Wickham, Jerry, Env. Health

From: Wickham, Jerry, Env. Health
Sent: Tuesday, August 17, 2010 3:25 PM
To: 'Ricky Bradford'
Cc: Peter McIntyre; jsigg@aeiconsultants.com
Subject: RE: Low-Flow Sampling Selected Wells, Vic's Auto, 245 8th Street, Oakland

Ricky,

Your proposal below to conduct both low-flow sampling and sampling using standard purge volumes for comparison purposes is acceptable. Please present the results in the Third Quarter 2010 Groundwater Monitoring Report.

Regards,

Jerry Wickham
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From: Ricky Bradford [mailto:rbradford@aeiconsultants.com]
Sent: Tuesday, August 17, 2010 1:40 PM
To: Wickham, Jerry, Env. Health
Cc: Peter McIntyre; jsigg@aeiconsultants.com
Subject: Low-Flow Sampling Selected Wells, Vic's Auto, 245 8th Street, Oakland

Good Afternoon Jerry –

I received your voicemail earlier this morning and wanted to follow-up with you regarding the low-flow sampling proposal. As you already know, standard purging and sampling methods are currently used for routine groundwater monitoring at the subject site. The wells are purged and sampled using an electrical submersible pump and flow-thru cell. The rotating impeller of the submersible pump causes significant artificial disturbances and mixing of groundwater within the well casing during purging. As a result, field and laboratory observations have shown non-dissolved, separate-phase hydrocarbons and/or petroleum-affected turbidity (LNAPL absorbed to fine-grained soil particles) was entrained in the samples.

We have hypothesized that elevated concentrations reported for groundwater samples have been in part the result of small LNAPL globules, LNAPL sheen, and/or petroleum-affected turbidity being entrained within the samples as an artifact of the purging and sampling process. As a result, the reported dissolve-phase hydrocarbon concentrations may have been biased high and not representative of the actual dissolved-phase concentrations.

Therefore, AEI proposes low-flow (minimal draw-down) sampling of select monitoring wells in order to evaluate the effects of the purging and sampling process on the groundwater results. AEI proposes to sample selected wells (i.e., MW-1, 2, 5, 6, 7, and 9) using low-flow methods followed by standard methods. The field and laboratory observations and the analytical results of the two approaches will be evaluated. The results and recommendations will be reported in the third quarter, 2010 groundwater monitoring report.

We greatly appreciate your timely attention to this project and the proposed low-flow testing. Should you have any questions or comments, or need any additional information, you may reach me at the office or on my cell phone (510) 375-2314.

Best Regards,

Ricky Bradford
Project Engineer

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