

August 30, 2007

Mr. Joe Austin
U.S. Nuclear Regulatory Commission
Resident Inspector, Brunswick Plant
8470 River Road Southeast
Southport, North Carolina 28461

**SUBJECT: REVISION TO ANALYTICAL RESULTS FOR TWELVE WATER SAMPLES ASSOCIATED WITH THE CAROLINA POWER AND LIGHT COMPANY'S BRUNSWICK PLANT NEAR SOUTHPORT, NORTH CAROLINA
(INSPECTION REPORT #05000325/07-005) [RFTA NO. 07-005]**

Dear Mr. Austin:

The Oak Ridge Institute for Science and Education (ORISE) received twelve water samples associated with the Carolina Power and Light Company's Brunswick Plant near Southport, North Carolina. At your request, six of the water samples were analyzed by liquid scintillation analysis (LSA) for tritium and the other six water samples were analyzed by gamma spectroscopy (GS). The water sample identifications are listed in Table 1. The LSA data are presented in Table 2 and the GS data are presented in Table 3. The pertinent procedure references are provided in the tables.

ORISE's Quality Control (QC) requirements were met for these analyses. The QC files are available for your review upon request.

In the original letter report dated August 27, 2007, the inspector's name in the greeting was listed as Evans. The name has been corrected to Austin. I apologize for the error and any inconvenience it may have caused.

My contact information is listed below. You may also contact Wade Ivey at 865.576.9184 with any questions or comments.

Sincerely,



Dale Condra, Manager
Laboratory

RDC/WPI:ar

Enclosures

c:	T. Carter, NRC/FSME/DWMEP 7J18	E. Abelquist, ORISE
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TABLE 1

SAMPLE IDENTIFICATIONS
AND COLLECTION DATA
BRUNSWICK PLANT
SOUTHPORT, NORTH CAROLINA

ORISE Sample ID	NRC Region II Sample ID	Collection Date	Collection Time
1750W0001	ESS 24A	08/07/2007	16:51
1750W0002	WP 50	08/07/2007	9:51
1750W0003	WP 56	08/07/2007	9:37
1750W0004	WP 62	08/07/2007	9:08
1750W0005	ESS-19B	08/07/2007	15:10
1750W0006	ESS-19C	08/07/2007	15:11
1750W0007	ESS 24A	08/07/2007	16:51
1750W0008	WP 50	08/07/2007	9:51
1750W0009	WP 56	08/07/2007	9:37
1750W0010	WP 62	08/07/2007	9:08
1750W0011	ESS-19B	08/07/2007	15:10
1750W0012	ESS-19C	08/07/2007	15:11

TABLE 2

**CONCENTRATIONS OF TRITIUM
IN WATER SAMPLES
BY LIQUID SCINTILLATION ANALYSIS
AP2, REVISION 16 AND CP4, REVISION 3
BRUNSWICK PLANT
SOUTHPORT, NORTH CAROLINA**

ORISE Sample ID	NRC Region II Sample ID	Radionuclide Concentrations (pCi/L)
1750W0001	ESS 24A	-60 ± 160 ^a , 280 ^b
1750W0002	WP 50	-70 ± 160 , 280
1750W0003	WP 56	40 ± 160 , 280
1750W0004	WP 62	-120 ± 150 , 280
1750W0005	ESS-19B	3,680 ± 280 , 280
1750W0006	ESS-19C	450,000 ± 4,900 , 280

^aUncertainties represent the 95% confidence level, based on total propagated uncertainties.

^bMDCs are after the comma.

TABLE 3
CONCENTRATIONS OF SELECTED RADIONUCLIDES
IN WATER SAMPLES
BY GAMMA SPECTROSCOPY CP1, REVISION 15
BRUNSWICK PLANT
SOUTHPORT, NORTH CAROLINA

ORISE Sample ID	NRC Region II Sample ID	Radionuclide Concentrations (pCi/L)			
		Co-58	Co-60	Cs-134	Cs-137
1750W0007	ESS 24A	0.0 ^a ± 2.4 ^b , 4.1 ^c	-0.4 ± 2.7 , 3.9	1.0 ± 2.5 , 4.2	-1.6 ± 2.6 , 3.7
1750W0008	WP 50	0.5 ± 1.7 , 2.9	0.4 ± 1.8 , 3.2	1.9 ± 1.9 , 3.0	1.4 ± 1.6 , 2.9
1750W0009	WP 56	0.5 ± 2.2 , 3.8	-1.1 ± 2.3 , 3.9	1.3 ± 2.3 , 4.0	-1.6 ± 2.1 , 3.5
1750W0010	WP 62	0.2 ± 2.8 , 4.2	-0.4 ± 2.6 , 4.4	-1.2 ± 2.9 , 4.1	-0.1 ± 2.2 , 3.8
1750W0011	ESS-19B	0.0 ± 1.8 , 2.8	2.0 ± 1.7 , 3.1	0.5 ± 1.7 , 2.9	-0.2 ± 1.6 , 2.7
1750W0012	ESS-19C	-1.3 ± 2.4 , 3.8	0.7 ± 2.2 , 3.9	0.0 ± 2.3 , 3.6	1.1 ± 5.3 , 3.2

^aZero values are due to rounding.

^bUncertainties represent the 95% confidence level, based on total propagated uncertainties.

^cMDCs are after the comma.