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RESULTS OF WELL SAMPLING

02/18/92

DOE-714-92

DOE-FEMP

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LETTER

CITIZEN



Department of Energy
Fernald Environmental Management Project
 P.O. Box 398705
 Cincinnati, Ohio 45239-8705
 (513) 738-6357

February 18, 1992

DOE-714-92

Mrs. Sally Kerr

Dear Mrs. Kerr:

The purpose of this letter is to provide you with the results of the water sampling of your well conducted by Westinghouse Environmental Management Company of Ohio (WEMCO). Your well at [REDACTED] was sampled on December 27, 1991, in response to your request for total uranium and total metals analyses. The result of this sampling is expressed below in parts of uranium per billion parts of water (ppb), and picocuries of uranium per liter of water (pCi/L). Picocuries per liter are the units used to express groundwater data in the Annual Environmental Report. Attachment I contains the results from the total metals analysis.

<u>Sampling Date</u>	<u>Uranium Concentration</u>	
	<u>(ppb)</u>	<u>(pCi/L)</u>
December 27, 1991	0.3	0.20

For comparison, a groundwater study conducted by an independent consultant for the Fernald Site determined that background concentrations of naturally-occurring uranium in the groundwater for this area range from less than 0.1 ppb to 2.7 ppb (0.068 to 2.0 pCi/L). Also, a U. S. Geological Survey study (J.D. Hem, 1970, Geological Survey Water-Supply Paper 1473) reported a range of uranium concentration of less than 0.1 ppb to 10 ppb (0.068 to 6.8 pCi/L) in most natural water within the United States.

The Environmental Protection Agency (EPA) has proposed an interim drinking water standard for total uranium of 20 ppb (13.5 pCi/L). The uranium concentration in your sample is well below this limit and is within the range expected for naturally-occurring background uranium in this area.

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Your well was also sampled for total metals per your request. The results from the total metals analyses are expressed, in Attachment I, in milligrams of a particular element per liter of water (mg/L). The established standards are also provided, where applicable. The data do not indicate any unusual results. All of the results are within the recommended primary drinking water guidelines established by the Department of Energy (DOE) and the U.S. Environmental Protection Agency (USEPA).

If you have any questions regarding the results reported to you in this letter or on any aspect of our environmental program, please contact me by phone (738-6160) at your convenience.

Sincerely,

Wally Quaider
Wally Quaider, Branch Chief
Environmental Compliance

FO:Quaider

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ATTACHMENT I

TYPE OF METAL	CONCENTRATION (mg/L)	STANDARD (mg/L)
Silver	<0.01	0.05 ^a .
Arsenic	<0.01	0.05 ^a .
Barium	<0.2	1.0 ^a .
Calcium	108	N/A ^c .
Cadmium	<0.005	0.01 ^a .
Chromium	<0.01	0.05 ^a .
Copper	0.03	1.0 ^b .
Iron	0.08	0.3 ^b .
Potassium	12.83	N/A ^c .
Magnesium	24.22	N/A ^c .
Manganese	<0.015	0.05 ^b .
Sodium	38.62	N/A ^c .
Nickel	<0.04	N/A ^c .
Lead	<0.003	0.05 ^a .
Selenium	<0.005	0.01 ^a .
Zinc	<0.02	5.0 ^b .

^a. Code of Federal Regulations, Title 40, Part 141, National Interim Primary Drinking Water Regulations - Subpart B - Maximum Contaminant Levels, July 1, 1984.

^b. Code of Federal Regulations, Title 40, Part 143, Secondary Maximum Contaminant Levels, July 1, 1984. These regulations establish guidelines for the aesthetic qualities relating to the public acceptance of drinking water.

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° N/A: Not Applicable; No DOE or USEPA standards have been established for calcium, potassium, magnesium, sodium, or nickel.

< : The "less than" symbol (<) indicates that the laboratory was unable to detect this particular metal in your water. The number following this symbol represents the lowest concentration the laboratory is able to detect; i.e., <0.005 means that the laboratory can only detect as low as 0.005 mg/L and your sample may contain between 0.0 to 0.005 mg/L of that material.