DEPARTMENT OF THE ARMY
Headquarters, U.S. Army Garrison Fort Monmouth
Fort Monmouth, New Jersey 07703 - 5101

REPLY TO
ATTENTION OF

Directorate of Public Works October 7, 1999

State of New Jersey
Department of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Case Management
401 East State Street, 5th Floor
ATTN: Ian Curtis
P.O. 028
Trenton, NJ 08625-0028

SUBJECT: Remedial Investigation of Landfill Site M2

Dear Mr. Curtis:

As part of an ongoing remedial investigation at landfill site M2, the Directorate of Public Works (DPW) has installed a total of ten shallow monitoring wells in order to evaluate ground water quality. During the site investigation phase of this project, four monitoring wells (four-inch diameter wells) were installed. To date, nine consecutive quarterly rounds of ground water samples have been collected from each of the four wells. The Standard Operating Procedure (SOP No.: SAM-0205) titled "Monitor Well Sampling for Installation Restoration Program (IRP) Sites at Fort Monmouth" which documents our sampling procedures is enclosed for your review and edification. Each sample was analyzed for Target Compound List (TCL) plus 30 parameters and Target Analyte List (TAL) metals. Based upon the presence of moderate levels of chlorobenzene within site ground water, the DPW was preparing to develop a Remedial Action Work Plan which stipulated natural attenuation for the contaminant of concern. This matter was discussed between us during an earlier onsite visit to Fort Monmouth. At the time you verbally recommended that we install additional monitoring wells and collect subsequent ground water samples to better support our natural attenuation approach. The DPW installed six monitoring wells (two-inch diameter wells) in August of 1998. The wells were placed down gradient of the landfill, adjacent to Mill Creek, spaced at 200 to 300 foot intervals. Following the well installations, four ground water sampling events were completed during three consecutive quarterly periods. Each sample was analyzed for TCL plus 30 parameters and TAL metals. Polychlorinated biphenyls (PCB) have been identified within two of the six monitoring wells (M2MW06 and M2MW09). The analytical results for the two wells can be viewed in Tables 1 and 2.

Table # 1

Monitoring Well M2MW-06

Sample Date	Purge Rate (Milliliters/Minute)	Contaminant of Concern	Result (ug/L)	NJDEP GW Quality Criteria
10/19/98	795	PCB	0.865	0.50
11/2/98	795	PCB	2.260	0.50
2/3/99	871	PCB	0.611	0.50
6/15/99	757	PCB	ND	0.50
7/20/99	871	PCB	0.581	0.50

Table # 2

Monitoring Well M2MW-09

Sample Date	Purge Rate (Milliliters/Minute)	Contaminant of Concern	Result (ug/L)	NJDEP GW Quality Criteria
10/19/98	681	PCB	4.55	0.50
11/2/98	681	PCB	1.73	0.50
2/3/99	871	PCB	1.431	0.50
6/15/99	871	PCB	ND	0.50
7/20/99	871	PCB	1.456	0.50

In an effort to determine the source of the PCB contamination, the DPW has collected soil samples within the vicinity of wells M2MW-06 and M2MW-09. PCBs have been identified within site soils. Furthermore, PCBs were identified within the soil column just above the water table. It is our belief that the PCB levels observed within the ground water at wells M2MW-06 and M2MW-09 are a function of PCB oils adhering to soil particles which are being drawn into the saturated section of the monitoring well during the course of well purging and sampling activities. We therefore conclude that the PCB contamination identified in earlier sampling rounds is not a true indication of their presence within site ground water.

In order to substantiate our position, the DPW proposes to collect two rounds of ground water samples from each well under a low flow purge and sampling procedure. The attached Field Sampling and Quality Assurance Plan is hereby submitted for your review and approval. Should you have any questions or require any additional information at this time, the undersigned can be contacted at the following telephone number: (732) 532-6223.

Sincerely,

Joseph M. Fallon

Joseph M. Fallon, CHMM
Environmental Protection Specialist
Directorate of Public Works

Enclosures