

**Quarterly Groundwater Monitoring
for Lead**

April 1993

PG&E
ENCON-GAS Transmission and Distribution
Construction Yard
4930 Coliseum Way
Oakland, California

Prepared by:

The Earth Technology Corporation
formerly Aqua Resources Inc.
2030 Addison Street, Suite 500
Berkeley, CA 94704

Report issued:
May 21, 1993

690262.03

1.0 BACKGROUND

This report presents the results of the quarterly groundwater monitoring performed in April 1993 at the PG&E ENCON-Gas Transmission and Distribution Construction Yard in accordance with the directive issued by the Alameda County Health Care Agency and a PG&E letter to the Alameda County dated April 12, 1993. The yard is located at 4930 Coliseum Way in Oakland, California.

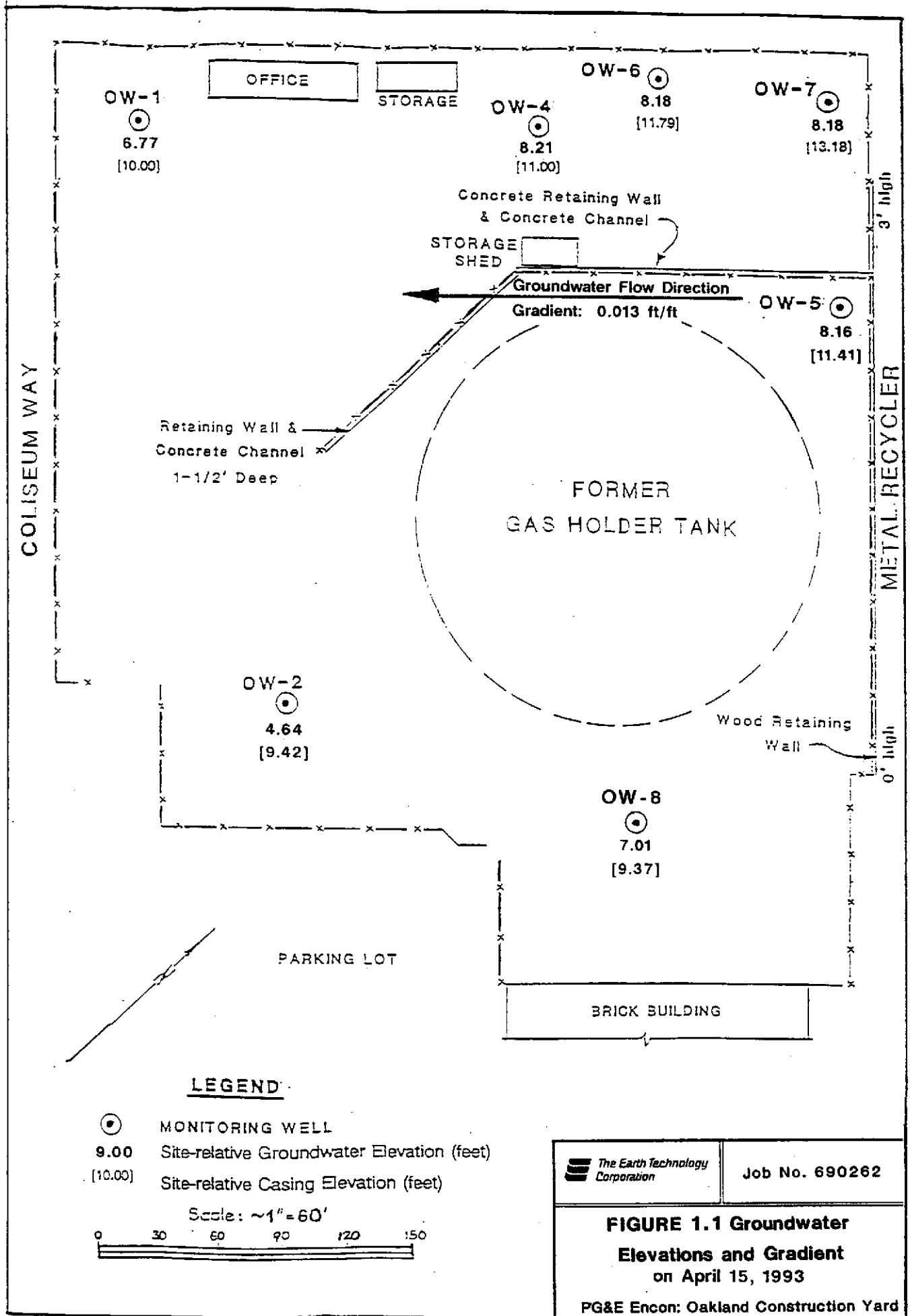
In accordance with PG&E's letter dated April 12, 1993, groundwater samples were collected from three monitoring wells including new well OW-8. This well was installed in February 1993. Before the well was installed, a well construction permit was obtained from Alameda County Flood Control and Water Conservation District - Zone 7. Following construction, Earth Technology submitted the well completion report to Zone 7 showing its depth, screening, seal, etc. This well was developed prior to the collection of the sample. The location of this well was approved by the Alameda County Health Care Agency.

All three wells are located in the area where soil has been contaminated by lead paint chips probably generated from historic maintenance operations involving sandblasting of a large aboveground natural gas storage tank. Reports summarizing activities on a site were previously submitted to the County.

Sampling Activities and Results

Prior to the collection of groundwater samples, water level measurements from each well were collected. The calculated groundwater gradient and flow direction based on the groundwater elevations in wells OW-2, OW-5, and OW-8, is shown on Figure 1.1.

Prior to the collection of samples, three to six casing volumes of groundwater were purged with a bailer from each well. Conductivity, pH and temperature were



OW-1
6.77
[10.00]

OFFICE

STORAGE

OW-4
8.21
[11.00]

OW-6
8.18
[11.79]

OW-7
8.18
[13.18]

Concrete Retaining Wall & Concrete Channel
STORAGE SHED

Groundwater Flow Direction
Gradient: 0.013 ft/ft
OW-5
8.16
[11.41]

COLISEUM WAY

Retaining Wall & Concrete Channel
1-1/2' Deep

FORMER GAS HOLDER TANK

METAL RECYCLER

OW-2
4.64
[9.42]

Wood Retaining Wall

OW-8
7.01
[9.37]

PARKING LOT

BRICK BUILDING

0' high

3' high

The Earth Technology Corporation

Job No. 690262

periodically monitored for stability to ensure that all of the static water from the well was removed. The groundwater sample was then collected.

The groundwater samples collected from each well were analyzed by Curtis & Tompkins, Ltd., Analytical Laboratories, Berkeley, California for Lead (EPA 7421). Certified laboratory results are presented in Appendix A along with the chain-of-custody documentation.

Sampling Results

A lead concentration exceeding the reporting limit of 3 $\mu\text{g/l}$ has been found in the groundwater sample collected from the well OW-8 which was installed in February 1993. The concentration of lead in this sample was 27 $\mu\text{g/l}$. It is below the Maximum Concentration Level (MCL) for drinking water, which is 50 $\mu\text{g/l}$. Wells Ow-2, OW-5, and OW-8 are scheduled to be sampled again for lead during the next quarterly sampling event in July 1993.

APPENDIX

ANALYTICAL LABORATORY REPORTS



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

DATE RECEIVED: 04/15/93
DATE REPORTED: 04/29/93

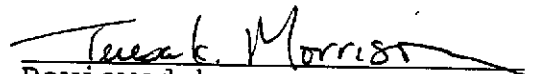
LABORATORY NUMBER: 110647

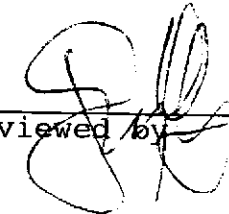
CLIENT: AQUA RESOURCES

PROJECT ID: 690262.03

LOCATION: PG&E OAKLAND

RESULTS: SEE ATTACHED


Reviewed by


Reviewed by

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MAY - 4 1993

Job# _____
File _____

Berkeley

Los Angeles



LABORATORY NUMBER: 110647
CLIENT: AQUA RESOURCES
PROJECT ID: 690262.03
LOCATION: PG&E OAKLAND

DATE SAMPLED: 04/15/93
DATE RECEIVED: 04/15/93
DATE ANALYZED: 04/19/93
DATE REPORTED: 04/29/93

=====
ANALYSIS: LEAD
ANALYSIS METHOD: EPA 7421
=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
110647-1	OW-2	ND	ug/L	3
110647-2	OW-5	ND	ug/L	3
110647-3	OW-8	27	ug/L	3

ND = Not detected at or above reporting limit.

QA/QC SUMMARY:

=====
RPD, % 2
RECOVERY, % 107
=====

Laboratory Curtis & Tompkins

Date _____

Address _____

Page _____ of _____

Method of Shipment: Hand Delivered

Shipment No. 1

Client PG & E Oakland

Project Manager Voytek B.

Address Coliseum

Telephone No. (510) 540-6954

Oakland, CA

Fax No. (510) 540-7496

Project Name / Number 690262.03

Samplers: (Signature) M. Cooney

Contract / Purchase Order / Quote _____

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Filtered / No. of Containers	Analysis Required	Remarks
						Temp.	Chemical			
OW-2		4/15		W	250 mL plastic	±4°C	HNO ₃	1 X		110647 - 1
OW-5		4/15		W	250 mL plastic	±4°C	HNO ₃	1 X		-2
OW-8		4/15		W	250 mL plastic	±4°C	HNO ₃	1 X		-3

Relinquished by:		Date	Received by:		Date	Relinquished by:		Date	Received by:		Date
Signature	<u>M. Cooney</u>	<u>4/15/93</u>	Signature	<u>T. Morrison</u>	_____	Signature	_____	_____	Signature	_____	_____
Printed	<u>M. Cooney</u>		Printed	<u>TERESA MORRISON</u>		Printed	_____		Printed	_____	
Company	<u>TETC</u>		Company	<u>CET</u>		Company	_____		Company	_____	
Reason	<u>Analyses</u>	Time	Reason	_____	Time	Reason	_____	Time	Reason	_____	

Comments:	Relinquished by:	Date	Received by:		Date
_____	Signature	_____	Signature	_____	_____
_____	Printed		Printed	_____	
_____	Company		Company	_____	
_____	Reason	Time	Reason	_____	Time