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MAY 13 2003

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

DOE-0371-03

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

Ms. Val Orr
Ohio Environmental Protection Agency
Division of Drinking and Ground Waters – UIC Unit
P.O. Box 1049
Columbus, OH 43216-1049

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

FOURTH QUARTER 2002 RE-INJECTION OPERATING REPORT

This letter serves to transmit the subject report for your review and approval. This letter also serves as notification that there is no need for a First Quarter 2003 Re-Injection Report, as re-injection did not take place during the First Quarter of 2003.

This report is being submitted in accordance with the Re-Injection Demonstration Test Plan. The report is also being submitted to the Ohio Environmental Protection Agency (OEPA) Division of Drinking and Ground Waters Unit of Underground Injection Control (UIC) in accordance with their guidelines.

Based on OEPA concurrence, the quarterly reporting format began with the Second Quarter 2002 report.

If you have questions or concerns regarding this report, please contact Robert Janke at (513) 648-3132.

Sincerely,

Johnny Reising

FCP:R.J. Janke

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure: As Stated

cc w/enclosure:
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A. Murphy, OH/FCP
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F. Bell, ATSDR
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T. Hagen, Fluor Fernald, Inc./MS1
W. Hertel, Fluor Fernald, Inc./MS52-5
M. Jewett, Fluor Fernald, Inc./MS52-5
T. Poff, Fluor Fernald, Inc./MS65-2
D. Powell, Fluor Fernald, Inc./MS64
ECDC, Fluor Fernald, Inc./MS52-7

FOURTH QUARTER 2002
RE-INJECTION OPERATING REPORT

Re-injection at Fernald is exempted under 40 CFR 300.400(e)(1) from requiring a permit, as it is a CERCLA action. Ohio EPA Guidelines (OEPA 1997), suggest monthly operating reports be submitted that include:

I. An analysis of the injectate
- Composite daily total uranium results from the injectate source (AWWT Expansion Facility effluent) for days when re-injection occurred are shown in Figure 1.
- The monthly grab sample results for the fourth quarter 2002 are provided in Table 1.

II. The volume and rate of re-injection
- Table 2 summarizes fourth quarter 2002 operational data.

III. A description of any well maintenance and rehabilitation procedures conducted.
- No well maintenance or rehabilitation occurred in October, November, or December 2002.

DOE has submitted the monthly reports since re-injection began in September 1998 through March 2002. Due to the routine nature of the reports, DOE and Ohio EPA agreed in March 2002 that the monthly information would be provided in quarterly reports beginning with the report for the second quarter 2002.

Routine monitoring of the aquifer in the re-injection area is conducted as part of the groundwater remedy performance monitoring program specified in Fernald's Integrated Environmental Monitoring Plan (IEMP). Results of the IEMP are reported semi-annually and are available for viewing on the Fernald website, www.fernald.gov. In 2002, Re-Injection Wells 8 and 9 were replaced with new wells, 8a and 8b. These two replacement wells began operating in November 2002. Location of the re-injection wells is shown in Figure 2.

ANALYSIS OF THE INJECTATE

No constituents exceeded their FRLs. Although a monthly grab sample was collected in December, re-injection was not taking place. Outages for the 4th quarter of 2002 are explained in Figure 1.

The following total uranium concentrations were measured in the monthly grab and daily composite samples, respectively:

- October 15, 2002: 5.14 micrograms per liter (µg/L) and 5.6 µg/L
- November: No monthly grab sample collected. The re-injection system was not operating during the time the grab sample was scheduled to be collected.
- December 03, 2002: 6.22 µg/L.

TABLE 1

ANALYSIS OF INJECTATE

Constituents[a]	Results[b] Oct. 15, 2002	Nov., 2002	Dec. 03, 2002	Groundwater FRL[c]	Constituent Type[e]	Basis for FRL[f]
General Chemistry				**mg/L**		
Nitrate	0.76 J	NS	0.74 J	11.0	MP	B
Inorganics				**mg/L**		
Antimony	U	NS	U	0.006	N	A
Arsenic	U	NS	U	0.05	N	A
Barium	0.0522 J	NS	0.0521 J	2.0	N	A
Beryllium	U	NS	U	0.004	N	A
Cadmium	U	NS	U	0.014	N	B
Chromium, total	U	NS	U	0.022[d]	MP	R
Cobalt	U	NS	U	0.17	N	R
Lead	U	NS	U	0.015	N	A
Manganese	U	NS	0.0004 J	0.9	N	B
Mercury	U	NS	U	0.002	MP	A
Nickel	U	NS	U	0.1	N	A
Selenium	U	NS	U	0.05	N	A
Silver	U	NS	U	0.05	N	R
Vanadium	U	NS	U	0.038	N	R
Zinc	U	NS	U	0.021	N	B
Radionuclides				**pCi/L**		
Neptunium-237	0.071 J	NS	U	1.0	MP	R*
Radium-226	0.551 J	NS	U	20.0	N	A
Strontium-90	U	NS	U	8.0	MP	A
Thorium-228	U	NS	U	4.0	N	R*
Thorium-232	U	NS	U	1.2	N	R*
				µg/L		
Uranium, total	5.14	NS	6.22	30.0	MP	A
Organics				**µg/L**		
Bis(2-ethylhexyl)phthalate	1 J	NS	U	6.0	N	A
Carbon disulfide	U	NS	0.1 J	5.5	N	A
1, 1-Dichloroethene	U	NS	U	7.0	N	A
1, 2-Dichloroethane	U	NS	U	5.0	MP	A
Trichloroethene	U	NS	U	5.0	N	A

Results Qualifiers: U = Nondetected result, B (inorganics) = Reported result is greater than the instrument detection level but less than the contract required detection limit, B (organics) = The compound is detected in an associated lab blank. J = Reported result is positively detected but is estimated; the result is still usable for making decisions.

[a]Constituents taken from Table 2-1 of the Re-Injection Demonstration Test Plan, and are those previously detected in Aquifer Zones 2 and 4 at concentrations above their FRL.

[b]If a duplicate sample was analyzed, then the highest concentration between the regular sample and duplicate sample is reported.

[c]From Table 9-4 in the Operable Unit 5 Record of Decision Report. NS = Not Sampled

[d]FRL is for hexavalent chromium.

[e]Constituent 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.

[f]A - Applicable or relevant and appropriate requirement based (MCL, PMCL, etc.), B - Based on 95th percentile background concentrations, R - Risk-based, R* - Risk-based radionuclide cleanup levels include constituent specific 95th percentile background concentration.

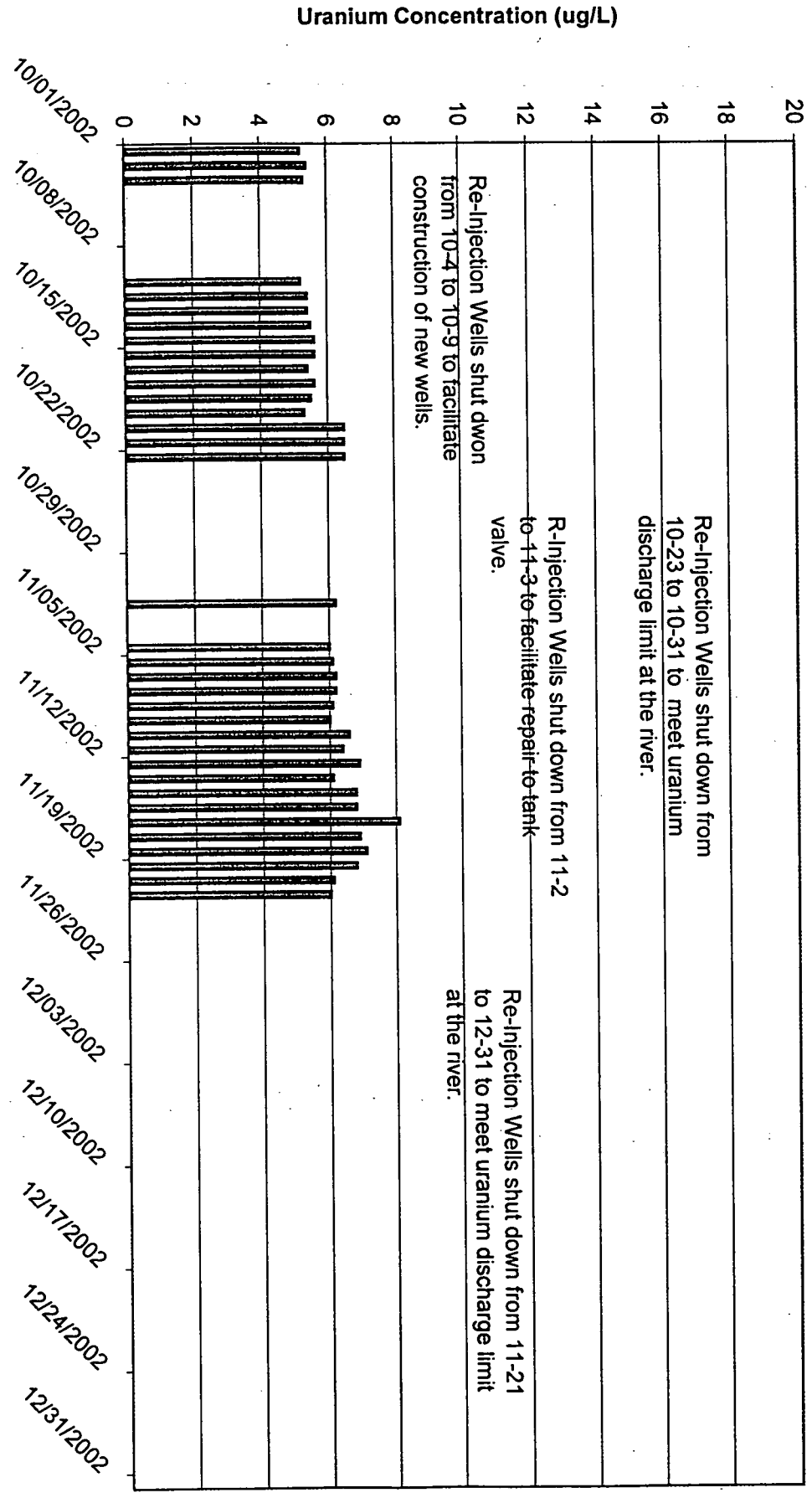
TABLE 2

RE-INJECTION WELL OPERATIONAL SUMMARY SHEET
FOURTH QUARTER 2002

Well Number	Reporting Period (hours)[a]	Hours Not Injecting[b]	Hours Injecting[c]	Operational Percent[d]	Million Gallons Injected[e]	Target /Average[f] Operating Injection Rate (gpm)
33253 (IW-8a)	2208	1886	322	14.6	3.849	200 / 199
33254 (IW-9a)	2208	1888	320	14.5	3.833	200 / 200
22109 (IW-10)	2208	1896	312	14.1	3.243	200 / 0.00
22240 (IW-11)	2208	1536	672	30.4	7.439	200 / 184.5
22111 (IW-12)	2208	1544	664	30.1	7.429	200 / 186.5

[a]First operational shift reading on October 1, 2002 to first operational shift reading on January 1, 2003.
[b]System downtime as noted on Figure 1.
[c]Hours in reporting period - Hours not injecting
[d](Hours injecting/Hours in reporting period) x 100
[e]Summation of daily totalizer differences
[f]Gallons Injected/(Hours Injecting x 60)

Figure 1
Daily Composite Uranium Results from AWWT Expansion System
Days when Re-Injection Occurred



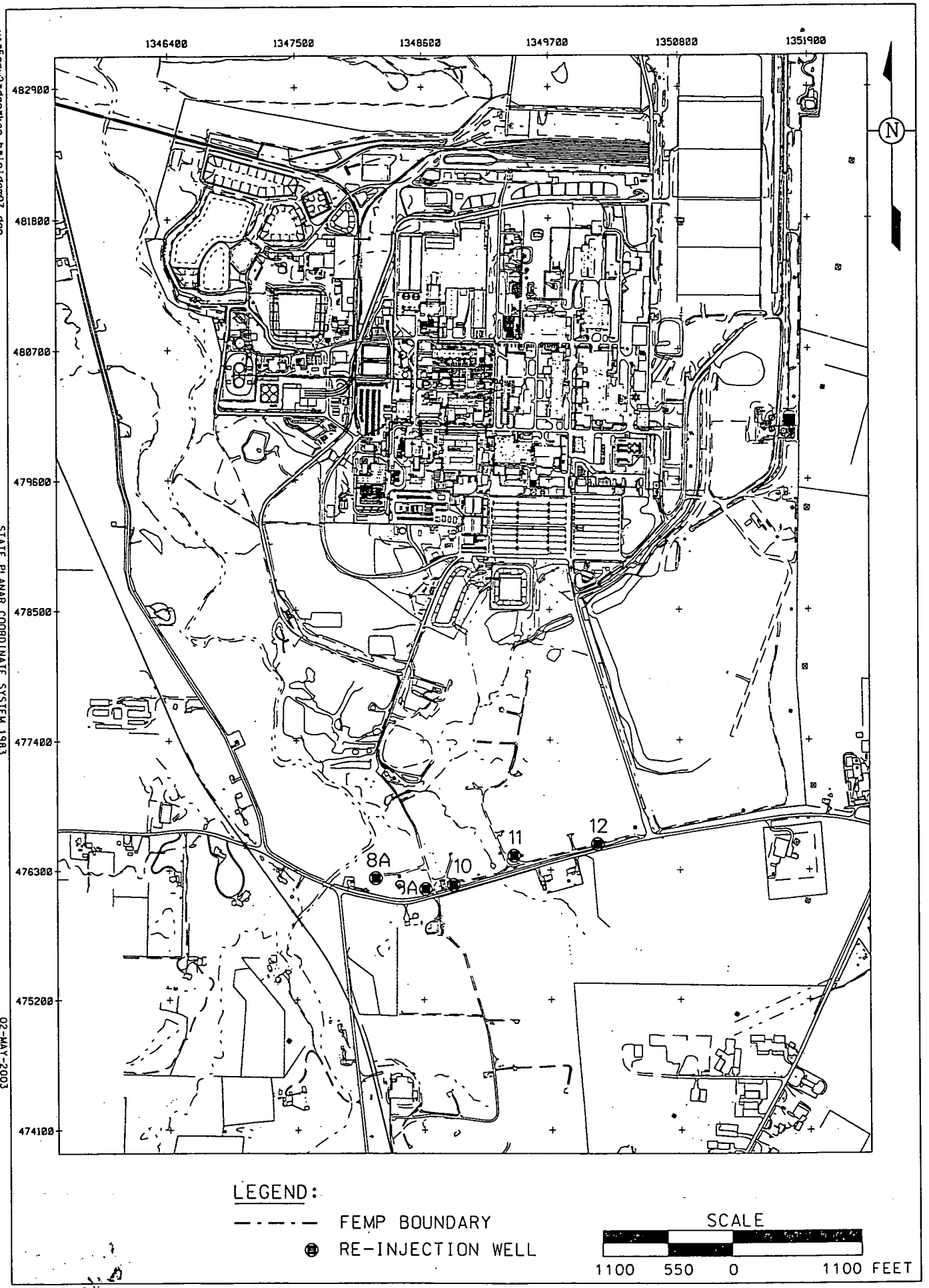


FIGURE 2. LOCATION OF RE-INJECTION WELLS

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