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Baker

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July 13, 1993

Commander
Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert Street (Building N-26)
Norfolk, Virginia 23511-2699

Attn: Ms. Linda Berry, P.E.
Code 1823

Re: Contract N62470-89-D-4814
Navy CLEAN, District III
Contract Task Order (CTO) 0174
RI/FS at Operable Unit No. 5 (Site 2)
Marine Corps Base Camp Lejeune, North Carolina
Time Critical Removal Action Evaluation

Dear Ms. Berry:

Baker Environmental, Inc. (Baker) is currently conducting RI/FS activities at Operable Unit No. 5 (Site 2) at Marine Corps Base (MCB) Camp Lejeune, North Carolina. Soil, groundwater, surface water, and sediment samples were collected during the field investigation in late April 1993. The majority of the validated laboratory analytical results for these samples has been received by Baker.

A preliminary assessment of the available data indicate the presence of elevated concentrations of pesticides in soil at two discrete areas on-site. The purpose of this correspondence is to present these results to you and evaluate them with respect to Removal Action Criteria outlined in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This may be of assistance to you in determining if a removal action is warranted for this site.

SITE EVALUATION

Elevated concentrations of pesticides have been detected in the soil surrounding two former pesticide mixing/washing pads on-site. Detected pesticides include:

COMPOUND	MAXIMUM CONCENTRATION	BENCHMARK RISK-BASED CONCENTRATION (USEPA)
4,4'-DDD	1,200 ppm	7.1 ppm
4,4'-DDE	130 ppm	5 ppm
4,4'-DDT	2,500 ppm	5 ppm

The benchmark risk-based concentration was prepared by USEPA Region III (January 28, 1993) and applies to soils in residential areas. The benchmark risk-based concentration is a value that equates to a 1×10^{-6} cleanup action level. Baker has used these values in this preliminary evaluation. Site-specific cleanup action levels, however, will be generated in association with the risk assessment and will likely be higher than the benchmark values.

The elevated concentrations of pesticides appear to be limited to the immediate vicinity of the two former washing/mixing pads. A conservative estimate of the volume of soil impacted by pesticide contamination is presented below:

PAD	LENGTH	WIDTH	DEPTH	TOTAL
North Pad	94 ft	47 ft	4 ft	17,672 ft^3
South Pad	157 ft	46 ft	4 ft	28,888 ft^3
			TOTAL	46,560 ft^3
			(or)	1,724 yds^3

REMOVAL CRITERIA

The NCP lists a number of criteria that are considered in determining the appropriateness of a removal action. Section 300.415 paragraph (b)(2)(i) directly applies to the conditions at Site 2.

300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants."

There are presently no access restrictions in this area. The building on site is currently used as an administrative office building.

The presence of pesticide contaminants in this area may pose an imminent and substantial endangerment to public health, or welfare, or the environment. In this case, a time-critical (as opposed to non-time critical) removal action would be appropriate. Time-critical removals require less than six months to plan and are the most common type of removal actions. An engineering evaluation and cost analysis (EE/CA) is not required under time-critical removal actions.

There are several major advantages associated with conducting a time-critical removal action under these conditions:

- It would result in the removal of materials that may pose an immediate threat to human health and the environment in a timely fashion.

- The removal could be performed without the need to perform an EE/CA or FS given the relatively non-complex nature of the problem.

- It would serve to focus, and potentially eliminate the need for, feasibility study activities for the soil matrix.

RECOMMENDATIONS

A time-critical removal action is appropriate at Site 2 considering the small volume of waste involved and the potential health risks associated with prolonged exposure. In order for LANTDIV to determine the appropriate disposal/treatment options, soil samples should be collected and analyzed to determine whether the pesticide-contaminated soil is characteristically hazardous. This determination will have a significant bearing on the cost of disposal. Non-hazardous waste could be disposed of at a price of approximately $90-100 cy whereas hazardous waste disposal will cost approximately $250-300 cy (assuming no further treatment is required). Therefore, it is recommended that additional soil samples be collected from Site 2 soils for full TCLP, corrosivity, reactivity, and ignitability analysis.

The additional sampling and analysis can be conducted as part of this CTO by utilizing the negotiated Unit Cost clusters for sampling and analysis. It is recommended that within the area of concern, three soil samples are collected for analysis. One sample should be collected near the mixing pads where the highest pesticide levels were detected. Two other soil samples should be collected from areas representing moderate to low levels of pesticides above the preliminary action levels. The determination of which areas of soil contamination exhibit hazardous characteristics will be required prior to initiation of the removal action.

Baker hopes that you find this correspondence useful in your assessment of this site. If you have any questions regarding this matter, or would like to discuss it further, please contact me at (412) 269-2038 or Mr. Raymond P. Wattras (Activity Coordinator) at (412) 269-2016.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Raymond P. Wattras

for Donald C. Shields
Project Manager

DCS/nd

cc: Mr. Keith Simmons, P.E., Code 0223
Ms. Lee Anne Rapp, Code 183
Ms. Beth Hacic, Code 02231