

4712

**TRANSMITTAL OF RESPONSES TO USEPA AND
OEPA COMMENTS ON THE PROJECT SPECIFIC
PLAN FOR SNAPSHOT MONITORING WELL
SAMPLING AND SURFACE WATER AND
SEDIMENT SAMPLING MAY 1993**

08/31/93

**DOE-FN/EPA
13
RESPONSES
OU5**



Department of Energy
Fernald Environmental Management Project
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 738-6357

4712

AUG 3 1993

DOE-2864-93

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HRE-8J
77 West Jackson Street
Chicago, Illinois 60604

Mr. Graham E. Mitchell, Project Manager
Ohio Environmental Protection Agency
40 South Main Street
Dayton, Ohio 45402

Dear Mr. Saric and Mr. Mitchell:

TRANSMITTAL OF RESPONSES TO UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE PROJECT SPECIFIC PLAN FOR ADDITIONAL MONITORING WELL INSTALLATION AND WELL ABANDONMENT, MAY 1993

- References: 1) Letter, J. A. Saric to J. R. Craig, "Disapproval of OU 5 Additional Monitoring Well and Well Abandonment Work Plan - FEMP," dated July 22, 1993
- 2) Letter, G. E. Mitchell to J. R. Craig, "Comments on the Operable Unit 5 PSP," dated July 8, 1993

Enclosed for your review are the subject responses. The work plan will be revised once final resolution of these comments is achieved.

If you have questions regarding the responses, please contact Pete Yerace at (513) 648-3161.

Sincerely,

Jack R. Craig
Fernald Remedial Action
Project Manager

FN:Yerace

Enclosure: As stated

001

4712

cc w/enc:

K. A. Chaney, EM-424, TREV
D. R. Kozłowski, EM-424 TREV
G. Jablonowski, USEPA-V, AT-18J
J. Kwasniewski, OEPA-Columbus
P. Harris, OEPA-Dayton
M. Proffitt, OEPA-Dayton
T. Schneider, OEPA-Dayton
J. Michaels, PRC
L. August, GeoTrans
F. Bell, ATSDR
K. L. Alkema, FERMCO
B. S. Biehle, FERMCO/52-5
P. F. Clay, FERMCO/19
AR Coordinator, FERMCO

cc w/o enc:

R. L. Glenn, Parsons
J. W. Thiesing, FERMCO/2

RESPONSES TO U.S. EPA COMMENTS ON THE PROJECT SPECIFIC PLAN FOR ADDITIONAL MONITORING WELL INSTALLATION AND WELL ABANDONMENT

Commenting Organization: U.S. EPA Commentor:
Section #: 3.1 Pg. #: 2 Line #: Code:
Original Comment # 1

Comment: The text states that soil samples collected from well borings will be analyzed by the FERMCO laboratory. The FERMCO laboratory cannot provide data of a quality suitable for use in the risk assessment. Analytical data provided by the FERMCO laboratory should only be used for site characterization.

Response: DOE agrees; these data are to be used to continue the general survey of radiological contamination in soils for site characterization.

Action: No change to the PSP is required.

Commenting Organization: U.S. EPA Commentor:
Section #: Figure 3-4 Pg. #: 14 Line #: Code:
Original Comment # 2

Comment: Using Figure 3-4, it is not possible to determine if the proposed wells are adequate to define the hydrogeology of the area. Figure 3-4 should include the locations of all existing wells. In addition, no wells exist south of the pilot plant. A well should be installed south of the pilot plant to characterize that location.

Response: There are a great many wells in the Plant 2/3 and Pilot Plant area used to define the 100-µg/l total uranium contour. The EPA is referred to Plate P-22 of the "Preliminary Presentation of Geology and Hydrogeology of the Glacial Overburden" provided in April 1993. Plate P-22 shows the location and water elevation data of all wells in the area depicted in Figure 3-4. The inclusion of all these wells in Figure 3-4 would make the figure difficult to read.

DOE agrees that the location of wells used to derive the water table contours on Figure 3-4 should be added to the figure. The local detail for the water table map in Figure 3-4 was produced using data from: Wells 1034 and 1033, located south and east of the K-65 Silos; Well 1008, located south of the Bionitrification Surge Lagoon; Well 1020 south of the new Pilot Plant; and Well 1042, located at the southwest corner of the Lime Sludge ponds. The water levels in these wells and topographic data for the Pilot Plant drainage ditch were used to develop the water table map presented in the PSP. The well locations were not depicted on the map in the PSP to avoid clutter. These data establish the general gradient presented in Figure 3-4.

As the updated figure will show, Well 1020 is located south of the new Pilot Plant Building. In addition, there are a number of piezometers and borings around the old Pilot

Plant that were installed during the Production and Additional Suspect Area Investigation. The locations of the wells are included in Plate P-22 referenced above.

Action: Add the locations of Wells 1008, 1018, 1020, 1033, 1034 and 1042 to Figure 3-4.

Commenting Organization: U.S. EPA

Commentor:

Section #: 3.1.7

Pg. #: 22

Line #:

Code:

Original Comment # 3

Comment: The text discusses seepage coming through the concrete wall that forms the eastern side of the "former storm sewer discharge structure." This structure is not mentioned anywhere else in the text, nor is it identified in any figure. DOE should provide a figure that identifies all structures mentioned in the text.

Response: The discharge structure is depicted in Figure 3-7 and is partially covered by the "11" in the label for Well 11081.

Action: The well label will be moved and a label will be added to Figure 3-7 that shows the former discharge structure.

Commenting Organization: U.S. EPA

Commentor:

Section #: 3.1.7

Pg. #: 22

Line #:

Code:

Original Comment # 4

Comment: The text discusses placement of groundwater wells in the vicinity of the storm water retention basins; however, no discussion of groundwater flow direction in this area is included. This section should include a discussion of groundwater flow direction. If contamination is detected in the storm water retention basin area, wells should be installed to the south and west of the storm water retention basin area.

Response: General groundwater flow is not the issue being addressed in Section 3.1. Therefore, it was not included in the discussion of the installation of the two wells. The wells are being installed to determine if there is contaminated perched groundwater in the small segment of the Glacial Overburden between the east cell of the Stormwater Retention Basin (SWRB) and the Storm Sewer Outfall Ditch. If contamination is detected in the SWRB area, the decision to install additional wells will be part of the remedial action for the area. Wells 1564, 1684, 1685 and 1490 are in place around the west cell of the SWRB to monitor groundwater quality to the south and west as shown in Figure 3-7.

Locally, perched groundwater in the Glacial Overburden is strongly influenced by the presence of the SWRB and the resulting discontinuous segments of the Glacial Overburden in the area. The Outfall Ditch lies between the two cells of the basin and cuts through the Glacial Overburden, so perched groundwater flow is towards the Outfall Ditch from either side. The excavations for both cells of the SWRB penetrated the Great Miami Aquifer, and liners were installed under the basins to prevent contaminant migration into the aquifer. The basins were also equipped with lateral drains to remove

any perched groundwater that would cause the synthetic liner to shift from its installed configuration. The basins in themselves are a barrier to lateral migration within the Glacial Overburden.

Perched groundwater flow in the vicinity of the west basin could all be from the west toward the Outfall Ditch or it could be to the southwest toward the Southfield Inactive Flyash Area. One reason for installing Well 11064 is to provide a monitoring point for perched groundwater quality and elevation, so that perched groundwater gradients on the west side of the SWRB can be determined.

In general, perched groundwater flow in the vicinity of the east cell is almost radial. Perched groundwater can only enter from the north and will pass around the cell to either the stream on the east or the Outfall Ditch on the west. A rerouted drainage that used to be the head water of the Outfall Ditch is located on the east side of the east cell of the SWRB. The new drainage was excavated to a depth that left a thin layer of till in this bottom of the section of the ditch. As the drainage turns west along the south side of the east basin, the stream has cut completely through the till and flows on the aquifer.

In effect, the small amount of Glacial Overburden in the vicinity of the east cell of the SWRB can only receive perched groundwater from the north, and discharge can be to the east, south or west into the Outfall Ditch and its tributary.

Action: Correct Figure 3-7 to show the current location of the drainage east of the east cell.

Commenting Organization: U.S. EPA
Section #: 3.2.3
Original Comment # 5

Pg. #: 26

Commentor:
Line #:

Code:

Comment: This section states that well 2397 located southeast of the storm water retention basins is downgradient of the storm water retention basins, which indicates that groundwater flows to the southeast. However, Section 3.2.2 states that groundwater flows to the east-northeast. Discussion of the storm water retention basin area should include a description of groundwater flow, how groundwater flow varies within the area, and how groundwater flow is influenced by seasonal influxes. Because of the variable groundwater flow direction, well 21065 is not necessarily upgradient of well 2397 and the storm water retention basins. Therefore, in addition to well 21065, a well should be installed north (upgradient during the dry season) of the storm water retention basins.

Response: The text states that Well 2397 is "downgradient from the Stormwater Retention Basin and the Storm Sewer Outfall Ditch," which is a larger area than the EPA has read into the statement. The location of the well as downgradient of either or both areas does change somewhat with the seasons.

In the 2000-Series wells, the interpreted gradient is always to the east/northeast in the area bounded on the south by the Inactive Flyash Pile/Southfield OU 2 area, on the east by the Storm Sewer Outfall Ditch, and on the north by the southern fence of the former Production Area. This is in part because there were no wells in the area to provide data on the impact of recharge from Paddys Run or the Storm Sewer Outfall Ditch.

4712

Wells 21064 and 21065 will improve the distribution of data points that refine the interpretation of gradients in this area. Because of the apparently consistent gradient to the east/northeast, Well 21065 is upgradient of Well 2397. Further, with the eastern gradient Well 2397 is downgradient of the west basin and the over-flow outlet from the basin.

Well 2397 was originally installed to determine if there was eastward migration of contamination that may have entered the Great Miami Aquifer with recharge from the Outfall Ditch. At the time, the SWRB was not considered a potential source area. A review of water table maps by month is required to understand the variation in flow direction in any area on the FEMP. For the area east of the Storm Sewer Outfall Ditch, the gradient appears to be to the east or east-northeast most of the time. During the low water table months, the gradient does shift to the southeast. Well 21065 appears to be upgradient of the basin most of the time. Well 21065 was placed in the most advantageous location to monitor background conditions regardless of the season.

Action: Clarify the text regarding the direction of groundwater flow in the SWRB area.

Commenting Organization: U.S. EPA
Section #: 3.2.5
Original Comment # 6

Commentor:
Pp. #: 27, 28
Line #:
Code:

Comment: It appears that text is missing from the bottom of page 27 and the top of page 28. The WPA should be revised to include the omitted text.

Response: DOE agrees.

Action: The missing text will be replaced.

Commenting Organization: U.S. EPA
Section #: 3.2.5
Original Comment # 7

Commentor:
Pg. #: 28
Line #:
Code:

Comment: The text states that well 3027 will replace well 3084 in terms of its monitoring function. However, Figure 3-8 (page 20) indicates that well 3027 is a damaged monitoring well. This discrepancy should be resolved.

Response: The figure is in error. Well 3027 is a new well.

Action: Correct Figure 3-8 to show that Well 3027 is a new well.

Commenting Organization: U.S. EPA
Section #: 3.2.5
Original Comment # 8

Commentor:
Pg. #: 28
Line #:
Code:

Comment: The text does not indicate whether DOE will use data from well 3084 as representative

of the groundwater at that location. The text should be revised to include this information. If DOE does not plan to use the well 3084 data, then a replacement well should be installed in the immediate vicinity of well 3084. Also, the text states that additional Resource Conservation and Recovery Act (RCRA) wells will replace well 3084 in terms of its monitoring function. However, it is difficult to assess whether the RCRA wells will be adequate replacements without a figure showing the RCRA well locations. A figure showing the locations of the RCRA wells should be included in this section.

Response: As part of the plugging and abandonment program described below, DOE will evaluate the impact of the leak on the aquifer in the vicinity of Well 3084 and make a decision on the use of the data after that evaluation. It is unlikely that the data from Well 3084 will be used to represent groundwater. The location of Well 3027 is adequate for monitoring the Waste Storage Area, especially since it is in a better downgradient position than Well 3084, which was upgradient of Pit 6.

In the interim between the time the PSP was written and the receipt of comments, the RCRA monitoring program has been modified. Well 3027 is currently the only Type 3 Well that will be installed to replace Well 3084. If samples from Well 3084 and 3027 indicate significant contamination in the aquifer, the situation will be further evaluated.

In order to evaluate the possible impact of leakage on the aquifer, the well abandonment procedure will be modified to include extensive purging and sampling of the well immediately prior to abandonment.

A television survey will be conducted in the casing above the water table to determine if the casing leak is active or dry. The well will be purged daily for five working days prior to the abandonment on the well. Each day a sample will be collected from the top of the water column with a bailer. Then three well volumes will be purged and a second sample will be collected as in a routine sampling event. An additional two well volumes will be purged; then a final sample will be collected to see if additional purging would have impacted the quality of the sample from a normal sampling event. The three samples will be analyzed for total uranium at the FERMCO laboratory on a 24-hour turnaround basis.

On the last day of purging, an additional sample will be collected for the parameters in TAL 50.03.23 B, which was used for 1000-Series wells in the Snapshot Monitoring Well Sampling PSP. This analysis, coupled with the daily samples collected during the purging, will provide a basis for assessing the impact of the leak in the well on the aquifer. This assessment, along with the monitoring data from new Well 3027, will be evaluated to determine if a more extensive investigation is required.

Action: The PSP will be modified to include the explanation given above.

Commenting Organization: U.S. EPA
Section #: 3.2.6
Original Comment # 9

Pg. #: 32

Commentor:
Line #:

Code:

Comment: The text describes where the well screen will be placed in cases where all Hydropunch samples exhibit background levels and where a single Hydropunch sample has an elevated level of total uranium. However, the text does not identify where the well screen will be placed in the event of elevated uranium levels in multiple Hydropunch samples. This information should be included in the text.

Response: It is not possible to predict all combinations of sampling outcomes, so the plan presented what seemed to be the most likely scenarios. As stated in the last sentence of the paragraph, the RI Project Manager will be responsible for the final decision on placement of the well screen. He will make that decision on the basis of a review of the data from the well and data from nearby wells, and consultation with senior members of the RI staff.

Action: No change to the PSP is required.

Commenting Organization: U.S. EPA
Section #: 6.1
Original Comment # 10

Pg. #: 38

Commentor:
Line #:

Code:

Comment: The text indicates that equipment rinsate samples will be collected at a rate of one for each 20 washings during soil sampling, but the text does not discuss equipment rinsate samples for groundwater sampling. Equipment rinsate samples should be collected for both soil sampling and groundwater sampling equipment. In addition, the number of equipment rinsate samples is usually one rinsate sample for every 20 samples collected, and equipment is to be decontaminated between samples. The text as it is currently written indicates that equipment may not be decontaminated between samples and that equipment rinsate samples may not be collected as frequently as necessary. The text should be modified to clarify these issues.

Response: Sampling equipment is decontaminated after every use. There is no suggestion in the PSP that the equipment is not to be cleaned between uses. A rinsate sample will be collected for every 20 decontaminations. Each time a sampling instrument is decontaminated, it will be included in the count of 20. This procedure is to assure that the rinsate sampling truly evaluates the cleaning process for all sampling programs. If five instruments are decontaminated in one batch, they would be counted as five decontaminations toward the 20. This approach assures that the decontamination procedure is monitored accurately and continuously. The frequency of rinsate samples will be maintained regardless of whether the samples are sent to the laboratory for analyses or used for lithologic purposes.

Action: Clarify the text to show that sampling equipment is decontaminated between each use, and that rinsate samples are collected at a frequency of 1 in 20 samples collected (and equipment washings) regardless of the use of the sample.

008

Commenting Organization: U.S. EPA
Section #: 6.2
Original Comment # 11

Pg. #: 38

Commentor:
Line #:

Code:

Comment: Section 6.2 is entitled "Training"; however, the text discusses quality assurance audits. The title of this section should be changed to reflect the information presented.

Response: DOE agrees. The title of the section will be changed to "Quality Assurance Audits."

Action: The title of Section 6.2 will be changed from "Training" to " Quality Assurance Audits."

000000

RESPONSES TO OHIO EPA COMMENTS ON THE PROJECT
SPECIFIC PLAN FOR ADDITIONAL MONITORING WELL INSTALLATION
AND WELL ABANDONMENT

Commenting Organization: Ohio EPA
Section #: 3.0
Original Comment # 1

Pg. #: 2

Commentor: M. Proffitt
Line #: ¶ 1
Code:

Comment: Soil samples should be collected from the screened interval and sampled for uranium. This data will be useful for the planned rate/attenuation study.

Response: Samples are collected for the sieve analyses in the screened interval. These samples will also be analyzed for uranium if required for the rate/attenuation analysis. All samples retrieved for geologic characterization are archived and available for later study or analysis.

Action: No action required at this time.

Commenting Organization: Ohio EPA
Section #: 3.1.1
Original Comment # 2

Pg. #: 3

Commentor: M. Proffitt
Line #: ¶ 2
Code:

Comment: How is lateral movement distinguished from vertical movement?

Response: The relative position of the brown weathered zones in relation to gray unweathered zones is the distinguishing feature. The brown coloration is likely due to the presence of infiltrating rainwater carrying oxygen. When brown materials are found below gray materials, it indicates the oxygen required to make the color change migrated laterally to the site rather than vertically. If migration had been vertical then the entire vertical section would be brown.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA
Section #: 3.1.1
Original Comment # 3

Pg. #: 3

Commentor:
Line #:
Code:

Comment: This section fails to discuss the proposed RCRA well to be installed immediately east of the STP. The RCRA well is an essential data point for the OU 5 RI as well as for determining if additional removal activities are necessary at the STP. As a part of this Project Specific Plan (PSP), DOE should ensure the RCRA well is installed and sampled by August 1, 1993.

Response: DOE agrees that the RCRA wells east of the Sewage Treatment Plant (STP) are important to the overall site characterization. The RCRA well pair being installed east

Commenting Organization: Ohio EPA
Section #: 3.1.2
Original Comment # 10

Pg. #: 14

Commentor: M. Proffitt
Line #: Fig. 3-4
Code:

Comment: A scale should be added to the figure.

Response: DOE agrees.

Action: A scale will be added to the figure.

Commenting Organization: Ohio EPA
Section #: 3.1.3
Original Comment # 11

Pg. #: 15

Commentor: M. Proffitt
Line #: ¶ 1
Code:

Comment: What is meant by "plugged and abandoned"? Were the wells abandoned in accordance with the QAPP and OAC 3745-9-10?

Response: The term "plugged and abandoned" refers to the well abandonment procedure implemented when a well is no longer to be used. The wells were plugged and abandoned under the procedures specified in the SCQ, which meet the requirements of OAC 3745-9-10.

Objectives of abandonment include: elimination of physical hazards; prevention of groundwater contamination; conservation of aquifer yield and head; and prevention of groundwater intermixing.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA
Section #: 3.1.3
Original Comment # 12

Pg. #: 15

Commentor: M. Proffitt
Line #: ¶ 1
Code:

Comment: What are the distances between the existing/abandoned wells and their replacements?

Response: Generally the replacement well will be approximately 10 feet from the well being replaced, which is consistent with the placement of wells within a well cluster. In actual practice, the well will be placed as close as physical constraints such as buildings, roads, above and below ground utilities, and surface drainages will allow. In all cases, the location of the replacement well will be surveyed after installation so the exact location is documented.

Action: No change to the PSP is required.

4712

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #: 3.1.3

Pg. #: 15

Line #: ¶ 1

Code:

Original Comment # 13

Comment: Why were these monitoring wells abandoned?

Response: The new storage areas created as part of the Plant 1 Pad upgrade covered the locations of these wells. They were plugged and abandoned to allow construction of the additional storage capacity.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #: 3.1.3

Pg. #: 15

Line #: ¶ 1

Code:

Original Comment # 14

Comment: What is meant by "average ground water data elevation contours"? The dynamic nature of ground water prohibits averaging over time. If a single ground water measuring event does not exist, then the ground water levels should be measured and new maps prepared.

Response: The contours represent the average elevations from 20 or more monthly water level measurements recorded for these wells between January 1988 and July 1992. While it is true that the water table will rise and fall at varying rates in different wells with seasonal changes, this level of detail is not important to the issue at hand. The objective is to put wells in locations where they are downgradient from suspected source areas, where they will serve as monitoring points for many years in any season. Use of average water table conditions is an excellent tool for siting wells for this purpose. Use of individual monthly water table maps may show that the gradient shifts direction for some part of the year. When siting a well, these variations must be considered so that the well will be directly downgradient the majority of the time. This is the same as using a water table map generated from averaged water level readings taken over several years.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #: 3.1.4

Pg. #: 15

Line #: ¶ 1

Code:

Original Comment # 15

Comment: Monitoring wells which are physically damaged should be abandoned within hours of the discovery of damage. These monitoring wells offer a preferential pathway of contaminant migration which DOE is fully responsible for. It is in DOE's best interest to properly abandon these wells as soon as technologically possible.

Response: DOE agrees that damaged wells should be plugged and abandoned as quickly as possible. However, DOE does not agree that the relation between damage and the creation of a potential pathway is so direct as stated in the comment.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA
Section #: 3.1.4
Original Comment # 16

Pg. #: Commentor: M. Proffitt
Line #: ¶ 1 Code:

Comment: What is the distance between well 1350 and well 11074?

Response: Generally a replacement well will be approximately 10 feet from the well being replaced, which is consistent with the placement of wells within a well cluster. In actual practice, the well will be placed as close as physical constraints such as buildings, roads, above and below ground utilities, and surface drainages will allow. In all cases, the location of the replacement well will be surveyed after installation so the exact location is known.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA
Section #: Pg. #: 16
Original Comment # 17

Commentor: M. Proffitt
Line #: Fig. 3-5 Code:

Comment: A scale should be added to figure 3-5

Response: DOE agrees.

Action: A scale will be added to Figure 3-5.

Commenting Organization: Ohio EPA
Section #: Pg. #: 17
Original Comment # 18

Commentor: M. Proffitt
Line #: Fig. 3-6 Code:

Comment: A scale should be added to figure 3-6.

Response: DOE agrees.

Action: A scale will be added to Figure 3-6

Commenting Organization: Ohio EPA
Section #: 3.1.4 Pg. #: 18
Original Comment # 19

Commentor: M. Proffitt
Line #: ¶ 1 Code:

Comment: What is the distance between well 11075 and well 1174?

Response: Generally a replacement well will be approximately 10 feet from the well being replaced, which is consistent with the placement of wells within a well cluster. In actual practice, the well will be placed as close as physical constraints such as buildings, roads, above and below ground utilities, and surface drainages will allow. In all cases, the location of the replacement well will be surveyed after installation so the exact location is known.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #: 3.1.6

Pg. #: 18

Line #: ¶ 1

Code:

Original Comment # 20

Comment: Is there sufficient data to support the location of till vs the location of waste in the waste pit area so that monitoring wells can be placed in till and not in waste?

Response: Generally speaking, enough wells have been drilled to characterize the extent of the till. However, the risk of encountering waste is always present. Health and Safety plans define response to such contingencies and specify real-time monitoring by scanning samples as they come from the boring.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #:

Pg. #: 20

Line #: Fig. 3-8

Code:

Original Comment # 21

Comment: A scale should be added to figure 3-8

Response: DOE agrees.

Action: A scale will be added to Figure 3-8.

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #: 3.1.6

Pg. #: 21

Line #: ¶ 1

Code:

Original Comment # 22

Comment: How will the borings be plugged and abandoned?

Response: The borings will be plugged and abandoned by following procedures defined in the SCQ Section 5.2.2 and Appendix J.4.3. In general, the old well material will be drilled out; the boring will be filled with grout to within three feet of the surface; and a concrete plug will fill the boring to the surface.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA

Commentor: M. Proffitt

Section #: 3.1.7

Pg. #: 22

Line #: ¶ 1

Code:

Original Comment # 23

Comment: This proposed investigation does not address ground water contamination along the length of 18" line. Contaminated water could have leaked out of any/all of the joints along the length of the line. Additional monitoring wells or a hydropunch investigation should be used to assess this problem.

Response: The DOE agrees that this PSP does not investigate the length of the line. However, the primary consideration before conducting such an investigation was to determine if the line really carried contamination. If it is confirmed that the line is carrying contamination, further investigation may be warranted during remedial design for the pipeline removal.

Action The text in the PSP will be modified to show that there may be further investigation of the 18-inch line as part of a remedial action.

Commenting Organization: Ohio EPA
Section #: 3.2.1 Pg. #: 23 Commentor: M. Proffitt
Original Comment # 24 Line #: ¶ 2 Code:

Comment: What is DCR 71?

Response: DCR 71 refers to the work plan addendum "Additional Wells for Operable Unit (OU) 5," October 10, 1991.

Action: The text referencing DCR 71 will be changed from "was determined in DCR 71" to "was presented in DCR 71."

Commenting Organization: Ohio EPA
Section # 3.2.1 Pg. #: 23 Commentor: M. Proffitt
Original Comment # 25 Line #: ¶ 3 Code:

Comment: The three digit nomenclature used here is not consistent with the rest of the document, nor is it consistent to figure 3-10. This should be revised.

Response: DOE acknowledges this misunderstanding. Four-digit nomenclature identifies well depth with the first digit and well location with the last three digits. Location 093 can have multiple wells; therefore, at location 093, you could have wells 1093, 2093, 3093 and 4093. The term "location" precedes the number so it is clear that a location is referenced in general without having to list all well numbers at the location repeatedly in the discussion.

Action: The definition of the four-digit nomenclature will be clarified in Section 1.0 where it is introduced.

Commenting Organization: Ohio EPA
Section #: 3.2.1 Pg. #: 24 Commentor: M. Proffitt
Original Comment # 26 Line #: Figure 3-9 Code:

Comment: This map should be extended to show the entire plume.

Response: This map is designed to illustrate the problems addressed in the PSP. While the extent of the rest of the plume is of interest, presenting it here would have required compressing the information on the map, thus reducing the clarity of presentation.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA Commentor: M. Proffitt
Section #: 3.2.3 Pg. #: 26 Line #: ¶ 2 Code:
Original Comment # 27

Comment: Split Spoon samples should be taken continuously.

Response: DOE agrees. Continuous split spoon sampling for lithologic data is specified in the PSP in all locations through the glacial overburden. Beginning with the March 1988 RI/FS Work Plan, the glacial overburden has always been sampled continuously with a split spoon sampler in at least one well at each well cluster location.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA Commentor: M. Proffitt
Section #: 3.2.4 Pg. #: 27 Line #: ¶ 2 Code:
Original Comment # 28

Comment: How will rising and falling water levels over time affect the placement of the monitoring well screen?

Response: The screen will be placed based on the water level at the time the well is drilled. Hydrographs of wells in the area are evaluated to determine optimum screen placement based on the seasonal variation in the local area.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA Commentor: M. Proffitt
Section #: 3.2.4 Pg. #: 27 Line #: ¶ 3 Code:
Original Comment # 29

Comment: Split spoon samples should be collected continuously.

Response: Split spoon samples are collected continuously through the glacial overburden. DOE disagrees that split spoon samples should be collected continuously in the aquifer. The five-foot sampling interval provides sufficient characterization for the RI. Continuous sampling may be considered for detailed design of remedial actions.

Action: No change to the PSP is required.

Commenting Organization: Ohio EPA
Section #: 3.2.1
Original Comment # 30

Pg. #: 27-28
Line #: ¶ 4

Commentor:
Code:

Comment: The section refers to "DCR 71 in 1991". Additional detail as to the title of this document should be provided. This could be provided in the text or within a reference section.

Response: DCR 71 refers to the work plan addendum "Additional Wells for Operable Unit (OU) 5," October 10, 1991.

Action: The PSP will be revised to reflect the title of DCR 71.

Commenting Organization: Ohio EPA
Section #: 3.2.5
Original Comment # 31

Pg. #: 27-28
Line #:

Commentor:
Code:

Comment: A portion of text appears to be missing between pages 27 and 28. The text should be corrected.

Response: DOE agrees. The text will be corrected.

Action: Replace the missing text.

Commenting Organization: Ohio EPA
Section #: 3.2.4
Original Comment # 32

Pg. #: 28
Line #: ¶ 2

Commentor: M. Proffitt
Code:

Comment: Because well 3084 has acted as a conduit for contaminant migration into the type 3 aquifer, DOE must now initiate an investigation to determine the extent of this contamination.

Response: In order to evaluate the possible impact of leakage on the aquifer, the well abandonment procedure will be modified to include extensive purging and sampling of the well immediately prior to abandonment. A television survey will be conducted in the casing above the water table to determine if the casing leak is active or dry. The well will be purged daily for five working days prior to abandonment. Each day a sample will be collected from the top of the water column with a bailer. Then three well volumes will be purged and a second sample will be collected as in a routine sampling event. An additional two well volumes will be purged and a final sample will be collected to see if additional purging would have impacted the quality of the sample from a normal sampling event. The three samples will be analyzed for total uranium at the FERMC0 laboratory on a 24-hour turnaround basis.

On the last day of purging, an additional sample will be collected for the parameters in TAL 50.03.23 B, which was used for 1000-Series wells in the "Snapshot Monitoring Well Sampling" PSP. TAL 50.03.23 is specified because the leak comes from the glacial

Commenting Organization: Ohio EPA
Section #: 7.1.3
Original Comment # 35

Pg. #: 18

Commentor:
Line #:

Code:

Comment: Appendix K of the SCQ does not specifically address contact waste. DOE should provide a more detailed discussion of contact waste handling and disposition or provide a more specific reference to the SCQ.

Response: DOE agrees that there is not a section in the SCQ directly pertaining to investigation derived wastes, although some sampling procedures in Appendix K do mention waste handling. The reference was made in error. Investigation-derived wastes are disposed of in accordance with DOE procedures and federal regulations. Contact wastes, such as PPE, wipes, rags, etc., will be handled in either of two ways. If work is performed in a radiological control area, contact wastes will be placed in a bag labelled "contaminated waste" and secured for future off-site disposal as contaminated waste. If work is performed outside the radiological control areas, contact wastes will be placed in a bag labelled "clean" and disposed of as clean trash.

Action: Remove the last sentence from Section 7.1.3 of the PSP referencing the SCQ. The PSP will be modified to describe how contact wastes are handled.