

**From:** [Detterman, Karel, Env. Health](#)  
**To:** ["Cook Environmental"](#)  
**Cc:** [Roe, Dilan, Env. Health](#)  
**Subject:** RE: Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA  
**Date:** Wednesday, April 16, 2014 1:35:40 PM  
**Attachments:** [RO22 EDF 3-29-2012 GWM.pdf](#)  
[RO22 Table 4 Historical GW Results Pages 27-30 from RFC R 2013-09-26.pdf](#)  
[RO22 Table 2 Historical GW Elevations Pages 21-24 from RFC R 2013-09-26.pdf](#)

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Hello Tim:

Thank you for uploading the attached EDF file for the **March 29, 2012** groundwater sampling event.

As requested in my 4/2/2014 e-mail, please upload the laboratory data for the **May 18, 2012** groundwater monitoring and sampling event included in Table 4, *Historical Groundwater Results*, of the September 9, 2013 *Request for No Further Action* to ACEH's ftp site (as RO22\_ANALYT\_R\_yyyy-dd-mm) and the GEO\_WELL and EDF files for the **May 18, 2012** groundwater monitoring and sampling event to Geotracker.

Additionally, please upload the monitoring well sampling log sheets indicating depth to water measurements for the **May 18, 2012** groundwater monitoring event (missing from the attached Table 2, *Historical Groundwater Elevations*, of the September 9, 2013 *Request for No Further Action* to ACEH's ftp site (RO22\_MISC\_R\_yyyy-mm-dd) and to Geotracker.

Issuance of the RACC is pending until the requested data is uploaded.

Thank you,

Karel Detterman, PG  
Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502  
Direct: 510.567.6708  
Fax: 510.337.9335  
Email: [karel.detterman@acgov.org](mailto:karel.detterman@acgov.org)

PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>

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**From:** Cook Environmental [mailto:[tcook@cookenvironmental.com](mailto:tcook@cookenvironmental.com)]  
**Sent:** Friday, April 11, 2014 12:39 PM  
**To:** Roe, Dilan, Env. Health  
**Cc:** Detterman, Karel, Env. Health  
**Subject:** Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA

Dilan,

Per your request I completed the following activities for the subject site:

1. Uploaded the EDF for the 3/29/12 monitoring event to Geotracker.
2. Topped off the grout in the borehole formerly occupied by MW-4 (see attached photos)

This completes all requested activities for closure of the subject site. Please issue the RACC at your earliest convenience.

Thank you!

**Tim Cook, P.E.**

Cook Environmental Services, Inc.  
(925) 478-8390

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**From:** Roe, Dilan, Env. Health [<mailto:Dilan.Roe@acgov.org>]  
**Sent:** Wednesday, April 02, 2014 12:21 PM  
**To:** Cook Environmental  
**Cc:** Detterman, Karel, Env. Health; Cullen, Pat@Waterboards  
**Subject:** RE: Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA

Thank you Tim. Once we get confirmation on the well abandonment we will issue the RACC.

**Dilan Roe, P.E.**

*Program Manager - Land Use & Local Oversight Program*

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502

510.567.6767; Ext. 36767

QIC: 30440

[dilan.roe@acgov.org](mailto:dilan.roe@acgov.org)

PDF copies of case files can be reviewed/downloaded at:

<http://www.acgov.org/aceh/top/ust.htm>

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**From:** Cook Environmental [<mailto:tcook@cookenvironmental.com>]  
**Sent:** Wednesday, April 02, 2014 12:20 PM  
**To:** Roe, Dilan, Env. Health  
**Subject:** RE: Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA

Hi Dilan,

Thank you for your email and attachments. I have the following responses:

1. I uploaded the EDF to Geotracker for the 3/29/12 monitoring event that was included in the September 9, 2013 Request for No Further Action Report.
2. Apparently the grout in MW-4 settled after abandonment. I will fix this within the next week by bringing the grout to grade level. I will take photos of the boring after adding the grout and email to you.

I appreciate you bringing these issues to my attention.

Regards,

**Tim Cook, P.E.**

Cook Environmental Services, Inc.  
(925) 478-8390

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**From:** Roe, Dilan, Env. Health [<mailto:Dilan.Roe@acgov.org>]  
**Sent:** Wednesday, April 02, 2014 11:58 AM  
**To:** Cook Environmental  
**Cc:** Detterman, Karel, Env. Health; Cullen, Pat@Waterboards  
**Subject:** RE: Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA

Hi Tim:

Prior to Alameda County Environmental Health finalizing the closure on the subject site, please address the following two issues:

- 1) Upload the GEO\_WELL and EDF files to GeoTracker for the data collected during the May 18, 2012 groundwater monitoring event that was included in the September 9, 2013 Request for No Further Action (see Attachment 1)
- 2) The January 15, 2014 Monitoring Well Decommissioning Report states that after the site monitoring wells were overdrilled, the borings were filled with a neat cement grout and the top 6 inches of the boring completed to match the existing surface. Based on observations at the site, the borehole for Monitoring Well MW-4 remains open to a depth of approximately 18 inches (see attached photos). Please provide documentation verifying the well was decommissioned in accordance with the procedures stated in the Monitoring Well Decommissioning Report and the permit requirements.

Alameda County Environmental Health looks forward to receiving documentation addressing these items so that we can issue the Remedial Action Completion Certificate for the site.

**Dilan Roe, P.E.**

*Program Manager - Land Use & Local Oversight Program*

Alameda County Environmental Health

1131 Harbor Bay Parkway

Alameda, CA 94502

510.567.6767; Ext. 36767

QIC: 30440

[dilan.roe@acgov.org](mailto:dilan.roe@acgov.org)

PDF copies of case files can be reviewed/downloaded at:

<http://www.acgov.org/aceh/top/ust.htm>

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**From:** Cook Environmental [<mailto:tcCook@cookenvironmental.com>]  
**Sent:** Tuesday, April 01, 2014 4:55 PM  
**To:** Detterman, Karel, Env. Health  
**Subject:** RE: Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA

Hi Karel,

Yes, there was data included in the Request for NFA report from 5/18/12 but there was no quarterly monitoring report prepared. The reason for this is that the UST Cleanup Fund's 5 yr review unit determined that site should be closed in a summary dated July 5, 2011. The USTCF stated that the site had been transferred to Site Closeout and that no additional funding would be approved for groundwater monitoring. They did pay for the collection and analysis of the May 2012 samples on a one time basis but stated that future cost that are not directly related to site closure and well abandonment would be ineligible for reimbursement. Thus no quarterly monitoring report was prepared. Since we had the data, we put it in the Request for NFA. I have attached the notification from the USTCF.

Regards,

**Tim Cook, P.E.**

Cook Environmental Services, Inc.  
(925) 478-8390

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**From:** Detterman, Karel, Env. Health [<mailto:Karel.Detterman@acgov.org>]  
**Sent:** Tuesday, April 01, 2014 3:11 PM  
**To:** 'Cook Environmental'  
**Cc:** Roe, Dilan, Env. Health  
**Subject:** Fuel Leak Case No. RO0000022 and GeoTracker Global ID T0600102128, Alaska Gas, 1310 Central Ave., Alameda, CA

Hello Tim:

The analytical results for the May 18, 2012 groundwater results are summarized in tables included in the September 26, 2013 *Request for No Further Action*, but I was not able to locate the groundwater monitoring report for the May 18, 2012 event either on Alameda County's ftp site or on Geotracker.

**TECHNICAL REPORT REQUEST**

Please upload technical report to the ACEH ftp site (Attention: Karel Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention and schedule:

- **April 11, 2014** – groundwater monitoring report  
Files to be named: RO22\_GWM\_R\_yyyy-mm-dd

This report is being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Thank you,

Karel Detterman, PG  
Hazardous Materials Specialist  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502  
Direct: 510.567.6708  
Fax: 510.337.9335  
Email: [karel.detterman@acgov.org](mailto:karel.detterman@acgov.org)

PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>

## Regulators Page

# Electronic Submittal Information

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**ALASKA GASOLINE**

1310 CENTRAL  
Alameda, CA 94501  
*OPEN - ELIGIBLE FOR CLOSURE*  
[\(Show this Site on Map\)](#)

**Regional Board - Case #: 01-2313**  
SAN FRANCISCO BAY RWQCB (REGION 2) - (CCM)  
**Local Agency (lead agency) - Case #: RO0000022**  
ALAMEDA COUNTY LOP - (KLD)

**EDF Data Report**

**Report Title: "Request for No Further Action Report"**

**Analysis performed by *McC Campbell Analytical, Pittsburg, CA***

**Sample taken by *Cook Environmental Services, Inc., Walnut Creek, CA***

**EDF Submitted: 4/2/2014 12:13:08 PM**

**# of Field Points Sampled: 5**

(All Data | [Client Data](#) | [Detections](#))

<a href="#">Analysis Date</a>	<a href="#">Matrix</a>	<a href="#">Field Pt. Name</a>	<a href="#">QCCode</a>	<a href="#">Method</a>	<a href="#">Parameter</a>	<a href="#">Qualifier</a>	<a href="#">Value</a>	<a href="#">RL</a>	<a href="#">MDL</a>	<a href="#">UNITS</a>	<a href="#">RL Note</a>
3/30/2012	WG	MW-5	Client Sample	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	96	0		PERCENT	
3/30/2012	WG	MW-2	Client Sample	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	101	0		PERCENT	
3/30/2012	WG	MW-4	Client Sample	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	97	0		PERCENT	
4/2/2012	WG	MW-4	Client Sample	SW8021F	a,a,a-Trifluorotoluene	SU	103	0		PERCENT	
4/2/2012	WG	MW-5	Client Sample	SW8021F	a,a,a-Trifluorotoluene	SU	122	0		PERCENT	
4/2/2012	WG	MW-3	Client Sample	SW8021F	a,a,a-Trifluorotoluene	SU	120	0		PERCENT	
4/2/2012	WG	MW-2	Client Sample	SW8021F	a,a,a-Trifluorotoluene	SU	108	0		PERCENT	
4/3/2012	WG	MW-1	Client Sample	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	97	0		PERCENT	
4/3/2012	WG	MW-3	Client Sample	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	101	0		PERCENT	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	a,a,a-Trifluorotoluene	SU	103	0		PERCENT	
4/2/2012	WQ	Lab Blank #1		SW8021F	a,a,a-Trifluorotoluene	SU	99	0		PERCENT	
4/2/2012	WQ	Non-Client Sample		SW8021F	a,a,a-Trifluorotoluene	SU	106	0		PERCENT	
4/2/2012	WQ	Non-Client Sample		SW8021F	a,a,a-Trifluorotoluene	SU	97	0		PERCENT	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	a,a,a-Trifluorotoluene	SU	101	0		PERCENT	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	a,a,a-Trifluorotoluene	SU	101	0		PERCENT	
4/2/2012	WQ	Blank Spike #1		SW8021F	a,a,a-Trifluorotoluene	SU	104	0		PERCENT	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	a,a,a-Trifluorotoluene	SU	102	0		PERCENT	
4/2/2012	WQ	Blank Spike #1		SW8021F	a,a,a-Trifluorotoluene	SU	101	0		PERCENT	
4/2/2012	WQ	Lab Blank #1		SW8021F	a,a,a-Trifluorotoluene	SU	106	0		PERCENT	
4/2/2012	WQ	Blank Spike #1		SW8021F	Benzene	=	11	0.5	0.07	UG/L	
4/2/2012	WQ	Non-Client Sample		SW8021F	Benzene	ND	0	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	Benzene	=	9.4	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Blank #1		SW8021F	Benzene	ND	0	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	Benzene	=	10	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	Benzene	=	9.5	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Blank #1		SW8021F	Benzene	ND	0	0.5	0.07	UG/L	
4/2/2012	WQ	Non-Client Sample		SW8021F	Benzene	ND	0	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	Benzene	=	11	0.5	0.07	UG/L	
4/2/2012	WQ	Blank Spike #1		SW8021F	Benzene	=	11	0.5	0.07	UG/L	
4/2/2012	WQ	Non-Client Sample		SW8021F	Toluene	ND	0	0.5	0.14	UG/L	
4/2/2012	WQ	Lab Blank #1		SW8021F	Toluene	ND	0	0.5	0.14	UG/L	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	Toluene	=	9.4	0.5	0.14	UG/L	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	Toluene	=	9.5	0.5	0.14	UG/L	
4/2/2012	WQ	Blank Spike #1		SW8021F	Toluene	=	10	0.5	0.14	UG/L	
4/2/2012	WQ	Lab Blank #1		SW8021F	Toluene	ND	0	0.5	0.14	UG/L	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	Toluene	=	9.5	0.5	0.14	UG/L	
4/2/2012	WQ	Blank Spike #1		SW8021F	Toluene	=	10	0.5	0.14	UG/L	
4/2/2012	WQ	Non-Client Sample		SW8021F	Toluene	ND	0	0.5	0.14	UG/L	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	Toluene	=	9.2	0.5	0.14	UG/L	
4/2/2012	WQ	Non-Client Sample		SW8021F	Ethylbenzene	ND	0	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	Ethylbenzene	=	9.2	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike #1		SW8021F	Ethylbenzene	=	9.2	0.5	0.07	UG/L	
4/2/2012	WQ	Non-Client Sample		SW8021F	Ethylbenzene	ND	0	0.5	0.07	UG/L	
4/2/2012	WQ	Lab Matrix Spike Duplicate #1		SW8021F	Ethylbenzene	=	9.2	0.5	0.07	UG/L	
4/2/2012	WQ	Blank Spike #1		SW8021F	Ethylbenzene	=	10	0.5	0.07	UG/L	

4/2/2012	WQ	Blank Spike #1	SW8021F	Ethylbenzene	=	10	0.5	0.07	UG/L
4/2/2012	WQ	Lab Matrix Spike #1	SW8021F	Ethylbenzene	=	9.4	0.5	0.07	UG/L
4/2/2012	WQ	Lab Blank #1	SW8021F	Ethylbenzene	ND	0	0.5	0.07	UG/L
4/2/2012	WQ	Lab Blank #1	SW8021F	Ethylbenzene	ND	0	0.5	0.07	UG/L
4/2/2012	WQ	Lab Blank #1	SW8021F	Methyl-tert-butyl ether (MTBE)	ND	0	5	0.36	UG/L
4/2/2012	WQ	Blank Spike #1	SW8021F	Methyl-tert-butyl ether (MTBE)	=	11	5	0.36	UG/L
4/2/2012	WQ	Lab Matrix Spike Duplicate #1	SW8021F	Methyl-tert-butyl ether (MTBE)	=	11	5	0.36	UG/L
4/2/2012	WQ	Blank Spike #1	SW8021F	Methyl-tert-butyl ether (MTBE)	=	11	5	0.36	UG/L
4/2/2012	WQ	Lab Matrix Spike Duplicate #1	SW8021F	Methyl-tert-butyl ether (MTBE)	=	10	5	0.36	UG/L
4/2/2012	WQ	Lab Blank #1	SW8021F	Methyl-tert-butyl ether (MTBE)	ND	0	5	0.36	UG/L
4/2/2012	WQ	Lab Matrix Spike #1	SW8021F	Methyl-tert-butyl ether (MTBE)	=	9.9	5	0.36	UG/L
4/2/2012	WQ	Non-Client Sample	SW8021F	Methyl-tert-butyl ether (MTBE)	ND	0	5	0.36	UG/L
4/2/2012	WQ	Non-Client Sample	SW8021F	Methyl-tert-butyl ether (MTBE)	ND	0	5	0.36	UG/L
4/2/2012	WQ	Lab Matrix Spike #1	SW8021F	Methyl-tert-butyl ether (MTBE)	=	11	5	0.36	UG/L
4/2/2012	WQ	Blank Spike #1	SW8021F	Xylenes	=	35	0.5	0.14	UG/L
4/2/2012	WQ	Blank Spike #1	SW8021F	Xylenes	=	31	0.5	0.14	UG/L
4/2/2012	WQ	Lab Matrix Spike Duplicate #1	SW8021F	Xylenes	=	29	0.5	0.14	UG/L
4/2/2012	WQ	Non-Client Sample	SW8021F	Xylenes	ND	0	0.5	0.14	UG/L
4/2/2012	WQ	Lab Matrix Spike #1	SW8021F	Xylenes	=	28	0.5	0.14	UG/L
4/2/2012	WQ	Lab Matrix Spike Duplicate #1	SW8021F	Xylenes	=	31	0.5	0.14	UG/L
4/2/2012	WQ	Lab Blank #1	SW8021F	Xylenes	ND	0	0.5	0.14	UG/L
4/2/2012	WQ	Non-Client Sample	SW8021F	Xylenes	ND	0	0.5	0.14	UG/L
4/2/2012	WQ	Lab Blank #1	SW8021F	Xylenes	ND	0	0.5	0.14	UG/L
4/2/2012	WQ	Lab Matrix Spike #1	SW8021F	Xylenes	=	32	0.5	0.14	UG/L
4/5/2012	WQ	Blank Spike #1	SW8015B	Diesel Range Organics (C10-C23)	=	950	50	20	UG/L
4/5/2012	WQ	Lab Blank #1	SW8015B	Diesel Range Organics (C10-C23)	ND	0	50	20	UG/L
4/5/2012	WQ	Blank Spike #1	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	106	0		PERCENT
4/5/2012	WQ	Lab Blank #1	SW8015B	McC Campbell's proprietary surrogate #1 for TPHD	SU	95	0		PERCENT

**Table 2. Historical Groundwater Elevations  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-1	11/06/99	26.85	5.16	21.69
	05/16/00		3.24	23.61
	08/03/00		4.15	22.70
	12/05/00		4.90	21.95
	03/05/01		3.04	23.81
	06/04/01		4.01	22.84
	06/05/02		3.73	23.12
	09/09/02		5.06	21.79
	12/19/02		4.09	22.76
	03/10/03		3.50	23.35
	06/03/03		3.66	23.19
	09/19/03		4.91	21.94
	12/22/03		4.30	22.55
	03/12/04		2.93	23.92
	06/11/04		4.23	22.62
	09/13/04		5.02	21.83
	12/16/04		3.76	23.09
	03/21/05		2.81	24.04
	06/23/05		3.66	23.19
	09/30/05		4.55	22.30
	12/08/05		4.21	22.64
	03/01/06		2.90	23.95
	05/25/06	29.18	2.84	26.34
	08/10/06		4.35	24.83
	11/21/06		4.22	24.96
	02/06/07		4.39	24.79
	05/08/07		3.88	25.30
	08/06/07		5.02	24.16
	12/26/07		4.87	24.31
	06/28/08		4.77	24.41
	09/27/08		6.29	22.89
	12/30/08		6.04	23.14
	03/28/09		3.78	25.40
09/12/09		6.59	22.59	
03/30/10		3.52	25.66	
09/30/10		5.61	23.57	
01/20/11		3.61	25.57	
12/15/11		5.12	24.06	
03/29/12			3.80	25.38

**Table 2. Historical Groundwater Elevations  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-2	11/06/99	27.18	5.56	21.62
	05/16/00		3.54	23.64
	08/03/00		4.44	22.74
	12/05/00		5.24	21.94
	03/05/01		3.28	23.90
	06/04/01		4.33	22.85
	06/05/02		3.98	23.20
	09/09/02		5.34	21.84
	12/19/02		4.33	22.85
	03/10/03		3.58	23.60
	06/03/03		3.87	23.31
	09/19/03		5.24	21.94
	12/22/03		4.47	22.71
	03/12/04		3.40	23.78
	06/11/04		4.51	22.67
	09/13/04		5.35	21.83
	12/16/04		4.09	23.09
	03/21/05		3.01	24.17
	06/23/05		3.91	23.27
	09/30/05		4.86	22.32
	12/08/05		4.49	22.69
	03/01/06		3.09	24.09
	05/25/06	29.55	3.16	26.39
	08/10/06		4.98	24.57
	11/21/06		4.81	24.74
	02/06/07		4.37	25.18
	05/08/07		4.12	25.43
	08/06/07		5.36	24.19
	12/26/07		5.03	24.52
	06/28/08		5.06	24.49
	09/27/08		6.64	22.91
	12/30/08		6.28	23.27
	03/28/09		4.03	25.52
09/12/09		6.24	23.31	
03/30/10		3.80	25.75	
09/30/10		6.00	23.55	
01/20/11		4.17	25.38	
12/15/11		5.46	24.09	
03/29/12		4.00	25.55	

**Table 2. Historical Groundwater Elevations  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-3	11/06/99	25.3	4.02	21.28
	05/16/00		2.06	23.24
	08/03/00		3.20	22.10
	12/05/00		3.71	21.59
	03/05/01		1.90	23.40
	06/04/01		2.72	22.58
	06/05/02		2.75	22.55
	09/09/02		3.88	21.42
	12/19/02		2.79	22.51
	03/10/03		2.36	22.94
	06/03/03		2.65	22.65
	09/19/03		3.15	22.15
	12/22/03		2.83	22.47
	03/12/04		2.00	23.30
	06/11/04		3.11	22.19
	09/13/04		3.90	21.40
	12/16/04		2.89	22.41
	03/21/05		1.93	23.37
	06/23/05		2.69	22.61
	09/30/05		4.54	20.76
	12/08/05		3.05	22.25
	03/01/06		1.95	23.35
	05/25/06	27.74	2.11	25.63
	08/10/06		3.25	24.49
	11/21/06		3.35	24.39
	02/06/07		3.34	24.40
	05/08/07		3.53	24.21
	08/06/07		3.91	23.83
	12/26/07		3.57	24.17
	06/28/08		3.66	24.08
	09/27/08		4.98	22.76
	12/30/08		4.63	23.11
	03/28/09		2.73	25.01
	09/12/09		4.80	22.94
03/30/10		2.62	25.12	
09/30/10		4.38	23.36	
01/20/11		2.58	25.16	
12/15/11		3.93	23.81	
03/29/12		2.35	25.39	

**Table 2. Historical Groundwater Elevations  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation
MW-4	05/25/06	26.23	2.54	23.69
	08/10/06		4.65	21.58
	11/21/06		4.63	21.60
	02/06/07		3.87	22.36
	05/08/07		4.21	22.02
	08/06/07		4.54	21.69
	12/26/07		2.90	23.33
	06/28/08		3.02	23.21
	09/27/08		4.78	21.45
	12/30/08		3.91	22.32
	03/28/09		2.50	23.73
	09/12/09		4.93	21.30
	03/30/10		3.43	22.80
	09/30/10		3.79	22.44
	01/20/11		2.19	24.04
12/15/11		3.64	22.59	
03/29/12		2.35	23.88	
MW-5	05/25/06	26.78	2.60	24.18
	08/10/06		3.40	23.38
	11/21/06		3.27	23.51
	02/06/07		3.10	23.68
	05/08/07		3.00	23.78
	08/06/07		3.79	22.99
	12/26/07		3.38	23.40
	06/28/08		3.70	23.08
	09/27/08		4.65	22.13
	12/30/08		4.04	22.74
	03/28/09		2.85	23.93
	09/12/09		4.48	22.30
	03/30/10		2.80	23.98
	09/30/10		4.11	22.67
	01/20/11		2.69	24.09
12/15/11		3.67	23.11	
03/29/12		2.49	24.29	

Notes: All measurements are in feet. DTW = Depth to water below top of PVC casing.  
 TOC = Top of casing. ELEV = Elevation above mean sea level.  
 Wells resurveyed on April 27, 2006

**Table 4. Historical Groundwater Analytical Results  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	TPH-g	TPH-d	benzen e	toluen e	ethyl- benzen e	xylene s	MtBE	tAME	tBA	Other Oxygenat es
MW-1	11/06/99	5,700	8,700	170	59	22	85	20,000	NA	NA	NA
	05/16/00	20,000	<7,500	38	6.3	740	1,600	<5.0	<5.0	<50	<5.0
	08/03/00	20,000	<6,000	56	9.7	920	1,600	<0.5	<0.5	<50	<0.5
	12/05/00	31,000	<4,000	64	27	820	2,200	<10	<5.0	<50	<5.0
	03/05/01	20,000	<4,000	19	<5.0	480	870	<5	<5.0	<50	<5.0
	06/04/01	23,000	<7,000	58	50	710	2,100	5.1	<5.0	<50	<5.0
	06/05/02	7,400	<1,500	9.3	6.7	180	230	<1.0	<1.0	<10	<1.0
	09/09/02	8,300	<3500	32	20	390	670	<2.0	<2.0	<20	<2.0
	12/19/02	5,100	NS	7.9	2.5	56	93	<1.0	<1.0	<10	<1.0
	03/10/03	2,000	<2,000	3.4	2.9	80	98	<0.5	<0.5	<5.0	<0.5
	06/03/03	7,300	<4,000	6.8	9.9	300	1,000	2.3	<0.5	<5.0	<0.5
	09/19/03	9,000	<3,000	26	22	420	1,200	4.5	<1.5	<20	<1.5
	12/22/03	4,300	<2,000	12	6.7	200	290	9.1	<1.0	<10	<1.0
	03/12/04	7,000	<3,000	8.3	8.2	250	760	3.9	<2.0	<20	<2.0
	06/11/04	13,000	<4,000	26	27	530	1,700	<2.5	<2.5	<15	<2.5
	09/13/04	17,000	<4,000	37	42	840	2,000	<5.0	<5.0	<50	<5.0
	12/16/04	1,800	<1,000	5.9	1.9	100	35	16	<0.5	<5.0	<0.5
	03/21/05	7,500	<3,000	3.4	4.2	290	760	<1.5	<1.5	<20	<1.5
	06/23/05	11,000	<8,000	15	11	370	910	2.4	<1.5	<7.0	<1.5
	09/30/05	9,800	<4,000	32	25	540	680	1.6	<1.5	<7.0	<1.5
	12/08/05	9,200	<4,000	27	21	500	490	2.2	<1.5	<7.0	<1.5
	03/01/06	6,500	<4,000	8.1	9.4	370	660	18	<1.5	<6.0	<1.5
	05/25/06	10,000	<3,000	19	14	900	620	<1.5	<1.5	<7.0	<1.5
	08/10/06	9,800	<1,500	16	8.1	640	180	<1.5	<1.5	<7.0	<1.5
	11/21/06	2,900	<1,000	7.8	2.5	160	12	2.5	2.5	<5.0	<0.5
	02/06/07	4,600	<1,500	9.4	6	380	220	1	<0.50	<5.0	<0.50
	05/08/07	3,700	<800	10	4.6	320	86	1.5	<0.50	<5.0	<0.50
	08/06/07	8,200	<2,000	14	8.8	730	180	<0.50	<0.50	<5.0	<0.50
	12/26/07	1,200	<300	2.3	1.1	89	21	4.8	<0.50	<5.0	<0.50
	03/31/08	2,000	<800	2.2	1.6	99	75	1.8	<0.50	<5.0	<0.50
	06/28/08	8,400	3900*	18	26	670	1,100	<2.5	<2.5	<10	<2.5
	09/27/08	12,000	4600*	32	49	1,200	680	<25	<25	<100	<25
12/30/08	5,300	3,700	12	31	300	27	7.1	<5.0	<20	<5.0	
03/28/09	1,900	920*	<1.7	<1.7	77	58	22	<1.7	<6.7	<1.7	
09/12/09	7,800	9,400	34	110	690	200	3.0	<0.5	140	<0.5	
03/30/10	1,700	700*	2.1	14	40	9.5	14	<0.5	7.8	<0.5	
09/30/10	2,300	6,500*	8.5	23	150	29	4	<0.5	2.2	<0.5	
01/20/11	1,100	590	0.85	6.6	34	42	7.7	<0.5	<2.0	<0.5	
12/15/11	3,000	1,700	12	16	230	120	<50	NA	NA	NA	
03/29/12	1,500	1,300	2.5	17	20	17	<10	NA	NA	NA	
05/18/12	2,700	1,500	2.2	18	41	41	ND	NA	NA	NA	

**Table 4. Historical Groundwater Analytical Results  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	TPH-g	TPH-d	benzene	toluene	ethyl-benzene	xylenes	MtBE	tAME	tBA	Other Oxygenates
MW-2	11/06/99	<b>6,000</b>	70	<b>1,300</b>	92	50	400	<b>6,800</b>	NA	NA	NA
	05/16/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/03/00	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	12/05/00	<50	<b>1,400</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	03/05/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	06/04/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	06/05/02	<50	<b>2,300</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	09/09/02	<50	<b>1,300</b>	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<5.0	<0.5
	12/19/02	<50	--	<0.5	<0.5	<0.5	<0.5	<b>16</b>	<0.5	<5.0	<0.5
	03/10/03	<50	<b>3,000</b>	<0.5	<0.5	<0.5	<0.5	1	<0.5	<5.0	<0.5
	06/03/03	<50	<b>700</b>	<0.5	<0.5	<0.5	<0.5	2	<0.5	<5.0	<0.5
	09/19/03	<50	<b>1,400</b>	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<5.0	<0.5
	12/22/03	<50	<b>1,000</b>	<0.5	<0.5	<0.5	<0.5	<b>39</b>	<0.5	<5.0	<0.5
	03/12/04	<50	<b>250</b>	<0.5	<0.5	<0.5	<0.5	2.1	<0.5	<5.0	<0.5
	06/11/04	<50	<b>920</b>	<0.5	<0.5	<0.5	<0.5	0.75	<0.5	<5.0	<0.5
	09/13/04	<50	<b>140</b>	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<5.0	<0.5
	12/16/04	<50	<b>150</b>	<0.5	<0.5	<0.5	<0.5	<b>12</b>	<0.5	<5.0	<0.5
	03/21/05	<50	<b>130</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	06/23/05	<50	<b>1,100</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	09/30/05	<50	<b>300</b>	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<5.0	<0.5
	12/08/05	<50	<b>600</b>	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<5.0	<0.5
	03/01/06	<50	<b>920</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	05/25/06	<50	<b>160</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/10/06	<50	<b>870</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	11/21/06	<50	<b>130</b>	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<5.0	<0.5
	02/06/07	<50	<b>450</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	05/08/07	<50	<b>160</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/06/07	<50	<b>180</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	12/26/07	<50	<b>190</b>	<0.5	<0.5	<0.5	<0.5	2.9	<0.5	<5.0	<0.5
	03/31/08	Inaccessible Not Sampled									
06/28/08	<50	<b>180</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<2.0
09/27/08	<50	78	<0.5	<0.5	<0.5	<0.5	<0.5	<b>7</b>	<0.5	<2.0	<0.5
12/30/08	<50	<b>100</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<b>13</b>	<0.5	<0.5	<0.5
03/28/09	<50	60	<0.5	<0.5	<0.5	<0.5	<0.5	<b>5.4</b>	<0.5	<0.5	<0.5
09/12/09	<50	91	<0.5	<0.5	<0.5	<0.5	<0.5	4.7	<0.5	<2.0	<0.5
03/30/10	<50	<b>150</b>	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<2.0	<0.5
09/30/10	<50	<b>310</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5
01/20/11	<50	90	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<2.0	<0.5
12/15/11	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA
03/29/12	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA
05/18/12	<50	94	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA

**Table 4. Historical Groundwater Analytical Results  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	TPH-g	TPH-d	benzen e	toluen e	ethyl- benzen e	xylene s	MtBE	tAME	tBA	Other Oxygenat es
MW-3	11/06/99	43,000	870	860	70	<0.5	65	120,000	NA	NA	NA
	05/16/00	17,000	<5,000	2,800	60	380	190	990	9.1	350	<5.0
	08/03/00	16,000	<2,000	1,600	29	210	53	1,200	21	260	<2.0
	12/05/00	17,000	5800	1,700	45	460	240	1,100	21	230	<5.0
	03/05/01	29,000	<1,300	2,100	68	280	100	180	<8.0	<80	<8.0
	06/04/01	17,000	<6,000	2,000	56	340	230	300	<10	130	<10
	06/05/02	11,000	<2,000	1,600	46	210	47	790	<10	220	<10
	09/09/02	12,000	<800	1,400	44	130	27	760	<10	160	<5.0
	12/19/02	10,000	NS	740	32	180	38	86	<5.0	<50	<5.0
	03/10/03	13,000	<6,000	1,200	42	240	35	470	5.3	140	<2.5
	06/03/03	6,500	<3,000	750	21	46	15	1,300	<50	280	<10
	09/19/03	9,800	<3,000	1,500	38	170	32	420	<10	150	<5.0
	12/22/03	8,800	<2,000	1,100	32	82	20	330	5.8	52	<2.5
	03/12/04	7,600	<3,000	590	23	69	17	470	9.2	63	<1.5
	06/11/04	7,800	<2,000	840	19	58	15	710	12	140	<2.5
	09/13/04	7,500	<1,500	840	17	23	7.8	730	15	93	<2.5
	12/16/04	9,300	<2,000	1,100	26	76	13	600	12	130	<2.5
	03/21/05	11,000	<3,000	1,200	37	190	24	460	9.3	100	<2.5
	06/23/05	9,600	<4,000	1,100	28	93	23	370	8.2	67	<1.5
	09/30/05	9,000	<3,000	690	18	32	14	380	8.4	72	<1.5
	12/08/05	8,700	<3,000	560	23	38	12	350	6.9	82	<1.5
	03/01/06	8,400	<2,000	410	24	42	13	360	8	58	<1.5
	05/25/06	9,900	<2,000	630	25	13	13	190	5.3	59	<1.5
	08/10/06	14,000	<3,000	690	43	130	26	200	5.4	70	<1.5
	11/21/06	10,000	<3,000	580	37	96	25	240	6.3	72	<1.5
	02/06/07	7,700	<1,000	520	36	90	23	260	7.4	54	<1.5
	05/08/07	4,700	<800	150	0.86	<0.5	<0.5	170	5	52	<0.5
	08/06/07	6,000	<1,000	240	26	34	17	180	5	55	<0.5
	12/26/07	8,100	<1,500	76	14	17	12	150	4.3	37	<0.9
	03/31/08	7,900	<1,500	250	30	62	20	140	4.5	47	<0.90
06/28/08	6,400	3,100*	97	17	19	13	200	5.6	38	<5.0	
09/27/08	11,000	15,000*	190	24	29	16	160	<5.0	40	<5.0	
12/30/08	9,100	2,300*	160	24	31	18	150	5	100	<5.0	
03/28/09	9,200	4,300*	150	25	34	22	120	<5.0	38	<5.0	
09/12/09	6,100	2,700*	110	21	14	18	170	<5.0	38	<0.5	
03/30/10	12,000	12,000*	200	25	35	23	96	<5.0	58	<5.0	
09/30/10	6,300	5,100	110	14	6.2	16	110	3.8	16	<2.5	
01/20/11	7,700	3,500	100	20	20	16	85	3.4	41	<1.7	
12/15/11	6,800	2,500	58	16	18	12	<150	NA	NA	NA	
03/29/12	6,900	2,500	84	16	14	15	<90	NA	NA	NA	
05/18/12	5,300	2,000	41	21	14	24	ND<80	NA	NA	NA	

**Table 4. Historical Groundwater Analytical Results  
Alameda Gas, 1310 Central Avenue, Alameda**

Well ID	Date	TPH-g	TPH-d	benzene	toluene	ethylbenzene	xylene	MtBE	tAME	tBA	Other Oxygenates
MW-4	05/25/06	<b>410</b>	<80	<2.5	<2.5	<2.5	<2.5	<b>1800</b>	28	44	<2.5
	08/10/06	<50	<50	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<5.0	<0.5
	11/21/06	<50	<50	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	<5.0	<0.5
	02/06/07	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	05/08/07	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
	08/06/07	<50	<50	<0.5	<0.5	<0.5	<0.5	0.82	<0.5	<5.0	<0.5
	12/26/07	<50	<50	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<5.0	<0.5
	03/31/08	<50	<50	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<5.0	<0.5
	06/28/08	<50	88	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<2.0	<0.5
	09/27/08	<50	<50	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<5.0	<0.5
	12/30/08	<50	<50	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5
	03/28/09	<50	<50	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
	09/12/09	<50	<b>240</b>	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<2.0	<0.5
	03/30/10	<50	<50	<0.5	<0.5	<0.5	<0.5	0.58	<0.5	<2.0	<0.5
	09/30/10	<50	<50	<0.5	<0.5	<0.5	<0.5	0.76	<0.5	<2.0	<0.5
01/20/11	<50	<b>210</b>	<0.5	<0.5	<0.5	<0.5	0.70	<0.5	<2.0	<0.5	
12/15/11	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	
03/29/12	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	
05/18/12	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	
MW-5	05/25/06	<50	86	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<5.0	<0.5
	08/10/06	55	<50	<0.5	<0.5	<0.5	<0.5	<b>1,100</b>	19	9.1	<0.5
	11/21/06	<250	<50	<2.5	<2.5	<2.5	<2.5	<b>1,500</b>	25	<b>28</b>	<2.5
	02/06/07	<b>430</b>	<50	<b>6.9</b>	<2.5	<2.5	<2.5	<b>1,600</b>	26	<b>34</b>	<2.5
	05/08/07	<250	<50	<2.5	<2.5	<2.5	<2.5	<b>1,200</b>	20	<b>38</b>	<2.5
	08/06/07	<b>330</b>	<80	<2.5	<2.5	<2.5	<2.5	<b>1,000</b>	20	<b>39</b>	<2.5
	12/26/07	<b>490</b>	<50	<2.5	<2.5	<2.5	<2.5	<b>1,000</b>	18	<b>28</b>	<2.5
	03/31/08	<b>520</b>	<100	6.0	1.9	<1.5	2.5	<b>520</b>	16	<b>33</b>	<1.5
	06/28/08	<b>510</b>	<b>290*</b>	<b>6.2</b>	1.0	<0.5	2.3	<b>550</b>	11	<40	<10
	09/27/08	<b>670</b>	<b>320*</b>	<17	<17	<17	<17	<b>650</b>	<17	<b>95</b>	<17
	12/30/08	<b>210</b>	<b>130*</b>	<0.5	0.8	0.99	<0.5	<b>610</b>	12	<40	<10
	03/28/09	<b>200</b>	<b>100*</b>	<17	<17	<17	<17	<b>610</b>	<17	<67	<17
	09/12/09	<b>230</b>	<b>130*</b>	<b>1.6</b>	1.3	<0.5	1.4	<b>540</b>	11	<40	<10
	03/30/10	<b>360</b>	<b>170*</b>	<b>2.0</b>	1.7	<0.5	1.3	<b>490</b>	13	<40	<10
	09/30/10	<b>710</b>	<b>310</b>	<b>10</b>	2.6	<1.0	3.1	<b>400</b>	<10	<40	<10
01/19/11	<b>340</b>	<b>280</b>	<b>3.0</b>	2.0	<0.5	1.2	<b>450</b>	<10	<b>100</b>	<10	
12/15/11	<b>180</b>	87	0.93	0.72	<0.5	0.54	<b>220</b>	NA	NA	NA	
03/29/12	<b>250</b>	61	<b>2.2</b>	1.3	<0.5	0.95	<b>250</b>	NA	NA	NA	
05/18/12	<b>760</b>	350	15.00	3.10	0.57	4.3	<b>220</b>	NA	NA	NA	
<b>ESL</b>		100	100	1.0	40	30	20	5	NE	12	NA

**Notes:**

Units are micrograms per liter (ug/L).

NT analyte not tested

MtBE methyl tert-butyl ether

TPH-g total petroleum hydrocarbons as gasoline

tAME tert-amyl methyl ether

TPH-d total petroleum hydrocarbons as diesel

tBA tert-butanol

\* Laboratory noted that TPH-g range is significant

ESL Environmental Screening Limits