

Carmen Johnson

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CP&L

Carolina Power & Light Company

Shearon Harris Energy & Environmental Center
Route 1, Box 327
New Hill, North Carolina 27562



Serial No.: ESS-87-919

SEP 14 1987

Mr. Michael L. Babuin, Hydrogeologist
Solid & Hazardous Waste Management Branch
Environmental Health Section
North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091
Raleigh, NC 27602-2091

RE: Shearon Harris Nuclear Power Plant
Monitoring Well Data

Dear Mr. Babuin:

As required by the Division of Health Services Landfill Permit No. 92-10 for the Shearon Harris Nuclear Power Plant sanitary landfill, we are submitting the first set of well monitoring data for 1987. The three wells located in Landfill Area 3, which is the only area in active operation, were sampled on May 14, 1987. As directed in your letter of October 7, 1986, to Mr. Charlie Ross of CP&L, analysis will be conducted two times during the first year of operation and annually thereafter.

The enclosed laboratory test results show three parameters whose concentrations warrant some discussion: iron, manganese, and lead. While iron and manganese levels are present in concentrations that exceed those listed in 15 NCAC 2L of the North Carolina Groundwater Standards for GA waters, they are certainly within the range that can be expected in the normal background. Lead, on the other hand, is somewhat puzzling at this point. It is not certain whether the levels detected represent normal background levels, possible sample contamination, or analytical error. During the next round of sampling later this year, the two wells in Landfill Area 2, which has not yet been developed, will also be sampled to provide additional data so that the background concentration of these constituents can be better understood.

If you have any questions or would like to discuss this matter further, please contact Mr. J. M. McDowell at (919) 836-6920.

Yours very truly,

G. H. Warriner
Manager
Environmental Services

CKR/dfs (4209CKR)

Enclosure

Shearon Harris Nuclear Power Plant
Sanitary Landfill Groundwater Monitoring

Water Analysis

| <u>Parameter Units</u> | <u>Well 1</u> | <u>Well 2</u> | <u>Well 3</u> |
|-----------------------------------|---------------|---------------|---------------|
| pH (units) | 8.2 | 8.1 | 8.1 |
| Chloride (mg/l) | 27.0 | 36.0 | 34.0 |
| Specific Conductance (umho/cm) | 457.0 | 400.0 | 440.0 |
| Total Organic Carbon (mg/l) | 3.8 | 3.2 | 42.0 |
| Biochemical Oxygen Demand (mg/l) | 5.1 | < 5.0 | 15.0 |
| Total Dissolved Solids (mg/l) | 310 | 280 | 300 |
| Sulfate as SO ₄ (mg/l) | 1.5 | 5.1 | 2.8 |
| Total Mercury (ug/l) | < 0.1 | < 0.1 | 0.1 |
| Total Copper (ug/l) | 230.0 | 68.0 | 30.0 |
| Total Iron (mg/l) | 0.38 | 1.2 | .10 |
| Total Arsenic (mg/l) | 0.0030 | 0.0060 | 0.0030 |
| Total Chromium (ug/l) | 8.6 | 7.9 | 2.5 |
| Total Cadmium (ug/l) | 1.9 | 0.60 | 0.61 |
| Total Lead (ug/l) | 50.0 | 31.0 | 20.0 |
| Total Manganese (mg/l) | 0.34 | 1.5 | 0.27 |
| Total Selenium (mg/l) | < 0.001 | < 0.001 | < 0.001 |
| Total Zinc (mg/l) | 0.11 | 0.02 | 0.02 |
| Fluoride (mg/l) | 0.3 | 0.2 | 0.3 |
| Total Barium (mg/l) | 0.05 | 0.19 | 0.11 |
| Total Silver (mg/l) | < 0.1 | < 0.1 | < 0.1 |