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Ms. Caroline Kwan
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
26 Federal Plaza
New York, NY 10278

**RE: Comments on Draft Phase II Remedial Investigation
Tutu Wells Site, St. Thomas, U.S. Virgin Islands**

Dear Ms. Kwan:

This letter provides comments on the draft Phase II Tutu Wells Site Remedial Investigation (RI) and Remedial Alternatives (RA) report recently submitted to the U.S. Environmental Protection Agency (EPA) by Geraghty & Miller (G&M) and the Tutu Environmental Investigation Committee (TEIC). These comments were developed at the request of Western Auto Supply Company and their attorneys. The comments have been reviewed by Western Auto's attorneys prior to submittal.

This letter briefly addresses Western Auto's position with respect to the primary areas of importance in the RI and RA. General areas of agreement and areas of disagreement are described and explained below. Detailed comments and supporting information are provided with the following attachments: (1) specific comments on the RI, (2) a summary report that describes the activities performed during and subsequent to the closure of two underground storage tanks (USTs) located behind the Western Auto store, (3) a copy of reports on two Gore-Sorber studies performed in the area behind the Western Auto store and under the Four Winds building and (4) a summary report with accompanying laboratory Quality Assurance data on the data quality problems associated with some of the data presented in the RI.

- **Though significant areas of concern remain, we believe that the scientific basis of the RI is generally sound and significantly improved over the earlier draft.**

ENSR previously submitted a series of comments to G&M and TEIC on the earlier draft version of this document. We are pleased to note that G&M and TEIC largely adopted a number of our comments and we believe that this draft has a better scientific foundation than the previous version.



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- **The information presented in the RI inadequately summarizes the information presented in the Tank Closure Report and Gore-Sorber reports, resulting in errors of omission and difficulty in the evaluation of the data presented.**

The removal of USTs and soil and the results of soil sampling during the October 1993 removal of two USTs located behind the Western Auto store were documented in the Closure Report for Underground Storage Tanks (ENSR, 1994). Two reports (W.L. Gore, 1993; 1994) documented the results of Gore-Sorber studies performed to evaluate the potential petroleum hydrocarbon source areas. Copies of these reports were provided to G&M and TEIC. However, the RI omits most of the relevant data from these reports. In fact, the RI does not even reference the Tank Closure Report. These omissions of data result in an inability to use the information in the RI alone to fully evaluate the conclusions found in the RI and RA reports. Therefore, we suggest that EPA review the data and text of the Tank Closure Report and Gore-Sorber reports as part of the evaluation of the RI. The Tank Closure Report was previously submitted to EPA and the Gore-Sorber reports are included as Attachment 3 with this letter. In order to facilitate EPA's review of these documents, we have included a summary of the report results in Attachment 2. In addition, brief statements of the major findings and conclusions of the reports are provided below.

The major findings and conclusions of the Tank Closure Report (with the report source information location provided in parenthesis) are:

- Two USTs behind the Western Auto store were removed from the ground and properly disposed of (Section 2.2.4, 2.3.8, Appendix F).
- The USTs were located in very low permeability soils (Section 2.4.2).
- A gravel layer located above the USTs was found to be heavily contaminated with petroleum hydrocarbons. This gravel layer contained the bulk of the hydrocarbon contamination (Sections 2.2.3, 2.3.4, 2.5.7).
- A four-inch PVC cistern pipe running through the gravel area was determined to be a potential source of the petroleum hydrocarbons in the gravel. The pipe was traced to run some 85 feet north of the diesel tank grave to a location well beneath the Four Winds Plaza structure. According to representatives of Four Winds Plaza, this pipe led from an underground spring located to the north of Western Auto to a cistern located to the south of Western Auto (Section 5.2.5). The pipe is not associated with either of

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the USTs. In addition, it is also likely that the gravel layer acted as a conduit of hydrocarbons from a source located under the Four Winds building (Sections 2.2.5, 2.5.1.2, 2.5.2.2, 3.3.3.3).

- A combination of petroleum hydrocarbon fingerprinting analysis (Section 3.4), a PAH ratio analysis (Section 3.5), and an analysis of potential transport mechanisms (Section 2.5.4, 4.0) concluded that the "oils sampled from the waste oil tank are different than oils sampled from the soil and gravel above the tank" and that the oils found in the gravel layer did not originate from the USTs.
- Approximately 85 cubic yards of soil from the tank graves and contaminated gravel were excavated from the site (Sections 2.2.1, 2.3.1, 2.5.3, 2.6). The excavated soil area included the soil in the vicinity of all soil samples except for the post-excavation soil samples; WOT-1, WOT-2, WOT-3, WOT-4, DT-1, DT-2, DT-3, DT-4 (Figures 5 and 6, Section 2.4). The post-excavation sampling indicated relatively low total petroleum hydrocarbon values (Figure 6, Section 4.0).

The results of the Gore-Sorber studies indicated the following:

- Relatively low, near background levels of petroleum hydrocarbons remain in the vicinity of the former UST locations.
- A large source of petroleum hydrocarbons is located under the Four Winds building to the north, and upgradient, of the former UST locations.
- **We disagree with the RI conclusion that Western Auto has soils contaminated with BTEX and BNAs.**

This conclusion is primarily based on the soil data from the gravel layer and from other soils that were removed from the site and properly disposed of (see Attachment 2). The only post-excavation soil sampling for BTEX and BNAs in the vicinity occurred during the installation of monitoring well MW-24. The sample results showed that BNAs were below detection limits (except for some phthalates which were likely due to lab contamination) and that BTEX values were very low (RI, Figure 5-9). As discussed above, other post-excavation soil sampling indicated relatively low values of total petroleum hydrocarbon concentration (Tank Closure Report Figure 6, Section 4.0). The results of the Gore-Sorber studies also indicate that post-excavation hydrocarbon values in the vicinity are low, generally in the vicinity of background levels (see Attachment 3). The absence of petroleum hydrocarbon constituents

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measured in groundwater in MW-24 (RI, Figure 5-17), and the presence of low conductivity clay soils in the former UST location (Tank Closure Report; Section 2.4.2, Appendix E) indicates that the remaining low hydrocarbon levels pose an inconsequential potential for environmental impacts. Based on the above information it should be concluded that there is no remaining soil impacted by BTEX and BNAs in the vicinity of the former UST locations behind the Western Auto store.

- **We agree with the RI conclusion that Western Auto does not have soils contaminated with chlorinated VOCs.**

The RI concludes that Western Auto does not have chlorinated VOC contamination. We agree with this conclusion. A single detection of PCE was appropriately discounted in the RI. There were, however, additional reasons for this rejection that were not set forth in the RI. For instance, the BB&L sample detecting PCE was a split of an ENSR sample. Laboratory analysis of the ENSR split sample did not detect the presence of any PCE. Furthermore, additional samples collected by BB&L, ENSR and others (a total more than 10 additional samples in the vicinity) failed to detect the presence of PCE. We further disagree with the statement on Page 5-21 that samples in the vicinity of the detection had elevated detection limits. As noted on the table in Attachment 1, most samples in the area had PCE detection limits of 25-60 ppb. Also, the RI does not mention the fact that there were significant laboratory quality control concerns associated with the PCE detection, as discussed in more detail in Attachment 1. Consideration of these items would lead to an even more definitive conclusion that Western Auto does not have soils contaminated with chlorinated VOCs.

- **We agree with the RI conclusion that Western Auto has not contributed to groundwater contamination.**

The groundwater sampling results at monitoring well MW-24 (RI, Figure 5-17) located in the vicinity of the former USTs behind the Western Auto store show non-detects for all parameters except for insignificantly low levels of chlorinated VOCs. The measured VOC values are attributable to and consistent with values that would be expected at the edge of the overall chlorinated VOC plume in Tutu aquifer. These results convincingly demonstrate that Western Auto has not contributed to groundwater contamination of the Tutu aquifer.



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Thank you for this opportunity to provide EPA and CDM with information that we believe will clarify the conclusions of the RI and RA reports. Please feel free to contact us with any questions or comments that you may have.

Sincerely,

A handwritten signature in black ink, appearing to read 'Don Galya'.

Donald P. Galya, P.E.
Program Director

A handwritten signature in black ink, appearing to read 'John Bierschenk'.

John Bierschenk
Senior Remediation Specialist
DPG/mfm