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G-000-1012.6

RESULTS OF ANALYSES OF WATER SAMPLES

08/15/90

DOE-1504-90
DOE-FSO/CITIZEN
2 //
LETTER

Department of Energy

FMPC Site Office
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 733-6319

AUG 15 1990

DOE-1504-90

Mr. Clarence Roy
11085 Paddy's Run Road
Harrison, OH 45030

Dear Mr. Roy:

RESULTS OF ANALYSES OF WATER SAMPLES

The purpose of this letter is to inform you of the results of analyses of water samples taken from wells located on your property. These wells were installed as groundwater monitoring wells and are not used to provide drinking water.

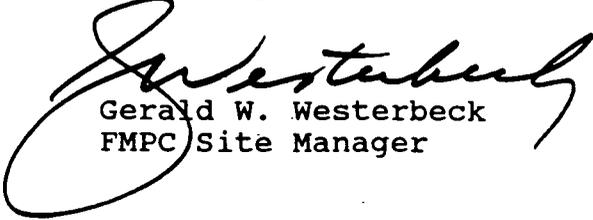
As you know, a representative of the Department of Energy (DOE) or its contractors collected samples from these wells as part of a comprehensive environmental investigation at the FMPC. This investigation, entitled the Remedial Investigation/Feasibility Study, or RI/FS, is focused on evaluating the environmental and public health impacts associated with past and present operations of the facility.

The laboratory's chemical and radiological results for the samples collected from wells located on your property are enclosed. For comparison, the applicable Federal drinking water standards and DOE concentration guidelines are also shown.

Mr. Rich Bendula of the Ohio Environmental Protection Agency (OEPA) has offered to respond to any questions you may have concerning the sampling or levels of contaminants. Mr. Bendula can be reached at (513) 449-6357.

If you have any questions, please contact Andy Avel, of my staff,
at (513) 738-6161.

Sincerely,



Gerald W. Westerbeck
FMPC Site Manager

DP-84:Avel

Enclosure: As stated

bcc w/encl.:

G. E. Mitchell, OEPA-Dayton
R. Bendula, OEPA-Dayton
C. A. McCord, USEPA-5
J. P. Hopper, WMCO
R. W. Kasperek, WMCO
L. K. Rogers, WMCO
J. W. Wood, ASI

FEEB MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 RADIOLOGICAL PARAMETERS

Property Owner : Mr. Clarence Roy
 [REDACTED]

New Well ID : 2125
 Sample : 04177
 Sample Date: 12/13/89

SUBSTANCE	APPLICABLE CONCENTRATION	STANDARD	REFERENCE
CESIUM-137	<20 pCi/l	120 pCi/l	C
NEPTUNIUM-237	<1.0 pCi/l	1.2 pCi/l	C
PLUTONIUM-238	<1.0 pCi/l	1.6 pCi/l	C
PLUTONIUM-239,240	<1.0 pCi/l	1.2 pCi/l	C
RADIUM-226	<1.0 pCi/l	5 pCi/l	* D
RADIUM-228	<3.0 pCi/l	5 pCi/l	* D
RUTHENIUM-106	<150 pCi/l	240 pCi/l	C
STRONTIUM-90	<5.0 pCi/l	8 pCi/l	E
TECHNETIUM-99	<30.0 pCi/l	4000 pCi/l	C
THORIUM-228	<1.0 pCi/l	16 pCi/l	C
THORIUM-230	<1.0 pCi/l	12 pCi/l	C
THORIUM-232	<1.0 pCi/l	2 pCi/l	C
THORIUM-TOTAL	<2 ug/l	NONE	
URANIUM-234	13.8 pCi/l	20 pCi/l	C
URANIUM-235,236	1.1 pCi/l	20 pCi/l	C
URANIUM-238	15.7 pCi/l	24 pCi/l	C
URANIUM-TOTAL	66.2 ug/l	NONE	**

C = United States Department of Energy; Order 5400.5, "Radiation Protection of the Public and the Environment;" Feb. 8, 1990.

D = United States Environmental Protection Agency; Safe Drinking Water Act; National Primary Drinking Water Regulations; 40 CFR 141.15

E = United States Environmental Protection Agency; Safe Drinking Water Act; National Primary Drinking Water Regulations; 40 CFR 141.16

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** = Note: A groundwater study conducted by an independent consultant for the FMPC determined that background concentrations of naturally-occurring uranium in the groundwater for this area, range from less than < 0.1 ug/l to 2.7 ug/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 < 0.1 ug/l to 10.0 ug/l in most natural water within the United States.

FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 (CHEMICAL/METAL PARAMETERS)

Property Owner : Mr. Clarence Roy

New Well ID : 2125

Sample : 04177

Sample Date: 12/13/89

SUBSTANCE	APPLICABLE CONCENTRATIONS	STANDARD	REFERENCE
Ammonia	< .1 ppm	None	
Arsenic	< .002 ppm	0.05 ppm	A
Barium	.035 ppm	1.0 ppm	A
Cadmium	<.01 ppm	0.01 ppm	A
Calcium	113.0 ppm	None	
Chloride	24.2 ppm	250 ppm	B
Chromium	.028 ppm	0.05 ppm	A
Copper	.014 ppm	1.0 ppm	B
Fluoride	.25 ppm	4(A), 2(B) ppm	***
Iron	.073 ppm	0.3 ppm	B
Lead	<.002 ppm	0.05 ppm	A
Magnesium	24.4 ppm	None	
Manganese	.032 ppm	0.05 ppm	B
Mercury	<.0002 ppm	0.002 ppm	A
Molybdenum	<.01 ppm	None	
Nickel	<.02 ppm	None	
Nitrates	1.11 ppm	10 ppm	A
Phenols	.014 ppm	None	
Phosphorus	.7 ppm	None	
Potassium	2.75 ppm	None	
Selenium	<.002 ppm	0.01 ppm	A
Silver	.011 ppm	0.05 ppm	A
Sodium	9.9 ppm	None	
Sulfate	60.5 ppm	250 ppm	B
Total Kjeldahl Nitrogen	.419 ppm	None	
Total Organic Nitrogen	.419 ppm	None	

A = United States Environmental Protection Agency; Safe Drinking Water Act; National Primary Drinking Water Regulations; 40 CFR 141.11

B = United States Environmental Protection Agency; Safe Drinking Water Act; National Secondary Drinking Water Regulations; 40 CFR 143.3

*** = The National Primary Drinking Water Standard for flouride is 2 ppm.
 The National Secondary Drinking Water Standard for flouride is 4 ppm.

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Note: The standards set by the National Primary Drinking Water Regulations (40 CFR 141) are to ensure public health protection. The standards set by the National Secondary Drinking Water Regulations control contaminants in drinking water that primarily affect the aesthetic qualities relating to the public acceptance of drinking water. Contaminant concentrations higher than the secondary limits may also have public health implications.

FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 RADIOLOGICAL PARAMETERS

1012

Property Owner : Mr. Clarence Roy

New Well ID : 3125
 Sample : 04179
 Sample Date: 1/9/90

SUBSTANCE	APPLICABLE CONCENTRATION	STANDARD	REFERENCE
CESIUM-137	<20 pCi/l	120 pCi/l	C
NEPTUNIUM-237	<1.0 pCi/l	1.2 pCi/l	C
PLUTONIUM-238	<1.0 pCi/l	1.6 pCi/l	C
PLUTONIUM-239,240	<1.0 pCi/l	1.2 pCi/l	C
RADIUM-226	<1.0 pCi/l	5 pCi/l	* D
RADIUM-228	<3.0 pCi/l	5 pCi/l	* D
RUTHENIUM-106	<150 pCi/l	240 pCi/l	C
STRONTIUM-90	<5.0 pCi/l	8 pCi/l	E
TECHNETIUM-99	<30.0 pCi/l	4000 pCi/l	C
THORIUM-228	<1.0 pCi/l	16 pCi/l	C
THORIUM-230	1.29 pCi/l	12 pCi/l	C
THORIUM-232	<1.0 pCi/l	2 pCi/l	C
THORIUM-TOTAL	<2 ug/l	NONE	
URANIUM-234	18 pCi/l	20 pCi/l	C
URANIUM-235,236	<1.0 pCi/l	20 pCi/l	C
URANIUM-238	19.3 pCi/l	24 pCi/l	C
URANIUM-TOTAL	70.9 ug/l	NONE	**

C = United States Department of Energy; Order 5400.5, "Radiation Protection of the Public and the Environment;" Feb. 8, 1990.

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FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 (CHEMICAL/METAL PARAMETERS)

1012

Property Owner : Mr. Clarence Roy

New Well ID : 3125
 Sample : 04179
 Sample Date: 1/9/90

SUBSTANCE	APPLICABLE CONCENTRATIONS		STANDARD	REFERENCE
Ammonia	.13	ppm	None	
Arsenic	<.002	ppm	0.05 ppm	A
Barium	.066	ppm	1.0 ppm	A
Cadmium	.004	ppm	0.01 ppm	A
Calcium	99.0	ppm	None	
Chloride	28.4	ppm	250 ppm	B
Chromium	.029	ppm	0.05 ppm	A
Copper	.011	ppm	1.0 ppm	B
Fluoride	.33	ppm	4(A), 2(B) ppm	***
Iron	1.62	ppm	0.3 ppm	B
Lead	<.002	ppm	0.05 ppm	A
Magnesium	22.5	ppm	None	
Manganese	.375	ppm	0.05 ppm	B
Mercury	<.0002	ppm	0.002 ppm	A
Molybdenum	<.01	ppm	None	
Nickel	<.02	ppm	None	
Nitrates	.13	ppm	10 ppm	A
Phenols	<.01	ppm	None	
Phosphorus	.17	ppm	None	
Potassium	2.31	ppm	None	
Selenium	<.002	ppm	0.01 ppm	A
Silver	<.01	ppm	0.05 ppm	A
Sodium	10.3	ppm	None	
Sulfate	951	ppm	250 ppm	B
Total Kjeldahl Nitrogen	.17	ppm	None	
Total Organic Nitrogen	<.1	ppm	None	

A = United States Environmental Protection Agency; Safe Drinking Water Act; National Primary Drinking Water Regulations; 40 CFR 141.11

B = United States Environmental Protection Agency; Safe Drinking Water Act; National Secondary Drinking Water Regulations; 40 CFR 143.3

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FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 RADIOLOGICAL PARAMETERS

Property Owner : [REDACTED]
 Harrison, Ohio 45030

New Well ID : 2125
 Sample : 04177
 Sample Date: 12/13/89

SUBSTANCE	APPLICABLE CONCENTRATION	STANDARD	REFERENCE
CESIUM-137	<20 pCi/l	120 pCi/l	C
NEPTUNIUM-237	<1.0 pCi/l	1.2 pCi/l	C
PLUTONIUM-238	<1.0 pCi/l	1.6 pCi/l	C
PLUTONIUM-239,240	<1.0 pCi/l	1.2 pCi/l	C
RADIUM-226	<1.0 pCi/l	5 pCi/l	* D
RADIUM-228	<3.0 pCi/l	5 pCi/l	* D
RUTHENIUM-106	<150 pCi/l	240 pCi/l	C
STRONTIUM-90	<5.0 pCi/l	8 pCi/l	E
TECHNETIUM-99	<30.0 pCi/l	4000 pCi/l	C
THORIUM-228	<1.0 pCi/l	16 pCi/l	C
THORIUM-230	<1.0 pCi/l	12 pCi/l	C
THORIUM-232	<1.0 pCi/l	2 pCi/l	C
THORIUM-TOTAL	<2 ug/l	NONE	
URANIUM-234	13.8 pCi/l	20 pCi/l	C
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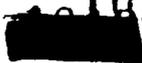
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FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 (CHEMICAL/METAL PARAMETERS)

1012


Property Owner : 
 HARRISON, OHIO 45030

New Well ID : 2125
 Sample : 04177
 Sample Date: 12/13/89

SUBSTANCE	APPLICABLE CONCENTRATIONS	STANDARD	REFERENCE
Ammonia	< .1 ppm	None	
Arsenic	< .002 ppm	0.05 ppm	A
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Cadmium	<.01 ppm	0.01 ppm	A
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Nitrates	1.11 ppm	10 ppm	A
Phenols	.014 ppm	None	
Phosphorus	.7 ppm	None	
Potassium	2.75 ppm	None	
Selenium	<.002 ppm	0.01 ppm	A
Silver	.011 ppm	0.05 ppm	A
Sodium	9.9 ppm	None	
Sulfate	60.5 ppm	250 ppm	B
Total Kjeldahl Nitrogen	.419 ppm	None	
Total Organic Nitrogen	.419 ppm	None	

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FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 RADIOLOGICAL PARAMETERS

Property Owner : 
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FEED MATERIALS PRODUCTION CENTER
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 ROUND 7 GROUND WATER QUALITY RESULTS
 (CHEMICAL/METAL PARAMETERS)

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Molybdenum	<.01 ppm	None	
Nickel	<.02 ppm	None	
Nitrates	.13 ppm	10 ppm	A
Phenols	<.01 ppm	None	
Phosphorus	.17 ppm	None	
Potassium	2.31 ppm	None	
Selenium	<.002 ppm	0.01 ppm	A
Silver	<.01 ppm	0.05 ppm	A
Sodium	10.3 ppm	None	
Sulfate	951 ppm	250 ppm	B
Total Kjeldahl Nitrogen	.17 ppm	None	
Total Organic Nitrogen	<.1 ppm	None	

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