



Logical Solutions for Complex Problems

November 1, 2010
G-Logics Project Number 01-0302-E

Tacoma | Pierce County Health Department
Mr. Rob Olsen
3629 South D Street, MS: 327
Tacoma, WA 98418-6813

**Subject: Site Status, Underground Storage Tank Removal
Fleischmann's Property, Parcel 0420241150, Permit 2038
1115 Zehnder Street
Sumner, WA**

Dear Mr. Olsen:

G-Logics has prepared this letter in response to your letter dated August 18, 2010. Your letter was addressed to Mr. Robert Code and requested additional site information. A copy of this letter is included as Attachment A. Mr. Code subsequently requested that we collect this information for your review, which is described below.

Brief Site-Environmental History, Pre-2000

Site-exploration work was conducted at the subject property in the late 1990s, performed by Hart Crowser and Dames & Moore. This work was focused in the area of the underground and aboveground fuel-storage tanks. The two underground tanks reportedly operated from approximately 1913 to 1970s and contained heavy oil. The AST, operated more recently, reportedly contained diesel fuel for a backup generator. Given the discovered presence of soil and groundwater contamination in the area of these tanks, Dames & Moore prepared a Cleanup Action Plan for this area of the property. Mapping showing the planned excavation areas, based on the completed site-exploration work, was included. A copy of this Cleanup Action Plan is included as Attachment B.

G-Logics, Inc.
40 2nd Avenue SE
Issaquah, WA 98027
T: 425-391-6874
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01-0302-F-CL

Conducted Tank Removal and Site-Cleanup Work, 2000

In late 2000, URS Construction Services remove the storage tanks, associated piping, and petroleum-contaminated soils. This work was conducted based on the workscope identified in the Cleanup Action Plan. Conducted soil and groundwater cleanup work was summarized in the URS report dated May 17, 2002. A copy of this Tank Removal/Cleanup Report is included as Attachment C.

In summary, impacted soils were excavated to the extent they were accessible (limited by remaining structures and underground utilities), with approximately 1,226 tons of soils removed for off-site treatment/disposal. Confirmation samples were collected to document the extent that these soils were removed. Of the numerous samples collected in the area of the underground tanks, residual petroleum concentrations only exceeded MTCA Method A Cleanup Levels in three samples. Petroleum contaminants also remain in the area of the former AST (excavation could not be conducted due to existing structures). Summary data tables and mapping showing sample locations are included with this report. The extent of the remedial excavation, showing confirmation samples and analytical results, are included as Figure 3 of this report.

In addition to the removed soils, approximately 20,000 gallons of impacted groundwater also was removed from the open excavation, again for off-site treatment/disposal. To assess groundwater conditions in the close vicinity of the conducted soil-excavation work, five groundwater-monitoring wells were installed. Petroleum contaminants (diesel and oil) were not detected in any of the five groundwater samples. Based on groundwater elevations in these wells, a flow direction was mapped to the south.

Given the completion of the remedial work and the findings of the conducted sampling, URS concluded that there was a “low potential for significant future migration of residual petroleum hydrocarbons”.

Additional Groundwater Sampling by ERI, 2003

Environmental Resolutions, Inc. (ERI) collected samples on December 9 and 10, 2003 from three of the existing monitoring wells (MW-1, MW-3, and MW-3-00). Samples from MW-3 and MW-3-00 were labeled by ERI as MW-3-HC and MW-3-URS, respectively. The samples were submitted for analysis of volatiles (Method 8260), gasoline (NWTPH-G), diesel and oil (NWTPH-Dx), semi-volatiles (Method 8270), and dissolved metals (EPA 7000 series). Findings of this sampling are summarized below.

Volatiles - Sample MW-1 contained 9.9 ug/L acetone and 20 ug/L butanone. Sample MW-3-URS contained 2.6 ug/L xylenes. These compounds are typical laboratory contaminants and the chemical concentrations are well below applicable cleanup levels. All other analytes for the three samples were below detection levels.

Semivolatiles - Sample MW-3-URS contained 2.5 ug/L bis (2-ethylhexyl) phthalate. This compound is a common laboratory contaminant. The concentration is below the Method B cleanup level of 6.25 ug/L. All other semivolatile analytes for the three samples were below detection levels.

Petroleum Hydrocarbons - No gasoline, diesel, or oil-range TPH was detected in the three groundwater samples.

Dissolved Metals - Barium concentrations ranging from 7 ug/L to 36 ug/L were detected in the three samples. The concentration is below the Method B cleanup level of 560 ug/L for barium. Arsenic was detected at a concentration of 0.5 ug/L and 2.6 ug/L in samples MW-3-HC and MW-3-URS, respectively. These concentrations are below the Method A cleanup level of 5 ug/L. All other metal analytes for the three samples were below detection levels.

Additional Groundwater Sampling by G-Logics, 2004

In early 2004, G-Logics was requested to conduct additional groundwater sampling at this site to assess groundwater in areas away from the removed tanks and impacted soils.

G-Logics installed three shallow-groundwater monitoring wells identified as GL-1, GL-2, and GL-3. The locations of these wells (and those sampled in 2003 by ERI) are shown on Figure 1 of the data transmittal prepared on March 22, 2004. The three wells were analyzed for volatiles, gasoline, diesel and oil-range petroleum hydrocarbons, and dissolved arsenic. A copy of this data transmittal is included as Attachment D. Findings of this sampling are summarized below.

Volatiles - Chlorinated solvents were not detected in the three analyzed groundwater samples. Toluene was detected in all three samples at concentrations ranging from 4.7 to 5.1 ug/L (well below the current MTCA Cleanup Level of 1,000 ug/L).

Petroleum Hydrocarbons - No gasoline, diesel, or oil-range petroleum hydrocarbons were detected in the three groundwater samples.

Dissolved Arsenic -Dissolved arsenic was not detected in the three analyzed.

Summary

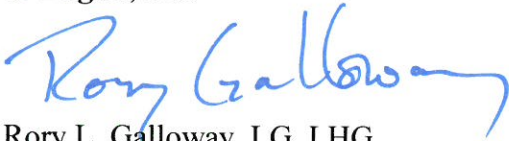
Based on our review of the provided information, some petroleum contaminants may remain in areas that could not be excavated in 2000. However, based on the three rounds of subsequent groundwater sampling described in this letter, we concur with the 2000 conclusion presented by URS. Specifically, the residual petroleum contaminants present a “low potential for significant future migration of residual petroleum hydrocarbons”. When site redevelopment occurs in the future, these residual soils could be assessed and/or remediated as appropriate

Given the conducted work and the documentation provided with this letter, we trust that the Health Department’s request for additional site-information has been satisfied. Additionally, with the submittal of this documentation, a workplan for additional site investigation and/or remediation should not be necessary at this time.

Closing

We appreciate this opportunity to provide this information to the Tacoma | Pierce County Health Department. Please feel free to contact us at your convenience with any questions or comments.

Sincerely,
G-Logics, Inc.



Rory L. Galloway, LG, LHG
President

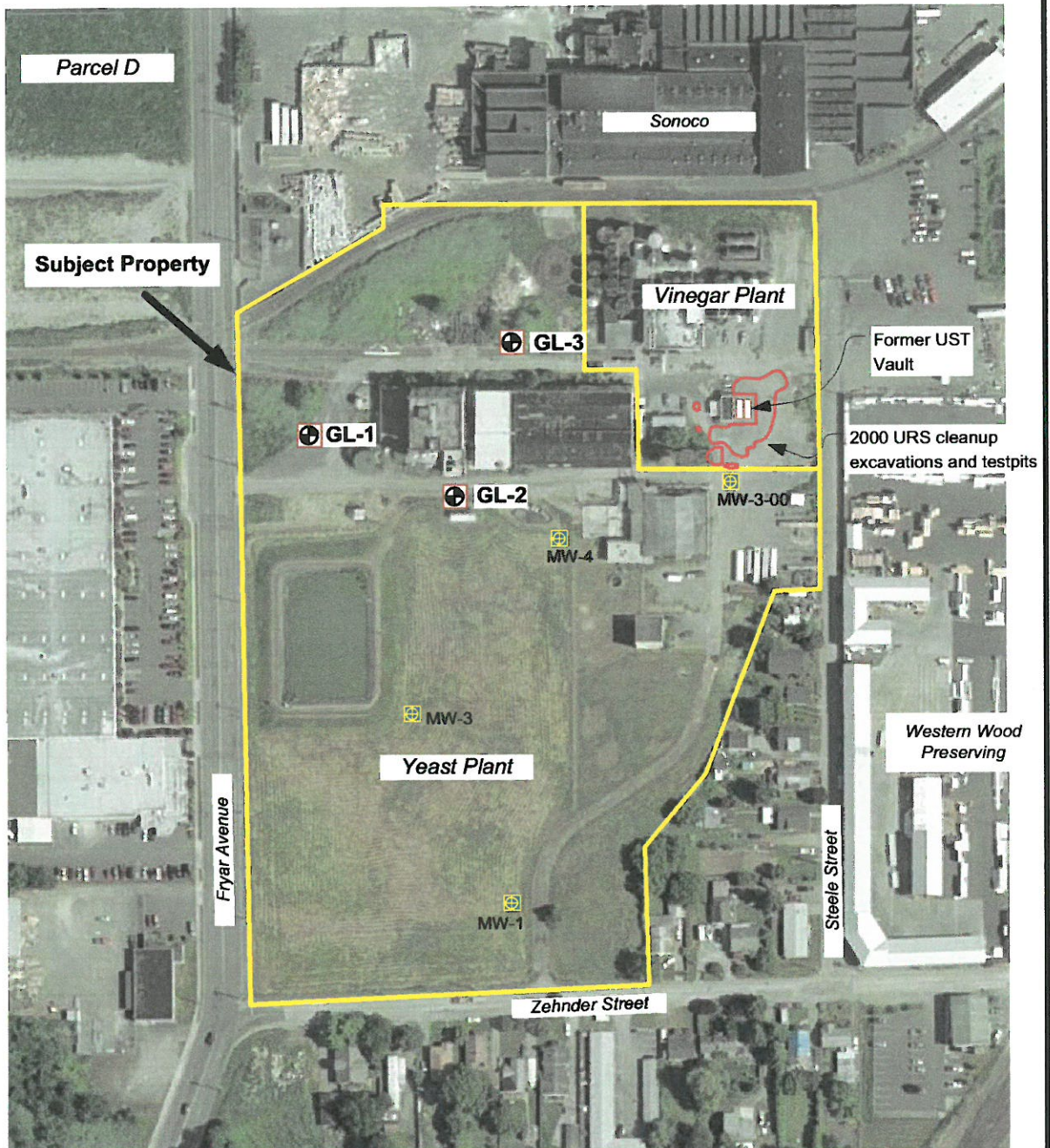
Attachment A, Tacoma/Pierce County Health Department letter, dated August 18, 2010

Attachment B, Cleanup Action Plan, Dames & Moore, dated October 18, 1999




Attachment C, UST and AST Removal and Voluntary Cleanup Action Report, URS, dated May 17, 2002

Attachment D, Data Memorandum, Groundwater Sampling Results, G-Logics, dated March 22, 2004

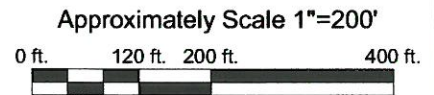
cc Robert Code (PDF and letter only)



Legend

-  **GL-1** G-Logics Strataprobe Wellpoint Location
-  **MW-1** Existing Monitoring well location (Yeast Plant only)
-  **Approximate Property Line**

Important Note: This figure contains information in color. Black & white photocopies may not be suitable for review.



Project File:
01-0302-C-F1.vsd



Groundwater Sampling Locations
Fleischmann's
1115 Zehnder Street
Sumner, WA

Figure
1

ADVANCED ANALYTICAL*Environmental Testing Laboratory*

March 20, 2004

*Rob Roberts
G-Logics
175 1st Pl NW
Issaquah, WA 98027*

Dear Mr. Roberts:

Please find enclosed the analytical data report for the *Fleischmanns*, Project.

Samples were received on March 18, 2004. The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 497-0110.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Val G. Ivanov, Ph.D.
Laboratory Manager

Overlake Business Center ■ 2821 152 Avenue NE ■ Redmond, WA 98052
ph 425.497.0110 fax 425.497.8089
E-mail: aachemlab@yahoo.com

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Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAL Job Number: A40318-1
Client: G-Logics
Project Manager: Rob Roberts
Client Project Name: Fleischmanns
Client Project Number: na
Date received: 03/18/04

Analytical Results						Dupl
NWTPH-Dx, mg/l		MTH BLK	GL-1	GL-2	GL-3	GL-3
Matrix	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04
Date analyzed	Limits	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04
Kerosene/Jet fuel	0.20	nd	nd	nd	nd	nd
Diesel/Fuel oil	0.20	nd	nd	nd	nd	nd
Heavy oil	0.50	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	118%	124%	123%	121%	121%
o-Terphenyl	122%	122%	123%	120%	120%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

Advanced Analytical Laboratory
 (425) 497-0110, fax (425) 497-8089

AAL Job Number: A40318-1
 Client: G-Logics
 Project Manager: Rob Roberts
 Client Project Name: Fleischmanns
 Client Project Number: na
 Date received: 03/18/04

Analytical Results							Dupl
NWTPH-Gx, mg/l		MTH BLK	GL-1	GL-2	GL-3	GL-3	
Matrix	Water	Water	Water	Water	Water	Water	
Date analyzed	Limits	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	
NWTPH-Gx, mg/l							
Mineral spirits/Stoddard	0.10	nd	nd	nd	nd	nd	
Gasoline	0.10	nd	nd	nd	nd	nd	
Surrogate recoveries:							
Trifluorotoluene		86%	90%	89%	94%	88%	
Bromofluorobenzene		78%	85%	83%	86%	85%	

Data Qualifiers and Analytical Comments

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na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

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Advanced Analytical Laboratory
(425) 497-0110, fax (425) 497-8089

AAI Job Number: A40318-1
Client: G-Logics
Project Manager: Rob Roberts
Client Project Name: Fleischmanns
Client Project Number: na
Date received: 03/18/04

Analytical Results		MS					
8260, µg/L		MTH BLK	LCS	GL-1	GL-2	GL-3	GL-3
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04
Dichlorodifluoromethane	1.0	nd		nd	nd	nd	
Chloromethane	1.0	nd		nd	nd	nd	
Vinyl chloride(*)	0.2	nd		nd	nd	nd	
Bromomethane	1.0	nd		nd	nd	nd	
Chloroethane	1.0	nd		nd	nd	nd	
Trichlorofluoromethane	1.0	nd		nd	nd	nd	
1,1-Dichloroethene	1.0	nd		nd	nd	nd	
Methylene chloride	1.0	nd		nd	nd	nd	
trans-1,2-Dichloroethene	1.0	nd		nd	nd	nd	
1,1-Dichloroethane	1.0	nd		nd	nd	nd	
2,2-Dichloropropane	1.0	nd		nd	nd	nd	
cis-1,2-Dichloroethene	1.0	nd		nd	nd	nd	
Chloroform	1.0	nd		nd	nd	nd	
1,1,1-Trichloroethane	1.0	nd		nd	nd	nd	
Carbontetrachloride	1.0	nd		nd	nd	nd	
1,1-Dichloropropene	1.0	nd		nd	nd	nd	
Benzene	1.0	nd	96%	nd	nd	nd	86%
1,2-Dichloroethane(EDC)	1.0	nd		nd	nd	nd	
Trichloroethene	1.0	nd	107%	nd	nd	nd	105%
1,2-Dichloropropane	1.0	nd		nd	nd	nd	
Dibromomethane	1.0	nd		nd	nd	nd	
Bromodichloromethane	1.0	nd		nd	nd	nd	
cis-1,3-Dichloropropene	1.0	nd		nd	nd	nd	
Toluene	1.0	nd	105%	4.7	5.1	4.8	91%
trans-1,3-Dichloropropene	1.0	nd		nd	nd	nd	
1,1,2-Trichloroethane	1.0	nd		nd	nd	nd	
Tetrachloroethene	1.0	nd		nd	nd	nd	
1,3-Dichloropropane	1.0	nd		nd	nd	nd	
Dibromochloromethane	1.0	nd		nd	nd	nd	
1,2-Dibromoethane (EDB)*	0.01	nd		nd	nd	nd	
Chlorobenzene	1.0	nd	103%	nd	nd	nd	97%
1,1,1,2-Tetrachloroethane	1.0	nd		nd	nd	nd	
Ethylbenzene	1.0	nd		nd	nd	nd	
Xylenes	1.0	nd		nd	nd	nd	
Styrene	1.0	nd		nd	nd	nd	
Bromoform	1.0	nd		nd	nd	nd	
Isopropylbenzene	1.0	nd		nd	nd	nd	
1,2,3-Trichloropropane	1.0	nd		nd	nd	nd	
Bromobenzene	1.0	nd		nd	nd	nd	

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Analytical Results							MS
8260, µg/L		MTH BLK	LCS	GL-1	GL-2	GL-3	GL-3
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04
1,1,2,2-Tetrachloroethane	1.0	nd		nd	nd	nd	nd
n-Propylbenzene	1.0	nd		nd	nd	nd	nd
2-Chlorotoluene	1.0	nd		nd	nd	nd	nd
4-Chlorotoluene	1.0	nd		nd	nd	nd	nd
1,3,5-Trimethylbenzene	1.0	nd		nd	nd	nd	nd
tert-Butylbenzene	1.0	nd		nd	nd	nd	nd
1,2,4-Trimethylbenzene	1.0	nd		nd	nd	nd	nd
sec-Butylbenzene	1.0	nd		nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd		nd	nd	nd	nd
Isopropyltoluene	1.0	nd		nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd		nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd		nd	nd	nd	nd
n-Butylbenzene	1.0	nd		nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	1.0	nd		nd	nd	nd	nd
1,2,4-Trichlorobenzene	1.0	nd		nd	nd	nd	nd
Hexachloro-1,3-butadiene	1.0	nd		nd	nd	nd	nd
Naphthalene	1.0	nd		nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd		nd	nd	nd	nd
*-instrument detection limits							
Surrogate recoveries							
Dibromofluoromethane		97%	90%	91%	93%	88%	77%
Toluene-d8		99%	98%	98%	98%	93%	100%
1,2-Dichloroethane-d4		87%	88%	92%	92%	94%	80%
4-Bromofluorobenzene		94%	97%	95%	95%	89%	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

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Client Project Name: Fleischmanns
Client Project Number: na
Date received: 03/18/04

Analytical Results	8260, µg/L	MSD		RPD
		MTH BLK	GL-3	GL-3
Matrix	Water	Water	Water	Water
Date analyzed	Reporting Limits	03/19/04	03/19/04	03/19/04
Dichlorodifluoromethane	1.0	nd		
Chloromethane	1.0	nd		
Vinyl chloride(*)	0.2	nd		
Bromomethane	1.0	nd		
Chloroethane	1.0	nd		
Trichlorofluoromethane	1.0	nd		
1,1-Dichloroethene	1.0	nd		
Methylene chloride	1.0	nd		
trans-1,2-Dichloroethene	1.0	nd		
1,1-Dichloroethane	1.0	nd		
2,2-Dichloropropane	1.0	nd		
cis-1,2-Dichloroethene	1.0	nd		
Chloroform	1.0	nd		
1,1,1-Trichloroethane	1.0	nd		
Carbon tetrachloride	1.0	nd		
1,1-Dichloropropene	1.0	nd		
Benzene	1.0	nd	93%	8%
1,2-Dichloroethane(EDC)	1.0	nd		
Trichloroethene	1.0	nd	105%	1%
1,2-Dichloropropane	1.0	nd		
Dibromomethane	1.0	nd		
Bromodichloromethane	1.0	nd		
cis-1,3-Dichloropropene	1.0	nd		
Toluene	1.0	nd	93%	2%
trans-1,3-Dichloropropene	1.0	nd		
1,1,2-Trichloroethane	1.0	nd		
Tetrachloroethene	1.0	nd		
1,3-Dichloropropane	1.0	nd		
Dibromochloromethane	1.0	nd		
1,2-Dibromoethane (EDB)*	0.01	nd		
Chlorobenzene	1.0	nd	97%	1%
1,1,1,2-Tetrachloroethane	1.0	nd		
Ethylbenzene	1.0	nd		
Xylenes	1.0	nd		
Styrene	1.0	nd		
Bromoform	1.0	nd		
Isopropylbenzene	1.0	nd		
1,2,3-Trichloropropane	1.0	nd		
Bromobenzene	1.0	nd		

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 Date received: 03/18/04

Analytical Results	8260, µg/L	MSD		RPD
		MTH BLK	GL-3	GL-3
Matrix	Water	Water	Water	Water
Date analyzed	Reporting Limits	03/19/04	03/19/04	03/19/04
1,1,2,2-Tetrachloroethane	1.0	nd		
n-Propylbenzene	1.0	nd		
2-Chlorotoluene	1.0	nd		
4-Chlorotoluene	1.0	nd		
1,3,5-Trimethylbenzene	1.0	nd		
tert-Butylbenzene	1.0	nd		
1,2,4-Trimethylbenzene	1.0	nd		
sec-Butylbenzene	1.0	nd		
1,3-Dichlorobenzene	1.0	nd		
Isopropyltoluene	1.0	nd		
1,4-Dichlorobenzene	1.0	nd		
1,2-Dichlorobenzene	1.0	nd		
n-Butylbenzene	1.0	nd		
1,2-Dibromo-3-Chloropropane	1.0	nd		
1,2,4-Trichlorobenzene	1.0	nd		
Hexachloro-1,3-butadiene	1.0	nd		
Naphthalene	1.0	nd		
1,2,3-Trichlorobenzene	1.0	nd		
*instrument detection limits				
Surrogate recoveries				
Dibromofluoromethane		97%	93%	
Toluene-d8		99%	102%	
1,2-Dichloroethane-d4		87%	89%	
4-Bromofluorobenzene		94%	99%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

Advanced Analytical Laboratory
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AAL Job Number: A40318-1
 Client: G-Logics
 Project Manager: Rob Roberts
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 Client Project Number: na
 Date received: 03/18/04

Analytical Results								Dupl
Metals (7010), mg/l		MTH BLK	LCS	GL-1	GL-2	GL-3	GL-3	
Matrix	Water	Water	Water	Water	Water	Water	Water	
Date extracted	Reporting	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	
Date analyzed	Limits	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	03/19/04	
Arsenic Dissolved (As)	0.005	nd	109%	nd	nd	nd	nd	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

J - estimated value

Acceptable Recovery limits: 70% TO 130%

Acceptable RPD limit: 30%

ADVANCED ANALYTICAL

Chain of Custody Record
A40318-1

2821 152 Avenue NE
REDMOND, WA 98052
Phone: (425) 497-0110 Fax: (425) 497-8086
e-mail: sechamshp@yahoo.com

Page 1 of 1

Client: G-LOGICS

Project Manager: Bob DeBolt

Address:

Phone: (425) 341-6874

Fax:

Date of collection: 3/17/04

Collector: Bob DeBolt

Project Number:

Project Name: FLEISCHMANN'S

Sample ID	Time	Matrix	Container type	Analytes										Notes, comments	# of containers				
				8260 Volatiles	8218 Volatiles	BTEX	BTEX-NWTPH-GX	NWTPH-GX	NWTPH-DX	NWTPH-HClO	8270	8270 PAH	PCB 8082			Pesticides 8031	RCRA 6 Metals	Lead	DIS. TB
1	GL-1	9:30	H2O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Hold A/Som. 2 for now	5
2	GL-2	10:15	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	NOTE: SAMPLES ARE VERY TURBID. LET SETTLE OUT	6
3	GL-3	11:15	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X		6
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: Bob DeBolt	Date/Time: 3/17/04	Received by: J. L. ...	Date/Time: 3/17/04
Relinquished by:	Date/Time:	Received by:	Date/Time:

Sample receipt info: Turnaround time: Same day 24 hr 48 hr Standard

Total # of containers: _____

Condition (temp, °C): _____

Seals (intact?, Y/N): _____

Comments: _____