State of New Jersey

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BOB MARTIN
Commissioner

January 3, 2013

Wanda Green
BRAC Environmental Coordinator
OACSIM - U.S. Army Fort Monmouth
PO Box 148
Oceanport, NJ 07757

Re: Vapor Intrusion Site Investigation Report
Fort Monmouth - Main Post and Charles Wood Area
Monmouth County
PI #G000000032

Dear Ms. Green:

The New Jersey Department of Environmental Protection (Department) has completed review of the referenced submittal, dated August 2012, which details the vapor intrusion investigation conducted at all buildings for which a trigger for performance of same was documented. The investigation was performed at Buildings 283, 602, 699, 700, 1001 and 2700. Comments and questions are as follows:

As discussed during our conference call in November, although it is understood Building 675 is beyond the 100' radius trigger for performance of a vapor intrusion investigation, additional information regarding this as well as Buildings 676 and 677 is necessary. During the "kickoff meeting", it was determined the building was to be assessed at the time of sampling, and recommendations made at that time with respect to sampling. Sections 3.2 and 3.3 of the submittal specify that Buildings 675, 676 and 677 were inspected and evaluated for inclusion in the vapor intrusion sampling program, and report text in Section 3.3 states the results of the inspection are provided in Section 4.1. Other than a brief mention (with no recommendation) in the field logbook notes, a review of the document, however, did not locate the discussion in the remaining sections of the report. Please submit same.

In Section 5.2, page 5-2, the Army posits the chloromethane detected in the samples are from background and unrelated to Site activities. The chloromethane ambient, indoor air, and sub-slab data as presented in the report were reviewed. Chloromethane is not detected in the sub-slab samples. At buildings where chloromethane is detected in the indoor air, the ambient samples likewise have detections of chloromethane. The detected concentrations in the indoor

air and ambient samples are all 1 ug/$m^3$. The absence of chloromethane detections in the sub-slab samples confirm the vapor intrusion pathway is incomplete, and coupled with the indoor air and ambient results support the Army's hypothesis.

*Buildings 283 & 602*

It is agreed the VI pathway is incomplete at existing Buildings 283 and 602; no additional action regarding VI is necessary.

*Building 699*

Section 6 states that the VI pathway is incomplete at this time, but that "VI at this location should be considered when the remedy for Building 700 is being evaluated, and that additional sampling is recommended after the completion of the Building 700 remedy, if necessary".

Groundwater has been and remains a potential source for the PCE and TCE present in the sub-slab soil gas. While it is agreed the VI pathway is not presently complete as indoor air results did not detect PCE or TCE, the sub-slab results for PCE are elevated, up to approximately ten times the soil gas screening level. Although this degree of exceedence was not identified or discussed in the submittal, it does trigger the Long Term Monitoring (Table 6.3) Mitigation Decision Matrix in the Department's Vapor Intrusion Technical Guidance (Version 2, January 2012), Table 6.3, which indicates semi-annual inspection of the building, with annual sampling of indoor air, is appropriate. It is agreed additional sampling following future remedial activities (relating to Building 700) in this area is appropriate.

*Building 700*

Section 6 states there will be an RI/FS for the PCE spill, the potential for VI should be considered during the Feasibility Study, and "if necessary, after the Building 700 remedy is implemented, additional VI sampling is recommended". The vapor intrusion assessment detected PCE in the sub-slab soil gas at a concentration below the screening level, PCE was not detected in the indoor air. The pathway is therefore currently incomplete. It is agreed, however, VI should be considered during the FS. As indicated, additional VI sampling may also be necessary following the remedy for Building 700.

*Building 1001*

It is agreed the VI pathway at existing Building 1001 is incomplete; no additional action regarding VI is necessary.

*Building 2700*

Although historic ground water analytical data indicates a potential source for VI in the building, sampling indicates the VI pathway for the existing Building 2700 is incomplete. No additional action regarding VI is necessary.

*Future Use/Redevelopment and VI*

Until such time as all VI contaminants of concern within the ground water have met criteria, as indicated in the submittal, plans for redevelopment must be mindful of same. It is agreed "engineering controls should be designed as part of any redevelopment effort to match up the future land use with the potential threat to current and planned buildings...." As indicated in the VIG, this can be accomplished by incorporating the presumptive remedy into the design of the building(s) or conducting a VI investigation at the time of redevelopment.

*Miscellaneous*

The summary tables list incorrect DEP screening levels for the compound 1,2-dichloroethane. The correct soil gas screening level for residential and non-residential is 20 $ug/m^3$, and the correct indoor air screening level for residential and non-residential is 2 $ug/m^3$.

The data package, submitted on December 7, 2012, is currently undergoing additional review for validation purposes.

Please contact this office if you have any questions.

Sincerely,

Linda S. Range

Linda S. Range
Bureau of Case Management

C: Joe Pearson, Calibre Systems
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