

ENVIRONMENTAL COST MANAGEMENT, INC.  
*Managing Cost and Liability*

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**October 31, 2007**

Jerry Wickham, P.G.  
Hazardous Materials Specialist  
Alameda County Health Care Services  
Environmental Health Services  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Subject:** Fuel Leak Case No. RO0000018 and Geotracker Global ID T0600100262,  
Carnation Dairy, 1310 14<sup>th</sup> Street, Oakland, CA 94607

Comments on Alameda County Health Care Services directive dated  
September 28, 2007.

Dear Mr. Wickham:

Environmental Cost Management, Inc. (ECM) on behalf of, and in conjunction with, Nestlé USA, Inc. (Nestlé) reviewed and considered the above referenced directive. Nestlé representatives have also had discussions with representatives of Encinal 14<sup>th</sup> Street, LLC (Encinal), the other named responsible party. Nestlé offers the following comments in response to the directive.

**Technical Comments for Northwest Portion of the Property**

**1. Separate Cases (issues related to subdividing the parcels):**

Nestlé intends to pursue the designation of the northwest portion of the site as a separate regulatory case. Nestlé will submit this request under separate cover.

**2. Soil Vapor Sampling Results and Potential Indoor Vapor Intrusion**

You questioned whether the August 1999 vapor sampling and analysis is representative of current conditions because the sampling was done while a remediation system was operating.

The August 1999 vapor sampling provides a more conservative and protective assessment of vapor conditions than vapor sampling would if performed now. Conclusions reached from the August 1999 data are conservative because the levels of petroleum hydrocarbons were higher in August 1999 than in later sampling events. Therefore, using 1999 vapor sampling data is more conservative than using more

recent, lower, petroleum hydrocarbons vapor data.

The levels of petroleum hydrocarbons present in post-remediation sampling (June 2000 through October 2001) were comparable to conditions in August 1999. This information confirms that petroleum hydrocarbon levels did not "rebound" significantly after the remediation system was discontinued. More recent sampling confirms that LPH is not present at observable thicknesses (ECM, 2005). This data point, provides additional verification that there has not been a significant increase in petroleum hydrocarbon levels. Thus, soil vapor sampling performed in August 1999 detected hydrocarbons in groundwater that were likely higher than soil vapor levels currently present beneath the site.

The Alameda County Health Care Services Agency (ACHC) directive comments that the results of a June 2001 soil vapor survey reported combined hydrocarbon vapor concentrations at levels ranging from non-detectable results to over 10,000 ppmv total hydrocarbons. In our view,, the statement that: "*Total petroleum hydrocarbons were detected in soil vapor at concentrations up to greater than 10,000 ppm at sampling locations within the building*" is inaccurate. The only location at which concentrations of total petroleum hydrocarbons reached this measurement was inside the well casings where free product was present, not in the bulk soil matrix. No valid conclusions can be drawn from comparing petroleum hydrocarbon levels inside well casings to petroleum hydrocarbon concentrations in soil vapor.

Nestlé proposes to submit a revised risk analysis as discussed in more detail below. The revised risk analysis will consider the highest concentration of soil gas detected at any point in time, including the August 1999 soil gas sampling. If the revised risk analysis indicates additional work is necessary to protect human health and the environment, Nestlé will propose additional follow-up measures.

### **3. Free Phase Product**

You noted that free product thicknesses rebounded in several wells (MW23, MW24, PR12, PR58, and PR64) following the shutdown of the dual phase extraction system. You requested additional research or additional investigation to address the existence of subsurface features (building foundations, subsurface utility trenches, storm drains) which may influence the movement, or lack thereof, of free phase product in areas near these wells.

ECM will survey the major utilities and will review construction diagrams if construction diagrams are available. Because construction on this facility dates back to 1929, construction diagrams may not be currently available. We will research construction diagrams with particular attention to utilities, such as sewer lines. Any construction information that we are able to locate that may provide information on possible subsurface pathways will be considered in the revised risk analysis discussed below.

### **4. Post-Remediation Groundwater Monitoring Results**

You requested groundwater monitoring or additional investigation to verify the overall decrease in post-remediation dissolved phase hydrocarbon concentrations.

The attached Figures 1 through 6 illustrate the non-detectable, stable, or declining concentrations of hydrocarbons that were measured at the 11 post-remediation monitoring wells, including well MW-26. We request that the agency reconsider this comment in light of this documentation.

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The revised risk analysis discussed below will consider the highest observed concentration for COCs in the risk calculation. The risk analysis will highlight deficiencies in representative concentrations, if any exist. Those deficiencies will be addressed by a subsequent action plan, if necessary.

#### **5. Hydraulic Gradient and Plume Stability:**

You requested clarification of the hydraulic gradient along 16<sup>th</sup> Street.

The most direct evidence of plume stability lies in the assessment of groundwater monitoring data from the post-remediation monitoring wells. Please keep in mind that ACHA approved Nestlé's plan for post-remediation monitoring wells by correspondence dated October 21, 2002 and November 14, 2002.

Fluctuations in groundwater gradient may influence the migration. Nestlé's consultant will review the groundwater elevations referenced in ACHC's comments and report any new conclusions reached as a result of these efforts in a separate correspondence by November 30, 2007.

#### **6. Dairy Fat and Detergent**

You questioned the extent and source of dairy fat and detergent noted in an April 3, 1989 report by Anania Geologic Engineering.

ECM, on behalf of Nestlé, reviewed the Remedial Action Plan and Preliminary Site Characterization Report prepared by Anania Geologic Engineering (AGE) dated April 3, 1989 for this issue. ECM has the following findings and conclusions:

- Oil and grease was detected in three of the 17 soil samples collected from 12 soil borings. Oil and grease concentrations ranged from 65 mg/kg to 1,220 mg/kg in soil. All the groundwater sample results for oil and grease were non-detect (MW-1 through MW-16).
  - The highest soil concentration of oil and grease was observed in boring MW-8 at 9.5 to 10 feet below ground. MW-8 was located at the northeast corner of the property, approximately 125 feet north of abandoned Kirkham Street. Though oil and grease was detected at a low concentration in boring MW-9 (located in the middle of the abandoned Kirkham Street) oil and grease was not detected in wells MW-12, MW-15, MW-13, (all located along abandoned Kirkham Street). Although AGE speculated that the source of any oil and grease would have been the abandoned sanitary sewer beneath Kirkham Street, this conclusion is inconsistent with the reported sampling results. ECM concludes that abandoned sanitary sewer was likely not the source of the oil and grease detected in the soil.
  - AGE stated that microbes were introduced in wells RW-1 and RW-2 on February 26, and March 9, 1989. (See the Remedial Action Plan dated April 3, 1989.) This report also states that dairy fat levels were successfully reduced to non-detect levels. (AGE Remedial Action Plan, April 3, 1989 at page 26.) Given remediation by microbes and the post-injection sampling results, it is reasonable to conclude that remediation of dairy fat is complete.
  - Furthermore, typically, dairy fat degrades easily through natural biodegradation process in the subsurface. Food manufacturing and
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distribution activities at this facility ceased in approximately 1989, 18 years ago. Given the passage of almost two decades, any dairy fat would have likely degraded to non-detectable levels in the subsurface even in the absence of enhanced bioremediation efforts.

- ECM did not find any information regarding detergent in either the site characterization report or in the Remedial Action Plan report prepared by AGE in 1989. Nor is ECM aware of any findings regarding detergent at the site from any other source.

Even if dairy fat were remaining in the subsurface, contrary to conditions reported by AGE, to our knowledge, there is no regulatory cleanup level for dairy fat. We respectfully ask ACHA to clarify regulatory requirements and allowable limits for the presence of constituents associated with dairy fats in the subsurface. Upon review of this information and the information gleaned from the utility survey discussed above, Nestlé will consider further efforts to address this issue, if necessary.

#### **7. Risk-Based Corrective Action Analysis**

The September 28, 2007, directive rejected the August 2000 RBCA analysis performed by JCI Consulting, Inc. because the document is not signed and the author's credentials and professional licenses are questionable. This information came as a surprise to Nestlé, especially in light of Regional Water Quality Board concurrence in the report.

To address this issue and others contained in the directive, Nestlé proposes to have a qualified risk assessment professional review the August 2000 RBCA and additional information described in this letter. That additional information includes:

- The validity of the August 1999 vapor sampling
- The risks presented by dairy fat or detergent
- A revised site conceptual model.
- The relationship of petroleum hydrocarbons at SB12 to the former USTs or any other source.
- The risks presented by PCBs on-site, if any.

Nestlé proposes to have that professional either validate the conclusions that were reached in the August 2000 RBCA, or provide recommended actions to minimize any additional health and safety risk that are identified and that cannot be reasonably mitigated.

Nestlé proposes to submit the revised risk assessment work to the agency by December 17, 2007, subject to prompt agency approval of the sampling discussed in section 10 below.

#### **8. Site Conceptual Model**

You requested a revised site conceptual model (SCM). Nestlé intends to submit a revised site conceptual model in conjunction with the revised risk assessment, to be submitted by December 17, 2007.

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**9. Petroleum Hydrocarbons Detected in Soil and Soil Vapor at SB12**

You requested an evaluation of whether the contamination detected in SB12 is related to releases from the former USTs and piping or whether the contamination represents a release from a separate source. The revised risk assessment work will address this issue.

**10. PCBs were Identified at PR12 in Groundwater**

AGE noted PCBs in a September 1989 report. The ACHA2007 directive instructed Nestlé to indicate whether the source of PCBs was identified and whether the lateral and vertical extent of the PCBs was defined.

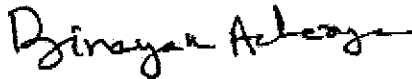
Due to lack of PCB monitoring data and inconsistency in past reports related to PCBs, ECM recommends supplemental soil and groundwater samples near PR12 to assess the vertical and lateral impact of PCB. A work plan for proposed soil and groundwater sampling is attached for your review and approval. Upon your approval, the field work will begin. The revised risk analysis will address PCB data collected from the investigation.

**Technical Comments for Remainder of Site**

Nestlé looks to Encinal 14<sup>th</sup> Street, LLC to respond to the technical comments for the remainder of the site.

Thank you in advance for your prompt review of this matter.

Sincerely,



Binayak Acharya  
Environmental Cost Management, Inc.

Cc: Mike Desso, Nestlé  
Noelia Marti-Colon, Nestlé Legal  
Ken Cheitlan, Hall Equities (Management Company for Encinal 14<sup>th</sup> Street, LLC)

Encl.

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# Post-Remediation Monitoring Well Network

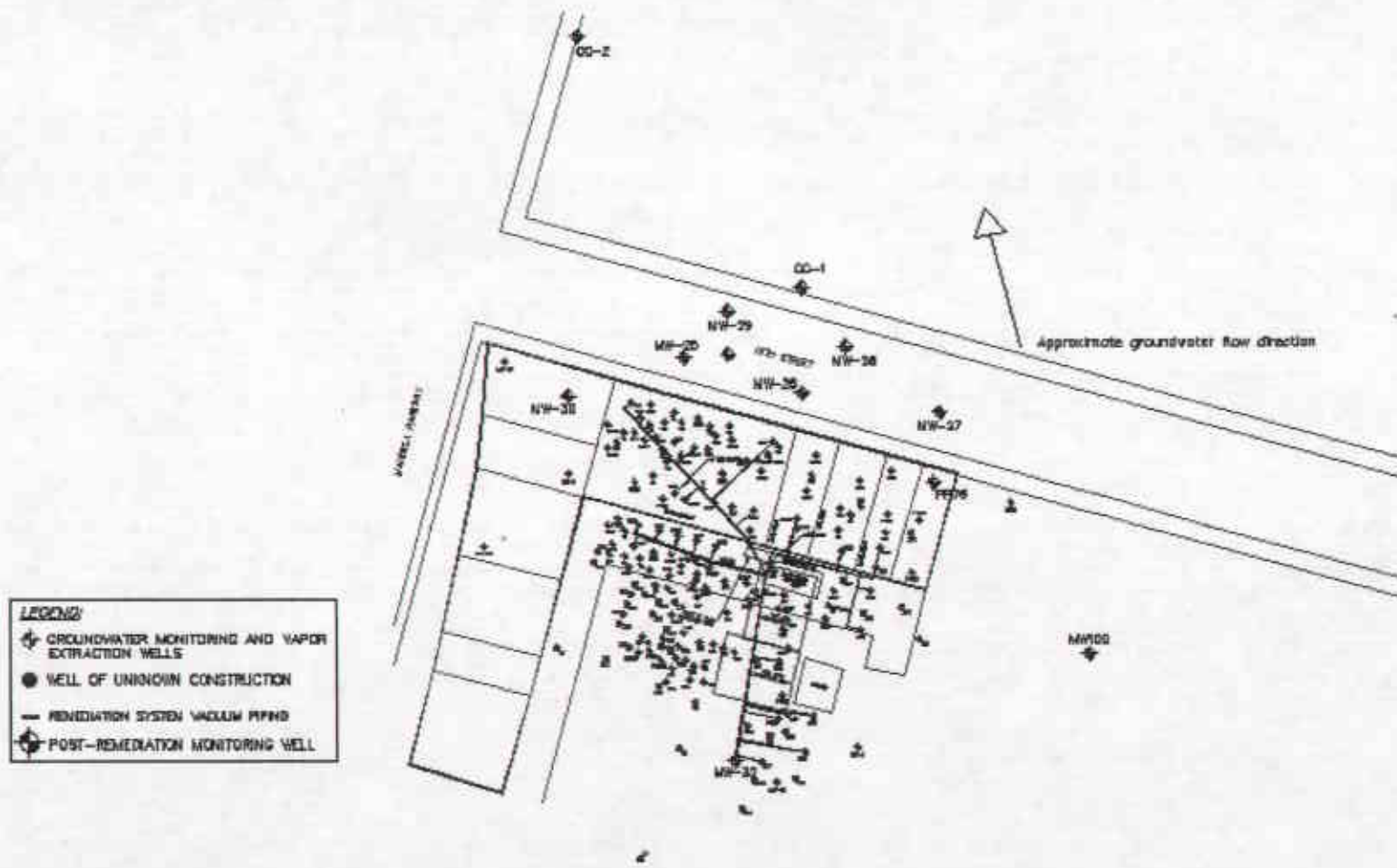


FIGURE 1

# Post-Remediation Monitoring

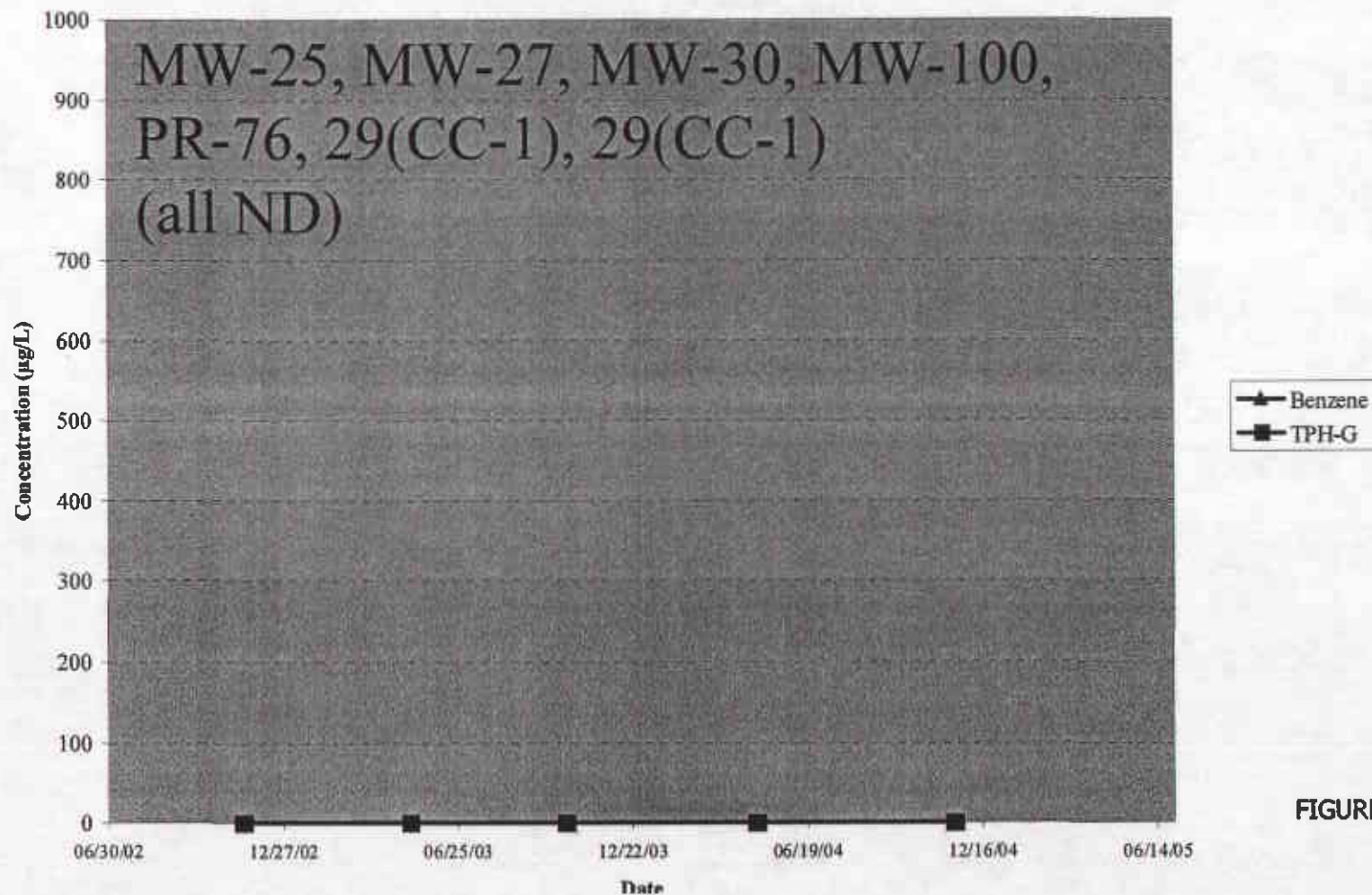


FIGURE 2

# Post-Remediation Monitoring

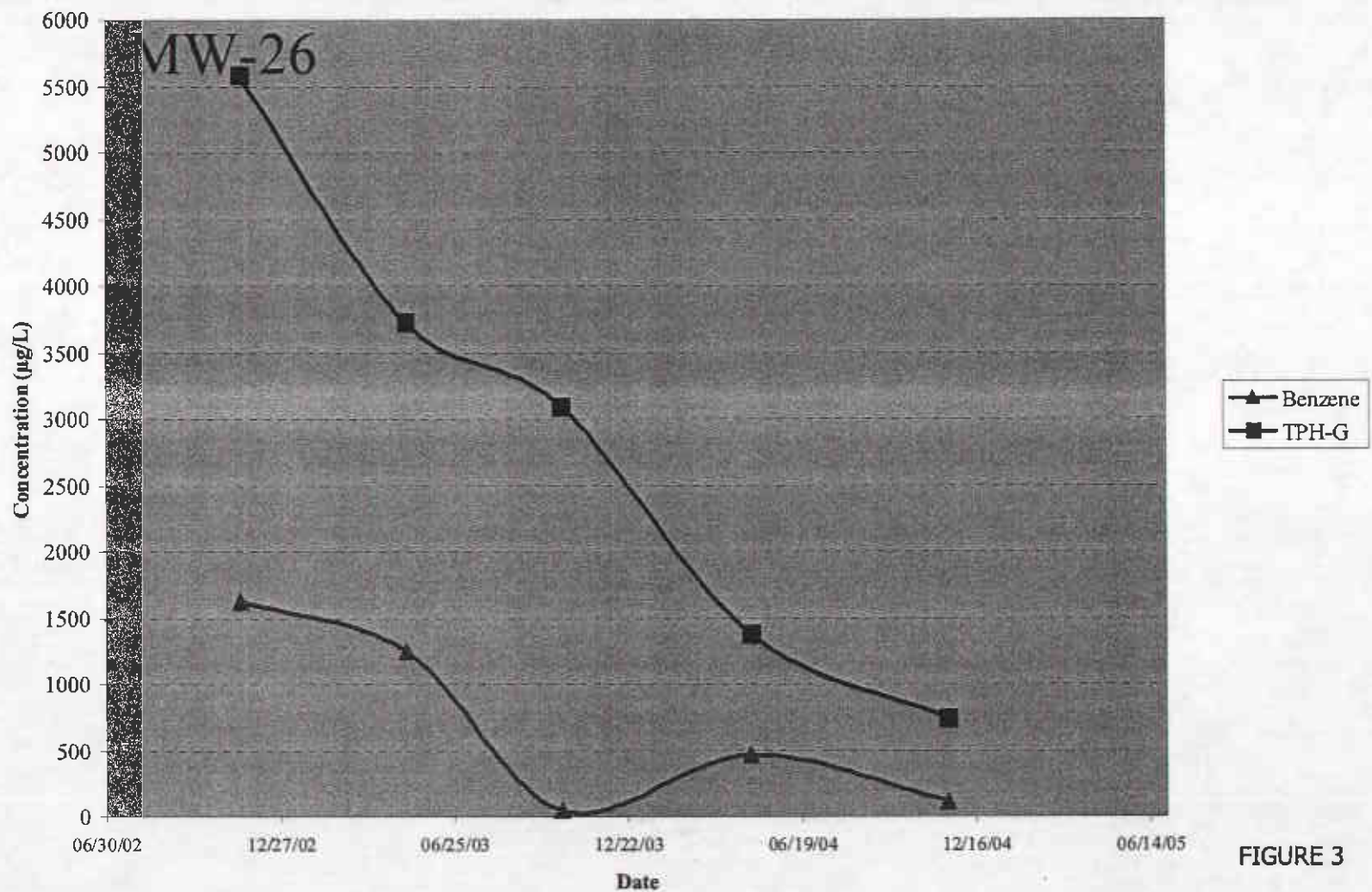


FIGURE 3



# Post-Remediation Monitoring

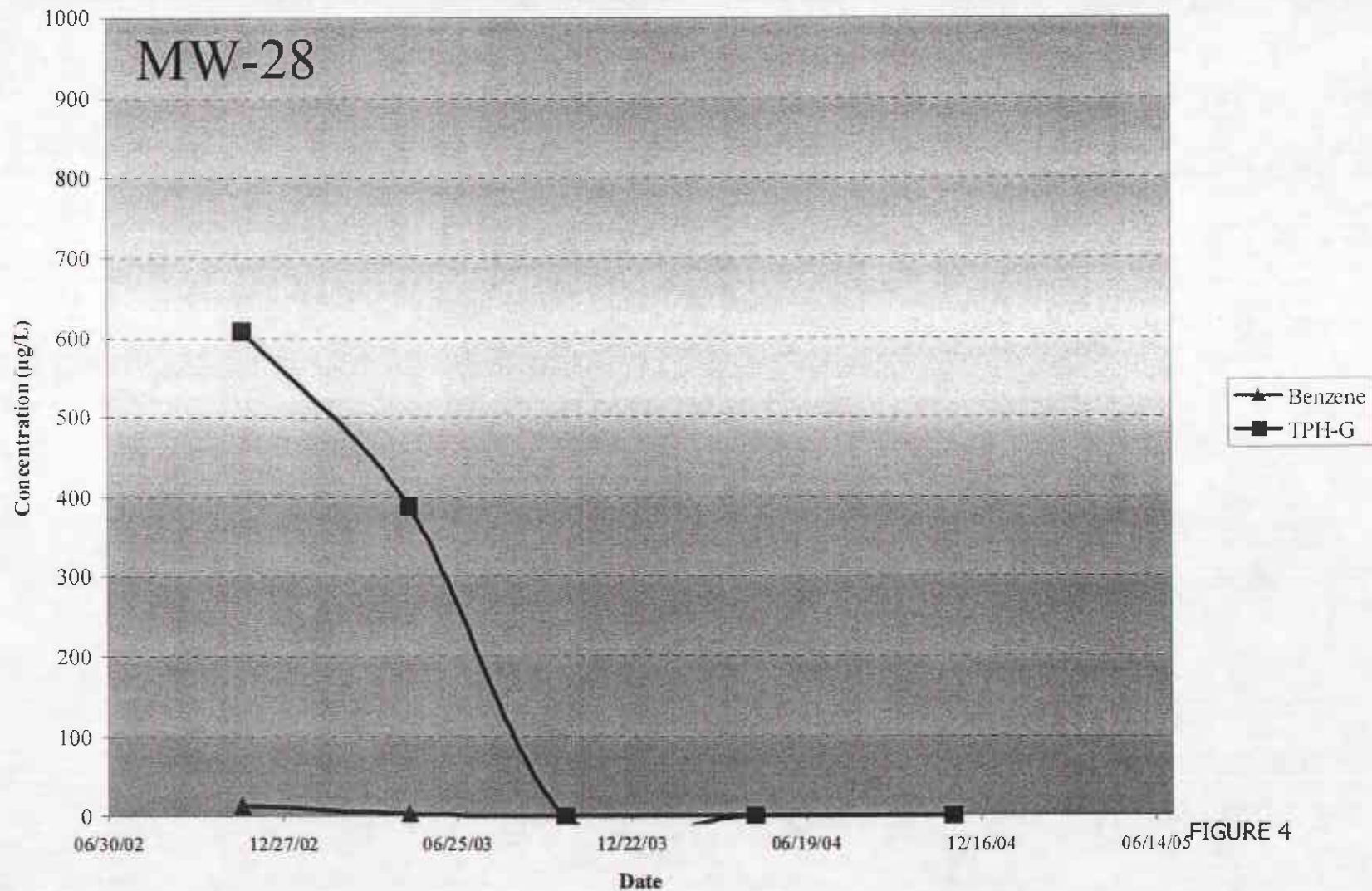


FIGURE 4

# Post-Remediation Monitoring

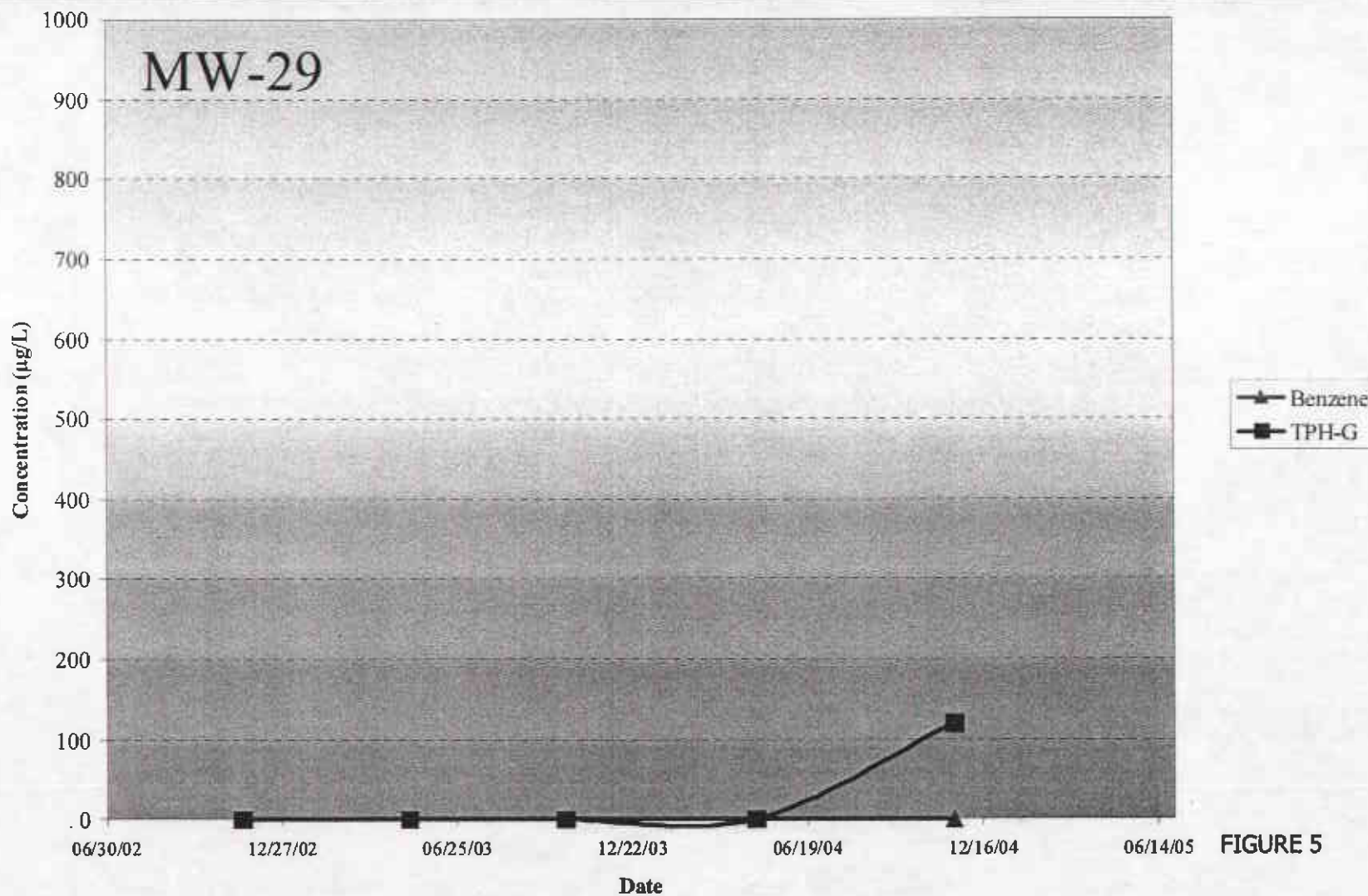


FIGURE 5

# Post-Remediation Monitoring

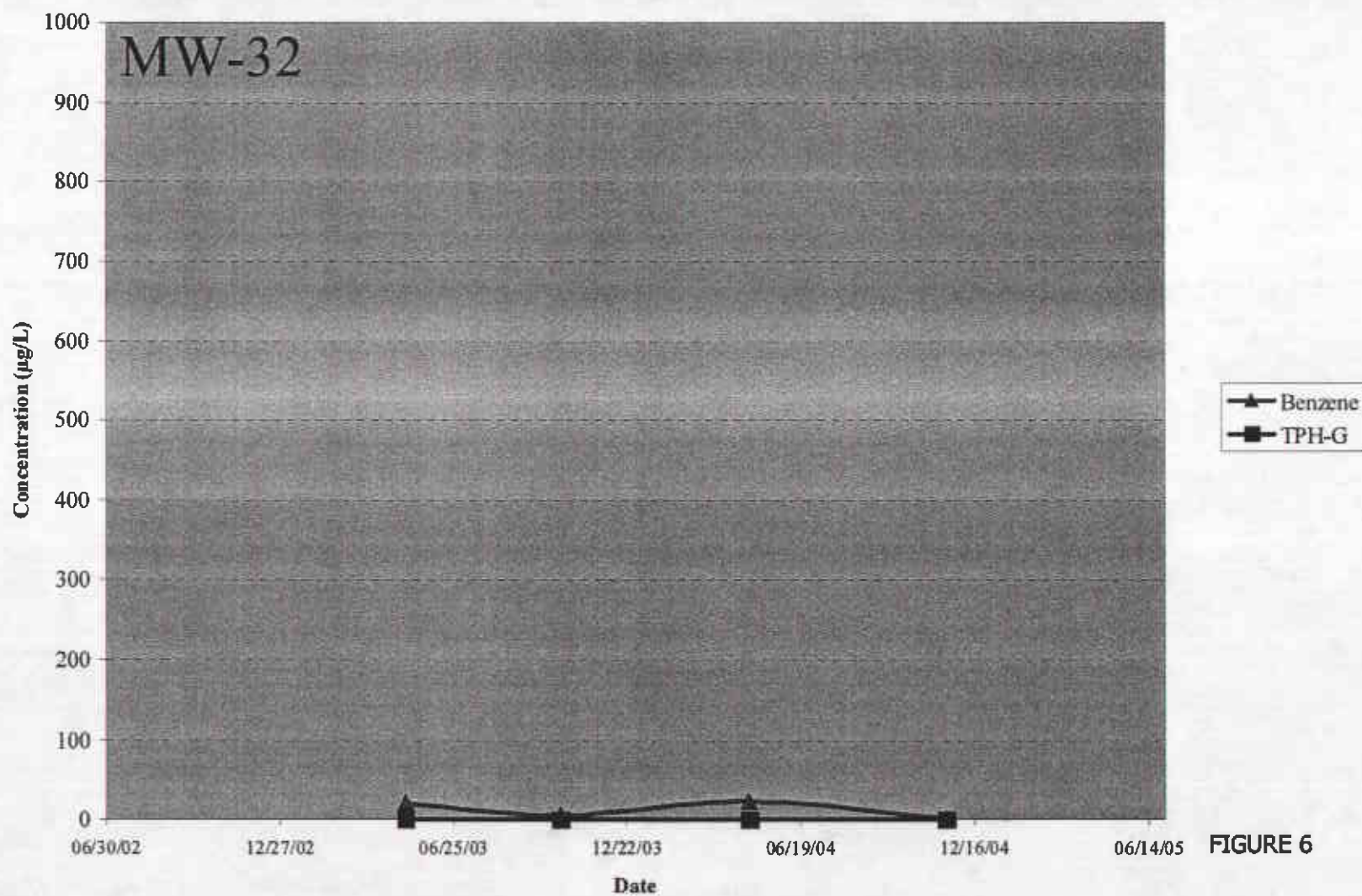


FIGURE 6