.6E+01	0.00E+00	2.43E+02
443260	5/9/2017 - 5/9/2017	H3SW	<2.05E+01	0.00E+00	2.41E+02
443818	5/16/2017 - 5/16/2017	H3SW	<6.78E+01	0.00E+00	2.33E+02
444212	5/23/2017 - 5/23/2017	H3SW	<-4.3E+01	0.00E+00	2.45E+02
445282	5/30/2017 - 5/30/2017	H3SW	<1.38E+01	0.00E+00	2.31E+02
446281	6/6/2017 - 6/6/2017	H3SW	<2.59E+01	0.00E+00	2.32E+02
446785	6/13/2017 - 6/13/2017	H3SW	<-1.5E+02	0.00E+00	2.41E+02
447111	6/21/2017 - 6/21/2017	H3SW	<-4.0E+01	0.00E+00	2.42E+02
447764	6/27/2017 - 6/27/2017	H3SW	<5.07E+01	0.00E+00	2.25E+02
448228	7/5/2017 - 7/5/2017	H3SW	<-7.3E+01	0.00E+00	2.28E+02
448854	7/11/2017 - 7/11/2017	H3SW	<7.05E+01	0.00E+00	2.30E+02
449167	7/18/2017 - 7/18/2017	H3SW	<4.57E+01	0.00E+00	2.36E+02



## BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 610 [ INDICATOR - -- @ 0 miles ]

Sample ID: 449904	Sample Dates: 7/25/2017 - 7/25/2017	Nuclide	Activity	2 Sigma Error	MDA
		H3SW	<1.67E+02	0.00E+00	2.42E+02

Sample Point 1065 [ INDICATOR - @ 0 miles ]

Sample ID: 432847	Sample Dates: 1/4/2017 - 1/4/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<1.34E+01	0.00E+00	1.34E+01
		Fe-59	<4.06E+01	0.00E+00	4.06E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<2.15E+01	0.00E+00	2.15E+01
		Zr-95	<1.44E+01	0.00E+00	1.44E+01
		Nb-95	<1.14E+01	0.00E+00	1.14E+01
		I-131	<1.29E+01	0.00E+00	1.29E+01
		Cs-134	<1.38E+01	0.00E+00	1.38E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<1.12E+01	0.00E+00	1.12E+01
		Ba-140	<4.20E+01	0.00E+00	4.20E+01
		Total-Gam	0.00E+00		

Sample ID: 433249	Sample Dates: 1/10/2017 - 1/10/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.47E+01	0.00E+00	1.47E+01
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<3.06E+01	0.00E+00	3.06E+01
		Nb-95	<1.52E+01	0.00E+00	1.52E+01
		I-131	<1.31E+01	0.00E+00	1.31E+01
		Cs-134	<9.73E+00	0.00E+00	9.73E+00
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<1.97E+01	0.00E+00	1.97E+01
		Ba-140	<5.49E+01	0.00E+00	5.49E+01
		Total-Gam	0.00E+00		

Sample ID: 433666	Sample Dates: 1/17/2017 - 1/17/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.60E+01	0.00E+00	1.60E+01
		Fe-59	<2.74E+01	0.00E+00	2.74E+01
		Co-60	<1.78E+01	0.00E+00	1.78E+01
		Zn-65	<4.04E+01	0.00E+00	4.04E+01
		Zr-95	<1.78E+01	0.00E+00	1.78E+01
		Nb-95	<1.16E+01	0.00E+00	1.16E+01
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<9.73E+00	0.00E+00	9.73E+00
		Cs-137	<1.78E+01	0.00E+00	1.78E+01
		La-140	<2.12E+01	0.00E+00	2.12E+01
		Ba-140	<5.04E+01	0.00E+00	5.04E+01
		Total-Gam	0.00E+00		

Sample ID: 434401	Sample Dates: 1/25/2017 - 1/25/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<1.34E+01	0.00E+00	1.34E+01
		Fe-59	<1.36E+01	0.00E+00	1.36E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<2.16E+01	0.00E+00	2.16E+01
		Nb-95	<1.40E+01	0.00E+00	1.40E+01
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<1.20E+01	0.00E+00	1.20E+01
		Ba-140	<4.24E+01	0.00E+00	4.24E+01
		Total-Gam	0.00E+00		

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1065 [ INDICATOR - @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435045	1/31/2017 - 1/31/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.21E+01	0.00E+00	1.21E+01
		Fe-59	<2.75E+01	0.00E+00	2.75E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<1.46E+01	0.00E+00	1.46E+01
		Nb-95	<1.75E+01	0.00E+00	1.75E+01
		I-131	<1.74E+01	0.00E+00	1.74E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<1.68E+01	0.00E+00	1.68E+01
		Ba-140	<4.43E+01	0.00E+00	4.43E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435755	2/8/2017 - 2/8/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.21E+01	0.00E+00	1.21E+01
		Fe-59	<3.07E+01	0.00E+00	3.07E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<2.30E+01	0.00E+00	2.30E+01
		Nb-95	<1.64E+01	0.00E+00	1.64E+01
		I-131	<1.56E+01	0.00E+00	1.56E+01
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<8.40E+00	0.00E+00	8.40E+00
		La-140	<1.58E+01	0.00E+00	1.58E+01
		Ba-140	<3.59E+01	0.00E+00	3.59E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436205	2/14/2017 - 2/14/2017	Mn-54	<8.67E+00	0.00E+00	8.67E+00
		Co-58	<1.62E+01	0.00E+00	1.62E+01
		Fe-59	<2.41E+01	0.00E+00	2.41E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<3.06E+01	0.00E+00	3.06E+01
		Zr-95	<1.80E+01	0.00E+00	1.80E+01
		Nb-95	<1.57E+01	0.00E+00	1.57E+01
		I-131	<1.37E+01	0.00E+00	1.37E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<4.17E+01	0.00E+00	4.17E+01
		Ba-140	<5.02E+01	0.00E+00	5.02E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
436656	2/21/2017 - 2/21/2017	Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<1.60E+01	0.00E+00	1.60E+01
		Fe-59	<2.74E+01	0.00E+00	2.74E+01
		Co-60	<1.80E+01	0.00E+00	1.80E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.52E+01	0.00E+00	2.52E+01
		Nb-95	<1.54E+01	0.00E+00	1.54E+01
		I-131	<1.86E+01	0.00E+00	1.86E+01
		Cs-134	<1.60E+01	0.00E+00	1.60E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<2.70E+01	0.00E+00	2.70E+01
		Ba-140	<5.07E+01	0.00E+00	5.07E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
437517	2/28/2017 - 2/28/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.70E+01	0.00E+00	1.70E+01
		Fe-59	<2.35E+01	0.00E+00	2.35E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1065 [ INDICATOR - @ 0 miles ]

Sample ID: 437517 Sample Dates: 2/28/2017 - 2/28/2017

Nuclide	Activity	2 Sigma Error	MDA
Zn-65	<2.64E+01	0.00E+00	2.64E+01
Zr-95	<1.77E+01	0.00E+00	1.77E+01
Nb-95	<1.28E+01	0.00E+00	1.28E+01
I-131	<1.57E+01	0.00E+00	1.57E+01
Cs-134	<9.73E+00	0.00E+00	9.73E+00
Cs-137	<1.19E+01	0.00E+00	1.19E+01
La-140	<1.66E+01	0.00E+00	1.66E+01
Ba-140	<4.23E+01	0.00E+00	4.23E+01
Total-Gam	0.00E+00		

Sample ID: 438247 Sample Dates: 3/7/2017 - 3/7/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.37E+01	0.00E+00	1.37E+01
Co-58	<8.55E+00	0.00E+00	8.55E+00
Fe-59	<2.04E+01	0.00E+00	2.04E+01
Co-60	<8.05E+00	0.00E+00	8.05E+00
Zn-65	<4.04E+01	0.00E+00	4.04E+01
Zr-95	<1.03E+01	0.00E+00	1.03E+01
Nb-95	<1.16E+01	0.00E+00	1.16E+01
I-131	<1.24E+01	0.00E+00	1.24E+01
Cs-134	<1.19E+01	0.00E+00	1.19E+01
Cs-137	<1.33E+01	0.00E+00	1.33E+01
La-140	<2.61E+01	0.00E+00	2.61E+01
Ba-140	<4.72E+01	0.00E+00	4.72E+01
Total-Gam	0.00E+00		

Sample ID: 439280 Sample Dates: 3/14/2017 - 3/14/2017

Nuclide	Activity	2 Sigma Error	MDA
Total-Gam	0.00E+00		

Sample ID: 439093 Sample Dates: 3/21/2017 - 3/21/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.37E+01	0.00E+00	1.37E+01
Co-58	<6.04E+00	0.00E+00	6.04E+00
Fe-59	<2.03E+01	0.00E+00	2.03E+01
Co-60	<1.26E+01	0.00E+00	1.26E+01
Zn-65	<3.41E+01	0.00E+00	3.41E+01
Zr-95	<1.77E+01	0.00E+00	1.77E+01
Nb-95	<2.16E+01	0.00E+00	2.16E+01
I-131	<1.00E+01	0.00E+00	1.00E+01
Cs-134	<1.18E+01	0.00E+00	1.18E+01
Cs-137	<5.94E+00	0.00E+00	5.94E+00
La-140	<2.90E+01	0.00E+00	2.90E+01
Ba-140	<5.02E+01	0.00E+00	5.02E+01
Total-Gam	0.00E+00		

Sample ID: 439946 Sample Dates: 3/28/2017 - 3/28/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.06E+01	0.00E+00	1.06E+01
Co-58	<1.90E+01	0.00E+00	1.90E+01
Fe-59	<2.35E+01	0.00E+00	2.35E+01
Co-60	<8.91E+00	0.00E+00	8.91E+00
Zn-65	<4.03E+01	0.00E+00	4.03E+01
Zr-95	<1.25E+01	0.00E+00	1.25E+01
Nb-95	<1.81E+01	0.00E+00	1.81E+01
I-131	<1.10E+01	0.00E+00	1.10E+01
Cs-134	<1.44E+01	0.00E+00	1.44E+01
Cs-137	<1.88E+01	0.00E+00	1.88E+01
La-140	<1.97E+01	0.00E+00	1.97E+01
Ba-140	<3.44E+01	0.00E+00	3.44E+01
Total-Gam	0.00E+00		

Sample ID: 440518 Sample Dates: 4/4/2017 - 4/4/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.65E+00	0.00E+00	8.65E+00
Co-58	<1.35E+01	0.00E+00	1.35E+01
Fe-59	<4.11E+01	0.00E+00	4.11E+01
Co-60	<1.97E+01	0.00E+00	1.97E+01
Zn-65	<3.05E+01	0.00E+00	3.05E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1065 [ INDICATOR - @ 0 miles ]

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
440518	4/4/2017 - 4/4/2017	Zr-95	<2.91E+01	0.00E+00	2.91E+01
		Nb-95	<1.30E+01	0.00E+00	1.30E+01
		I-131	<1.89E+01	0.00E+00	1.89E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.68E+01	0.00E+00	1.68E+01
		La-140	<2.13E+01	0.00E+00	2.13E+01
		Ba-140	<4.72E+01	0.00E+00	4.72E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
441358	4/11/2017 - 4/11/2017	Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<1.04E+01	0.00E+00	1.04E+01
		Fe-59	<2.71E+01	0.00E+00	2.71E+01
		Co-60	<1.39E+01	0.00E+00	1.39E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.70E+01	0.00E+00	2.70E+01
		Nb-95	<1.15E+01	0.00E+00	1.15E+01
		I-131	<1.30E+01	0.00E+00	1.30E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.46E+01	0.00E+00	1.46E+01
		La-140	<2.62E+01	0.00E+00	2.62E+01
		Ba-140	<2.99E+01	0.00E+00	2.99E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
441769	4/18/2017 - 4/18/2017	Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<1.48E+01	0.00E+00	1.48E+01
		Fe-59	<2.04E+01	0.00E+00	2.04E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<2.16E+01	0.00E+00	2.16E+01
		Zr-95	<2.72E+01	0.00E+00	2.72E+01
		Nb-95	<1.83E+01	0.00E+00	1.83E+01
		I-131	<1.31E+01	0.00E+00	1.31E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<2.17E+01	0.00E+00	2.17E+01
		Ba-140	<4.73E+01	0.00E+00	4.73E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
442216	4/25/2017 - 4/25/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.50E+01	0.00E+00	2.50E+01
		Nb-95	<1.62E+01	0.00E+00	1.62E+01
		I-131	<1.63E+01	0.00E+00	1.63E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<2.14E+01	0.00E+00	2.14E+01
		Ba-140	<4.60E+01	0.00E+00	4.60E+01
		Total-Gam	0.00E+00		

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Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
442807	5/2/2017 - 5/2/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<8.55E+00	0.00E+00	8.55E+00
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<4.32E+01	0.00E+00	4.32E+01
		Zr-95	<2.06E+01	0.00E+00	2.06E+01
		Nb-95	<1.92E+01	0.00E+00	1.92E+01
		I-131	<1.37E+01	0.00E+00	1.37E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01

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**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1065 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
442807	5/2/2017 - 5/2/2017	Cs-137	<1.78E+01	0.00E+00	1.78E+01
		La-140	<2.15E+01	0.00E+00	2.15E+01
		Ba-140	<4.37E+01	0.00E+00	4.37E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443245	5/9/2017 - 5/9/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<3.49E+01	0.00E+00	3.49E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<2.15E+01	0.00E+00	2.15E+01
		Zr-95	<2.50E+01	0.00E+00	2.50E+01
		Nb-95	<1.51E+01	0.00E+00	1.51E+01
		I-131	<1.56E+01	0.00E+00	1.56E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<1.62E+01	0.00E+00	1.62E+01
		Ba-140	<5.44E+01	0.00E+00	5.44E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443803	5/16/2017 - 5/16/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<6.00E+00	0.00E+00	6.00E+00
		Fe-59	<1.35E+01	0.00E+00	1.35E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<3.41E+01	0.00E+00	3.41E+01
		Zr-95	<3.05E+01	0.00E+00	3.05E+01
		Nb-95	<1.51E+01	0.00E+00	1.51E+01
		I-131	<1.35E+01	0.00E+00	1.35E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<5.94E+00	0.00E+00	5.94E+00
		La-140	<1.13E+01	0.00E+00	1.13E+01
		Ba-140	<4.21E+01	0.00E+00	4.21E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
444197	5/23/2017 - 5/23/2017	Mn-54	<1.39E+01	0.00E+00	1.39E+01
		Co-58	<1.14E+01	0.00E+00	1.14E+01
		Fe-59	<2.33E+01	0.00E+00	2.33E+01
		Co-60	<1.40E+01	0.00E+00	1.40E+01
		Zn-65	<2.21E+01	0.00E+00	2.21E+01
		Zr-95	<2.76E+01	0.00E+00	2.76E+01
		Nb-95	<2.17E+01	0.00E+00	2.17E+01
		I-131	<2.85E+01	0.00E+00	2.85E+01
		Cs-134	<1.55E+01	0.00E+00	1.55E+01
		Cs-137	<1.97E+01	0.00E+00	1.97E+01
		La-140	<7.20E+02	0.00E+00	7.20E+02
		Ba-140	<6.93E+01	0.00E+00	6.93E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
445267	5/30/2017 - 5/30/2017	Mn-54	<1.86E+01	0.00E+00	1.86E+01
		Co-58	<1.56E+01	0.00E+00	1.56E+01
		Fe-59	<2.57E+01	0.00E+00	2.57E+01
		Co-60	<8.06E+00	0.00E+00	8.06E+00
		Zn-65	<3.79E+01	0.00E+00	3.79E+01
		Zr-95	<2.67E+01	0.00E+00	2.67E+01
		Nb-95	<1.82E+01	0.00E+00	1.82E+01
		I-131	<1.94E+01	0.00E+00	1.94E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<1.31E+02	0.00E+00	1.31E+02
		Ba-140	<8.20E+01	0.00E+00	8.20E+01
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1065 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446266	6/6/2017 - 6/6/2017	Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<8.50E+00	0.00E+00	8.50E+00
		Fe-59	<1.36E+01	0.00E+00	1.36E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<3.73E+01	0.00E+00	3.73E+01
		Zr-95	<3.23E+01	0.00E+00	3.23E+01
		Nb-95	<1.81E+01	0.00E+00	1.81E+01
		I-131	<1.57E+01	0.00E+00	1.57E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<1.19E+01	0.00E+00	1.19E+01
		Ba-140	<4.89E+01	0.00E+00	4.89E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446770	6/13/2017 - 6/13/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<8.57E+00	0.00E+00	8.57E+00
		Fe-59	<1.94E+01	0.00E+00	1.94E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.52E+01	0.00E+00	2.52E+01
		Nb-95	<1.75E+01	0.00E+00	1.75E+01
		I-131	<1.03E+01	0.00E+00	1.03E+01
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<1.57E+01	0.00E+00	1.57E+01
		La-140	<2.84E+01	0.00E+00	2.84E+01
		Ba-140	<4.42E+01	0.00E+00	4.42E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447096	6/21/2017 - 6/21/2017	Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<1.90E+01	0.00E+00	1.90E+01
		Fe-59	<3.32E+01	0.00E+00	3.32E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<1.52E+01	0.00E+00	1.52E+01
		Zr-95	<2.28E+01	0.00E+00	2.28E+01
		Nb-95	<1.14E+01	0.00E+00	1.14E+01
		I-131	<9.56E+00	0.00E+00	9.56E+00
		Cs-134	<9.72E+00	0.00E+00	9.73E+00
		Cs-137	<1.57E+01	0.00E+00	1.57E+01
		La-140	<1.63E+01	0.00E+00	1.63E+01
		Ba-140	<5.44E+01	0.00E+00	5.44E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447749	6/27/2017 - 6/27/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<2.71E+01	0.00E+00	2.71E+01
		Co-60	<1.61E+01	0.00E+00	1.61E+01
		Zn-65	<2.15E+01	0.00E+00	2.15E+01
		Zr-95	<2.70E+01	0.00E+00	2.70E+01
		Nb-95	<9.89E+00	0.00E+00	9.89E+00
		I-131	<1.40E+01	0.00E+00	1.40E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<3.11E+01	0.00E+00	3.11E+01
		Ba-140	<4.85E+01	0.00E+00	4.85E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448213	7/5/2017 - 7/5/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.59E+01	0.00E+00	1.59E+01
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1065 [ INDICATOR - @ 0 miles ]

Sample ID: 448213 Sample Dates: 7/5/2017 - 7/5/2017

Nuclide	Activity	2 Sigma Error	MDA
Zn-65	<3.41E+01	0.00E+00	3.41E+01
Zr-95	<2.49E+01	0.00E+00	2.49E+01
Nb-95	<1.40E+01	0.00E+00	1.40E+01
I-131	<1.30E+01	0.00E+00	1.30E+01
Cs-134	<1.27E+01	0.00E+00	1.27E+01
Cs-137	<1.68E+01	0.00E+00	1.68E+01
La-140	<2.82E+01	0.00E+00	2.82E+01
Ba-140	<4.88E+01	0.00E+00	4.88E+01
Total-Gam	0.00E+00		

Sample ID: 448839 Sample Dates: 7/11/2017 - 7/11/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.22E+01	0.00E+00	1.22E+01
Co-58	<1.34E+01	0.00E+00	1.34E+01
Fe-59	<1.36E+01	0.00E+00	1.36E+01
Co-60	<1.14E+01	0.00E+00	1.14E+01
Zn-65	<3.73E+01	0.00E+00	3.73E+01
Zr-95	<2.79E+01	0.00E+00	2.79E+01
Nb-95	<1.62E+01	0.00E+00	1.62E+01
I-131	<1.47E+01	0.00E+00	1.47E+01
Cs-134	<1.54E+01	0.00E+00	1.54E+01
Cs-137	<1.68E+01	0.00E+00	1.68E+01
La-140	<2.69E+01	0.00E+00	2.69E+01
Ba-140	<4.57E+01	0.00E+00	4.57E+01
Total-Gam	0.00E+00		

Sample ID: 449152 Sample Dates: 7/18/2017 - 7/18/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<8.65E+00	0.00E+00	8.65E+00
Co-58	<8.56E+00	0.00E+00	8.56E+00
Fe-59	<2.89E+01	0.00E+00	2.89E+01
Co-60	<1.14E+01	0.00E+00	1.14E+01
Zn-65	<3.05E+01	0.00E+00	3.05E+01
Zr-95	<2.06E+01	0.00E+00	2.06E+01
Nb-95	<1.64E+01	0.00E+00	1.64E+01
I-131	<1.25E+01	0.00E+00	1.25E+01
Cs-134	<1.60E+01	0.00E+00	1.60E+01
Cs-137	<2.22E+01	0.00E+00	2.22E+01
La-140	<2.23E+01	0.00E+00	2.23E+01
Ba-140	<5.67E+01	0.00E+00	5.67E+01
Total-Gam	0.00E+00		

Sample ID: 449889 Sample Dates: 7/25/2017 - 7/25/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.22E+01	0.00E+00	1.22E+01
Co-58	<1.47E+01	0.00E+00	1.47E+01
Fe-59	<2.71E+01	0.00E+00	2.71E+01
Co-60	<1.54E+01	0.00E+00	1.54E+01
Zn-65	<3.41E+01	0.00E+00	3.41E+01
Zr-95	<1.76E+01	0.00E+00	1.76E+01
Nb-95	<1.51E+01	0.00E+00	1.51E+01
I-131	<1.30E+01	0.00E+00	1.30E+01
Cs-134	<1.18E+01	0.00E+00	1.18E+01
Cs-137	<1.46E+01	0.00E+00	1.46E+01
La-140	<2.32E+01	0.00E+00	2.32E+01
Ba-140	<4.56E+01	0.00E+00	4.56E+01
Total-Gam	0.00E+00		

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID: 432848 Sample Dates: 1/4/2017 - 1/4/2017

Nuclide	Activity	2 Sigma Error	MDA
Mn-54	<1.50E+01	0.00E+00	1.50E+01
Co-58	<8.55E+00	0.00E+00	8.55E+00
Fe-59	<2.74E+01	0.00E+00	2.74E+01
Co-60	<1.39E+01	0.00E+00	1.39E+01
Zn-65	<3.74E+01	0.00E+00	3.74E+01
Zr-95	<1.26E+01	0.00E+00	1.26E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
432848	1/4/2017 - 1/4/2017	Nb-95	<1.64E+01	0.00E+00	1.64E+01
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<1.53E+01	0.00E+00	1.53E+01
		Ba-140	<4.38E+01	0.00E+00	4.38E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433250	1/10/2017 - 1/10/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<4.31E+01	0.00E+00	4.31E+01
		Zr-95	<2.29E+01	0.00E+00	2.29E+01
		Nb-95	<1.62E+01	0.00E+00	1.62E+01
		I-131	<1.19E+01	0.00E+00	1.19E+01
		Cs-134	<9.62E+00	0.00E+00	9.62E+00
		Cs-137	<1.88E+01	0.00E+00	1.88E+01
		La-140	<3.14E+01	0.00E+00	3.14E+01
		Ba-140	<4.60E+01	0.00E+00	4.60E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433667	1/17/2017 - 1/17/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.05E+01	0.00E+00	1.05E+01
		Fe-59	<2.37E+01	0.00E+00	2.37E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<1.45E+01	0.00E+00	1.45E+01
		Nb-95	<1.42E+01	0.00E+00	1.42E+01
		I-131	<1.49E+01	0.00E+00	1.50E+01
		Cs-134	<1.19E+01	0.00E+00	1.19E+01
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<4.29E+01	0.00E+00	4.29E+01
		Ba-140	<5.65E+01	0.00E+00	5.65E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
434402	1/25/2017 - 1/25/2017	Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.59E+01	0.00E+00	1.59E+01
		Fe-59	<2.86E+01	0.00E+00	2.86E+01
		Co-60	<1.39E+01	0.00E+00	1.39E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<1.76E+01	0.00E+00	1.76E+01
		Nb-95	<9.93E+00	0.00E+00	9.93E+00
		I-131	<1.53E+01	0.00E+00	1.53E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.78E+01	0.00E+00	1.78E+01
		La-140	<2.09E+01	0.00E+00	2.09E+01
		Ba-140	<5.48E+01	0.00E+00	5.48E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435046	1/31/2017 - 1/31/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.22E+01	0.00E+00	1.22E+01
		Fe-59	<2.07E+01	0.00E+00	2.07E+01
		Co-60	<1.39E+01	0.00E+00	1.39E+01
		Zn-65	<3.06E+01	0.00E+00	3.06E+01
		Zr-95	<1.47E+01	0.00E+00	1.47E+01
		Nb-95	<1.33E+01	0.00E+00	1.33E+01
		I-131	<1.02E+01	0.00E+00	1.02E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
Cs-137	<8.40E+00	0.00E+00	8.41E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435046	1/31/2017 - 1/31/2017	La-140	<4.22E+01	0.00E+00	4.22E+01
		Ba-140	<4.25E+01	0.00E+00	4.25E+01
		Total-Gam	0.00E+00		
435756	2/8/2017 - 2/8/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<2.16E+01	0.00E+00	2.16E+01
		Zr-95	<1.26E+01	0.00E+00	1.26E+01
		Nb-95	<1.42E+01	0.00E+00	1.42E+01
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<2.26E+01	0.00E+00	2.26E+01
		Ba-140	<5.68E+01	0.00E+00	5.68E+01
		Total-Gam	0.00E+00		
436206	2/14/2017 - 2/14/2017	Mn-54	<1.23E+01	0.00E+00	1.23E+01
		Co-58	<1.37E+01	0.00E+00	1.37E+01
		Fe-59	<2.41E+01	0.00E+00	2.41E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<2.17E+01	0.00E+00	2.17E+01
		Zr-95	<1.80E+01	0.00E+00	1.80E+01
		Nb-95	<1.45E+01	0.00E+00	1.45E+01
		I-131	<1.77E+01	0.00E+00	1.77E+01
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<4.94E+01	0.00E+00	4.94E+01
		Ba-140	<4.66E+01	0.00E+00	4.66E+01
		Total-Gam	0.00E+00		
436657	2/21/2017 - 2/21/2017	Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<2.04E+01	0.00E+00	2.04E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.06E+01	0.00E+00	2.06E+01
		Nb-95	<1.42E+01	0.00E+00	1.42E+01
		I-131	<1.50E+01	0.00E+00	1.50E+01
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<8.40E+00	0.00E+00	8.40E+00
		La-140	<2.72E+01	0.00E+00	2.72E+01
		Ba-140	<4.74E+01	0.00E+00	4.74E+01
		Total-Gam	0.00E+00		
437518	2/28/2017 - 2/28/2017	Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<1.34E+01	0.00E+00	1.34E+01
		Fe-59	<2.02E+01	0.00E+00	2.02E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<3.41E+01	0.00E+00	3.41E+01
		Zr-95	<2.04E+01	0.00E+00	2.04E+01
		Nb-95	<9.92E+00	0.00E+00	9.92E+00
		I-131	<1.30E+01	0.00E+00	1.30E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<1.65E+01	0.00E+00	1.65E+01
		Ba-140	<5.18E+01	0.00E+00	5.18E+01
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438248	3/7/2017 - 3/7/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<1.94E+01	0.00E+00	1.94E+01
		Co-60	<1.61E+01	0.00E+00	1.61E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<1.45E+01	0.00E+00	1.45E+01
		Nb-95	<1.53E+01	0.00E+00	1.53E+01
		I-131	<1.43E+01	0.00E+00	1.43E+01
		Cs-134	<9.63E+00	0.00E+00	9.63E+00
		Cs-137	<1.57E+01	0.00E+00	1.57E+01
		La-140	<2.16E+01	0.00E+00	2.16E+01
		Ba-140	<5.92E+01	0.00E+00	5.92E+01
		Total-Gam	0.00E+00		
439281	3/14/2017 - 3/14/2017	Nuclide	Activity	2 Sigma Error	MDA
		Total-Gam	0.00E+00		
439094	3/21/2017 - 3/21/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<8.65E+00	0.00E+00	8.65E+00
		Co-58	<8.54E+00	0.00E+00	8.54E+00
		Fe-59	<3.35E+01	0.00E+00	3.35E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.05E+01	0.00E+00	2.05E+01
		Nb-95	<1.92E+01	0.00E+00	1.92E+01
		I-131	<1.59E+01	0.00E+00	1.59E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<2.06E+01	0.00E+00	2.06E+01
		Ba-140	<4.70E+01	0.00E+00	4.70E+01
Total-Gam	0.00E+00				
439947	3/28/2017 - 3/28/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.59E+01	0.00E+00	1.59E+01
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.49E+01	0.00E+00	2.49E+01
		Nb-95	<1.62E+01	0.00E+00	1.62E+01
		I-131	<1.66E+01	0.00E+00	1.66E+01
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<1.46E+01	0.00E+00	1.46E+01
		La-140	<2.35E+01	0.00E+00	2.35E+01
		Ba-140	<5.46E+01	0.00E+00	5.46E+01
Total-Gam	0.00E+00				
440519	4/4/2017 - 4/4/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<8.56E+00	0.00E+00	8.56E+00
		Fe-59	<2.89E+01	0.00E+00	2.89E+01
		Co-60	<1.39E+01	0.00E+00	1.39E+01
		Zn-65	<2.16E+01	0.00E+00	2.16E+01
		Zr-95	<1.78E+01	0.00E+00	1.78E+01
		Nb-95	<1.64E+01	0.00E+00	1.64E+01
		I-131	<2.00E+01	0.00E+00	2.00E+01
		Cs-134	<1.54E+01	0.00E+00	1.54E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<2.21E+01	0.00E+00	2.21E+01
		Ba-140	<5.07E+01	0.00E+00	5.07E+01
Total-Gam	0.00E+00				
441359	4/11/2017 - 4/11/2017	Nuclide	Activity	2 Sigma Error	MDA
		Mn-54	<1.22E+01	0.00E+00	1.22E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	441359	Sample Dates:	4/11/2017 - 4/11/2017	Nuclide	Activity	2 Sigma Error	MDA
				Co-58	<8.50E+00	0.00E+00	8.50E+00
				Fe-59	<2.35E+01	0.00E+00	2.35E+01
				Co-60	<1.39E+01	0.00E+00	1.39E+01
				Zn-65	<2.64E+01	0.00E+00	2.64E+01
				Zr-95	<2.89E+01	0.00E+00	2.89E+01
				Nb-95	<1.90E+01	0.00E+00	1.90E+01
				I-131	<1.18E+01	0.00E+00	1.18E+01
				Cs-134	<1.18E+01	0.00E+00	1.18E+01
				Cs-137	<1.19E+01	0.00E+00	1.19E+01
				La-140	<2.63E+01	0.00E+00	2.63E+01
				Ba-140	<4.88E+01	0.00E+00	4.88E+01
				Total-Gam	0.00E+00		

Sample ID:	441770	Sample Dates:	4/18/2017 - 4/18/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.22E+01	0.00E+00	1.22E+01
				Co-58	<1.21E+01	0.00E+00	1.21E+01
				Fe-59	<3.36E+01	0.00E+00	3.36E+01
				Co-60	<8.05E+00	0.00E+00	8.05E+00
				Zn-65	<3.05E+01	0.00E+00	3.05E+01
				Zr-95	<2.06E+01	0.00E+00	2.06E+01
				Nb-95	<1.54E+01	0.00E+00	1.54E+01
				I-131	<1.50E+01	0.00E+00	1.50E+01
				Cs-134	<1.08E+01	0.00E+00	1.08E+01
				Cs-137	<1.33E+01	0.00E+00	1.33E+01
				La-140	<2.19E+01	0.00E+00	2.19E+01
				Ba-140	<4.74E+01	0.00E+00	4.74E+01
				Total-Gam	0.00E+00		

Sample ID:	442217	Sample Dates:	4/25/2017 - 4/25/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.12E+00	0.00E+00	6.12E+00
				Co-58	<1.36E+01	0.00E+00	1.36E+01
				Fe-59	<2.89E+01	0.00E+00	2.89E+01
				Co-60	<8.91E+00	0.00E+00	8.91E+00
				Zn-65	<2.16E+01	0.00E+00	2.16E+01
				Zr-95	<3.09E+01	0.00E+00	3.09E+01
				Nb-95	<1.43E+01	0.00E+00	1.43E+01
				I-131	<1.79E+01	0.00E+00	1.79E+01
				Cs-134	<1.08E+01	0.00E+00	1.08E+01
				Cs-137	<1.78E+01	0.00E+00	1.78E+01
				La-140	<2.89E+01	0.00E+00	2.89E+01
				Ba-140	<3.13E+01	0.00E+00	3.13E+01
				Total-Gam	0.00E+00		

Sample ID:	442808	Sample Dates:	5/2/2017 - 5/2/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.22E+01	0.00E+00	1.22E+01
				Co-58	<1.35E+01	0.00E+00	1.35E+01
				Fe-59	<2.74E+01	0.00E+00	2.74E+01
				Co-60	<1.54E+01	0.00E+00	1.54E+01
				Zn-65	<3.41E+01	0.00E+00	3.41E+01
				Zr-95	<2.72E+01	0.00E+00	2.72E+01
				Nb-95	<2.09E+01	0.00E+00	2.09E+01
				I-131	<1.37E+01	0.00E+00	1.37E+01
				Cs-134	<1.18E+01	0.00E+00	1.18E+01
				Cs-137	<1.57E+01	0.00E+00	1.57E+01
				La-140	<1.54E+01	0.00E+00	1.54E+01
				Ba-140	<5.36E+01	0.00E+00	5.36E+01
				Total-Gam	0.00E+00		

Sample ID:	443246	Sample Dates:	5/9/2017 - 5/9/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.62E+01	0.00E+00	1.62E+01
				Co-58	<1.04E+01	0.00E+00	1.04E+01
				Fe-59	<2.71E+01	0.00E+00	2.71E+01
				Co-60	<1.39E+01	0.00E+00	1.39E+01
				Zn-65	<2.15E+01	0.00E+00	2.15E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443246	5/9/2017 - 5/9/2017	Zr-95	<2.04E+01	0.00E+00	2.04E+01
		Nb-95	<1.62E+01	0.00E+00	1.62E+01
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.46E+01	0.00E+00	1.46E+01
		La-140	<2.32E+01	0.00E+00	2.32E+01
		Ba-140	<4.22E+01	0.00E+00	4.22E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
443804	5/16/2017 - 5/16/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.60E+01	0.00E+00	1.60E+01
		Fe-59	<2.74E+01	0.00E+00	2.74E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.51E+01	0.00E+00	2.51E+01
		Nb-95	<1.30E+01	0.00E+00	1.30E+01
		I-131	<8.32E+00	0.00E+00	8.32E+00
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<0.00E+00	0.00E+00	0.00E+00
		La-140	<4.53E+01	0.00E+00	4.53E+01
		Ba-140	<4.39E+01	0.00E+00	4.39E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
444198	5/23/2017 - 5/23/2017	Mn-54	<1.39E+01	0.00E+00	1.39E+01
		Co-58	<1.14E+01	0.00E+00	1.14E+01
		Fe-59	<3.12E+01	0.00E+00	3.12E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<1.56E+01	0.00E+00	1.56E+01
		Zr-95	<2.38E+01	0.00E+00	2.38E+01
		Nb-95	<1.81E+01	0.00E+00	1.81E+01
		I-131	<1.93E+01	0.00E+00	1.93E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<7.24E+02	0.00E+00	7.24E+02
		Ba-140	<6.33E+01	0.00E+00	6.33E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
445268	5/30/2017 - 5/30/2017	Mn-54	<1.24E+01	0.00E+00	1.24E+01
		Co-58	<1.42E+01	0.00E+00	1.42E+01
		Fe-59	<3.63E+01	0.00E+00	3.63E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<3.46E+01	0.00E+00	3.46E+01
		Zr-95	<1.33E+01	0.00E+00	1.33E+01
		Nb-95	<1.11E+01	0.00E+00	1.11E+01
		I-131	<2.22E+01	0.00E+00	2.22E+01
		Cs-134	<6.84E+00	0.00E+00	6.84E+00
		Cs-137	<1.78E+01	0.00E+00	1.78E+01
		La-140	<1.25E+02	0.00E+00	1.25E+02
		Ba-140	<4.70E+01	0.00E+00	4.70E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446267	6/6/2017 - 6/6/2017	Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<2.35E+01	0.00E+00	2.35E+01
		Co-60	<1.61E+01	0.00E+00	1.61E+01
		Zn-65	<1.52E+01	0.00E+00	1.52E+01
		Zr-95	<1.45E+01	0.00E+00	1.45E+01
		Nb-95	<1.99E+01	0.00E+00	1.99E+01
		I-131	<1.72E+01	0.00E+00	1.72E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446267	6/6/2017 - 6/6/2017	Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<2.08E+01	0.00E+00	2.08E+01
		Ba-140	<6.00E+01	0.00E+00	6.00E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
446771	6/13/2017 - 6/13/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<8.57E+00	0.00E+00	8.57E+00
		Fe-59	<2.75E+01	0.00E+00	2.75E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<3.41E+01	0.00E+00	3.41E+01
		Zr-95	<2.91E+01	0.00E+00	2.91E+01
		Nb-95	<1.43E+01	0.00E+00	1.43E+01
		I-131	<1.40E+01	0.00E+00	1.40E+01
		Cs-134	<9.63E+00	0.00E+00	9.63E+00
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<2.86E+01	0.00E+00	2.86E+01
		Ba-140	<5.10E+01	0.00E+00	5.10E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447097	6/21/2017 - 6/21/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<2.71E+01	0.00E+00	2.71E+01
		Co-60	<1.54E+01	0.00E+00	1.54E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.70E+01	0.00E+00	2.70E+01
		Nb-95	<1.40E+01	0.00E+00	1.40E+01
		I-131	<1.41E+01	0.00E+00	1.41E+01
		Cs-134	<8.33E+00	0.00E+00	8.33E+00
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<2.00E+01	0.00E+00	2.00E+01
		Ba-140	<2.44E+01	0.00E+00	2.44E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
447750	6/27/2017 - 6/27/2017	Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<8.49E+00	0.00E+00	8.49E+00
		Fe-59	<2.85E+01	0.00E+00	2.85E+01
		Co-60	<1.61E+01	0.00E+00	1.61E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<3.05E+01	0.00E+00	3.05E+01
		Nb-95	<1.28E+01	0.00E+00	1.28E+01
		I-131	<1.29E+01	0.00E+00	1.29E+01
		Cs-134	<1.54E+01	0.00E+00	1.54E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<1.12E+01	0.00E+00	1.12E+01
		Ba-140	<5.15E+01	0.00E+00	5.15E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448214	7/5/2017 - 7/5/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.34E+01	0.00E+00	1.34E+01
		Fe-59	<2.35E+01	0.00E+00	2.35E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.15E+01	0.00E+00	2.15E+01
		Zr-95	<1.44E+01	0.00E+00	1.44E+01
		Nb-95	<1.28E+01	0.00E+00	1.28E+01
		I-131	<1.57E+01	0.00E+00	1.57E+01
		Cs-134	<1.98E+01	0.00E+00	1.98E+01
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<1.91E+01	0.00E+00	1.91E+01
		Ba-140	<5.18E+01	0.00E+00	5.18E+01
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1066 [ INDICATOR - @ 0 miles ]

Sample ID:	448840	Sample Dates:	7/11/2017 - 7/11/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.06E+01	0.00E+00	1.06E+01
				Co-58	<1.05E+01	0.00E+00	1.05E+01
				Fe-59	<2.04E+01	0.00E+00	2.04E+01
				Co-60	<1.26E+01	0.00E+00	1.26E+01
				Zn-65	<1.53E+01	0.00E+00	1.53E+01
				Zr-95	<2.18E+01	0.00E+00	2.18E+01
				Nb-95	<1.84E+01	0.00E+00	1.84E+01
				I-131	<1.72E+01	0.00E+00	1.72E+01
				Cs-134	<1.08E+01	0.00E+00	1.08E+01
				Cs-137	<1.78E+01	0.00E+00	1.78E+01
				La-140	<2.21E+01	0.00E+00	2.21E+01
				Ba-140	<5.67E+01	0.00E+00	5.67E+01
				Total-Gam	0.00E+00		

Sample ID:	449153	Sample Dates:	7/18/2017 - 7/18/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.22E+01	0.00E+00	1.22E+01
				Co-58	<1.48E+01	0.00E+00	1.48E+01
				Fe-59	<3.06E+01	0.00E+00	3.06E+01
				Co-60	<8.91E+00	0.00E+00	8.91E+00
				Zn-65	<2.16E+01	0.00E+00	2.16E+01
				Zr-95	<1.78E+01	0.00E+00	1.78E+01
				Nb-95	<1.42E+01	0.00E+00	1.42E+01
				I-131	<1.30E+01	0.00E+00	1.30E+01
				Cs-134	<1.38E+01	0.00E+00	1.38E+01
				Cs-137	<1.03E+01	0.00E+00	1.03E+01
				La-140	<3.63E+01	0.00E+00	3.63E+01
				Ba-140	<5.35E+01	0.00E+00	5.35E+01
				Total-Gam	0.00E+00		

Sample ID:	449890	Sample Dates:	7/25/2017 - 7/25/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.22E+01	0.00E+00	1.22E+01
				Co-58	<1.21E+01	0.00E+00	1.21E+01
				Fe-59	<2.38E+01	0.00E+00	2.38E+01
				Co-60	<8.05E+00	0.00E+00	8.05E+00
				Zn-65	<3.41E+01	0.00E+00	3.41E+01
				Zr-95	<3.09E+01	0.00E+00	3.09E+01
				Nb-95	<1.42E+01	0.00E+00	1.42E+01
				I-131	<1.63E+01	0.00E+00	1.63E+01
				Cs-134	<1.08E+01	0.00E+00	1.08E+01
				Cs-137	<1.78E+01	0.00E+00	1.78E+01
				La-140	<2.30E+01	0.00E+00	2.30E+01
				Ba-140	<4.03E+01	0.00E+00	4.03E+01
				Total-Gam	0.00E+00		

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	432849	Sample Dates:	1/4/2017 - 1/4/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.93E+01	0.00E+00	1.93E+01
				Co-58	<1.21E+01	0.00E+00	1.21E+01
				Fe-59	<2.37E+01	0.00E+00	2.37E+01
				Co-60	<1.39E+01	0.00E+00	1.39E+01
				Zn-65	<3.74E+01	0.00E+00	3.74E+01
				Zr-95	<2.51E+01	0.00E+00	2.51E+01
				Nb-95	<1.42E+01	0.00E+00	1.42E+01
				I-131	<9.31E+00	0.00E+00	9.31E+00
				Cs-134	<1.19E+01	0.00E+00	1.19E+01
				Cs-137	<1.19E+01	0.00E+00	1.19E+01
				La-140	<2.71E+01	0.00E+00	2.71E+01
				Ba-140	<3.58E+01	0.00E+00	3.58E+01
				Total-Gam	0.00E+00		

Sample ID:	433251	Sample Dates:	1/10/2017 - 1/10/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.06E+01	0.00E+00	1.06E+01
				Co-58	<1.05E+01	0.00E+00	1.05E+01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
433251	1/10/2017 - 1/10/2017	Fe-59	<2.05E+01	0.00E+00	2.05E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<2.16E+01	0.00E+00	2.16E+01
		Zr-95	<2.73E+01	0.00E+00	2.73E+01
		Nb-95	<1.65E+01	0.00E+00	1.65E+01
		I-131	<1.04E+01	0.00E+00	1.04E+01
		Cs-134	<9.63E+00	0.00E+00	9.63E+00
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<2.81E+01	0.00E+00	2.81E+01
		Ba-140	<4.81E+01	0.00E+00	4.81E+01
		Total-Gam	0.00E+00		
		433668	1/17/2017 - 1/17/2017	Mn-54	<1.50E+01
Co-58	<1.60E+01			0.00E+00	1.60E+01
Fe-59	<2.89E+01			0.00E+00	2.89E+01
Co-60	<1.26E+01			0.00E+00	1.26E+01
Zn-65	<3.74E+01			0.00E+00	3.74E+01
Zr-95	<2.18E+01			0.00E+00	2.18E+01
Nb-95	<1.01E+01			0.00E+00	1.01E+01
I-131	<1.67E+01			0.00E+00	1.67E+01
Cs-134	<9.73E+00			0.00E+00	9.73E+00
Cs-137	<1.19E+01			0.00E+00	1.19E+01
La-140	<2.25E+01			0.00E+00	2.25E+01
Ba-140	<4.75E+01			0.00E+00	4.75E+01
Total-Gam	0.00E+00				
434403	1/25/2017 - 1/25/2017	Mn-54	<2.12E+01	0.00E+00	2.12E+01
		Co-58	<8.51E+00	0.00E+00	8.51E+00
		Fe-59	<2.72E+01	0.00E+00	2.72E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.50E+01	0.00E+00	2.50E+01
		Nb-95	<1.41E+01	0.00E+00	1.41E+01
		I-131	<1.37E+01	0.00E+00	1.37E+01
		Cs-134	<9.73E+00	0.00E+00	9.73E+00
		Cs-137	<1.46E+01	0.00E+00	1.46E+01
		La-140	<2.13E+01	0.00E+00	2.13E+01
		Ba-140	<4.59E+01	0.00E+00	4.59E+01
Total-Gam	0.00E+00				
435047	1/31/2017 - 1/31/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.60E+01	0.00E+00	1.61E+01
		Fe-59	<2.90E+01	0.00E+00	2.90E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<2.65E+01	0.00E+00	2.65E+01
		Zr-95	<2.52E+01	0.00E+00	2.52E+01
		Nb-95	<1.30E+01	0.00E+00	1.30E+01
		I-131	<1.47E+01	0.00E+00	1.47E+01
		Cs-134	<6.81E+00	0.00E+00	6.81E+00
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<3.48E+01	0.00E+00	3.48E+01
		Ba-140	<3.64E+01	0.00E+00	3.64E+01
Total-Gam	0.00E+00				
435757	2/8/2017 - 2/8/2017	Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.21E+01	0.00E+00	1.21E+01
		Fe-59	<1.37E+01	0.00E+00	1.37E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<2.16E+01	0.00E+00	2.16E+01
		Zr-95	<2.52E+01	0.00E+00	2.52E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
435757	2/8/2017 - 2/8/2017	Nb-95	<1.01E+01	0.00E+00	1.01E+01
		I-131	<1.87E+01	0.00E+00	1.87E+01
		Cs-134	<9.73E+00	0.00E+00	9.73E+00
		Cs-137	<8.40E+00	0.00E+00	8.40E+00
		La-140	<2.24E+01	0.00E+00	2.24E+01
		Ba-140	<5.39E+01	0.00E+00	5.39E+01
		Total-Gam	0.00E+00		
436207	2/14/2017 - 2/14/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.37E+01	0.00E+00	1.37E+01
		Fe-59	<1.97E+01	0.00E+00	1.97E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<3.06E+01	0.00E+00	3.06E+01
		Zr-95	<2.33E+01	0.00E+00	2.33E+01
		Nb-95	<1.78E+01	0.00E+00	1.78E+01
		I-131	<1.52E+01	0.00E+00	1.52E+01
		Cs-134	<8.35E+00	0.00E+00	8.35E+00
		Cs-137	<1.68E+01	0.00E+00	1.68E+01
		La-140	<2.50E+01	0.00E+00	2.50E+01
		Ba-140	<5.72E+01	0.00E+00	5.72E+01
		Total-Gam	0.00E+00		
436658	2/21/2017 - 2/21/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.71E+01	0.00E+00	1.71E+01
		Fe-59	<3.07E+01	0.00E+00	3.07E+01
		Co-60	<2.28E+01	0.00E+00	2.28E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.18E+01	0.00E+00	2.18E+01
		Nb-95	<1.01E+01	0.00E+00	1.01E+01
		I-131	<1.61E+01	0.00E+00	1.61E+01
		Cs-134	<1.44E+01	0.00E+00	1.44E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<1.57E+01	0.00E+00	1.57E+01
		Ba-140	<5.95E+01	0.00E+00	5.95E+01
		Total-Gam	0.00E+00		
437519	2/28/2017 - 2/28/2017	Mn-54	<8.65E+00	0.00E+00	8.65E+00
		Co-58	<1.71E+01	0.00E+00	1.71E+01
		Fe-59	<2.74E+01	0.00E+00	2.74E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<1.78E+01	0.00E+00	1.78E+01
		Nb-95	<1.30E+01	0.00E+00	1.30E+01
		I-131	<1.62E+01	0.00E+00	1.62E+01
		Cs-134	<9.63E+00	0.00E+00	9.63E+00
		Cs-137	<1.68E+01	0.00E+00	1.68E+01
		La-140	<1.61E+01	0.00E+00	1.61E+01
		Ba-140	<3.60E+01	0.00E+00	3.60E+01
		Total-Gam	0.00E+00		
438249	3/7/2017 - 3/7/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<3.06E+01	0.00E+00	3.06E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.81E+01	0.00E+00	2.81E+01
		Nb-95	<1.84E+01	0.00E+00	1.84E+01
		I-131	<1.38E+01	0.00E+00	1.38E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
Cs-137	<1.19E+01	0.00E+00	1.19E+01		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
438249	3/7/2017 - 3/7/2017	La-140	<1.55E+01	0.00E+00	1.55E+01
		Ba-140	<5.37E+01	0.00E+00	5.37E+01
		Total-Gam	0.00E+00		
439282	3/14/2017 - 3/14/2017	Total-Gam	0.00E+00		
439095	3/21/2017 - 3/21/2017	Mn-54	<1.22E+01	0.00E+00	1.22E+01
		Co-58	<1.48E+01	0.00E+00	1.48E+01
		Fe-59	<2.37E+01	0.00E+00	2.37E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<3.74E+01	0.00E+00	3.74E+01
		Zr-95	<2.72E+01	0.00E+00	2.72E+01
		Nb-95	<2.01E+01	0.00E+00	2.01E+01
		I-131	<1.17E+01	0.00E+00	1.17E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.46E+01	0.00E+00	1.46E+01
		La-140	<2.12E+01	0.00E+00	2.12E+01
		Ba-140	<5.04E+01	0.00E+00	5.04E+01
		Total-Gam	0.00E+00		
439948	3/28/2017 - 3/28/2017	Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<2.71E+01	0.00E+00	2.71E+01
		Co-60	<1.39E+01	0.00E+00	1.39E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.50E+01	0.00E+00	2.50E+01
		Nb-95	<1.51E+01	0.00E+00	1.51E+01
		I-131	<1.47E+01	0.00E+00	1.47E+01
		Cs-134	<1.18E+01	0.00E+00	1.18E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<2.02E+01	0.00E+00	2.02E+01
		Ba-140	<3.45E+01	0.00E+00	3.45E+01
		Total-Gam	0.00E+00		
440520	4/4/2017 - 4/4/2017	Mn-54	<1.50E+01	0.00E+00	1.50E+01
		Co-58	<1.35E+01	0.00E+00	1.35E+01
		Fe-59	<1.94E+01	0.00E+00	1.94E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<0.00E+00	0.00E+00	0.00E+00
		Zr-95	<1.78E+01	0.00E+00	1.78E+01
		Nb-95	<1.01E+01	0.00E+00	1.01E+01
		I-131	<1.39E+01	0.00E+00	1.39E+01
		Cs-134	<1.52E+01	0.00E+00	1.52E+01
		Cs-137	<1.46E+01	0.00E+00	1.46E+01
		La-140	<1.60E+01	0.00E+00	1.60E+01
		Ba-140	<5.68E+01	0.00E+00	5.68E+01
		Total-Gam	0.00E+00		
441360	4/11/2017 - 4/11/2017	Mn-54	<1.06E+01	0.00E+00	1.06E+01
		Co-58	<8.51E+00	0.00E+00	8.51E+00
		Fe-59	<1.92E+01	0.00E+00	1.92E+01
		Co-60	<1.26E+01	0.00E+00	1.26E+01
		Zn-65	<2.64E+01	0.00E+00	2.64E+01
		Zr-95	<2.16E+01	0.00E+00	2.16E+01
		Nb-95	<1.28E+01	0.00E+00	1.28E+01
		I-131	<1.37E+01	0.00E+00	1.37E+01
		Cs-134	<1.36E+01	0.00E+00	1.36E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<9.77E+00	0.00E+00	9.77E+00



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
441360	4/11/2017 - 4/11/2017	Ba-140	<3.47E+01	0.00E+00	3.47E+01
		Total-Gam	0.00E+00		
441771	4/18/2017 - 4/18/2017	Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.21E+01	0.00E+00	1.21E+01
		Fe-59	<1.94E+01	0.00E+00	1.94E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<3.74E+01	0.00E+00	3.74E+01
		Zr-95	<2.52E+01	0.00E+00	2.52E+01
		Nb-95	<8.22E+00	0.00E+00	8.22E+00
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<1.44E+01	0.00E+00	1.44E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<3.44E+01	0.00E+00	3.44E+01
		Ba-140	<4.41E+01	0.00E+00	4.41E+01
		Total-Gam	0.00E+00		
442218	4/25/2017 - 4/25/2017	Mn-54	<8.64E+00	0.00E+00	8.64E+00
		Co-58	<8.51E+00	0.00E+00	8.51E+00
		Fe-59	<2.35E+01	0.00E+00	2.35E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<2.15E+01	0.00E+00	2.15E+01
		Zr-95	<2.89E+01	0.00E+00	2.89E+01
		Nb-95	<1.72E+01	0.00E+00	1.72E+01
		I-131	<8.84E+00	0.00E+00	8.84E+00
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<1.33E+01	0.00E+00	1.33E+01
		La-140	<1.22E+01	0.00E+00	1.22E+01
		Ba-140	<5.21E+01	0.00E+00	5.21E+01
		Total-Gam	0.00E+00		
442809	5/2/2017 - 5/2/2017	Mn-54	<1.37E+01	0.00E+00	1.37E+01
		Co-58	<1.21E+01	0.00E+00	1.21E+01
		Fe-59	<1.94E+01	0.00E+00	1.94E+01
		Co-60	<8.91E+00	0.00E+00	8.91E+00
		Zn-65	<4.04E+01	0.00E+00	4.04E+01
		Zr-95	<2.72E+01	0.00E+00	2.72E+01
		Nb-95	<1.64E+01	0.00E+00	1.64E+01
		I-131	<1.10E+01	0.00E+00	1.10E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<8.40E+00	0.00E+00	8.40E+00
		La-140	<3.98E+01	0.00E+00	3.98E+01
		Ba-140	<3.58E+01	0.00E+00	3.58E+01
		Total-Gam	0.00E+00		
443247	5/9/2017 - 5/9/2017	Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<1.20E+01	0.00E+00	1.20E+01
		Fe-59	<2.35E+01	0.00E+00	2.35E+01
		Co-60	<8.05E+00	0.00E+00	8.05E+00
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<2.70E+01	0.00E+00	2.70E+01
		Nb-95	<1.52E+01	0.00E+00	1.52E+01
		I-131	<1.42E+01	0.00E+00	1.42E+01
		Cs-134	<1.08E+01	0.00E+00	1.08E+01
		Cs-137	<1.19E+01	0.00E+00	1.19E+01
		La-140	<1.68E+01	0.00E+00	1.68E+01
		Ba-140	<5.18E+01	0.00E+00	5.18E+01
		Total-Gam	0.00E+00		



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	443805	Sample Dates:	5/16/2017 - 5/16/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.06E+01	0.00E+00	1.06E+01
				Co-58	<1.60E+01	0.00E+00	1.60E+01
				Fe-59	<2.38E+01	0.00E+00	2.38E+01
				Co-60	<1.54E+01	0.00E+00	1.54E+01
				Zn-65	<3.74E+01	0.00E+00	3.74E+01
				Zr-95	<2.30E+01	0.00E+00	2.30E+01
				Nb-95	<1.84E+01	0.00E+00	1.84E+01
				I-131	<1.72E+01	0.00E+00	1.72E+01
				Cs-134	<9.73E+00	0.00E+00	9.73E+00
				Cs-137	<1.19E+01	0.00E+00	1.19E+01
				La-140	<2.25E+01	0.00E+00	2.25E+01
				Ba-140	<5.08E+01	0.00E+00	5.08E+01
				Total-Gam	0.00E+00		

Sample ID:	444199	Sample Dates:	5/23/2017 - 5/23/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.54E+01	0.00E+00	1.54E+01
				Co-58	<1.80E+01	0.00E+00	1.80E+01
				Fe-59	<3.31E+01	0.00E+00	3.31E+01
				Co-60	<8.09E+00	0.00E+00	8.09E+00
				Zn-65	<2.74E+01	0.00E+00	2.74E+01
				Zr-95	<1.66E+01	0.00E+00	1.66E+01
				Nb-95	<1.28E+01	0.00E+00	1.28E+01
				I-131	<4.61E+01	0.00E+00	4.61E+01
				Cs-134	<1.09E+01	0.00E+00	1.09E+01
				Cs-137	<1.68E+01	0.00E+00	1.68E+01
				La-140	<2.43E+03	0.00E+00	2.43E+03
				Ba-140	<7.76E+01	0.00E+00	7.76E+01
				Total-Gam	0.00E+00		

Sample ID:	445269	Sample Dates:	5/30/2017 - 5/30/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.64E+01	0.00E+00	1.64E+01
				Co-58	<1.56E+01	0.00E+00	1.56E+01
				Fe-59	<1.48E+01	0.00E+00	1.48E+01
				Co-60	<1.26E+01	0.00E+00	1.26E+01
				Zn-65	<3.79E+01	0.00E+00	3.79E+01
				Zr-95	<3.25E+01	0.00E+00	3.25E+01
				Nb-95	<1.57E+01	0.00E+00	1.57E+01
				I-131	<2.14E+01	0.00E+00	2.14E+01
				Cs-134	<1.28E+01	0.00E+00	1.28E+01
				Cs-137	<1.46E+01	0.00E+00	1.46E+01
				La-140	<1.80E+02	0.00E+00	1.80E+02
				Ba-140	<8.83E+01	0.00E+00	8.83E+01
				Total-Gam	0.00E+00		

Sample ID:	446268	Sample Dates:	6/6/2017 - 6/6/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<6.11E+00	0.00E+00	6.11E+00
				Co-58	<1.47E+01	0.00E+00	1.47E+01
				Fe-59	<2.02E+01	0.00E+00	2.02E+01
				Co-60	<8.05E+00	0.00E+00	8.05E+00
				Zn-65	<2.64E+01	0.00E+00	2.64E+01
				Zr-95	<2.79E+01	0.00E+00	2.79E+01
				Nb-95	<1.41E+01	0.00E+00	1.41E+01
				I-131	<1.43E+01	0.00E+00	1.43E+01
				Cs-134	<1.52E+01	0.00E+00	1.52E+01
				Cs-137	<1.33E+01	0.00E+00	1.33E+01
				La-140	<2.44E+01	0.00E+00	2.44E+01
				Ba-140	<4.91E+01	0.00E+00	4.91E+01
				Total-Gam	0.00E+00		

Sample ID:	446772	Sample Dates:	6/13/2017 - 6/13/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.50E+01	0.00E+00	1.50E+01
				Co-58	<1.21E+01	0.00E+00	1.21E+01
				Fe-59	<2.75E+01	0.00E+00	2.75E+01
				Co-60	<1.14E+01	0.00E+00	1.14E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	446772	Sample Dates:	6/13/2017 - 6/13/2017	Nuclide	Activity	2 Sigma Error	MDA
				Zn-65	<3.06E+01	0.00E+00	3.06E+01
				Zr-95	<2.06E+01	0.00E+00	2.06E+01
				Nb-95	<1.17E+01	0.00E+00	1.17E+01
				I-131	<1.60E+01	0.00E+00	1.60E+01
				Cs-134	<9.73E+00	0.00E+00	9.73E+00
				Cs-137	<8.40E+00	0.00E+00	8.40E+00
				La-140	<1.76E+01	0.00E+00	1.76E+01
				Ba-140	<4.81E+01	0.00E+00	4.81E+01
				Total-Gam	0.00E+00		

Sample ID:	447098	Sample Dates:	6/21/2017 - 6/21/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.22E+01	0.00E+00	1.22E+01
				Co-58	<1.70E+01	0.00E+00	1.70E+01
				Fe-59	<2.35E+01	0.00E+00	2.35E+01
				Co-60	<1.14E+01	0.00E+00	1.14E+01
				Zn-65	<2.15E+01	0.00E+00	2.15E+01
				Zr-95	<2.50E+01	0.00E+00	2.50E+01
				Nb-95	<1.72E+01	0.00E+00	1.72E+01
				I-131	<1.62E+01	0.00E+00	1.62E+01
				Cs-134	<1.38E+01	0.00E+00	1.38E+01
				Cs-137	<1.78E+01	0.00E+00	1.78E+01
				La-140	<2.05E+01	0.00E+00	2.05E+01
				Ba-140	<4.57E+01	0.00E+00	4.57E+01
				Total-Gam	0.00E+00		

Sample ID:	447751	Sample Dates:	6/27/2017 - 6/27/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.37E+01	0.00E+00	1.37E+01
				Co-58	<1.34E+01	0.00E+00	1.34E+01
				Fe-59	<2.02E+01	0.00E+00	2.02E+01
				Co-60	<1.39E+01	0.00E+00	1.39E+01
				Zn-65	<2.64E+01	0.00E+00	2.64E+01
				Zr-95	<2.50E+01	0.00E+00	2.50E+01
				Nb-95	<2.14E+01	0.00E+00	2.14E+01
				I-131	<1.29E+01	0.00E+00	1.29E+01
				Cs-134	<1.54E+01	0.00E+00	1.54E+01
				Cs-137	<1.57E+01	0.00E+00	1.57E+01
				La-140	<1.15E+01	0.00E+00	1.15E+01
				Ba-140	<5.96E+01	0.00E+00	5.96E+01
				Total-Gam	0.00E+00		

Sample ID:	448215	Sample Dates:	7/5/2017 - 7/5/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.22E+01	0.00E+00	1.22E+01
				Co-58	<1.20E+01	0.00E+00	1.20E+01
				Fe-59	<2.71E+01	0.00E+00	2.71E+01
				Co-60	<8.91E+00	0.00E+00	8.91E+00
				Zn-65	<2.64E+01	0.00E+00	2.64E+01
				Zr-95	<2.04E+01	0.00E+00	2.04E+01
				Nb-95	<1.40E+01	0.00E+00	1.40E+01
				I-131	<1.12E+01	0.00E+00	1.12E+01
				Cs-134	<6.80E+00	0.00E+00	6.80E+00
				Cs-137	<1.57E+01	0.00E+00	1.57E+01
				La-140	<2.09E+01	0.00E+00	2.09E+01
				Ba-140	<4.58E+01	0.00E+00	4.58E+01
				Total-Gam	0.00E+00		

Sample ID:	448841	Sample Dates:	7/11/2017 - 7/11/2017	Nuclide	Activity	2 Sigma Error	MDA
				Mn-54	<1.37E+01	0.00E+00	1.37E+01
				Co-58	<1.35E+01	0.00E+00	1.35E+01
				Fe-59	<2.04E+01	0.00E+00	2.04E+01
				Co-60	<1.39E+01	0.00E+00	1.39E+01
				Zn-65	<1.53E+01	0.00E+00	1.53E+01
				Zr-95	<2.18E+01	0.00E+00	2.18E+01
				Nb-95	<1.65E+01	0.00E+00	1.65E+01
				I-131	<1.51E+01	0.00E+00	1.51E+01



**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: SURFACE WATER Concentration (Activity): pCi/l

Sample Point 1067 [ INDICATOR - @ 0 miles ]

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
448841	7/11/2017 - 7/11/2017	Cs-134	<9.73E+00	0.00E+00	9.73E+00
		Cs-137	<1.78E+01	0.00E+00	1.78E+01
		La-140	<3.48E+01	0.00E+00	3.48E+01
		Ba-140	<4.77E+01	0.00E+00	4.77E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
449154	7/18/2017 - 7/18/2017	Mn-54	<1.73E+01	0.00E+00	1.73E+01
		Co-58	<1.82E+01	0.00E+00	1.82E+01
		Fe-59	<3.07E+01	0.00E+00	3.07E+01
		Co-60	<1.14E+01	0.00E+00	1.14E+01
		Zn-65	<1.53E+01	0.00E+00	1.53E+01
		Zr-95	<2.72E+01	0.00E+00	2.72E+01
		Nb-95	<1.64E+01	0.00E+00	1.64E+01
		I-131	<1.18E+01	0.00E+00	1.18E+01
		Cs-134	<1.27E+01	0.00E+00	1.27E+01
		Cs-137	<1.03E+01	0.00E+00	1.03E+01
		La-140	<1.59E+01	0.00E+00	1.59E+01
		Ba-140	<2.54E+01	0.00E+00	2.54E+01
		Total-Gam	0.00E+00		

Sample ID:	Sample Dates:	Nuclide	Activity	2 Sigma Error	MDA
449891	7/25/2017 - 7/25/2017	Mn-54	<1.62E+01	0.00E+00	1.62E+01
		Co-58	<1.60E+01	0.00E+00	1.60E+01
		Fe-59	<2.75E+01	0.00E+00	2.75E+01
		Co-60	<1.39E+01	0.00E+00	1.39E+01
		Zn-65	<3.05E+01	0.00E+00	3.05E+01
		Zr-95	<1.79E+01	0.00E+00	1.79E+01
		Nb-95	<1.16E+01	0.00E+00	1.16E+01
		I-131	<1.12E+01	0.00E+00	1.12E+01
		Cs-134	<1.44E+01	0.00E+00	1.44E+01
		Cs-137	<1.78E+01	0.00E+00	1.78E+01
		La-140	<3.33E+01	0.00E+00	3.33E+01
		Ba-140	<6.26E+01	0.00E+00	6.26E+01
		Total-Gam	0.00E+00		

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 1 [ INDICATOR - E @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
437061	1/4/2017 - 4/5/2017	mR/Std Qtr	10.35
444959	4/5/2017 - 7/7/2017	mR/Std Qtr	10.03
451990	7/7/2017 - 10/2/2017	mR/Std Qtr	9.37
464372	10/2/2017 - 1/3/2018	mR/Std Qtr	10.55

Sample Point 2 [ INDICATOR - ESE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
437071	1/4/2017 - 4/5/2017	mR/Std Qtr	10.02
444969	4/5/2017 - 7/7/2017	mR/Std Qtr	9.15
452000	7/7/2017 - 10/2/2017	mR/Std Qtr	7.67
464382	10/2/2017 - 1/3/2018	mR/Std Qtr	11.82



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 3 [ INDICATOR - SE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	437082	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	10.63
Sample ID:	444980	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	11.08
Sample ID:	452011	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	9.36
Sample ID:	464393	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	10.44

Sample Point 4 [ INDICATOR - SSE @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	437093	Sample Dates:	1/4/2017 - 4/4/2017	Nuclide	Activity
				mR/Std Qtr	9.76
Sample ID:	444991	Sample Dates:	4/4/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.55
Sample ID:	452022	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	8.46
Sample ID:	464404	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.80

Sample Point 5 [ INDICATOR - S @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	437095	Sample Dates:	1/4/2017 - 4/4/2017	Nuclide	Activity
				mR/Std Qtr	11.32
Sample ID:	444993	Sample Dates:	4/4/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.61
Sample ID:	452024	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	7.36
Sample ID:	464406	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	12.04

Sample Point 6 [ INDICATOR - SSW @ 1.6 miles ]

TLD RING TLD\_INNER

Sample ID:	437096	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	10.80
Sample ID:	444994	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	10.08
Sample ID:	452025	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	7.79
Sample ID:	464407	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.83

Sample Point 7 [ INDICATOR - SW @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	437097	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	9.92
Sample ID:	444995	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	8.89
Sample ID:	452026	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	7.66



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 7 [ INDICATOR - SW @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	464408	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.10

Sample Point 8 [ INDICATOR - W @ 1.2 miles ]

TLD RING TLD\_INNER

Sample ID:	437103	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	10.77

Sample ID:	445001	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	8.59

Sample ID:	452032	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	7.18

Sample ID:	464414	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.76

Sample Point 9 [ INDICATOR - WNW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	437109	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	9.34

Sample ID:	445007	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	7.01

Sample ID:	452038	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	7.10

Sample ID:	464420	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	9.66

Sample Point 10 [ INDICATOR - NW @ 0.8 miles ]

TLD RING TLD\_INNER

Sample ID:	437062	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	8.71

Sample ID:	444960	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	8.24

Sample ID:	451991	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	6.47

Sample ID:	464373	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.06

Sample Point 11 [ INDICATOR - NNW @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	437063	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	10.22

Sample ID:	444961	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.32

Sample ID:	451992	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	9.24

Sample ID:	464374	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	12.70

Sample Point 12 [ INDICATOR - N @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	437064	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	11.86

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 12 [ INDICATOR - N @ 1.1 miles ]

TLD RING TLD\_INNER

Sample ID:	444962	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	10.03

Sample ID:	451993	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	9.35

Sample ID:	464375	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.53

Sample Point 13 [ INDICATOR - NNE @ 1.2 miles ]

TLD RING TLD\_INNER

Sample ID:	437065	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	8.99

Sample ID:	444963	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	6.92

Sample ID:	451994	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	6.85

Sample ID:	464376	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	9.90

Sample Point 14 [ INDICATOR - NE @ 0.5 miles ]

TLD RING TLD\_INNER

Sample ID:	437066	Sample Dates:	1/5/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	13.65

Sample ID:	444964	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.85

Sample ID:	451995	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	10.31

Sample ID:	464377	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	12.96

Sample Point 15 [ INDICATOR - ENE @ 0.9 miles ]

TLD RING TLD\_INNER

Sample ID:	437067	Sample Dates:	1/5/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	12.27

Sample ID:	444965	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	11.67

Sample ID:	451996	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	9.65

Sample ID:	464378	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.92

Sample Point 16 [ INDICATOR - WSW @ 1 miles ]

TLD RING TLD\_INNER

Sample ID:	437068	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	11.63

Sample ID:	444966	Sample Dates:	4/2/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	7.69

Sample ID:	451997	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	8.11

Sample ID:	464379	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.36

# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 17 [ INDICATOR - ESE @ 1.4 miles ]

TLD RING TLD\_INNER

Sample ID: 437069	Sample Dates: 1/4/2017 - 4/5/2017	Nuclide	Activity
		mR/Std Qtr	12.47
Sample ID: 444967	Sample Dates: 4/5/2017 - 7/7/2017	Nuclide	Activity
		mR/Std Qtr	11.61
Sample ID: 451998	Sample Dates: 7/7/2017 - 10/2/2017	Nuclide	Activity
		mR/Std Qtr	9.10
Sample ID: 464380	Sample Dates: 10/2/2017 - 1/3/2018	Nuclide	Activity
		mR/Std Qtr	13.07

Sample Point 18 [ INDICATOR - SE @ 1.7 miles ]

TLD RING TLD\_INNER

Sample ID: 437070	Sample Dates: 1/4/2017 - 4/5/2017	Nuclide	Activity
		mR/Std Qtr	10.01
Sample ID: 444968	Sample Dates: 4/5/2017 - 7/7/2017	Nuclide	Activity
		mR/Std Qtr	9.03
Sample ID: 451999	Sample Dates: 7/7/2017 - 10/2/2017	Nuclide	Activity
		mR/Std Qtr	8.19
Sample ID: 464381	Sample Dates: 10/2/2017 - 1/3/2018	Nuclide	Activity
		mR/Std Qtr	12.53

Sample Point 20 [ INDICATOR - S @ 2.1 miles ]

TLD RING TLD\_INNER

Sample ID: 437072	Sample Dates: 1/4/2017 - 4/5/2017	Nuclide	Activity
		mR/Std Qtr	10.79
Sample ID: 444970	Sample Dates: 4/5/2017 - 7/7/2017	Nuclide	Activity
		mR/Std Qtr	8.96
Sample ID: 452001	Sample Dates: 7/7/2017 - 10/2/2017	Nuclide	Activity
		mR/Std Qtr	7.59
Sample ID: 464383	Sample Dates: 10/2/2017 - 1/3/2018	Nuclide	Activity
		mR/Std Qtr	12.18

Sample Point 21 [ INDICATOR - SSW @ 2.9 miles ]

TLD RING TLD\_INNER

Sample ID: 437073	Sample Dates: 1/4/2017 - 4/5/2017	Nuclide	Activity
		mR/Std Qtr	14.40
Sample ID: 444971	Sample Dates: 4/5/2017 - 7/7/2017	Nuclide	Activity
		mR/Std Qtr	12.13
Sample ID: 452002	Sample Dates: 7/7/2017 - 10/2/2017	Nuclide	Activity
		mR/Std Qtr	10.11
Sample ID: 464384	Sample Dates: 10/2/2017 - 1/3/2018	Nuclide	Activity
		mR/Std Qtr	14.58

Sample Point 22 [ INDICATOR - SW @ 5.3 miles ]

TLD RING TLD\_OUTER

Sample ID: 437074	Sample Dates: 1/4/2017 - 4/3/2017	Nuclide	Activity
		mR/Std Qtr	12.06
Sample ID: 444972	Sample Dates: 4/3/2017 - 7/7/2017	Nuclide	Activity
		mR/Std Qtr	9.92
Sample ID: 464385	Sample Dates: 10/4/2017 - 1/9/2018	Nuclide	Activity
		mR/Std Qtr	11.57



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 23 [ INDICATOR - WSW @ 4.6 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
437075	1/4/2017 - 4/3/2017	mR/Std Qtr	8.39
444973	4/3/2017 - 7/7/2017	mR/Std Qtr	6.96
452004	7/7/2017 - 10/4/2017	mR/Std Qtr	6.16
464386	10/4/2017 - 1/9/2018	mR/Std Qtr	8.85

Sample Point 24 [ INDICATOR - W @ 3 miles ]

TLD RING TLD\_INNER

Sample ID:	Sample Dates:	Nuclide	Activity
437076	1/4/2017 - 4/3/2017	mR/Std Qtr	16.30
444974	4/3/2017 - 7/7/2017	mR/Std Qtr	13.65
452005	7/7/2017 - 10/4/2017	mR/Std Qtr	12.89
464387	10/4/2017 - 1/8/2018	mR/Std Qtr	15.66

Sample Point 25 [ INDICATOR - WNW @ 8.6 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
437077	1/4/2017 - 4/3/2017	mR/Std Qtr	9.91
444975	4/3/2017 - 7/7/2017	mR/Std Qtr	9.12
452006	7/7/2017 - 10/4/2017	mR/Std Qtr	8.47
464388	10/4/2017 - 1/8/2018	mR/Std Qtr	13.10

Sample Point 26 [ INDICATOR - NW @ 5.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
437078	1/4/2017 - 4/5/2017	mR/Std Qtr	12.41
444976	4/5/2017 - 7/7/2017	mR/Std Qtr	11.02
452007	7/7/2017 - 10/3/2017	mR/Std Qtr	10.86
464389	10/3/2017 - 1/3/2018	mR/Std Qtr	13.06

Sample Point 27 [ INDICATOR - NNW @ 5.1 miles ]

TLD RING TLD\_OUTER

Sample ID:	Sample Dates:	Nuclide	Activity
437079	1/4/2017 - 4/5/2017	mR/Std Qtr	8.78
444977	4/5/2017 - 7/7/2017	mR/Std Qtr	7.93
452008	7/7/2017 - 10/3/2017	mR/Std Qtr	7.17



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 27 [ INDICATOR - NNW @ 5.1 miles ]

TLD RING TLD\_OUTER

Sample ID:	464390	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.38

Sample Point 28 [ INDICATOR - NW @ 4.2 miles ]

TLD RING TLD\_OUTER

Sample ID:	437080	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	9.90

Sample ID:	444978	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.10

Sample ID:	452009	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	6.77

Sample ID:	464391	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	10.60

Sample Point 29 [ INDICATOR - SSW @ 2.6 miles ]

TLD RING TLD\_INNER

Sample ID:	437081	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	10.19

Sample ID:	444979	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	7.97

Sample ID:	452010	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	6.99

Sample ID:	464392	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	9.86

Sample Point 30 [ INDICATOR - NE @ 2 miles ]

TLD RING TLD\_INNER

Sample ID:	437083	Sample Dates:	1/4/2017 - 4/4/2017	Nuclide	Activity
				mR/Std Qtr	9.30

Sample ID:	452012	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	8.21

Sample ID:	464394	Sample Dates:	10/3/2017 - 1/10/2018	Nuclide	Activity
				mR/Std Qtr	11.21

Sample Point 31 [ INDICATOR - ENE @ 2.5 miles ]

TLD RING TLD\_INNER

Sample ID:	437084	Sample Dates:	1/4/2017 - 4/4/2017	Nuclide	Activity
				mR/Std Qtr	11.88

Sample ID:	444982	Sample Dates:	4/4/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	11.61

Sample ID:	452013	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	10.14

Sample ID:	464395	Sample Dates:	10/3/2017 - 1/10/2018	Nuclide	Activity
				mR/Std Qtr	13.02

Sample Point 32 [ INDICATOR - ENE @ 5.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	437085	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	11.74

Sample ID:	444983	Sample Dates:	4/2/2017 - 7/6/2017	Nuclide	Activity
				mR/Std Qtr	10.05



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 32 [ INDICATOR - ENE @ 5.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	452014	Sample Dates:	7/6/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	10.26

Sample ID:	464396	Sample Dates:	10/3/2017 - 1/7/2018	Nuclide	Activity
				mR/Std Qtr	12.59

Sample Point 33 [ INDICATOR - E @ 4.1 miles ]

TLD RING TLD\_OUTER

Sample ID:	437086	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	8.84

Sample ID:	444984	Sample Dates:	4/2/2017 - 7/6/2017	Nuclide	Activity
				mR/Std Qtr	7.76

Sample ID:	452015	Sample Dates:	7/6/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	7.05

Sample ID:	464397	Sample Dates:	10/3/2017 - 1/7/2018	Nuclide	Activity
				mR/Std Qtr	12.12

Sample Point 34 [ INDICATOR - E @ 5.4 miles ]

TLD RING TLD\_OUTER

Sample ID:	437087	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	9.08

Sample ID:	444985	Sample Dates:	4/2/2017 - 7/6/2017	Nuclide	Activity
				mR/Std Qtr	8.73

Sample ID:	452016	Sample Dates:	7/6/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	7.49

Sample ID:	464398	Sample Dates:	10/3/2017 - 1/7/2018	Nuclide	Activity
				mR/Std Qtr	11.08

Sample Point 35 [ INDICATOR - SSE @ 7.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	437088	Sample Dates:	1/5/2017 - 4/4/2017	Nuclide	Activity
				mR/Std Qtr	8.81

Sample ID:	444986	Sample Dates:	4/4/2017 - 7/6/2017	Nuclide	Activity
				mR/Std Qtr	7.30

Sample ID:	452017	Sample Dates:	7/6/2017 - 10/5/2017	Nuclide	Activity
				mR/Std Qtr	5.71

Sample ID:	464399	Sample Dates:	10/5/2017 - 1/8/2018	Nuclide	Activity
				mR/Std Qtr	10.73

Sample Point 36 [ INDICATOR - NE @ 8.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	437089	Sample Dates:	1/5/2017 - 4/2/2017	Nuclide	Activity
				mR/Std Qtr	10.63

Sample ID:	444987	Sample Dates:	4/2/2017 - 7/6/2017	Nuclide	Activity
				mR/Std Qtr	8.73

Sample ID:	452018	Sample Dates:	7/6/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	7.81

Sample ID:	464400	Sample Dates:	10/3/2017 - 1/7/2018	Nuclide	Activity
				mR/Std Qtr	10.10



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 37 [ INDICATOR - NW @ 5.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	437090	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	8.21
Sample ID:	444988	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	8.65
Sample ID:	452019	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	5.60
Sample ID:	464401	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.89

Sample Point 38 [ INDICATOR - W @ 11 miles ]

TLD RING TLD\_OUTER

Sample ID:	437091	Sample Dates:	1/4/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	11.68
Sample ID:	444989	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	8.93
Sample ID:	452020	Sample Dates:	7/7/2017 - 10/4/2017	Nuclide	Activity
				mR/Std Qtr	8.68
Sample ID:	464402	Sample Dates:	10/4/2017 - 1/8/2018	Nuclide	Activity
				mR/Std Qtr	9.98

Sample Point 39 [ INDICATOR - SW @ 5.3 miles ]

TLD RING TLD\_OUTER

Sample ID:	437092	Sample Dates:	1/4/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	16.42
Sample ID:	444990	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	12.87
Sample ID:	452021	Sample Dates:	7/7/2017 - 10/4/2017	Nuclide	Activity
				mR/Std Qtr	11.75
Sample ID:	464403	Sample Dates:	10/4/2017 - 1/9/2018	Nuclide	Activity
				mR/Std Qtr	15.19

Sample Point 40 [ INDICATOR - WSW @ 6.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	437094	Sample Dates:	1/4/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	15.19
Sample ID:	444992	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	11.26
Sample ID:	452023	Sample Dates:	7/7/2017 - 10/4/2017	Nuclide	Activity
				mR/Std Qtr	9.53
Sample ID:	464405	Sample Dates:	10/4/2017 - 1/9/2018	Nuclide	Activity
				mR/Std Qtr	15.99

Sample Point 75 [ INDICATOR - S @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	437098	Sample Dates:	1/4/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	11.14
Sample ID:	444996	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.56
Sample ID:	452027	Sample Dates:	7/7/2017 - 10/4/2017	Nuclide	Activity
				mR/Std Qtr	8.40



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 75 [ INDICATOR - S @ 4.7 miles ]

TLD RING TLD\_OUTER

Sample ID:	464409	Sample Dates:	10/4/2017 - 1/9/2018	Nuclide	Activity
				mR/Std Qtr	11.90

Sample Point 76 [ INDICATOR - SSW @ 4.8 miles ]

TLD RING TLD\_OUTER

Sample ID:	437099	Sample Dates:	1/4/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	13.37

Sample ID:	444997	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	11.43

Sample ID:	464410	Sample Dates:	10/4/2017 - 1/9/2018	Nuclide	Activity
				mR/Std Qtr	12.45

Sample Point 77 [ INDICATOR - S @ 5.4 miles ]

TLD RING TLD\_OUTER

Sample ID:	437100	Sample Dates:	1/5/2017 - 4/4/2017	Nuclide	Activity
				mR/Std Qtr	8.39

Sample ID:	444998	Sample Dates:	4/4/2017 - 7/6/2017	Nuclide	Activity
				mR/Std Qtr	7.70

Sample ID:	452029	Sample Dates:	7/6/2017 - 10/5/2017	Nuclide	Activity
				mR/Std Qtr	6.87

Sample ID:	464411	Sample Dates:	10/5/2017 - 1/8/2018	Nuclide	Activity
				mR/Std Qtr	8.33

Sample Point 78 [ INDICATOR - NNE @ 9.9 miles ]

TLD RING TLD\_OUTER

Sample ID:	437101	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	10.24

Sample ID:	444999	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	8.29

Sample ID:	452030	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	6.44

Sample ID:	464412	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	9.83

Sample Point 79 [ INDICATOR - N @ 9.5 miles ]

TLD RING TLD\_OUTER

Sample ID:	437102	Sample Dates:	1/4/2017 - 4/5/2017	Nuclide	Activity
				mR/Std Qtr	11.44

Sample ID:	445000	Sample Dates:	4/5/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	9.89

Sample ID:	452031	Sample Dates:	7/7/2017 - 10/3/2017	Nuclide	Activity
				mR/Std Qtr	7.62

Sample ID:	464413	Sample Dates:	10/3/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	11.62

Sample Point 81 [ CONTROL - WNW @ 9.9 miles ]

TLD RING TLD\_CTRL

Sample ID:	437104	Sample Dates:	1/4/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	11.70

Sample ID:	445002	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	10.32





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: TLD Concentration (Activity): mR/Standard Quarter

Sample Point 81 [ CONTROL - WNW @ 9.9 miles ]

TLD RING TLD\_CTRL

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Sample ID:	452033	Sample Dates:	7/7/2017 - 10/4/2017	Nuclide	Activity
				mR/Std Qtr	9.20

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Sample ID:	464415	Sample Dates:	10/4/2017 - 1/8/2018	Nuclide	Activity
				mR/Std Qtr	12.02

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Sample Point 82 [ INDICATOR - NNE @ 0.17 miles ]

TLD RING NOT\_APPLIC

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Sample ID:	437105	Sample Dates:	1/5/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	23.68

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Sample ID:	445003	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	23.19

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Sample ID:	452034	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	23.58

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Sample ID:	464416	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	29.04

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Sample Point 83 [ INDICATOR - NE @ 0.27 miles ]

TLD RING NOT\_APPLIC

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Sample ID:	437106	Sample Dates:	1/5/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	25.19

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Sample ID:	445004	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	22.70

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Sample ID:	452035	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	24.18

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Sample ID:	464417	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	25.15

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Sample Point 84 [ INDICATOR - NE @ 0.27 miles ]

TLD RING NOT\_APPLIC

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Sample ID:	437107	Sample Dates:	1/5/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	20.04

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Sample ID:	445005	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	19.11

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Sample ID:	452036	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	16.72

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Sample ID:	464418	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	18.10

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Sample Point 85 [ INDICATOR - ENE @ 0.09 miles ]

TLD RING NOT\_APPLIC

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Sample ID:	437108	Sample Dates:	1/5/2017 - 4/3/2017	Nuclide	Activity
				mR/Std Qtr	27.78

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Sample ID:	445006	Sample Dates:	4/3/2017 - 7/7/2017	Nuclide	Activity
				mR/Std Qtr	24.87

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Sample ID:	452037	Sample Dates:	7/7/2017 - 10/2/2017	Nuclide	Activity
				mR/Std Qtr	25.83

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Sample ID:	464419	Sample Dates:	10/2/2017 - 1/3/2018	Nuclide	Activity
				mR/Std Qtr	24.27

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# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [ INDICATOR - NE @ 0.7 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
433079	1/3/2017 - 1/3/2017	WAXMYRTLE	Mn-54	<3.45E+01	0.00E+00	3.45E+01
			Co-58	<3.64E+01	0.00E+00	3.64E+01
			Fe-59	<6.29E+01	0.00E+00	6.29E+01
			Co-60	<4.01E+01	0.00E+00	4.01E+01
			Zn-65	<6.27E+01	0.00E+00	6.27E+01
			Zr-95	<6.30E+01	0.00E+00	6.30E+01
			Nb-95	<3.34E+01	0.00E+00	3.34E+01
			I-131	<3.47E+01	0.00E+00	3.47E+01
			Cs-134	<4.49E+01	0.00E+00	4.49E+01
			Cs-137	<3.88E+01	0.00E+00	3.88E+01
			BaLa-140	<3.29E+01	0.00E+00	3.29E+01
			Be-7	2.20E+03	4.88E+02	4.91E+02
			K-40	1.67E+03	4.92E+02	9.08E+01
435537	2/1/2017 - 2/1/2017	WAXMYRTLE	Mn-54	<2.24E+01	0.00E+00	2.24E+01
			Co-58	<2.10E+01	0.00E+00	2.10E+01
			Fe-59	<5.54E+01	0.00E+00	5.54E+01
			Co-60	<2.91E+01	0.00E+00	2.91E+01
			Zn-65	<5.97E+01	0.00E+00	5.97E+01
			Zr-95	<4.38E+01	0.00E+00	4.38E+01
			Nb-95	<1.76E+01	0.00E+00	1.76E+01
			I-131	<2.26E+01	0.00E+00	2.26E+01
			Cs-134	<3.19E+01	0.00E+00	3.19E+01
			Cs-137	<2.57E+01	0.00E+00	2.57E+01
			BaLa-140	<1.93E+01	0.00E+00	1.93E+01
			Be-7	1.44E+03	2.96E+02	2.64E+02
			K-40	2.36E+03	5.22E+02	3.86E+02
438089	3/1/2017 - 3/1/2017	WAXMYRTLE	Mn-54	<3.09E+01	0.00E+00	3.09E+01
			Co-58	<3.15E+01	0.00E+00	3.15E+01
			Fe-59	<6.32E+01	0.00E+00	6.32E+01
			Co-60	<3.86E+01	0.00E+00	3.86E+01
			Zn-65	<5.91E+01	0.00E+00	5.91E+01
			Zr-95	<5.46E+01	0.00E+00	5.46E+01
			Nb-95	<3.14E+01	0.00E+00	3.14E+01
			I-131	<4.77E+01	0.00E+00	4.77E+01
			Cs-134	<3.30E+01	0.00E+00	3.30E+01
			Cs-137	<2.97E+01	0.00E+00	2.97E+01
			BaLa-140	<5.28E+01	0.00E+00	5.28E+01
			Be-7	1.67E+03	3.79E+02	3.87E+02
			K-40	2.17E+03	5.72E+02	5.15E+02
440771	4/1/2017 - 4/1/2017	WAXMYRTLE	Mn-54	<2.20E+01	0.00E+00	2.20E+01
			Co-58	<2.22E+01	0.00E+00	2.22E+01
			Fe-59	<5.40E+01	0.00E+00	5.40E+01
			Co-60	<2.41E+01	0.00E+00	2.41E+01
			Zn-65	<3.27E+01	0.00E+00	3.27E+01
			Zr-95	<4.05E+01	0.00E+00	4.05E+01
			Nb-95	<2.08E+01	0.00E+00	2.08E+01
			I-131	<2.50E+01	0.00E+00	2.50E+01
			Cs-134	<2.46E+01	0.00E+00	2.46E+01
			Cs-137	<2.12E+01	0.00E+00	2.12E+01
			BaLa-140	<2.76E+01	0.00E+00	2.76E+01
			Be-7	3.20E+03	4.62E+02	2.72E+02
			K-40	2.23E+03	4.92E+02	3.32E+02
443047	5/1/2017 - 5/1/2017	WAXMYRTLE	Mn-54	<2.59E+01	0.00E+00	2.59E+01
			Co-58	<2.71E+01	0.00E+00	2.71E+01
			Fe-59	<4.50E+01	0.00E+00	4.50E+01
			Co-60	<2.59E+01	0.00E+00	2.59E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [ INDICATOR - NE @ 0.7 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
443047	5/1/2017 - 5/1/2017	WAXMYRTLE	Zn-65	<5.32E+01	0.00E+00	5.32E+01
			Zr-95	<5.53E+01	0.00E+00	5.53E+01
			Nb-95	<2.62E+01	0.00E+00	2.62E+01
			I-131	<2.70E+01	0.00E+00	2.70E+01
			Cs-134	<2.19E+01	0.00E+00	2.19E+01
			Cs-137	<2.51E+01	0.00E+00	2.51E+01
			BaLa-140	<2.82E+01	0.00E+00	2.82E+01
			Be-7	1.74E+03	3.44E+02	3.13E+02
			K-40	3.51E+03	6.32E+02	2.64E+02
			444229	6/1/2017 - 6/1/2017	WAXMYRTLE	Mn-54
Co-58	<2.04E+01	0.00E+00				2.04E+01
Fe-59	<5.07E+01	0.00E+00				5.07E+01
Co-60	<3.05E+01	0.00E+00				3.05E+01
Zn-65	<4.70E+01	0.00E+00				4.70E+01
Zr-95	<3.29E+01	0.00E+00				3.29E+01
Nb-95	<2.31E+01	0.00E+00				2.31E+01
I-131	<3.07E+01	0.00E+00				3.07E+01
Cs-134	<2.50E+01	0.00E+00				2.50E+01
Cs-137	<2.25E+01	0.00E+00				2.25E+01
BaLa-140	<3.09E+01	0.00E+00				3.09E+01
Be-7	8.07E+02	2.27E+02				2.38E+02
K-40	2.97E+03	5.86E+02				3.89E+02
447135	7/5/2017 - 7/5/2017	WAXMYRTLE				Mn-54
			Co-58	<1.77E+01	0.00E+00	1.77E+01
			Fe-59	<4.48E+01	0.00E+00	4.48E+01
			Co-60	<3.13E+01	0.00E+00	3.13E+01
			Zn-65	<5.17E+01	0.00E+00	5.17E+01
			Zr-95	<3.84E+01	0.00E+00	3.84E+01
			Nb-95	<2.96E+01	0.00E+00	2.96E+01
			I-131	<3.22E+01	0.00E+00	3.22E+01
			Cs-134	<2.69E+01	0.00E+00	2.69E+01
			Cs-137	<2.42E+01	0.00E+00	2.42E+01
			BaLa-140	<3.90E+01	0.00E+00	3.90E+01
			Be-7	1.02E+03	2.82E+02	3.27E+02
			K-40	3.36E+03	6.29E+02	3.99E+02
			449187	8/2/2017 - 8/2/2017	WAXMYRTLE	Mn-54
Co-58	<1.91E+01	0.00E+00				1.91E+01
Fe-59	<4.43E+01	0.00E+00				4.43E+01
Co-60	<2.02E+01	0.00E+00				2.02E+01
Zn-65	<4.35E+01	0.00E+00				4.35E+01
Zr-95	<3.13E+01	0.00E+00				3.13E+01
Nb-95	<1.74E+01	0.00E+00				1.74E+01
I-131	<2.52E+01	0.00E+00				2.52E+01
Cs-134	<1.91E+01	0.00E+00				1.91E+01
Cs-137	<1.81E+01	0.00E+00				1.81E+01
BaLa-140	<2.14E+01	0.00E+00				2.14E+01
Be-7	1.35E+03	2.55E+02				2.47E+02
K-40	2.61E+03	4.40E+02				2.46E+02
451155	9/5/2017 - 9/5/2017	WAXMYRTLE				Mn-54
			Co-58	<2.05E+01	0.00E+00	2.05E+01
			Fe-59	<4.42E+01	0.00E+00	4.42E+01
			Co-60	<3.63E+01	0.00E+00	3.63E+01
			Zn-65	<4.62E+01	0.00E+00	4.62E+01
			Zr-95	<5.49E+01	0.00E+00	5.49E+01
			Nb-95	<3.01E+01	0.00E+00	3.01E+01
			I-131	<3.52E+01	0.00E+00	3.52E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 800 [ INDICATOR - NE @ 0.7 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
451155	9/5/2017 - 9/5/2017		Cs-134	<3.06E+01	0.00E+00	3.06E+01
			Cs-137	<3.09E+01	0.00E+00	3.09E+01
			BaLa-140	<4.08E+01	0.00E+00	4.08E+01
			Be-7	1.77E+03	3.46E+02	2.86E+02
			K-40	2.86E+03	5.95E+02	4.38E+02
453410	10/2/2017 - 10/2/2017		Mn-54	<3.13E+01	0.00E+00	3.13E+01
			Co-58	<2.60E+01	0.00E+00	2.60E+01
			Fe-59	<3.32E+01	0.00E+00	3.32E+01
			Co-60	<2.95E+01	0.00E+00	2.95E+01
			Zn-65	<8.17E+01	0.00E+00	8.17E+01
			Zr-95	<4.71E+01	0.00E+00	4.71E+01
			Nb-95	<2.42E+01	0.00E+00	2.42E+01
			I-131	<3.13E+01	0.00E+00	3.13E+01
			Cs-134	<3.16E+01	0.00E+00	3.16E+01
			Cs-137	<2.50E+01	0.00E+00	2.50E+01
			BaLa-140	<2.32E+01	0.00E+00	2.32E+01
			Be-7	9.44E+02	2.57E+02	2.73E+02
			K-40	3.31E+03	6.21E+02	2.67E+02
456008	11/2/2017 - 11/2/2017		Mn-54	<1.44E+01	0.00E+00	1.44E+01
			Co-58	<1.27E+01	0.00E+00	1.27E+01
			Fe-59	<2.60E+01	0.00E+00	2.60E+01
			Co-60	<1.41E+01	0.00E+00	1.41E+01
			Zn-65	<2.84E+01	0.00E+00	2.84E+01
			Zr-95	<2.60E+01	0.00E+00	2.60E+01
			Nb-95	<1.65E+01	0.00E+00	1.65E+01
			I-131	<3.02E+01	0.00E+00	3.02E+01
			Cs-134	<1.54E+01	0.00E+00	1.54E+01
			Cs-137	<1.42E+01	0.00E+00	1.42E+01
			BaLa-140	<2.96E+01	0.00E+00	2.96E+01
			Be-7	1.50E+03	2.00E+02	2.08E+02
			K-40	2.81E+03	3.26E+02	2.45E+02
463058	12/3/2017 - 12/3/2017		Mn-54	<2.46E+01	0.00E+00	2.46E+01
			Co-58	<2.43E+01	0.00E+00	2.43E+01
			Fe-59	<5.11E+01	0.00E+00	5.11E+01
			Co-60	<3.01E+01	0.00E+00	3.01E+01
			Zn-65	<5.80E+01	0.00E+00	5.80E+01
			Zr-95	<4.31E+01	0.00E+00	4.31E+01
			Nb-95	<3.35E+01	0.00E+00	3.35E+01
			I-131	<4.54E+01	0.00E+00	4.54E+01
			Cs-134	<2.90E+01	0.00E+00	2.90E+01
			Cs-137	<2.21E+01	0.00E+00	2.21E+01
			BaLa-140	<5.24E+01	0.00E+00	5.24E+01
			Be-7	1.97E+03	3.20E+02	3.00E+02
			K-40	2.50E+03	4.83E+02	4.78E+02

Sample Point 801 [ INDICATOR - SW @ 0.8 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
433080	1/3/2017 - 1/3/2017		Mn-54	<2.35E+01	0.00E+00	2.35E+01
			Co-58	<3.24E+01	0.00E+00	3.24E+01
			Fe-59	<5.37E+01	0.00E+00	5.37E+01
			Co-60	<4.15E+01	0.00E+00	4.15E+01
			Zn-65	<6.85E+01	0.00E+00	6.85E+01
			Zr-95	<5.39E+01	0.00E+00	5.39E+01
			Nb-95	<3.15E+01	0.00E+00	3.15E+01
			I-131	<3.63E+01	0.00E+00	3.63E+01
			Cs-134	<4.17E+01	0.00E+00	4.17E+01
			Cs-137	<2.76E+01	0.00E+00	2.76E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 801 [ INDICATOR - SW @ 0.8 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
433080	1/3/2017 - 1/3/2017		BaLa-140	<4.58E+01	0.00E+00	4.58E+01
			Be-7	1.41E+03	3.73E+02	4.36E+02
			K-40	1.69E+03	4.89E+02	4.14E+02
435538	2/1/2017 - 2/1/2017		Mn-54	<1.83E+01	0.00E+00	1.83E+01
			Co-58	<1.81E+01	0.00E+00	1.81E+01
			Fe-59	<4.43E+01	0.00E+00	4.43E+01
			Co-60	<1.89E+01	0.00E+00	1.89E+01
			Zn-65	<5.31E+01	0.00E+00	5.31E+01
			Zr-95	<4.16E+01	0.00E+00	4.16E+01
			Nb-95	<1.74E+01	0.00E+00	1.74E+01
			I-131	<2.34E+01	0.00E+00	2.34E+01
			Cs-134	<1.69E+01	0.00E+00	1.69E+01
			Cs-137	<2.64E+01	0.00E+00	2.64E+01
			BaLa-140	<3.11E+01	0.00E+00	3.11E+01
			Be-7	2.95E+03	4.41E+02	2.83E+02
			K-40	2.37E+03	5.03E+02	3.06E+02
			438090	3/1/2017 - 3/1/2017		Mn-54
Co-58	<3.49E+01	0.00E+00				3.49E+01
Fe-59	<6.39E+01	0.00E+00				6.39E+01
Co-60	<2.96E+01	0.00E+00				2.96E+01
Zn-65	<5.67E+01	0.00E+00				5.67E+01
Zr-95	<4.25E+01	0.00E+00				4.25E+01
Nb-95	<3.80E+01	0.00E+00				3.80E+01
I-131	<3.26E+01	0.00E+00				3.26E+01
Cs-134	<2.86E+01	0.00E+00				2.86E+01
Cs-137	<1.76E+01	0.00E+00				1.76E+01
BaLa-140	<2.83E+01	0.00E+00				2.83E+01
Be-7	1.59E+03	3.29E+02				2.59E+02
K-40	2.71E+03	5.86E+02				3.47E+02
440772	4/1/2017 - 4/1/2017					Mn-54
			Co-58	<1.97E+01	0.00E+00	1.97E+01
			Fe-59	<4.55E+01	0.00E+00	4.55E+01
			Co-60	<4.27E+01	0.00E+00	4.27E+01
			Zn-65	<6.87E+01	0.00E+00	6.87E+01
			Zr-95	<5.36E+01	0.00E+00	5.36E+01
			Nb-95	<3.05E+01	0.00E+00	3.05E+01
			I-131	<3.27E+01	0.00E+00	3.27E+01
			Cs-134	<2.88E+01	0.00E+00	2.88E+01
			Cs-137	<2.73E+01	0.00E+00	2.73E+01
			BaLa-140	<4.17E+01	0.00E+00	4.17E+01
			Be-7	1.71E+03	3.46E+02	2.94E+02
			K-40	2.35E+03	5.30E+02	3.10E+02
			443048	5/1/2017 - 5/1/2017		Mn-54
Co-58	<3.01E+01	0.00E+00				3.01E+01
Fe-59	<5.50E+01	0.00E+00				5.50E+01
Co-60	<3.46E+01	0.00E+00				3.46E+01
Zn-65	<5.29E+01	0.00E+00				5.29E+01
Zr-95	<4.40E+01	0.00E+00				4.40E+01
Nb-95	<2.35E+01	0.00E+00				2.35E+01
I-131	<2.95E+01	0.00E+00				2.95E+01
Cs-134	<2.97E+01	0.00E+00				2.97E+01
Cs-137	<3.00E+01	0.00E+00				3.00E+01
BaLa-140	<8.75E+00	0.00E+00				8.75E+00
Be-7	<3.13E+02	0.00E+00				3.13E+02
K-40	3.49E+03	6.72E+02				4.38E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 801 [ INDICATOR - SW @ 0.8 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
444230	6/1/2017 - 6/1/2017		Mn-54	<2.28E+01	0.00E+00	2.28E+01
			Co-58	<2.20E+01	0.00E+00	2.20E+01
			Fe-59	<3.92E+01	0.00E+00	3.92E+01
			Co-60	<2.87E+01	0.00E+00	2.87E+01
			Zn-65	<4.63E+01	0.00E+00	4.63E+01
			Zr-95	<4.30E+01	0.00E+00	4.30E+01
			Nb-95	<2.74E+01	0.00E+00	2.74E+01
			I-131	<3.43E+01	0.00E+00	3.43E+01
			Cs-134	<2.82E+01	0.00E+00	2.82E+01
			Cs-137	<2.74E+01	0.00E+00	2.74E+01
			BaLa-140	<2.66E+01	0.00E+00	2.66E+01
			Be-7	1.55E+03	3.22E+02	2.82E+02
			K-40	3.16E+03	6.29E+02	4.41E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
447136	7/5/2017 - 7/5/2017		Mn-54	<3.01E+01	0.00E+00	3.01E+01
			Co-58	<2.93E+01	0.00E+00	2.93E+01
			Fe-59	<5.76E+01	0.00E+00	5.76E+01
			Co-60	<3.00E+01	0.00E+00	3.00E+01
			Zn-65	<6.59E+01	0.00E+00	6.59E+01
			Zr-95	<3.67E+01	0.00E+00	3.67E+01
			Nb-95	<3.31E+01	0.00E+00	3.31E+01
			I-131	<3.37E+01	0.00E+00	3.37E+01
			Cs-134	<2.32E+01	0.00E+00	2.32E+01
			Cs-137	<2.34E+01	0.00E+00	2.34E+01
			BaLa-140	<4.67E+01	0.00E+00	4.67E+01
			Be-7	1.05E+03	3.10E+02	3.64E+02
			K-40	2.65E+03	5.77E+02	2.96E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
449188	8/2/2017 - 8/2/2017		Mn-54	<2.25E+01	0.00E+00	2.25E+01
			Co-58	<2.42E+01	0.00E+00	2.42E+01
			Fe-59	<6.17E+01	0.00E+00	6.17E+01
			Co-60	<1.59E+01	0.00E+00	1.59E+01
			Zn-65	<4.98E+01	0.00E+00	4.98E+01
			Zr-95	<5.49E+01	0.00E+00	5.49E+01
			Nb-95	<3.34E+01	0.00E+00	3.34E+01
			I-131	<3.74E+01	0.00E+00	3.74E+01
			Cs-134	<3.15E+01	0.00E+00	3.15E+01
			Cs-137	<2.71E+01	0.00E+00	2.71E+01
			BaLa-140	<3.65E+01	0.00E+00	3.65E+01
			Be-7	1.45E+03	3.27E+02	3.36E+02
			K-40	2.75E+03	6.04E+02	5.17E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
451156	9/5/2017 - 9/5/2017		Mn-54	<2.58E+01	0.00E+00	2.58E+01
			Co-58	<2.97E+01	0.00E+00	2.97E+01
			Fe-59	<3.08E+01	0.00E+00	3.08E+01
			Co-60	<4.33E+01	0.00E+00	4.33E+01
			Zn-65	<7.63E+01	0.00E+00	7.63E+01
			Zr-95	<5.40E+01	0.00E+00	5.40E+01
			Nb-95	<3.30E+01	0.00E+00	3.30E+01
			I-131	<4.42E+01	0.00E+00	4.42E+01
			Cs-134	<3.48E+01	0.00E+00	3.48E+01
			Cs-137	<2.33E+01	0.00E+00	2.33E+01
			BaLa-140	<5.22E+01	0.00E+00	5.22E+01
			Be-7	1.96E+03	4.02E+02	3.71E+02
			K-40	2.48E+03	5.89E+02	4.72E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
453411	10/2/2017 - 10/2/2017		Mn-54	<2.37E+01	0.00E+00	2.37E+01
			Co-58	<2.38E+01	0.00E+00	2.38E+01
			Fe-59	<4.31E+01	0.00E+00	4.31E+01
			Co-60	<2.22E+01	0.00E+00	2.22E+01



**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 801 [ INDICATOR - SW @ 0.8 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
453411	10/2/2017 - 10/2/2017		Zn-65	<5.10E+01	0.00E+00	5.10E+01
			Zr-95	<2.98E+01	0.00E+00	2.98E+01
			Nb-95	<2.22E+01	0.00E+00	2.22E+01
			I-131	<2.51E+01	0.00E+00	2.51E+01
			Cs-134	<3.21E+01	0.00E+00	3.21E+01
			Cs-137	<2.18E+01	0.00E+00	2.18E+01
			BaLa-140	<3.49E+01	0.00E+00	3.49E+01
			Be-7	2.32E+03	3.77E+02	2.42E+02
			K-40	2.55E+03	5.53E+02	4.27E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
456009	11/2/2017 - 11/2/2017		Mn-54	<2.27E+01	0.00E+00	2.27E+01
			Co-58	<2.31E+01	0.00E+00	2.31E+01
			Fe-59	<4.70E+01	0.00E+00	4.70E+01
			Co-60	<2.29E+01	0.00E+00	2.29E+01
			Zn-65	<4.61E+01	0.00E+00	4.61E+01
			Zr-95	<3.73E+01	0.00E+00	3.73E+01
			Nb-95	<2.43E+01	0.00E+00	2.43E+01
			I-131	<4.69E+01	0.00E+00	4.69E+01
			Cs-134	<2.37E+01	0.00E+00	2.37E+01
			Cs-137	<1.42E+01	0.00E+00	1.42E+01
			BaLa-140	<4.13E+01	0.00E+00	4.13E+01
			Be-7	2.08E+03	2.86E+02	2.68E+02
			K-40	3.06E+03	4.27E+02	3.56E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
463059	12/3/2017 - 12/3/2017		Mn-54	<2.26E+01	0.00E+00	2.26E+01
			Co-58	<2.45E+01	0.00E+00	2.45E+01
			Fe-59	<5.44E+01	0.00E+00	5.44E+01
			Co-60	<2.33E+01	0.00E+00	2.33E+01
			Zn-65	<5.45E+01	0.00E+00	5.45E+01
			Zr-95	<4.72E+01	0.00E+00	4.72E+01
			Nb-95	<2.82E+01	0.00E+00	2.82E+01
			I-131	<4.68E+01	0.00E+00	4.68E+01
			Cs-134	<2.38E+01	0.00E+00	2.38E+01
			Cs-137	<2.91E+01	0.00E+00	2.91E+01
			BaLa-140	<3.88E+01	0.00E+00	3.88E+01
			Be-7	1.86E+03	2.51E+02	2.46E+02
			K-40	3.85E+03	5.35E+02	4.12E+02

**Sample Point 802 [ CONTROL - -- @ 10.1 miles ]**

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
433081	1/3/2017 - 1/3/2017		Mn-54	<2.44E+01	0.00E+00	2.44E+01
			Co-58	<2.06E+01	0.00E+00	2.06E+01
			Fe-59	<4.39E+01	0.00E+00	4.39E+01
			Co-60	<1.99E+01	0.00E+00	1.99E+01
			Zn-65	<6.77E+01	0.00E+00	6.77E+01
			Zr-95	<3.32E+01	0.00E+00	3.32E+01
			Nb-95	<2.00E+01	0.00E+00	2.00E+01
			I-131	<2.59E+01	0.00E+00	2.59E+01
			Cs-134	<2.87E+01	0.00E+00	2.87E+01
			Cs-137	<2.86E+01	0.00E+00	2.86E+01
			BaLa-140	<3.08E+01	0.00E+00	3.08E+01
			Be-7	2.82E+03	4.36E+02	2.91E+02
			K-40	9.62E+02	3.86E+02	4.62E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
435539	2/1/2017 - 2/1/2017		Mn-54	<1.66E+01	0.00E+00	1.66E+01
			Co-58	<1.80E+01	0.00E+00	1.80E+01
			Fe-59	<4.39E+01	0.00E+00	4.39E+01
			Co-60	<2.64E+01	0.00E+00	2.64E+01
			Zn-65	<5.26E+01	0.00E+00	5.26E+01
			Zr-95	<3.95E+01	0.00E+00	3.95E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 802 [ CONTROL - -- @ 10.1 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
435539	2/1/2017 - 2/1/2017	WAXMYRTLE	Nb-95	<2.88E+01	0.00E+00	2.88E+01
			I-131	<2.08E+01	0.00E+00	2.08E+01
			Cs-134	<2.71E+01	0.00E+00	2.71E+01
			Cs-137	<2.70E+01	0.00E+00	2.70E+01
			BaLa-140	<2.75E+01	0.00E+00	2.75E+01
			Be-7	4.00E+03	5.29E+02	2.80E+02
			K-40	1.32E+03	4.11E+02	4.26E+02
438091	3/1/2017 - 3/1/2017	WAXMYRTLE	Mn-54	<3.04E+01	0.00E+00	3.04E+01
			Co-58	<2.62E+01	0.00E+00	2.62E+01
			Fe-59	<5.66E+01	0.00E+00	5.66E+01
			Co-60	<3.71E+01	0.00E+00	3.71E+01
			Zn-65	<7.72E+01	0.00E+00	7.72E+01
			Zr-95	<4.24E+01	0.00E+00	4.24E+01
			Nb-95	<3.24E+01	0.00E+00	3.24E+01
			I-131	<4.29E+01	0.00E+00	4.29E+01
			Cs-134	<3.40E+01	0.00E+00	3.40E+01
			Cs-137	<3.31E+01	0.00E+00	3.31E+01
			BaLa-140	<4.95E+01	0.00E+00	4.95E+01
			Be-7	1.80E+03	3.90E+02	3.73E+02
			K-40	1.91E+03	5.34E+02	4.74E+02
440773	4/1/2017 - 4/1/2017	WAXMYRTLE	Mn-54	<3.28E+01	0.00E+00	3.28E+01
			Co-58	<2.84E+01	0.00E+00	2.84E+01
			Fe-59	<6.24E+01	0.00E+00	6.24E+01
			Co-60	<3.19E+01	0.00E+00	3.19E+01
			Zn-65	<6.78E+01	0.00E+00	6.78E+01
			Zr-95	<5.15E+01	0.00E+00	5.15E+01
			Nb-95	<2.81E+01	0.00E+00	2.81E+01
			I-131	<3.54E+01	0.00E+00	3.54E+01
			Cs-134	<3.14E+01	0.00E+00	3.14E+01
			Cs-137	<3.65E+01	0.00E+00	3.65E+01
			BaLa-140	<4.33E+01	0.00E+00	4.33E+01
			Be-7	3.33E+03	5.38E+02	4.46E+02
			K-40	2.37E+03	5.94E+02	5.44E+02
443049	5/1/2017 - 5/1/2017	WAXMYRTLE	Mn-54	<2.15E+01	0.00E+00	2.15E+01
			Co-58	<1.20E+01	0.00E+00	1.20E+01
			Fe-59	<3.89E+01	0.00E+00	3.89E+01
			Co-60	<2.81E+01	0.00E+00	2.81E+01
			Zn-65	<4.61E+01	0.00E+00	4.61E+01
			Zr-95	<4.04E+01	0.00E+00	4.04E+01
			Nb-95	<2.91E+01	0.00E+00	2.91E+01
			I-131	<2.51E+01	0.00E+00	2.51E+01
			Cs-134	<2.29E+01	0.00E+00	2.29E+01
			Cs-137	<2.58E+01	0.00E+00	2.58E+01
			BaLa-140	<3.14E+01	0.00E+00	3.14E+01
			Be-7	1.11E+03	2.45E+02	2.22E+02
			K-40	2.71E+03	5.10E+02	2.18E+02
444231	6/1/2017 - 6/1/2017	WAXMYRTLE	Mn-54	<2.02E+01	0.00E+00	2.02E+01
			Co-58	<2.26E+01	0.00E+00	2.26E+01
			Fe-59	<4.84E+01	0.00E+00	4.84E+01
			Co-60	<2.61E+01	0.00E+00	2.61E+01
			Zn-65	<5.13E+01	0.00E+00	5.13E+01
			Zr-95	<3.94E+01	0.00E+00	3.94E+01
			Nb-95	<2.46E+01	0.00E+00	2.46E+01
			I-131	<3.41E+01	0.00E+00	3.41E+01
			Cs-134	<2.65E+01	0.00E+00	2.65E+01
			Cs-137	<3.25E+01	0.00E+00	3.25E+01





# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 802 [ CONTROL - -- @ 10.1 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
444231	6/1/2017 - 6/1/2017	WAXMYRTLE	BaLa-140	<5.27E+01	0.00E+00	5.27E+01
			Be-7	9.75E+02	2.77E+02	2.96E+02
			K-40	2.20E+03	5.58E+02	4.89E+02
447137	7/5/2017 - 7/5/2017	WAXMYRTLE	Mn-54	<2.74E+01	0.00E+00	2.74E+01
			Co-58	<2.52E+01	0.00E+00	2.52E+01
			Fe-59	<5.11E+01	0.00E+00	5.11E+01
			Co-60	<2.56E+01	0.00E+00	2.56E+01
			Zn-65	<3.88E+01	0.00E+00	3.88E+01
			Zr-95	<3.50E+01	0.00E+00	3.50E+01
			Nb-95	<2.37E+01	0.00E+00	2.37E+01
			I-131	<2.58E+01	0.00E+00	2.58E+01
			Cs-134	<2.21E+01	0.00E+00	2.21E+01
			Cs-137	<2.65E+01	0.00E+00	2.65E+01
			BaLa-140	<3.47E+01	0.00E+00	3.47E+01
			Be-7	1.08E+03	3.12E+02	3.64E+02
			K-40	1.25E+03	4.54E+02	5.19E+02
449189	8/2/2017 - 8/2/2017	WAXMYRTLE	Mn-54	<2.34E+01	0.00E+00	2.34E+01
			Co-58	<2.05E+01	0.00E+00	2.05E+01
			Fe-59	<3.82E+01	0.00E+00	3.82E+01
			Co-60	<2.33E+01	0.00E+00	2.33E+01
			Zn-65	<5.68E+01	0.00E+00	5.68E+01
			Zr-95	<4.14E+01	0.00E+00	4.14E+01
			Nb-95	<2.17E+01	0.00E+00	2.17E+01
			I-131	<3.11E+01	0.00E+00	3.11E+01
			Cs-134	<2.72E+01	0.00E+00	2.72E+01
			Cs-137	<2.60E+01	0.00E+00	2.60E+01
			BaLa-140	<2.82E+01	0.00E+00	2.82E+01
			Be-7	1.51E+03	3.06E+02	2.79E+02
			K-40	1.37E+03	3.99E+02	3.89E+02
451157	9/5/2017 - 9/5/2017	WAXMYRTLE	Mn-54	<2.80E+01	0.00E+00	2.80E+01
			Co-58	<3.44E+01	0.00E+00	3.44E+01
			Fe-59	<5.15E+01	0.00E+00	5.15E+01
			Co-60	<3.05E+01	0.00E+00	3.05E+01
			Zn-65	<7.81E+01	0.00E+00	7.81E+01
			Zr-95	<6.59E+01	0.00E+00	6.59E+01
			Nb-95	<3.51E+01	0.00E+00	3.51E+01
			I-131	<3.39E+01	0.00E+00	3.39E+01
			Cs-134	<4.19E+01	0.00E+00	4.19E+01
			Cs-137	<2.82E+01	0.00E+00	2.82E+01
			BaLa-140	<5.32E+01	0.00E+00	5.32E+01
			Be-7	4.21E+03	6.16E+02	4.06E+02
			K-40	2.43E+03	5.66E+02	3.80E+02
453412	10/2/2017 - 10/2/2017	WAXMYRTLE	Mn-54	<2.13E+01	0.00E+00	2.13E+01
			Co-58	<2.13E+01	0.00E+00	2.13E+01
			Fe-59	<5.51E+01	0.00E+00	5.51E+01
			Co-60	<2.35E+01	0.00E+00	2.35E+01
			Zn-65	<6.66E+01	0.00E+00	6.66E+01
			Zr-95	<4.37E+01	0.00E+00	4.37E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<2.58E+01	0.00E+00	2.58E+01
			Cs-134	<2.03E+01	0.00E+00	2.03E+01
			Cs-137	<2.43E+01	0.00E+00	2.43E+01
			BaLa-140	<2.25E+01	0.00E+00	2.25E+01
			Be-7	3.77E+03	5.13E+02	1.97E+02
			K-40	1.32E+03	4.30E+02	4.56E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 802 [ CONTROL - -- @ 10.1 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
456010	11/2/2017 - 11/2/2017		Mn-54	<2.16E+01	0.00E+00	2.16E+01
			Co-58	<2.41E+01	0.00E+00	2.41E+01
			Fe-59	<4.23E+01	0.00E+00	4.23E+01
			Co-60	<2.20E+01	0.00E+00	2.20E+01
			Zn-65	<5.01E+01	0.00E+00	5.01E+01
			Zr-95	<3.94E+01	0.00E+00	3.94E+01
			Nb-95	<2.75E+01	0.00E+00	2.75E+01
			I-131	<4.74E+01	0.00E+00	4.74E+01
			Cs-134	<2.41E+01	0.00E+00	2.41E+01
			Cs-137	<2.46E+01	0.00E+00	2.46E+01
			BaLa-140	<4.28E+01	0.00E+00	4.28E+01
			Be-7	5.07E+03	8.11E+02	2.26E+02
			K-40	2.19E+03	3.63E+02	3.40E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
463060	12/3/2017 - 12/3/2017		Mn-54	<2.29E+01	0.00E+00	2.29E+01
			Co-58	<2.03E+01	0.00E+00	2.03E+01
			Fe-59	<4.58E+01	0.00E+00	4.58E+01
			Co-60	<1.85E+01	0.00E+00	1.85E+01
			Zn-65	<3.68E+01	0.00E+00	3.68E+01
			Zr-95	<3.54E+01	0.00E+00	3.54E+01
			Nb-95	<2.61E+01	0.00E+00	2.61E+01
			I-131	<4.11E+01	0.00E+00	4.11E+01
			Cs-134	<2.23E+01	0.00E+00	2.23E+01
			Cs-137	<2.37E+01	0.00E+00	2.37E+01
			BaLa-140	<3.63E+01	0.00E+00	3.63E+01
			Be-7	2.48E+03	3.32E+02	2.91E+02
			K-40	2.10E+03	3.41E+02	2.57E+02

## Sample Point 803 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
433082	1/3/2017 - 1/3/2017		Mn-54	<2.82E+01	0.00E+00	2.82E+01
			Co-58	<1.94E+01	0.00E+00	1.94E+01
			Fe-59	<2.93E+01	0.00E+00	2.93E+01
			Co-60	<2.18E+01	0.00E+00	2.18E+01
			Zn-65	<6.51E+01	0.00E+00	6.51E+01
			Zr-95	<4.43E+01	0.00E+00	4.43E+01
			Nb-95	<2.73E+01	0.00E+00	2.73E+01
			I-131	<2.49E+01	0.00E+00	2.49E+01
			Cs-134	<2.88E+01	0.00E+00	2.88E+01
			Cs-137	<2.21E+01	0.00E+00	2.21E+01
			BaLa-140	<3.38E+01	0.00E+00	3.38E+01
			Be-7	3.59E+03	5.11E+02	2.45E+02
			K-40	1.53E+03	4.52E+02	4.10E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
435540	2/1/2017 - 2/1/2017		Mn-54	<2.47E+01	0.00E+00	2.47E+01
			Co-58	<2.34E+01	0.00E+00	2.34E+01
			Fe-59	<3.84E+01	0.00E+00	3.84E+01
			Co-60	<1.53E+01	0.00E+00	1.53E+01
			Zn-65	<5.41E+01	0.00E+00	5.41E+01
			Zr-95	<3.85E+01	0.00E+00	3.85E+01
			Nb-95	<2.54E+01	0.00E+00	2.54E+01
			I-131	<2.09E+01	0.00E+00	2.09E+01
			Cs-134	<2.77E+01	0.00E+00	2.77E+01
			Cs-137	<2.40E+01	0.00E+00	2.40E+01
			BaLa-140	<3.46E+01	0.00E+00	3.46E+01
			Be-7	2.78E+03	4.46E+02	3.65E+02
			K-40	2.13E+03	5.26E+02	4.87E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
438092	3/1/2017 - 3/1/2017		Mn-54	<2.53E+01	0.00E+00	2.53E+01
			Co-58	<2.58E+01	0.00E+00	2.58E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 803 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
438092	3/1/2017 - 3/1/2017	WAXMYRTLE	Fe-59	<6.00E+01	0.00E+00	6.00E+01
			Co-60	<2.49E+01	0.00E+00	2.49E+01
			Zn-65	<6.10E+01	0.00E+00	6.10E+01
			Zr-95	<4.24E+01	0.00E+00	4.24E+01
			Nb-95	<2.58E+01	0.00E+00	2.58E+01
			I-131	<3.40E+01	0.00E+00	3.40E+01
			Cs-134	<2.98E+01	0.00E+00	2.98E+01
			Cs-137	<2.01E+01	0.00E+00	2.01E+01
			BaLa-140	<3.34E+01	0.00E+00	3.34E+01
			Be-7	3.07E+03	4.70E+02	2.72E+02
			K-40	2.57E+03	5.78E+02	4.36E+02
			440774	4/1/2017 - 4/1/2017	WAXMYRTLE	Mn-54
Co-58	<2.77E+01	0.00E+00				2.77E+01
Fe-59	<5.11E+01	0.00E+00				5.11E+01
Co-60	<3.46E+01	0.00E+00				3.46E+01
Zn-65	<4.30E+01	0.00E+00				4.30E+01
Zr-95	<5.58E+01	0.00E+00				5.58E+01
Nb-95	<3.55E+01	0.00E+00				3.55E+01
I-131	<3.59E+01	0.00E+00				3.59E+01
Cs-134	<2.88E+01	0.00E+00				2.88E+01
Cs-137	<2.65E+01	0.00E+00				2.65E+01
BaLa-140	<4.20E+01	0.00E+00				4.20E+01
Be-7	3.02E+03	5.05E+02				3.68E+02
K-40	3.14E+03	6.51E+02				3.48E+02
443050	5/1/2017 - 5/1/2017	WAXMYRTLE				Mn-54
			Co-58	<1.89E+01	0.00E+00	1.89E+01
			Fe-59	<5.43E+01	0.00E+00	5.43E+01
			Co-60	<2.98E+01	0.00E+00	2.98E+01
			Zn-65	<4.78E+01	0.00E+00	4.78E+01
			Zr-95	<4.95E+01	0.00E+00	4.95E+01
			Nb-95	<2.02E+01	0.00E+00	2.02E+01
			I-131	<2.70E+01	0.00E+00	2.70E+01
			Cs-134	<3.06E+01	0.00E+00	3.06E+01
			Cs-137	<2.14E+01	0.00E+00	2.14E+01
			BaLa-140	<2.35E+01	0.00E+00	2.35E+01
			Be-7	1.12E+03	3.03E+02	3.49E+02
			K-40	3.15E+03	6.29E+02	4.16E+02
			444232	6/1/2017 - 6/1/2017	WAXMYRTLE	Mn-54
Co-58	<2.49E+01	0.00E+00				2.49E+01
Fe-59	<6.32E+01	0.00E+00				6.32E+01
Co-60	<3.14E+01	0.00E+00				3.14E+01
Zn-65	<5.54E+01	0.00E+00				5.54E+01
Zr-95	<4.89E+01	0.00E+00				4.89E+01
Nb-95	<2.39E+01	0.00E+00				2.39E+01
I-131	<3.47E+01	0.00E+00				3.47E+01
Cs-134	<2.44E+01	0.00E+00				2.44E+01
Cs-137	<2.98E+01	0.00E+00				2.98E+01
BaLa-140	<2.54E+01	0.00E+00				2.54E+01
Be-7	9.02E+02	2.75E+02				3.35E+02
K-40	3.19E+03	6.01E+02				3.30E+02
447138	7/5/2017 - 7/5/2017	WAXMYRTLE				Mn-54
			Co-58	<2.54E+01	0.00E+00	2.54E+01
			Fe-59	<5.01E+01	0.00E+00	5.01E+01
			Co-60	<2.02E+01	0.00E+00	2.02E+01
			Zn-65	<6.64E+01	0.00E+00	6.64E+01
			Zr-95	<4.42E+01	0.00E+00	4.42E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 803 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
447138	7/5/2017 - 7/5/2017	WAXMYRTLE	Nb-95	<2.42E+01	0.00E+00	2.42E+01
			I-131	<2.46E+01	0.00E+00	2.46E+01
			Cs-134	<3.04E+01	0.00E+00	3.04E+01
			Cs-137	<2.29E+01	0.00E+00	2.29E+01
			BaLa-140	<3.66E+01	0.00E+00	3.66E+01
			Be-7	1.01E+03	2.80E+02	3.18E+02
			K-40	3.37E+03	6.62E+02	4.93E+02
449190	8/2/2017 - 8/2/2017	WAXMYRTLE	Mn-54	<2.88E+01	0.00E+00	2.88E+01
			Co-58	<2.10E+01	0.00E+00	2.10E+01
			Fe-59	<6.39E+01	0.00E+00	6.39E+01
			Co-60	<3.62E+01	0.00E+00	3.62E+01
			Zn-65	<6.86E+01	0.00E+00	6.86E+01
			Zr-95	<4.08E+01	0.00E+00	4.08E+01
			Nb-95	<2.34E+01	0.00E+00	2.34E+01
			I-131	<4.39E+01	0.00E+00	4.39E+01
			Cs-134	<3.89E+01	0.00E+00	3.89E+01
			Cs-137	<2.93E+01	0.00E+00	2.93E+01
			BaLa-140	<5.18E+01	0.00E+00	5.18E+01
			Be-7	3.55E+03	5.91E+02	4.92E+02
			K-40	3.05E+03	6.84E+02	5.14E+02
451158	9/5/2017 - 9/5/2017	WAXMYRTLE	Mn-54	<2.18E+01	0.00E+00	2.18E+01
			Co-58	<2.12E+01	0.00E+00	2.12E+01
			Fe-59	<4.65E+01	0.00E+00	4.65E+01
			Co-60	<3.33E+01	0.00E+00	3.33E+01
			Zn-65	<4.85E+01	0.00E+00	4.85E+01
			Zr-95	<4.15E+01	0.00E+00	4.15E+01
			Nb-95	<2.43E+01	0.00E+00	2.43E+01
			I-131	<3.55E+01	0.00E+00	3.55E+01
			Cs-134	<2.43E+01	0.00E+00	2.43E+01
			Cs-137	<2.88E+01	0.00E+00	2.88E+01
			BaLa-140	<4.43E+01	0.00E+00	4.43E+01
			Be-7	1.17E+03	2.91E+02	3.08E+02
			K-40	2.90E+03	5.57E+02	2.18E+02
453413	10/2/2017 - 10/2/2017	WAXMYRTLE	Mn-54	<2.54E+01	0.00E+00	2.54E+01
			Co-58	<2.80E+01	0.00E+00	2.80E+01
			Fe-59	<4.86E+01	0.00E+00	4.86E+01
			Co-60	<2.51E+01	0.00E+00	2.51E+01
			Zn-65	<3.00E+01	0.00E+00	3.00E+01
			Zr-95	<3.65E+01	0.00E+00	3.65E+01
			Nb-95	<2.22E+01	0.00E+00	2.22E+01
			I-131	<2.43E+01	0.00E+00	2.43E+01
			Cs-134	<3.13E+01	0.00E+00	3.13E+01
			Cs-137	<2.69E+01	0.00E+00	2.69E+01
			BaLa-140	<3.96E+01	0.00E+00	3.96E+01
			Be-7	2.34E+03	4.03E+02	2.94E+02
			K-40	2.74E+03	5.54E+02	6.35E+01
456011	11/2/2017 - 11/2/2017	WAXMYRTLE	Mn-54	<2.30E+01	0.00E+00	2.30E+01
			Co-58	<2.18E+01	0.00E+00	2.18E+01
			Fe-59	<4.55E+01	0.00E+00	4.55E+01
			Co-60	<2.00E+01	0.00E+00	2.00E+01
			Zn-65	<5.01E+01	0.00E+00	5.01E+01
			Zr-95	<3.94E+01	0.00E+00	3.94E+01
			Nb-95	<2.74E+01	0.00E+00	2.74E+01
			I-131	<4.79E+01	0.00E+00	4.79E+01
			Cs-134	<2.20E+01	0.00E+00	2.20E+01
			Cs-137	<2.27E+01	0.00E+00	2.27E+01



**BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)**

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 803 [ INDICATOR - SSE @ 0.6 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
456011	11/2/2017 - 11/2/2017		BaLa-140	<4.61E+01	0.00E+00	4.61E+01
			Be-7	3.43E+03	3.98E+02	2.99E+02
			K-40	4.10E+03	5.07E+02	3.30E+02
Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
463061	12/3/2017 - 12/3/2017		Mn-54	<2.39E+01	0.00E+00	2.39E+01
			Co-58	<2.17E+01	0.00E+00	2.17E+01
			Fe-59	<4.73E+01	0.00E+00	4.73E+01
			Co-60	<2.41E+01	0.00E+00	2.41E+01
			Zn-65	<5.46E+01	0.00E+00	5.46E+01
			Zr-95	<4.66E+01	0.00E+00	4.66E+01
			Nb-95	<2.84E+01	0.00E+00	2.84E+01
			I-131	<4.61E+01	0.00E+00	4.61E+01
			Cs-134	<2.25E+01	0.00E+00	2.25E+01
			Cs-137	<2.26E+01	0.00E+00	2.26E+01
			BaLa-140	<4.13E+01	0.00E+00	4.13E+01
			Be-7	2.09E+03	3.36E+02	3.37E+02
			K-40	2.74E+03	4.57E+02	3.63E+02

Sample Point 804 [ INDICATOR - S @ 0.7 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
433083	1/3/2017 - 1/3/2017		Mn-54	<1.86E+01	0.00E+00	1.86E+01
			Co-58	<2.75E+01	0.00E+00	2.75E+01
			Fe-59	<4.24E+01	0.00E+00	4.24E+01
			Co-60	<2.48E+01	0.00E+00	2.48E+01
			Zn-65	<5.07E+01	0.00E+00	5.07E+01
			Zr-95	<4.08E+01	0.00E+00	4.08E+01
			Nb-95	<2.18E+01	0.00E+00	2.18E+01
			I-131	<2.52E+01	0.00E+00	2.52E+01
			Cs-134	<2.52E+01	0.00E+00	2.52E+01
			Cs-137	<2.59E+01	0.00E+00	2.59E+01
			BaLa-140	<3.32E+01	0.00E+00	3.32E+01
			Be-7	1.25E+03	2.97E+02	3.15E+02
			K-40	1.73E+03	4.23E+02	2.67E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
435541	2/1/2017 - 2/1/2017		Mn-54	<2.07E+01	0.00E+00	2.07E+01
			Co-58	<2.71E+01	0.00E+00	2.71E+01
			Fe-59	<5.08E+01	0.00E+00	5.08E+01
			Co-60	<3.29E+01	0.00E+00	3.29E+01
			Zn-65	<6.16E+01	0.00E+00	6.16E+01
			Zr-95	<4.68E+01	0.00E+00	4.68E+01
			Nb-95	<3.40E+01	0.00E+00	3.40E+01
			I-131	<2.30E+01	0.00E+00	2.30E+01
			Cs-134	<4.01E+01	0.00E+00	4.01E+01
			Cs-137	<2.51E+01	0.00E+00	2.51E+01
			BaLa-140	<3.82E+01	0.00E+00	3.82E+01
			Be-7	2.81E+03	4.42E+02	2.41E+02
			K-40	2.61E+03	5.84E+02	3.78E+02

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
438093	3/1/2017 - 3/1/2017		Mn-54	<2.83E+01	0.00E+00	2.83E+01
			Co-58	<2.60E+01	0.00E+00	2.60E+01
			Fe-59	<4.83E+01	0.00E+00	4.83E+01
			Co-60	<2.95E+01	0.00E+00	2.95E+01
			Zn-65	<4.64E+01	0.00E+00	4.64E+01
			Zr-95	<4.78E+01	0.00E+00	4.78E+01
			Nb-95	<2.75E+01	0.00E+00	2.75E+01
			I-131	<3.26E+01	0.00E+00	3.26E+01
			Cs-134	<2.85E+01	0.00E+00	2.85E+01
			Cs-137	<2.97E+01	0.00E+00	2.97E+01
			BaLa-140	<4.62E+01	0.00E+00	4.62E+01
			Be-7	1.98E+03	3.74E+02	2.71E+02



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 804 [ INDICATOR - S @ 0.7 miles ]

Sample ID:	Sample Dates:	WAXMYRTL	Nuclide	Activity	2 Sigma Error	MDA
438093	3/1/2017 - 3/1/2017		K-40	1.98E+03	5.08E+02	3.87E+02
440775	4/1/2017 - 4/1/2017		Mn-54	<2.91E+01	0.00E+00	2.91E+01
			Co-58	<2.32E+01	0.00E+00	2.32E+01
			Fe-59	<4.44E+01	0.00E+00	4.44E+01
			Co-60	<1.96E+01	0.00E+00	1.96E+01
			Zn-65	<5.19E+01	0.00E+00	5.19E+01
			Zr-95	<3.58E+01	0.00E+00	3.58E+01
			Nb-95	<2.41E+01	0.00E+00	2.41E+01
			I-131	<3.00E+01	0.00E+00	3.00E+01
			Cs-134	<2.82E+01	0.00E+00	2.82E+01
			Cs-137	<2.89E+01	0.00E+00	2.89E+01
			BaLa-140	<3.35E+01	0.00E+00	3.35E+01
			Be-7	2.24E+03	3.79E+02	2.74E+02
			K-40	2.22E+03	5.11E+02	3.86E+02
443051	5/1/2017 - 5/1/2017		Mn-54	<2.54E+01	0.00E+00	2.54E+01
			Co-58	<2.55E+01	0.00E+00	2.55E+01
			Fe-59	<6.50E+01	0.00E+00	6.50E+01
			Co-60	<2.28E+01	0.00E+00	2.28E+01
			Zn-65	<5.63E+01	0.00E+00	5.63E+01
			Zr-95	<3.17E+01	0.00E+00	3.17E+01
			Nb-95	<2.50E+01	0.00E+00	2.50E+01
			I-131	<2.66E+01	0.00E+00	2.66E+01
			Cs-134	<2.28E+01	0.00E+00	2.28E+01
			Cs-137	<2.31E+01	0.00E+00	2.31E+01
			BaLa-140	<3.21E+01	0.00E+00	3.21E+01
			Be-7	4.68E+02	2.10E+02	2.75E+02
			K-40	2.84E+03	5.76E+02	6.68E+01
444233	6/1/2017 - 6/1/2017		Mn-54	<2.31E+01	0.00E+00	2.31E+01
			Co-58	<2.14E+01	0.00E+00	2.14E+01
			Fe-59	<5.81E+01	0.00E+00	5.81E+01
			Co-60	<2.83E+01	0.00E+00	2.83E+01
			Zn-65	<5.30E+01	0.00E+00	5.30E+01
			Zr-95	<5.14E+01	0.00E+00	5.14E+01
			Nb-95	<2.71E+01	0.00E+00	2.71E+01
			I-131	<2.59E+01	0.00E+00	2.59E+01
			Cs-134	<2.19E+01	0.00E+00	2.19E+01
			Cs-137	<2.00E+01	0.00E+00	2.00E+01
			BaLa-140	<3.07E+01	0.00E+00	3.07E+01
			Be-7	8.90E+02	2.33E+02	2.34E+02
			K-40	2.47E+03	5.06E+02	2.88E+02
447139	7/5/2017 - 7/5/2017		Mn-54	<3.08E+01	0.00E+00	3.08E+01
			Co-58	<2.50E+01	0.00E+00	2.50E+01
			Fe-59	<4.17E+01	0.00E+00	4.17E+01
			Co-60	<3.33E+01	0.00E+00	3.33E+01
			Zn-65	<4.99E+01	0.00E+00	4.99E+01
			Zr-95	<5.45E+01	0.00E+00	5.45E+01
			Nb-95	<3.02E+01	0.00E+00	3.02E+01
			I-131	<3.79E+01	0.00E+00	3.79E+01
			Cs-134	<3.44E+01	0.00E+00	3.44E+01
			Cs-137	<2.86E+01	0.00E+00	2.86E+01
			BaLa-140	<3.43E+01	0.00E+00	3.43E+01
			Be-7	1.30E+03	3.03E+02	2.85E+02
			K-40	2.89E+03	5.95E+02	3.35E+02
449191	8/2/2017 - 8/2/2017		Mn-54	<2.65E+01	0.00E+00	2.65E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 804 [ INDICATOR - S @ 0.7 miles ]

Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
449191	8/2/2017 - 8/2/2017	WAXMYRTLE	Co-58	<3.13E+01	0.00E+00	3.13E+01
			Fe-59	<6.63E+01	0.00E+00	6.63E+01
			Co-60	<4.80E+01	0.00E+00	4.80E+01
			Zn-65	<7.47E+01	0.00E+00	7.47E+01
			Zr-95	<4.69E+01	0.00E+00	4.69E+01
			Nb-95	<3.13E+01	0.00E+00	3.13E+01
			I-131	<3.36E+01	0.00E+00	3.36E+01
			Cs-134	<3.13E+01	0.00E+00	3.13E+01
			Cs-137	<2.55E+01	0.00E+00	2.55E+01
			BaLa-140	<1.08E+01	0.00E+00	1.08E+01
			Be-7	1.93E+03	3.87E+02	3.33E+02
			K-40	2.79E+03	6.03E+02	3.28E+02
			451159	9/5/2017 - 9/5/2017	WAXMYRTLE	Mn-54
Co-58	<2.49E+01	0.00E+00				2.49E+01
Fe-59	<3.62E+01	0.00E+00				3.62E+01
Co-60	<1.85E+01	0.00E+00				1.85E+01
Zn-65	<9.50E+00	0.00E+00				9.50E+00
Zr-95	<3.74E+01	0.00E+00				3.74E+01
Nb-95	<2.43E+01	0.00E+00				2.43E+01
I-131	<2.94E+01	0.00E+00				2.94E+01
Cs-134	<2.17E+01	0.00E+00				2.17E+01
Cs-137	<2.90E+01	0.00E+00				2.90E+01
BaLa-140	<2.56E+01	0.00E+00				2.56E+01
Be-7	1.66E+03	3.08E+02				2.21E+02
K-40	2.45E+03	4.92E+02				2.15E+02
453414	10/2/2017 - 10/2/2017	WAXMYRTLE	Mn-54	<1.71E+01	0.00E+00	1.71E+01
			Co-58	<2.08E+01	0.00E+00	2.08E+01
			Fe-59	<3.24E+01	0.00E+00	3.24E+01
			Co-60	<2.28E+01	0.00E+00	2.28E+01
			Zn-65	<5.26E+01	0.00E+00	5.26E+01
			Zr-95	<3.79E+01	0.00E+00	3.79E+01
			Nb-95	<2.33E+01	0.00E+00	2.33E+01
			I-131	<2.21E+01	0.00E+00	2.21E+01
			Cs-134	<2.55E+01	0.00E+00	2.55E+01
			Cs-137	<2.20E+01	0.00E+00	2.20E+01
			BaLa-140	<2.89E+01	0.00E+00	2.89E+01
			Be-7	1.36E+03	2.73E+02	2.25E+02
			K-40	1.80E+03	4.25E+02	3.00E+02
456012	11/2/2017 - 11/2/2017	WAXMYRTLE	Mn-54	<2.28E+01	0.00E+00	2.28E+01
			Co-58	<2.30E+01	0.00E+00	2.30E+01
			Fe-59	<4.70E+01	0.00E+00	4.70E+01
			Co-60	<2.45E+01	0.00E+00	2.45E+01
			Zn-65	<5.06E+01	0.00E+00	5.06E+01
			Zr-95	<4.51E+01	0.00E+00	4.51E+01
			Nb-95	<2.81E+01	0.00E+00	2.81E+01
			I-131	<4.50E+01	0.00E+00	4.50E+01
			Cs-134	<2.37E+01	0.00E+00	2.37E+01
			Cs-137	<2.22E+01	0.00E+00	2.22E+01
			BaLa-140	<4.05E+01	0.00E+00	4.05E+01
			Be-7	2.82E+03	3.61E+02	3.02E+02
			K-40	3.49E+03	7.82E+02	2.85E+02
463062	12/3/2017 - 12/3/2017	WAXMYRTLE	Mn-54	<2.94E+01	0.00E+00	2.94E+01
			Co-58	<3.58E+01	0.00E+00	3.58E+01
			Fe-59	<6.02E+01	0.00E+00	6.02E+01
			Co-60	<3.22E+01	0.00E+00	3.22E+01
			Zn-65	<6.12E+01	0.00E+00	6.12E+01



# BRUNSWICK Radiological Environmental Monitoring Analysis Report - 2017 (Appendix E)

Media Type: VEGETATION Concentration (Activity): pCi/kg wet

Sample Point 804 [ INDICATOR - S @ 0.7 miles ]

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Sample ID:	Sample Dates:	WAXMYRTLE	Nuclide	Activity	2 Sigma Error	MDA
463062	12/3/2017 - 12/3/2017		Zr-95	<4.92E+01	0.00E+00	4.92E+01
			Nb-95	<3.09E+01	0.00E+00	3.09E+01
			I-131	<4.75E+01	0.00E+00	4.75E+01
			Cs-134	<3.05E+01	0.00E+00	3.05E+01
			Cs-137	<3.02E+01	0.00E+00	3.02E+01
			BaLa-140	<5.58E+01	0.00E+00	5.58E+01
			Be-7	1.77E+03	3.57E+02	3.75E+02
			K-40	2.11E+03	5.31E+02	5.74E+02

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**APPENDIX F**

**ERRATA TO  
PREVIOUS REPORTS**

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# APPENDIX F

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## ERRATA TO THE 2017 BSEP AREOR

There are no errata to be appended to the 2017 BSEP AREOR.