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UNITED STATES MARINE CORPS
MARINE CORPS BASE
PSC BOX 20004
CAMP LEJEUNE, NORTH CAROLINA 28542-0004

IN REPLY REFER TO:
6286
BEMD
31 JUL 1997

Mr. David J. Lown
North Carolina Department of Environment,
Health, and Natural Resources
Division of Solid Waste Management
Superfund Section
Post Office Box 27687
Raleigh, North Carolina 27611-7687

Dear Mr. Lown:

Please find the enclosed "Notices of Non-Significant Changes" to selected remedial alternatives at two Operable Units (OU) within Marine Corps Base, Camp Lejeune. The modifications pertain to existing Records of Decision (RODs) for OU 1 (Sites 24 and 78) and OU 5 (Site 2) and revise some of the sampling and analytical requirements stipulated in each of the Final RODs.

If you have any questions or comments, please contact Mr. Brian Marshburn, Installation Restoration Division, Environmental Management Department at (910) 451-5068.

Sincerely,

SCOTT A. BREWER, PE
Deputy Assistant Chief of Staff
Environmental Management
By direction of
the Commanding General

Enclosure: 1. Notice of Non-Significant Changes

Copy to: (with enclosure)
COMLANTNAVFACENGCOM (K. Landman)
EPA, Region IV (G. Townsend)
NCDEHNR, Groundwater Section Cheif (A. Mouberry)
NCDEHNR, Water Quality Section Cheif (S. Tedder)
NCDEHNR-WiRO, Regional Supervisor (R. Shiver)
NCDEHNR-WiRO, Groundwater Regional Supervisor (C. Stehman)

NOTICE OF NON-SIGNIFICANT CHANGES

Modification of OU 1 (Site 24) Sample Analyses

The ROD for OU1 stipulates that groundwater samples from selected monitoring, recovery, and supply wells be collected quarterly and analyzed for volatile organic compounds (VOCs), total metals, dissolved solids, and suspended solids. The ROD however does not differentiate between sample analyses at Site 24 versus those at Site 78. The contaminant of concern in groundwater at Site 24, unlike Site 78, was identified during the Remedial Investigation (RI) as heptachlor epoxide. The pesticide heptachlor epoxide was detected in groundwater samples collected from shallow monitoring wells 24-GW08, 24-GW09, and 24-GW10. Heptachlor epoxide was detected in samples obtained from each of the three monitoring wells. Concentrations of heptachlor epoxide exceeded the North Carolina Water Quality Standard (NCQWS) of 0.004 micrograms per liter (µg/L), but were less than the Federal Maximum Contaminant Level (MCL) of 0.2 µg/L. During the RI no VOCs were detected at concentrations exceeding applicable water quality standards from any of the 10 monitoring wells at Site 24.

Quarterly monitoring activities were initiated at Site 24 in July 1996. Groundwater samples were submitted for analyses according to the ROD requirements; no pesticide analyses were performed. During the previous three sampling quarters no VOCs have been detected in any of the samples obtained from the three identified monitoring wells at Site 24. Although pesticide analyses were not stipulated in the ROD for OU1, the lack of unique sample analyses at Site 24 was, most likely, an oversight. Based upon this information, it is recommended that future samples obtained from shallow monitoring wells 24-GW08, 24-GW09, and 24-GW10 be submitted for pesticide analyses only.

Modification of OU 1 (Site 78) Sample Analyses and Sampling Scheme

The ROD for OU1 stipulates that groundwater samples be collected quarterly and analyzed for VOCs, total metals, dissolved solids, and suspended solids. Oil and grease analyses were added to the monitoring program in response to engineering requirements of the groundwater treatment system. However, only the treatment plant influent and effluent need be submitted for oil and grease analyses as an indicator of oil and water separator efficiency. In addition, concentrations of oil and grease compounds were not detected among any of the most recent sampling results. Analytical results from previous monitoring activities at Site 78 suggest that oil and grease compounds have been detected infrequently and at concentrations less than 15 milligrams per liter (mg/L). Based upon this information, groundwater samples obtained at Site 78 will no longer be submitted for oil and grease analyses.

Total metals, dissolved solid, and suspended solid analyses will also be eliminated from the sampling program at Site 78. Although metals and dissolved solids have been detected at concentrations greater than applicable North Carolina groundwater standards, these analyses are not required to determine or monitor the migration of known organic contaminants. In addition, there is no history or evidence to suggest that metal disposal activities may have occurred at Site78. Concentrations of

certain metals and dissolved solids are often greater than applicable groundwater standards among unfiltered samples obtained from the surficial aquifer throughout the coastal plain of North Carolina. Total metal concentrations in groundwater are due more to geologic conditions (i.e., naturally occurring metals and unconsolidated soils) and sample acquisition methods than to mobile metal concentrations in the surficial aquifer. Concentrations of total metals among groundwater samples obtained at Site 78 are typical of natural conditions observed throughout MCB Camp Lejeune. Based upon this information, groundwater analyses for total metals, dissolved solids, and suspended solids will no longer be performed.

The ROD for OU1 also stipulates that groundwater samples be collected from 8 supply wells, all 11 groundwater recovery wells, and 22 monitoring wells at Site 78. Seven of the eight supply wells have since been abandoned; the one remaining supply well continues to be sampled periodically as part of ongoing water resource activities. Recovery wells RW-1 through RW-4 and RW-9 were deactivated as a result of low influent contaminant concentrations. In fact, sampling results obtained since the inception of monitoring program activities at Site 78 suggest that little to no contamination has been present within groundwater extracted from the five identified recovery wells. The remaining six recovery wells are no longer being sampled individually at each well head; rather, an aggregate influent sample is collected prior to treatment. Based upon this information, recovery wells will not be sampled as part of the monitoring program at Site 78.

In order to more accurately depict the extent of known organic contaminants at Site 78, other adjustments in the sampling scheme are required. Monitoring wells installed as part of unrelated investigations throughout Site 78 will be employed in the future to better define the extent of groundwater contamination. The supplemental information will also aid in the placement of future recovery wells. In addition, other adjustments to the current sampling program will be required. Groundwater samples obtained from a number of monitoring wells identified in the ROD provide only extraneous analytical data. Monitoring wells 78-GW05 and 78-GW19 are located immediately adjacent to areas within Site 78 that are currently being investigated. Monitoring well 78-GW22-1 was located, prior to abandonment, within the former fuel farm area of Hadnot Point. The former fuel farm is currently undergoing both investigative and corrective action activities. Samples obtained from 78-GW31-3 have exhibited little to no contamination during the previous six monitoring events. Monitoring well 78-GW31-3 is also located greater than 1,000 feet from any known area of contamination. Based upon this information, groundwater samples will no longer be obtained from monitoring wells 78-GW05, 78-GW19, 78-GW22-1, and 78-GW31-3.

Modification of OU 5 (Site 2) Sample Analyses and Sampling Scheme

The sampling program at Site 2 will be modified to eliminate total metal, dissolved solid, and suspended solid analyses. Although metals and total dissolved solids have been detected at concentrations greater than applicable North Carolina standards, these analyses are not necessary to monitor known organic contaminants within groundwater at Site 2. In addition, there is no history or evidence to suggest that metal disposal activities may have occurred at Site 2. Concentrations of certain metals and dissolved solids are often greater than applicable groundwater standards among unfiltered samples obtained from the surficial aquifer throughout the coastal plain

of North Carolina. Total metal concentrations in groundwater are due more to geologic conditions (i.e., naturally occurring metals and unconsolidated soils) and sample acquisition methods than to mobile metal concentrations in the surficial aquifer. Concentrations of total metals at Site 2 are typical of natural conditions observed throughout MCB Camp Lejeune. Based upon this information, groundwater analyses for total metals, dissolved solids, and suspended solids will no longer be performed.

During the previous six quarters of sampling, organic contaminants have consistently been detected among groundwater samples obtained from monitoring well 02-GW03. In fact, analytical data collected to date suggests that a localized area of groundwater contamination exists near well 02-GW03 with little to no horizontal migration of the fuel-related contaminants. Ethylbenzene and total xylenes have consistently been detected at concentrations above the NCWQS in samples obtained from 02-GW03. Based upon this information, an immediate reduction in the number of yearly sampling events will be implemented. Semiannual sampling, rather than quarterly sampling, will sufficiently monitor the groundwater conditions at Site 2.

The ROD for OU5 stipulates that groundwater samples be collected from 3 supply wells and 12 monitoring wells at Site 2. The three supply wells are being sampled periodically as part of ongoing water resource activities. In addition, each supply well is located greater than 750 feet from Site 2. Based upon this information and lack of evidence suggesting that fuel-related contaminants have migrated from the site, future sampling of supply wells HP-616, HP-646, and HP-647 will be eliminated from the sampling program.

In order to more accurately depict the extent of known organic contaminants at Site 2, other adjustments in the sampling scheme are required. Two additional monitoring wells that were recently installed will be employed in the future to better define the extent of known groundwater contamination. One shallow monitoring well was installed immediately downgradient of the known groundwater contamination; an intermediate well was installed within the contaminated area. In addition, other adjustments to the current sampling program will be required.

Groundwater samples obtained from a number of monitoring wells identified in the ROD provide only extraneous analytical data. Monitoring wells 02-GW06 and 02-GW09 are located far beyond the area of known contamination. Monitoring wells 02-GW01 and 02-GW02 were also located, prior to abandonment, beyond thearea of known contamination and were not situated hydraulically downgradient of known contamination. Monitoring well 02-GW04, although positioned hydraulically downgradient of the contamination, had begun to show signs of subsurface deterioration. Most likely the well screen and sand pack of 02-GW04 had become clogged with fine-grained material. Redevelopment of 02-GW04 was unsuccessful in re-establishing interconnection with the surrounding aquifer. As a result, 02-GW04 was also abandoned. Based upon this information, groundwater samples will no longer be obtained from monitoring wells 02-GW01, 02-GW02, 02-GW04, 02-GW6, and 02-GW09. Future samples will, however, be obtained from the two newly installed monitoring wells 02-GW03IW and 02-GW12.