

Bruce W. Page Consulting

ENVIRONMENTAL CHEMICAL ENGINEERING

FACSIMILE COVER SHEET**Date: February 1, 2002****Time: 9:55****Deliver to: Mr. Scott Seery (cc: Dr. Mansour Sepehr, Albert M. Cohen, Esq.)****Company: Alameda County Health Care Services Agency****Fax Phone Number: 510-337-9335****Number of Pages Sent: 4****Remarks: Scott, Mansour asked me to send you the information that we had previously obtained on the LNAPL at the former Glovatorium site.**

During the January 20 – 25, 2000 sampling event, LFR personnel reported floating product in sampling point B-3. Samples of the LNAPL from points B-3 and B-8 were sent to Friedman & Bruya for identification. We also asked them to check for the presence of chlorinated solvents. I have attached my only copy of the Friedman & Bruya report which identifies the organic as Stoddard Solvent. I also have a record of a phone call to Kurt Johnson in which he says that they did not find any chlorinateds above a detection limit of 1%.

The water phases from those two sampling points were analysed by Curtis & Tompkins. They reported (in units of ppb):

	B-3	B-8
Gasoline	8,800	19,000
Stoddard	4,900	11,000
MTBE	ND	ND
Benzene	4.8	ND
m,p-Xylenes	7.4	ND
O-Xylene	64	170
PCE	ND	ND
TCE	ND	ND
cis-1,2-DCE	610	35
1,1-DCE	2.7	ND

If you have any questions, please give me a call.

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ATTORNEY WORK PRODUCT**

February 8, 2000

Taylor Bennett, Project Manager
Levine Fricke
1900 Powell Street, 12th Floor
Emeryville, CA 94608-1827

Dear Mr. Bennett:

Included are the results from the testing of material submitted on January 31, 2000 from your 6895.00 project. The product and water samples submitted for forensic evaluation arrived in good condition. Upon their arrival, the samples CT#143612-006 B-8, CT#143612-008 B-3, CT#143612-011 B-8, and CT#143612-012 B-3 were assigned our laboratory project number 001128 and were placed in a refrigerator maintained at 4°C until removed for sample processing.

The purpose of our investigation was to identify the material present in the samples CT#143612-011 B-8 and CT#143612-012 B-3. In order to make this determination the samples were extracted and analyzed using a gas chromatograph with a flame ionization detector (GC/FID) and an electron capture detector (ECD). The data generated yielded information on the boiling range and general chemical composition of the material present. Based on this information, the material was identified. The GC/FID and GC/ECD traces are enclosed. A GC/FID trace of a standard consisting of normal alkanes is also provided for reference purposes.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions. We will hold your samples for 30 days before disposal unless directed otherwise.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson
Chemist

Enclosures
1.F10803R.DOC

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Date of Report: 02/03/00
Date Received: 01/31/00
Project: 6895.00
Date Extracted: 01/19/00
Date Analyzed: 01/19/00

**RESULTS FROM THE ANALYSIS OF THE PRODUCT SAMPLE
FOR FORENSIC EVALUATION
BY CAPILLARY GAS CHROMATOGRAPHY
USING A FLAME IONIZATION DETECTOR (FID)
AND ELECTRON CAPTURE DETECTOR (ECD)**

Sample ID

GC Characterization

CT#143612-011 B-8

The GC trace using the flame ionization detector (FID) showed the presence of low boiling compounds. The pattern displayed by these peaks is indicative of Stoddard solvent.

The low boiling compounds appear on the GC/FID trace as a ragged pattern of peaks on top of a hump or unresolved complex mixture (UCM). This material elutes from approximately n-C₉ to n-C₁₂ showing a maximum near n-C₁₀. This correlates with a temperature range of approximately 151°C to 216°C. Within this range, the GC/FID trace showed the a lack of a dominant pattern of peaks characteristic of the aromatic hydrocarbons benzene, toluene, ethylbenzene, and the xylenes.

The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. There is a second surrogate present that is seen on the GC/ECD trace at about 26 minutes which is dibutyl chlorendate.

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BY CAPILLARY GAS CHROMATOGRAPHY
USING A FLAME IONIZATION DETECTOR (FID)
AND ELECTRON CAPTURE DETECTOR (ECD)**

Sample ID

CT#143612-012 B-3

GC Characterization

The GC trace using the flame ionization detector (FID) showed the presence of low boiling compounds. The pattern displayed by these peaks is indicative of Stoddard solvent.

The low boiling compounds appear on the GC/FID trace as a ragged pattern of peaks on top of a hump or unresolved complex mixture (UCM). This material elutes from approximately *n*-C₉ to *n*-C₁₂ showing a maximum near *n*-C₁₀. This correlates with a temperature range of approximately 151°C to 216°C. Within this range, the GC/FID trace showed the a lack of a dominant pattern of peaks characteristic of the aromatic hydrocarbons benzene, toluene, ethylbenzene, and the xylenes.

The large peak seen near 25 minutes on the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. There is a second surrogate present that is seen on the GC/ECD trace at about 26 minutes which is dibutyl chlorodate.