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21G-97-0083
GOV-01-60
ACF-97-136

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. G. Alan Farmer, Chief
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Waste Management Division
Environmental Protection Agency
Region IV
100 Alabama Street, S.W.
Atlanta, GA 30303

Mr. Thomas Tiesler, Director
Division of Solid Waste Management
TN Department of Environment
and Conservation
Fifth Floor, L&C Tower
401 Church Street
Nashville, TN 37243-1535

June 19, 1997

REFERENCE: *HSWA Permit for 1984 RCRA Amendments*
Nuclear Fuel Services, Inc., Erwin, TN
EPA ID: TND 003 095 635

Dear Messrs. Farmer and Tiesler:

As required by the above reference, Condition II.E.3.a. and Condition II.F.3.a., Nuclear Fuel Services, Inc. (NFS) is enclosing the quarterly RCRA Facility Investigation (RFI) and Interim Measures (IM) Progress Reports as Attachments I and II. The next quarterly RFI/IM Progress Reports will be submitted by September 17, 1997.

If you have any questions or need further information, please contact me or Ms. Marie Moore, Environmental & Health Physics Director, at (423) 743-1737. Please reference our unique document identification number (21G-97-0083) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

Thomas S. Baer, PhD
Vice President
Safety and Regulatory

TSB/BMM/rcy

Enclosure

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ATTACHMENT I

*To Letter Dated June 19, 1997
T. S. Baer to Mr. G. Alan Farmer and Mr. Thomas Tiesler*

RFI Progress Report

(6 pages to follow)

**RFI PROGRESS REPORT
NUCLEAR FUEL SERVICES, INC.
EPA ID NO. TND 00 309 5635**

1.0 SWMU 20 (Building 130 Scale Pit)

1.1 Work Completed

The groundwater from the Building 130 scale pit (SWMU 20) was pumped routinely from September 1995 to February 1996. As requested by EPA Region IV, NFS resumed pumping the Building 130 scale pit in September 1996. The scale pit is pumped monthly and water is transferred to the Groundwater Treatment Facility. The groundwater is sampled and then treated in accordance with applicable regulations. A total of 75,157 gallons of groundwater has been pumped and treated since September 1995. The scale pit has been pumped twice since the last reporting period.

1.2 Findings and Observations

The analytical results for samples obtained from the scale pit during this and previous reporting periods are presented in Table 1, Attachment. Two groundwater samples were obtained since the last reporting period. PCE concentrations in these samples were 0.149 mg/L and 0.097 mg/L. TCE concentrations in the samples were 0.011 mg/L and 0.008 mg/L. 1,2-DCE was detected in both groundwater samples obtained during this reporting period at concentrations of 0.024 mg/L and 0.017 mg/L. Vinyl chloride was not detected in the groundwater samples.

Data from both pumping periods, September 1995 through February 1996 and September 1996 to the present, were evaluated statistically to determine if groundwater concentrations of PCE, TCE, and 1,2-DCE had changed significantly. Results of the statistical analyses indicate that contaminant concentrations do not differ significantly between the two pumping periods.

Additionally, data obtained during the second pumping period were evaluated statistically to determine if contaminant concentrations had changed significantly from September 1996 to the present. The results of the statistical analyses indicate contaminant concentrations in scale pit water have not changed significantly since September 1996.

1.3 Work Projected (Third Quarter 1997)

Monthly pumping and sampling of the Building 130 scale pit (SWMU 20) will continue until EPA Region IV approves closure. The findings will be reported in the RFI progress report.

2.0 Off-Site Groundwater Investigation

2.1 Work Completed

The report describing the results of the SWMU 20/Well 103A and Off Site Groundwater Investigation has been completed and will be submitted to the EPA, NRC and TDEC in July 1997.

Quarterly groundwater sampling of the eleven off site wells was conducted April 23 to April 25. Analytical results were received from the NFS 105 Laboratory. Uranium data have been validated. Technetium data will be presented in the next RFI quarterly report.

A workplan to define the vertical extent of off site groundwater contamination has been completed and will be submitted to the EPA, NRC and TDEC in July 1997.

2.2 Findings and Observations

Quarterly groundwater samples were obtained from eleven off-site monitoring wells and analyzed for the following constituents: PCE, TCE, 1,2-DCE, vinyl chloride, isotopic uranium and technetium 99. Preliminary volatile organic data are presented on Table 2. PCE, TCE, 1,2-DCE and vinyl chloride results are consistent with results obtained during January 1997 with the exception of PCE results for Well 118A and Well 118B. PCE was not detected in Well 118A and Well 118B during January 1997. Results from April indicate PCE concentrations of 0.012 mg/L in Well 118A and 0.006 mg/L in Well 118B. Uranium data are presented on Table 3. Uranium data are consistent with data obtained during January 1997.

2.3 Work Projected (Third Quarter 1997)

Offsite wells will be sampled in July and the results will be reported in the RFI progress report.

3.0 Areas of Concern 2 (Building 111 Boiler Blowdown/Backwash) and 4 (Plant Drainage System)

The RFI Report for AOCs 2 and 4 was submitted to the EPA, NRC, and TDEC on June 19, 1997.

4.0 SWMU 10 (Demolition Landfill)

Excavation, shipping and disposal of contents of the Demolition Landfill Trenches K, L, and M (SWMU 10) began on April 10, 1997. The status of these activities are presented in the Interim Measures Progress Report.

5.0 SWMU 16 RFI (Radiological Incinerator)

The RFI report for SWMU 16 was submitted to the NRC, EPA and TDEC on March 25, 1997.

6.0 General Information

The Groundwater Risk Assessment Report has been completed and will be submitted to the EPA and TDEC in July 1997, concurrent with the Off-Site Groundwater Investigation and SWMU 20/Well 102A Report and Workplan to Define the Vertical Extent of Groundwater Contamination.

Table 1

| Analytical Results for SWMU 20 Groundwater | | | | | | | |
|---|--------------|-----------------|------------|------------|----------------|-----------------------|--------|
| Sample ID | Pumping Date | Collection Date | PCE (mg/L) | TCE (mg/L) | 1,2 DCE (mg/L) | Vinyl Chloride (mg/L) | |
| Baseline 1377124 | 09/11/95 | 09/11/95 | 0.0258 | 0.0021 | 0.0193 | < | 0.005 |
| 1377299 | 09/11/95 | 09/12/95 | 0.0428 | 0.0027 | 0.0191 | | 0.0053 |
| 1379194 | 09/27/95 | 09/29/95 | 0.1846 | 0.0090 | 0.0583 | < | 0.005 |
| 1380354 | 10/11/95 | 10/12/95 | 0.1601 | 0.0039 | 0.0557 | < | 0.005 |
| 1381571 | 10/24/95 | 10/25/95 | 0.0022 | < 0.00038 | < 0.008 | < | 0.005 |
| 1382926 | 11/09/95 | 11/10/95 | 0.2079 | < 0.00038 | < 0.008 | < | 0.005 |
| 1384040 | 11/21/95 | 11/22/95 | 0.2045 | 0.0239 | 0.0253 | < | 0.005 |
| 1385232 | 12/06/95 | 12/07/95 | 1.2020 | < 0.00038 | 0.0808 | < | 0.005 |
| 1388088 | 01/16/96 | 01/17/96 | 0.5455 | < 0.00038 | < 0.008 | < | 0.005 |
| 1389653 | 02/13/96 | 02/14/96 | 0.1732 | 0.3507 | 0.1742 | < | 0.005 |
| 1401424 | 09/18/96 | 09/18/96 | 0.1965 | < 0.00038 | 0.0806 | < | 0.005 |
| 1402978 | 10/15/96 | 10/15/96 | 0.047 | 0.003 | UJ 0.009 | < | 0.004 |
| 1404091 | 11/05/96 | 11/05/96 | 0.103 | 0.027 | 0.091 | | 0.006 |
| 1405586 | 12/03/96 | 12/03/96 | 0.098 | 0.005 | 0.010 | < | 0.004 |
| 1409085 | 01/20/97 | 01/21/97 | 0.039 | < 0.004 | < 0.004 | < | 0.004 |
| 1411441 | 02/10/97 | 2/10/97 | 0.071 | < 0.004 | < 0.004 | < | 0.004 |
| 1415212 | 03/12/97 | 3/13/97 | 0.149 | 0.011 | 0.024 | < | 0.004 |
| 1417118 | 04/09/97 | 4/10/97 | 0.097 | 0.008 | 0.017 | < | 0.004 |
| Mean | | | 0.2072 | 0.0267 | 0.0398 | | 0.0047 |
| Standard Deviation | | | 0.2837 | 0.0839 | 0.0457 | | 0.0006 |
| t-value | | | 1.3368 | 1.3368 | 1.3368 | | 1.3368 |
| No of Observations | | | 17 | 17 | 17 | | 17 |
| 90% UCL | | | 0.2992 | 0.0539 | 0.0546 | | 0.0049 |
| Action Level (mg/L) | | | 0.005 | 0.005 | 0.070 | | 0.002 |
| Notes: Analysis performed by NFS laboratory UJ - estimated value below detection limit < - below detection limit | | | | | | | |

Table 2

| Second Quarter 1997 Offsite Groundwater Analytical Results for Volatile Organic Compounds | | | | | |
|--|-------------|-----------------------------|---------------------------|--------------------------------|------------------------|
| Sample ID | Well Number | Tetrachloroethylene mg/L | Trichloroethylene mg/L | 1,2-Dichloroethylene** mg/L | Vinyl chloride mg/L |
| OFG-MW116A | 116A | 0.440 | 0.032 | 0.031 | <0.005 |
| OFG-MW116B | 116B | 2.786 | 0.142 | 0.221 | <0.005 |
| OFG-MW117A | 117A | 0.141 | 0.016 | 0.013 | <0.005 |
| OFG-MW117B | 117B | 0.473 | 0.044 | 0.038 | <0.005 |
| OFG-MW118A | 118A | 0.012 | 0.008 | <0.008 | <0.005 |
| OFG-MW118B | 118B | 0.006 | 0.009 | 0.012 | 0.006 |
| OFG-MW119A* | 119A | 0.082 | 0.016 | 0.011 | <0.005 |
| OFG-MW120A* | 120A | 0.180 | 0.028 | 0.016 | <0.005 |
| OFG-MW120B | 120B | 0.297 | 0.026 | 0.022 | <0.005 |
| OFG-MW121A | 121A | 0.098 | 0.007 UJ | 0.005 | <0.005 |
| OFG-MW121B | 121B | 0.092 | 0.007 UJ | 0.005 | <0.005 |
| Mean | | 0.419 | 0.030 | 0.035 | <0.005 |
| Standard Deviation | | 0.801 | 0.039 | 0.063 | 0.000 |
| Observations | | 11 | 11 | 11 | 11 |
| t-value | | 1.812 | 1.812 | 1.812 | 1.812 |
| 95% Upper confidence | | 0.957 | 0.057 | 0.077 | 0.005 |
| MCL | | 0.005 | 0.005 | 0.07 | 0.002 |
| <p><u>Notes:</u> Data obtained 4/23/97 - 4/25/97. Analysis completed by NFS 105 Lab. *Duplicate sample: results averaged < = less than detection limit; value given is the quantitation limit. ** values represent total 1,2-dichloroethylene; assume total = cis-. MCL = Maximum Contaminant Level (EPA, 1996) Validated by EAS 6/4/97</p> | | | | | |

Table 3

| Second Quarter 1997 Offsite Groundwater Analytical Results for Radionuclides | | | | | | | | | | | | | |
|---|-----|---------------|-------|------|----|---------------|-------|------|----|---------------|-------|------|-----------------|
| Sample ID | | U-234 (pCi/L) | | | | U-235 (pCi/L) | | | | U-238 (pCi/L) | | | Total U (pCi/L) |
| | | Result | Error | MDC | | Result | Error | MDC | | Result | Error | MDC | |
| OFG-MW116A | BJ< | 0.49 | 0.30 | 0.89 | J< | 0.00 | 0.17 | 0.89 | J< | 0.00 | 0.00 | 0.33 | 0.49 |
| OFG-MW116B | B | 1.17 | 0.40 | 0.35 | J< | -0.13 | 0.23 | 1.21 | J< | 0.13 | 0.23 | 0.96 | 1.17 |
| OFG-MW117A | B | 0.87 | 0.34 | 0.34 | | 0.50 | 0.25 | 0.34 | J< | 0.13 | 0.33 | 1.34 | 1.50 |
| OFG-MW117B | B | 0.38 | 0.22 | 0.34 | J< | 0.00 | 0.00 | 0.34 | J< | 0.00 | 0.00 | 0.34 | 0.38 |
| OFG-MW118A | B | 3.18 | 0.66 | 0.32 | | 0.35 | 0.21 | 0.32 | | 1.18 | 0.38 | 0.32 | 4.72 |
| OFG-MW118B | B | 0.73 | 0.37 | 0.49 | J< | 0.00 | 0.00 | 0.49 | | 0.55 | 0.32 | 0.49 | 1.28 |
| OFG-MW119A | BJ< | 0.49 | 0.30 | 0.90 | J< | 0.00 | 0.00 | 0.33 | J< | 0.00 | 0.00 | 0.33 | 0.49 |
| OFG-MW120A | BJ< | 0.50 | 0.50 | 1.85 | J< | -0.25 | 0.25 | 1.85 | J< | 0.00 | 0.00 | 0.68 | 0.25 |
| OFG-MW120B | B | 1.14 | 0.41 | 0.38 | | 0.71 | 0.32 | 0.38 | J< | 0.28 | 0.20 | 0.38 | 2.13 |
| OFG-MW121A | B | 1.95 | 0.67 | 0.58 | J< | 0.00 | 0.00 | 0.58 | | 0.87 | 0.44 | 0.58 | 2.82 |
| OFG-MW121B | B | 0.96 | 0.39 | 0.89 | J< | 0.00 | 0.00 | 0.33 | | 0.48 | 0.24 | 0.33 | 1.45 |
| Mean | | 1.08 | | | | 0.11 | | | | 0.33 | | | 1.51 |
| Standard Deviation | | 0.83 | | | | 0.29 | | | | 0.40 | | | 1.32 |
| Observations | | 11 | | | | 11 | | | | 11 | | | 11 |
| t-value | | 1.812 | | | | 1.812 | | | | 1.812 | | | 1.812 |
| 95% Upper confidence | | 1.64 | | | | 0.33 | | | | 0.60 | | | 2.41 |
| Action Level | | ND | | | | ND | | | | ND | | | 30 pCi/L |
| Notes: < = less than the MDC J = estimated result B = sample result is less than 5 times the activity detected in the blank Total uranium is the sum of the activities of U-234, U-235, and U-238 Sample collected April 23-25, 1997 Action levels based on EPA proposed maximum contaminant level (MCL) for radionuclides in drinking water (EPA, 1996) ND = no data Validated by GCC 5/28/97 | | | | | | | | | | | | | |

ATTACHMENT II

***To Letter Dated June 19, 1997
T. S. Baer to Mr. G. Alan Farmer and Mr. Thomas Tiesler***

Interim Measures Progress Report

(4 pages to follow)

INTERIM MEASURES (IM) PROGRESS REPORT
SWMU's 2 ,4, 6, 7, 9 and 10
NUCLEAR FUEL SERVICES, INC.
EPA ID. NO. TND 00 309 5635

1.0 Work Completed

Since the last IM Progress Report dated March 21, 1997, excavation has continued on the CSX soil pile (SWMU 7). Removal of the CSX soil pile (SWMU 7) by packaging into intermodal containers for off-site burial at Envirocare of Utah, has yielded approximately 116,100 cubic feet of soil by May 30.

Excavation also began on the Demolition landfill (SWMUs 9 and 10) on April 10, 1997. The waste and debris obtained during the excavation of SWMUs 9 and 10 were transported into Building 410. The waste and debris was sorted, the waste then blended and packaged into burial bags for disposal. As of May 30, 1997, approximately 12,600 cubic feet of waste and debris has been transported into Building 410 and approximately 4,300 cubic feet of waste has been blended and packaged into burial bags. The debris has been placed into burial boxes and as of May 30, 12 boxes had been filled with compactable and non-compactable materials.

Through May 30, 5,476,298 gallons of groundwater has been treated and discharged in accordance with applicable regulations to the Erwin POTW in the 1,012 days since start-up.

2.0 Findings and Observations

Analytical data indicates that the waste and debris from the SWMUs 9 and 10 excavation process does not contain any hazardous constituents above the TCLP regulatory limits.

Influent Data

On November 22, 1996, the Pond 4 Groundwater drawdown project well operation was suspended. On May 16, 1997 efforts to re-start the drawdown system were initiated. Since pumping of the drawdown wells were suspended throughout most of this quarter, analytical data will be presented in the next report. The ponds adjacent and upgradient of the work area have continued to be pumped as necessary to maintain water levels within the ponds.

Groundwater Data

Monitoring Wells #26 and #28 are located in the Pond 4 area and are sampled monthly for PCE, vinyl chloride, and TBP as an indicator of groundwater quality in the Pond 4 area. Two groundwater samples from these wells were obtained since the last reporting period. Wells #101A and #102A are located along the western perimeter of the NFS site and area downgradient of the Pond 4 area. Wells #101A and #102A were sampled quarterly for PCE, vinyl chloride, and TBP through June 1995. In June 1995, the sampling frequency increased to monthly. Three groundwater samples were obtained from these wells since the last reporting period. Analytical results are presented in Attachment 1.

Tetrachloroethylene - PCE was detected in 31 of 32 (97%) samples obtained from Well #26. Concentrations of PCE were greater than the 0.005 mg/l MCL in 13 of 32 (41%) samples. Concentrations of PCE above the MCL ranged from 0.006 mg/l to 2.068 mg/l. PCE was detected in 30 of 31 (97%) of samples obtained from Well #28. All the PCE concentrations detected were above the MCL with a range of 0.213 mg/l to 2.173 mg/l.

PCE was detected in 20 of 28 (71%) samples obtained from Well #101A. Concentrations of PCE were greater than the MCL in 19 of 28 (68%) samples. Concentrations of PCE above the MCL in Well #101A ranged from 0.004 mg/l to 0.949 mg/l. PCE was detected at concentrations greater than the MCL in all samples obtained from Well #102A. PCE concentrations in Well #102A ranged from 0.084 mg/l to 2.96 mg/l.

Vinyl Chloride - Vinyl chloride has not been detected in Well #26, however, the PQL (0.005 mg/l) is greater than the 0.002 mg/l MCL. Vinyl chloride was detected in 23 of 31 (74%) samples obtained from Well #28. Detected concentrations ranged from an estimated value of 0.006 mg/l to 0.360 mg/l.

Vinyl Chloride was detected in 16 of 28 (50%) samples obtained from Well #101A. Concentrations of vinyl chloride in Well #101A samples ranged from 0.007 mg/l to 0.120 mg/l.

Vinyl chloride was detected in 3 of 28 samples (11%) obtained from Well #102A. These concentrations were 0.011 mg/l, 0.024 mg/l and 0.069 mg/l which are greater than the MCL.

Tributyl Phosphate - TBP was not detected in Wells #26, #101A or #102A at concentrations greater than the 0.2 mg/l provisional action level. TBP was detected in 18 of 31 (58%) samples obtained from Well #28. The August 1996 sample from Well #28 contained TBP at a concentration of 0.202 mg/l.

Data from Wells #26, #28, #101A and #102A were evaluated statistically to determine if contaminant concentrations have changed significantly as a result of waste removal. Results of the evaluation indicate an increase in PCE concentrations in Wells #26 and #28. TCE concentrations increased in Well #101A and #102A. Uranium concentrations increased in Well #26 and decreased in Well #28.

Vinyl chloride concentrations decreased in Well #28. Only one sample contained TBP above the MCL, therefore, TBP was not included in the evaluation.

An additional statistical evaluation was conducted to evaluate the effect of the temporary cessation of pumping on groundwater quality. Pumping was discontinued in November of 1996 for winter shut down. Groundwater data collected in October, November, and December 1996 were compared to January and February 1997 data. Results of the evaluation indicate there is no significant difference in contaminant concentrations (PCE, vinyl chloride, TBP) as a result of discontinuation of groundwater pumping.

3.0 Deviations from Workplan

There have been no deviations from the workplan during this quarter.

4.0 Problems and Solutions

None.

5.0 Work Completed

Work projected for the second quarter of 1997 includes:

- Continue excavation, packaging and shipping of CSX soil pile (SWMU 7)
- Continue excavation and processing waste and debris of demolition landfill (SWMU's 9 and 10)
- Continue packaging and shipping of backlogged debris generated during 1996 from SWMU's 2, 4, and 6 excavation operations
- Re-establish the maintenance of the groundwater drawdown wells in the Pond 4 Area

ATTACHMENT 1

Analytical Results for Wells 26, 28, 101A, and 102A

| Date Collected | Tetrachloroethylene (mg/L) | | | | Vinyl Chloride (mg/L) | | | | Tributyl Phosphate (mg/L) | | | |
|--------------------|----------------------------|---------|-----------|-----------|-----------------------|---------|-----------|-----------|---------------------------|---------|-----------|-----------|
| | Well 26 | Well 28 | Well 101A | Well 102A | Well 26 | Well 28 | Well 101A | Well 102A | Well 26 | Well 28 | Well 101A | Well 102A |
| 7/29/92 | ... | 0.590 | ... | ... | ... | J 0.006 | ... | ... | ... | < 0.010 | ... | ... |
| 11/93 | ... | ... | 0.114 | 2.960 | ... | ... | 0.054 | 0.011 | ... | ... | < 0.005 | < 0.005 |
| 2/94 | ... | ... | 0.155 | 0.834 | ... | ... | 0.047 | < 0.005 | ... | ... | < 0.118 | < 0.005 |
| 5/94 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | < 0.005 |
| 7/94 | 0.001 | ... | ... | ... | < 0.005 | ... | ... | ... | 0.005 | ... | ... | ... |
| 8/94 | 0.000 | 0.441 | ... | ... | < 0.005 | 0.132 | ... | ... | 0.010 | 0.140 | ... | ... |
| 9/94 | 0.002 | ... | 0.006 | 0.399 | < 0.005 | ... | 0.008 | < 0.005 | ... | ... | ... | ... |
| 10/94 | 0.003 | 0.661 | 0.004 | 0.629 | < 0.005 | 0.026 | < 0.005 | < 0.005 | < 0.005 | 0.027 | 0.035 | < 0.030 |
| 11/94 | 0.002 | 0.293 | ... | ... | < 0.005 | 0.018 | ... | ... | < 0.018 | 0.046 | < 0.030 | < 0.005 |
| 12/94 | 0.002 | 0.952 | ... | ... | < 0.005 | 0.037 | ... | ... | 0.020 | 0.123 | ... | ... |
| 1/95 | 0.024 | 1.309 | ... | ... | < 0.005 | 0.100 | ... | ... | < 0.030 | < 0.030 | ... | ... |
| 2/95 | 0.001 | 1.287 | 0.015 | 0.897 | < 0.005 | 0.043 | 0.007 | < 0.005 | < 0.030 | < 0.030 | 0.078 | < 0.030 |
| 3/95 | 0.001 | 2.173 | ... | ... | < 0.005 | 0.188 | ... | ... | < 0.030 | < 0.030 | ... | ... |
| 4/95 | 0.006 | 1.667 | ... | ... | < 0.005 | 0.183 | ... | ... | < 0.030 | 0.128 | ... | ... |
| 5/95 | 0.004 | 1.545 | 0.011 | 0.879 | < 0.005 | 0.140 | < 0.005 | < 0.005 | < 0.030 | 0.116 | 0.051 | < 0.030 |
| 6/95 | 0.002 | 1.438 | < 0.000 | 0.809 | < 0.005 | 0.097 | < 0.005 | < 0.005 | < 0.030 | 0.073 | 0.038 | < 0.030 |
| 7/95 | 0.003 | 1.411 | 0.016 | 1.054 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.030 | 0.036 | 0.034 | < 0.030 |
| 8/95 | 0.002 | 1.485 | 0.012 | 0.925 | < 0.005 | 0.137 | < 0.005 | < 0.005 | < 0.030 | < 0.030 | 0.031 | < 0.030 |
| 9/95 | 0.002 | 1.011 | 0.042 | 1.195 | < 0.005 | 0.101 | < 0.005 | < 0.005 | < 0.030 | 0.064 | 0.036 | < 0.030 |
| 10/95 | 0.003 | 1.798 | 0.011 | 1.203 | < 0.005 | 0.204 | < 0.005 | < 0.005 | < 0.030 | 0.105 | 0.032 | < 0.030 |
| 11/95 | 0.004 | 1.605 | 0.024 | 0.998 | < 0.005 | 0.192 | < 0.005 | < 0.005 | < 0.030 | 0.135 | 0.052 | < 0.030 |
| 12/95 | 0.002 | 1.880 | 0.059 | 0.822 | < 0.005 | 0.130 | 0.031 | < 0.005 | < 0.030 | 0.080 | 0.099 | < 0.030 |
| 1/96 | 0.004 | 1.922 | 0.052 | 0.236 | < 0.005 | < 0.005 | 0.083 | < 0.005 | < 0.030 | < 0.030 | 0.068 | < 0.030 |
| 2/96 | 0.005 | 1.024 | 0.053 | 0.396 | < 0.005 | < 0.005 | 0.081 | < 0.005 | < 0.030 | < 0.030 | 0.078 | < 0.030 |
| 3/96 | < 0.001 | 1.761 | < 0.000 | 0.133 | < 0.005 | 0.156 | 0.080 | < 0.005 | < 0.030 | 0.074 | 0.062 | < 0.030 |
| 4/96 | 0.006 | 1.963 | < 0.000 | 1.206 | < 0.005 | 0.316 | < 0.005 | < 0.005 | < 0.030 | 0.154 | 0.048 | < 0.030 |
| 5/96 | 0.006 | 1.860 | < 0.000 | 1.534 | < 0.005 | 0.137 | 0.026 | 0.024 | < 0.030 | 0.168 | 0.044 | < 0.030 |
| 6/96 | 0.009 | 1.615 | 0.082 | 0.883 | < 0.005 | 0.360 | 0.115 | < 0.005 | < 0.030 | 0.108 | 0.042 | < 0.030 |
| 7/96 | 0.009 | 0.213 | < 0.000 | 1.069 | < 0.005 | < 0.005 | 0.120 | < 0.005 | < 0.030 | < 0.030 | 0.041 | < 0.030 |
| 8/96 | 0.007 | 1.847 | < 0.001 | 0.702 | < 0.005 | 0.240 | < 0.005 | < 0.005 | < 0.030 | 0.202 | 0.036 | < 0.030 |
| 9/96 | 2.068 | < 0.001 | < 0.001 | 0.649 | < 0.005 | < 0.005 | 0.068 | < 0.005 | 0.154 | < 0.030 | 0.036 | < 0.030 |
| 10/96 | 0.007 | 1.442 | 0.949 | 0.084 | < 0.005 | 0.115 | < 0.005 | 0.069 | < 0.030 | 0.118 | 0.031 | < 0.030 |
| 11/96 | 0.008 | 1.091 | 0.073 | 1.904 | < 0.005 | 0.079 | 0.068 | < 0.005 | < 0.030 | < 0.030 | 0.034 | < 0.030 |
| 12/96 | 0.007 | 1.450 | 0.076 | 1.028 | < 0.005 | < 0.005 | 0.070 | < 0.005 | < 0.030 | < 0.030 | 0.035 | < 0.030 |
| 01/97 | 0.007 | 1.086 | 0.078 | 0.728 | < 0.005 | < 0.005 | 0.074 | < 0.005 | < 0.030 | < 0.030 | 0.042 | < 0.030 |
| 02/97 | 0.007 | 1.454 | < 0.0001 | 1.077 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.030 | < 0.030 | 0.048 | < 0.030 |
| 03/97 | ... | ... | 0.045 | 0.813 | ... | ... | 0.062 | < 0.005 | ... | ... | 0.032 | < 0.030 |
| Mean | 0.060 | 1.259 | 0.067 | 0.920 | 0.005 | 0.099 | 0.038 | 0.008 | 0.030 | 0.071 | 0.047 | 0.027 |
| Standard Deviation | 0.335 | 0.588 | 0.174 | 0.554 | 0.001 | 0.095 | 0.037 | 0.012 | 0.024 | 0.052 | 0.023 | 0.009 |
| No. Observations | 32 | 31 | 28 | 28 | 32 | 31 | 28 | 28 | 31 | 31 | 28 | 29 |
| t-value | 1.310 | 1.310 | 1.314 | 1.314 | 1.310 | 1.310 | 1.314 | 1.314 | 1.310 | 1.310 | 1.314 | 1.313 |
| 90% Conf. Limit | 0.137 | 1.397 | 0.110 | 1.057 | 0.005 | 0.122 | 0.047 | 0.011 | 0.036 | 0.083 | 0.053 | 0.029 |
| Action Level | 0.005 | 0.005 | 0.005 | 0.005 | 0.002 | 0.002 | 0.002 | 0.002 | 0.2* | 0.2* | 0.2* | 0.2* |

NOTES:

Action Levels based on US EPA Maximum Contaminant Levels (MCL) for drinking water (February 1996).
 * - Provisional action level based on Issue Paper (1992), verified with USEPA RCRA Health Assessment Office (May 1996)
 < Less than detection limit
 ... No sample collected
 Analysis performed by NFS
 J - Estimated value

REVISED: 6/13/97
Pond4-wells