7026 R-009-208.51

RESPONSE TO U. S. EPA AND OEPA COMMENTS ON THE APRIL 1995 SOUTH PLUME GROUNDWATER RECOVERY SYSTEM EVALUATION REPORT

07/13/95

DOE-1209-95
DOE-FN EPAS
25
RESPONSES

7026

Department of Energy
Fernald Environmental Management Project
P.O. Box 538705
Cincinnati, Ohio 45239-8705
(513) 648-3155

JUL 13 1995

DOE-1209-95

Mr. James Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V - 5HRE-8J
77 W. Jackson Boulevard
Chicago, IL 60604-3590

Mr. Thomas Schneider, Project Manager
Ohio Environmental Protection Agency
401 East Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

RESPONSE TO U.S. EPA AND OEPA COMMENTS ON THE APRIL 1995 SOUTH PLUME GROUNDWATER RECOVERY SYSTEM EVALUATION REPORT

References: 1) Letter, Jim Saric (U.S. EPA) to Jack Craig (DOE-FN), "South Plume Groundwater Recovery System Evaluation Report," dated May 8 1995.

2) Letter, T. A. Schneider (OEPA) to J. R. Craig (DOE-FN), "Comments - South Plume DMEPP Report," dated May 22, 1995.

Enclosed for your review and approval are the subject responses. Based on the referenced letters and comments as well as your discussions with Operable Unit 5 staff on June 13 and 28, 1995, it is apparent that both agencies would like an optimization study performed to assess the need for additional recovery wells and/or operational changes to optimize uranium removal from the off-property portion of the South Plume. The Department of Energy, Fernald Area Office (DOE-FN) agrees that the study would be beneficial.

In light of the agencies' interest in potentially modifying the recovery wellfield and pursuant to your discussions with the DOE-FN Operable Unit 5 (OU5) staff on June 13 and 28, 1995, a cost/benefit analysis and South Plume optimization study has been initiated to assess the advantage of refinements to the current South Plume groundwater recovery system. We will provide you with an update on the optimization study when the OU5 staff meets with you later this month.

Recycled and Recyclable

Since the Design, Monitoring, and Evaluation Program Plan (DMEPP) report is a status report, DOE recommends that this comment response documentation be incorporated into the April 1995 report rather than revising the report. Several issues raised in the U.S. EPA and OEPA comments are addressed in this comment response document and resultant actions will be incorporated in future DMEPP reports. Remaining issues are being addressed in the South Plume Optimization Study.

If you have any questions, please call Robert Janke at 648-3124.

Sincerely,

Robert Janke

for Jack R. Craig
Fernald Remedial Action
Project Manager

FN:RJJanke

Enclosures: As Stated

cc w/enc:

K. H. Chaney, EM-423/GTN
L. Griffin, EM-423/GTN
G. Jablonowski, USEPA-V AT-18J
J. Kwasniewski, OEPA-Columbus
P. Harris, OEPA-Dayton
M. Proffitt, OEPA-Dayton
S. McClellan, PRC
R. Cohen, GeoTrans
F. Bell, ATSDR
R. Owen, ODOH
D. J. Carr, FERMCO/52-5
R. D. George, FERMCO/52-2
T. Hagen, FERMCO/65-2
W. A. Hertel, FERMCO
AR Coordinator, FERMCO

cc w/o enc:

M. Yates, FERMCO/9

RESPONSES TO U.S. EPA COMMENTS ON THE SOUTH PLUME GROUNDWATER RECOVERY SYSTEM EVALUATION REPORT APRIL 1995

1. Commenting Organization: U.S. EPA Commentor: Saric
Section #: Executive Summary Page #: E-1 Line #: NA
Original General Comment #: 1

Comment: The executive summary states that despite operational problems and changes in pumping configurations, the system appears to be meeting the goals of the removal action because the extraction wellfield is preventing the southern migration of the uranium plume and minimizing the impact on the Paddys Run Road Site Plumes. It appears that the system is successfully minimizing the impact on the Paddys Run Road Site Plumes and is successfully minimizing the southern migration of the uranium plume, and that the highest concentration of the uranium plume is captured by4 the extraction well system; however, it does not appear that the extraction well system is a complete hydraulic barrier preventing all southern migration of the uranium plume. The southwestern-most edge of the uranium plume near monitoring well 2552 and 3552 is outside of the capture zone (flow divide) of the extraction system in all of the recovery well scenarios shown (see Figures 3.2-5 through 3.2-7). Also, the report states in Section .1.1 on page 3-3 that the tip of the plume is an area of increasing uranium contamination (See Figure 3.1-1). Although, the report states that uranium concentration increases in the southwestern tip of the plume, neither analytical data nor a discussion of why the increase may be occurring are presented.

The system evaluation report should be revised to provide a discussion that addresses this issue. Information regarding the plume migration rate, rate of uranium contamination increase in the southwestern-most edge of the plume, analytical data to support the observation of the increase in uranium concentration, and potential measures that can be employed to capture the tip of the plume should be included.

Response: This comment raises several concerns regarding the performance of the South Plume extraction system and whether or not the system, under its current configuration, is meeting the objectives of the removal action. These concerns fall into the following major areas:

1. Is the system serving as a complete hydraulic barrier?
2. Is the system capturing all of the 20 ppb uranium plume? If not, can additional capture be realized without further impact to the Paddys Run Road Site (PRRS) plume?
3. What is the rate and direction of plume migration, and what analytical data are available to show changes (increases) in concentration in the southern tip of the plume? What is the cause of the observed increase in concentration?

Responses for each of these questions are provided below.

1. Is the system serving as a complete hydraulic barrier?

To address this concern, it is important to note the technical distinctions between a "complete hydraulic barrier" and "complete capture" of a desired contaminant concentration. DOE recognizes this is a point of confusion and these terms therefore require some further definition. To clarify, DOE concludes that the system is serving as a complete hydraulic barrier because it is designed to create a hydraulic divide that extends across the full width of the plume (as defined by the width of the 20 ppb uranium concentration contour). The

hydraulic divide effectively prevents uranium concentrations greater than 20 ppb that exist upgradient of the divide from bypassing the extraction wells, thereby serving as an effective or "complete" hydraulic barrier. DOE considers this extension of the divide across the full width of the plume to satisfy the intentions of the removal action as it pertains to the effectiveness of the hydraulic barrier. In effect, no upgradient contaminants are getting past this barrier and thus its intended effect is "complete."

For clarity, a historical perspective of the removal action objectives and design approach is provided in the following paragraphs. It was recognized at the time of the South Plume Modeling Report (DOE 1993) that a portion of the plume would need to be truncated to satisfy the objective of minimizing impact to the PRRS plume. Moreover, at the time of the Operable Unit 5 FS and Proposed Plan, it was recognized that further actions to address the truncated portion would need to be incorporated into the final remedy, or, if necessary, as part of future DOE response obligations under the PRRS remedy. The optimization simulations DOE is planning to run will help answer the question as to how much of the 20 ppb area south of the current divide can be accommodated into the final remedy.

In the South Plume Groundwater Recovery System Design, Monitoring, and Evaluation Program Plan dated April 1993 specific objectives are identified. These objectives are as follows:

1) *The groundwater recovery wells need to be pumped at a sufficient rate to create a hydraulic barrier along a line running approximately perpendicular to the longitudinal axis of the plume in the shallow portion of the Great Miami Aquifer, creating an elongated groundwater trough. This hydraulic barrier needs to extend sufficiently outward from the centerline of the plume to intercept the width of the Zone 1 plume as defined by contamination above the 20 μg/L total uranium level.*
2) *The magnitude of the hydraulic trough needs to be minimized while still meeting Objective 1 in order to minimize the impact on the overall hydrogeologic system. If extensive capture zones are created, then the PRRS plumes may be pulled toward the recovery wells. Also, minimal disturbance to the local hydrologic system is desired to prevent impacts on groundwater users in the area, to minimize the possible velocity increases of movement of on-site plumes, and to not significantly deflect the PRRS contaminant flow trajectory. The recovery wells, therefore, need to create a hydraulic sink to prevent plume movement by the wells and to minimize capture zones and large scale reversals of groundwater flow.*
3) *Contamination within the aquifer needs to be removed as soon as feasible to prevent further plume movement and degradation of the groundwater environment. Removal of contaminants near the source or in the shallow portion of the aquifer is more efficient and prevents further damage. The recovery system should be operated to prevent further spread of contamination.*
4) *The operation of the removal action recovery system needs to be consistent with the final site remediation. This standard is difficult because the final site remediation systems are unknown at the present time. However, probably the most relevant issue regarding impacts of pump and treat systems is the possible expansion of other plumes caused by increasing hydraulic slope, thus increasing potential spread of contamination. This issue is the basis of Objective 2 which requires the minimizing of impacts on the natural system.*

Because of the constraints created by the PRRS plume, the location of the hydraulic divide is such that there are areas south (downgradient) of the divide where uranium concentrations do exceed 20 ppb. One of the areas is the small lobe connected to the main plume in the vicinity of Well 2552 (approximately 1.5 acres in size) that has concentration levels above 20 ppb. In effect, the divide truncates this area from the main plume as a necessary consequence of minimizing disturbance to the PRRS plume. (As discussed in the next response, the other area that exceeds 20 ppb is a disconnected area that is imbedded in the heart of the PRRS plume). The current location of the divide and the truncation of the plume is necessary to satisfy two competing objectives: (1) capture as much of the 20 ppb plume as possible, but without (2) causing detrimental impact to the PRRS plume.

Given the current configuration of the removal action wellfield and the pumping rate refinements that have been made over the past two years of operation, these two objectives are balanced as well as possible. However, as indicated at the June 28, 1995 meeting, DOE is planning to run additional optimization simulations. One of the objectives is to see if additional capture of the 20 ppb plume can be realized with different well pumping configurations and/or locations. If additional wells are found to be advantageous, they will be incorporated as required elements of the Operable Unit 5 final remedy.

On a related matter and in response to an Ohio EPA request, as part of the optimization study DOE will be examining the need for the continued operation of the three easternmost removal action recovery wells (3926, 3927, and 3928) to achieve interim capture of the upper portion of the plume that is situated near Willey Road. Based on model simulations this portion of the plume will remain within the area capable of being captured by the existing extraction wells until such time that the main remedial system is brought on line. In view of the relative rates at which the plume is advancing under natural gradients and because the eastern wells pump relatively low-concentration water to achieve full capture of this upper plume portion, it may be more prudent to discontinue pumping the easternmost wells and address the upper portion of the plume when the main remedial system along Willey Road proceeds forward. These tradeoffs will be explored though the optimization study.

Lastly, the optimization study will examine options to speed the overall remediation time for the off-property portion of the South Plume. The FS evaluations revealed that the off-property portion of the plume was not the limiting factor in the overall site-wide plume remediation time, and therefore additional wells off property were not proposed as part of the base-case FS remedy. The optimization evaluation will look at the benefits of additional wells in the highest concentration areas off property, in an effort to evaluate the benefits and tradeoffs required to enhance remediation time for the off-property area. The overall goal of the optimization study is to evaluate the best options for dovetailing the elements of the South Plume removal action with the intentions of the Operable Unit 5 remedial action.

2. Is the system capturing all of the 20 ppb uranium plume? If not, can additional capture be realized without further impact to the PRRS plume?

As mentioned above, there are two areas where concentrations greater than 20 ppb fall outside the capture zone created by the removal action: (1) the portion of the plume that is truncated by the hydraulic divide; and (2) a separate "closed contour" area that is embedded in the heart of the PRRS plume. The portion that is truncated by the removal action's hydraulic divide will be examined further in the optimization study to see if additional capture

can be achieved without further impact to the PRRS plume. Additional wells/configurations will be examined as part of this effort.

The "closed contour" area that is embedded in the PRRS plume will need to be examined as part of the PRRS remedy deliberations and is currently beyond the scope of the FEMP's Operable Unit 5 remedy. Response actions for the truncated portions of the plume that are deemed to fall outside the optimized capture zone (if any) will also have to be coordinated as part of the PRRS deliberations.

3. What is the rate and direction of plume migration, and what analytical data are available to show changes (increases) in concentration in the southern tip of the plume? What is the cause of the observed increase in concentration?

Based on information presented in the OU5 RI report, the rate of the uranium plume migration at the FEMP is estimated to be in the range of 33 - 88 feet per year. Based on data from Well 2552, the southern tip of the plume shows an increase in uranium concentration when comparing prepumping 1993 "Snapshot" data to October 1994 analytical data. If one compares all available data for Monitoring Well 2552 it appears that overall there is a decreasing trend of uranium concentrations in the well. Data collected as recent as May 8, 1995 shows that concentrations of uranium in groundwater at this location is 18 μg/L. A uranium concentration vs. time plot for Well 2552 is provided as Attachment 1. The cause for the temporary increase at Well 2552 is likely seasonal variation because this well is located immediately adjacent to Paddys Run at a point where the stream is generally gaining water from the aquifer during the wetter winter and spring months and losing water to the aquifer during the drier summer and fall months.

Action: DOE is planning to provide the results of the optimization simulations at a meeting with U.S. EPA on July 25, 1995. Recommendations regarding additional wells and their locations (if deemed necessary) will be provided at the meeting. The optimization findings and simulation results will then be incorporated into the remedial design deliverables that ultimately will be prepared for the Operable Unit 5 remedy in accordance with the approved remedial design work plan. DOE is also requesting that this comment/response packet, following approval, be incorporated into the current DMEPP (it is furnished on three-hole punched paper to facilitate placement in the existing binders). Other improvements to the DMEPP reporting process resulting from U.S. EPA's comments will be incorporated into the next DMEPP submittal, scheduled for October 2, 1995.

2. Commenting Organization: U.S. EPA Commentor: Saric
Section #: 2.2 Page #: 2-6 Line #: NA
Original Specific Comment #1

Comment: The report states that the integrity of the well screens in recovery wells 3924, 3926, and 3928 were compromised by holes. The report further states that a determination is pending on whether to redrill these wells or repair the well screens. Any decision made regarding repair or replacement of these well screens should be reviewed by the U.S. EPA prior to actions being taken in the field. The report should be revised to specify this requirement.

Response: Agree that U.S. EPA should be involved in the decision as to repair or replace Recovery Wells 3924, 3926 and 3928. Following discussions with U.S. EPA and OEPA on June 13 and June 28, 1995 DOE considered three potential methods of fixing the wells: 1) replacing the wells, 2) patching the holes in the screens, and 3) placing new screens in the wells. In the above-noted discussions, U.S. EPA and OEPA indicated their concurrence with DOE's

proposal to use Method 3. At the June 28, 1995 meeting U.S. EPA requested a schedule identifying when the replacement screens would be installed.

Action: No change to the DMEPP report required. In accordance with U.S. EPA's request, a schedule identifying when the repair work is to occur will be provided to U.S. EPA and OEPA at the meeting scheduled for July 25, 1995. Currently it is anticipated that the repair work will be completed by the end of September 1995.

3. Commenting Organization: U.S. EPA Commentor: Saric
Section #: 2.3 Page #: 2-9 Line #: NA
Original Specific Comment #2
Comment: Figure 2.3-2 shows the cumulative gallons pumped per month as wells 1 through 5; however, the text of the report refers to recovery wells 3924 through 3928. This discrepancy should be resolved.
Response: Agreed.
Action: All relevant figures will be modified for the next DMEPP report to show the FEMP well identification numbers 3924 through 3928.

4. Commenting Organization: U.S. EPA Commentor: Saric
Section #: 3.1.1 Page #: 3-3 Line #: NA
Original Specific Comment #3
Comment: The report states that an increase in uranium plume near Willey Road, the southern tip of the plume, and the center of the plume north of well 2061 and near recovery well 3925. An explanation for the increased concentration in all areas except the southern tip is given. An explanation for the increase of uranium contamination in the southern plume tip should also be provided. The southern tip appears to be outside of the capture zone (flow divide) of the recovery well system. General Comment # 1 discusses this issue further.

Also, analytical data should be included to support the observation that uranium contamination increases in concentration in the southern tip of the plume.
Response: Agree. An explanation for the depicted increase of uranium in the southern tip is needed. As discussed in the response to U.S. EPA General Comment 1 the basis for the increase in the southern tip is uranium concentrations in Well 2552. Based on data from Well 2552, the southern tip of the plume shows an increase in uranium concentration when comparing prepumping 1993 "Snapshot" data to October 1994 analytical data. If one compares all available data for Monitoring Well 2552 it appears that overall there is a decreasing trend of uranium concentrations in the well.
Action: See action for General Comment 1.

5. Commenting Organization: U.S. EPA Commentor: Saric
Section #: 3.1.3 Page #: 3-10 Line #: NA
Original Specific Comment #4
Comment: This section discusses variable concentrations of potassium in well 2128. A detection value of "16,000" was reported for this well; however, no unit value (for example, milligrams per liter) is provided. This omission should be corrected.
Response: Agreed. The text at the bottom of page 3-9 and continued on page 3-10 should have read " a detection value of 16 mg/L (October 3, 1994) represents the maximum concentration observed for this well during the reporting period."
Action: The text of the next DMEPP will be corrected as noted in the response to the comment.

RESPONSES TO OHIO EPA COMMENTS ON THE SOUTH PLUME GROUNDWATER RECOVERY SYSTEM EVALUATION REPORT APRIL 1995

6. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: Executive Summary Pg.#: E-1 Line#: Para 3 Code:
Original Comment# 1
Comment: This paragraph indicates that the As levels increase for any change to the pumping system. This should be revised to indicate that As levels increase as the pumping rate for the recovery system is increased.
Response: Arsenic concentrations can increase with changes to pumping rates as the reviewer suggests. However, arsenic concentrations also appear to increase with various pumping configurations.

Action: Future reports will be clearer on the types of recovery well operations that appear to impact arsenic concentrations south of the recovery well field.

7. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Line#: Code:
Original Comment# 2
Comment: Ground water data for monitoring wells 3062, 2396, 3396, 2552, 3689, 3552, 2553, 2546 are not included in this report. These monitor wells are located so that they may provide important information as to plume properties southwest of the recovery system. This data should be incorporated in the analysis.
Response: Agree that data from these wells are not included in the appendices of the report. However data from the above noted Type 2 wells have been used to generate the contours in Figures 3.1-1 and 3.1-2. Groundwater total uranium data were available from other sampling programs for Monitoring Wells 2396, 3396, 2552, 3689, 3552, 2553, 2546 and other Type 2 wells in the vicinity of the South Plume. This data was used where applicable in preparing this report. Because these wells were not part of the DMEPP program at the time the report was compiled they were not included in Appendix A. Before receipt of OEPA comments, DOE added some of these wells to the DMEPP program for use in the preparation of the next DMEPP Status Report. Any remaining monitoring wells listed above that are not part of the DMEPP program will be added.
Action: The data referenced in the response is provided in the attached data table (Attachment 2). All data used in the preparation of the DMEPP report will be included in future DMEPP Reports. DOE will add those wells identified by OEPA in Comments 2 and 6 to the DMEPP program for total uranium analysis and water elevation measurements by the next scheduled DMEPP sampling event.

8. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Figure 3.1.2 Line#: Code:
Original Comment# 3
Comment: Monitoring well 3125 is drawn between the 20 ppb and the 5 ppb contours when in fact it should be well within the 50 ppb contour. The average 1994 uranium concentration for this well is reported as being 60.4 ppb.
Response: Paragraph 2 on page 3-3 of the report states that Figure 3.1-2 was based on data collected from Type 2 monitoring wells. Therefore it was not appropriate to use data from Well 3125 to prepare the plume map.

Action: To eliminate confusion, future figures will be labeled "Based on Type 2 Well Data" or "Type 3" as appropriate. A new figure and associated discussion will be prepared depicting uranium concentration contours for Type 3 wells in the study area for future DMEPP reports.

9. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Figure 3.1.2 Line#: Code:
Original Comment# 4
Comment: Monitoring well 2624 is drawn between the 20 ppb and 50 ppb contours. The average 1994 uranium concentration for this well is reported as 62.25 ppb. The contours should be redrawn to include 2624 in the 50 ppb contour.
Response: Figure 3.1-2 notes that July and October 1994 total uranium data (not average concentrations) were used to generate this figure. For Well 2624 the latest available data was collected October 6, 1994. The total uranium concentration for this date was 25 μg/L which places Well 2624 between the 20 ppb and 50 ppb contours as drawn in the figure.
Action: None required.

10. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Figure 3.1.2 Line#: Code:
Original Comment# 5
Comment: The average 1994 uranium concentration for monitoring well 2095 is reported as 170 ppb. This indicates that the 200 ppb contour around 2061 is not as isolated as shown on the map. The 200 ppb contour should be extended north closer to 2095.
Response: When comparing Figure 3.1-1 to Figure 3.1-2 it should be noted that an area of increased total uranium concentration was present north of Well 2095 before the start up of the recovery wells. As the plume moved south towards the recovery wells in 1994, uranium concentrations increased at Well 2095. Therefore, the relatively high levels of uranium at Well 2095 are related more to plume movement from the north than they are to concentrations at Well 2061 to the south. To extend the 200 ppb contour to the north would suggest plume movement to the north when Figures 3.1-1 and 3.1-2 are both considered.
Action: None required.

11. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Line#: Code:
Original Comment# 6
Comment: The uranium plume has not been fully defined in the southwest region of the plume indicated in figure 3.1-2. This area includes monitoring wells 2624, 3624, 3689, 2125, 3125, 4125, 2545, 3062, 2552, 3552, 2396, 3396. The Ohio EPA cites the following as evidence of this: A) No explanation has been given for elevated uranium concentrations in monitoring well 3125 (average 1994 concentrations of 60.4 ppb) while monitoring well 2125 has an average 1994 uranium concentration of only 13.5 ppb. No where else in the DMEPP study area is higher uranium concentrations found in the type 3 well when compared to the type 2 well in the same cluster. This may be evidence of a significant variation in flow and/or transport in this area.

B) The average uranium concentration for monitoring well 3125 has increased from 47.6 ppb in 1993 to 60.4 ppb in 1994. Monitoring well 2624 which lies between 3125 and the 200 ppb contour has decreased during this time (1993 uranium concentration of 83.7 and a 1994 uranium concentration of 65.2 ppb). Monitoring well 3624 has consistently shown very low concentrations of uranium (.4 ppb for 1993 and .5 ppb for 1994). These monitoring wells clearly do not indicate the same trend as is found in 2125 and 3125 even though they are

between the 200 ppb contour and monitoring wells 2125 and 3125. This is additional evidence of a significant variation in flow and/or transport in this area.

C) Data for monitoring wells 3062, 2396, 3396, 2552, 3689, 3552, 2553, 2546 are not included in this report. This does not leave much hard data to assess the contouring for the southwestern portion of the plume. This data must be incorporated into the report.

Response: DOE disagrees that the uranium plume has not been fully defined in the southwest area. Total uranium data for all of the OEPA-noted wells with the exception of Well 3062 was available and used in the preparation of Figures 3.1-1, 3.1-2 and 3.1-3. The wells referenced by OEPA were not part of the DMEPP work plan (DOE 1993) and therefore were not included in Appendix A.

A) The higher total uranium concentrations noted in monitoring well 3125 compared to Well 2125 is due to the location of this well cluster. Monitoring Wells 2125 and 3125 are the only well cluster in the DMEPP study area immediately adjacent to Paddys Run. Because these wells are so close to a losing stretch of Paddys Run, infiltration from relatively uncontaminated surface water has kept concentrations of uranium in Well 2125 below 50 μg/L. Surface water controls implemented at the FEMP since 1986 have reduced uranium concentrations in surface water leaving the FEMP via Paddys Run from about 80 μg/L to < 10 μg/L. What we are seeing in Well 3125 today has likely resulted from infiltration of uranium-contaminated surface water before 1986. Modeling results presented in the August 1994 DMEPP Report addressed the issue of capture of uranium present at the Type 3 well-depth interval. Both horizontal and vertical particle tracks presented in Section 3.2 of the August 1994 DMEPP Report confirmed total capture of the uranium plume at depth (to bedrock) and in the vicinity of Well 3125.

B) DOE agrees that a comparison of Well Cluster 2125/3125 to 2624/3624 shows a difference in flow and/or transport. A comparison of all the well clusters in the vicinity of the study area shows that the effect of infiltration from Paddys Run is very localized in those areas where Paddys Run is a losing stream (see Attachment 3). Previous data presented in the August 1994 report addressed the issue of migration and capture of the uranium plume at the Type 3 well-depth interval.

C) As noted in the beginning of this response, data was available from all wells except 3062. This data was not included in Appendix A because the data was collected under a separate work plan. DOE feels that with the available data the uranium plume in the southwest region was adequately defined.

Action: The data currently not collected under the DMEPP work plan but used for interpretation is presented in Attachment 2. All available data used in the preparation of the DMEPP report will be included in future reports. DOE will add those wells identified by OEPA in Comments 2 and 6 to the DMEPP program for total uranium analysis and water elevation measurements by the next scheduled sampling event. Attachment 3 shows those stretches of Paddys Run that are gaining and losing stretches.

12. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Figure 3.1.3 Line#: Code:
Original Comment# 7
Comment: What is the increase in uranium concentrations around monitoring wells 2552, 3552 based on? This data was not included in the report.
Response: See response to U.S. EPA General Comment 1 and 4.
Action: See action for U.S. EPA General Comment 1.

13. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.1 Pg.#: Figure 3.1.3 Line#: Code:
Original Comment# 8
Comment: Uranium concentrations in monitoring well 3125 increased from 47.6 ppb in 1993 to 60.4 ppb in 1994. This should be indicated on the figure.
Response: Figure 3.1-3 is based on data from Type 2 wells. Well 3125 is the only Type 3 well monitored with concentrations above the proposed cleanup level of 20 μg/L.
Action: Uranium concentrations in Type 3 wells will be discussed in future DMEPP reports.

14. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.4 Pg.#: Line#: Code:
Original Comment# 9a
Comment: Tables 3.1-2 and 3.1-3 DMEPP Statistical Summary show values reported to one thousandth of a part per billion or to the part per trillion. FEMP analytical methods do not allow accuracy to this degree. The table should be adjusted accordingly.
Response: Agree.
Action: Future statistical data tables will round off to the nearest significant figure.

15. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 3.1.4 Pg.#: 3-12 Line#: para 1 Code:
Original Comment# 9b
Comment: This paragraph omits monitoring wells 2552 and 3552 which shows an increase in uranium concentration in figure 3.1-3.
Response: Well 2552 was not a part of the DMEPP monitoring program as defined in the 1993 DMEPP work plan and was therefore not included. The data for Well 2552 will be included in the appendices for future DMEPP reports. Wells 2552 and 3552 are being added to the DMEPP monitoring network and will also be included in future reports.
Action: Attached is uranium data (Attachment 2) for both wells in the data summary and a concentration vs. time plot for total uranium in Well 2552 (Attachment 1).

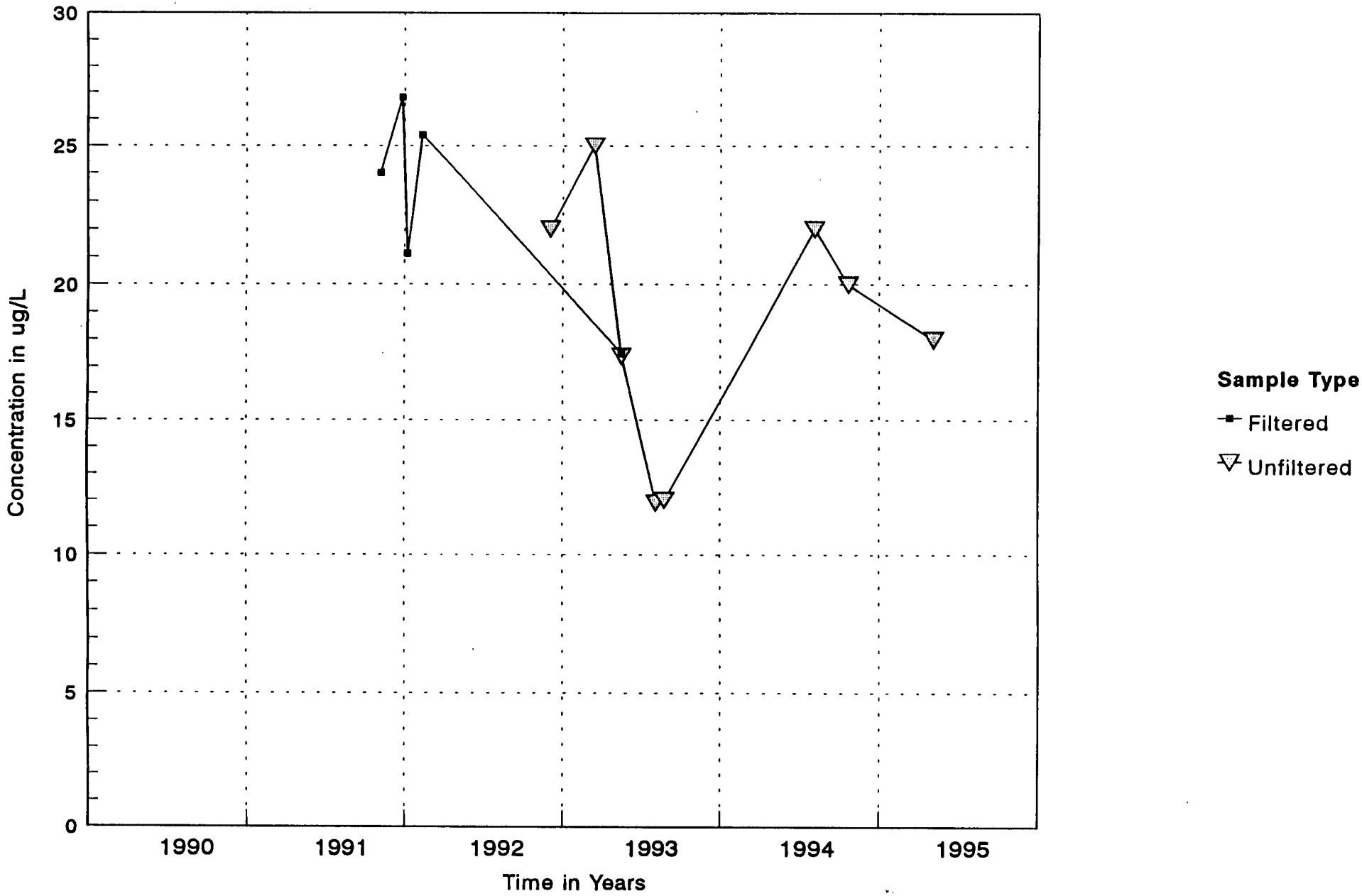
16. Commenting Organization: Ohio EPA Commentor: DDAGW
Section#: 4.0 Pg.#: para 3 Line#: Code:
Original Comment# 10
Comment: Sampling results do not show that the system is meeting the overall project objective of capture of the uranium plume. The Ohio EPA has identified data gaps which exist in the southwestern portion of the projected plume that are not satisfied by this report. This report shows that additional data is needed for this area and that an additional production well will probably be warranted west southwest of production well 3924. Production wells 3926, 3927, and 3928 are removing ground water with uranium concentrations that are near background. These wells do not appear to be useful and should be shut down.
Response: As noted previously, data from wells identified by the OEPA were not normally collected under the DMEPP work plan. It is available from other sampling programs and has been and will continue to be used to write the DMEPP report. DOE acknowledges that one of the wells (3062) was not used in any analyses but does not believe that the lack of data from this one well would impact the conclusions of the document sufficiently to suggest that project goals are not being met. As noted in the comment responses for Comments 7 and 11, DOE plans to add those wells identified by OEPA as critical to the DMEPP before the next scheduled DMEPP sampling round. A number of these wells were incorporated in the DMEPP before receipt of OEPA comments.

The placement of an additional recovery well west-southwest of Production Well 3924 is already being investigated in response to EPA comments and as was identified by DOE in the South Plume Removal Action Groundwater Modeling Report (SPMR) (DOE 1993).

The shutdown of Recovery Wells 3926, 3927 and 3928 will temporarily impact total capture of the width of the 20 μg/L isopleth of the uranium plume. Modeling projections show that the shutdown of Recovery Wells 3926, 3927 and 3928 will result in the portion of the plume northeast of the recovery well field not being captured over time, which would violate the goals of the removal action. Once the final groundwater remedy for the site is implemented these wells may be shut down permanently if the area of the plume in question is captured by one of the planned recovery well fields. The South Plume Optimization Study may also indicate that one or more of these wells may be shut down either temporarily or permanently. OEPA has been informed that Recovery Well 3928 has been temporarily shut down. Results of the optimization study will determine the future need of this well. See response to U.S. EPA General Comment 1 for additional discussion pertinent to this comment.

Action: The wells identified by OEPA will be added to the DMEPP sampling program if not already included in the program. Recovery Well 3928 will not be operated unless the South Plume Optimization Study results shows such a need. OEPA will be informed of the results of the optimization study related to the South Plume remediation, as discussed in the meetings with DOE on June 13 and June 28, 1995. An update on the South Plume Optimization will be provided to OEPA in July 1995.

Attachment 1



Monitoring Well 2552 Uranium Concentration

Attachment 2

Uranium Sampling for Selected Wells

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 2015										
Uranium, Total	04/19/88	003097	NORMAL	NONE	*U	168.000	J	ug/L	IT	168.000
Uranium, Total	08/03/88	003395	NORMAL	NONE	*U	169.000	-	ug/L	IT	
Uranium, Total	08/03/88	003396	DUPLICATE	NONE	*U	178.000	-	ug/L	IT	
Uranium, Total	11/07/88	003684	NORMAL	F	FILTERED	179.000	-	ug/L	IT	179.000
Uranium, Total	11/07/88	003684	NORMAL	U	UNFILTER	185.000	-	ug/L	IT	185.000
Uranium, Total	02/06/89	003881	NORMAL	F	FILTERED	199.000	J	ug/L	IT	
Uranium, Total	02/06/89	003881	NORMAL	U	UNFILTER	186.000	J	ug/L	IT	
Uranium, Total	03/01/90	004212	NORMAL	NONE	*U	290.000	-	ug/L	IT	290.000
Uranium, Total	03/08/90	EMGW_SYSGEN_422	NORMAL	NONE	UNFILTER	145.000	NV	ug/L	IT	145.000
Uranium, Total	06/14/90	EMGW_SYSGEN_423	NORMAL	NONE	UNFILTER	184.000	NV	ug/L	IT	184.000
Uranium, Total	09/06/90	EMGW_SYSGEN_424	NORMAL	NONE	UNFILTER	171.000	NV	ug/L	IT	171.000
Uranium, Total	01/02/91	EMGW_SYSGEN_425	NORMAL	NONE	UNFILTER	165.000	NV	ug/L	IT	165.000
Uranium, Total	01/02/91	EMGW_SYSGEN_425D	DUPLICATE	NONE	UNFILTER	146.000	NV	ug/L	IT	146.000
Uranium, Total	03/11/91	EMGW_SYSGEN_426	NORMAL	NONE	UNFILTER	189.000	NV	ug/L	IT	189.000
Uranium, Total	09/24/91	EMGW_SYSGEN_427	NORMAL	NONE	UNFILTER	165.000	NV	ug/L	WMCO	165.000
Uranium, Total	10/31/91	EMGW_SYSGEN_428	NORMAL	NONE	UNFILTER	171.000	NV	ug/L	WMCO	171.000
Uranium, Total	08/19/92	2015-08/19/92-A-N8	NORMAL	NONE	UNFILTER	170.000	NV	ug/L	WMCO	170.000
Uranium, Total	05/24/93	GW930524-16	NORMAL	NONE	FILTERED	197.000	-	ug/L	CORE	197.000
Uranium, Total	05/24/93	GW930524-16	NORMAL	NONE	UNFILTER	199.000	-	ug/L	CORE	199.000
Uranium, Total	05/24/93	GW930524-16	NORMAL	NONE	FILTERED	180.000	NV	ug/L	FERMCO	180.000
Uranium, Total	05/24/93	GW930524-16	NORMAL	NONE	UNFILTER	180.000	NV	ug/L	FERMCO	180.000
Uranium, Total	08/10/93	GW930810-9	NORMAL	NONE	UNFILTER	129.000	-	ug/L	CORE	129.000
Uranium, Total	08/10/93	GW930810-9	NORMAL	NONE	*U	140.000	NV	ug/L	FERMCO	140.000
Uranium, Total	08/10/93	GW930810-9	NORMAL	NONE	*U	140.000	NV	ug/L	FERMCO	140.000
Uranium, Total	02/25/94	200040451	NORMAL	NONE	UNFILTER	170.000	NV	ug/L	FERMCO	170.000
Uranium, Total	05/10/94	200056366	NORMAL	NONE	UNFILTER	160.000	NV	ug/L	FERMCO	160.000
Uranium, Total	08/03/94	200081816	NORMAL	NONE	UNFILTER	160.000	NV	ug/L	LOW LEVEL	160.000
Uranium, Total	10/12/94	200101895	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	160.000
Well 2017										
Uranium, Total	04/06/88	003078	NORMAL	NONE	*U	3.000	J	ug/L	IT	
Uranium, Total	07/26/88	003379	NORMAL	NONE	*U	4.000	J	ug/L	IT	4.000
Uranium, Total	11/06/88	003660	NORMAL	NONE	*U	3.000	J	ug/L	IT	3.000
Uranium, Total	01/20/89	003846	NORMAL	NONE	*U	4.000	-	ug/L	IT	
Uranium, Total	04/09/90	004214	NORMAL	NONE	*U	3.590	-	ug/L	IT	3.590
Uranium, Total	06/13/90	EMGW_SYSGEN_435	NORMAL	NONE	UNFILTER	5.350	NV	ug/L	IT	5.350
Uranium, Total	09/06/90	EMGW_SYSGEN_436	NORMAL	NONE	UNFILTER	4.360	NV	ug/L	IT	4.360
Uranium, Total	12/05/90	EMGW_SYSGEN_437	NORMAL	NONE	UNFILTER	3.860	NV	ug/L	IT	3.860
Uranium, Total	03/06/91	067954	NORMAL	NONE	*F	5.940	-	ug/L	IT	5.940
Uranium, Total	05/14/91	068007	NORMAL	NONE	*F	3.170	-	ug/L	IT/RSL	3.170
Uranium, Total	05/14/91	068008	NORMAL	NONE	*F	3.000	NV	ug/L	WEMCO	3.000

7026

16

Uranium Sampling for Selected Wells

Well	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
2017	06/13/91	068081	NORMAL	NONE	*F	2.800	NV	ug/L	WEMCO	2.800
Uranium, Total	09/10/91	EMGW_SYSGEN_438	NORMAL	NONE	UNFILTER	5.400	NV	ug/L	WMCO	5.400
Uranium, Total	09/18/91	068239	NORMAL	NONE	*F	5.160	-	ug/L	IT	
Uranium, Total	09/18/91	068240	NORMAL	NONE	*F	4.200	NV	ug/L	WEMCO	4.200
Uranium, Total	10/16/91	068315	NORMAL	NONE	*F	5.090	-	ug/L	IT	5.090
Uranium, Total	10/16/91	068316	NORMAL	NONE	*F	4.400	NV	ug/L	WEMCO	4.400
Uranium, Total	11/06/91	068390	NORMAL	NONE	*F	4.280	-	ug/L	IT	4.280
Uranium, Total	11/06/91	068391	NORMAL	NONE	*F	4.400	NV	ug/L	WEMCO	4.400
Uranium, Total	12/12/91	068452	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	01/07/92	068514	NORMAL	NONE	*F	3.490	-	ug/L	IT/RSL	3.490
Uranium, Total	02/10/92	068561	NORMAL	NONE	*F	7.490	J	ug/L	IT	7.490
Uranium, Total	08/11/92	2017-08/11/92-B-N8	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	4.200
Uranium, Total	11/03/92	2017-11/03/92-A-N8	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	4.200
Uranium, Total	04/26/93	GW930426-14	NORMAL	NONE	FILTERED	4.000	NV	ug/L	FERMCO	4.000
Uranium, Total	04/26/93	GW930426-14	NORMAL	NONE	FILTERED	4.500	-	ug/L	CORE	4.500
Uranium, Total	04/26/93	GW930426-14	NORMAL	NONE	UNFILTER	4.500	-	ug/L	CORE	4.500
Uranium, Total	04/26/93	GW930426-14	NORMAL	NONE	FILTERED	3.700	NV	ug/L	FERMCO	3.700
Uranium, Total	08/05/93	GW930805-4	NORMAL	NONE	UNFILTER	3.800	-	ug/L	CORE	3.800
Uranium, Total	05/04/94	200056107	NORMAL	NONE	UNFILTER	4.000	NV	ug/L	FERMCO	4.000
Uranium, Total	10/19/94	200102861	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	5.000
2060	06/02/88	003257	DUPLICATE	NONE	*U	242.000	-	ug/L	IT	
Uranium, Total	06/02/88	003260	DUPLICATE	NONE	*U	203.000	-	ug/L	IT	
Uranium, Total	08/04/88	003399	NORMAL	F	FILTERED	239.000	-	ug/L	IT	
Uranium, Total	08/04/88	003399	NORMAL	U	UNFILTER	225.000	-	ug/L	IT	225.000
Uranium, Total	10/25/88	003696	NORMAL	NONE	*U	171.000	-	ug/L	IT	171.000
Uranium, Total	02/01/89	003889	NORMAL	NONE	*U	250.000	J	ug/L	IT	250.000
Uranium, Total	03/02/90	004223	NORMAL	NONE	*U	332.000	-	ug/L	IT	332.000
Uranium, Total	03/15/90	EMGW_SYSGEN_607	NORMAL	NONE	UNFILTER	228.000	NV	ug/L	IT	228.000
Uranium, Total	06/13/90	EMGW_SYSGEN_608	NORMAL	NONE	UNFILTER	233.000	NV	ug/L	IT	233.000
Uranium, Total	11/26/90	EMGW_SYSGEN_610	NORMAL	NONE	UNFILTER	133.000	NV	ug/L	IT	133.000
Uranium, Total	08/10/93	GW930810-10	NORMAL	NONE	UNFILTER	103.000	-	ug/L	CORE	103.000
Uranium, Total	08/10/93	GW930810-10	NORMAL	NONE	*U	100.000	NV	ug/L	FERMCO	100.000
Uranium, Total	08/10/93	GW930810-10	NORMAL	NONE	*U	100.000	NV	ug/L	FERMCO	100.000
Uranium, Total	02/24/94	200040678	NORMAL	NONE	UNFILTER	75.000	NV	ug/L	FERMCO	75.000
Uranium, Total	05/04/94	200055738	NORMAL	NONE	UNFILTER	56.000	NV	ug/L	FERMCO	56.000
Uranium, Total	08/03/94	200082179	NORMAL	NONE	UNFILTER	49.000	NV	ug/L	LOW LEVEL	49.000
Uranium, Total	10/12/94	200101897	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	61.000

Uranium Sampling for Selected Wells

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 2106										
Uranium, Total	02/07/89	004021	NORMAL	NONE	*U	61.000	J	ug/L	IT	61.000
Uranium, Total	04/30/89	004101	NORMAL	NONE	*U	16.000	-	ug/L	IT	
Uranium, Total	03/02/90	004236	NORMAL	NONE	*U	88.600	-	ug/L	IT	88.600
Uranium, Total	06/15/90	EMGW_SYSGEN_725	NORMAL	NONE	UNFILTER	50.900	NV	ug/L	IT	50.900
Uranium, Total	09/06/90	EMGW_SYSGEN_726	NORMAL	NONE	UNFILTER	56.000	NV	ug/L	IT	56.000
Uranium, Total	03/06/91	067952	NORMAL	NONE	*F	64.500	-	ug/L	IT	64.500
Uranium, Total	05/07/91	068003	NORMAL	NONE	*F	67.800	-	ug/L	IT	67.800
Uranium, Total	05/07/91	068004	NORMAL	NONE	*F	65.000	NV	ug/L	WEMCO	65.000
Uranium, Total	08/28/91	068214	NORMAL	NONE	*F	54.000	NV	ug/L	WEMCO	54.000
Uranium, Total	09/17/91	068235	NORMAL	NONE	*F	53.100	NV	ug/L	IT	
Uranium, Total	09/17/91	068236	NORMAL	NONE	*F	57.000	NV	ug/L	WEMCO	57.000
Uranium, Total	10/07/91	068293	NORMAL	NONE	*F	47.000	NV	ug/L	WEMCO	47.000
Uranium, Total	10/07/91	068292	NORMAL	NONE	*F	50.700	-	ug/L	IT/RSL	50.700
Uranium, Total	11/05/91	068369	NORMAL	NONE	*F	49.400	-	ug/L	IT	49.400
Uranium, Total	11/05/91	068370	NORMAL	NONE	*F	49.000	NV	ug/L	WEMCO	49.000
Uranium, Total	11/07/91	EMGW_SYSGEN_727	NORMAL	NONE	UNFILTER	50.000	NV	ug/L	WMCO	50.000
Uranium, Total	01/06/92	068513	NORMAL	NONE	*F	57.800	-	ug/L	IT	57.800
Uranium, Total	02/06/92	068560	NORMAL	NONE	*F	81.400	J	ug/L	IT	81.400
Uranium, Total	08/06/92	2106-08/06/92-B-N9	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	53.000
Uranium, Total	10/13/92	2106-10/13/92-B-N9	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	75.000
Uranium, Total	12/03/92	068437	NORMAL	NONE	*F	51.000	-	ug/L	IT	51.000
Uranium, Total	12/03/92	068438	NORMAL	NONE	*F	50.000	NV	ug/L	FERMCO	50.000
Uranium, Total	01/06/93	GW930106-3	NORMAL	NONE	UNFILTER	47.300	NV	ug/L	CORE	47.300
Uranium, Total	01/06/93	GW930106-3	NORMAL	NONE	UNFILTER	45.000	NV	ug/L	FERMCO Lab	45.000
Uranium, Total	04/07/93	GW930407-8	NORMAL	NONE	FILTERED	66.000	NV	ug/L	FERMCO	66.000
Uranium, Total	04/07/93	GW930407-8	NORMAL	NONE	UNFILTER	67.900	-	ug/L	CORE	67.900
Uranium, Total	04/07/93	GW930407-8	NORMAL	NONE	FILTERED	62.200	-	ug/L	CORE	62.200
Uranium, Total	04/07/93	GW930407-8	NORMAL	NONE	UNFILTER	65.000	NV	ug/L	FERMCO	65.000
Uranium, Total	07/26/93	GW930726-1	NORMAL	NONE	UNFILTER	69.700	-	ug/L	CORE	69.700
Uranium, Total	07/26/93	GW930726-1	NORMAL	NONE	UNFILTER	61.000	NV	ug/L	FERMCO	61.000
Uranium, Total	09/16/93	GW930916-1	NORMAL	NONE	UNFILTER	57.100	-	ug/L	CORE	57.100
Uranium, Total	09/16/93	GW930916-1	NORMAL	NONE	*U	52.000	NV	ug/L	FERMCO	52.000
Uranium, Total	01/25/94	200034948	NORMAL	NONE	UNFILTER	2.177	< U	ug/L	DATACHEM	2.200
Uranium, Total	01/25/94	200034948	NORMAL	RE	UNFILTER	70.000	NV	ug/L	DATACHEM	70.000
Uranium, Total	04/12/94	200049725	NORMAL	NONE	UNFILTER	6.059	J	ug/L	ORAS	6.100
Uranium, Total	07/05/94	200071961	NORMAL	NONE	UNFILTER	34.538	J	ug/L	ORAS	34.500
Uranium, Total	09/06/94	200091617	NORMAL	NONE	UNFILTER	47.845	-	ug/L	ORAS	47.800
Uranium, Total	09/06/94	200091663	DUPLICATE	NONE	UNFILTER	54.128	-	ug/L	ORAS	54.100
Well 2434										
Uranium, Total	01/25/93	GW930125-2	NORMAL	NONE	UNFILTER	2.000	NV	ug/L	FERMCO Lab	2.000

7026

18

Uranium Sampling for Selected Wells

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 2434										
Uranium, Total	01/25/93	GW930125-2	NORMAL	NONE	UNFILTER	0.500	< NV	ug/L	CORE	0.500
Uranium, Total	07/28/93	GW930728-6	NORMAL	NONE	UNFILTER	1.800	-	ug/L	CORE	1.800
Uranium, Total	07/28/93	GW930728-6	NORMAL	NONE	UNFILTER	1.800	NV	ug/L	FERMCO	1.800
Uranium, Total	09/20/93	GW930920-4	NORMAL	NONE	UNFILTER	1.410	-	ug/L	CORE	1.400
Uranium, Total	09/20/93	GW930920-4	NORMAL	NONE	UNFILTER	2.000	NV	ug/L	FERMCO	2.000
Uranium, Total	01/26/94	200035130	NORMAL	NONE	UNFILTER	4.480	< U	ug/L	DATACHEM	4.500
Uranium, Total	04/12/94	200051169	NORMAL	NONE	UNFILTER	1.175	-	ug/L	ORAS	1.200
Uranium, Total	07/06/94	200072800	NORMAL	NONE	UNFILTER	1.371	J	ug/L	ORAS	1.370
Uranium, Total	09/07/94	200091626	NORMAL	D	UNFILTER	1.135	NV	ug/L	ORAS	1.140
Uranium, Total	09/07/94	200091626	NORMAL	NONE	UNFILTER	1.449	-	ug/L	ORAS	1.450
Well 2550										
Uranium, Total	12/03/90	004358	NORMAL	NONE	*U	112.000	-	ug/L	IT/RSL	112.000
Uranium, Total	03/07/91	067955	NORMAL	NONE	*F	106.000	-	ug/L	IT	106.000
Uranium, Total	05/06/91	068002	NORMAL	NONE	*F	114.000	NV	ug/L	WEMCO	114.000
Uranium, Total	05/06/91	068001	NORMAL	NONE	*F	111.000	-	ug/L	IT	111.000
Uranium, Total	07/28/91	068173	NORMAL	NONE	*F	90.400	NV	ug/L	IT	90.400
Uranium, Total	09/21/91	068248	NORMAL	NONE	*F	98.000	NV	ug/L	WEMCO	98.000
Uranium, Total	09/21/91	068247	NORMAL	NONE	*F	106.000	NV	ug/L	IT	106.000
Uranium, Total	10/07/91	068296	NORMAL	NONE	*F	102.000	-	ug/L	IT/RSL	102.000
Uranium, Total	11/05/91	068374*	NORMAL	NONE	*F	101.000	-	ug/L	IT	101.000
Uranium, Total	11/05/91	068375	NORMAL	NONE	*F	101.000	NV	ug/L	WEMCO	101.000
Uranium, Total	12/30/91	068505	DUPLICATE	NONE	*F	88.100	-	ug/L	IT	88.100
Uranium, Total	12/30/91	068506	NORMAL	NONE	*F	93.500	-	ug/L	IT	93.500
Uranium, Total	01/22/92	068527	NORMAL	NONE	*F	88.800	-	ug/L	IT/RSL	88.800
Uranium, Total	02/06/92	068557	NORMAL	NONE	*F	99.600	-	ug/L	IT	99.600
Uranium, Total	12/02/92	GW921202-21	NORMAL	NONE	UNFILTER	73.000	NV	ug/L	FERMCO	73.000
Uranium, Total	03/09/93	GW930309-7	NORMAL	NONE	*U	70.000	NV	ug/L	FERMCO	70.000
Uranium, Total	05/11/93	GW930511-3	NORMAL	NONE	FILTERED	120.000	NV	ug/L	FERMCO	120.000
Uranium, Total	05/11/93	GW930511-3	NORMAL	NONE	UNFILTER	94.500	-	ug/L	CORE	94.500
Uranium, Total	05/11/93	GW930511-3	NORMAL	NONE	UNFILTER	120.000	NV	ug/L	FERMCO	120.000
Uranium, Total	05/11/93	GW930511-3	NORMAL	NONE	FILTERED	75.900	-	ug/L	CORE	75.900
Uranium, Total	02/25/94	200040823	NORMAL	NONE	UNFILTER	78.000	NV	ug/L	FERMCO	78.000
Uranium, Total	05/04/94	200056069	NORMAL	NONE	UNFILTER	73.000	NV	ug/L	FERMCO	73.000
Uranium, Total	08/02/94	200081818	NORMAL	NONE	UNFILTER	82.000	NV	ug/L	LOW LEVEL	82.000
Uranium, Total	10/14/94	200102271	NORMAL	NONE	UNFILTER	77.000	NV	ug/L	LOW LEVEL	77.000
Well 2551										
Uranium, Total	11/19/90	004352	NORMAL	NONE	*U	90.000	-	ug/L	IT	90.000
Uranium, Total	03/12/91	067958	NORMAL	NONE	*F	79.100	-	ug/L	IT	79.100
Uranium, Total	05/15/91	068015	NORMAL	NONE	*F	108.000	-	ug/L	IT	108.000

7026

19

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 2551										
Uranium, Total	07/29/91	068182	NORMAL	NONE	*F	84.200	J	ug/L	IT	84.200
Uranium, Total	10/09/91	068307	NORMAL	NONE	*F	78.000	NV	ug/L	WEMCO	78.000
Uranium, Total	10/09/91	068306	NORMAL	NONE	*F	85.300	-	ug/L	IT	85.300
Uranium, Total	10/24/91	068344	NORMAL	NONE	*F	89.600	-	ug/L	IT	89.600
Uranium, Total	10/24/91	068345	NORMAL	NONE	*F	89.000	NV	ug/L	WEMCO	89.000
Uranium, Total	11/06/91	068394	NORMAL	NONE	*F	87.800	-	ug/L	IT	87.800
Uranium, Total	11/06/91	068395	NORMAL	NONE	*F	87.000	NV	ug/L	WEMCO	87.000
Uranium, Total	12/10/91	068445	NORMAL	NONE	*F	67.500	-	ug/L	IT	67.500
Uranium, Total	01/23/92	068533	NORMAL	NONE	*F	57.300	-	ug/L	IT/RSL	57.300
Uranium, Total	02/10/92	068563	NORMAL	NONE	*F	57.800	J	ug/L	IT	57.800
Uranium, Total	12/03/92	GW921203-7	NORMAL	NONE	UNFILTER			ug/L	FERMCO Lab	36.000
Uranium, Total	03/15/93	GW930315-17	NORMAL	NONE	*U	56000.000	NV	ug/L	FERMCO	56000.000
Uranium, Total	05/17/93	GW930517-3	NORMAL	NONE	FILTERED	54.700	-	ug/L	CORE	54.700
Uranium, Total	05/17/93	GW930517-3	NORMAL	NONE	UNFILTER	58.500	-	ug/L	CORE	58.500
Uranium, Total	05/17/93	GW930517-3	NORMAL	NONE	UNFILTER	62.000	NV	ug/L	FERMCO	62.000
Uranium, Total	05/17/93	GW930517-3	NORMAL	NONE	FILTERED	64.000	NV	ug/L	FERMCO	64.000
Uranium, Total	02/25/94	200040812	NORMAL	NONE	UNFILTER	12.000	NV	ug/L	FERMCO	12.000
Uranium, Total	05/04/94	200056071	NORMAL	NONE	UNFILTER	19.000	NV	ug/L	FERMCO	19.000
Uranium, Total	08/05/94	200082191	NORMAL	NONE	UNFILTER	23.000	NV	ug/L	LOW LEVEL	23.000
Uranium, Total	10/13/94	200102273	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	30.000
Well 2552										
Uranium, Total	11/07/91	068379	NORMAL	NONE	*F	29.000	NV	ug/L	WEMCO	29.000
Uranium, Total	11/07/91	068378	NORMAL	NONE	*F	24.000	-	ug/L	IT	24.000
Uranium, Total	12/27/91	068500	NORMAL	NONE	*F	26.800	-	ug/L	IT	26.800
Uranium, Total	12/27/91	068501	NORMAL	NONE	*F	24.100	NV	ug/L	WEMCO	24.100
Uranium, Total	01/08/92	068517	NORMAL	NONE	*F	21.100	-	ug/L	IT/RSL	21.100
Uranium, Total	02/11/92	068566	NORMAL	NONE	*F	25.400	-	ug/L	IT	25.400
Uranium, Total	12/02/92	GW921202-15	NORMAL	NONE	UNFILTER	22.000	NV	ug/L	FERMCO Lab	22.000
Uranium, Total	03/15/93	GW930315-11	NORMAL	NONE	*U	25.000	NV	ug/L	FERMCO	25.000
Uranium, Total	05/17/93	GW930517-2	NORMAL	NONE	UNFILTER	14.000	NV	ug/L	FERMCO	14.000
Uranium, Total	05/17/93	GW930517-2	NORMAL	NONE	FILTERED	17.500	-	ug/L	CORE	17.500
Uranium, Total	05/17/93	GW930517-2	NORMAL	NONE	UNFILTER	17.400	-	ug/L	CORE	17.400
Uranium, Total	05/17/93	GW930517-2	NORMAL	NONE	FILTERED	15.000	NV	ug/L	FERMCO	15.000
Uranium, Total	02/24/94	200040452	NORMAL	NONE	UNFILTER	24.000	NV	ug/L	FERMCO	24.000
Uranium, Total	05/05/94	200056378	NORMAL	NONE	UNFILTER	22.000	NV	ug/L	FERMCO	22.000
Uranium, Total	08/04/94	200082197	NORMAL	NONE	UNFILTER	22.000	NV	ug/L	LOW LEVEL	22.000
Uranium, Total	10/21/94	200102869	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	20.000
Well 2553										
Uranium, Total	11/06/91	068376	NORMAL	NONE	*F	2.400	-	ug/L	IT	2.400

7026

20

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 2553										
Uranium, Total	11/06/91	068377	NORMAL	NONE	*F	2.400	NV	ug/L	WEMCO	2.400
Uranium, Total	12/27/91	068498	NORMAL	NONE	*F	1.060	-	ug/L	IT	1.060
Uranium, Total	12/27/91	068499	NORMAL	NONE	*F	0.400	NV	ug/L	WEMCO	0.400
Uranium, Total	01/08/92	068516	NORMAL	NONE	*F	1.000	< U	ug/L	IT/RSL	1.000
Uranium, Total	02/11/92	068565	NORMAL	NONE	*F	1.010	-	ug/L	IT	1.010
Uranium, Total	02/28/94	200040463	NORMAL	NONE	UNFILTER	1.700	NV	ug/L	FERMCO	1.700
Uranium, Total	08/05/94	200082199	NORMAL	NONE	UNFILTER	0.900	NV	ug/L	LOW LEVEL	0.900
Uranium, Total	10/19/94	200102871	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	1.800
Well 3015										
Uranium, Total	06/02/88	003256	NORMAL	NONE	*U	4.000	-	ug/L	IT	
Uranium, Total	08/03/88	003394	NORMAL	NONE	*U	1.000	< U	ug/L	IT	
Uranium, Total	11/06/88	003683	NORMAL	NONE	*U	1.000	< UJ	ug/L	IT	1.000
Uranium, Total	02/07/89	003880	NORMAL	NONE	*U	1.000	< UJ	ug/L	IT	1.000
Uranium, Total	03/01/90	004240	NORMAL	NONE	*U	1.880	-	ug/L	IT	108.000
Uranium, Total	03/08/90	EMGW_SYSGEN_951	NORMAL	NONE	UNFILTER	1.580	NV	ug/L	IT	1.580
Uranium, Total	06/14/90	EMGW_SYSGEN_952	NORMAL	NONE	UNFILTER	3.740	NV	ug/L	IT	3.740
Uranium, Total	01/02/91	EMGW_SYSGEN_954	NORMAL	NONE	UNFILTER	2.370	NV	ug/L	IT	2.370
Uranium, Total	03/11/91	EMGW_SYSGEN_955	NORMAL	NONE	UNFILTER	4.140	NV	ug/L	IT	4.140
Uranium, Total	08/19/92	3015-08/19/92-A-N8	NORMAL	NONE	UNFILTER	1.300	NV	ug/L	WMCO	1.300
Uranium, Total	05/12/93	GW930512-2	NORMAL	NONE	UNFILTER	1.200	-	ug/L	CORE	1.200
Uranium, Total	05/12/93	GW930512-2	NORMAL	NONE	FILTERED	1.100	NV	ug/L	FERMCO	1.100
Uranium, Total	05/12/93	GW930512-2	NORMAL	NONE	UNFILTER	1.300	NV	ug/L	FERMCO	1.300
Uranium, Total	05/12/93	GW930512-2	NORMAL	NONE	FILTERED	1.400	J	ug/L	CORE	1.400
Uranium, Total	08/05/93	GW930805-7	NORMAL	NONE	UNFILTER	1.000	-	ug/L	CORE	1.000
Uranium, Total	02/25/94	200040458	NORMAL	NONE	UNFILTER	1.300	NV	ug/L	FERMCO	1.300
Uranium, Total	05/10/94	200056370	NORMAL	NONE	UNFILTER	0.900	NV	ug/L	FERMCO	0.900
Uranium, Total	08/03/94	200081820	NORMAL	NONE	UNFILTER	1.200	NV	ug/L	LOW LEVEL	1.200
Uranium, Total	10/12/94	200101901	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	1.200
Well 3017										
Uranium, Total	04/06/88	003079	NORMAL	NONE	*U	1.000	< UJ	ug/L	IT	
Uranium, Total	07/26/88	003378	NORMAL	NONE	*U	1.000	< UJ	ug/L	IT	1.000
Uranium, Total	11/06/88	003659	NORMAL	NONE	*U	1.000	< UJ	ug/L	IT	1.000
Uranium, Total	01/19/89	003844	NORMAL	NONE	*U	1.000	< U	ug/L	IT	1.000
Uranium, Total	04/09/90	004242	NORMAL	NONE	*U	0.791	J	ug/L	IT	0.791
Uranium, Total	04/09/90	004267	NORMAL	NONE	*U	1.150	J	ug/L	IT	1.150
Uranium, Total	06/13/90	EMGW_SYSGEN_963	NORMAL	NONE	UNFILTER	4.100	NV	ug/L	IT	4.100
Uranium, Total	09/06/90	EMGW_SYSGEN_964	NORMAL	NONE	UNFILTER	1.190	NV	ug/L	IT	1.190
Uranium, Total	12/05/90	EMGW_SYSGEN_965	NORMAL	NONE	UNFILTER	1.470	NV	ug/L	IT	1.470
Uranium, Total	03/06/91	067953	NORMAL	NONE	*F	1.010	-	ug/L	IT	1.010

7026

21

Uranium Sampling for Selected Wells

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 3017										
Uranium, Total	05/14/91	068010	NORMAL	NONE	*F	0.700	NV	ug/L	WEMCO	0.700
Uranium, Total	05/14/91	068009	NORMAL	NONE	*F	1.730	-	ug/L	IT/RSL	1.730
Uranium, Total	07/16/91	068148	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	09/10/91	EMGW_SYSGEN_966	NORMAL	NONE	UNFILTER	0.700	NV	ug/L	WMCO	0.700
Uranium, Total	09/18/91	068241	NORMAL	NONE	*F	1.000	< U	ug/L	IT	
Uranium, Total	09/18/91	068242	NORMAL	NONE	*F	0.600	NV	ug/L	WEMCO	0.600
Uranium, Total	10/16/91	068317	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	10/16/91	068318	NORMAL	NONE	*F	0.600	NV	ug/L	WEMCO	0.600
Uranium, Total	10/31/91	EMGW_SYSGEN_967	NORMAL	NONE	UNFILTER	0.700	NV	ug/L	WMCO	0.700
Uranium, Total	11/06/91	068392	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	11/06/91	068393	NORMAL	NONE	*F	0.800	NV	ug/L	WEMCO	0.800
Uranium, Total	12/12/91	068453	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	12/12/91	068454	DUPLICATE	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	01/07/92	068515	NORMAL	NONE	*F	1.000	< U	ug/L	IT/RSL	1.000
Uranium, Total	02/10/92	068562	NORMAL	NONE	*F	12.200	J	ug/L	IT	12.200
Uranium, Total	08/11/92	3017-08/11/92-B-N6	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	1.100
Uranium, Total	11/03/92	3017-11/03/92-A-N8	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	1.400
Uranium, Total	06/07/93	120045	NORMAL	NONE	UNFILTER	1.000	< NV	ug/L	FERMCO	1.000
Uranium, Total	06/07/93	120045	NORMAL	NONE	UNFILTER	1.100	-	ug/L	CORE	1.100
Uranium, Total	06/07/93	120045	NORMAL	NONE	FILTERED	0.900	< NV	ug/L	FERMCO	0.900
Uranium, Total	06/07/93	120045	NORMAL	NONE	FILTERED	1.000	-	ug/L	CORE	1.000
Uranium, Total	05/04/94	200056111	NORMAL	NONE	UNFILTER	1.000	NV	ug/L	FERMCO	1.000
Uranium, Total	10/19/94	200102879	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	0.800
Well 3106										
Uranium, Total	02/06/89	004022	NORMAL	NONE	*U	2.000	J	ug/L	IT	
Uranium, Total	04/30/89	004102	NORMAL	NONE	*U	1.000	< U	ug/L	IT	
Uranium, Total	03/02/90	004258	NORMAL	NONE	*U	1.930	-	ug/L	IT	1.930
Uranium, Total	06/15/90	EMGW_SYSGEN_1152	NORMAL	NONE	UNFILTER	1.240	NV	ug/L	IT	1.240
Uranium, Total	09/06/90	EMGW_SYSGEN_1153D	DUPLICATE	NONE	UNFILTER	6.270	NV	ug/L	IT	6.270
Uranium, Total	09/06/90	EMGW_SYSGEN_1153	NORMAL	NONE	UNFILTER	6.200	NV	ug/L	IT	6.200
Uranium, Total	03/05/91	067951	NORMAL	NONE	*F	1.320	-	ug/L	IT	1.320
Uranium, Total	05/07/91	068006	NORMAL	NONE	*F	1.300	NV	ug/L	WEMCO	1.300
Uranium, Total	05/07/91	068005	NORMAL	NONE	*F	1.230	-	ug/L	IT	1.230
Uranium, Total	06/12/91	068079	NORMAL	NONE	*F	1.000	< NV	ug/L	IT	1.000
Uranium, Total	07/16/91	068143	NORMAL	NONE	*F	1.100	NV	ug/L	WMCO	1.100
Uranium, Total	07/16/91	068144	DUPLICATE	NONE	*F	1.000	< U	ug/L	IT/RSL	1.000
Uranium, Total	07/16/91	068142	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	08/28/91	068211	NORMAL	NONE	*F	1.080	-	ug/L	IT	1.080
Uranium, Total	08/28/91	068212	NORMAL	NONE	*F	1.500	NV	ug/L	WEMCO	1.500
Uranium, Total	09/17/91	068237	NORMAL	NONE	*F	1.380	NV	ug/L	IT	

22

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 3106										
Uranium, Total	09/17/91	068238	NORMAL	NONE	*F	1.400	NV	ug/L	WEMCO	1.400
Uranium, Total	10/07/91	068294	NORMAL	NONE	*F	2.810	-	ug/L	IT/RSL	2.810
Uranium, Total	11/05/91	068371	NORMAL	NONE	*F	1.250	-	ug/L	IT	1.250
Uranium, Total	11/05/91	068372	NORMAL	NONE	*F	1.300	NV	ug/L	WEMCO	1.300
Uranium, Total	12/18/91	068478	NORMAL	NONE	*F	2.290	J	ug/L	IT	2.290
Uranium, Total	01/30/92	068548	NORMAL	NONE	*F	1.570	-	ug/L	IT	1.570
Uranium, Total	02/27/92	068593	NORMAL	NONE	*F	1.130	-	ug/L	IT	1.130
Uranium, Total	08/06/92	3106-08/06/92-B-N9	NORMAL	NONE	UNFILTER	1.100	NV	ug/L	WMCO	1.100
Uranium, Total	10/13/92	3106-10/13/92-B-D9	DUPLICATE	NONE	UNFILTER			ug/L	WMCO Labor	1.300
Uranium, Total	10/13/92	3106-10/13/92-B-N9	NORMAL	NONE	UNFILTER			ug/L	WMCO Labor	1.900
Uranium, Total	01/06/93	GW930106-4	NORMAL	NONE	UNFILTER	1.100	NV	ug/L	FERMCO Lab	1.100
Uranium, Total	01/06/93	GW930106-4	NORMAL	NONE	UNFILTER	0.500	< NV	ug/L	CORE	0.500
Uranium, Total	04/07/93	GW930407-9	NORMAL	NONE	FILTERED	1.200	-	ug/L	CORE	1.200
Uranium, Total	04/07/93	GW930407-9	NORMAL	NONE	UNFILTER	1.600	-	ug/L	CORE	1.600
Uranium, Total	04/07/93	GW930407-9	NORMAL	NONE	FILTERED	1.200	NV	ug/L	FERMCO	1.200
Uranium, Total	04/07/93	GW930407-9	NORMAL	NONE	UNFILTER	1.200	NV	ug/L	FERMCO	1.200
Uranium, Total	07/26/93	GW930726-2	NORMAL	NONE	UNFILTER	1.600	-	ug/L	CORE	1.600
Uranium, Total	07/26/93	GW930726-2	NORMAL	NONE	UNFILTER	1.300	NV	ug/L	FERMCO	1.300
Uranium, Total	09/16/93	GW930916-2	NORMAL	NONE	UNFILTER	1.000	-	ug/L	CORE	1.000
Uranium, Total	09/16/93	GW930916-2	NORMAL	NONE	*F	1.200	NV	ug/L	FERMCO	1.200
Uranium, Total	01/25/94	200034970	NORMAL	NONE	UNFILTER	1.360	< U	ug/L	DATACHEM	1.300
Uranium, Total	04/12/94	200049734	NORMAL	NONE	UNFILTER	5.131	-	ug/L	ORAS	5.100
Uranium, Total	07/05/94	200071979	NORMAL	NONE	UNFILTER	13.422	J	ug/L	ORAS	13.400
Uranium, Total	09/06/94	200091644	NORMAL	NONE	UNFILTER	1.196	-	ug/L	ORAS	1.200
Well 3550										
Uranium, Total	10/23/91	004902	NORMAL	NONE	*U	18.000	NV	ug/L	WEMCO	18.000
Uranium, Total	10/23/91	004901	NORMAL	NONE	*U	17.400	-	ug/L	IT	17.400
Uranium, Total	12/30/91	068507	NORMAL	NONE	*F	11.100	-	ug/L	IT	11.100
Uranium, Total	12/30/91	068508	NORMAL	NONE	*F	1.200	NV	ug/L	WEMCO	1.200
Uranium, Total	01/22/92	068528	NORMAL	NONE	*F	10.400	-	ug/L	IT/RSL	10.400
Uranium, Total	02/06/92	068558	NORMAL	NONE	*F	41.100	-	ug/L	IT	41.100
Uranium, Total	12/02/92	GW921202-22	NORMAL	NONE	UNFILTER	8.000	NV	ug/L	FERMCO Lab	8.000
Uranium, Total	03/09/93	GW930309-17	NORMAL	NONE	*U	8.500	NV	ug/L	FERMCO	8.500
Uranium, Total	05/24/93	GW930524-14	NORMAL	NONE	FILTERED	6.700	NV	ug/L	FERMCO	6.700
Uranium, Total	05/24/93	GW930524-13	DUPLICATE	NONE	UNFILTER	7.100	-	ug/L	CORE	7.100
Uranium, Total	05/24/93	GW930524-14	NORMAL	NONE	FILTERED	7.300	-	ug/L	CORE	7.300
Uranium, Total	05/24/93	GW930524-13	DUPLICATE	NONE	FILTERED	6.500	NV	ug/L	FERMCO	6.500
Uranium, Total	05/24/93	GW930524-13	DUPLICATE	NONE	UNFILTER	6.700	NV	ug/L	FERMCO	6.700
Uranium, Total	05/24/93	GW930524-13	DUPLICATE	NONE	FILTERED	7.400	-	ug/L	CORE	7.400
Uranium, Total	05/24/93	GW930524-14	NORMAL	NONE	UNFILTER	6.900	-	ug/L	CORE	6.900

23

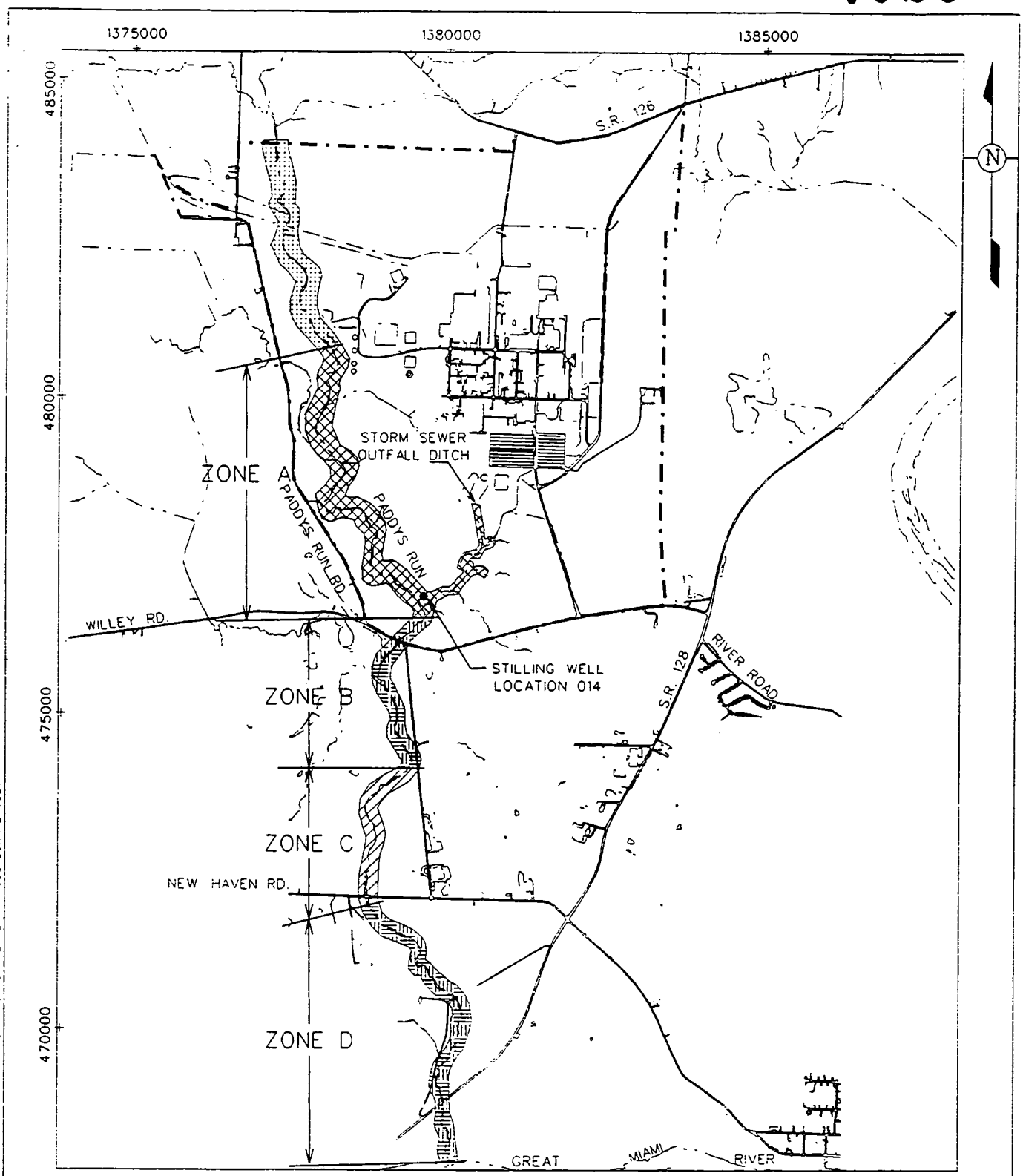
Uranium Sampling for Selected Wells

	Date	Sample ID	QA Type	Suffix	Filter	Result	Qual.	Units	Lab	Lab Result
Well 3550										
Uranium, Total	05/24/93	GW930524-14	NORMAL	NONE	UNFILTER	6.800	NV	ug/L	FERMCO	6.800
Uranium, Total	02/25/94	200040824	NORMAL	NONE	UNFILTER	6.100	NV	ug/L	FERMCO	6.100
Uranium, Total	05/04/94	200056073	NORMAL	NONE	UNFILTER	6.000	NV	ug/L	FERMCO	6.000
Uranium, Total	08/02/94	200081822	NORMAL	NONE	UNFILTER	6.100	NV	ug/L	LOW LEVEL	6.100
Uranium, Total	10/14/94	200102275	NORMAL	NONE	UNFILTER	5.300	NV	ug/L	LOW LEVEL	5.300
Well 3551										
Uranium, Total	10/17/91	067640	NORMAL	NONE	*U	1.000	< U	ug/L	IT/RSL	1.000
Uranium, Total	12/27/91	068503	NORMAL	NONE	*F	0.700	NV	ug/L	WEMCO	0.700
Uranium, Total	12/27/91	068502	NORMAL	NONE	*F	1.000	< U	ug/L	IT	1.000
Uranium, Total	01/23/92	068534	NORMAL	NONE	*F	1.000	< U	ug/L	IT/RSL	1.000
Uranium, Total	02/10/92	068564	NORMAL	NONE	*F	1.810	J	ug/L	IT	1.810
Uranium, Total	12/03/92	GW921203-8	NORMAL	NONE	UNFILTER			ug/L	FERMCO Lab	0.800
Uranium, Total	03/15/93	GW930315-18	NORMAL	NONE	*U	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	05/17/93	GW930517-1	NORMAL	NONE	UNFILTER	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	05/17/93	GW930517-1	NORMAL	NONE	UNFILTER	0.600	-	ug/L	CORE	0.600
Uranium, Total	05/17/93	GW930517-1	NORMAL	NONE	FILTERED	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	05/17/93	GW930517-1	NORMAL	NONE	FILTERED	0.600	-	ug/L	CORE	0.600
Uranium, Total	08/26/93	GW930826-5	NORMAL	NONE	*U	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	08/26/93	GW930826-5	NORMAL	NONE	UNFILTER	0.400	-	ug/L	CORE	0.400
Uranium, Total	09/20/93	GW930920-06	NORMAL	NONE	FILTERED	0.100	< U	ug/L	CORE	0.000
Uranium, Total	02/25/94	200040819	DUPLICATE	NONE	UNFILTER	0.700	NV	ug/L	FERMCO	0.700
Uranium, Total	02/25/94	200040814	NORMAL	NONE	UNFILTER	0.600	NV	ug/L	FERMCO	0.600
Uranium, Total	05/04/94	200056075	NORMAL	NONE	UNFILTER	0.900	NV	ug/L	FERMCO	0.900
Uranium, Total	08/05/94	200082193	NORMAL	NONE	UNFILTER	0.700	NV	ug/L	LOW LEVEL	0.700
Uranium, Total	08/05/94	200082195	DUPLICATE	NONE	UNFILTER	0.600	NV	ug/L	LOW LEVEL	0.600
Uranium, Total	10/13/94	200102277	NORMAL	NONE	UNFILTER		NV	ug/L	LOW LEVEL	0.600
Uranium, Total	10/13/94	200102279	DUPLICATE	NONE	UNFILTER		NV	ug/L	LOW LEVEL	0.600
Well 3552										
Uranium, Total	04/23/92	068595	NORMAL	NONE	FILTERED	1.000	< U	ug/L	IT	1.000
Uranium, Total	04/30/92	068597	NORMAL	NONE	*F	0.600	NV	ug/L	WEMCO	0.600
Uranium, Total	06/23/92	069966	NORMAL	NONE	FILTERED	1.000	< U	ug/L	IT	1.000
Uranium, Total	06/23/92	069968	NORMAL	NONE	*F	0.500	NV	ug/L	WEMCO	0.500
Uranium, Total	12/02/92	GW921202-18	NORMAL	NONE	UNFILTER	0.600	NV	ug/L	FERMCO Lab	0.600
Uranium, Total	03/15/93	GW930315-13	NORMAL	NONE	*U	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	03/15/93	GW930315-14	DUPLICATE	NONE	*U	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	05/17/93	GW930517-4	NORMAL	NONE	FILTERED	0.400	NV	ug/L	FERMCO	0.400
Uranium, Total	05/17/93	GW930517-4	NORMAL	NONE	UNFILTER	0.600	-	ug/L	CORE	0.600
Uranium, Total	05/17/93	GW930517-4	NORMAL	NONE	UNFILTER	0.500	NV	ug/L	FERMCO	0.500
Uranium, Total	05/17/93	GW930517-4	NORMAL	NONE	FILTERED	0.600	-	ug/L	CORE	0.600

7026

24

Attachment 3



NOTE:
ZONE AREAS ARE APPROXIMATE

LEGEND:
- ON GLACIAL OVERBURDEN MINIMUM INFILTRATION
- INFILTRATION ALWAYS OCCURS
- INFILTRATION DEPENDENT ON WATER TABLE ELEV.
- GROUNDWATER DISCHARGE IN ALL SEASONS
- FEMP PROPERTY BOUNDARY

SCALE
2250 1125 0 2250 FEET

DRAFT
FINAL

/USR/ERMA3/FMPC/DGN/MAP/HGR/DPTH/C110046.DGN OU5 RI STATE PLANAR COORDINATE 1927

FIGURE 3-10. SURFACE WATER INFILTRATION TO THE GREAT MIAMI AQUIFER ALONG PADDYS RUN AND THE STORM SEWER OUTFALL DITCH