

September 23, 1991

Mr. Leo Francis
Commissioner
Department of Public Works
No. 8 Subbase
St. Thomas, U.S. Virgin Islands 00802

Re: Request for Temporary Discharge
of Groundwater to Treatment Plant.

Dear Commissioner Francis:

Geraghty & Miller, Inc. will be conducting a ground-water investigation in the Tutu, St. Thomas area. The investigation work plan is expected to be approved by the U.S. Environmental Protection Agency (USEPA) within approximately two weeks. Approximately 40,000 to 45,000 gallons of ground-water will be generated during the investigation, primarily during the purging of monitoring wells for sampling and pump testing. The USEPA has indicated this ground water must be handled as a waste. Geraghty & Miller would like to request authorization for a temporary discharge of the generated ground water to the nearest wastewater treatment facility. Ground-water quality sampling of existing wells in the Tutu area has been conducted since September 1990 under the supervision of USEPA and U.S. Virgin Islands Department of Natural Resources (DPNR) representatives.

The proposed ground-water investigation will include the installation of ten shallow monitoring wells and seven deep monitoring wells in the Tutu area (see Figure 1). After the monitoring wells are installed, each well will be developed by pumping to improve the efficiency of the well. After well development, the monitoring wells will be purged to remove non-representative ground water prior to two water-quality sampling events.

Aquifer testing, consisting of step tests and pumping tests, will be carried out in between the two ground-water sampling events.

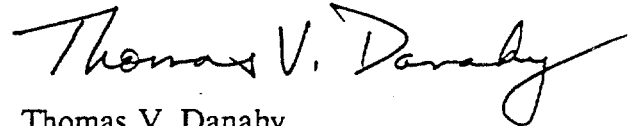
Based upon a preliminary telephone conversation between Ms. Mary Cornwall, Department of Public Works, and Thomas Danahy, Geraghty & Miller, Inc., we have provided an estimate of our expected discharge volumes and concentrations of volatile organic compounds (VOCs). Table 1 presents a summary of the anticipated ground water discharge volumes. Table 2 presents an estimate of the average VOC concentration that will be present in the generated ground water. The five VOCs listed on Table 2 are the only compounds detected above trace concentrations. The VOC averages were calculated using the maximum values detected in the Four Winds II and Tillett well samples during three sampling events conducted from September 1990 through June 1991. The Tillett well samples have consistently contained elevated VOC concentrations. The Four Winds II and Tillett wells are both situated in the center of the study area. The average of the maximum VOC values for the Tillett and Four Winds II samples (Table 2) is considered to be representative of the average VOC concentrations that would be present in the proposed monitoring well ground water. A field gas chromatograph (GC) will be onsite throughout the investigation, allowing for rapid determination of VOC content of samples. If required, additional laboratory analysis could be performed as confirmation of the field GC results. If necessary, the ground water could be temporarily stored onsite until the analytical results were available.

Please let us know if the proposed discharge is feasible. If necessary, pre-treatment (using carbon adsorption or air stripping) may be performed to meet required discharge VOC limitations.

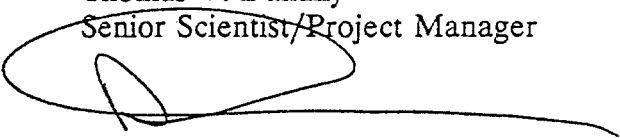
Geraghty & Miller, Inc. and the USEPA would like to finalize the project work plan within the next two weeks. Your timely response to our request would be greatly appreciated.

Sincerely,

GERAGHTY & MILLER, INC.



Thomas V. Danahy
Senior Scientist/Project Manager



Daniel A. Nachman
Vice President/Project Director

c: ~~Caroline Kwan, USEPA~~
Julie May Monsanto, USVI-DPNR
Sarah Odland, CDM
Ana Gloria Ramos, TEIC

TVD:nr
PR01301/092191.ltr

Table 2. Average Concentration of Volatile Organic Compounds in Tutu Study Area, Tutu Service Station Investigation, St. Thomas, U.S. Virgin Islands.

VOC Parameter	Four Winds II Highest Value*	Tillett Highest Value*	Average Value
1,2-Dichloroethene	230	400	315
Trichloroethene	21	72	46.5
Tetrachloroethene	90	180	135
Benzene	ND	27	13.5
Vinyl Chloride	ND	17	8.5

All values reported in micrograms per liter (ug/L).

Analyses performed using USEPA Method 524.2.

High concentration samples were diluted and analyzed using USEPA Method 624.

* Highest value detected during three sampling events September/October 1990, February 1991 and June 1991.

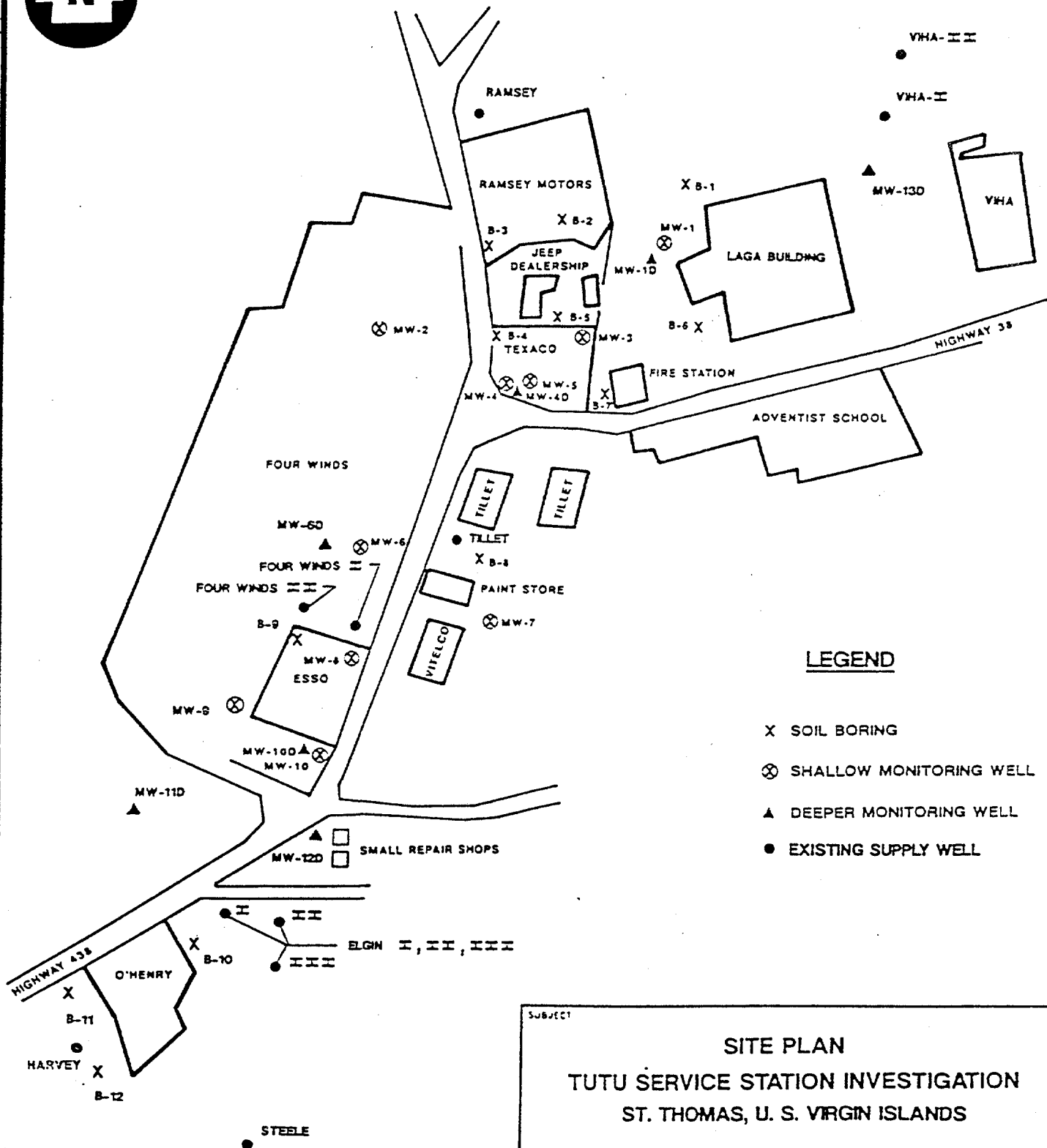
ND Not detected.

PR01301/a vocvo

Table 1. Schedule of Ground-Water Discharges, Tutu Service Station Investigation, St. Thomas, U.S. Virgin Islands.

Weeks from Project Start	Activity	Estimated Volume of Generated Ground Water (gallons)
13-15	Monitoring Well Development	5,100
17-18	Monitoring Well Purging- Sampling Round 1	2,800
21-22	Step Tests and Pumping Tests	33,100
31-32	Monitoring Well Purging- Sampling Round 2	2,800
Estimated Total		= 43,800 gallons

PR01301/sbedwd



LEGEND

- X SOIL BORING
- ⊗ SHALLOW MONITORING WELL
- ▲ DEEPER MONITORING WELL
- EXISTING SUPPLY WELL

SUBJECT

SITE PLAN TUTU SERVICE STATION INVESTIGATION ST. THOMAS, U. S. VIRGIN ISLANDS

PREPARED FOR

TEIC

Geraghty
& Miller, Inc.

COMPILED BY DANAHY
PREPARED BY PADULA
PROJECT MGR DANAHY

SCALE SHOWN
DATE 5/4/91

FIGURE
1