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State of North Carolina
Department of Environment, Health, and Natural Resources
Wilmington Regional Office

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William W. Cobey, Jr., Secretary

Bob Jamison
Regional Manager

DIVISION OF ENVIRONMENTAL MANAGEMENT

Groundwater Section

December 6, 1991

CERTIFIED MAIL P 813 412 811

RETURN RECEIPT REQUESTED

Dr. Bertram Wolfe, Vice President
General Electric Nuclear Energy
175 Curtner Avenue
Mail Code 803
San Jose, California 95125

Subject: NOTICE OF VIOLATION
15A NCAC 2L
Groundwater Quality Violations
General Electric
Wilmington
New Hanover County

Dear Dr. Wolfe:

On November 9, 1991, General Electric notified the Division of a release of uranyl nitrate at the subject facility. The release was discovered on November 5, 1991, when a seam in the concrete floor of the fuel manufacturing operations expansion (FMOX) was observed to have deteriorated. The Division granted permission to construct emergency monitoring wells for groundwater data collection. On November 13, 1991, Steve Clark and Bruce Reed investigated the incident and obtained preliminary groundwater analytical results.

Specifically, groundwater quality data submitted by General Electric showed the following groundwater quality violations:

<u>Well No.</u>	<u>Date</u>	<u>Constituent</u>	<u>Reported Concentration</u>	<u>Standard</u>	<u>Class Groundwater</u>
2	November 9, 1991	uranium	185 ppm	NS*	GA
2	November 9, 1991	nitrate-N**	80 ppm	10 ppm	GA
2	November 9, 1991	fluoride	96 ppm	2 ppm	GA
3	November 9, 1991	uranium	353 ppm	NS	GA

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<u>Well No.</u>	<u>Date</u>	<u>Constituent</u>	<u>Reported Concentration</u>	<u>Standard</u>	<u>Class Groundwater</u>
3	November 9, 1991	nitrate-N	18 ppm	10 ppm	GA
3	November 9, 1991	fluoride	66 ppm	2 ppm	GA
5	November 9, 1991	nitrate-N	62 ppm	10 ppm	GA
5	November 9, 1991	fluoride	102 ppm	2 ppm	GA
6	November 9, 1991	uranium	181 ppm	NS	GA
6	November 9, 1991	nitrate-N	101 ppm	10 ppm	GA
6	November 9, 1991	fluoride	53 ppm	2 ppm	GA
8	November 9, 1991	uranium	2 ppm	NS	GA
8	November 9, 1991	fluoride	8 ppm	2 ppm	GA
9	November 9, 1991	uranium	1 ppm	NS	GA
9	November 9, 1991	fluoride	265 ppm	2 ppm	GA
13	November 9, 1991	uranium	362 ppm	NS	GA
13	November 9, 1991	nitrate-N	54 ppm	10 ppm	GA
13	November 9, 1991	fluoride	80 ppm	2 ppm	GA
14	November 9, 1991	uranium	55 ppm	NS	GA
14	November 9, 1991	fluoride	28 ppm	2 ppm	GA
5	November 10, 1991	uranium	1.8 ppm	NS	GA
5	November 10, 1991	nitrate-N	170 ppm	10 ppm	GA
5	November 10, 1991	fluoride	98 ppm	2 ppm	GA
8	November 10, 1991	uranium	0.8 ppm	NS	GA
8	November 10, 1991	nitrate-N	314 ppm	10 ppm	GA
9	November 10, 1991	uranium	1.4 ppm	NS	GA
9	November 10, 1991	nitrate-N	26 ppm	10 ppm	GA
9	November 10, 1991	fluoride	211 ppm	2 ppm	GA

<u>Well No.</u>	<u>Date</u>	<u>Constituent</u>	<u>Reported Concentration</u>	<u>Standard</u>	<u>Class Groundwater</u>
2	November 11, 1991	uranium	315 ppm	NS	GA
2	November 11, 1991	nitrate-N	59 ppm	10 ppm	GA
3	November 11, 1991	nitrate-N	19 ppm	NS	GA
5	November 11, 1991	nitrate-N	45 ppm	10 ppm	GA
6	November 11, 1991	uranium	44 ppm	NS	GA
6	November 11, 1991	nitrate-N	82 ppm	10 ppm	GA
8	November 11, 1991	nitrate-N	79 ppm	10 ppm	GA
9	November 11, 1991	nitrate-N	12 ppm	10 ppm	GA
13	November 11, 1991	uranium	387 ppm	NS	GA
13	November 11, 1991	nitrate-N	54 ppm	10 ppm	GA
18	November 11, 1991	nitrate-N	92 ppm	10 ppm	GA
19	November 11, 1991	uranium	9 ppm	NS	GA

*NS narrative standard - substances which are not naturally occurring and for which no standard is specified shall not be permitted in detectable concentrations in Class GA or Class GSA groundwaters.

**nitrate-N - nitrate expressed as nitrogen.

For your reference, Class GA groundwaters are defined as those groundwaters that: 1) naturally contain 250 ppm or less of chlorides; 2) are an existing (or potential source) of drinking water supply for humans; and 3) occur in the saturated zone.

To eliminate these violations you are required to take the following actions in accordance with applicable provisions in 15A NCAC 2L .0106:

- 1) Assess the horizontal and vertical extent of the violations;
- 2) Assess the significance of the violations; and
- 3) Submit the results of the assessment along with a remedial action plan (RAP), a plan that provides for restoration of groundwater quality and elimination of the contaminant source.

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Failure to comply with this notice may result in an enforcement report to the Director recommending that General Electric be assessed a maximum penalty of \$10,000.00 per day per violation.

We request that General Electric Corporation respond to this letter within fifteen (15) days of its receipt notifying our office of General Electric's intent to comply with this notice. Furthermore we suggest that representatives of your company and representatives of our staff meet to negotiate a Special Order of Consent (SOC) that will formalize what General Electric proposes to do to eliminate these violations.

If you have any questions regarding this matter, please do not hesitate to call Steve Clark at (919) 395-3900.

Sincerely,

Original Signed By
A. Preston Howard, Jr.
A. Preston Howard, Jr., P.E.
Regional Supervisor

APH\RSS\SLC\lfc

cc: William Ogden
Herb Strickler
Dayne Brown
Tom Decker
Perry Nelson
WIRO-GWS
CF

STEVEC\GEURAN.DEC
12-04-91