COMPENDIUM OF WELL WATER DATA COLLECTED AT THE VIRGIN ISLAND CHEMICAL CO. BY THE USEPA (1986-1990)

FOREWORD

The purpose of this report is to summarize pertinent sampling data and information regarding the volatile organic, well water data collected by the United States Environmental Protection Agency (EPA) during various sampling events at, and in the vicinity of the Virgin Island Chemical Co. (VIChem) Hazardous Waste Site in St. Croix during and prior to the 1990 Superfund Removal Action. Summary reports of each of these sampling events are included in the VIChem Removal Action Site Files.

A review of the data indicates that Chloroform was consistently the dominant contaminant during each of the sampling events. For this reason, Chloroform results are included herein and are plotted in the attached graph, "Chloroform Contamination in Well Water - Virgin Island Chemical Co. Site, St. Croix". Since the purpose of this report is to merely assemble pertinent data, and not to interpret the data or make recommendations based on the data, all analyzed data, including qualified and rejected data, are included in this report.

It should be pointed out that the Drinking Water Maximum Contaminant Level for total trihalomethanes is 100 ug/l (See 40 CFR §141.12) and the 1980 Federal Water Quality Criteria for Chloroform (as revised), based on a carcinogenicity of 10^{-6}, is 5.70 ug/l for human exposure from contaminated water and fish.

COMPENDIUM

1. RCRA Enforcement (3/13/86) The Environmental Services Division (ESD) of Region 2 conducted a RCRA Enforcement Inspection of the VIChem facility, then known as Berlex Laboratories, on March 13, 1986. The inspection included 3 soil samples taken from the intermittent stream, or "gut", on the site perimeter, 2 soil samples obtained from the laboratory water drainage pit, and one sample taken from the production well in the northwest corner of the property. The results of the organic analysis from the production well indicated Chloroform contamination at a level of 130 ug/l.

2. St. Croix Well Survey Phase I (3/7/88-3/10/88) The Response and Prevention Branch (RPB) conducted well sampling for volatile organic constituents at 21 locations in St. Croix, including four wells in the vicinity of the VIChem Site. The data was rejected by the Monitoring Management Branch (MMB) due to excessive holding times. Chloroform contamination was indicated in the October 25, 1988 report, "St. Croix Well Survey", prepared by Weston - TAT, as shown below:

Well Name	Fairplains #6	Fairplains #9	VIPA #1	VIPA #2
Chloroform (ug/l)	24	75 &70	11.5	11.3

3. St. Croix Well Survey Phase I (10/31/88-11/2/88) RPB resampled wells at eight locations, including four wells in the vicinity of the VIChem Site. Chloroform contamination was indicated as shown below:

Well Name	Fairplains #6	Fairplains #9	Fairplains #8	VIPA #2
Chloroform (ug/l)	35.9	10.4 & 9.7	12.4	1.6U*

* Chloroform was not detected at the detection level of 1.6 ug/l.

4. VIChem Removal Action Phase I (1/17/90) During Phase I removal action activities at VIChem, three off-site wells and the on-site water tank were sampled for volatile organic contamination. Analytical services were provided by a private laboratory procured by the TAT. In addition to the routine QA/QC required for Level 2 Removal Program sampling, two performance evaluation samples and one blind duplicate sample were analyzed. TAT validated the data and, although QA/QC discrepansies were slight and few, the data was qualified as estimated. Once again, Chloroform was the most dominant compound in each sample; the data for this contaminant are shown below:

Well Name	Fairplains #6	Fairplains #9	Fairplains #8	Water Tank
Chloroform (ug/l)	39.0	25.0	5.0	23.9*

* This is an average of Chloroform contamination in the three tank samples (Water tank sample = 23.9 ug/l, Water tank drain sample = 22.7 ug/l, Water tank pump sample = 25.0 ug/l).

5. VIChem Removal Action Phase I (6/25/90) During Phase II removal action activities at VIChem, four off-site wells were sampled and analyzed for volatile organic contaminants. When detected, Chloroform was the most dominant compound in each sample and in 3 out of 4 samples the only VOC detected. Analytical services were provided by the Contract Laboratory Program and the data was validated by MMB. The only data qualified was for a QA/QC sample for a single compound. The Chloroform data for this sampling event are shown below:

Well Name	Fairplains #6	Fairplains #9	VIPA #1	VIPA #2
Chloroform (ug/l)	11	39	2J*	5U**

* An estimated value of 2 ug/l was reported.
** Chloroform was not detected at the detection level of 5 ug/l.