



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

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JUL 30 1999

REPLY TO THE ATTENTION OF:

DW-8J

Mr. Tom Brent
Naval Surface Warfare Center
EPD, Code 095 B-3260
300 Highway 361
Crane, IN 47522-5001

Re: Work Plan for Geophysical
Investigation at McComish Gorge
SWMU #4

Dear Mr. Brent:

The United States Environmental Protection Agency (U.S. EPA) has reviewed the Work Plan for Geophysical Investigation at SWMU #4, McComish Gorge dated July 1999.

Attached you will find U.S. EPA's comments. Please revise the Work Plan to address these comments.

If you have any questions regarding this matter, please contact me at (312) 886-7890.

Regards,

A handwritten signature in black ink, appearing to read "Peter Ramanauskas".

Peter Ramanauskas
Environmental Engineer
WMB, IL/IN/MI Section

Enclosure

Filename: SWMU4 Geophysical Work Plan NOD.wpd

cc: Bill Gates, SOUTHDIV (w/ encl)
James Ursic, USEPA (w/encl)

NOTICE OF DEFICIENCY
Work Plan for Geophysical Investigation
For Solid Waste Management Unit 4 (McComish Gorge)
Naval Surface Warfare Center
Crane, Indiana

A. Work Plan Comments

Comment 1:

Section 2.2: Before the survey is conducted, it is important to define and consider the type of material used to cover the disposal area since highly conductive soils would tend to mask and limit instrument detection capabilities. The success of the Geonics EM-31 is dependent on significant changes in ground conductivity or magnetic permeability between the natural background and fill. If changes are minor, it will be difficult to detect anomalous areas. If highly conductive soils are present, one may consider the use of a Geonics EM-61 metal detection tool.

Comment 2:

Section 3.0: The proposed grid transects are very broad and will provide an extremely limited outline of any anomalies that are found. One may consider other minor transects, if anomalies are found to further delineate the data.

Comment 3:

Section 3.0: Records should be investigated before the survey is initiated to determine if any utility (overhead or buried lines), communication or drainage features (metal/concrete culverts) are in the area that may influence the data. In addition, any materials found at the surface during the EM-31 survey should be noted in the data and on a map in order not to confuse surface anomalies with buried anomalies.

Comment 4:

Section 3.0: A background area should be selected so that EM-31 readings can be taken before and after the survey to verify that the instrument is in good working order. The EM-31 should not be operated if lightning is seen near the area since it may spike the data.

Comment 5:

Section 3.0: Although GPS data will be collected in conjunction with the EM-31 data, additional positioning checks are advised. These positioning checks would consist of periodic way points evenly spaced throughout the grid (i.e. every 50, 100 or 200 foot

intervals). At each interval, the EM-31's "marker" switch would be activated to record a mark on the data logger. These marks could then be used to help confirm the location of the individual data points. This procedure is especially helpful if the operators traverse pace is interrupted or GPS data is unavailable due to dense vegetation canopy or other obstacles.

Comment 6:

Section 3.0: It may be helpful to take several additional readings over anomalous areas using the EM-31 in the horizontal dipole mode so that data can be compared with the vertical mode to provide an estimate as to anomaly depth.

Comment 7:

Section 4.0: It is advisable that the name and version of the software used to interpret the data be documented in the final report.