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April 3, 2007

Mr. Timothy Dieffenbach
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

RE: Former Carborundum Site, Sanborn, New York
Soil Vapor Intrusion – Water Levels and DoD Housing Soil Gas Survey

Dear Mr. Dieffenbach:

At the request of Atlantic Richfield Company, this letter is intended to provide the water level monitoring results and the results of a historical soil gas data review of The Remedial Investigation (RI), Carborundum Facility, Sanborn, N.Y. report (Ecology and Environment, June 1990). Both the water level monitoring and data review are parts of the New York State Department of Environmental Conservation (NYSDEC) – approved Soil Vapor Intrusion Assessment at Sanborn. In addition to the water levels, a summary of the 1990 soil vapor survey completed for the DoD housing facility, and a summary of the Risk Assessment (from the RI report) as it relates to the exposure and inhalation of chlorinated organic vapor by the residents of the DoD housing facility is provided.

Following the initial soil gas survey, described in the RI (1990), there was supplemental soil vapor work planned for the DoD property. However, it does not appear that this survey was performed.

Water Level Monitoring

The New York State Department of Health (NYSDOH) guidance for evaluation soil vapor intrusion suggests that soil vapor samples not be collected at depths shallower than five feet below grade as samples may be biased (negative) through the introduction of outdoor air. The NYSDOH recommends that samples from these shallow depths should only be collected, if necessary, based on site conditions.

Attached is a hydrograph created using water levels (depth to water below ground surface) measured from the two piezometers (WP-1, WP-2) installed (December 2006) as part of the soil vapor intrusion assessment. The piezometers were installed to measure the static water level and help determine the depth to which single and nested soil vapor monitoring points (SVMP) would be installed. As indicated on the hydrograph, water levels are very shallow (i.e. < 2.14 feet below grade) limiting the ability to install a SVMP at or below the NYSDOH recommended depth of five feet. Although a measurable decrease in water levels was observed during the long

freeze that occurred between the middle of January and the middle of February, temperatures have moderated, allowing for infiltration, and resulting in an increase of water levels.

A review of historic and recent water level elevations in eight wells (B-21, 22, 4, 19, 13, 27, 9, and B-12) located in the vicinity of the piezometers, shows that water levels are generally lowest from August through October, and highest from December through April. This data is consistent with observations made in the RI report in which the groundwater elevation in the overburden was at or above the ground surface during the wet season. Thus, lower water level conditions in late summer or early fall may be the most favorable for the installation of soil vapor probes to a depth of five feet or greater.

DoD Soil Gas Survey

The RI provided information on the soil gas survey performed in April and May of 1990. Sampling was attempted at 47 sample locations, but air flow was sufficient to allow sampling at only 25 locations. According to the RI report, low permeability and a probable high degree of saturation, prevented air flow in 22 samples. The majority of the samples were collected near the homes closest to the facility (see attached figure). In particular, Samples 43, 17, 44, 26, 46, 42, 41, and 47 were obtained at or near the boundary of the facility and the DoD property. It is also noted in the RI that Sample 26, the only location where CVOCs were detected (see attached table), is surrounded by four other samples that were below detection limits. The sample results led to a conclusion in the RI report that the concentration of chlorinated organics present in soil gas in the area of the DoD property was negligible.

Using the soil gas survey data from the DoD property, the RI report concludes that " …The results of the soil gas survey indicate that soil gas containing chlorinated organics does not migrate to the surface in the area of the DoD facility over most of the site."

Risk Assessment

In the risk assessment section (Section 5) of the June 1990 RI report, one pathway of exposure was stated as "Exposure of residents living in the DoD housing area adjacent to the Carborundum facility to volatilized chlorinated organics emanating from groundwater passing beneath some of the residences and from volatilization from chlorinated organics from the facility." Using the soil gas data, groundwater data, and estimated ambient air concentrations from the DoD housing and the facility, the risk assessment report states that the estimated carcinogenic risks associated with this pathway were considered insignificant and acceptable. Non-carcinogenic adverse effects were unlikely. Thus, no remedial measures were proposed to reduce risks associated with this pathway.

The June 1990 RI report concluded that potential inhalation of vapors emanating from the ground at the Carborundum Facility, or in the adjacent DoD housing area, does not appear to pose any significant risks to human health.

If you would like a copy of the soil gas survey or risk assessment sections of the RI report, please let us know. If you have any questions or comments concerning the water level monitoring data or the review of historical data, please contact William B. Barber of the Atlantic Richfield Company at (216) 271-8038.

Very truly yours,

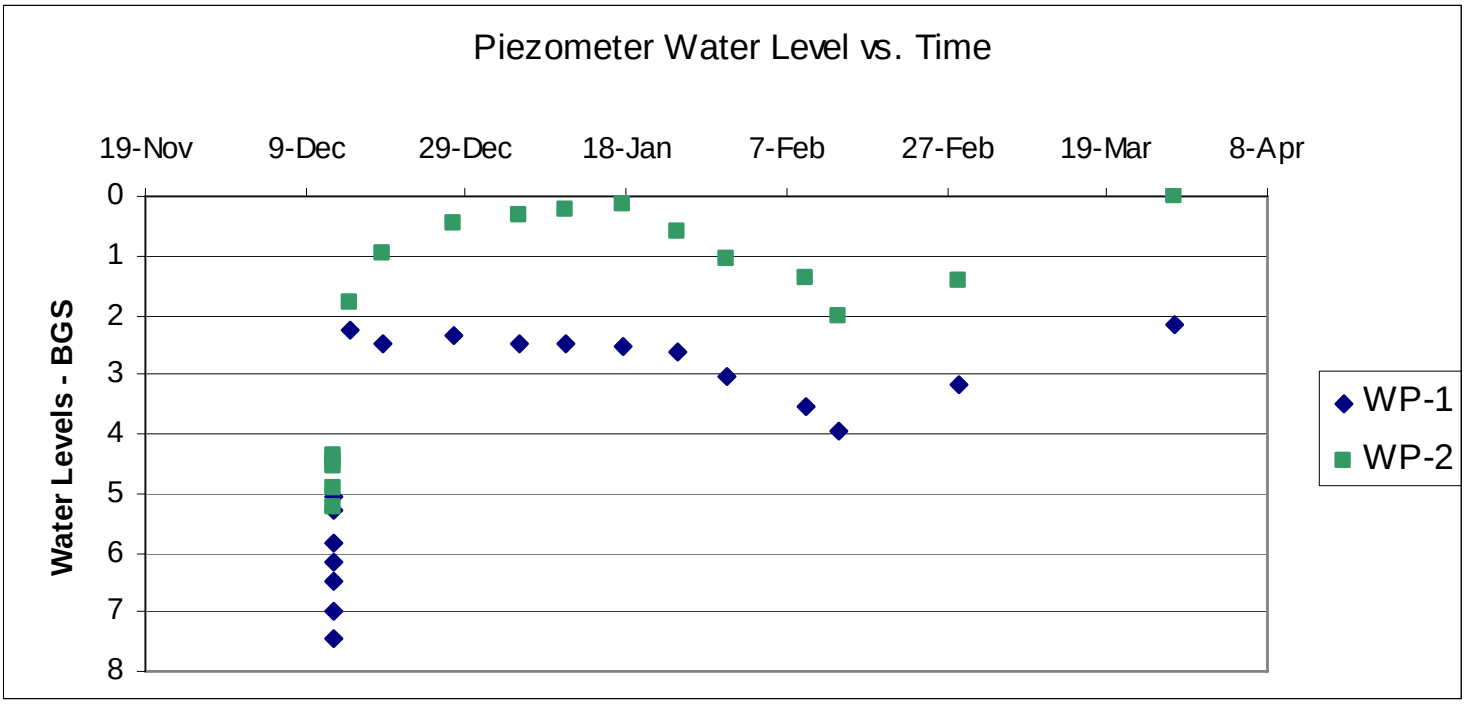
Mark S. Raybuck

Mark S. Raybuck
Project Manager

cc: M. Forcucci, NYSDOH
W. Barber, Atlantic Richfield Company
G. Hermance, Parsons – Buffalo
File - 442951 No. 9

ATTACHMENTS

Hydrograph for Piezometers WP-1 and WP-2



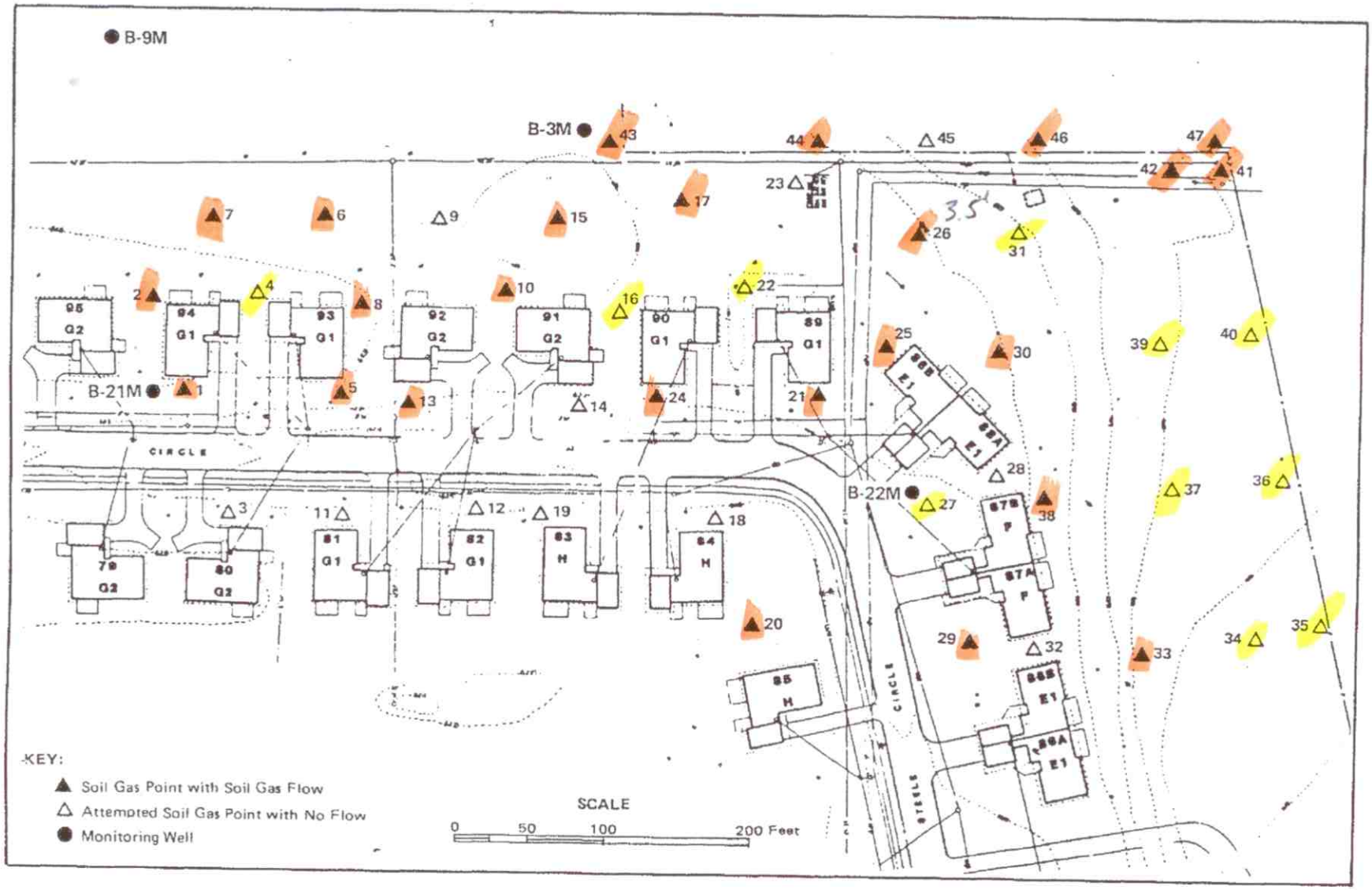


Figure 4–11 SOIL GAS SURVEY POINTS AT DoD FACILITY (4/90)

Table 4-8

ANALYTICAL RESULTS OF SOIL GAS SAMPLES AT
DoD FACILITY WITH LEVELS ABOVE DETECTION LIMITS
(results in µg/L)

Sample Number	Depth	MC	1,1-DCE	1,1-DCA	1,2-DCE	TCA	TCE	VC
26	3.5 ft	<0.002	3	0.1	2	0.3	NA	0.1
26A	3.5 ft	<0.003	4	0.2	8	0.6	2	1

[AD]CZ4140:D2467, #3399, PM=18

NA = Not analyzed.