

MILLER ENVIRONMENTAL COMPANY

91 MAR -8 AM 10:59

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RICHMOND, CALIFORNIA 94804
(415) 233-9068
FAX (415) 233-0140

Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Attn: Mr. Gil Wistar

Re: California Linen Rental Co., 989 41st Street,
Oakland, CA

Dear Mr. Wistar:

Enclosed are the laboratory results for the fourth quarterly sampling interval for the above-mentioned site. This latest sampling episode concludes the year of quarterly monitoring required by Alameda County Health Care Services Agency (ACHCSA) as stated in their letter dated 06/13/89.

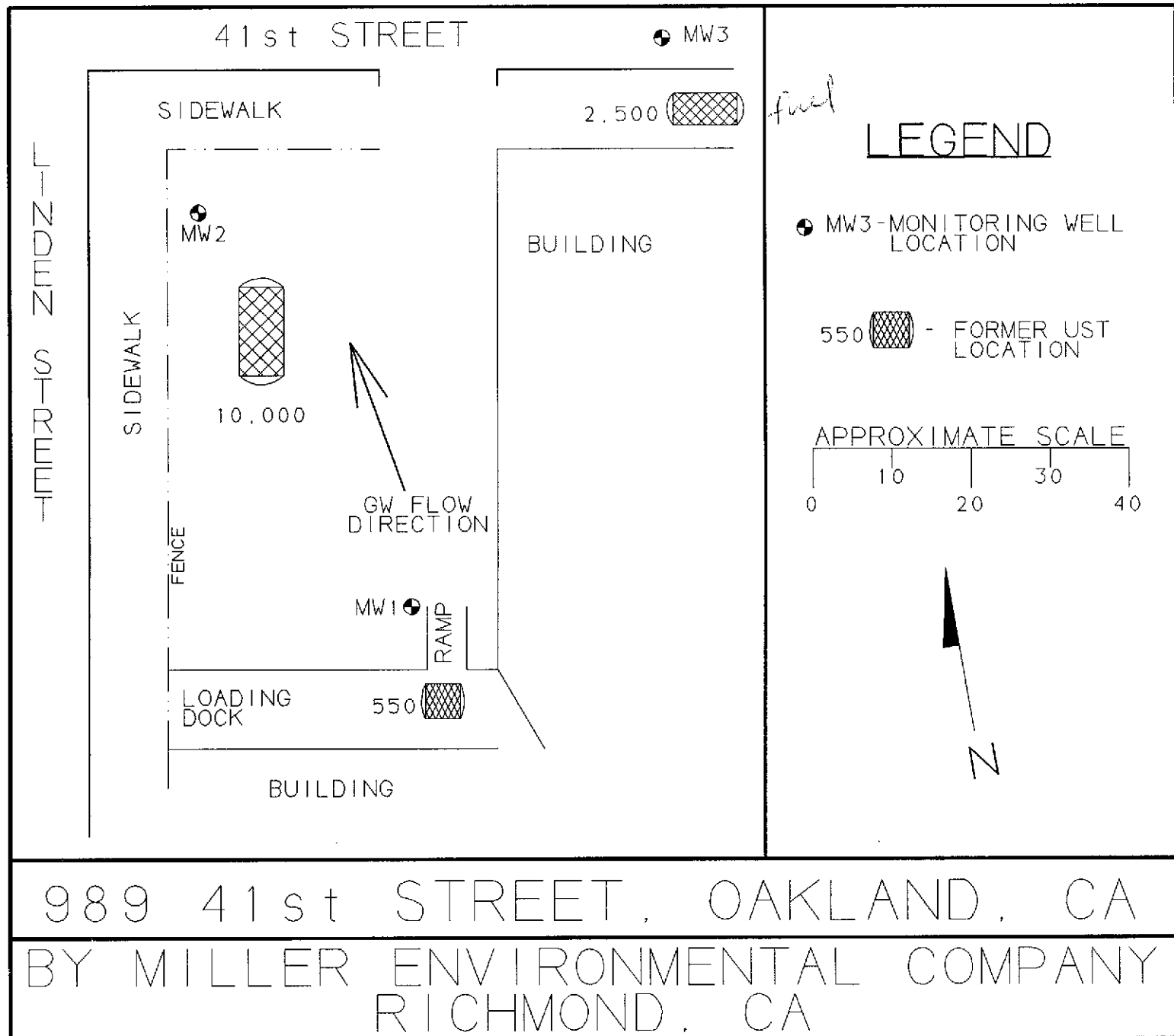
Summary of Activity

On February 8, 1989 the Robert J. Miller Co. removed three underground storage tanks (USTs) from the site: a 10,000 gallon capacity tank which contained regular gasoline, a 2,500 gallon tank which contained #5 fuel oil and a 550 gallon tank which contained unleaded gasoline. Figure 1 shows the locations of the former tanks.

Analytical results from soil and water samples collected after tank removal indicated hydrocarbon contamination above action levels set by the Regional Water Quality Control Board (RWQCB). The discovery of the hydrocarbon contamination warranted a soil and ground water investigation at this site.

California Linen Rental retained Miller Environmental Company (MEC) to perform the subsurface investigation. Three ground water monitoring wells were installed by MEC in October 1989. Ground water monitoring well locations are shown on Figure 1. A report on this subsurface investigation was submitted by MEC on November 3, 1989. After well installation MEC performed 4 quarters of ground water monitoring. The final quarterly monitoring sampling results are included in this report.

FIGURE 1 SITE PLAN - CALIFORNIA LINEN



California Linen - 4th Quarter Results - 03/07/91

Ground Water Monitoring Results

Prior to well sampling, a visual observation for floating product was performed using a clear teflon bailer. No product was observed in any of the monitoring wells. For ease of reference, a summary of laboratory results is presented below in Table 1:

TABLE 1
Summary of Laboratory Results

Well #	Date	TPH gas	TPH dsl	TPH w.o.	B	T	E	X
MW1	10/02/89	70	0.61	ND	2.8	2.4	2.3	4.8
<i>W1</i>	02/20/90	73	2.2	3	7.5	5.9	0.68	5.3
<i>W1</i>	07/25/90	34	ND	1	2.0	0.67	0.12	1.5
<i>W1</i>	10/23/90	50	1.1	ND	3.3	4.0	4.2	4.7
<i>W1</i>	01/28/91							
MW2	10/02/89	ND	ND	ND	ND	ND	ND	ND
	02/20/90	ND	ND	ND	ND	ND	ND	ND
	07/25/90	ND	ND	ND	ND	ND	ND	ND
	10/23/90	ND	ND	ND	ND	ND	ND	ND
	01/28/91	ND	ND	ND	ND	ND	ND	ND
MW3	10/02/89	ND	ND	ND	ND	ND	ND	ND
	02/20/90	ND	ND	ND	ND	ND	ND	ND
	07/25/90	ND	ND	ND	ND	ND	ND	ND
	10/23/90	ND	ND	ND	ND	ND	ND	ND
	01/28/91	ND	ND	ND	ND	ND	ND	ND

a) all results are expressed in milligrams per liter (mg/L) which is equivalent to parts per million (ppm).

Monthly water level readings were taken. Table 2 on page 3 is a summary of ground water elevations.

TABLE 2
Summary of Ground Water Elevations

	MW1	MW2	MW3
10/11/89	46.19	44.81	45.79
11/13/89	45.85	44.91	45.96
12/14/89	45.86	44.97	45.96
2/20/90	46.53	45.35	46.37
3/22/90	46.55	45.17	46.09
4/23/90	45.81	44.99	46.01
7/25/90	45.68	44.88	45.92
8/22/90	46.34	44.51	45.68
9/25/90	46.20	44.53	45.68
10/23/90	45.68	44.64	45.57
01/28/91	45.34	44.46	45.72

a) elevations are given in feet above mean sea level (MSL).

Conclusions

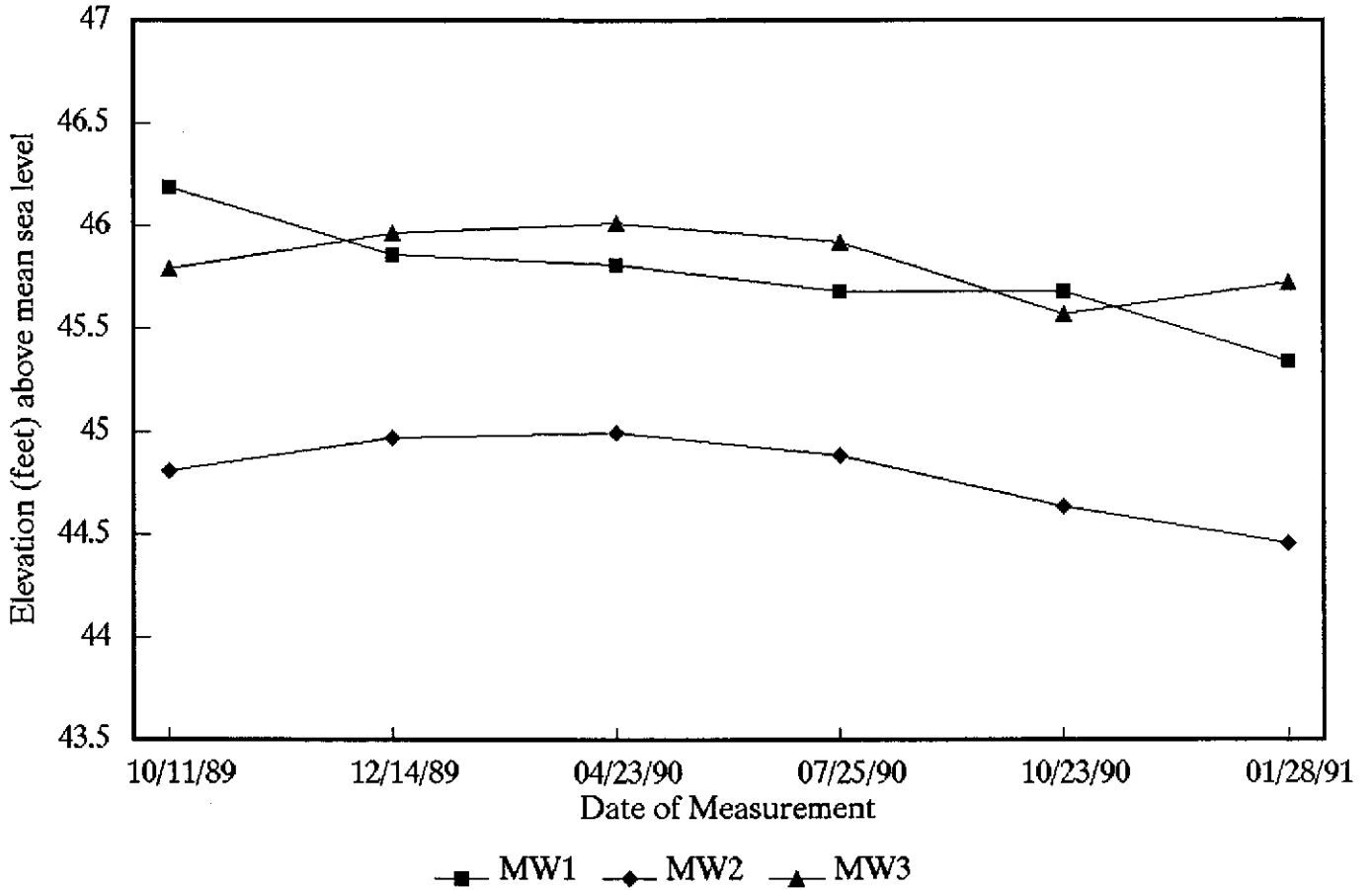
Based on four quarters of ground water sampling of the 3 monitoring wells located on and off-site, it appears that there has not been a hydrocarbon release to the ground water from the former tanks located near MW2 and MW3. No hydrocarbon contamination has been detected in MW2 and MW3 in 5 sampling episodes. Gasoline contamination found in monitoring well MW1 probably originated from the former 550 gallon gasoline UST. The former tank location is now located beneath a building.

Although the Bay Area is experiencing it's 5th consecutive year of drought conditions, ground water depth at this site has not changed significantly over the past year. A graph showing ground water level fluctuations over the past year is presented in Figure 2. Ground water flow direction at this site has not varied significantly from the north-northwest flow stated in the technical report submitted by Miller Environmental Company on 11/3/89. The monitoring wells appear to be properly placed to detect any hydrocarbon release to the ground water originating from the former USTs.

The primary contaminant detected in well MW1 is gasoline. The well is located downgradient from a former tank which stored gasoline. There is no history of diesel fuel being stored in this former UST. MEC believes that the diesel and waste oil contamination found in MW1 may be caused by 1) the overlapping of the chromatograms from the respective laboratory analyses, [diesel and waste oil 'peaks' may be detected due to an elevated gasoline concentration] or 2) the natural degradation of gasoline [aged gasoline has similar characteristics to higher boiling point hydrocarbons].

Figure 2

Ground Water Level Readings



Elevation (feet) Above Mean Sea Level			
Date	MW1	MW2	MW3
10/11/89	46.19	44.81	45.79
12/14/89	45.86	44.97	45.96
04/23/90	45.81	44.99	46.01
07/25/90	45.68	44.88	45.92
10/23/90	45.68	44.64	45.57
01/28/91	45.34	44.46	45.72

California Linen Rental
 989 41st Street
 Oakland, CA

California Linen - 4th Quarter Results - 03/07/91

Recommendations

Due to the fact that the former 550 gallon tank location, upgradient of MW1, is inaccessible due to an overlying building, MEC recommends continued monitoring of MW1 and MW2 on a quarterly basis while allowing natural degradation of the remaining contamination. MW2 is downgradient of MW1 and should be effective in detecting any significant migration of contaminants from the former tank area under the building. However, the laboratory analyses required should be limited to TPH/gasoline and BTEX. MEC also recommends that ground water monitoring well MW3 be properly abandoned, thus ending the encroachment to City of Oakland's Public right-of-way and insurance liability for Cal Linen.

MEC will not begin the recommended work until receipt of a written response from ACHCSA. If you have any questions please do not hesitate to call me.

Sincerely,
MILLER ENVIRONMENTAL COMPANY



Reinhard Ruhmke
Hydrogeologist

Enc: Laboratory results

cc: RWQCB
Joel Pitney - California Linen
file - 90-1031



3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
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Reinhard Ruhmke
Miller Environmental Co.
Environmental Engineering
385 Pittsburg Ave
Richmond, CA 94801

Client Code: MIEC1
Survey # Cal Linen
Project/Release # 10126

Page 1

L A B O R A T O R Y R E S U L T S

Date Collected: 01/28/91
Date Analyzed: 02/04/91

Laboratory Job No.: 910484
Date Received: 01/30/91
Date Reported: 02/13/91

ASSAY:

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

MATRIX: WATER

LABNO	SMPLNO	COMPOUND	FOUND mg/L	DET.LIM. mg/L
3697	MW-1	TRPH	3.0	0.6
3698	MW-2	TRPH	ND	0.6
3699	MW-3	TRPH	ND	0.6
3700	CM	TRPH	ND	0.6
3701	CMS	TRPH	6.5	0.6
3702	CMSD	TRPH	6.0	0.6
3703	MB	TRPH	ND	0.6

NOTE: CMS AND CMSD WERE SPIKED AT 8.3 mg/L.

THIS REPORT HAS BEEN REVIEWED
AND APPROVED FOR RELEASE.

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L A B O R A T O R Y R E S U L T S

Date Collected: 01/28/91
Date Extracted: 02/05/91
Date Analyzed: 02/07/91

Laboratory Job No.: 910484
Date Received: 01/30/91
Date Reported: 02/13/91

ASSAY: TPH/DIESEL (EPA 8015)
MATRIX: WATER

LABNO SMPLNO-ID -----	RESULTS -----	DET.LIM. -----
3697 MW-1 DIESEL	1.7 mg/L	0.05 mg/L
3698 MW-2 DIESEL	ND	0.05 mg/L
3699 MW-3 DIESEL	ND	0.05 mg/L
3700 CM DIESEL	ND	0.05 mg/L
3701 CMS DIESEL	0.68 mg/L	0.05 mg/L
3702 CMSD DIESEL	0.61 mg/L	0.05 mg/L
3703 MB DIESEL	ND	0.05 mg/L

CMS AND CMSD SPIKED AT 0.83 mg/L.



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LABORATORY RESULTS

Date Collected: 01/28/91
Date Extracted: 02/01/91
Date Analyzed: 02/01/91

Laboratory Job No.: 910484
Date Received: 01/30/91
Date Reported: 02/13/91

ASSAY: TPH/GASOLINE (EPA 5030/8015)
MATRIX: LIQUID

LABNO	SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3697	MW-1 GASOLINE	99	10
3698	MW-2 GASOLINE	ND	0.050
3699	MW-3 GASOLINE	ND	0.050
3700	CM GASOLINE	ND	0.050
3701	CMS GASOLINE	0.52	0.050
3702	CMSD GASOLINE	0.47	0.050
3703	MB GASOLINE	ND	0.050

NOTE: CMS AND CMSD WERE SPIKED AT 0.48 mg/L.



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LABORATORY RESULTS

Date Collected: 01/28/91
Date Extracted: 02/01/91
Date Analyzed: 02/01/91

Laboratory Job No.: 910484
Date Received: 01/30/91
Date Reported: 02/13/91

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO	SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
3697	MW-1		
	BENZENE	4.4	0.20
	TOLUENE	7.4	0.20
	ETHYLBENZENE	1.8	0.20
	XYLENES	8.6	0.20
3698	MW-2		
	BENZENE	ND	0.0005 *
	TOLUENE	ND	0.001
	ETHYLBENZENE	ND	0.001
	XYLENES	ND	0.001
3699	MW-3		
	BENZENE	ND	0.0005 *
	TOLUENE	ND	0.001
	ETHYLBENZENE	ND	0.001
	XYLENES	ND	0.001
3700	CM		
	BENZENE	ND	0.001
	TOLUENE	ND	0.001
	ETHYLBENZENE	ND	0.001
	XYLENES	ND	0.001
3701	CMS		
	BENZENE	0.019	0.001
	TOLUENE	0.020	0.001
	ETHYLBENZENE	0.019	0.001
	XYLENES	0.061	0.001



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L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 910484

ASSAY: BTEX (EPA 5030/8020)
MATRIX: LIQUID

LABNO SMPLNO-ID	RESULTS mg/L	DET. LIM. mg/L
-----	-----	-----
3702 CMSD		
BENZENE	0.019	0.001
TOLUENE	0.019	0.001
ETHYLBENZENE	0.019	0.001
XYLENES	0.058	0.001
3703 MB		
BENZENE	ND	0.001
TOLUENE	ND	0.001
ETHYLBENZENE	ND	0.001
XYLENES	ND	0.001

NOTE: CMS AND CMSD WERE SPIKED AT 0.020 mg/L FOR ALL ANALYTES
EXCEPT XYLENES, WHICH WERE SPIKED AT 0.060 mg/L.

NOTE: * BENZENE WAS ANALYZED ON A DIFFERENT GC ON WHICH THE
DETECTION LIMIT IS 0.0005 mg/L.



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QUALITY CONTROL REPORT - UPDATE

For the past few months, ACCULAB Environmental Services' has been reporting the results of Quality Control sample analysis along with your sample results. This has been done to provide you with the means of assessing the quality of the data in our report. In order to improve your ability to make this assessment, we will also be providing the results of the method blank (MB) that was run with your samples.

Method blanks are designed to monitor the level of contamination introduced by reagents, extracting solvents, glassware, etc. They are prepared and processed in exactly the same manner as samples and spikes, except that no standard is spiked into them.

We are also changing the name of the unspiked control matrix sample from Control Matrix Blank (CMB) to Control Matrix (CM) to more accurately describe the nature of the sample.

Due to the nature of the control matrix materials, certain positive values can be expected in the control matrix (CM) results. The tap water we use for liquids may contain trihalomethanes, anions, major cations, and some trace metals. The control matrix we use for solids may also contain anions, major cations and some trace metals. These positive results represent inherent concentrations and in no way reflect upon your sample results, or upon laboratory background levels.

We continue to strive to improve the quality of service to our clients. We welcome any questions or comments you may have about this information, or about ACCULAB in general. Please contact a Project Manager for further information.



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RECEIVED
ACCULAB

SAMPLE CHAIN OF CUSTODY / WORK ORDER

Client's Name Miller Environmental Company 91 JAN 30 AM 8:41 5-233-9068
Address 385 Pittsburg Avenue, Richmond, CA 94801 Phone
City, State, Zip

Client's or Representative's Signature Darwin Reinholdt

(signature authorizes the work and terms listed below)

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pick up samples.

PROJ. NO.	PROJECT NAME						NO. OF CONTAINERS	REMARKS				LAB USE ONLY LAB NO.
10126	Cal Lines	SAMPLERS (Signature) Darwin Reinholdt										
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION							
MW1	1/28	10:44			MW1 MW1	4	Y	X	Y			
MW2		13:12			MW2 MW2						10 days 7x7	
MW3		13:29			MW3 MW3							

Relinquished by: (Signature) <u>Darwin Reinholdt</u>	DATE <u>1/29/11</u>	TIME <u>10:15</u>	Received by: (Signature) <u>[Signature]</u>	General Remarks:
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature)	