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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

FEB. 11 1994

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Douglas A. Niedt, President
Niedt Enterprises, Inc./Niedt Realty Company
One Steelcote Square
St. Louis, Missouri 63103

RE: Niedt Enterprises, Inc. (formerly known as Steelcote Mfg. Co.)/Niedt Realty Company (collectively referred to herein as "Niedt")
EPA Docket No. VII-91-H-0025

Dear Mr. Niedt:

The U.S. Environmental Protection Agency (EPA) has reviewed the document entitled "Site Investigation Report, Steelcote Facility, St. Louis, Missouri" dated September 30, 1993, which was submitted by Shannon & Wilson, Inc. on behalf of Niedt, as well as the document entitled "Results of Cone Penetrometer Tests and Reverse Slug Tests, Steelcote Facility, St. Louis, Missouri" dated August 1993, which was also submitted by Shannon & Wilson, Inc. on behalf of Niedt.

While these documents adequately characterize the geology of the site, contaminant characterization is incomplete. The EPA's review of these documents has revealed inconsistent sample results. We believe that the inconsistent results are due to the excessively long well screens. Niedt should submit a plan, in the form of an addendum to the Workplan, to determine the vertical and horizontal extent, including concentrations, of contaminants detected during the sampling events discussed in the Site Investigation Report. This plan should include specifications for wells to be screened in specific preferential flow paths as determined by the cone penetrometer tests (CPT) study. In addition, a contingency plan must be included which will outline in detail the further delineation of contaminant migration should that be indicated from new data. It is further recommended that Niedt delay the eight quarterly sampling events scheduled to begin February 15 until the new groundwater monitoring system has been installed.

Pursuant to the Additional Work provision (Section IX) of the Administrative Order On Consent (AOC) entered into between

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the EPA and Niedt in this matter, the EPA is hereby formally notifying Niedt that the above mentioned tasks will be required in order to fulfill the objectives of the AOC. Within thirty (30) days of receipt of this letter Niedt should submit to the EPA the Addendum to the Workplan.

It may be beneficial to discuss the necessary work in person or in a phone conference. Please contact me if you wish to discuss these issues further at (913) 551-7478.

Sincerely,

Cynthia L. Hutchison
Geological Engineer
RCRA Compliance

Enclosure

cc: Alphonse McMahon, Esq.
Donald J. McQueen, Shannon & Wilson,
Ed Sadler, Missouri Department of Natural Resources

The EPA's Comments on the
"Site Investigation Report"
and the
"Results of Cone Penetrometer Tests and Reverse Slug Tests,
Steelcote Facility, St. Louis, Missouri"

The Cone Penetrometer Tests (CPT) have achieved the goal of geological characterization of the site. Data generated and interpreted by way of cross-sections of the site are of excellent quality. Reverse slug testing has been completed in an acceptable manner and hydrogeological data given appears to be in the range for the type of material underlying the site. Niedt states that the results of the slug test indicate that the monitoring wells are constructed properly. While well construction may be acceptable, the well design with 45 foot screens is not adequate for the site. The CPT data confirms that the underlying unconsolidated deposits are heterogeneous and distinct preferential flow paths need to be monitored for contaminant migration.

It is stated that there is apparently a perched water zone some distance above the water table. The CPT data confirms this with the sandy silt zone overlying a silty clay above the bedrock as shown on Figure 7. The water level depths still appear to be anomalous in some areas. This is probably due to the well screens of the current well system being screened through the perched aquifer and into the water table. A monitoring well system capable of screening discrete preferential pathways for contaminant movement must be installed at this site. The most acceptable zone to be screened would be the interface of the sandy silt and bedrock upper surface and the lower surface of any perched water tables as indicated by the CPT.

Analytical results for the four wells show a great deal of fluctuation in contaminant concentrations. For example, Well SWGW/1(C) shows xylene concentrations ranging from 10 ug/l to 2100 ug/l, toluene ranging from non-detect (ND) to 2000 ug/l then back to ND, and formaldehyde ranging from 380 ug/l to ND. The report does not attempt to explain these wide differences that have occurred on a quarterly basis. Again, the excessive screened intervals may be the cause for the fluctuating contaminant concentrations due to dilution and multiple sources of contamination within the saturated zone.

The proposal to discontinue sampling for some parameters based on the last four sampling events is unacceptable due to the fluctuation in concentration levels for some of the major contaminants of concern. Groundwater data from the 45 foot screens is considered acceptable only as a detection mechanism. Detection was accomplished by the current monitoring well system. Shorter screens covering specific intervals where preferential flow is indicated would be the only acceptable method to

determine vertical and horizontal extent as well as representative concentration levels for contaminants of concern.

The CPT portion of the report was very good and yielded a great deal of information on the geology of the site. Cross sections illustrated on Figures 7 and 8 are excellent depictions of the geology of the site and should serve as a guide to more zone specific groundwater monitoring. However, Figures 6 and 9 which are respectively entitled "Bedrock Contours" and "Water Level Contours" may be incorrectly identified. The contours shown on Figure 6 appear to be water levels and the contours on Figure 9 correspond to the top of the bedrock as is discussed in the text. These figures should be re-labeled if the above statement is true. Units of measure for the contours should also be given on the map legend. In addition, water level contours may be influenced by perched water entering the long screened interval resulting in a less than accurate water table map of the site.

Although the report is acceptable for preliminary data and partial site characterization, the proposed plan to discontinue sampling for certain parameters as stated in the text must be disapproved at this time.