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# RESPONSES TO OEPA COMMENTS TO RESPONSES TO OEPA COMMENTS ON THE INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT FOR SECOND QUARTER 1999

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

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U.S. DEPARTMENT OF ENERGY

**RESPONSES TO OEPA COMMENTS TO RESPONSES TO OEPA COMMENTS ON THE INTEGRATED ENVIRONMENTAL MONITORING STATUS REPORT FOR SECOND QUARTER 1999**

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1. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: 1.0 Pg. #: 1-4 Line #: 39 Code: C
Original Comment # 4

Comment: As indicated in the original comment, the need to obtain groundwater level measurements in the Type 3 wells is driven by the presence of above-FRL total uranium concentrations at some locations at the site. The water level data is needed to show that upward gradients are established during remediation of the areas of deeper contamination. Although the gradients are unquestionably slight, they do exist and do appear to be downward for at least some of the record at the wells discussed in the referenced documents. It seems unlikely that they can explain as "attributable to measurement, transcription, or keypunch error." It seems reasonable that the number of Type 3 Monitoring Wells for water level measurement can be reduced. Wells should be proposed on a case specific basis rather than the complete elimination of all Type 3 water level monitoring.

Response: The U.S. Department of Energy (DOE) will accommodate the Ohio Environmental Protection Agency's (OEPA's) request to continue quarterly monitoring of water levels in the Type 3 monitoring wells listed below:

3009, 3014, 3015, 3017, 3027, 3032, 3045, 3046, 3049, 3054, 3065, 3068, 3069, 3095, 3106, 3125, 3128, 3385, 3387, 3390, 3396, 3398, 3402, 3550, 3551, 3552, 3821, 3880, 3881, and 3900.

With the exception of the original four South Plume extraction wells, the above list is consistent to the list of Type 3 wells to be monitored that was received from OEPA's contractor HSI GeoTrans, Inc.

DOE will include Type 3 water level data on the CD-ROM issued to the U.S. Environmental Protection Agency and OEPA with each Integrated Environmental Monitoring Plan (IEMP) quarterly status report. However, DOE does not plan on producing a quarterly Type 3 water level map. Instead, DOE will produce annual hydrographs for these Type 3 wells with corresponding Type 2 wells so that vertical gradients can be assessed.

Action: DOE will collect and report the Type 3 water level data per the comment response.

2. Commenting Organization: OEPA Commentor: HSI GeoTrans, Inc.
Section #: 1.0 Pg. #: Figs. 1-30 & 1-31 Line #: N/A Code: C
Original Comment # 5

Comment: The comment response indicates that the base of the plume was located at Geoprobe Point 12369 in Round A, and was verified in Round B. The decision was then made to limit the sampling depth based on this information when conducting Round C. Sampling for Round D was conducted the final depth of Rounds A and B. An obvious concern during re-injection as stated in the plan is migration below the injection zone. Deeper portions of the aquifer that sampled clean in previous rounds may, therefore, show increases in concentration during later rounds. Sampling should be conducted to the maximum depth possible in order to meet the objectives of the plan.

Response: DOE believes that enough deep direct-push sampling data were collected over the course of the re-injection demonstration to document that the uranium contamination was not migrating beneath the re-injection wells. This information will be published in the final report for the re-injection demonstration, which is scheduled for issue to the agencies on June 30, 2000. DOE requests that OEPA defer this comment to that report.

Action: No action required.

3. Commenting Organization: OEPA Commentor: DSW
Section #: 4.0 Pg. #: 4.3 Line #: 5-11 Code: C
Original Comment # 21

Comment: It is agreed that an intense storm could cause turbidity, however the turbidity from the site should not exceed ambient turbidity in Paddys Run. This was the reason for having field inspections after rain events.

- DOES' response was, that three days later turbid conditions were no longer present and no further action was required is unacceptable. There wasn't any rain in the intervening time and it is intuitively obvious that turbid conditions will abate. The SWPPP calls for inspections of sediment controls after a precipitation event of at least 0.5 inches and the purpose of sections Appendix D.2.1 and D.3 are to protect the habitat of Sloan's Crayfish from excessive sediment loads from site activity. To say it stopped raining so the turbidity dropped is unacceptable. If the turbidity from the site exceeds that of Paddys Run, it is expected that an investigation of the cause and report of the findings and corrective actions will follow.

- Your metorological data submitted to us does not support the statement that "more than one inch of rain fell within a one hour period" in your response. The largest hourly rainfall on April 9 is 0.60-inch at 4 A.M.

- The statement that the increased turbidity could have been caused by runoff through exposed cut banks is speculative. Paddys Run also has exposed cut banks. The increased turbidity from the site could also have been caused by failed sediment controls, newly disturbed soils, or a myriad of other conditions. As stated above, the cause needs to be investigated, reported, and corrected. The turbidity from the site should not exceed ambient turbidity in Paddys Run

Response: In response to bulleted issues #1 and #3, DOE agrees that the cause of the increased turbidity requires investigation and, if possible, correction. However, there does not appear to be an obvious cause for the increase. The northern drainage area was field inspected after snowmelt occurred in February 2000. The following are findings of this survey:

- A large area bounded on the south by the rail yard, the north by an access road, on the east by the on-site disposal facility, and the west by the former fire training facility has not been stabilized. This area has previously been used for heavy equipment training and practice. However, this area is very flat and the down gradient area is controlled by a silt fence. Drainage features down gradient of this area do not show signs of excessive sedimentation.

- Check dams within the contributory drainage channels appear to be functioning. There is no excessive vegetation or debris accumulation compromising their function. Erosion of these ditches does not appear to be occurring.

- Several areas within the northern drainage ditch watershed are sparsely vegetated. However, the channel conditions downstream of these areas did not indicate that they are contributing to the sediment load. There are no visible signs of increased turbidity, such as the presence of small "sandbars" and the presence of residual sediment coating vegetation, rocks, etc.

- The channel itself is densely vegetated.

In summary, there is no apparent cause of increased turbidity from the northern drainage ditch. DOE observed this drainage the morning of February 14, 2000, after 2.07 inches of rain was measured from the previous day. The point of discharge at Paddys Run was in fact less turbid than that flowing in Paddys Run.

DOE will continue to monitor the channel in an attempt to determine a cause of these isolated occurrences of increased turbidity. Any future turbid conditions in this channel will be immediately reported to OEPA via telephone and/or email. Corrective actions resulting from these monitoring activities will be discussed with and approved by OEPA prior to their implementation.

In response to bulleted issue #2, DOE agrees that the statement of "over one inch of rain fell within a one hour period" was incorrect. It should have stated "a significant rainfall." DOE will be more careful with the accuracy of statements in association with the IEMP reports.

Action: DOE will conduct visual observations along the length of the northern drainage ditch to determine a source of increased turbidity following storm events. Once a cause is identified, DOE will undertake corrective actions to eliminate the turbidity, if possible. DOE will also be more careful with the accuracy of the statements in association with the IEMP reports.

4. Commenting Organization: OEPA Commentor: OFFO
Section #: Pg. #: Line #: Code: C
Original Comment # 15

Comment: Disagree with DOE response. The audience for NESHAP compliance tables would seem to be primarily the *regulators*. Adding a row to the bottom of the table to aid in our review of all air emission quality factors, does not seem to be an unacceptable request.

Response: DOE acknowledges OEPA's interest in monitoring the site's compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) standards. In order to aid in OEPA's review of data, DOE will add a row at the bottom of each NESHAP compliance table (quarterly and year-to-date) to show the sum of doses from each radionuclide.

Action: DOE will modify NESHAP tables in IEMP quarterly status reports per the comment response.

5. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg. #: Line #: Code: C
Original Comment # 19

Comment: Disagree with DOE response. The statement "...is not likely to aid in the efficient review of data," is inappropriate. Ohio EPA's request to add additional graphics was made to show differences between background and fence line concentrations with one "look," rather than paging between different figures. The latter seem inefficient. The inference that the reviewer may not be able to observe the difference between a biweekly and a quarterly composite sample is inappropriate.

Response: DOE recognizes that the large number of graphs in the IEMP quarterly status reports makes the efficient review and analysis of the information difficult. In order to improve the presentation and efficient review of data, the graphs for the WPTH-1 and WPTH-2 locations will include data on the average background concentration of each isotope of thorium as measured at the background monitors, AMS-12 and AMS-16.

Action: DOE will modify graphs for the WPTH-1 and WPTH-2 locations per the comment response.