

April 27, 1995

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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 Final Phase II Remedial Investigation
Tutu Wells Site, St. Thomas, U.S. Virgin Islands**

Dear Ms. Kwan:

This letter provides comments on the final Phase II Tutu Wells Site Remedial Investigation (RI) 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 addresses Western Auto's position with respect to the primary areas of importance in the RI. If you recall or review our prior correspondence to you (letter of November 14, 1994 and letter of April 17, 1994, for example) you may find that a striking feature of this missive is its familiarity. Almost all of the comments below have been made previously to you and to De Maximus/Geraghty & Miller. What is genuinely disconcerting is that most of our comments to the RI sought to redress issues of FACT, not opinion or interpretation. Most of the points that we made were objective and verifiable; the omission and the lack of acknowledgement of these points is disturbing.

Detailed comments and supporting information are provided below. The figures referred to in some of the comments are the two Gore-Sorber maps that were supplied to you last week in St. Thomas and are not supplied again here. Table 1, also referred to in some of the comments, was supplied to you last week as well. We are attaching a revised Table 1, which has had a few minor mistakes corrected. In presenting these comments now we do not wish to retract our comments from prior communications. It is likely that some of the prior comments that are not specifically repeated below still apply, especially with regard to the accuracy of Figures 5.8 and 5.9 of the RI. We have not as yet received the final figures

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for review and would like to have the opportunity to comment on them in the future. The comments, as necessary, are ordered paragraph by paragraph exactly as the RI itself.

- **Section 5.1.8, Paragraph 1, Last Sentence, Page 5-18**

This is the first time in the report that the 4-inch cistern pipe is mentioned. It should be clearly stated that this pipe is not associated with either the diesel or waste oil USTs nor with Western Auto in any way whatsoever. Throughout much of the RI the 4-inch PVC pipe is discussed as if it were part and parcel with the USTs. By not explicitly stating the origin (both well known and documented) of this pipe, the RI could allow a reader who is not intimately familiar with the site to deduce that the pipe is associated with the USTs.

- **Section 5.1.8, Paragraph 2, Second to Last Sentence, Page 5-18**

Again the 4-inch PVC pipe is mentioned and its origin is not stated, leaving the misleading impression that it and its contents are somehow associated with Western Auto.

- **Section 5.1.8.1, Paragraph 4, First Sentence, Page 5-19**

What is the significance of discussing the composition of the contents of the diesel tank or the waste oil tank? Section 5.1 is intended to discuss soil contamination at each of the individual PRP properties. For most of the PRPs, such as Texaco and Esso this is the case and only soil data is presented in the section. However, the paragraph in this section on Western Auto (5.1.8) also includes analytical results for product samples. If product sample results are to be included for Western Auto, similar data should be presented for all the PRPs. For example, it is likely that product samples from the Esso and Texaco sites have BTEX at concentrations ranging from about 500,000 to 2,000,000 ug/kg.

- **Section 5.1.8.1, Paragraph 5, Page 5-20,**

It is stated that during the Target surveys low concentrations (less than 10 ug/L) of total VOCs were measured "...in the vicinity of the USTs, with the exception of in the vicinity of the waste oil UST". In fact, the Target survey results indicate non-detect (less than 1 ug/L) in the vicinity of the waste oil UST. The only location behind the Western Auto building that total VOC values above 10 ug/L were measured is directly adjacent to the Four Winds building (away from either of the two USTs behind the Western Auto store).

Also, the measured VOC concentrations were approximately 1000 times lower than values measured in front of the Four Winds building (particularly near the Esso Tutu station) during

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the previous Target survey. It should also be noted that the Target survey results showed non-detect values for chlorinated VOCs in the vicinity of the Western Auto store (even though very high values for these parameters were measured in front of the Four Winds building).

- **Section 5.1.8.2, , Paragraph 1, Page 5-20**

The 4-inch PVC pipe extends under the Cost-U-Less store of the Four Winds Plaza and leads to an area found to have very high levels of petroleum hydrocarbons in the soil vapor (see attached Figure from the Gore-Sorber survey). It is our understanding that the spring that the pipe points to is not the same location of the vault that was sampled and from which a dye study was performed. The vault that was tested is located near Gore-Sorber location # 104181 not location # 104178 (the location of high organic vapors, see attached figures).

- **Section 5.1.8.2, , Paragraph 2, Page 5-20, 5-21**

While the exact locations of soil samples PE1, PE2, and PE3 are uncertain it is known that they were collected near the Cost-U-Less loading dock, upgradient from the diesel UST (and waste oil UST). Although BNA levels did not exceed NYS TAGM levels, PE3 exhibited 2-methylnaphthalene (8,100 ug/kg) and phenanthrene (3,500 ug/kg) concentrations comparable to those of samples collected from the diesel tank grave (Table 1, attached).

- **Section 5.1.8.2, Paragraph 3, Page 5-21**

The samples mentioned in this paragraph were outside of quality control limits for BNA data because they were non-compliant with their internal standard areas, not because of MS/MSD exceedances. In fact, BBL's laboratory qualified the semi-volatile data for Samples SS-2, SS-3, SS-4, SS-5, SS-6, SS-9, SS-11, and WS-2. The laboratory report stated "the GC/MS semi-volatile internal standard areas were outside of the QC limits for both the initial injection and the re-injection." EPA data validation guidelines consider the "internal standard area" criteria to be very important. If the criteria are not met, the data are usually rejected. Yet, data from these samples are presented and used in the RI on an equivalent basis to data that met QA/QC requirements.

- **Section 5.1.8.2, Paragraph 5, Sentence 1, Page 5-21**

The only soil sample with any detectable concentration of a chlorinated solvent was sample SS-1. Sample SS-1 was essentially a product sample that leaked out of the waste oil vent pipe after the pipe was inadvertently ruptured during the tank removal. It is misleading to

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present it as representative of soil conditions at the site, especially in light of the fact that all soil with which the leaking product came into contact was removed prior to backfilling the tank graves. ENSR's split (sample T2-AS) of sample SS-1 did not indicate the presence of any chlorinated VOCs. In addition, there were significant laboratory control concerns with the analysis of sample SS-1. Furthermore, no chlorinated VOCs were detected in more than 10 additional samples taken in the vicinity of sample SS-1.

- **Section 5.1.8.2, , Paragraph 5, Sentence 2, Page 5-21**

This sentence states that samples in the vicinity of SS-1 had elevated detection limits (for PCE). This is an incorrect generalization. Most of the samples did not have elevated limits, as demonstrated in the table below and in none of them was PCE detected.

ENSR Sample ID	Detection Limit (ppb)	BB&L Sample ID	Detection Limit (ppb)
T2-SN	25	SS-2	57
T2-1S	61	SS-4	25
T2-2S	61	SS-5	25
T2-4S	58	SS-3	25

- **Section 5.1.8.2, Paragraph 6, Sentence 3, Page 5-22**

The ruptured pipe in this sentence is the 4-inch PVC pipe, not a pipe associated with the UST in any way.

- **Section 5.1.8.2, Paragraph 8, Sentence 1, Page 5-22**

We are aware of 2 sets of soil samples that exceed NYS TAGM levels for xylenes. These were split samples resulting in 4 analyses. The attached Table 1 depicts the results of soil samples from the two UST grave areas. Again, sample SS-1 is one of the samples cited by the RI as exceeding NYS TAGM levels and as stated above this sample is not representative of soil conditions either before or after excavation.

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- **Section 5.1.8.2, Paragraph 8, Sentence 2, Page 5-22**

What is the significance of a waste oil sample exceeding the NYS TAGM standards? If this treatment is appropriate for Western Auto, the RI should evaluate whether product samples at Esso and Texaco exceed NYS TAGM standards; they do for BTEX as well as for a host of other compounds.

- **Section 5.1.8.2, , Paragraph 10, Sentence 2, Page 5-22**

It is stated that ENSR's analysis indicated that the diesel UST contained heavy and mid-range petroleum product. However, ENSR's analysis indicated that the diesel samples exhibited only mid-range, not heavy range product (ENSR Closure Report, June 1994, Section 3.4).

- **Section 5.1.8.2, Paragraph 12, Page 5-23**

This paragraph refers to a portion of the Gore-Sorber survey behind the Western Auto store which indicates that the presence of diesel fuel was detected in the vicinity of the former diesel UST and heavy oil components were detected in the vicinity of the former waste oil UST. However, as depicted in the attached figures, the levels of these parameters measured in the vicinity of the USTs were very low, and much closer to background levels than results from other sorber module locations, particularly upgradient, under the Four Winds building.

- **Section 5.1.8.2, Paragraph 14, Sentence 1, Page 5-23**

The only soil samples collected after excavation was completed from behind the Western Auto store and analyzed for VOCs and BNAs were the 4 samples generated from the boring of MW24, located adjacent to the waste oil tank grave. None of these samples exceeded NYS TAGM levels for any of these analytes.

- **Section 5.1.8.2, Paragraph 14, Last Sentence, Page 5-23**

The one soil sample in which PCE was detected was sample SS-1. As described above, this sample was collected beneath a vent pipe that had just been ruptured by the excavator and is more representative of the contents of the pipe than the soil before the excavation. As stated in the RI, this soil was removed from the site.

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- **Section 5.1.10, Paragraph 3, Last Sentence, Page 5-26**

We agree that the reported tetrachloroethane result was probably an error. We note, however, that the example tetrachloroethane listed in the text - 1,1,1,1-tetrachloroethane - is also an error; no such compound exists.

- **Section 5.1.12, Paragraph 1, Page 5-30**

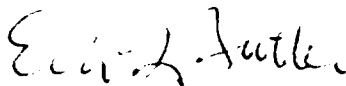
It should be noted that no soil samples collected after the excavation exhibited levels of any analytes that exceeded NYS TAGM standards. Again, the 4-inch PVC pipe is discussed without making clear that it has nothing to do with the USTs or Western Auto.

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

Sincerely,



Donald P. Galya, P.E.
Program Director



Eric L. Butler, Ph.D.
Senior Consulting Chemist

Attachment

Table 1. Listing of inaccuracies in Section 2.2.1.2 of the Feasibility Study with regard to Western Auto.

Values in FS Section 2.2.1.2	Laboratory Analytical Data	
BTEX - Former Diesel UST	ENSR Sample #/Value	BB&L Sample #/Value
Benzene: (29 $\mu\text{g/kg}$)	T1-2/29J	SS-8/25U
Toluene: (12 to 25 $\mu\text{g/kg}$)	T1-2/12J	SS-8/25U
	T1-4/16J	SS-10/25U
	T1-3/25J	SS-9/25U
Ethylbenzene: ¹ (16 to 1,700 $\mu\text{g/kg}$)	T1-4/16J	SS-10/25U
	T1-3/20J	SS-9/290
	T1-1/100	SS-7/270
	T1-2/240	SS-8/340
Xylene: (53 to 210 $\mu\text{g/kg}$)	T1-1/85Y	SS-7/25U
	T1-2/210Y	SS-8/53
BNAs - Former Diesel UST	ENSR Sample #/Value	BB&L Sample #/Value
Individual BNAs (1^2 to 23,000 $\mu\text{g/kg}$)		
2-Methylnaphthalene (the most abundant individual BNA in the ENSR samples)	T1-3/2,200J	SS-9/NA
	T1-2/8,200	SS-8/NA
	T1-1/14,000	SS-7/NA
	T1-4/23,000	SS-10/NA
Phenanthrene (the most abundant individual BNA in the BB&L samples)	T1-3/1,100J	SS-9/3,200
	T1-2/4,600	SS-8/9,400
	T1-1/6,900J	SS-7/6,300
	T1-4/11,000	SS-10/15,000
BTEX - Former Waste Oil UST	ENSR Sample #/Value	BB&L Sample #/Value
Benzene (3^3 -140 $\mu\text{g/kg}$)	T2-3S/1,500U	SS-6/34
	T2-AS/1,500U	SS-1 ⁴ /140

Values in FS Section 2.2.1.2	Laboratory Analytical Data	
Toluene (2^3 -3,900 $\mu\text{g/kg}$)	T2-4S/7J	SS-3/25U
	T2-1S/28J	SS-4/25U
	T2-3S/740J	SS-6/320
	T2-AS/760J	SS-1 ⁴ /3,900
Ethylbenzene (1^2 -1,600 $\mu\text{g/kg}$)	TT-2S/29J	SS-5/100
	T2-4S/150	SS-3/25U
	T2-1S/230	SS-4/30
	T2-SN/230	SS-2/850
	T2-AS/890J	SS-1 ⁴ /1,600
	T2-3S/980J	SS-6/420
Xylene (2^3 to 34,000 $\mu\text{g/kg}$)	T2-2S/51JY	SS-5/125
	T2-4S/60Y	SS-3/6U
	T2-SN/120Y	SS-2/501
	T2-1S/430Y	SS-4/128
	T2-AS/5,800Y	SS-1 ⁴ /34,000
	T2-3S/7,000	SS-6/2,700

¹ Ethylbenzene: Draft FS report notes eight samples; these results are actually from four split samples and one ADL sample (NOTE: the FS states 1,700 $\mu\text{g/kg}$ but ADL reports a value 16.9 $\mu\text{g/kg}$).

² We have not been able to identify a soil sample with this concentration.

³ This value is estimated (J) and comes from a water sample (T-2W) not a soil sample and its units are $\mu\text{g/L}$.

⁴ SS-1 and T2-AS were samples collected beneath a newly broken waste oil tank vent pipe and are indicative of product from that pipe and not of the condition of the soil before excavation.

J = estimated value, usually because the value is below the reporting limit

NA = not applicable, not a target analyte

U = not detected at stated detection limit

Y = manually integrated by the laboratory analyst