



Department of Energy 1653



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AUG 18 1998

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-1104-98

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Mr. Val Orr
Division of Drinking and Ground Waters-UIC Unit
P.O. Box 1049
1800 Watermark Drive
Columbus, Ohio 43216-1049

Dear Mr. Saric, Mr. Schneider, and Mr. Orr:

**ANALYTICAL RESULTS FOR TREATED GROUNDWATER FOR THE RE-INJECTION
DEMONSTRATION PROJECT**

This letter transmits analytical results for the treated groundwater that will be re-injected into the Great Miami Aquifer for the Re-Injection Demonstration Project. The Re-injection Demonstration Project is scheduled to begin on August 31, 1998.

As specified in the Re-Injection Demonstration Test Plan, the treated groundwater was analyzed for Final Remediation Level (FRL) constituents which have been detected in the aquifer, in the area of our extraction wells, at concentrations above their established FRL. The analysis of May 28, 1998, sample indicates that the treated groundwater being slated for re-injection does not contain any FRL constituent concentration exceedances.

The U.S. Environmental Protection Agency (U.S. EPA) approved Re-Injection Demonstration Test Plan requires that monthly samples of the treated groundwater being used for re-injection be analyzed for agreed to FRL constituents. These monthly samples are being collected from the effluent treated groundwater as it leaves the Advanced Waste

1653

Mr. James A. Saric
Mr. Tom Schneider
Mr. Val Orr

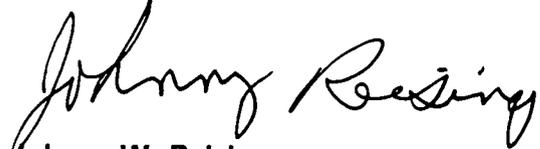
-2-

AUG 18 1998

Water Treatment (AWWT) Expansion Facility. This May 1998 sample is the first of these monthly analyses. Results from the June and July 1998 samples will be transmitted for your attention as soon as the data is received from the off-site laboratory.

If you have any questions regarding this submittal, please contact John Kappa at (513) 648-3149.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Kappa

Enclosure:

2

AUG 18 1998

Mr. James A. Saric
Mr. Tom Schneider
Mr. Val Orr

-3-

cc w/enclosure:

G. Jablonowski, USEPA-V, SRF-5J
R. Beaumier, TPSS/DERR, OEPA-Columbus
T. Schneider, OEPA-Dayton (total of 3 copies of enc.)
F. Bell, ATSDR
M. Schupe, HSI GeoTrans
R. Vandegrift, ODH
F. Barker, Tetra Tech
D. Brettschneider, FDF/52-5
K. Broberg, FDF/52-5
D. Carr, FDF/52-2
T. Hagen, FDF/65-2
J. Harmon, FDF/90
W. Hertel, FDF/52-5
R. Hughes, FDF/52-5
R. Kneip, FDF/52-5
D. Shanklin, FDF/52-5
R. White, FDF/52-5
AR Coordinator, FDF/78

cc w/o enclosure:

N. Hallein, EM-42/CLOV
A. Tanner, DOE-FEMP
R. Heck, FDF/2
S. Hinnefeld, FDF/2
EDC, FDF/52-7

ANALYSIS OF INJECTATE
Sample Collected May 28, 1998

Constituents ^b	Result ^c	Groundwater FRL ^a	Detection Limit	Constituent Type ^e	Basis for FRL ^f
General Chemistry		mg/L			
Nitrate	0.31 0.31 ^d	11.0		MP	B
Inorganics		mg/L			
Antimony	0.0012	0.006		N	A
Arsenic	0.001	0.05		N	A
Barium	0.0527	2.0		N	A
Beryllium	U	0.004	.00005	N	A
Cadmium	U	0.014	.00012	N	B
Chromium	0.002	0.022 ^e		MP	R
Cobalt	U	0.17	0.00038	N	R
Lead	U	0.015	.00062	N	A
Manganese	.175	0.9		N	B
Mercury	U	0.002	0.0001	MP	A
Nickel	.0021	0.1		N	A
Selenium	U	0.05	.001	N	A
Silver	U	0.05	.00028	N	A
Vanadium	U	0.038	.00032	N	R
Zinc	.0026	0.021		N	B
Radionuclides		pCi/L			
Neptunium-237	U	1.0	0.035	MP	R*
Radium-226	U	20.0	0.055	N	A
Strontium-90	U	8.0	1.4	MP	A
Thorium-228	U	4.0	0.11	N	R*
Thorium-232	U	1.2	0.11	N	R*
Total Uranium		µg/L			
Total Uranium	0.065	20.0		MP	A
Organics		µg/L			
Bis(2-ethylhexyl)phthalate	U	6.0	5	N	A
Carbon disulfide	U	5.5	1	N	A
1,1-Dichloroethene	U	7.0	1	N	A
1,2-Dichloroethane	U	5.0	1	MP	A
Trichloroethene	U	5.0	1	N	A

^aFrom Table 9-4 in OU5 ROD.

^bConstituents taken from Table 2-1 of Re-injection Demonstration Test Plan. Constituents are those previously detected in aquifer zones 2 and 4 at concentrations above their FRL.

^cConstituent types from Appendix A of IEMP. MP indicates that the constituent has been identified as being able to migrate to the aquifer. N indicates that the constituent has been identified as not being able to migrate to the aquifer.

^dDuplicate

^eFRL is for hexavalent chromium.

U = Undetect

^fIf a duplicate sample was analyzed the highest concentration between the regular sample and duplicate sample is reported.

^gA - Applicable or relevant and appropriate requirement based (MCL, PMCL, etc.).

B - Based on 95th percentile background concentrations.

R - Risk Based Preliminary Remediation Goal (CPRG)

R* - Risk Based Preliminary Remediation Level includes the radionuclide risk-based PRG plus its 95th percentile background concentration.