



## Department of Energy

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AUG 08 2002

Ms. Miriam Heyob

DOE-0629-02

Dear Ms. Heyob:

### GROUNDWATER MONITORING WELL RESULTS FOR 2001

As you are aware, the U.S. Department of Energy (DOE) has installed groundwater Monitoring Wells 2553 and 2555 on your property to collect water samples for analysis. Although water quality samples continue to be collected from Monitoring Well 2553, Monitoring Well 2555 has not been sampled since 1993. Monitoring ceased at this Monitoring Well 2555 once enough data had been collected to support the various sampling programs.

This letter presents the results of the samples collected in 2001 for Monitoring Well 2553. Analytical results through 2000 have been previously provided to you.

We appreciate your participation in this important program and the water quality results will continue to be reported to you. Also, the water quality monitoring results can be found in annual site environmental reports (issued in June of each year), which are available at the Fernald Environmental Management Project (FEMP) Public Environmental Information Center.

#### Methodology

FEMP personnel have sampled these monitoring wells per the U.S. Environmental Protection Agency (EPA) and Ohio Environmental Protection Agency requirements. Data from samples collected from the monitoring wells are used to determine the quality of the groundwater in the area surrounding the FEMP.

#### Results and Discussion

Total uranium is considered the primary constituent of concern at the FEMP. An Explanation of Significant Differences (ESD) pertaining to the site groundwater remedy was approved by EPA on November 30, 2001. The ESD amended the Operable Unit 5 Record of Decision by adopting the Safe Drinking Water Act Maximum Contaminant Level for uranium (30 micrograms per liter [ $\mu\text{g/L}$ ]) as both the Final Remediation Level (FRL) for groundwater restoration and the uranium effluent discharge limit to the Great Miami River. Since the new FRL was in effect at the end of 2001, it was used as the basis of comparison for the entire year. There were no FRL exceedances for total uranium at Monitoring Well 2553.

Attachment A is a Fact Sheet that provides explanations of the terms used in this transmittal. When

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reviewing the monitoring results for each sampling period, please keep in mind that FEMP personnel sample monitoring wells for specific projects. As the FEMP continues its groundwater remediation efforts, the requirements for each project change; therefore, constituents analyzed by the laboratory may also change.

The FEMP has committed to remediate the groundwater in the affected portion of the Great Miami Aquifer and is currently engaged in active groundwater restoration. The aquifer is being cleaned up to concentrations known as FRLs, which are defined in the Record of Decision for Remedial Actions at Operable Unit 5. Attachment A contains more information on FRLs.

Attachment B presents the monitoring results from Monitoring Well 2553 and the associated FEMP groundwater FRL.

Additional information concerning the FEMP restoration plan and documents referred to above are available at the FEMP Public Environmental Information Center located in the Delta Building at 10995 Hamilton-Cleves Highway, Harrison, OH; phone: (513) 648-7480.

DOE is committed to making the environmental restoration of the FEMP effective and successful. Your cooperation in this effort is greatly appreciated. If you have any questions regarding your monitoring results, then please contact Kathleen Nickel at (513) 648-3166.

Sincerely,



Johnny W. Reising  
Associate Director  
Environmental Management

FEMP: Nickel  
Attachments: As stated

cc w/enclosure:  
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## ATTACHMENT A

## FACT SHEET

This attachment provides explanations for the terms used in this information packet. Please refer to the cover letter for additional information.

**Monitoring Results**

The monitoring well results report the name of the constituent analyzed, the concentration measured, and the unit of concentration. Some FEMP projects require a determination of the dissolved (filtered) constituent concentration, as well as the total (unfiltered) concentration. Filtering a groundwater sample results in the removal of suspended soil particles that are greater than 0.45 micrometers in diameter. This diameter is approximately equivalent to 1/200 of the thickness of this page.

**Units**

The monitoring well results are reported in standard concentration units.

$\mu\text{g/L}$  (micrograms per liter) A unit of measure of the concentration of a substance. This unit is approximately equivalent to parts per billion (ppb). As an illustration, 1  $\mu\text{g/L}$  (ppb) is roughly one drop of gasoline in a railroad box car full of water.

**Final Remediation Levels**

The Operable Unit 5 Record of Decision established FRLs for FEMP-related contaminants in environmental media (i.e., soil, surface water, sediment, and groundwater). These FRLs are legally binding cleanup levels that will be used to track and certify the completion of the FEMP's remediation process. FRLs were specifically developed for the Great Miami Aquifer for those constituents that are presently in the Great Miami Aquifer and those that have the potential (based on modeling) to reach the aquifer within 1,000 years at levels that pose an unacceptable risk to human health and/or the environment.

## ATTACHMENT B

TABLE B-1  
MONITORING WELL DATA

Monitoring Well	Constituent	Sample Date	Result	FRL
2553	Uranium, total (filtered)	2/7/01	9.292 µg/L	30 µg/L
	Uranium, total (unfiltered)	2/7/01	9.094 µg/L	30 µg/L
	Uranium, total (filtered)	5/9/01	9.819 µg/L	30 µg/L
	Uranium, total (unfiltered)	5/9/01	9.48 µg/L	30 µg/L
	Uranium, total (unfiltered)	8/7/01	12.079 µg/L	30 µg/L
	Uranium, total (unfiltered)	11/19/01	9 µg/L	30 µg/L