From: Wickham, Jerry, Env. Health

Sent: Tuesday, September 09, 2008 1:48 PM

To: 'Bryan Campbell'

Cc: Christa Marting; Hamidou Barry; Thomas Neely; jennifer.c.sedlachek@exxonmobil.com

Subject: RE: 04H6J: Review of Subsurface Conditions

Bryan,

I cannot concur with submittal of a case closure request without conducting a complete case file review. Therefore, you should submit a case closure request when you believe the case is ready for closure. The submittal will initiate my review.

Regards,

Jerry Wickham
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From: Bryan Campbell [mailto:bcampbell@eticeng.com]
Sent: Friday, September 05, 2008 10:11 AM
To: Wickham, Jerry, Env. Health
Cc: Christa Marting; Hamidou Barry; Thomas Neely; jennifer.c.sedlachek@exxonmobil.com
Subject: 04H6J: Review of Subsurface Conditions

Mr. Wickham,

We are getting ready to submit a formal case closure request for former Mobil Station 04H6J (Figures 1 and 2). Before we do, I just wanted to let you know of our recent evaluation of the subsurface conditions at the site. During a previous meeting with you, we had discussed looking at the site conditions in order to determine whether or not the groundwater concentrations within the wells were representative even

though some wells at the site have screen lengths of approximately 25 to 30 feet. It was suggested that if water samples were not representative, that the collection of additional water samples from a subsurface investigation may be necessary.

Figure 3 presents the lines of geologic cross section and Figures 4 through 6 present three cross sections for the site. The subsurface soils at the site between approximately 5 and 35 feet below ground surface (bgs) are predominantly silts and clays (the clay/silt unit). This unit is underlain by soils consisting of silty sands, gravelly sand, and sandy gravel (the sand/gravel unit). The gravels in this unit have been characterized as poorly graded with clast sizes between 0.5" to 2.5" in diameter. As shown, the sand/ gravel unit appears to exist as the main water-bearing unit below the site. Below the sand/gravel unit, some borings at the site have encountered a layer of clay at approximately 50 feet bgs. These soil units are shown on the attached cross sections (Figures 4 through 6) along with the depth to static water measured during the June 2008 event.

Examination of the cross sections shows that wells screened within the upper clay/silt unit have somewhat different groundwater elevations which is to be expected in soils with perched groundwater with very low permeabilities. The groundwater levels of wells screened in the sand/gravel unit are consistent with each other which is expected in soils with higher permeabilities. Wells which do intersect sand units but do not have consistent water levels may not fully intersect the sand/gravel unit (e.g. VMW2 on Figure 4 and VMW1 and MW11 on Figure 6).

The sand/gravel unit appears to be an unconfined water bearing zone due to the fact that the static groundwater levels do not rise above the unit and wells screened within this unit have only approximately 10 feet of water column. Although some wells which are screened within the sand/gravel unit are also screened within the clay/silt unit above or the clay unit below (e.g. MW10 on Figure 4), it is expected that groundwater samples collected from these wells will be representative of the sand/gravel unit owing to the much greater permeability of the sand/gravel unit as opposed to the surrounding units.

In the past 2 to 3 years, groundwater concentrations have shown a marked decrease and the June 2008 sampling event shows that benzene, Total Petroleum Hydrocarbons as gasoline, and methyl tertiary butyl ether are below the laboratory detection limits in all wells sampled (Figure 2). Based on these results and the discussion presented here, we would like to submit a request for case closure for your consideration. Please let us know if you concur with the submission of a formal case closure request or if you have any questions or comments. Thank you.

Bryan Campbell, P.G.
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