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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

MAR 6 1991

4WD-RCRA & FFB

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Brigadier General Michael P. Downs
Commanding General
Building 1
Marine Corps Base
Camp Lejeune, North Carolina 28540

RE: Review of Site Inspection documents for selected sites

Dear General Downs:

The U.S. Environmental Protection Agency (EPA) has reviewed the following documents for Marine Corps Base Camp Lejeune, all by NUS Corporation and dated December 1990:

1) Draft Work Plan for Site Inspections at Sites 3, 7, 43, 44, 54, 63, 65, 80, and 82

2) Draft Health and Safety Plan for Site Inspections at Sites 3, 7, 43, 44, 54, 63, 65, 80, and 82

3) Draft Sampling and Analysis Plan (Vol. I) for Site Inspections at Sites 3, 7, 43, 44, 54, 63, 65, 80, and 82

4) Draft Sampling and Analysis Plan (Vol. II) for Site Inspections at Sites 3, 7, 43, 44, 54, 63, 65, 80, and 82

Several issues still need to be addressed before final approval of the above-referenced documents can be given, as presented in the enclosed comments. If you have any questions concerning these matters, please contact Mr. Carl R. Froede Jr. of my staff at (404) 347-3016.

Sincerely yours,

J. E. Meredith

James H. Scarbrough, P.E., Chief
RCRA and Federal Facilities Branch
Waste Management Division

for

Enclosure

cc: Ms. Lee Crosby, NCDEHNR
Ms. Laurie Boucher, NAVFAC
Ms. Stephanie Del-Re, MCB Camp Lejeune

EPA Comments on Site Inspection Work Plan and Related Documents for Sites 3, 7, 43, 44, 54, 63, 65, 80, and 82, Marine Corps Base Camp Lejeune

A. GENERAL COMMENTS

1) The Draft Work Plan states that 31 sites warrant further investigation. EPA only knows of 30 sites. If a new site is to be added, please notify EPA of which site.

2) The target compound list of organics and inorganics should be stated in the report.

3) On location maps, a reference is needed on what the numbers on the map mean. (EPA realizes that the numbers reflect the sites listed in the report, but it needs to be stated).

4) Several sites will be sampled for BTEX (benzene, toluene, ethylbenzene, and xylene), which is appropriate; however, why is there no sampling for PAHs? Can MCB Camp Lejeune state without reservation that no diesel fuels were ever used in these areas?

5) Location plats for older sites under investigation need to distinguish between previous monitor well locations and new well locations. EPA recommends that a different symbol be used to more clearly show the new wells. The same holds true for soil borings that will be performed on site.

6) In several tables in the report, the State of North Carolina Water Quality Standards are given. EPA standards should be shown when N.C. has no standard or when EPA has a more stringent standard. If neither N.C. nor EPA has a standard, then there should be a reference as such.

7) Well-development water should not be disposed of on the ground surface if the monitor well is constructed in an area suspected of contamination. This could result in further site contamination. Development waters should be disposed of in a manner deemed safe and effective for the prevention of further contamination.

8) Groundwater monitoring wells must not be constructed of PVC material to be in compliance with the EPA Region IV Engineering Support Branch Standard Operation Procedures and Quality Assurance Manual. In many cases, PVC is not recommended, since contaminants will leach from or adsorb on PVC. Stainless steel or Teflon are the only materials approved for well construction at this time. If wells are constructed of PVC, results might not reflect the exact amounts of contamination in the subsurface. This could result in additional well construction (using approved materials) and sampling to quantify/qualify contamination later. However, alternative materials for groundwater monitoring wells may be used, if a variance request is approved by EPA. (See attachment for required information for such a variance request.)

9) Surface water samples should never be collected from areas of "good current velocity and turbulence" since compounds will be stripped from the water due to aeration.

10) If a shallow boring is made, it is not always necessary to seal the hole with bentonite unless contamination at the surface is to be kept from spreading to subsurface soils or a landfill cap has been violated and needs to be repaired.

11) Field screening of organic vapors using the HNu and OVM recorders is appropriate; however, the meters will not register metal contamination. This should be considered when selecting the location for soil borings.

12) If filtered samples are planned (to determine the dissolved fraction of organic compounds and/or metal analyses), unfiltered samples must also be collected and the data identified and reported for both filtered and unfiltered samples.

B. SPECIFIC COMMENTS (Draft Sampling and Analysis Plan)

1) Section 13.3.4 Monitoring Well Construction/Installation; pg 13-11: The drawing of the "Typical" monitor well shows the drain hole above the well cap. The drain hole should be moved to a level below the top of the well cap.

2) Section 13.3.5 Well Development; pg 13-13: No development water should be released to the ground surface unless it can be proved that the well development water is not contaminated.

3) Section 13.6 Decontamination; pg 13-15: All waters used to clean equipment should be disposed of in a manner that does not create additional contamination. If rinse waters are contaminated, they should be disposed of in a manner safe to human health and the environment. EPA recommends that a sufficient quantity of hand sampling implements be brought to the site to minimize the amount of decontamination needed to be conducted at the site.

4) Section 13.6.2 Sampling Equipment; pg 13-15: All water used for sampling equipment cleaning/washing should not be deionized, but rather, organic-free. Also, trip blanks should be organic-free water.

5) Appendix A; SA-1.1, Groundwater Sample Acquisition: No PVC bailers should be used to take samples (whether dedicated or not), since contaminants will leach from or adsorb on PVC. Teflon is the only material approved for bailer use at this time.

Alternate Well Casing Material Justification

Below is EPA's minimum seven point information requirements to justification the use of PVC as an alternate casing material for groundwater monitoring wells.

1. The Data Quality Objective(s) (DQO) for the samples to be collected from wells with PVC casing per EPA/540/G-87/003, "Data Quality Objectives for Remedial Response Activities".

2. The anticipated compounds and their concentration ranges.

3. The anticipated residence time of the sample in the well and the aquifer's productivity.

4. The reasons for not using a hybrid well.

5. Literature on adsorption/desorption characteristics of the compounds and elements of interest for the type of PVC to be used.

6. If an anticipated increase in thickness of the wall thickness will require a larger annular space.

7. The type of PVC to be used and if available the manufacturers specifications. And an assurance that the PVC to be used does not leach, mask, react or otherwise interfere with the contaminants being monitored within the limits of the DQO(s).

Acceptance does not constitute approval, therefore, if PVC is accepted for use by EPA, then the following conditions shall apply:

1. The Army accepts the risks that the use of alternate materials for groundwater monitoring may cause interferences or inaccuracies in the chemical analysis of samples from such wells. All compounds found in samples collected from the well will be considered to originate in the aquifer being monitored.

2. Any such acceptance applies to the implementation of the specified RFI Work Plan only, and any other use of alternate materials for groundwater monitoring must be granted by EPA separately.

3. Any major amendments or revisions to the referenced RFI Work Plan or the intended DQO(s) of the work plan may require reassessment of the acceptance for use of alternate materials by the EPA.

4. EPA reserves the right to refuse groundwater monitoring data from groundwater wells constructed of alternate materials from those specified in the Region IV SOP whenever such construction materials could cause the Groundwater monitoring data to fail to meet the necessary data DQO(s).