



ENVIRONMENTAL
PROTECTION
96 AUG -1 PM 2:46

Ms. Juliet Shin
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502-6577

July 30, 1996

RE: Request for Case Closure and Fourth consecutive quarter (3rd Quarter, 1996) groundwater monitoring: 1081-1085 Eastshore Highway (formerly 1077 Eastshore Frontage Road), Albany, CA.

Dear Ms. Shin;

This letter report provides the results of the fourth consecutive quarter (Third Quarter, 1996) sampling of the monitoring wells at 1081-1085 Eastshore Highway (formerly 1077 Eastshore Frontage Road), Albany, California (Figure 1).

Depth to water in each monitoring well was measured to +/- 0.01 feet using a Solinst Model 101 water level meter on July 08, 1996. The depth to water was converted to potentiometric surface elevation by subtracting the measured depths to water from the casing top elevation. This information is presented below.

WELL AND GROUNDWATER ELEVATIONS
JULY 08, 1996

Well Number	Top of Casing Elevation (feet, msl)	Time of Depth measurement	Depth to Water (feet)	Groundwater Surface Elevation (feet, msl)
MW-4	8.58	10:24	6.24	2.34
MW-K	8.43	10:21	5.45	2.98
MW-L	7.64	10:16	5.27	2.37
MW-N	8.96	10:19	5.81	3.15

The groundwater flow direction (more precisely direction of groundwater gradient, since the horizontal hydraulic conductivity anisotropy is unknown) for the triangle with a well at each apex is S 4.5° E at a gradient of 0.0112. Figure 2 is a potentiometric surface map showing well locations and groundwater surface contours as measured on July 08, 1996. Historic water level information follows.

MW-4	10/17/95	09:49	6.57	2.01
	01/11/96	12:46	8.58	2.14
	04/10/96	12:18	5.92	2.66
	07/08/96	10:24	6.24	2.34
MW-K	10/17/95	10:01	5.74	2.69
	01/11/96	12:36	8.43	2.91
	04/10/96	12:09	5.08	3.35
	07/08/96	10:21	5.45	2.98
MW-L	10/17/95	09:53	5.78	1.86
	01/11/96	12:45	7.64	2.59
	04/10/96	12:16	4.92	2.72
	07/08/96	10:16	5.27	2.37
MW-N	10/17/95	09:56	6.02	2.94
	01/11/96	12:41	8.96	3.29
	04/10/96	12:13	5.23	3.73
	07/08/96	10:19	5.81	3.15

GROUNDWATER FLOW DIRECTION AND GRADIENT

10/17/95 S 16.4° W at a gradient of 0.0053
 01/11/96 S 19.1° E at a gradient of 0.0104
 04/10/96 S 5.0° E at a gradient of 0.0113
 07/08/96 S 4.5° E at a gradient of 0.0112

AVERAGE S - 3.0° E at a gradient of 0.007

Following water level measurements the groundwater surface at each monitoring well was checked for free product, observation of sheen, and odor. No free product, sheen, or hydrocarbon odor was noted.

The monitoring wells were purged by pumping with an "ES-60" submersible pump marketed for monitoring well purging by Enviro-Tech Services Co. of Martinez, California. Field measured water quality parameters were measured using a Cambridge Scientific Industries Hydac™ Conductivity Temperature pH Tester. Well purging activities and the field measured water quality parameters are documented in Attachment A. For each well, purging continued until specific conductance stabilized to +/- 5% on consecutive readings.

Groundwater samples were collected directly from the end of the pump discharge tubing with the pump discharging at a rate of less than one liter per minute. Groundwater samples for TPH-D analysis were collected in one liter amber glass bottles. Groundwater samples for TPH-G plus BTEX were collected in 40-mL glass vials with Teflon™ septum lids.

Groundwater sample bottles were labeled and placed in an ice chest with 2 Liter plastic bottles containing ice. Chain-of-Custody forms were filled out and were delivered with the ice chest to Chromalab, Inc. of Pleasanton, California, a state certified laboratory.

Copies of the laboratory report and Chain-of-Custody documentation are contained in Attachment B. On the Chain-of-Custody Chromalab was instructed to perform a "silica gel cleanup" as requested by ACHCSA in the letter dated May 22, 1996.

The current and the previously reported groundwater sample analytical results are summarized below.

All concentrations are expressed in micrograms per liter (µg/L).

Well	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-4						
10/17/95	440*	<50	<0.5	<0.5	<0.5	<0.5
* Superior Analytical reports all compounds from C10-C25 as Diesel.						
01/11/96	<50	<50	<0.5	<0.5	<0.5	<0.5
Chromalab reported 460 µg/L unknown hydrocarbons in the diesel range.						
04/10/96	630	<50	<0.5	<0.5	<0.5	<0.5
Chromalab reported 630 µg/L, but not matching their diesel standard. See also the attached April 4, 1996 letter.						
07/08/96	680 ✓	<50	0.68 ✓	0.67 ✓	0.65 ✓	2.1 ✓
Chromalab reported 680 µg/L in the late Diesel range, but not matching their diesel standard.						
MW-L						
10/17/95	180*	<50	1.3	<0.5	0.6	0.5
* Superior Analytical reports all compounds from C10-C25 as Diesel.						
01/11/96	<50	<50	<0.5	<0.5	<0.5	<0.5
04/10/96	<50	<50	<0.5	<0.5	<0.5	<0.5
07/08/96	150 ✓	<50	<0.5	<0.5	<0.5	0.62 ✓
Chromalab reported 150 µg/L in the late Diesel range, but not matching their diesel standard.						

the current groundwater samples from both monitoring wells MW-L and MW-4 were found not to contain detectable concentrations of gasoline range petroleum hydrocarbons (TPH-Gasoline). Monitoring well MW-L was found not to contain detectable concentrations of Benzene, Toluene, or Ethylbenzene, but did contain 0.62 micrograms per liter

($\mu\text{g/L}$) total Xylene isomers. Monitoring well MW-4 was found to contain 0.68 $\mu\text{g/L}$ Benzene, 0.67 $\mu\text{g/L}$ Toluene, 0.65 $\mu\text{g/L}$ Ethylbenzene, and 2.1 $\mu\text{g/L}$ total Xylene isomers.

Monitoring well MW-4 was found to contain 680 $\mu\text{g/L}$ and MW-L was found to contain 150 $\mu\text{g/L}$ of hydrocarbons in the late Diesel range that do not match the laboratory diesel standard. As detailed in the December 22, 1995 letter these constituents are attributed to hydrocarbons derived from decayed vegetation (primarily cordgrass) as was encountered in the MW-4 monitoring well borehole.

The "silica gel cleanup" requested by the County does not provide evidence to alter the opinion that the reported hydrocarbons are derived from decayed vegetation. The silica gel adsorption method was designed to be used in conjunction with analysis of Total Oil and Grease (i.e., long chain hydrocarbon compounds) by Standard Method 5520 in wastewater streams at concentration ranges much greater than here encountered. In addition, the "silica gel cleanup" may or may not adsorb the lignin derived ester-bound phenolic compounds (principally vanilyl, syringyl, and cinnamyl phenols), C_{16} and C_{18} cutin-derived hydroxy acids, and other compounds and compound categories.

Case closure is requested at this time. A contaminant plume has not been identified as extending downgradient from the former tank locations. There are no further sampling events scheduled at 1081-1085 Eastshore Highway (formerly 1077 Eastshore Frontage Road), Albany, California.

Organic compounds (EPA Method 8015M results) present in trace concentrations (<0.75 ppm) in the shallow groundwater beneath 1081-1085 Eastshore Highway, Albany, California cannot be considered to pose a "potential for future impact to human health or the environment" whether they are derived from the decay of a buried vegetation mat of derived from petroleum products. There is no contact with humans and it is unlikely that there will ever be any. Remember, this is a late 19th to early 20th century landfill. The property is in a saline Bay fringe environment. The shallow groundwater is non-potable, and the water is very, very saline with a specific conductance of 16,000 to 32,000 $\mu\text{S/cm}$. The yields of the monitoring wells are very low ($\ll 1$ GPM). Therefore, the shallow zone is not a potential source of drinking water. Also, please remember that water well seals are required to extend deeper than the bottom of the filled ground in which the monitoring wells are completed (minimum seal depth 20 feet residential, 50 feet commercial/municipal).

Juliet Shin
July 30, 1996
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The currently reported benzene concentration (0.68 $\mu\text{g/L}$) from MW-4 and the 10/17/95 concentration from MW-L (1.3 $\mu\text{g/L}$) are the only non-detect values reported during the preceding year. The single concentration value reported for MW-4 is below both the former action level (0.7 $\mu\text{g/L}$) and the Drinking Water standard (1.0 $\mu\text{g/L}$). The aquifer immediately underlying the Bay Mud beneath the late 19th to early 20th century landfill at 1081-1085 Eastshore Highway is the Merritt/Posey sand. The single benzene concentration reported from each of MW-4 and MW-L are two orders of magnitude lower (1/100th) than benzene concentration found in monitoring wells completed in the upper portion of the Merritt/Posey sand at at least one site being granted closure by ACHCSA and RWQCB.

Please do not hesitate to call me at (510) 373-9211 should you have any questions.

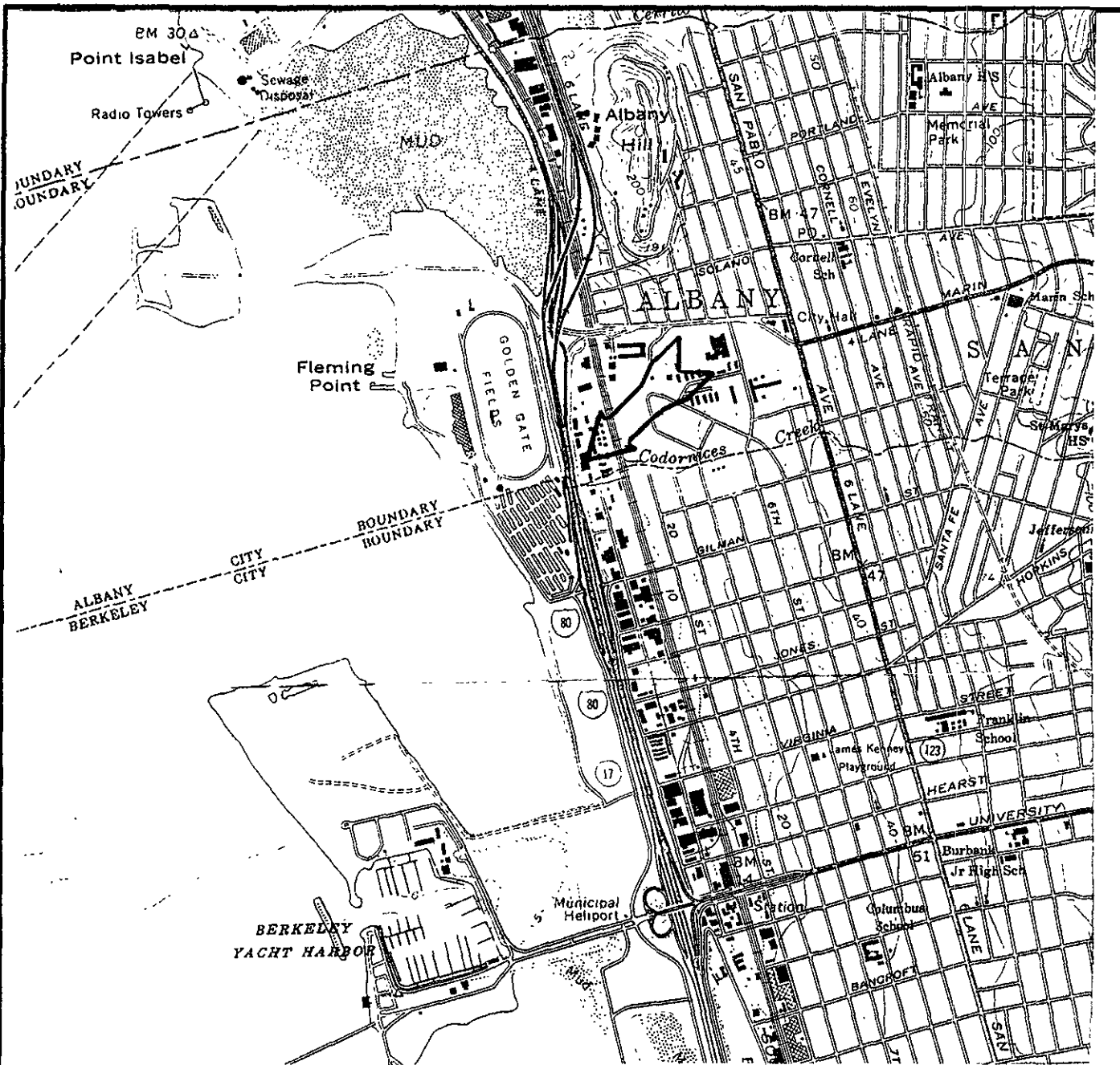
Sincerely,



Gary D. Lowe, R.G., C.E.G., C.H.
Principal, Hydrogeologist
Sole Proprietor



xc: Mr. John Piggott, Wilanco, Inc., P.O. Box 8117, Berkeley, CA,
94563



Base from U.S. Geological Survey Richmond and Oakland West 7.5 Minute Series Topographic Maps

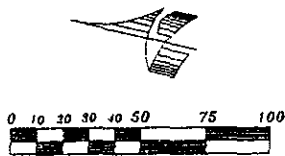


H₂OGEOL
A GROUND WATER CONSULTANCY

SITE LOCATION MAP
1081-1085 EASTSHORE HIGHWAY
ALBANY, CALIFORNIA

FIGURE

1

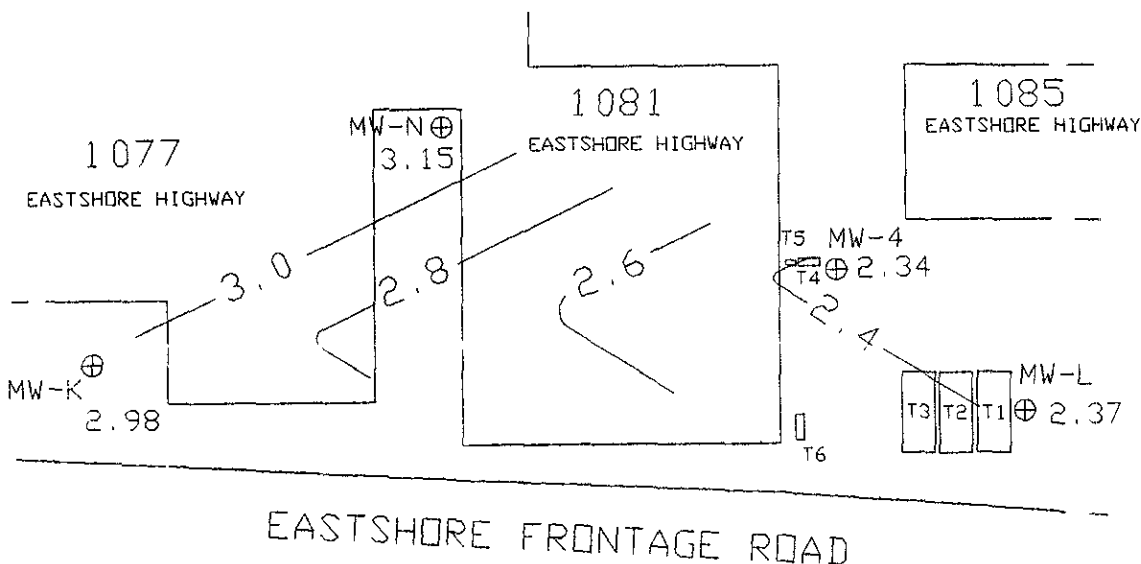


MW-N Monitoring Well name/Number
 ⊕ Monitoring Well Location
 3.15 Groundwater Surface Elevation
 at monitoring well

T1, T2, & T3 Diesel
 T4, T5, & T6 Gasoline

Information From ENSR, June 17, 1993,
 Wilanco Tank Removal Report

2.6 — Potentiometric Surface Contour
 and Contour Elevation



GRADIENT = 0.0112 Feet/Foot

DIRECTION OF GRADIENT = S 4.5° E

(Approximate groundwater flow direction,
 uncorrected for hydraulic conductivity anisotropy).

Tank locations and dimensions are approximate after ENSR, 1993, Figure 1.



POTENTIOMETRIC SURFACE MAP
 JULY 08, 1996
 1077-1085 EASTSHORE HIGHWAY
 ALBANY, CALIFORNIA

FIGURE

2



P.O.Box 2165 ■ Livermore, California 94551 ■ 510-373-9211

ATTACHMENT A

FIELD DATA SHEET
LOG OF WELL SAMPLING ACTIVITIES

LOG OF WELL SAMPLING ACTIVITIES

MW-2?

Well Identification: MW-1 Project Name: 1081-1085 Eastshore Highway, Albany, CA Date: 07/08/96

Sampled by: G. Lowe & R. Vorst Weather Conditions: Cloudy, breeze, 64°F

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 14.20

Measuring Point: Top of PVC Casing Initial Depth to Water: 5.27 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.43 / 4.3 Well Borehole Volume: _____

Purging Method: <u>Centrifugal Pump/Peristaltic Pump</u> <u>Grundfos Submersible Pump</u> <u>Centrifugal Pump/ES-60 Submersible</u> <u>ES-60 Submersible Pump</u>	Sampling Method: <u>Peristaltic Pump</u> <u>Grundfos Submersible Pump</u> <u>ES-60 Sub. Pump <1L/min.</u> X <u>Teflon Bailor</u>
--	--

Purging Rate: See below Total Discharge: 5.4 Casing Volumes Purged: 3.8

Comments: _____

Waste Water Disposal: To property site drum.

Starting Time: 10:54

Time Pump on: 10:56

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (µS/cm)	Color
07/08/96	11:03	4.7 <i>sampled</i>	7.22	66.4 66.4	16,760	x 2	33,520	<i>500</i>
"	11:07	5.0 <i>sampled</i>	7.41	66.6	16,760	x 2	33,520	"
"	11:10	5.2 <i>sampled</i>	7.42	66.4	16,210	x 2	32,420	"
"	11:12	5.4 <i>sampled</i>	7.43	66.5	16,310	x 2	32,620	"
	:					x		
	:					x		
	:					x		
	:					x		
	:					x		
	:					x		
	:					x		

Sample Identification: 1081-85/MW- L Sample Time: 11:20

TURBIDITY ANALYSIS

Finishing Time: _____ Time Analyzed: _____ NTU Value: _____

LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-4 Project Name: 1081-1085 Eastshore Highway, Albany, CA Date: 07/08/96

Sampled by: G. Lowe & R. Vorst Weather Conditions: cloudy, 64°F, breezy

Well Location: _____ Well Casing Diameter: 2-inch Depth of Well Casing: 14.21

Measuring Point: Top of PVC Casing Initial Depth to Water: 6.24 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.3 / 3.8 Well Borehole Volume: _____

Purging Method: Centrifugal Pump/Peristaltic Pump
Grundfos Submersible Pump
Centrifugal Pump/ES-60 Submersible
ES-60 Submersible Pump X

Sampling Method: Peristaltic Pump
Grundfos Submersible Pump
ES-60 Sub. Pump < 1L/min. X
Teflon Bailer

Purging Rate: See below Total Discharge: 5.1 Casing Volumes Purged: 3.9

Comments: _____

Waste Water Disposal: To property site drum.

Starting Time: 10:26

Time Pump on: 10:29

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (µS/cm)	Color
07/08/96	10:32	3.2 / sampled	6.60	69.2	11,000	x 2		510y
"	10:33	3.4 / sampled	6.57	68.4		x	= 17,770	510y
"	10:38	3.5	6.71	68.6		x	= 11,340	"
"	10:39	4.3	6.68	68.9		x	= 11,210	"
"	10:42	4.7	6.73	68.6		x	= 11,410	"
"	10:45	5.1	6.75	68.2		x	= 11,310	"
	:		✓	✓		x	= ✓	
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	

Sample Identification: 1081-85/MW-4 Sample Time: 10:47

TURBIDITY ANALYSIS

Finishing Time: 10:54 Time Analyzed: _____ NTU Value: _____



P.O.Box 2165 ■ Livermore, California 94551 ■ 510-373-9211

ATTACHMENT B

**LABORATORY ANALYTICAL RESULTS
AND CHAIN-OF-CUSTODY DOCUMENTATION**

CHROMALAB, INC.

Environmental Services (SDB)

July 22, 1996

Submission #: 9607576

H20GEOL


Atten: Gary Lowe


Project: WILANCO, INC.
Received: July 8, 1996

re: 2 samples for Gasoline and BTEX compounds analysis.
Method: EPA 5030/8015M/8020

Sampled: July 8, 1996 Matrix: WATER Run#: 2156 Analyzed: July 12, 1996

Spl#	CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	
91124	1081-85/MW-4	N.D.	0.68	0.67	0.65	2.1	✓
91125	1081-85/MW-L	N.D.	N.D.	N.D.	N.D.	0.62	✓
Reporting Limits		50	0.50	0.50	0.50	0.50	
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.	✓
Blank Spike Result (%)		105	114	111	118	112	


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

July 22, 1996

H20GEOL

Atten: Gary Lowe

Project: WILANCO, INC.
Received: July 8, 1996

Submission #: 9607576

revised from report sent
previously.

re: 2 samples for TPH - Diesel analysis.
Method: EPA 3510/8015M

Sampled: July 8, 1996 Matrix: WATER Extracted: July 10, 1996
Run#: 2166 Analyzed: July 12, 1996

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
91125	1081-85/MW-L	150 ✓	50	N.D.	73.5	--

Note: Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard. Silica gel cleanup.

Sampled: July 8, 1996 Matrix: WATER Extracted: July 10, 1996
Run#: 2166 Analyzed: July 12, 1996

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
91124	1081-85/MW-4	680	50	N.D.	73.5	1

Note: Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard. Silica gel cleanup.


Bruce Havlik
Chemist


Alex Tam
Semivolatiles Supervisor

5/16 / 2004. 91125

28656

H₂OGEOL A GROUNDWATER CONSULTANCY
 P.O. BOX 2165
 LIVERMORE, CALIFORNIA 94551-2165

CHAIN OF CUSTODY
 DATE: 07/08/96 PAGE 1 of 1
 Sample Source:
 Wilanco, Inc.
 1081-1085 Eastshore Highway
 Albany, CA

SAMPLER(S): Gary D. Lowe & Richard C. Vorst

SAMPLER'S SIGNATURE: *[Signature]*

SAMPLE RECIEPT:
 TOTAL No. of CONTAINERS _____
 CHAIN OF CUSTODY SEALS _____
 REC'D GOOD CONDITION/COLD _____
 CONFORMS TO RECORD _____

ANALYTE

SUBM #: 9607576 REP: GC
 CLIENT: H2OGEOL
 DUE: 07/22/96
 REF #: 28656

TPH-gasoline (5030/8015M) plus BTEX (EPA 602/8020)	TPH-diesel (EPA 3550/8015M)													NUMBER OF CONTAINERS
---	--------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	----------------------

SAMPLE ID.	DATE	TIME	MATRIX	LAB ID.	TPH-gasoline (5030/8015M) plus BTEX (EPA 602/8020)	TPH-diesel (EPA 3550/8015M)									NUMBER OF CONTAINERS
1081-85/MW-4	07/08/96	10:47	water		X	X									3
1081-85/MW-L	07/08/96	11:20	water		X	X									3

BY REQUEST OF JULIET SHIN OF ACHCSA
 PUT SAMPLE THROUGH A "SILICA GEL CLEANUP" ✓

Please note special pricing
 per Gary Cook
 10-DAY TAT

RELINQUISHED BY: *[Signature]*
 SIGNATURE
 PRINTED NAME Gary D. Lowe
 COMPANY H₂OGEOL
 DATE 07/08/96
 TIME 12:30

RELINQUISHED BY: Laboratory Currier
 SIGNATURE
 PRINTED NAME
 COMPANY
 DATE

RECEIVED BY: Laboratory Currier
 SIGNATURE
 PRINTED NAME
 COMPANY
 DATE

RECEIVED BY LABORATORY:
[Signature]
 SIGNATURE
 PRINTED NAME Chris Rowley
 COMPANY CHROMALAB, INC.
 DATE 07/08/96
 TIME 12:30