

**Department of Energy**

**Ohio Field Office  
Fernald Closure Project  
175 Tri-County Parkway  
Springdale, Ohio 45246  
(513) 648-3155**



DEC 14 2005

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

DOE-0046-06

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

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF RESPONSES TO U.S. ENVIRONMENTAL PROTECTION  
AGENCY AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON  
THE DRAFT WAC ATTAINMENT PLAN FOR SEDIMENT IN THE STORM WATER  
RETENTION BASINS**

- References:
- 1) Letter, J. Saric to J. Reising, "SWRB WAC Attainment Plan," dated November 9, 2005
  - 2) Letter, T. Schneider to J. Reising, "Disapproval - WAC Attainment Plan SWRB," dated November 10, 2005

Enclosed for your approval are responses to U.S. Environmental Protection Agency and Ohio Environmental Protection Agency comments on the Draft Waste Acceptance Criteria (WAC) Attainment Plan for Sediment in the Storm Water Retention Basins per the above-noted references.

In summary, these responses conclude that the sediment in the middle basin is considered to be above the On-Site Disposal Facility (OSDF) WAC due to the presence of visible resin material. However, the sediment in the west basin is considered to be below the OSDF WAC as confirmed by recent sampling and analytical activities. This conclusion is different than what was provided and discussed with the agencies during the Weekly Conference Call held on Tuesday, December 6, 2005.

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Mr. James A. Saric  
Mr. Tom Schneider

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In the data and figures that were submitted to the agencies for the December 6, 2005 Weekly Conference Call, a single data point in the southern end of the west basin demonstrated technetium-99 results of 32.1 picoCuries per gram (pCi/g), which is above the OSDF WAC. This sample as well as the samples that were collected to bound this sample were discussed during the call and a letter was committed to be sent to the agencies that describes potential data quality issues and the excavation approach to handle this apparent isolated above-WAC condition in the west basin. However, upon further review of the quality control data associated with the sample that had the above-WAC result of 32.1 pCi/g technetium-99, the result became suspect because the recovery for the tracer spike of 27 percent for this sample fell outside of the acceptable tolerance of 30 to 110 percent, while all other samples from the same analytical batch as well as the four bounding samples had tracer recoveries of approximately 83 percent. The impact of having a bad and low tracer spike that is not representative of sample/analytical conditions is the application of an incorrect factor that will bias the reported result high. In this case, the result was biased high by a factor of three (i.e.,  $83 \text{ percent recovery} / 27 \text{ percent recovery} = 3.1$ )

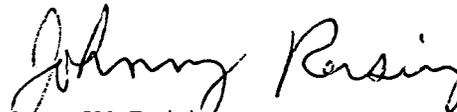
Upon this finding, the exact sample that had the non-representative tracer spike was re-prepped and re-analyzed in duplicate last week, which produced results of 9.54 pCi/g and 8.64 pCi/g (tracer recovery of 82 percent), both of which are below the OSDF WAC for technetium-99 of 29.1 pCi/g.

Based on the latest information, the west storm water retention basin does not contain any valid result that is above the OSDF WAC. As such, the intent is to send the sediment from the west storm water retention basin to the OSDF for disposal according to all relevant OSDF Impacted Material Placement Plan requirements. For completeness, all data that have been described above will be included in the final WAC Attainment Plan for Sediment in the Storm Water Retention Basins. Additionally, the figure that was submitted for the December 6, 2005 Weekly Conference Call has been revised and is enclosed.

Upon approval, these comment responses will be incorporated into the final WAC Attainment Plan.

If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,



Johnny W. Reising  
Director

Mr. James A. Saric  
Mr. Tom Schneider

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DOE-0046-06

Enclosures

cc w/enclosures:

J. Desormeau, OH/FCP  
T. Schneider, OEPA-Dayton (three copies of enclosures)  
G. Jablonowski, USEPA-V, SR-6J  
M. Cullerton, Tetra Tech  
M. Shupe, HSI GeoTrans  
R. Vandegrift, ODH  
AR Coordinator, Fluor Fernald, Inc./MS6

cc w/o enclosures:

J. Chiou, Fluor Fernald, Inc./MS88  
F. Johnston, Fluor Fernald, Inc./MS12  
C. Murphy, Fluor Fernald, Inc./MS1

**RESPONSES TO  
U.S. ENVIRONMENTAL PROTECTION AGENCY AND  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
COMMENTS ON THE DRAFT WAC ATTAINMENT PLAN  
FOR SEDIMENT IN THE  
STORM WATER RETENTION BASINS**

**FERNALD CLOSURE PROJECT  
FERNALD, OHIO**

**DECEMBER 2005**

**U.S. DEPARTMENT OF ENERGY**

**RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY  
TECHNICAL REVIEW COMMENTS ON THE  
DRAFT WAC ATTAINMENT PLAN FOR  
SEDIMENT IN THE STORM WATER RETENTION BASINS  
(20500-PL-0004, REVISION A)**

**SPECIFIC COMMENTS**

Commenting Organization: U.S. EPA

Section #: 4

Page #: 1

Commentor: Saric

Line #: Not Applicable (NA)

Original Specific Comment #: 1

**Comment:** The text states that two sediment samples collected in 2004 from the Center and East Basins each were above the waste acceptance criteria (WAC) for technetium-99 and that all sediment samples collected from the West Basin were below-WAC for uranium and technetium-99 and refers to Figure 1. The text should be revised to state the WAC for uranium and technetium-99, the constituents of concern for the Storm Water Retention Basins. Also, according to Figure 1, all sediment samples were collected from the perimeter of the three basins. Additional sediment samples should be collected from the center (deeper) parts of the basins to make a proper WAC attainment determination for the three Storm Water Retention Basins. The appropriate sections of the plan should be revised accordingly.

**Response:** Agree. The deeper portions of the basins were characterized by adding six locations to the center of the west basin and an additional location was collected in the center of the middle basin. Once off line, the east basin will be re-sampled as well. These new data from the west basin reaffirm the conclusion that the west basin meets the On-Site Disposal Facility (OSDF) WAC. Based on the visual indications of resin in the center basin, the center basin does not meet the OSDF WAC and will therefore be sent to Soil Stockpile (SP) 7 for off-site disposal. The additional sample results from the middle basin for Envirocare WAC are consistent with all previous samples from this basin.

**Action:** The text will be revised to list the WAC for both uranium and technetium-99. Additionally, the text will be revised to incorporate the description of this most recent sampling activity and to provide discussion of the results from these samples.

Commenting Organization: U.S. EPA

Section #: 5

Page #: 2

Commentor: Saric

Line #: NA

Original Specific Comment #: 1

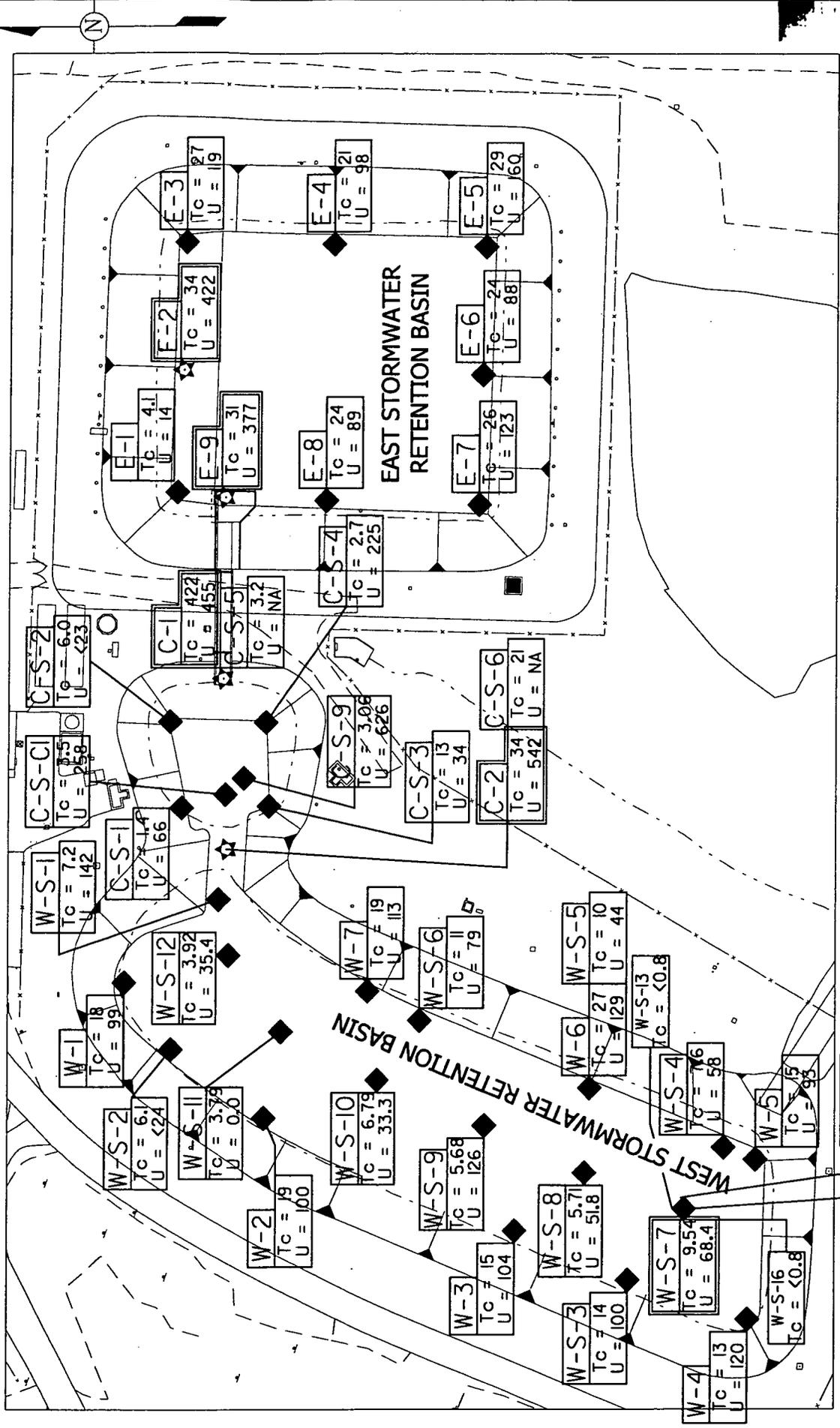
**Comment:** The text states that two samples collected in 2005 from the Center Basin were greater than the '20 times rule' for total selenium and refers to Figure 2. Figure 2 indicates that the four sediment samples collected from the Center Basin were collected from the perimeter of the basin and not the center (deeper) part. Additional sediment samples should be collected from the center of all three Storm Water Retention Basins and analyzed for Envirocare WAC parameters. The appropriate sections of the plan should be revised accordingly.

**Response:** Agree. Each of the additional samples described in the above response (U.S. EPA Specific Comment No. 1) were analyzed for the Envirocare WAC parameters.

**Action:** The text will be revised to incorporate the description of this most recent sampling activity and to provide discussion of the results from these samples including the Envirocare WAC parameters.



2005 Tc99 (pCi/g)  
U (ppm)



LEGEND:  
 ◆ BELOW-WAC SAMPLE LOCATIONS  
 ☆ ABOVE-WAC SAMPLE LOCATIONS

DRAFT

FIGURE 5 2005 SAMPLING RESULTS