

**State of California  
California Regional Water Quality Control Board, Los Angeles Region**

**Final Technical Staff Report**

**Evidence in support of an  
Amendment to the  
*Water Quality Control Plan for the Coastal Watersheds  
of Los Angeles and Ventura Counties***

**to Prohibit On-site Wastewater Disposal Systems  
in the Malibu Civic Center Area**

***Technical Memorandum #2: Pathogens and Nitrogen in Wastewaters Impair  
Underlying Groundwater as a Potential Source of Drinking Water***

**by  
David Koo\***

*\* The author would like to thank Regional Board staff, Joe Luera and interns Yifei Tong, Ryan Thacher, Shentong Lu, and Justin Tang for their assistance in preparing map, tables and graphs.*

*November 5, 2009*

Staff revised Table 2, Figure 1, and Figure 2, For Attachment 2-1, three tables have been combined. For Attachment 2-2, three graphs have been combined. These tables and graphs, listed below, have been revised or replaced from the draft dated October 21, 2009:

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***Technical Memorandum #2: Pathogens and Nitrogen in Wastewaters Impair Underlying Groundwater as a Potential Source of Drinking Water***

*by*  
*David Koo*

**INTRODUCTION**

The City of Malibu (Malibu) is located in Los Angeles County on the north shore of the Santa Monica Bay, northwest of the City of Los Angeles, California. The boundaries of the Malibu Civic Center area are shown in Figure 1<sup>1</sup>. There are 392 residential properties and 38 commercial properties located in the study area. Surface water includes the lower portion of Malibu Creek, Malibu Lagoon, and Malibu Beach to Malibu Pier State Park.

Wastewater disposal in the City of Malibu falls within the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). The regional application of the Porter-Cologne Act is through the *Water Quality Control Plan – Los Angeles Region (Basin Plan)* for the Coastal Watersheds of Los Angeles and Ventura Counties.

According to the *Basin Plan*, the Malibu Civic Center area lies within the Malibu Valley Groundwater Basin. The *Basin Plan* designates this area as having a Potential Beneficial Use for Municipal and Domestic Supply (MUN) and Industrial Service Supply (IND).

**PURPOSE**

The purpose of this study is to determine the extent and severity of contamination of groundwater that is designated as a potential source of drinking water.

**BACKGROUND**

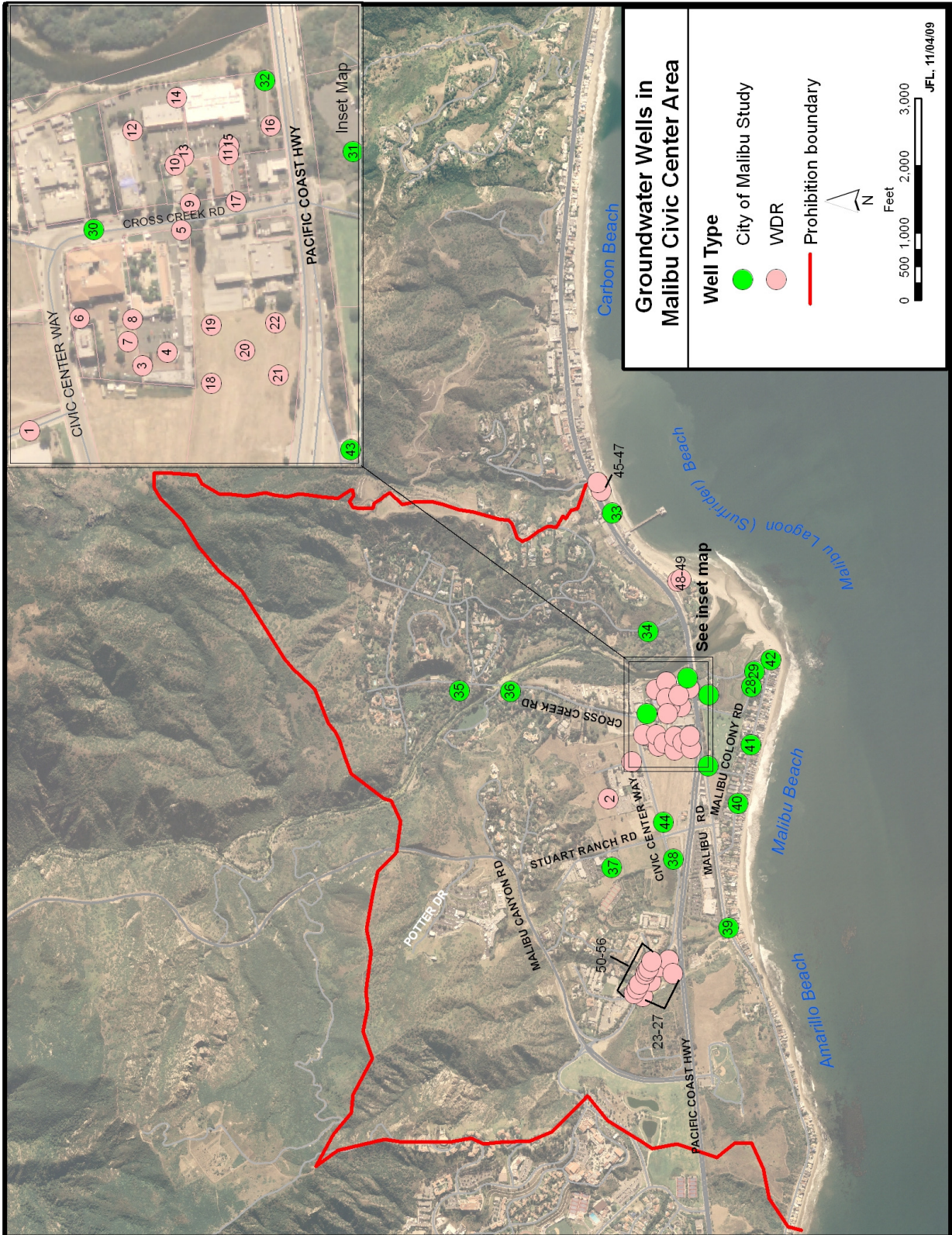
In addition to 27 miles of coastline which forms the northwest boundary of Santa Monica Bay and includes internationally famous Surfrider Beach, Malibu is home to two regionally significant aquatic resources, Malibu Creek, which drains the southern slope of the mountains, draining 109 square miles of watershed, and Malibu Lagoon, one of two significant remaining freshwater estuaries in southern California. Both the creek and lagoon have been identified as impaired for bacteria and nutrients under section 303(d) of the Clean Water Act.

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<sup>1</sup> The area subject to the proposed prohibition is referred to as the Malibu Civic Center area (Figure 1). The area was defined using topographic features and drainage patterns, and encompasses the hydrologic areas of Malibu Valley (also referred to as the lower Malibu Creek watershed), Winter Canyon, and adjacent coastal strips including Amarillo Beach, Malibu Beach, Malibu Lagoon, and Malibu Lagoon Beach (aka Surfrider Beach, including First, Second, and Third Points at Surfrider). For more discussion on the prohibition boundaries defining the Malibu Civic Center area, refer to the Technical Staff Report Overview and the Environmental Staff Report.



**Figure 1 – Groundwater wells in the Malibu Civic Center Area**



Malibu Civic Center area consists of a low-lying plain along Santa Monica Bay, plus adjacent steep uplands that rise from sea level to 100 feet, with additional upland areas that rise 500 feet into the foothills to the Santa Monica Mountains. The area contains some undeveloped parcels but sustains the largest commercial development in Malibu along with multi-family and single-family residences that include Malibu Colony, a dense subdivision where houses are built close together directly on the beach. The Los Angeles County courthouse and library, the county fire department and county sheriff's offices are also located in this area, which effectively functions as Malibu's town center. Contemporary development is built on what was naturally an estuary-lagoon and wetlands established within an alluvial plain at the mouth of Malibu Creek. Generally the water table is 3 to 36 feet below ground surface and depths fluctuate with tidal and seasonal hydrologic variations.

There are 429 on-site wastewater disposal systems (OWDSs) that serve Malibu Civic Center area. The LARWQCB, which is responsible for regulating waste discharge in the Los Angeles and Ventura County, has evidence that OWDSs in proximity to Malibu's water resources may be among the factors contributing to poor water quality. There are a total of 38 commercial and 392 residential OWDSs in the Malibu Civic Center area. Some of the systems are old; other systems are operated at a much greater wastewater flow capacity than what they were originally designed for.

## **METHODS AND PROCEDURES**

The main steps of this study include the following:

- Collect and review existing information from a variety of sources on groundwater quality in proximity to the OWDSs from April 19, 1999 to June 12, 2009.
- Analyze the data, for pollutants that are indicators of wastewater – specifically for fecal coliform, total coliform, ammonia, and nitrogen (nitrate + nitrite).
- Determine the frequency that the groundwater failed to meet drinking water standards – i.e., Maximum Contaminant Levels (MCLs)<sup>2</sup> for fecal coliform, total coliform, ammonia, and nitrate + nitrite.

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<sup>2</sup> The United States Environmental Protection Agency (USEPA) provides Drinking Water Health Advisories for organics, inorganics, radionuclides, and microbiology including total coliform. The MCL goal and MCL for total coliform is zero and 5%, respectively. In a well used for drinking water, no more than 5% samples analyzed each month can test positive for total coliform. Every sample that has total coliform must be analyzed for fecal coliform; no fecal coliform is allowed.

According to Title 22 of the California Code of Regulations, Section 64426.1 Total Coliform MCL “....(b) A public water system is in violation of the total coliform MCL when any of the following occurs: ... (2) For a public water system which collects fewer than 40 samples per month, more than one sample collected during any month is total coliform-positive; or (3) Any repeat sample is fecal coliform-positive ....”, the MCL for total coliform and fecal coliform is zero.

The Water Quality Control Plan – Los Angeles Region or Basin Plan provides that “In ground waters used for domestic or municipal supply (MUN), the concentration of coliform organisms over any seven day period shall be less than 1.1 MPN/100 ml.

Although the MCL for total coliform and fecal coliform is zero, the detection limit used by a majority of laboratories for total coliform and fecal coliform is 1.1 MPN/100 ml. Therefore, unless the sample has a zero concentration for total coliform and fecal coliform, any detection above 1.1 MPN/100 ml means that the sample is above the MCL.

Staff used two sources of groundwater quality data for this study. They are: (1) the compliance files under Waste Discharge Requirements (WDRs) issued by the LARWQCB; and (2) “Final Report – Risk Assessment of Decentralized Wastewater Treatment Systems in High Priority Areas in the City of Malibu, California” prepared by Stone Environmental, Inc. in August 2004 (2004 Stone Report).

In all, data from a total of 56 groundwater wells shown in Figure 2 are used for this study. Among the 56 wells, 39 of them are identified in the WDR compliance files and the other 17 are identified in the 2004 Stone Report. The two sources of data provided a total of 1,016 groundwater sampling results with 7,112 individual analyses.

Groundwater quality data for each well was then entered into spreadsheets. Results were compared to drinking water standards. Using these spreadsheets, two graphs – one for fecal and total coliform and the other for nitrogen species – were generated for each well to illustrate the exceedance from the MCL.

## **RESULTS**

Staff reviewed data for 56 wells in the Malibu Civic Center area that were designed and constructed for monitoring the quality of groundwater. To examine impairment of groundwater as a source of drinking water, staff compiled analytical results of testing for pathogen indicators and nitrogen species, and summarized these results in Table 1. In addition, tables and graphs summarizing the analytical results of each well are provided in Attachments 2-1 and 2-2, respectively.

### *Fecal Coliform*

For the 56 groundwater monitoring wells in the Malibu Civic Center area, from April 19, 1999 to June 12, 2009, a total of 1,016 samples were collected and analyzed for fecal coliform. Results indicated that out of the 1,016 samples, 383, or 38%, of the samples failed to meet the MCL. Forty-seven (47) out of 56, or 84%, of the wells detected fecal coliform that failed to meet the MCL of 0 MPN/100 ml (Most Probable Number per 100 milliliters).

### *Total Coliform*

For the 56 groundwater monitoring wells in the Malibu Civic Center area, from April 19, 1999 to June 12, 2009, a total of 1,016 samples were collected and analyzed for total coliform. Results indicated that out of the 1,016 samples, 576, or 57%, of the samples failed to meet the MCL. All 56, or 100%, of the wells detected total coliform that failed to meet the MCL of 1.1 MPN/100 ml.

### *Nitrate and Nitrite*

For the 56 groundwater monitoring wells in Malibu Civic Center area, from April 19, 1999 to June 12, 2009, a total of 1,012 samples were collected and analyzed for nitrate-nitrogen and nitrite-nitrogen. Results indicated that out of the 1,012 samples, 322, or 32%, of the samples failed to meet the MCL of 10 mg/L. Twenty-four (24) out of 56, or 43%, of the wells detected nitrogen (nitrate and nitrite) that failed to meet the MCL.

### *Ammonia plus Nitrate and Nitrite*

For the 56 groundwater monitoring wells in the Malibu Civic Center area, from April 19, 1999 to June 12, 2009, a total of 1,012 samples were collected and analyzed for ammonia. Results indicated that out of the 1,012 samples, 400, or 40%, of the samples failed to meet the MCL of 10 mg/L. Thirty-four (34) out of 56, or 61%, of the wells detected total nitrogen (ammonia, nitrate and nitrite) that failed to meet the MCL.

In at least one point in time, all 56 wells demonstrated the presence of pathogens and nitrogen at levels that exceeded the MCL for drinking water as summarized in Table 2. Although not all wells were contaminated for each sampling event, of the 56 wells, 47 or 84% of them had fecal coliform that failed to meet the MCL and all 56 or 100% had total coliform that failed to meet the MCL. Twenty-four (24) or 43% of the wells had nitrate and nitrite that failed to meet the MCL. Staff also did an analysis including ammonia plus nitrite and nitrate; when using all three nitrogen species, 34 or 61% of the wells had nitrogen present that failed to meet the MCL.

**Table 1: Summary of Groundwater Pollution**

	<b>Fecal Coliform</b>	<b>Total Coliform</b>	<b>Nitrate+Nitrite</b>	<b>Ammonia + Nitrate+Nitrite</b>
	<b>MPN/100mL</b>	<b>MPN/100mL</b>	<b>mg/L</b>	<b>mg/L</b>
<b>MCL</b>	0	0	10	10
<b>Concentration Range</b>	0 - 140,000	0 - 16,000,000	0 - 120	0 - 120
<b>Total Samples Analyzed</b>	1,016	1,016	1,012	1,012
<b># Samples Failing to Meet MCL</b>	383	576	322	400
<b>% Samples Failing to Meet MCL</b>	38%	57%	32%	40%

## **CONCLUSION**

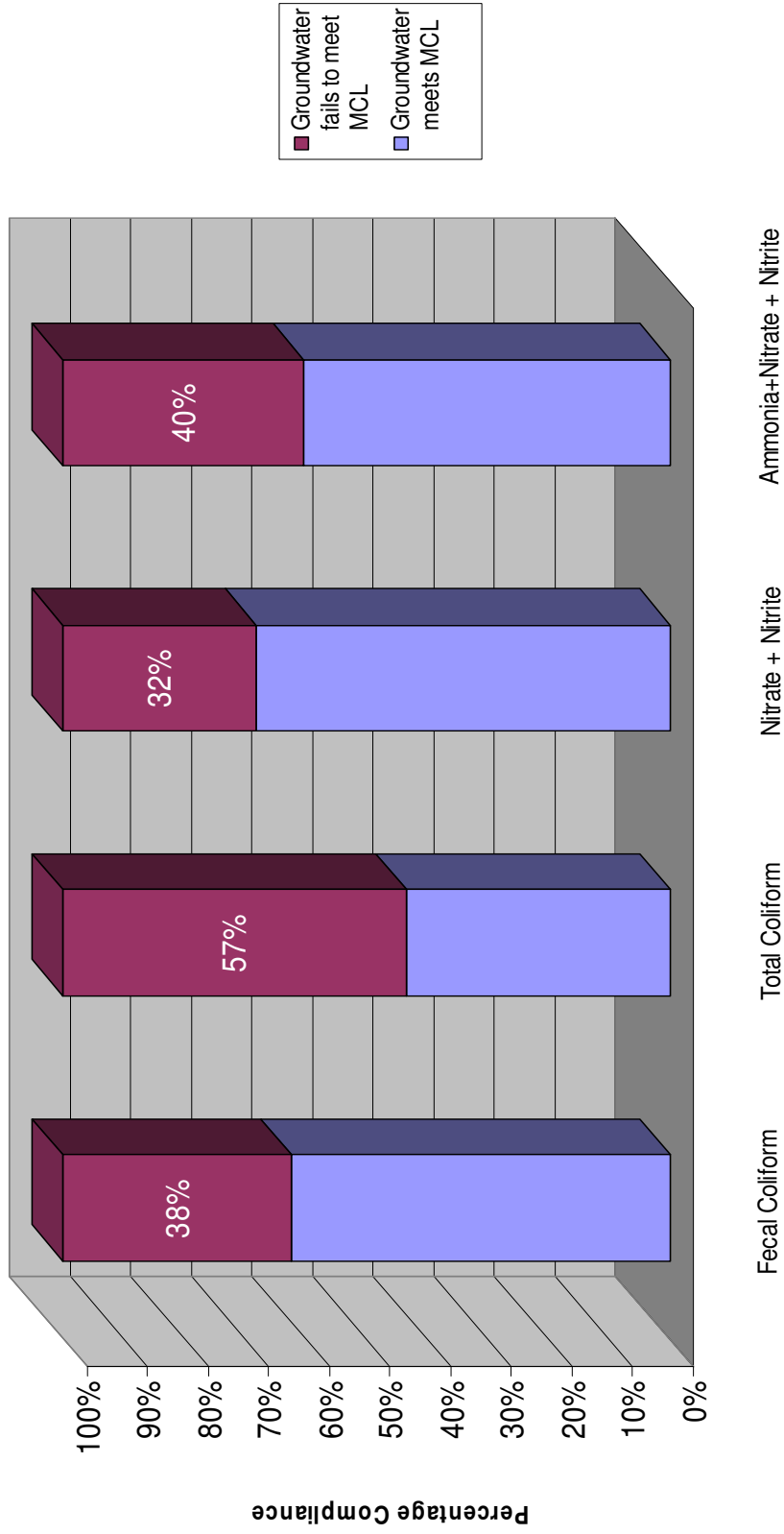
### **Pathogens and nitrogen in wastewaters released from OWDSs impair underlying groundwater as a potential source of drinking water.**

Indicators of pathogen and nitrogen contaminants released by OWDSs substantially impair the potential use of groundwater as a source of drinking water.

Although groundwater in the Malibu Valley Groundwater Basin and Winter Canyon is not an existing source of drinking water to the community, groundwater was the community's drinking water source up until the early 1960s. In 1963, the County of Los Angeles started delivering imported water to the area. As a future resource, and also in the event of a disruption of deliveries of imported water, groundwater in Malibu Civic Center area is an important local source that the community may need to use. However, continued degradation jeopardizes use of this local resource for beneficial use of potential MUN (drinking water use).



**Figure 2 - Groundwater Quality Compliance Status**



**Table 2: Summary of Groundwater Wells in Malibu Study Area**

Location	Well Numbers	Well Names	Fecal Coliform Fail to Meet MCL	Total Coliform Fail to Meet MCL	Nitrate+Nitrite Fail to Meet MCL	Ammonia+Nitrate +Nitrite Fail to Meet MCL
Malibu Administrative Center	1	Well #7b	Yes	Yes	Yes	Yes
	2	Well # 8	Yes	Yes	Yes	Yes
Malibu Country Mart I	3	Well MW-1	Yes	Yes	Yes	Yes
	4	Well MW-2	Yes	Yes	No	No
	5	Well MW-3	Yes	Yes	Yes	Yes
Malibu Country Mart II	6	Well MW-1	No	Yes	No	Yes
	7	Well MW-2	Yes	Yes	No	Yes
	8	Well MW-3	Yes	Yes	No	Yes
Malibu Country Mart III	9	Well MW-1	Yes	Yes	No	No
	10	Well MW-2	Yes	Yes	No	Yes
	11	Well MW-3	Yes	Yes	No	No
Malibu Creek Plaza	12	Well #1	Yes	Yes	No	No
	13	Well #2	Yes	Yes	Yes	Yes
	14	Well #3	Yes	Yes	No	No
	15	Well #4	Yes	Yes	Yes	Yes
	16	Well #5	Yes	Yes	No	Yes
Malibu Lumber	17	Well #6	Yes	Yes	Yes	Yes
	18	ML MW-1	Yes	Yes	No	No
	19	ML MW-2	Yes	Yes	No	No
	20	ML MW-3	Yes	Yes	No	Yes
	21	ML MW-4	Yes	Yes	No	No
	22	ML MW-5	Yes	Yes	No	No
Malibu Colony Plaza	23	Well #1	Yes	Yes	No	Yes
	24	Well #2	Yes	Yes	Yes	Yes
	25	Well #3	Yes	Yes	Yes	Yes
	26	Well #4	Yes	Yes	Yes	Yes
Malibu Study Area	27	Well #5	Yes	Yes	Yes	Yes
	28	C-1	Yes	Yes	No	No
	29	C-2	Yes	Yes	No	No
	30	Well P-1	No	Yes	No	No
	31	Well P-7	Yes	Yes	No	No
	32	Well P-9	Yes	Yes	No	No
	33	Well SMBRP-1	Yes	Yes	No	No
	34	Well SMBRP-2	Yes	Yes	No	No
	35	Well SMBRP-3c	Yes	Yes	No	No
	36	Well SMBRP-6	Yes	Yes	No	No
	37	Well SMBRP-9	Yes	Yes	Yes	Yes
	38	Well SMBRP-10c	Yes	Yes	No	No
	39	Well SMBRP-11	Yes	Yes	No	No
	40	Well SMBRP-12	Yes	Yes	No	Yes
	41	Well SMBRP-13	Yes	Yes	No	No
	42	Well SMBRP-14	Yes	Yes	No	Yes
Malibu Beach Inn	43	Well SMBRP-15b	Yes	Yes	No	No
	44	Well SMBRP-16	No	Yes	No	Yes
	45	MW1	Yes	Yes	Yes	Yes
Surfrider Beach	46	MW2	Yes	Yes	Yes	Yes
	47	MW3	Yes	Yes	Yes	Yes
	48	Well SB-1	No	Yes	Yes	Yes
Malibu Water Pollution Control Plant	49	Well SB-2	Yes	Yes	Yes	Yes
	50	MW-1	No	Yes	Yes	Yes
	51	MW-2	No	Yes	Yes	Yes
	52	MW-3	No	Yes	Yes	Yes
	53	MW-4	Yes	Yes	Yes	Yes
	54	MW-5	No	Yes	Yes	Yes
	55	MW-6	No	Yes	Yes	Yes
56	MW-7	Yes	Yes	Yes	Yes	
Total Number of Wells			56	56	56	56
Number of Wells Fail to Meet MCL			47	56	24	34
Percentage of Wells Fail to Meet MCL			84%	100%	43%	61%

**Technical Memorandum #2: Pathogens and Nitrogen in  
Wastewaters Impair Underlying Groundwater as a Potential  
Source of Drinking Water**

**Attachment 2-1**

**Data Tables for 56 Individual Wells**

**Malibu Administrative Center  
Well #7b**

Parameter Unit	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + (mg/l)
MCL	0	0	0						10	10
Sample Date										
2/24/2003	2419.2	0	0	0.474	0.18	0	0.278	0.752	0.18	0.654
3/25/2003	2419.21	0	0	0.608	0.063	0	1.29	1.898	0.063	0.671
4/23/2003	0	0	0	0.69	0.16	0	0.71	1.4	0.16	0.85
5/29/2003	0	0	0	0.29	0.56	0	0.1	0.39	0.56	0.85
6/12/2003	0	0	0	0.43	0.368	0	0.29	0.72	0.368	0.798
6/30/2003	0	0	0	0.74	0	0	0.96	1.7	0	0.74
7/21/2003	29.3	0	0	0.53	0.06	0	0.47	1	0.06	0.59
7/30/2003	0	0	0	0.179	0.045	0	0.313	0.492	0.045	0.224
8/15/2003	0	0	230	0.243	0	0	0	0.243	0	0.243
8/18/2003	2419.2	0	300	0.33	0	0	0.58	0.91	0	0.33
9/30/2003	4.1	2	4	0.35	0.1	0	0.25	0.6	0.1	0.45
10/21/2003	0	0	0	0	0	0	0.43	0.43	0	0
10/28/2003	0	0	300	0.598	0.14	0.155	0.478	1.076	0.295	0.893
11/18/2003	19.6	4	4	0.18	0	0	0.61	0.79	0	0.18
11/19/2003	0	0	80	0	66.161	0.292	0.197	0.197	66.453	66.453
12/15/2003	0	0	0	0.17	0.03	0	0.42	0.59	0.03	0.2
12/19/2003	0	40	230	0.419	0	0.791	10.9	11.319	0.791	1.21
1/16/2004	0	140	140	0.292	0.79	2.06	0	0.292	2.85	3.142
1/19/2004	0	6	350	0.1	0.07	0	0.03	0.13	0.07	0.17
2/16/2004	0	0	0	0.42	0.03	0	0.07	0.49	0.03	0.45
2/20/2004	0	0	0	0	0.19	2.95	0.18	0.18	3.14	3.14
3/15/2004	691	0	20	0.03	0.02	0	0.64	0.67	0.7	0.05
3/24/2004	0	0	20	0.622	0	0	1.704	2.326	0	0.622
4/27/2004	0	0	3000	0.126	0.24	2.36	0.676	0.802	2.6	2.726
5/21/2004	0	0	2100	0.184	0	0	0	0.184	0	0.184
9/1/2004	0	0	0	0.139	0.126	0	0.483	0.622	0.126	0.265
12/6/2004	300	0	900	0	1.1	0	1.06	1.06	1.1	1.1
3/9/2005	40	0	340	0	0.359	0	0.407	0.407	0.359	0.359
6/10/2005	0	0	130	0	0.133	0	1.16	1.16	0.133	0.133
9/9/2005	3500	0	20	0.261	0.11	0	0.879	1.14	0.11	0.371
11/18/2005	10111	0	1700	0.286	0.176	0	0.274	0.56	0.176	0.462
3/3/2006	3990	20	24000	0.15	0.294	0	0.41	0.56	0.294	0.444
6/2/2006	763	0	20	0.24	0.183	0	0.94	1.18	0.183	0.423
9/8/2006	0	0	0	0.241	0	0	0.359	0.6	0	0.241
12/1/2006	0	0	0	0.4	0	0	0.24	0.64	0	0.4
3/9/2007	0	0	20	0	0.124	0	0.59	0.59	0.124	0.124
6/13/2008	0	0	0	0	0.37	0	1.22	1.22	0.37	0.37
9/12/2008	0	0	0	0.11	0.15	0	0.49	0.6	0.15	0.26



**Malibu Administrative Center  
Well # 8**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
5/29/2003	2419.2	2	6	0	55.6	0	0	0	55.6	55.6
6/12/2003	31	0	0	0	72.5	0	0	0	72.5	72.5
6/30/2003	1	0	0	0.26	11.1	0	0.02	0.28	11.1	11.36
7/21/2003	148.5	0	11	1.44	61.5	0	0.46	1.9	61.5	62.94
7/30/2003	30000	0	0	0	61.4	0	0	0	61.4	61.4
8/15/2003	0	0	130	0	65	0.873	0	0	65.873	65.873
8/20/2003	0	0	14	0	63.8	0	0.86	0.86	63.8	63.8
9/30/2003	3	2	300	0.04	43.1	0	0.41	0.45	43.1	43.14
10/21/2003	2419.2	0	0	0	31.6	0	0.53	0.53	31.6	31.6
10/28/2003	20	2300	2300	0	0.302	0.36	0.758	0.758	0.662	0.662
11/18/2003	8.4	22	23	0	48.1	0	0.9	0.9	48.1	48.1
11/19/2003	0	0	0	0.427	0	0	0.287	0.714	0	0.427
12/16/2003	2419.7	0	0	0	2.61	0	0.02	0.02	2.61	2.61
12/19/2003	0	80	800	0	54	0.633	13.8	13.8	54.633	54.633
1/16/2004	0	0	0	0	51	0.834	0.186	0.186	51.834	51.834
1/20/2004	2419.2	60	170	0	48.4	0.04	0	0	48.44	48.44
2/17/2004	5	0	2	0.09	48.6	0.02	0.09	0.18	48.62	48.71
2/20/2004	0	0	0	0	51.7	1.26	0.13	0.13	52.96	52.96
3/16/2004	10.5	0	0	0.02	60.2	0	0.16	0.18	0.7	60.22
3/24/2004	0	0	0	0.154	57.4	0.414	1.098	1.252	57.814	57.968
4/27/2004	0	0	2800	0	60.5	0.119	0	0	60.619	60.619
5/21/2004	20	0	70	0.121	60.7	0	0	0.121	60.7	60.821
9/1/2004	20	0	0	0.072	62.77	0	0.258	0.33	62.77	62.842
12/6/2004	300	0	0	0	68.3	0	0	0	68.3	68.3
3/9/2005	220	0	17000	0	5.85	0	0.343	0.343	5.85	5.85
6/10/2005	16000000	140000	3000000	18.2	0.142	0	7.4	25.6	0.142	18.342
9/9/2005	281	0	160000	0.303	19.7	0	2.97	3.273	19.7	20.003
11/18/2005	1553	0	30000	0	26.4	1.79	0.551	0.551	28.19	28.19
3/3/2006	155	0	1700	0	27.8	0.313	0.12	0.12	28.113	28.113
6/2/2006	0	0	500000	0	37	0	0.74	0.74	37	37
9/8/2006	1600000	5000	16000000	0.881	44.9	0	3.34	4.221	44.9	45.781
12/1/2006	300	1400	1300000	0.29	31.2	0.204	0.27	0.56	31.404	31.694
3/9/2007	40	0	3000	0	40.2	0	7.17	7.17	40.2	40.2
6/13/2008	1300	0	160000	0	31.6	0	0.19	0.19	31.6	31.6
9/12/2008	40	0	30000	0.2	30.9	0	10.44	10.64	30.9	31.1

**Malibu Country Mart I  
Well MW-1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
12/14/2004	0	0	1601	1.05	0.1	0	0.37	1.42	0.1	1.15
3/15/2005	0	0	0	0.39	1.6	0	0.85	1.24	1.6	1.99
6/15/2005	3880	0	0	0	0.3	0	0.37	0.37	0.3	0.3
9/15/2005	0	0	0	0	5.6	0	0.32	0.32	5.6	5.6
12/14/2005	0	0	0	0.1	11.6	0	0.25	0.35	11.6	11.7
3/20/2006	0	0	23	0.22	4.35	0	0.231	0.451	4.35	4.57
6/21/2006	10	23	2220	0.334	16	0	0.346	0.68	16	16.334
9/13/2006	0	0	0	0.221	9.1	0	0.503	0.724	9.1	9.321
12/27/2006	0	0	0	0.162	5.25	0	0.33	0.492	5.25	5.412
3/20/2007	0	0	0	7.48	0.1	0	8.36	15.84	0.1	7.58
6/13/2007	0	0	0	0.115	1.95	0	0.28	0.395	1.95	2.065
9/14/2007	0	0	0	0	5.5	0	0	0	5.5	5.5
12/21/2007	0	0	0	0	2.3	0	0.474	0.474	2.3	2.3
4/4/2008	0	0	0	0	3.45	0	0.335	0.335	3.45	3.45
7/2/2008	0	0	0	0.094	2.45	0	0.122	0.216	2.45	2.544

**Malibu Country Mart I  
Well MW-2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
12/14/2004	17	2	220	5.8	0	0	2.84	8.64	0	5.8
3/15/2005	0	0	2	5.2	0	0	6.22	11.42	0	5.2
6/15/2005	120	0	0	4.65	0	0	4.75	9.4	0	4.65
9/15/2005	0	0	4	7	0	0	8.5	15.5	0	7
12/14/2005	0	0	0	3.99	0	0	5.1	9.09	0	3.99
3/20/2006	0	0	22	3.64	0	0	3.64	7.28	0	3.64
6/21/2006	52	0	2600	0.56	1.6	0	0.589	1.149	1.6	2.16
9/13/2006	0	0	0	4.95	0	0	4.99	9.94	0	4.95
12/27/2006	0	0	0	4.23	0	0	4.33	8.56	0	4.23
3/20/2007	0	0	0	3.81	0	0	4.3	8.11	0	3.81
6/13/2007	0	0	4	6.34	0	0	6.9	13.24	0	6.34
9/14/2007	0	0	0	8.5	0	0	8.5	17	0	8.5
12/21/2007	0	0	0	7.7	0	0	7.99	15.69	0	7.7
4/4/2008	0	0	0	7.63	0	0	8.94	16.57	0	7.63
7/2/2008	0	0	0	6.5	0	0	6.95	13.45	0	6.5

**Malibu Country Mart I  
Well MW-3**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
12/14/2004	0	0	0	0.18	1.75	0	0	0.18	1.75	1.93
3/15/2005	0	0	4	0.1	3.5	0	0.272	0.372	3.5	3.6
6/15/2005	546	0	8	0	4.9	0	0.153	0.153	4.9	4.9
9/15/2005	0	0	13	0	0.6	0	0.242	0.242	0.6	0.6
12/14/2005	0	0	4	0.12	3.05	0	0.257	0.377	3.05	3.17
3/20/2006	0	0	0	0.175	2.35	0	0.19	0.365	2.35	2.525
6/21/2006	41	23	14000	0.7	12	0	0.797	1.497	12	12.7
9/13/2006	0	0	0	0	1.05	0	0	0	1.05	1.05
12/27/2006	0	0	0	0.102	2.05	0	0.166	0.268	2.05	2.152
3/20/2007	0	0	0	0	1.7	0	0.42	0.42	1.7	1.7
6/13/2007	0	0	0	0.149	1.7	0	0.354	0.503	1.7	1.849
9/14/2007	0	0	0	0.08	2	0	0.1	0.18	2	2.08
12/21/2007	0	0	0	0	1.65	0	0.178	0.178	1.65	1.65
4/4/2008	0	0	0	0	1.65	0	0.165	0.165	1.65	1.65
7/2/2008	0	0	0	0.088	2.1	0	0.309	0.397	2.1	2.188

**Maibu Country Mart II  
Well MW-1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
12/14/2004	11	0	0	0.17	1.75	0	0.15	0.32	1.75	1.92
3/15/2005	0	0	4	0.23	7.4	0	0.317	0.547	7.4	7.63
6/15/2005	2	0	0	0	7.65	0	0.3	0.3	7.65	7.65
12/14/2005	0	0	0	0.06	3.9	0	0.151	0.211	3.9	3.96
3/20/2006	0	0	2	0.36	2.75	0.05	0.36	0.72	2.8	3.16
6/21/2006	52	0	70	0.54	2.9	0	0.55	1.09	2.9	3.44
9/13/2006	0	0	0	0.128	3.4	0	0.128	0.256	3.4	3.528
12/27/2007	0	0	0	0.065	2.55	0	0.207	0.272	2.55	2.615
3/20/2007	0	0	0	11.2	0	0	11.7	22.9	0	11.2
6/13/2007	0	0	0	0.17	1.2	0.05	0.254	0.424	1.25	1.42
9/14/2007	0	0	0	0	1.2	0.05	0	0	1.25	1.25
12/21/2007	0	0	0	0	1.25	0.1	0.178	0.178	0.7	1.35
7/2/2008	0	0	0	0.054	1.75	0.05	0.169	0.223	0.7	1.854

**Malibu Country Mart II  
Well MW-2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
12/14/2004	0	0	0	18.8	0	0	15.5	34.3	0	18.8
3/15/2005	0	13	22	0.96	0	0	1.15	2.11	0	0.96
6/15/2005	30.5	0	500	13.7	0	0	15.7	29.4	0	13.7
12/14/2005	0	0	17	11.7	0	0	14.1	25.8	0	11.7
3/20/2006	0	0	2	9.1	0	0	9.2	18.3	0	9.1
6/21/2006	52	0	130	8.59	0	0	8.65	17.24	0	8.59
9/13/2006	0	0	0	1.92	0	0	4.37	6.29	0	1.92
12/27/2007	0	0	220	10.6	0	0	11.7	22.3	0	10.6
3/20/2007	0	0	0	9.2	0	0	11.9	21.1	0	9.2
6/13/2007	0	0	2	12	0	0	12.8	24.8	0	12
9/14/2007	0	0	0	3.61	0	0	3.81	7.42	0	3.61
12/21/2007	0	22000	90000	7.24	0	0	7.59	14.83	0	7.24
7/2/2008	0	16000	16001	14.1	0	0	15.9	30	0	14.1

**Malibu Country Mart II  
Well MW-3**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL										
Sample Date										
12/14/2004	0	0	0	66	0.1	0	44.3	110.3	0.1	66.1
3/15/2005	0	30	30	55	0	0	58.6	113.6	0	55
6/15/2005	0	0	14	32	0	0	58.3	90.3	0	32
12/14/2005	0	0	7	49.3	0	0	52	101.3	0	49.3
3/20/2006	10	2	17	57	0	0	57.6	114.6	0	57
6/21/2006	52	0	240	8.6	0	0	8.7	17.3	0	8.6
9/13/2006	0	0	0	42.1	0	0	44.5	86.6	0	42.1
12/27/2006	0	0	0	47.3	0	0	49.2	96.5	0	47.3
3/20/2007	0	0	30	53.9	0	0	63	116.9	0	53.9
6/13/2007	0	0	0	55.4	0	0	56.4	111.8	0	55.4
9/13/2007	0	0	0	46.4	0	0	46.4	92.8	0	46.4
12/21/2007	0	0	0	35	0	0	35.3	70.3	0	35
7/2/2008	0	300	16001	28.3	0	0	29.8	58.1	0	28.3

**Malibu Country Mart III  
Well MW-1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
3/8/2004	3	17	1601	0.084	1.57	0	1.25	1.334	1.57	1.654
7/9/2004	0	0	0	0.12	1.6	0	1.33	1.45	1.6	1.72
9/23/2004	0	0	0	0.11	1.15	0	0.8	0.91	1.15	1.26
12/14/2004	0	0	0	0	1.6	0	0	0	1.6	1.6
3/15/2005	0	0	0	0.063	2.6	0	0.103	0.166	2.6	2.663
6/15/2005	31	0	0	0	3.15	0	0.169	0.169	3.15	3.15
9/15/2005	0	4	6	0	3.3	0	0.3	0.3	3.3	3.3
3/20/2006	0	0	0	0.17	2.5	0.1	0.181	0.351	2.6	2.77
6/21/2006	96	0	0	0.1	2.25	0	0.1	0.2	2.25	2.35
9/13/2006	0	0	0	0.079	2.2	0	0.08	0.159	2.2	2.279
12/27/2006	0	0	0	0.177	1.9	0	0.212	0.389	1.9	2.077
3/20/2007	0	0	4	0	1.55	0	0.285	0.285	1.55	1.55
6/13/2007	0	0	0	0.079	1.75	0	0.15	0.229	1.75	1.829
9/14/2007	0	2	2	0	1.4	0	0	0	1.4	1.4
12/21/2007	0	0	0	0	1.5	0	0.35	0.35	1.5	1.5
4/4/2008	0	0	0	0	1.9	0	0.235	0.235	1.9	1.9
7/2/2008	0	0	0	0	2.35	0	0.091	0.091	2.35	2.35



**Malibu Country Mart III  
Well MW-2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
3/8/2004	0	0	1601	0.8	2.32	0	1.07	1.87	2.32	3.12
7/9/2004	0	0	0	30.5	0.6	0	2.5	33	0.6	31.1
9/23/2004	4.1	1601	1601	34	0.55	0	12.4	46.4	0.55	34.55
12/14/2004	500	8	22	2.9	1.35	0	1.64	4.54	1.35	4.25
3/15/2005	0	4	22	0.72	3.1	0	0.826	1.546	3.1	3.82
6/15/2005	230	0	9	0.153	3.45	0	0.252	0.405	3.45	3.603
9/15/2005	63	2	2	0.9	2.75	0	1	1.9	2.75	3.65
3/20/2006	10	1100	1100	0.148	2.25	0	0.156	0.304	2.25	2.398
6/21/2006	84	1601	90000	0.291	2.2	0	0.294	0.585	2.2	2.491
9/13/2006	0	0	130	2.25	1.2	0	2.51	4.76	1.2	3.45
12/27/2006	23	0	9000	0.648	1.5	0	0.793	1.441	1.5	2.148
3/20/2007	0	0	0	0	1.2	0	0.231	0.231	1.2	1.2
6/13/2007	0	0	30	0.2	1.05	0	0.201	0.401	1.05	1.25
9/14/2007	0	23	23	0	3.3	0	0	0	3.3	3.3
12/21/2007	0	0	0	0	1.15	0	0.502	0.502	1.15	1.15
4/4/2008	0	0	0	0	1.8	0	0.276	0.276	1.8	1.8
7/2/2008	0	0	0	0.074	2.1	0	0.075	0.149	2.1	2.174

**Malibu Country Mart III  
Well MW-3**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL			0						10	10
Sample Date										
3/8/2004	0	0	1601	0.086	1.35	0	0.58	0.666	1.35	1.436
7/9/2004	0	0	4	0.12	1.35	0	1.74	1.86	1.35	1.47
9/23/2004	0.99	23	50	0.15	0.25	0	1	1.15	0.25	0.4
12/14/2004	13	1601	1601	0	1.8	0	0	0	1.8	1.8
3/15/2005	0	0	0	0.063	1.9	0	0.135	0.198	1.9	1.963
6/15/2005	1860	0	2	0	4.8	0	0.23	0.23	4.8	4.8
9/16/2005	0	0	0	0	3.2	0.05	0.16	0.16	3.25	3.25
3/20/2006	0	2	2	0.107	2.45	0.1	0.1	0.207	2.55	2.657
6/21/2006	97	1601	90000	0.302	2.25	0	0.305	0.607	2.25	2.552
9/13/2006	0	0	8	2.25	1.2	0	2.51	4.76	1.2	3.45
12/27/2006	23	0	8000	0.102	1.35	0	0.106	0.208	1.35	1.452
3/20/2007	0	0	0	0	1.2	0	0.345	0.345	1.2	1.2
6/13/2007	0	0	90	0.093	1.2	0	0.185	0.278	1.2	1.293
9/14/2007	0	0	0	0	1.7	0.05	0	0	1.75	1.75
12/21/2007	0	0	0	0	1.45	0	0.33	0.33	1.45	1.45
4/4/2008	0	0	0	0	1.95	0	0.32	0.32	1.95	1.95
7/2/2008	0	0	0	0	1.75	0	0	0	1.75	1.75

**Malibu Creek Plaza  
Well #1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
7/12/2002	7.4	0	1600	0.26	2.77	0.03	1.4	1.66	2.8	3.06
9/5/2002	8.4	0	6	0.08	2.47	0.11	1.62	1.7	2.58	2.66
11/6/2002	4.1	0	4	1.2	0.47	0.03	6.47	7.67	0.5	1.7
3/12/2004	20.2	0	22	0.03	3.3	0.03	0.21	0.24	3.33	3.36
5/28/2004	344.8	8	23	0.17	3.8	0	0.05	0.22	3.8	3.97
8/13/2004	15.3	0	8	0.23	3.9	0.03	0.28	0.51	3.93	4.16
11/12/2004	0	4	8	0.15	2.06	0.14	0.44	0.59	2.2	2.35
2/15/2005	231.8	0	13	0.08	4	0	1.18	1.26	4	4.08
5/1/2005	0	0	0	0	5.66	0.2	0.2	0.2	5.86	5.86
9/1/2005	4.1	0	0	0.08	2.21	0	0.19	0.27	2.21	2.29
11/22/2005	7.4	4	240	0	1.73	0	0.05	0.05	1.73	1.73
2/15/2006	0	0	0	0.26	2.32	0.13	0.05	0.31	2.45	2.71
5/3/2006	0	0	0	0	3.4	0	0.49	0.49	3.4	3.4
8/22/2006	0	0	0	0	1.99	0	0.05	0.05	1.99	1.99
11/15/2006	6.2	0	0	0.15	1.46	0	1.29	1.44	1.46	1.61
2/13/2007	11.6	7	50	0.1	1.52	0	0.81	0.91	1.52	1.62
5/11/2007	0	0	7	0.92	1.63	0	0.26	1.18	1.63	2.55
8/18/2007	42.4	0	8	0.02	1.72	0	0.64	0.66	1.72	1.74
11/7/2007	0	0	12	0.11	1.92	0	0.23	0.34	1.92	2.03
2/14/2008	84.5	13	50	0.02	2.29	0	0.44	0.46	2.29	2.31
5/13/2008	50.5	0	0	0.07	1.97	0	0.17	0.24	1.97	2.04
8/26/2008	9.8	0	0	0.05	1.68	0	1.02	1.07	1.68	1.73
11/18/2008	7.2	0	23	0.09	1.2	0	0.26	0.35	1.2	1.29

**Malibu Creek Plaza  
Well #2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL			0						10	10
Sample Date										
7/12/2002	2419.2	80	1600	0.5	0.7	0.03	0.86	1.36	0.73	1.23
9/5/2002	4.1	0	4	1.2	0.47	0.03	6.47	7.67	0.5	1.7
11/6/2002	51.9	0	4	0	2.39	0.04	1.07	1.07	2.43	2.43
3/12/2004	0	0	0	0.5	2.09	0	0.39	0.89	2.09	2.59
5/28/2004	10.8	0	0	0.05	1.39	0	0.11	0.16	1.39	1.44
8/13/2004	98.1	0	0	0.36	1.96	0.06	0.81	1.17	2.02	2.38
11/12/2004	31.8	0	0	0.47	1.67	0.14	0.43	0.9	1.81	2.28
2/15/2005	866.4	0	8	1.86	1.72	0	0.94	2.8	1.72	3.58
5/1/2005	64.5	0	0	0.6	0	0	0.28	0.88	0	0.6
9/1/2005	214.3	11	50	1.49	1.5	0	0.63	2.12	1.5	2.99
11/22/2005	0	2	80	0.25	2.84	0	0.1	0.35	2.84	3.09
3/2/2006	0	500	1600	0.28	0	0	0.05	0.33	0	0.28
5/3/2006	18.3	0	0	0.27	2.06	0	0.25	0.52	2.06	2.33
8/22/2006	0	0	0	0.08	1.35	0	0.05	0.13	1.35	1.43
11/15/2006	0	0	30	0.59	1.46	0	0.18	0.77	1.46	2.05
2/13/2007	32.9	0	4	0.74	1.81	0	0.78	1.52	1.81	2.55
5/11/2007	0	4	4	2.63	1.52	0	2.4	5.03	1.52	4.15
8/18/2007	10.8	0	0	2.71	1.9	0	1.56	4.27	1.9	4.61
11/7/2006	5.2	0	280	1.48	1.84	0	1.3	2.78	1.84	3.32
2/13/2008	3	0	7	0.98	1.69	0	1.31	2.29	1.69	2.67
5/13/2008	3	0	0	4.96	16	0.04	1.22	6.18	16.04	21
8/26/2008	9.7	0	23	0.55	2.28	0	0.56	1.11	2.28	2.83
11/18/2008	0	90	0	1.56	1.33	0	0.05	1.61	1.33	2.89

**Malibu Creek Plaza  
Well #3**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
7/12/2002	2	0	0	0.17	1.16	0.03	1.11	1.28	1.19	1.36
9/5/2002	4	0	4	0.5	0.93	0.08	1.12	1.62	1.01	1.51
11/6/2002	18.3	0	4	0.26	1.09	0.03	3.16	3.42	1.12	1.38
3/12/2004	0	0	0	0.62	2.02	0	0.35	0.97	2.02	2.64
5/28/2004	17.9	8	8	0.33	2.89	0	0.15	0.48	2.89	3.22
8/13/2004	0	0	0	0.69	2.24	0	0.53	1.22	2.24	2.93
11/12/2004	0	350	1600	0.76	1.19	0.14	0.48	1.24	1.33	2.09
2/15/2005	2	280	900	0.85	1.81	0	0.67	1.52	1.81	2.66
5/1/2005	0	0	13	0.81	4.64	0	0.28	1.09	4.64	5.45
9/1/2005	0	0	0	0.74	2.05	0	0.3	1.04	2.05	2.79
11/22/2005	2	0	300	0.82	1.36	0	0.36	1.18	1.36	2.18
3/2/2006	5.2	50	50	1.43	1.86	0.13	0.05	1.48	1.99	3.42
5/3/2006	8.4	0	4	0.9	1.86	0	0.32	1.22	1.86	2.76
8/22/2006	3	0	0	0	1.53	0.03	0.05	0.05	1.56	1.56
11/15/2006	5.1	0	240	0.73	0.72	0	0.85	1.58	0.72	1.45
2/13/2007	2419.2	1600	1600	0.03	1.07	0	2.73	2.76	1.07	1.1
5/11/2007	235.9	11	26	1.98	1.31	0	1.41	3.39	1.31	3.29
8/14/2007	165	8	1600	0.63	0.74	0	1.5	2.13	0.74	1.37
12/5/2007	16	0	23	0.6	0.87	0	1.04	1.64	0.87	1.47
2/13/2008	2419.2	9	1600	0.76	1.12	0.06	2.35	3.11	1.18	1.94
5/13/2008	11.9	0	0	0.76	1.09	0	0.48	1.24	1.09	1.85
8/26/2008	0	0	8	0.13	1.46	0	0.24	0.37	1.46	1.59
11/18/2008	16.6	1600	280	0.22	0.94	0.09	1.46	1.68	1.03	1.25

**Malibu Creek Plaza  
Well #4**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
7/12/2002	49.6	0	11	0.17	0.34	0.03	1.18	1.35	0.37	0.54
9/5/2002	22	0	240	0.4	0.03	0.09	2.91	3.31	0.12	0.52
11/6/2002	8.2	0	4	1.13	0.06	0.03	2.61	3.74	0.09	1.22
3/12/2004	48.7	0	0	0.06	1.63	0.04	0.24	0.3	1.67	1.73
5/28/2004	0	0	0	0.48	0.09	0	0.05	0.53	0.09	0.57
8/13/2004	3	0	0	0.25	3.47	0.12	0.38	0.63	3.59	3.84
11/12/2004	0	0	13	0.26	0.85	0.28	0.18	0.44	1.13	1.39
2/15/2005	2	13	13	0.12	2.54	0.05	0.2	0.32	2.59	2.71
5/1/2005	0	0	0	0	0.38	0.95	0.51	0.51	1.33	1.33
9/1/2005	0	50	50	0.06	0.27	0.02	0.16	0.22	0.29	0.35
11/22/2005	2	4	1600	0.08	1.25	0.11	0.07	0.15	1.36	1.44
3/2/2006	0	0	0	0.26	0.02	0	0.24	0.5	0.02	0.28
5/3/2006	2	0	0	0	1.51	0.06	0.4	0.4	1.57	1.57
8/22/2006	0	0	4	0	0.04	0	0.05	0.05	0.04	0.04
11/15/2006	15.6	0	0	0	0.04	0	0.25	0.25	0.04	0.04
2/15/2007	1046.2	0	300		0.03	0		0	0.03	0.03
5/11/2007	4.1	0	26	11.1	19.5	0	2.61	13.71	19.5	30.6
8/17/2007	0	0	22	25.8	1.04	0	4.56	30.36	1.04	26.84
12/6/2007	0	23	23	10.3	0.76	0	4.71	15.01	0.76	11.06
2/14/2008	2419.2	14	1600	6.44	0.03	0	7.76	14.2	0.03	6.47
5/13/2008	2419.2	500	1600	12.6	0.07	0	17	29.6	0.07	12.67
8/26/2008	25.4	2	30	6.46	1.57	0	3.64	10.1	1.57	8.03
11/18/2008	7.1	1600	240	7.75	0.04	0	3.7	11.45	0.04	7.79

**Malibu Creek Plaza  
Well #5**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
7/12/2002	2419.2	23	900	3.1	7.43	0.03	1.5	4.6	7.46	10.56
9/5/2002	104.6	0	1600	0.15	4.45	0.16	1.13	1.28	4.61	4.76
11/6/2002	184.2	240	1600	0	0.03	0.03	2.04	2.04	0.06	0.06
3/12/2004	0	0	4	7.23	0.04	0	3.22	10.45	0.04	7.27
5/28/2004	0	0	0	4.28	0	0	3.54	7.82	0	4.28
8/13/2004	2	0	0	3.61	0	0	4.3	7.91	0	3.61
11/12/2004	0	1600	1600	2.98	0	0.14	1.99	4.97	0.14	3.12
2/15/2005	0	240	240	4.58	0	0	3.42	8	0	4.58
5/1/2005	0	0	0	4.52	0.09	0	3.21	7.73	0.09	4.61
9/1/2005	0	14	22	2.73	0.25	0	1.2	3.93	0.25	2.98
11/22/2005	0	0	0	9.81	0	0	4.93	14.74	0	9.81
3/2/2006	0	0	17	6.58	0.03	0	1.06	7.64	0.03	6.61
5/3/2006	12.1	0	0	6.59	0	0	5.76	12.35	0	6.59
8/22/2006	0	0	0	1.17	0.92	0	0.12	1.29	0.92	2.09
11/15/2006	103.9	8	80	4.28	0.04	0.05	0.78	5.06	0.09	4.37
2/13/2007	488.4	0	23	4.05	0	0	0.06	4.11	0	4.05
5/11/2007	2	23	30	0.33	0	0	5.92	6.25	0	0.33
8/17/2007	49.7	1600	1600	1.23	0.28	0.03	1.76	2.99	0.31	1.54
12/5/2007	58	50	140	0.98	0	0	0.74	1.72	0	0.98
2/14/2008	2	17	110	1.18	0.11	0	0.6	1.78	0.11	1.29
5/13/2008	6.2	0	4	2.82	0.027	0	0.22	3.04	0.027	2.847
8/26/2008	5.2	500	1600	0.13	1.4	0	0.06	0.19	1.4	1.53
11/18/2008	0	130	14	0.08	1.47	0	0.36	0.44	1.47	1.55

**Malibu Creek Plaza  
Well #6**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
7/12/2002	2	0	0	0.19	0.06	0.03	1.12	1.31	0.09	0.28
9/5/2002	2419.2	0	1600	0.72	0.19	0.06	1.21	1.93	0.25	0.97
11/6/2002	29.1	0	300	0	4.22	0.09	2.18	2.18	4.31	4.31
3/12/2004	8.2	0	7	0.03	0.73	0.04	0.73	0.76	0.77	0.8
5/28/2004	79.7	13	23	0.13	3.46	0	0	0.13	3.46	3.59
8/13/2004	32.9	0	0	0.1	3.9	0.03	0.3	0.4	3.93	4.03
11/12/2004	0	0	4	0.23	1.45	0.19	0.17	0.4	1.64	1.87
2/15/2005	65.7	0	4	0.02	1.49	0	0.58	0.6	1.49	1.51
5/1/2005	0	0	0	0	13.3	10.4	0.43	0.43	23.7	23.7
9/1/2005	23.4	0	8	0	3.99	0	0	0	3.99	3.99
11/22/2005	6.2	4	1600	0.03	0.66	0	0.11	0.14	0.66	0.69
3/2/2006	0	0	0	0.16	0.98	0	0.05	0.21	0.98	1.14
5/3/2006	2	0	4	0.12	0.9	0	0.31	0.43	0.9	1.02
8/22/2006	0	0	0	3.74	0.04	0	0.81	4.55	0.04	3.78
11/15/2006	22.1	7	7	0	1.18	0	0	0	1.18	1.18
2/13/2007	13.5	0	0	0.11	1.23	0	0.31	0.42	1.23	1.34
5/10/2007	290.9	0	4	0.16	0.82	0	0.75	0.91	0.82	0.98
8/14/2007	58.5	0	30	0	7.96	0	1.19	1.19	7.96	7.96
11/15/2007	103	0	2	0	1.67	0	1.61	1.61	1.67	1.67
2/14/2008	5.1	0	11	0	1.35	0.03	0.35	0.35	1.38	1.38
5/13/2008	0	0	0	0.03	1.25	0	0.39	0.42	1.25	1.28
8/26/2008	9.3	0	0	0	10.7	0	0	0	10.7	10.7
11/18/2008	7	0	0	0	2.92	0	0	0	2.92	2.92



**Malibu Lumber**  
**ML MW-1, ML MW-2, ML MW-3, ML MW-4, ML MW-5**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL									
Sample Number									
Sample Date									
ML MW-1	6	2	2	1.55	1.8	0	1.68	1.8	3.35
ML MW-2	2	2	4	1.7	2.3	0	1.86	2.3	4
ML MW-3	8	0	4	8.8	1.9	0	9	1.9	10.7
ML MW-4	62	0	0	0.94	2.2	0	1.02	2.2	3.14
ML MW-5	84	0	0	0.65	1.7	0	0.74	1.7	2.35

**Malibu Colony Plaza  
Well # 1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
2/28/2003	14.8	8	8	1.59	0.45	0.09	2.96	4.55	0.54	2.13
5/22/2003	0.99	0	4	0.22	0.16	0.09	0.84	1.06	0.25	0.47
8/21/2003	1986.3	0	0	0.4	0.05	0.09	0.41	0.81	0.14	0.54
11/5/2003	0	0	0	0.59	0.04	0	0.39	0.98	0.04	0.63
2/25/2004	0	0	0	0.38	0.06	0	0.02	0.4	0.06	0.44
4/30/2004	0	0	0	0.82	0.019	0	0.26	1.08	0.019	0.839
8/18/2004	0	0	0	0.31	0.03	0	0.08	0.39	0.03	0.34
11/12/2004	0	0	0	0.36	0.03	0.14	0.31	0.67	0.17	0.53
2/15/2005	14.1	4	23	0.11	0.07	0	0.74	0.85	0.07	0.18
5/12/2005	0.99	0	0	0.04	0.1	0	0.22	0.26	0.1	0.14
8/16/2005	2	0	0	0.29	0.06	0	0.14	0.43	0.06	0.35
11/9/2005	18.9	7	500	0.13	0.04	0	0.1	0.23	0.04	0.17
2/14/2006	114.5	2	2	0.17	0	0.1	0.05	0.22	0.1	0.27
6/7/2006	4.1	13	23	0	0.03	0.02	0.15	0.15	0	0.05
9/20/2006	3	2	16	0	0.03	0.02	0.05	0.05	0	0.05
12/26/2006	10	2	2	7.5	6.5	0	7.9	15.4	6.5	14
3/8/2007	0	0	0	0.93	1.7	0.028	0.99	1.92	1.728	2.658
6/7/2007	2	2	2	0.88	1.85	0.021	0.04	0.92	1.871	2.751
9/6/2007	2	2	10	0.79	2	0.023	0.06	0.85	2.023	2.813
11/15/2007	2	34	480	0.8	1.7	0.024	0.05	0.85	1.724	2.524
2/14/2008	2	2	16	0.82	1.5	0.022	0.04	0.86	1.522	2.342
5/14/2008	2	2	2	0.87	1.9	0.024	0.07	0.94	1.924	2.794

**Malibu Colony Plaza  
Well # 2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL			0						10	10
Sample Date										
2/28/2003	2	0	0	11.3	2.31	0.09	6.92	18.22	2.4	13.7
5/22/2003	2419.21	2	23	7.04	0.74	0.1	3.55	10.59	0.84	7.88
8/21/2003	2419.21	0	2	7.4	0.23	0.09	7.26	14.66	0.32	7.72
11/5/2003	0	0	8	12	0.65	0	37	49	0.65	12.65
2/25/2004	0	0	0	7.51	4.59	0	12.3	19.81	4.59	12.1
4/30/2004	0	0	0	11.3	5.69	0.03	4.15	15.45	5.72	17.02
8/18/2004	0	0	0	9.36	1.5	0.07	5.68	15.04	1.57	10.93
11/12/2004	0	7	900	8.06	0.22	0.25	5.18	13.24	0.47	8.53
2/15/2005	4.1	14	50	2.16	1.79	0.005	8.87	11.03	1.795	3.955
5/12/2005	0	0	0	2.3	3.83	0	11.3	13.6	3.83	6.13
8/16/2005	0	0	0	9.69	1.34	0.06	2.16	11.85	1.4	11.09
11/9/2005	0	2	2	9.65	1.76	0.07	0.43	10.08	1.83	11.48
2/14/2006	1	2	2	23.4	0.04	0.09	0.24	23.64	0.13	23.53
6/7/2006	10.1	17	80	12.2	0.05	0.04	10.6	22.8	0.09	12.29
9/20/2006	1	2	2	20.4	0.07	0.03	1.51	21.91	0.1	20.5
12/26/2006	10	2	2	28.7	11	0.021	29.4	58.1	11.021	39.721
3/8/2007	0	0	0	22	11.5	0.024	23	45	11.524	33.524
6/7/2007	8	2	2	19.8	10.6	0.023	0.2	20	10.623	30.423
9/6/2007	2	2	10	18.1	9.9	0.027	0.9	19	9.927	28.027
11/15/2007	10	50	110	16.7	9.4	0.02	0.7	17.4	9.42	26.12
2/14/2008	2	2	2	20.4	10.2	0.021	0.6	21	10.221	30.621
5/14/2008	11	2	2	18.5	10.6	0.027	1.2	19.7	10.627	29.127

**Malibu Colony Plaza  
Well # 3**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
2/28/2003	1	0	0	0.2	120	0	1.87	2.07	120	120.2
5/22/2003	101.4	0	4	0.09	21.1	0.1	0.08	0.17	21.2	21.29
8/21/2003	12	0	2	0.3	25.7	0	0.46	0.76	25.7	26
11/5/2003	2	0	0	0.38	23.4	0.012	1.25	1.63	23.412	23.792
2/25/2004	0	0	0	0.31	22	0.08	0.11	0.42	22.08	22.39
4/30/2004	16.1	0	0	0.41	30.4	0.08	0.33	0.74	30.48	30.89
8/18/2004	2	0	0	0	52.8	0.27	0.32	0.32	53.07	53.07
11/12/2004	0	0	0	0	21	1.82	0.049	0.049	22.82	22.82
2/15/2005	131.3	8	13	0	26.1	0.25	0.08	0.08	26.35	26.35
5/12/2005	0	0	0	0	24.7	0	0.16	0.16	24.7	24.7
8/16/2005	13.4	4	27	0.03	26.6	0	0.29	0.32	26.6	26.63
11/9/2005	0	7	30	0.09	22.3	0.2	0.049	0.139	22.5	22.59
2/14/2006	133.4	2	2	0.28	34.3	0.26	0.05	0.33	34.56	34.84
6/7/2006	1	23	23	0	23.3	0.26	0.05	0.05	23.56	23.56
9/20/2006	2	2	2	0	13.7	0.22	0.05	0.05	13.92	13.92
12/26/2006	10	2	2	1.05	30.5	0.251	1.2	2.25	30.751	31.801
3/8/2007	0	0	0	0.11	13.7	0	0.13	0.24	13.7	13.81
6/7/2007	2	2	2	0.1	12.5	0	0.02	0.12	12.5	12.6
9/6/2007	2	2	10	0	11.4	0	0	0	11.4	11.4
11/15/2007	2	14	170	0.1	11.6	0	0.02	0.12	11.6	11.7
2/14/2008	2	2	2	0.1	12.6	0	0	0.1	12.6	12.7
5/14/2008	9	2	2	0.1	14	0	0.02	0.12	14	14.1

**Malibu Colony Plaza  
Well # 4**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
2/28/2003	0	0	0	0.049	99.4	0	0.99	1.039	99.4	99.449
5/22/2003	2419.21	0	50	0.08	23.1	0	0.09	0.17	23.1	23.18
8/21/2003	2419.21	0	300	0.2	24.3	0	0.049	0.249	24.3	24.5
11/5/2003	109.5	0	2	0.83	23	0.03	0.87	1.7	23.03	23.86
2/25/2004	0	0	0	0.26	18.4	0.06	0.049	0.309	18.46	18.72
4/30/2004	3.1	0	0	0.34	26.8	0.03	0.049	0.389	26.83	27.17
8/18/2004	0	0	0	0.28	30.6	0.1	0.29	0.57	30.7	30.98
11/12/2004	0	0	0	0.08	22.7	1.3	0.049	0.129	24	24.08
2/15/2005	0	2	8	0	16.5	0	0.049	0.049	16.5	16.5
5/12/2005	0	2	2	0	14.9	0	0.049	0.049	14.9	14.9
8/16/2005	2	0	0	0.04	12.5	0	0.28	0.32	12.5	12.54
11/9/2005	1	17	1600	0.02	2.16	0	0.049	0.069	2.16	2.18
2/14/2006	133.4	2	2	0.28	34.3	0.26	0.05	0.33	34.56	34.84
6/7/2006	1	23	23	0	23.3	0.26	0.05	0.05	23.56	23.56
9/20/2006	1	2	2	0	13.7	0	0.05	0.05	13.7	13.7
12/26/2006	10	2	2	30	7.5	0.026	31	61	7.526	37.526
3/8/2007	0	0	0	0.64	10	0.031	0.7	1.34	10.031	10.671
6/7/2007	2	2	2	0.59	9.7	0.035	0.03	0.62	9.735	10.325
9/6/2007	2	2	10	0.52	9.5	0.03	0.06	0.58	9.53	10.05
11/15/2007	2	6	90	0.52	8.5	0.029	0.06	0.58	8.529	9.049
2/14/2008	2	2	2	12.8	0.52	9.4	0.027	12.83	9.92	22.72
5/14/2008	2	2	2	0.57	9.3	0.028	0.06	0.63	9.328	9.898

**Malibu Colony Plaza  
Well # 5**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit										
MCL		0	0						10	10
Sample Date										
2/28/2003	4.1	0	0	11.5	4.64	0	3.98	15.48	4.64	16.14
5/22/2003	2419.21	0	2	9.71	0.16	0	4.83	14.54	0.16	9.87
8/21/2003	103.9	0	4	11.8	0.46	0	4.56	16.36	0.46	12.26
11/5/2003	6.2	0	0	18.1	0.34	0	15.1	33.2	0.34	18.44
2/25/2004	0	0	0	7.32	0.97	0	7.32	14.64	0.97	8.29
4/30/2004	0	0	17	18	1.44	0	18	36	1.44	19.44
8/18/2004	0	0	0	16.5	3	0.04	16.5	33	3.04	19.54
11/12/2004	0	0	23	1.65	0.09	0.15	1.65	3.3	0.24	1.89
2/15/2005	2419.21	50	50	2.08	2.08	0	2.08	4.16	2.08	4.16
5/12/2005	1.1	26	110	2.17	2.17	0	2.17	4.34	2.17	4.34
8/16/2005	0	1.9	4	10.6	10.6	0.02	10.6	21.2	10.62	21.22
11/9/2005	2	4	900	7.25	7.25	0	7.25	14.5	7.25	14.5
2/14/2006	1986.3	2	2	16	0	0.02	16	32	0.02	16.02
6/7/2006	1	2	2	19.6	0.06	0.02	19.6	39.2	0.08	19.68
9/20/2006	2419.2	2	1600	21.2	0	0.02	4.79	25.99	0.02	21.22
12/26/2006	10	2	2	1.75	16.5	0	1.9	3.65	16.5	18.25
3/8/2007	0	0	0	6	1.9	0.029	6.3	12.3	1.929	7.929
6/7/2007	2	4	2	5.7	1.8	0.03	0.01	5.71	1.83	7.53
9/6/2007	2	2	10	4.8	2.1	0.025	0.2	5	2.125	6.925
11/15/2007	68	8	80	4.8	1.9	0.026	0.12	4.92	1.926	6.726
2/14/2008	2	2	2	5.4	1.7	0.025	0.2	5.6	1.725	7.125
5/14/2008	2	2	2	5	1.7	0.031	0.5	5.5	1.731	6.731

**Malibu Civic Center Area  
Well C-1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0					10	10
Sample Date									
4/24/2003	0	0	0	3.27	0.6	0	4.1	0.6	3.87
5/30/2003	648.8	0	22	1.97	0.05	0	3.2	0.05	2.02
6/30/2003	61.3	0	20	2.88	0	0	3.5	0	2.88
7/24/2003	178.5	0	17	0.51	0	0	5.4	0	0.51
8/19/2003	63.7	4	17	3.02	0	0	6.9	0	3.02
9/30/2003	2	6	6	8.57	0	0	9.7	0	8.57
10/21/2003	0	2	2	7.22	0	0	10	0	7.22
11/18/2003	0	0	8	3.75	0.02	0	8.3	0.02	3.77
12/16/2003	0	0	0	3.42	0	0	6.3	0	3.42
1/20/2004	0	2	2	0	0.06	0.02	7.3	0.08	0.08
2/17/2004	1	0	0	3.78	0.08	0	6.3	0.08	3.86
3/16/2004	32.3	0	0	2.65	0.04	0	4.7	0.7	2.69

**Malibu Civic Center Area  
Well C-2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0					10	10
Sample Date									
4/24/2003	200	0	14	0.11	0.61	0	0.57	0.61	0.72
5/30/2003	2	0	4	0.44	0.07	0	0.85	0.07	0.51
6/30/2003	6.3	0	0	0.76	0	0	0.88	0	0.76
7/24/2003	2419.2	7	7	0.22	0	0	0.55	0	0.22
8/19/2003	1203.3	0	50	0.47	0	0	0.77	0	0.47
9/30/2003	15.5	0	0	0.44	0	0	0.87	0	0.44
10/21/2003	0	0	0	0.27	0	0	0.79	0	0.27
11/18/2003	4	8	30	0.21	0.03	0	0.78	0.03	0.24
12/16/2003	571.7	0	0	0.3	0	0	1	0	0.3
1/20/2004	4.1	0	0	0.48	0.02	0.02	0.94	0.04	0.52
2/17/2004	7.3	0	0	0.61	0.08	0	1.3	0.08	0.69
3/16/2004	4.1	0	0	0.23	0.03	0	0.84	0.7	0.26



**Malibu Civic Center Area  
Well P-1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	0	0	0	0.08	6.58	0	0.15	6.58	6.66
5/29/2003	19.5	0	2	0.21	2.85	0	0	2.85	3.06
6/26/2003	0	0	4	0.08	5.49	0	0.85	5.49	5.57
7/21/2003	0	0	2	0.41	3.55	0	0.22	3.55	3.96
8/18/2003	0	0	4	0.13	7.16	0	0.18	7.16	7.29
9/29/2003	9.8	0	0	0	2.82	0	0.42	2.82	2.82
10/20/2003	1	0	2	0	4.07	0	0.1	4.07	4.07
11/18/2003	1	0	14	0.08	4.99	0	0.74	4.99	5.07
12/15/2003	1	0	0	0	2.89	0	0.18	2.89	2.89
1/19/2004	0	0	4	0	4.58	0	0	4.58	4.58
2/16/2004	0	0	2	0.25	3.53	0	0.61	3.53	3.78
3/15/2004	0	0	0	0.04	3.75	0	0.11	0.7	3.79

**Malibu Civic Center Area  
Well P-7**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	3.1	0	23	0	0.68	0	0.26	0.68	0.68
5/28/2003	66.4	2	240	0.5	0.19	0	0.29	0.19	0.69
6/27/2003	0	0	0	0.2	0.11	0	0.37	0.11	0.31
7/24/2003	65.3	0	4	0.23	0	0	65.3	0	0.23
8/19/2003	547.5	0	0	0.08	0	0	0.27	0	0.08
9/30/2003	721.5	9	9	0	0	0	0.44	0	0
10/21/2003	125.4	23	1600	0	0.07	0	0.65	0.07	0.07
11/18/2003	55.9	50	900	0.04	0.09	0.02	0.35	0.11	0.15
12/16/2003	3	8	23	0	0.57	0.03	0.23	0.6	0.6
1/20/2004	12	12	80	0.04	0.5	0.04	0.52	0.54	0.58
2/17/2004	22.5	2	23	0.02	0.54	0.05	0.24	0.59	0.61
3/16/2004	7.4	0	30	0.02	0.57	0	0.18	0.7	0.59

**Malibu Civic Center Area  
Well P-9**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/23/2003	4.1	0	0	0.88	1.51	0	1.6	1.51	2.39
5/29/2003	21.3	0	0	0.31	1.83	0	1.3	1.83	2.14
6/26/2003	4.1	0	0	3.35	0.14	0	3.4	0.14	3.49
7/21/2003	2	0	2	3	0.71	0	3.2	0.71	3.71
8/18/2003	17.1	0	4	1.69	0.42	0	3.4	0.42	2.11
9/29/2003	44.1	0	4	1.56	0.42	0		0.42	1.98
10/20/2003	13.2	0	2	1.49	0.66	0	1.5	0.66	2.15
11/17/2003	1	0	6	2.11	0.12	0	5	0.12	2.23
12/16/2003	8.5	0	0	1.17	1.11	0	2	1.11	2.28
1/20/2004	13.4	4	8	0.51	2.13	0.1	1	2.23	2.74
2/17/2004	20.9	0	0	3.09	0.15	0	3.9	0.15	3.24
3/16/2004	45.7	0	110	0.03	5.12	0.05	3.6	0.7	5.2

**Malibu Civic Center Area  
Well SMBRP-1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/23/2003	0	7	50	0.78	0.15	0	2.7	0.15	0.93
5/30/2003	11	0	2	0.52	0.49	0	2	0.49	1.01
6/27/2003	0	0	0	2.52	0	0	4.9	0	2.52
7/24/2003	2419.2	0	50	1.72	0.14	0	2.5	0.14	1.86

**Malibu Civic Center Area  
Well SMBRP-2**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	7200	3000	3000	2.72	0	0	29	0	2.72
5/30/2003	2419.2	70	300	0.72	0.05	0	14	0.05	0.77
6/30/2003	2419.2	120	250	1.29	0.11	0	20	0.11	1.4
7/24/2003	2419.2	4	500	0.56	0	0	6	0	0.56
8/20/2003	0	0	4	0.57	0	0	10	0	0.57
9/30/2003	2419.2	0	9	0	0	0	1.1	0	0
10/21/2003	2419.2	0	0	0	0	0	1.3	0	0
11/18/2003	1119.8	0	23	0.07	0.14	0	0.9	0.14	0.21
12/16/2003	1413.6	0	2	0	0.18	0	0.93	0.18	0.18
1/20/2004	1413.6	0	0	0.25	0.06	0.02	0.81	0.08	0.33
2/17/2004	435.2	0	0	0.33	0.09	0	0.64	0.09	0.42
3/16/2004	25.7	0	30	0.17	0.07	0	0.58	0.7	0.24

**Malibu Civic Center Area  
Well SMBRP-3c**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	30.8	0	0	0	2.82	0	0.1	2.82	2.82
5/30/2003	2419.2	0	0	0.2	2.78	0	0.37	2.78	2.98
6/27/2003	0	0	0	0.22	0.97	0	0.4	0.97	1.19
7/24/2003	4.1	0	0	0.24	0	0	0.41	0	0.24
8/19/2003	7.4	0	0	0.14	0.52	0.25	7.4	0.77	0.91
9/30/2003	1	0	0	0	0.37	0	0.44	0.37	0.37
10/21/2003	2	2	1600	0	0.37	0	1.4	0.37	0.37
11/18/2003	1	0	17	0	0.48	0	0.16	0.48	0.48
12/16/2003	1	0	0	0	1	0	0.2	1	1
1/20/2004	1	2	4	0.03	2.31	0.02	0	2.33	2.36
2/17/2004	1	0	0	0.16	3.79	0	0.38	3.79	3.95
3/16/2004	0	0	0	0.12	4.27	0	0.18	0.7	4.39

**Malibu Civic Center Area  
Well SMBRP-6**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	0	0	13	0	2.02	0	0.36	2.02	2.02
5/30/2003	16.5	11	26	0.16	0.33	0	1.2	0.33	0.49
6/27/2003	0	2	2	0.16	0.21	0	1.1	0.21	0.37
7/24/2003	1	0	2	0.36	0	0	0.44	0	0.36
8/19/2003	0	0	0	0.05	0.22	0	0.14	0.22	0.27
9/30/2003	0	4	110	0	0.17	0	0.44	0.17	0.17
10/21/2003	0	0	900	0	0.27	0	1.3	0.27	0.27
11/18/2003	2	33	34	0	0.93	0	0.2	0.93	0.93
12/16/2003	0	0	0	0	1.55	0	0.35	1.55	1.55
1/20/2004	7.4	0	2	0	4.43	0.03	0	4.46	4.46
2/17/2004	5.2	0	0	0.05	6.88	0	0.27	6.88	6.93
3/16/2004	10.7	11	110	0.11	2.74	0	0.3	0.7	2.85

**Malibu Civic Center Area  
Well SMBRP-9**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/23/2003	0	0	0	0.01	3.03	0	1.1	3.03	3.04
5/28/2003	4.1	0	4	0.47	32.1	0	0	32.1	32.57
6/26/2003	0	0	11	0.4	25.8	0	0.52	25.8	26.2
7/21/2003	2419.2	240	1600	0.29	21.6	0	0.22	21.6	21.89
8/18/2003	2419.2	0	500	0.02	18.7	0	0.29	18.7	18.72
9/29/2003	6.3	0	7	0	13.2	0	0.16	13.2	13.2
10/20/2003	124.5	0	0	0	31.2	0	0.1	31.2	31.2
11/17/2003	1	17	500	0.15	22.3	0	0.48	22.3	22.45
12/15/2003	0	0	0	0	21.9	0	0.48	21.9	21.9
1/19/2004	14.2	0	0	0	30.8	0	0	30.8	30.8
2/16/2004	0	0	0	0.09	34.7	0.02	0.11	34.72	34.81
3/16/2004	10.7	0	0	0.02	38.5	0	0.24	0.7	38.52



**Malibu Civic Center Area  
Well SMBRP-10c**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/24/2003	0	0	0	0.09	3.41	0	0.35	3.41	3.5
5/29/2003	157.8	0	2	0.47	1.66	0	1.1	1.66	2.13
6/26/2003	0	2	4	0.04	1.27	0	1.3	1.27	1.31
7/21/2003	770.1	2	130	0.44	0.93	0	2.3	0.93	1.37
8/18/2003	1986.3	0	0	0.11	0.65	0	1	0.65	0.76
9/29/2003	33.7	0	4	0	0.32	0	2.7	0.32	0.32
10/20/2003	125.7	2	2	0	0.67	0	2.6	0.67	0.67
11/17/2003	43.5	0	0	0.06	0.7	0	1.4	0.7	0.76
12/15/2003	5.2	0	2	0	0.59	0	1.5	0.59	0.59
1/19/2004	2	0	0	0	1.43	0	0.24	1.43	1.43
2/16/2004	1	0	0	0.26	1.31	0	1.3	1.31	1.57
3/15/2004	5.1	0	0	0.05	1.79	0.02	1.3	1.81	1.86

**Malibu Civic Center Area  
Well SMBRP-11**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	0	0	0	0.04	5.66	0	0.85	5.66	5.7
5/28/2003	2419.2	0	4	0.3	3.85	0	0.51	3.85	4.15
6/26/2003	0	0	2	0.03	2.48	0	0.49	2.48	2.51
7/21/2003	1203.3	2	110	0.37	1.48	0	0.52	1.48	1.85
8/18/2003	2419.2	2	240	0.17	1.35	0	0.98	1.35	1.52
9/29/2003	28.1	4	7	0	0.55	0	0.8	0.55	0.55
10/20/2003	3	0	0	0	0.45	0	0.16	0.45	0.45
11/18/2003	0	13	13	0.11	0.09	0	0.38	0.09	0.2
12/16/2003	7	0	0	0	0.26	0	0.29	0.26	0.26
1/20/2004	15.3	0	0	0	1.54	0.03	0.2	1.57	1.57
2/17/2004	5	0	0	0.11	0.25	0	0.28	0.25	0.36
3/15/2004	2	0	0	0.04	3.43	0	0.11	3.43	3.47

**Malibu Civic Center Area  
Well SMBRP-12**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	2	2	50	5.14	0	0	13	0	5.14
5/28/2003	0	4	4	9.29	0	0	12	0	9.29
6/27/2003	0	0	0	10.2	0	0	12	0	10.2
7/21/2003	0	0	0	8.6	0.06	0	11	0.06	8.66
8/18/2003	1	0	0	6.45	0	0	12	0	6.45
9/29/2003	0	0	0	7.26	0	0	12	0	7.26
10/20/2003	0	0	0	6.29	0	0	6.5	0	6.29
11/17/2003	0	0	0	3.66	0.02	0	8.7	0.02	3.68
12/15/2003	1	2	4	7.19	0.02	0	9.6	0.02	7.21
1/19/2004	0	2	2	7.82	0.07	0	22	0.07	7.89
2/16/2004	1	0	0	0	0.03	0	12	0.03	0.03
3/15/2004	0	0	0	1.01	0	0	12	0	1.01

**Malibu Civic Center Area  
Well SMBRP-13**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/22/2003	34.1	0	0	0.16	1	0	0.59	1	1.16
5/28/2003	54.8	0	2	6.03	0.49	0	0.28	0.49	6.52
6/27/2003	5	0	0	0.15	0.3	0	0.35	0.3	0.45
7/21/2003	0	0	0	0.38	0.23	0	0.4	0.23	0.61
8/18/2003	2	0	8	0.09	0.09	0	0.34	0.09	0.18
9/29/2003	5.1	0	0	0.03	0.06	0	0.62	0.06	0.09
10/20/2003	2	0	0	0	0	0	0.15	0	0
11/17/2003	2	0	2	0.06	0.03	0	0.27	0.03	0.09
12/15/2003	19.9	0	0	0.14	0.02	0	1.2	0.02	0.16
1/19/2004	2	0	2	0	0.24	0	0	0.24	0.24
2/16/2004	26	2	2	0.05	0.42	0	0.4	0.42	0.47
3/15/2004	7.4	0	2	0.02	0.41	0	1.2	0.41	0.43

**Malibu Civic Center Area  
Well SMBRP-14**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/22/2003	21.1	17000	17000	17.4	0	0	25	0	17.4
5/28/2003	91.4	1600	1600	0.26	0	0	15	0	0.26
6/27/2003	0	1600	1600	13.1	0	0	16	0	13.1
7/21/2003	2419.2	900	1600	23.8	0.18	0	26	0.18	23.98
8/18/2003	16.6	220	1600	8.23	0	0	28	0	8.23
9/29/2003	8.4	1600	1600	21.1	0.07	0	26	0.07	21.17
10/20/2003	1	300	1600	20.4	0	0	100	0	20.4
11/17/2003	5.2	500	1600	15.5	0.03	0.02	33	0.05	15.55
12/15/2003	2	1600	1600	16.4	0.02	0	31	0.02	16.42
1/19/2004	22.8	1600	1600	16.2	0.05	0.02	36	0.07	16.27
3/15/2004	6.3	1600	1600	0.48	0.02	0	22	0.02	0.5

**Malibu Civic Center Area  
Well SMBRP-15b**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/25/2003	67.6	0	0	0.14	0.91	0	1	0.91	1.05
5/28/2003	2419.2	0	21	1.21	1.03	0	0.42	1.03	2.24
6/26/2003	3.1	0	0	0.05	0.94	0	0.28	0.94	0.99
7/21/2003	0	0	0	0.37	0.94	0	0.24	0.94	1.31
8/18/2003	2	0	2	0.05	1.31	0	0.18	1.31	1.36
9/29/2003	0	2	2	0	1.15	0	0.4	1.15	1.15
10/20/2003	0	0	0	0.18	1.64	0	0.48	1.64	1.82
11/18/2003	0	0	0	0	1.56	0.03	0.4	1.59	1.59
12/15/2003	0	0	0	0.02	1.7	0	0.66	1.7	1.72
1/20/2004	0	0	0	0	1.46	0.05	0	1.51	1.51
2/17/2004	9.1	0	0	0.09	1.24	0.06	0.2	1.3	1.39
3/16/2004	2	0	2	0.08	1.05	0.03	0.25	1.08	1.16

**Malibu Civic Center Area  
Well SMBRP-16**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
4/23/2003	33.3	0	0	0.2	2.88	0.49	0.64	3.37	3.57
5/28/2003	2419.2	0	4	6.08	4.02	0.31	1.2	4.33	10.41
6/26/2003	29.2	0	0	0.83	2.38	0.19	1.6	2.57	3.4
7/21/2003	5.2	0	0	0.52	4.5	0.24	0.56	4.74	5.26
8/18/2003	2419.2	0	0	0.04	4.58	0	1.1	4.58	4.62
9/29/2003	42.8	0	0	0	2.77	0.1	1.4	2.87	2.87
10/20/2003	0	0	0	0	3.66	0	0.73	3.66	3.66
11/17/2003	3.1	0	2	0.32	3	0.09	1.5	3.09	3.41
12/15/2003	1	0	0	0.04	4.11	0	1.1	4.11	4.15
1/19/2004	0	0	0	0.06	4.68	0.06	0.1	4.74	4.8
2/16/2004	0	0	2	0.04	5	0.03	0.99	5.03	5.07
3/15/2004	1	0	2	0.03	0	5.12	0.05	0.7	5.15

**Malibu Water Pollution Control Plant  
Well WPCP 1**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
4/19/1999	/	0	0	0	10.3	0	0.108	0.108	10.3	10.3
1/24/2000	/	0	0	0	18.2	0	0	0	18.2	18.2
5/16/2000	/	0	0	0	18.7	0	0	0	18.7	18.7
8/8/2000	/	0	0	0.104	21	0	0.17	0.274	21	21.104
11/14/2000	/	0	0	0	15.3	0	0.168	0.168	15.3	15.3
3/13/2001	/	0	0	0	17.7	0	0	0	17.7	17.7
5/8/2001	/	0	0	0	21.4	0	0	0	21.4	21.4
8/7/2001	/	0	0	0	20.8	0	0.16	0.16	20.8	20.8
10/2/2001	/	0	0	0	16.6	0	0.12	0.12	16.6	16.6
1/22/2002	/	0	0	0.143	18.7	0	0	0.143	18.7	18.843
4/23/2002	/	0	0	0	21.9	0	0.234	0.234	21.9	21.9
7/16/2002	/	0	0	0.0809	25.7	0	0	0.081	25.7	25.7809
10/29/2002	/	0	0	1.09	23.9	0	4.89	5.98	23.9	24.99
2/25/2003	/	0	0	0	30.5	2.4	0.155	0.155	32.9	32.9
5/13/2003	/	0	0	0	22.4	0	0.15	0.15	22.4	22.4
8/26/2003	/	0	0	0	24.2	0.271	0.106	0.106	24.471	24.471
10/21/2003	/	0	0	0.11	31.4	0.353	0	0.11	31.753	31.863
1/13/2004	/	0	0	0	24.8	0.4	0.476	0.476	25.2	25.2
4/13/2004	/	0	0	0	37.9	0	0	0	37.9	37.9
7/13/2004	/	0	0	0.125	31.4	0.076	0	0.125	31.476	31.601
10/5/2004	/	0	0	0	23.26	0.18	0	0	23.44	23.44
1/18/2005	/	0	0	0	27	0	0.382	0.382	27	27
4/12/2005	/	0	0	0	21.6	0	0	0	21.6	21.6
7/19/2005	/	0	0	0	24.839	0.164	0	0	25.003	25.003
10/24/2005	/	0	0	0.108	18.5	0.849	0	0.108	19.349	19.457
1/30/2006	/	0	0	0	28.7	0	0.196	0.196	28.7	28.7
5/8/2006	/	0	0	0	23	0	0	0	23	23
7/31/2006	/	0	800	0	24.2	0.28	0	0	24.48	24.48
1/9/2007	/	0	0	0	24.2	0	0	0	24.2	24.2
4/3/2007	/	0	0	0	17.8	0.067	0.11	0.11	17.867	17.867
7/3/2007	/	0	0	0	7.43	0	0.71	0.71	7.43	7.43
10/9/2007	/	0	0	0	15.8	0	0	0	15.8	15.8
1/8/2008	/	0	0	0	16.6	0	0	0	16.6	16.6
4/22/2008	/	0	0	0	21.6	0	0	0	21.6	21.6
7/15/2008	/	0	0	0	22.5	0	0	0	22.5	22.5
10/20/2008	/	0	0	0.12	20.4	0	0.16	0.28	20.4	20.52



**Malibu Water Pollution Control Plant  
Well WPCP 2**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
4/19/1999	/	0	0	0	26	0	0	0	26	26
1/24/2000	/	0	0	0	0.657	0	1.06	1.06	0.657	0.657
5/16/2000	/	0	0	0	1.71	0	0	0	1.71	1.71
8/8/2000	/	0	0	0.174	1.09	0	0.578	0.752	1.09	1.264
11/14/2000	/	0	0	0	1.79	0	0.12	0.12	1.79	1.79
3/13/2001	/	0	0	0	0.043	0	0.156	0.156	0.043	0.043
5/8/2001	/	0	0	0	4.4	0	0.4	0.4	4.4	4.4
8/7/2001	/	0	0	0	8.5	0	0	0	8.5	8.5
10/2/2001	/	0	0	0.152	7.9	0	0	0.152	7.9	8.052
1/22/2002	/	0	0	1.61	1.7	0	0.136	1.746	1.7	3.31
4/23/2002	/	0	0	3.3	0.4	0	0.28	3.58	0.4	3.7
7/16/2002	/	0	4	0.143	0	0	5.06	5.203	0	0.143
10/29/2002	/	0	0	2.89	0.535	5.05	1.07	3.96	5.585	8.475
2/25/2003	/	0	0	0.198	4.99	0	0.116	0.314	4.99	5.188
5/13/2003	/	0	0	2.94	0.409	0.344	0	2.94	0.753	3.693
8/26/2003	/	0	0	0.165	5.78	0.405	0.339	0.504	6.185	6.35
10/21/2003	/	0	0	2.22	0.429	0.438	0	2.22	0.867	3.087
1/13/2004	/	0	0	0.343	3.5	0.7	0.481	0.824	4.2	4.543
4/13/2004	/	0	0	3.323	0	0	0	3.323	0	3.323
7/13/2004	/	0	0	0	5.62	0	0	0	5.62	5.62
12/6/2004	/	0	0	0	6.842	0	0.15	0.15	6.842	6.842
1/18/2005	/	0	170	0	9.72	0	1.7	1.7	9.72	9.72
4/12/2005	/	0	34	0	6.95	0	0	0	6.95	6.95
7/19/2005	/	0	0	0	6.684	0	0	0	6.684	6.684
10/24/2005	/	0	0	0	6.98	0	0.415	0.415	6.98	6.98
1/30/2006	/	0	300	0	6.55	0	0.251	0.251	6.55	6.55
5/8/2006	/	0	0	0	6.48	0	0.24	0.24	6.48	6.48
7/31/2006	/	0	230	0	5.76	0	0.206	0.206	5.76	5.76
1/9/2007	/	0	0	0	5.2	0	0	0	5.2	5.2
4/3/2007	/	0	80	0	0.225	0	0.1	0.1	0.225	0.225
7/3/2007	/	0	0	0	4.6	0	0.56	0.56	4.6	4.6
10/9/2007	/	0	0	0	3.6	0	0.2	0.2	3.6	3.6
1/8/2008	/	0	0	0	3.39	0	0.24	0.24	3.39	3.39
4/22/2008	/	0	40	0	2.78	0	0.55	0.55	2.78	2.78
7/15/2008	/	0	0	0	3.77	0	0	0	3.77	3.77
10/20/2008	/	0	0	0	2.8	0	0.21	0.21	2.8	2.8

**Malibu Water Pollution Control Plant  
Well WPCP 3**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
4/19/1999	/	0	0	0	16.8	0	0	0	16.8	16.8
1/24/2000	/	0	0	0	13.2	0	0	0	13.2	13.2
5/16/2000	/	0	0	0	15.78	0.23	0	0	16.01	16.01
8/8/2000	/	0	0	0	16.1	0	0.238	0.238	16.1	16.1
11/14/2000	/	0	0	0	19.7	0.47	0	0	20.17	20.17
3/14/2001	/	0	20	0	14.8	0	0.229	0.229	14.8	14.8
5/8/2001	/	0	0	0	12.8	0	0	0	12.8	12.8
8/7/2001	/	0	0	0	12.1	0	0	0	12.1	12.1
10/2/2001	/	0	0	0	10.8	0	0.13	0.13	10.8	10.8
1/22/2002	/	0	0	0.084	16.5	0	0	0.084	16.5	16.584
4/23/2002	/	0	0	0.107	15	0	0.163	0.27	15	15.107
7/16/2002	/	0	0	0	14.5	0	0	0	14.5	14.5
10/29/2002	/	0	0	0.349	14.3	0	0	0.349	14.3	14.649
2/25/2003	/	0	0	0	80.7	0	0	0	80.7	80.7
5/13/2003	/	0	0	0	65.5	0	0	0	65.5	65.5
8/26/2003	/	0	0	0	22.5	0	0	0	22.5	22.5
10/21/2003	/	0	0	0	22.8	0.453	0.38	0.38	23.253	23.253
1/13/2004	/	0	300	0	24.8	1.1	0.31	0.31	25.9	25.9
4/13/2004	/	0	0	0	24.8	0	0.229	0.229	24.8	24.8
7/13/2004	/	0	0	0	19.1	0	0	0	19.1	19.1
12/6/2004	/	0	16,000	0	9.868	0.228	0.37	0.37	10.096	10.096
1/18/2005	/	0	50,000	0	18.6	0	1.03	1.03	18.6	18.6
4/12/2005	/	0	900	0	14.8	0	0	0	14.8	14.8
7/19/2005	/	0	300	0	32.52	0	0	0	32.52	32.52
10/24/2005	/	0	170	0	23.3	0	0.161	0.161	23.3	23.3
1/30/2006	/	0	0	0	37.9	0	0	0	37.9	37.9
5/8/2006	/	0	0	0	43.6	0	0	0	43.6	43.6
7/31/2006	/	0	0	0	47.4	0	0.129	0.129	47.4	47.4
1/9/2007	/	0	0	0	25.1	0	0	0	25.1	25.1
4/3/2007	/	0	0	0	31.6	0	0.1	0.1	31.6	31.6
7/3/2007	/	0	0	0	19.9	0	0.75	0.75	19.9	19.9
10/9/2007	/	0	0	0	13.2	0	0	0	13.2	13.2
1/8/2008	/	0	0	0	11.3	0	0	0	11.3	11.3
4/22/2008	/	0	0	0	11.2	0	0	0	11.2	11.2
7/15/2008	/	0	0	0	19	0	0	0	19	19
10/20/2008	/	0	0	0	11.9	0	0.11	0.11	11.9	11.9

**Malibu Water Pollution Control Plant  
Well WPCP 4**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
8/7/2001	/	0	2	0	23	0	0.18	0.18	23	23
10/2/2001	/	0	0	0	16.7	0	0.27	0.27	16.7	16.7
5/16/2000	/	0	0	0	18.7	0	0	0	18.7	18.7
8/8/2000	/	0	0	0.104	21	0	0.17	0.274	21	21.104
11/14/2000	/	0	0	0	15.3	0	0.168	0.168	15.3	15.3
3/13/2001	/	0	0	0	17.7	0	0	0	17.7	17.7
5/8/2001	/	0	0	0	21.4	0	0	0	21.4	21.4
8/7/2001	/	0	0	0	20.8	0	0.16	0.16	20.8	20.8
10/2/2001	/	0	0	0	16.6	0	0.12	0.12	16.6	16.6
1/22/2002	/	0	17	0.092	1.31	0.02	0	0.092	1.33	1.422
4/23/2002	/	0	700	0.12	1.46	0	0.28	0.4	1.46	1.58
7/16/2002	/	0	1,600	0.02	2.57	0	0.29	0.31	2.57	2.59
10/29/2002	/	0	140	0	20.2	0	0	0	20.2	20.2
2/25/2003	/	1,600	1,600	0	9.68	3.19	0	0	12.87	12.87
5/13/2003	/	1	55.2	0	1.75	0	0.907	0.907	1.75	1.75
8/26/2003	/	0	240	0	3.79	0	0	0	3.79	3.79
10/21/2003	/	170	1700	0.637	1.77	0.332	0	0.637	2.102	2.739
1/13/2004	/	0	24,000	0	0.8	0.4	0.367	0.367	1.2	1.2
4/13/2004	/	0	3,000	0	1.98	0	0.309	0.309	1.98	1.98
7/13/2004	/	0	0	0	1.77	0	0.13	0.13	1.77	1.77
10/5/2004	/	0	0	0	24.39	0	0	0	24.39	24.39
1/18/2005	/	0	160,000	0	21	0	0.778	0.778	21	21
4/12/2005	/	0	4	0.127	27.5	0.164	0.241	0.368	27.664	27.791
7/19/2005	/	0	220	0	25.97	0	0	0	25.97	25.97
10/24/2005	/	0	0	0.119	27.1	0.752	0	0.119	27.852	27.971
1/30/2006	/	0	500	0	35.7	0	0	0	35.7	35.7
5/8/2006	/	0	2,400	0	25.1	0	0	0	25.1	25.1
7/31/2006	/	0	9,000	0	26.8	0	0	0	26.8	26.8
1/9/2007	/	0	160,000	0	22.8	0	0	0	22.8	22.8
4/3/2007	/	0	90,000	0	18.1	0	0	0	18.1	18.1
7/3/2007	/	0	160,000	0	6.86	0.48	0.58	0.58	7.34	7.34
10/9/2007	/	0	1,300	0	11.2	0	0.1	0.1	11.2	11.2
1/8/2008	/	0	130	0	12.8	0	0	0	12.8	12.8
4/22/2008	/	0	13,000	0.14	19.4	0	0	0.14	19.4	19.54
7/15/2008	/	0	2,800	0	19.4	0	0	0	19.4	19.4
10/20/2008	/	0	230	0.1	18.2	0	0.16	0.26	18.2	18.3

**Malibu Water Pollution Control Plant  
Well WPCP 5**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
5/16/2000	/	0	0	0	18.7	0	0	0	18.7	18.7
8/8/2000	/	0	0	0.104	21	0	0.17	0.274	21	21.104
11/14/2000	/	0	0	0	15.3	0	0.168	0.168	15.3	15.3
3/13/2001	/	0	0	0	17.7	0	0	0	17.7	17.7
5/8/2001	/	0	0	0	21.4	0	0	0	21.4	21.4
8/7/2001	/	0	6	0	13	0	0.11	0.11	13	13
8/7/2001	/	0	0	0	20.8	0	0.16	0.16	20.8	20.8
10/2/2001	/	0	0	0	11.5	0	0.167	0.167	11.5	11.5
10/2/2001	/	0	0	0	16.6	0	0.12	0.12	16.6	16.6
1/22/2002	/	0	4	0.1	13.1	0	0.127	0.227	13.1	13.2
4/23/2002	/	0	50	0	7.79	0	0	0	7.79	7.79
7/16/2002	/	0	23	0	5.4	0	0	0	5.4	5.4
10/29/2002	/	0	20	0.124	10.6	0	0.268	0.392	10.6	10.724
2/25/2003	/	0	0	0	7.83	0	0.18	0.18	7.83	7.83
4/24/2003	0	0	0	0.1	3.52	0	2.9	3	3.52	3.62
5/13/2003	/	0	13.4	0	4.45	0	0.142	0.142	4.45	4.45
5/30/2003	6	0	4	0.07	15.3	0	0.06	0.13	15.3	15.37
6/30/2003	2	0	17	0.03	7.49	0	0.02	0.05	7.49	7.52
7/24/2003	0	0	4	0.39	14.9	0	0	0.39	14.9	15.29
8/19/2003	2	0	0	0.02	11.7	0	1.58	1.6	11.7	11.72
8/26/2003	/	0	0	0	8.96	0	0.166	0.166	8.96	8.96
9/30/2003	5.2	0	0	0	6.13	0	0.16	0.16	6.13	6.13
10/21/2003	/	0	0	0	3.41	0.545	0.242	0.242	3.955	3.955
10/21/2003	1553.1	0	0	0	6.46	0	2	2	6.46	6.46
11/18/2003	4.1	8	23	0	2.39	0	0.16	0.16	2.39	2.39
12/16/2003	0	0	2	0	28.5	0.39	0.19	0.19	28.89	28.89
1/13/2004	/	0	0	0	1.6	0.5	0.124	0.124	2.1	2.1
1/20/2004	0	0	0	0	1.31	0.02	0	0	1.33	1.33
2/17/2004	0	0	0	0.12	1.46	0	0.16	0.28	1.46	1.58
3/16/2004	0	0	0	0.02	2.57	0	0.27	0.29	0.7	2.59
4/13/2004	/	0	0	0.103	2.82	0	0	0.103	2.82	2.923
7/13/2004	/	0	0	0	17.2	0	0	0	17.2	17.2
10/5/2004	/	0	0	0	18.58	0	0.153	0.153	18.58	18.58
1/18/2005	/	0	40	0	22.8	0	0.568	0.568	22.8	22.8
4/12/2005	/	0	0	0.159	23.9	0	0.181	0.34	23.9	24.059
10/24/2005	/	0	0	0	30.3	0	0	0	30.3	30.3
1/30/2006	/	0	230	0	36.8	0	0	0	36.8	36.8
5/8/2006	/	0	0	0	27.8	0	0	0	27.8	27.8
7/31/2006	/	0	130	0	29.1	0	0	0	29.1	29.1
1/9/2007	/	0	0	0	26.4	0	0	0	26.4	26.4
4/3/2007	/	0	0	0	23.5	0	0	0	23.5	23.5
7/3/2007	/	0	0	0	14.7	0	0.56	0.56	14.7	14.7
10/9/2007	/	0	0	0	20.7	0	0	0	20.7	20.7
1/8/2008	/	0	0	0	18.8	0	0	0	18.8	18.8
4/22/2008	/	0	0	0	22.3	0	0	0	22.3	22.3
7/15/2008	/	0	0	0	20.8	0	0	0	20.8	20.8
10/20/2008	/	0	0	0	16.7	0	0.13	0.13	16.7	16.7

**Malibu Water Pollution Control Plant  
Well WPCP 6**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
8/7/2001	/	0	30	0	14.6	0	0	0	14.6	14.6
10/2/2001	/	0	0	0	11.5	0	0.17	0.17	11.5	11.5
5/16/2000	/	0	0	0	18.7	0	0	0	18.7	18.7
8/8/2000	/	0	0	0.104	21	0	0.17	0.274	21	21.104
11/14/2000	/	0	0	0	15.3	0	0.168	0.168	15.3	15.3
3/13/2001	/	0	0	0	17.7	0	0	0	17.7	17.7
5/8/2001	/	0	0	0	21.4	0	0	0	21.4	21.4
8/7/2001	/	0	0	0	20.8	0	0.16	0.16	20.8	20.8
10/2/2001	/	0	0	0	16.6	0	0.12	0.12	16.6	16.6
1/22/2002	/	0	0	0	18.3	0	0.128	0.128	18.3	18.3
4/23/2002	/	0	8	0	15.5	0.1	0	0	15.6	15.6
7/16/2002	/	0	0	0	20.3	0.116	0	0	20.416	20.416
10/29/2002	/	0	0	0.312	22.6	0.195	0	0.312	22.795	23.107
2/25/2003	/	0	0	0.114	20.9	0	0.174	0.288	20.9	21.014
5/13/2003	/	0	1	0	24.4	0	0	0	24.4	24.4
8/26/2003	/	0	0	0	25.5	0.317	0	0	25.817	25.817
10/21/2003	/	0	2	0.113	23.9	0.268	0	0.113	24.168	24.281
1/13/2004	/	0	0	0	30	0.6	0.159	0.159	30.6	30.6
4/13/2004	/	0	80	0	28.9	0	0.232	0.232	28.9	28.9
7/13/2004	/	0	0	0	29.8	0.204	10.5	10.5	30.004	30.004
10/5/2004	/	0	0	0	23.94	0.16	0.37	0.37	24.1	24.1
1/18/2005	/	0	20	0	20.8	0	0.475	0.475	20.8	20.8
4/12/2005	/	0	0	0	19.4	0	0	0	19.4	19.4
7/19/2005	/	0	0	0	22.4	0	0	0	22.4	22.4
10/24/2005	/	0	40	0	20.6	1.19	0	0	21.79	21.79
1/30/2006	/	0	20	0	28.9	0	0	0	28.9	28.9
5/8/2006	/	0	0	0	19.5	0	0	0	19.5	19.5
7/31/2006	/	0	40	0	22.2	0	0	0	22.2	22.2
1/9/2007	/	0	0	0	23.9	0	0	0	23.9	23.9
4/3/2007	/	0	0	0	27.5	0	0	0	27.5	27.5
7/3/2007	/	0	0	0	16.5	0	0.46	0.46	16.5	16.5
10/9/2007	/	0	0	0	14.2	0	0	0	14.2	14.2
1/8/2008	/	0	0	0	13.6	0	0	0	13.6	13.6
4/22/2008	/	0	0	0	19.1	0	0	0	19.1	19.1
7/15/2008	/	0	0	0	21.7	0	0	0	21.7	21.7
10/20/2008	/	0	220	0	21.8	0	0.12	0.12	21.8	21.8

**Malibu Water Pollution Control Plant  
Well WPCP 7**

Parameter	Enterococcus	Fecal Coliform	Total Coliform	Ammonia	Nitrate	Nitrite	Organic Nitrogen	TKN	Nitrate + Nitrite	Ammonia + Nitrate + Nitrite
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
8/7/2001	/	0	4	0	22	0	0.15	0.15	22	22
10/2/2001	/	0	0	0	10.8	0	0.215	0.215	10.8	10.8
5/16/2000	/	0	0	0	18.7	0	0	0	18.7	18.7
8/8/2000	/	0	0	0.104	21	0	0.17	0.274	21	21.104
11/14/2000	/	0	0	0	15.3	0	0.168	0.168	15.3	15.3
3/13/2001	/	0	0	0	17.7	0	0	0	17.7	17.7
5/8/2001	/	0	0	0	21.4	0	0	0	21.4	21.4
8/7/2001	/	0	0	0	20.8	0	0.16	0.16	20.8	20.8
10/2/2001	/	0	0	0	16.6	0	0.12	0.12	16.6	16.6
1/22/2002	/	0	0	0	16.5	0.438	0.121	0.121	16.938	16.938
4/23/2002	/	0	0	0	19.7	0.207	0	0	19.907	19.907
7/16/2002	/	0	0	0	21.1	0.335	0	0	21.435	21.435
10/29/2002	/	0	40	0	23	1.02	0.46	0.46	24.02	24.02
2/25/2003	/	0	0	0	26.2	0.48	0	0	26.68	26.68
5/13/2003	/	2	47.1	0	26.9	0.225	0	0	27.125	27.125
8/26/2003	/	0	0	0	15.1	0.472	0.234	0.234	15.572	15.572
10/21/2003	/	0	0	1.04	18.2	0	0	1.04	18.2	19.24
1/13/2004	/	0	0	0	19.8	0	0.288	0.288	19.8	19.8
4/13/2004	/	0	0	0	16.4	0	0	0	16.4	16.4
7/13/2004	/	0	0	0	19.7	0	7.35	7.35	19.7	19.7
10/5/2004	/	0	0	0	15.2	0	0.944	0.944	15.2	15.2
1/18/2005	/	0	0	0	15.2	0	0.628	0.628	15.2	15.2
4/12/2005	/	0	0	0	11.5	0	0.166	0.166	11.5	11.5
7/19/2005	/	0	0	0	13.03	0	0	0	13.03	13.03
10/24/2005	/	0	0	0	19.3	0	0.327	0.327	19.3	19.3
1/30/2006	/	0	500,000	0	20.5	0	0	0	20.5	20.5
5/8/2006	/	0	300	0	18.4	0	0	0	18.4	18.4
7/31/2006	/	0	0	0	15.9	0	0	0	15.9	15.9
1/9/2007	/	0	0	0	13.5	0	0.26	0.26	13.5	13.5
4/3/2007	/	0	0	0	12.03	0	0	0	12.03	12.03
7/3/2007	/	0	20	0	10.7	0	0.4	0.4	10.7	10.7
10/9/2007	/	0	0	0	9.2	0	0.11	0.11	9.2	9.2
1/8/2008	/	0	0	0	8.9	0	0	0	8.9	8.9
4/22/2008	/	0	40	0	10.4	0	0.9	0.9	10.4	10.4
7/15/2008	/	0	0	0	10	0	0.137	0.137	10	10
10/20/2008	/	0	0	0	8.76	0	0.13	0.13	8.76	8.76

**Surfrider Beach  
Well SB-1**

Parameter	Enterococcus (MPN/100 ml)	Fecal Coliform (MPN/100 ml)	Total Coliform (MPN/100 ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100 ml)	(MPN/100 ml)	(MPN/100 ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
3/24/2004	0	0	0	0.271	2.09	1.51	1.54	1.811	3.6	3.871
5/14/2004	0	0	0	0	2.17	0	0.55	0.55	2.17	2.17
9/1/2004	0	0	0	0	2.222	0	0.381	0.381	2.222	2.222
12/7/2004	0	0	0	0	5.53	0	1.63	1.63	5.53	5.53
3/9/2005	0	0	0	0	12	0.292	0	0	12.292	12.292
6/3/2005	0	0	0	1	1.33	0.615	2.38	3.38	1.945	2.945
9/9/2005	0	0	0	1.18	12.3	0	8.61	9.79	12.3	13.48
11/18/2005	549	0	800	0.396	11	1.4	1.6	1.996	12.4	12.796
3/3/2006	14,700	0	9,000	0.4	9.53	0.764	0.84	1.24	10.294	10.694
6/2/2006	0	0	0	0.466	39.3	0.928	0.154	0.62	40.228	40.694
9/8/2006	0	0	40	0.62	43.8	0.755	7.56	8.18	44.555	45.175
11/17/2006	0	0	0	0.64	42.9	0.396	3.1	3.74	43.296	43.936
3/2/2007	0	0	0	0.7	72.9	0.156	0.84	1.54	73.056	73.756
6/1/2007	0	0	0	1.5	31.1	0	2.28	3.78	31.1	32.6
9/7/2007	0	0	0	0	4.33	0	1.01	1.01	4.33	4.33
11/16/2007	0	0	0	0.92	3.61	0	1.38	2.3	3.61	4.53
5/30/2008	0	0	0	0.13	15.1	0	0.51	0.64	15.1	15.23
8/29/2008	0	0	0	0.19	16.7	0	0.39	0.58	16.7	16.89
12/5/2008	/	/	/	0	17.9	/	0	0	/	/
3/13/2009	0	0	0	0.37	14.4	/	0.12	0.49	/	/
6/12/2009	0	0	0	0.2	321	/	0.15	0.35	/	/

**Surfrider Beach  
Well SB-2**

Parameter	Enterococcus (MPN/100 ml)	Fecal Coliform (MPN/100 ml)	Total Coliform (MPN/100 ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Organic Nitrogen (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100 ml)	(MPN/100 ml)	(MPN/100 ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0						10	10
Sample Date										
3/24/2004	0	20	40	3.81	3.14	1.84	79.4	83.21	4.98	8.79
5/14/2004	0	0	0	1.63	63.7	0.13	36.6	38.23	63.83	65.46
9/1/2004	0	0	0	2.02	76.32	0.24	1.28	3.3	76.56	78.58
12/7/2004	0	0	0	0.34	15.8	0.158	0.58	0.92	15.958	16.298
3/9/2005	0	0	0	1.8	51.7	0	0.4	2.2	51.7	53.5
6/3/2005	0	0	0	0	10.2	0.231	1.67	1.67	10.431	10.431
9/9/2005	0	0	0	0.127	4.56	0	1.02	1.147	4.56	4.687
11/18/2005	3	0	230	0	0.869	0.724	0.541	0.541	1.593	1.593
3/3/2006	41	0	130	0.12	3.23	0	4.66	4.78	3.23	3.35
6/2/2006	0	0	40	0	0.045	0	1.11	1.11	0.045	0.045
9/8/2006	0	0	300	0	7.47	0	0.451	0.451	7.47	7.47
11/17/2006	0	0	0	0.17	9.03	0	0.91	1.08	9.03	9.2
3/2/2007	0	0	0	0.1	4.43	0	0.5	0.6	4.43	4.53
6/1/2007	0	0	0	0	0.9	0	0.17	0.17	0.9	0.9
9/7/2007	0	0	0	0	2.03	0	2.22	2.22	2.03	2.03
11/16/2007	0	0	0	0	2.08	0	0.13	0.13	2.08	2.08
5/30/2008	0	0	0	0.12	0.3	0	0.32	0.44	0.3	0.42
8/29/2008	70	0	0	0.11	3	0	0.25	0.36	3	3.11
12/5/2008	/	/	/	0	4.81	/	0.42	0.42	/	/
3/13/2009	0	0	0	0	1.88	/	0.42	0.42	/	/
6/12/2009	0	0	0	0.17	0.27	/	0.11	0.28	/	/



**Malibu Beach Inn  
MW1**

Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit	(MPN/100ml)	(MPN/100ml)	(MPN/100ml)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MCL		0	0					10	10
Sample Date									
2/11/2009	0	2	8	3	1.7	0	3.15	1.7	4.7
6/9/2009	2	0	10	2.05	3.9	0	2.2	3.9	5.95
2/11/2009	0	2	8	3	1.7	0	3.15	1.7	4.7
2/14/2008	0	0	0	1.5	15.1	0.09	1.63	15.19	16.69
5/15/2008	0	0	110	2.65	39	0.147	2.8	39.147	41.797
9/30/2008	/	2	24	2.3	18.1	0.201	2.47	18.301	20.601
12/3/2008	0	0	0	2.26	10.3	0.184	2.4	10.484	12.744
11/15/2007	/	0	0	16.5	8.5	0.635	17.5	9.135	25.635
2/15/2007	/	/	/	/	/	/	/	/	/
5/1/2007	/	/	/	/	/	/	/	/	/
2/15/2006	/	/	/	/	/	/	/	/	/
5/25/2006	/	/	/	/	/	/	/	/	/
8/18/2006	/	/	/	/	/	/	/	/	/
12/8/2006	/	/	/	/	/	/	/	/	/
2/23/2005	/	/	/	/	/	/	/	/	/
5/18/2005	/	/	/	/	/	/	/	/	/
9/27/2005	/	/	/	/	/	/	/	/	/
11/18/2005	/	/	/	/	/	/	/	/	/
6/25/2004	/	/	/	/	/	/	/	/	/
8/17/2004	/	/	/	/	/	/	/	/	/
11/8/2004	/	/	/	/	/	/	/	/	/

**Malibu Beach Inn  
MW2**

Parameter	Enterococcus (MPN/100ml)	Fecal Colliform (MPN/100ml)	Total Colliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
2/11/2009	/	/	/	/	/	/	/	/	/
6/9/2009	/	/	/	/	/	/	/	/	/
2/11/2009	/	/	/	/	/	/	/	/	/
2/14/2008	0	0	0	2.6	1.4	0.07	1.63	1.47	4.07
5/15/2008	0	0	48	1.85	9.5	0.029	2.83	9.529	11.379
9/30/2008	/	2	10	2.54	2.4	0	1.9	2.4	4.94
12/3/2008	0	0	0	2.15	3.2	0.028	2.68	3.228	5.378
11/15/2007	/	/	/	/	/	/	/	/	/
2/15/2007	2	2	0	0.01	0.18	0	0.06	0.18	0.19
5/1/2007	4.1	2	0	0	0.63	0	4.14	0.63	0.63
2/15/2006	33.6	0	0	0.01	0.15	0.04	1.47	0.19	0.2
5/25/2006	5.2	2	0	0.06	0.08	0	3.49	0.08	0.14
8/18/2006	0	2	0	0.12	5.14	0	0.56	5.14	5.26
12/8/2006	0	0	0	0.12	5.14	0	0.56	5.14	5.26
2/23/2005	2419.2	0	2	0.49	6.3	0.18	5.93	6.48	6.97
5/18/2005	63.2	2	4	0.7	28.9	0.28	2.44	29.18	29.88
9/27/2005	44.7	2	17	0.6	1.1	0	1.1	1.1	1.7
11/18/2005	13.2	0	0	0.34	0.32	0	0.42	0.32	0.66
6/25/2004	93.3	30	50	3.02	4.95	0.07	15.32	5.02	8.04
8/17/2004	128.7	2	2	1.82	3.83	0.13	6.71	3.96	5.78
11/8/2004	9.8	0	0	2.67	15.6	0.34	7.64	15.94	18.61

**Malibu Beach Inn  
MW3**

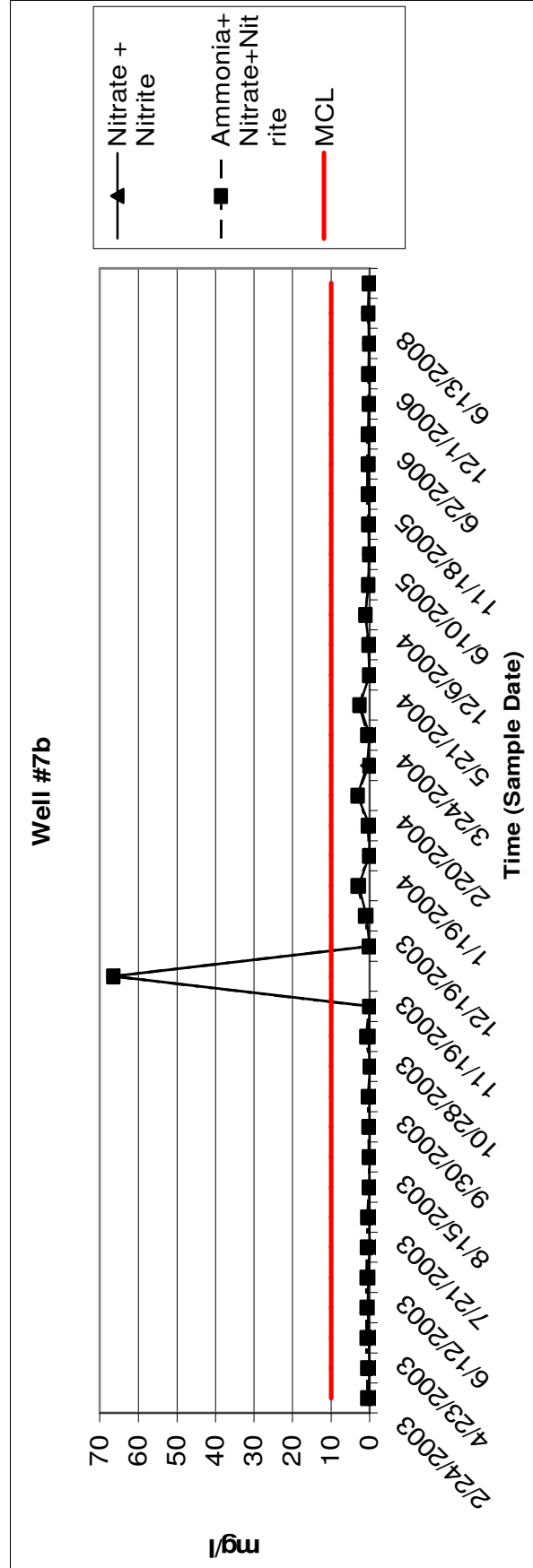
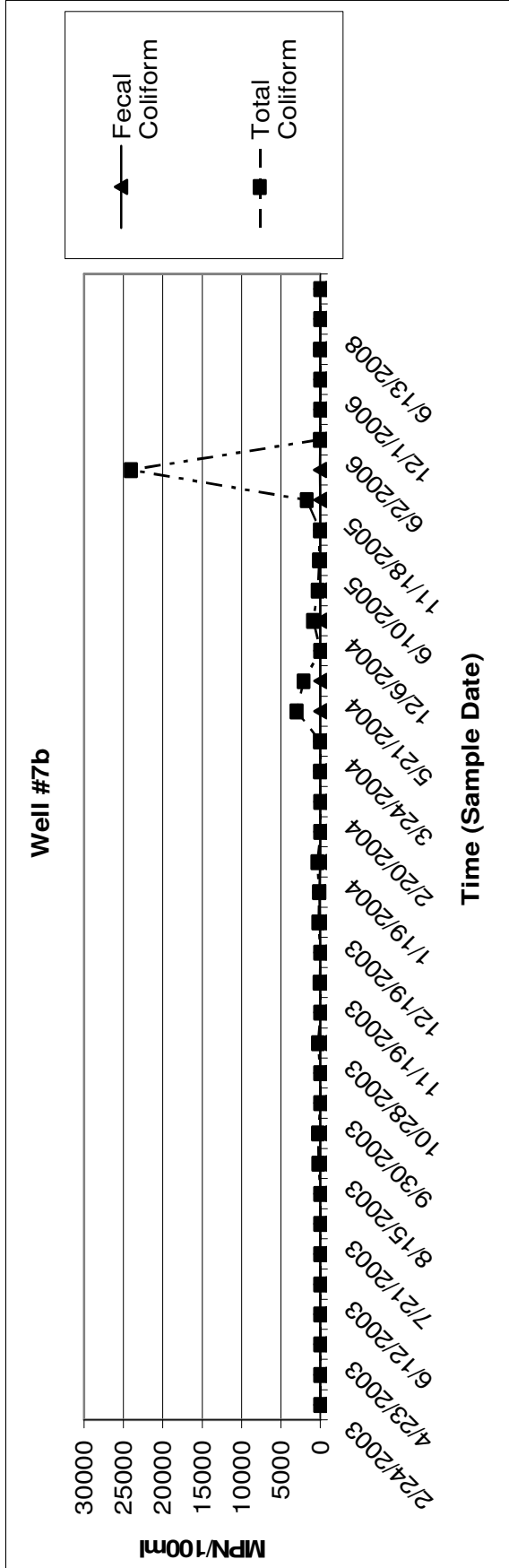
Parameter	Enterococcus (MPN/100ml)	Fecal Coliform (MPN/100ml)	Total Coliform (MPN/100ml)	Ammonia (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	TKN (mg/l)	Nitrate + Nitrite (mg/l)	Ammonia + Nitrate + Nitrite (mg/l)
Unit									
MCL		0	0					10	10
Sample Date									
2/11/2009	0	0	0	1.55	12.2	1.56	1.64	13.76	15.31
6/9/2009	0	0	0	0.68	16	0.119	0.73	16.119	16.799
2/11/2009	0	0	0	1.55	12.2	1.56	1.64	13.76	15.31
2/14/2008	/	/	/	/	/	/	/	/	/
5/15/2008	/	/	/	/	/	/	/	/	/
9/30/2008	/	/	/	/	/	/	/	/	/
12/3/2008	/	/	/	/	/	/	/	/	/
11/15/2007	/	/	/	/	/	/	/	/	/
2/15/2007	15.8	2	0	2.36	1.47	0.06	40.16	1.53	3.89
5/1/2007	18.7	2	11	16.3	0.88	0	19.48	0.88	17.18
2/15/2006	13.2	2	2	21	5.41	0.38	28.02	5.79	26.79
5/25/2006	5.2	17	17	10.9	15.4	0.06	13.05	15.46	26.36
8/18/2006	66.2	0	0	19.9	3.02	0	28.05	3.02	22.92
12/8/2006	0	0	0	65.1	0.9	0	88.7	0.9	66
2/23/2005	22.6	2	8	4.53	0.04	0.11	9.01	0.15	4.68
5/18/2005	5.1	4	4	6.19	1.34	0.06	19.59	1.4	7.59
9/27/2005	47.2	2	2	50.1	3.4	0.02	67.6	3.42	53.52
11/18/2005	7.4	0	0	26.8	1.22	0	31.73	1.22	28.02
6/25/2004	2419.2	7	30	22.4	0	1.29	40.1	1.29	23.69
8/17/2004	31.4	0	0	23.6	0	0.1	28.87	0.1	23.7
11/8/2004	9.7	0	0	12	0.07	0.14	13.44	0.21	12.21

**Technical Memorandum #2: Pathogens and Nitrogen in  
Wastewaters Impair Underlying Groundwater as a Potential  
Source of Drinking Water**

**Attachment 2-2**

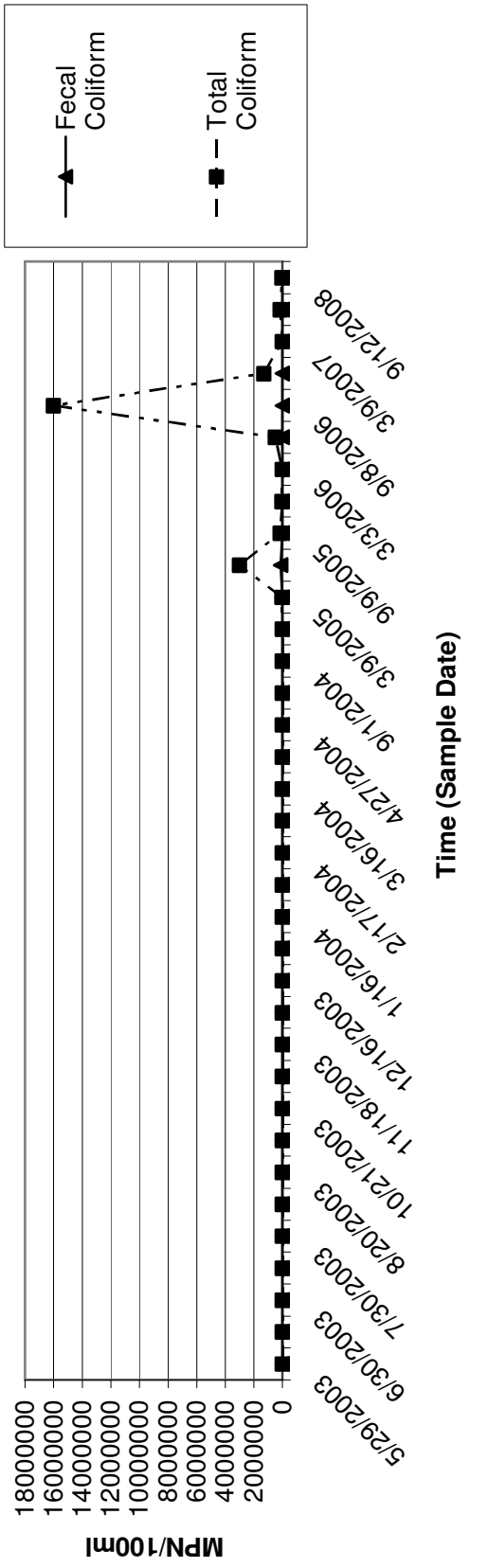
**Graphs for 56 Individual Wells**

Malibu Administrative Center

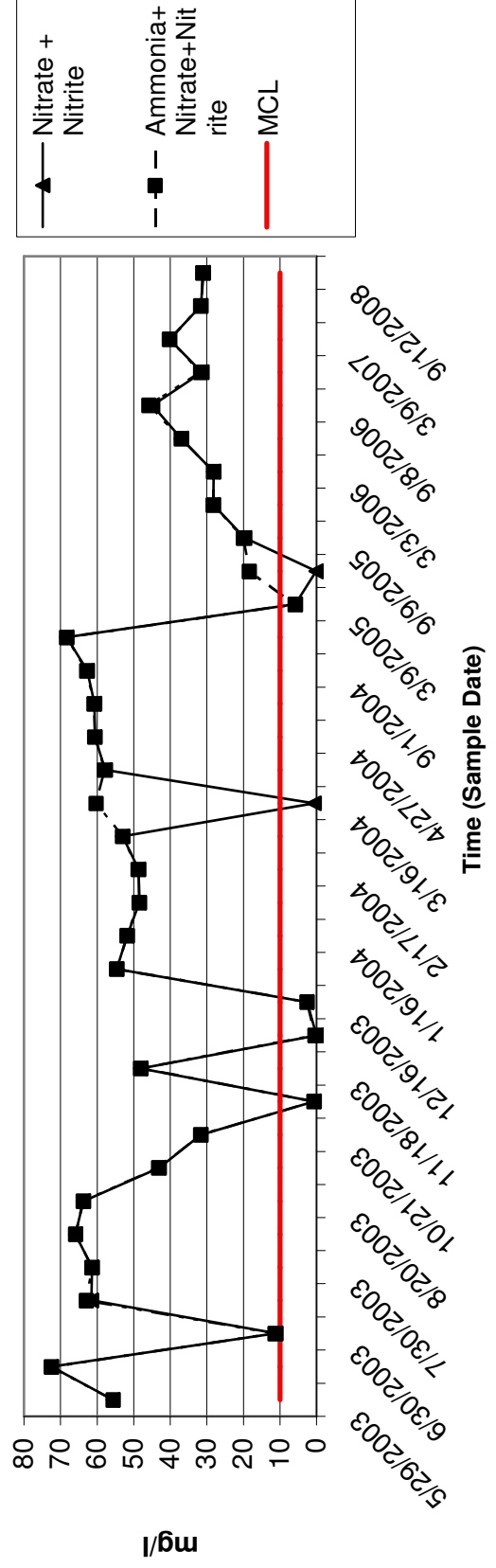


Malibu Administrative Center

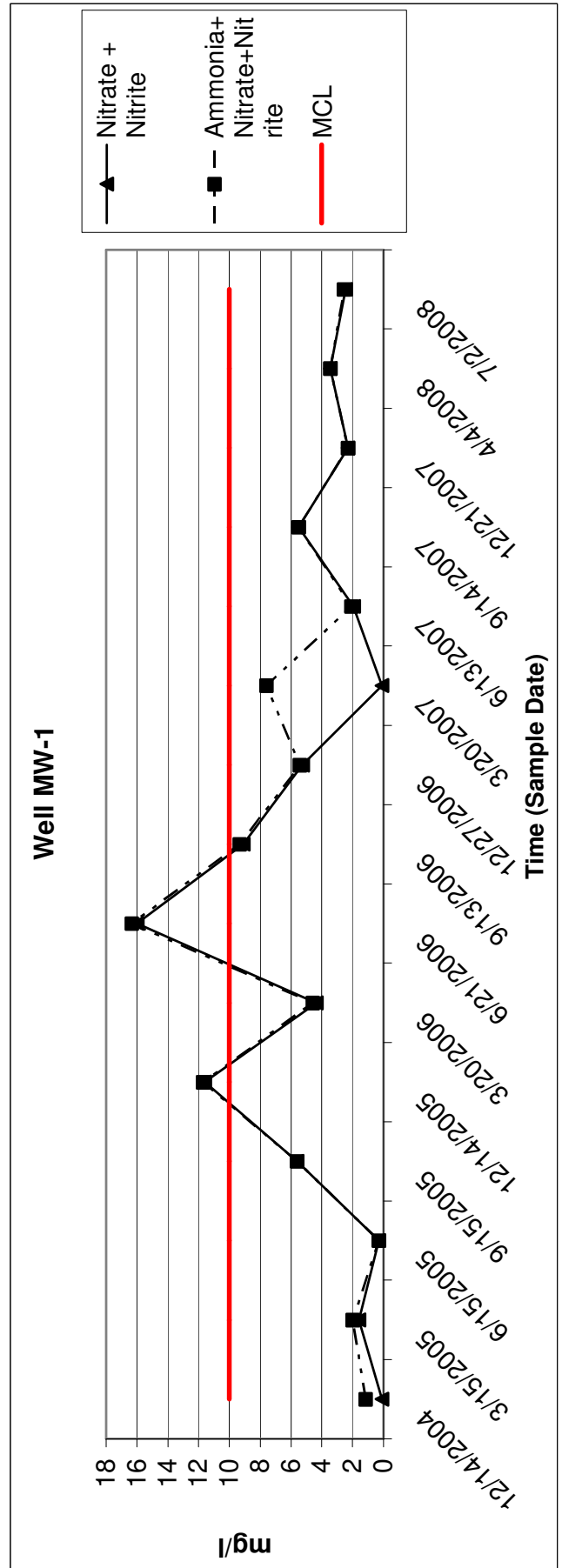
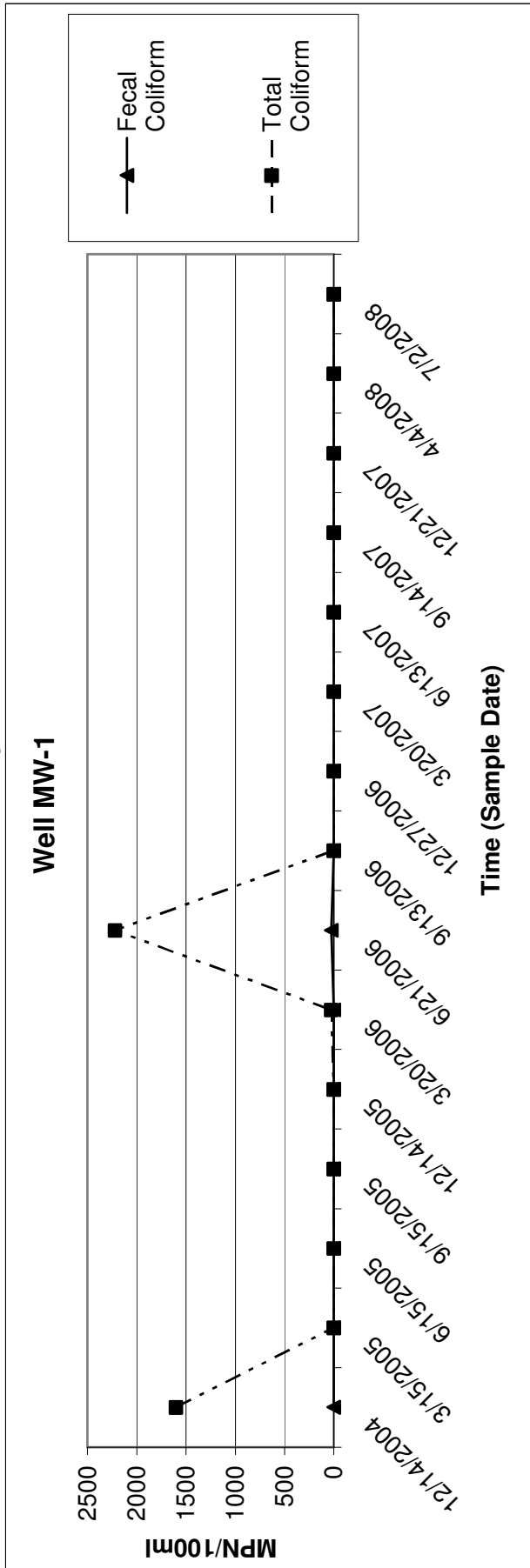
Well # 8



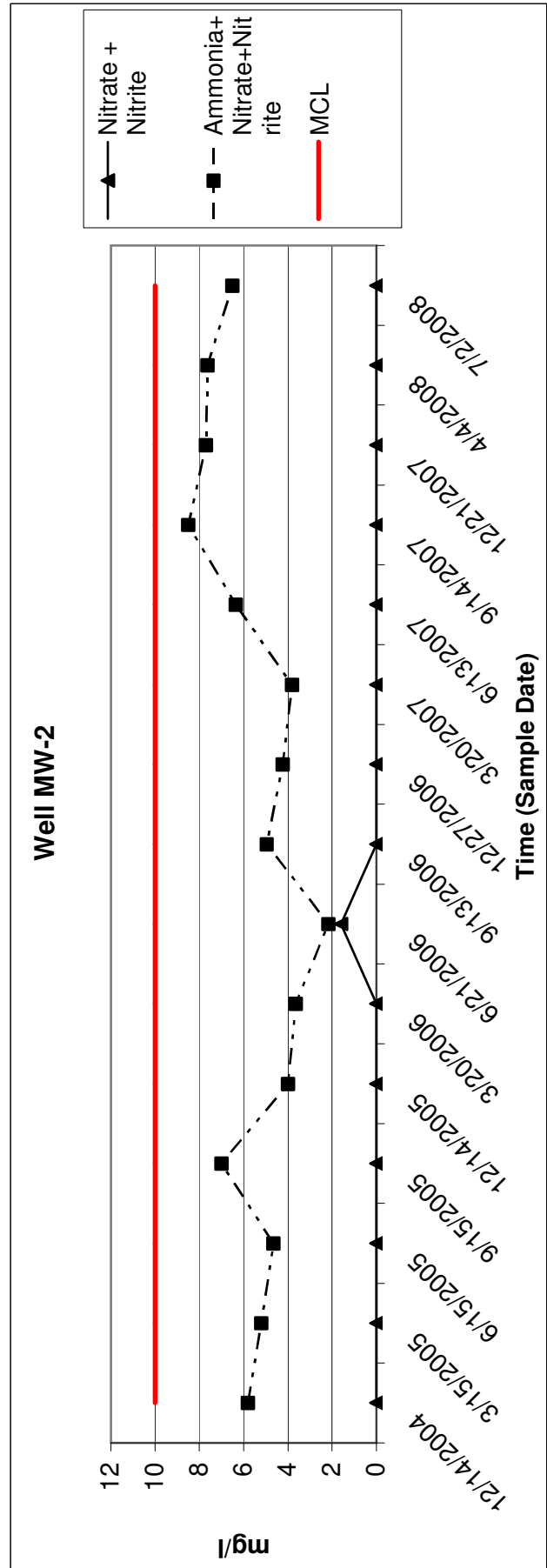
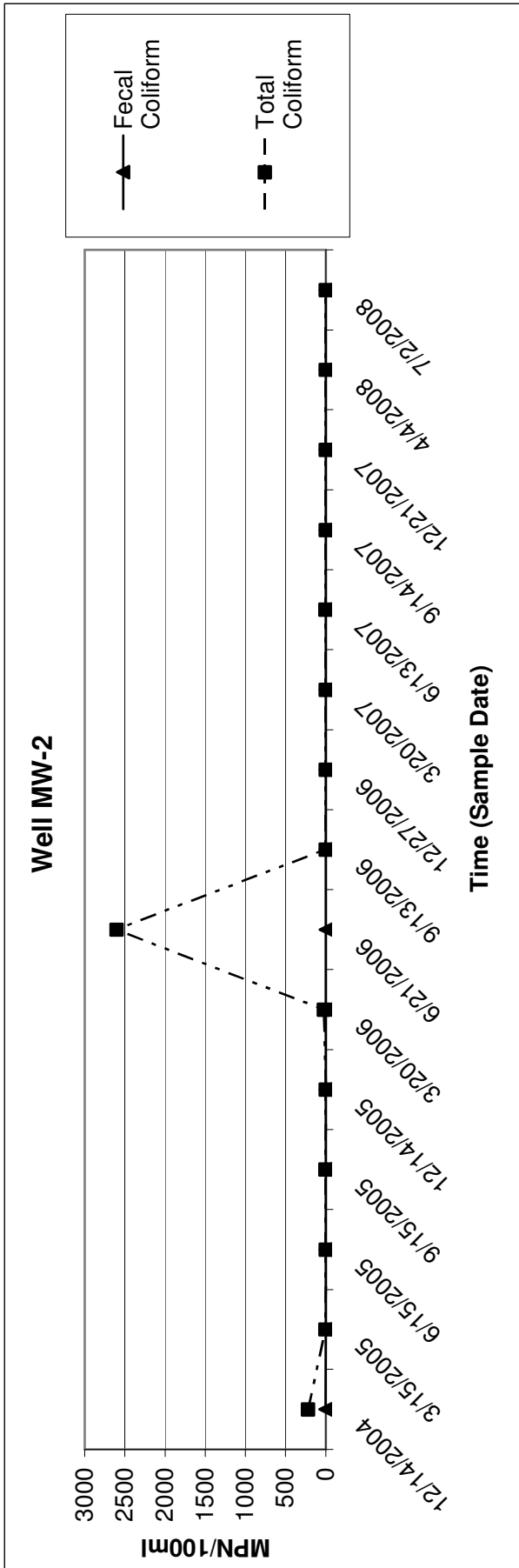
Well # 8



# Malibu Country Mart I

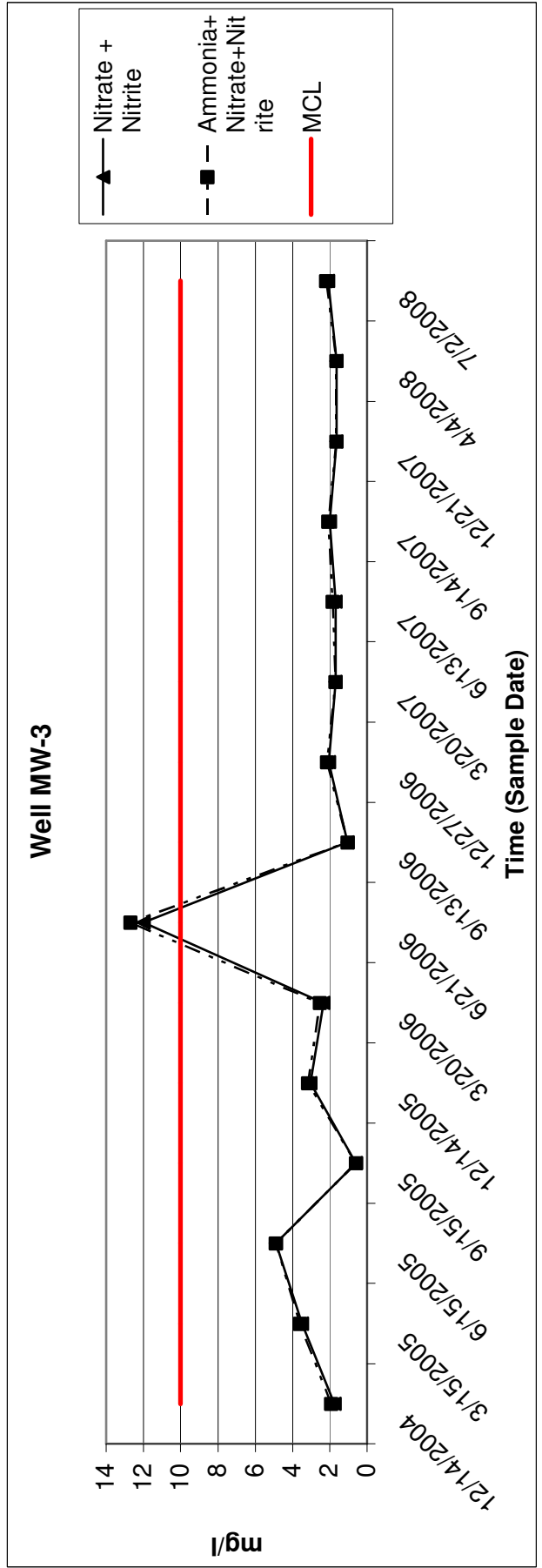
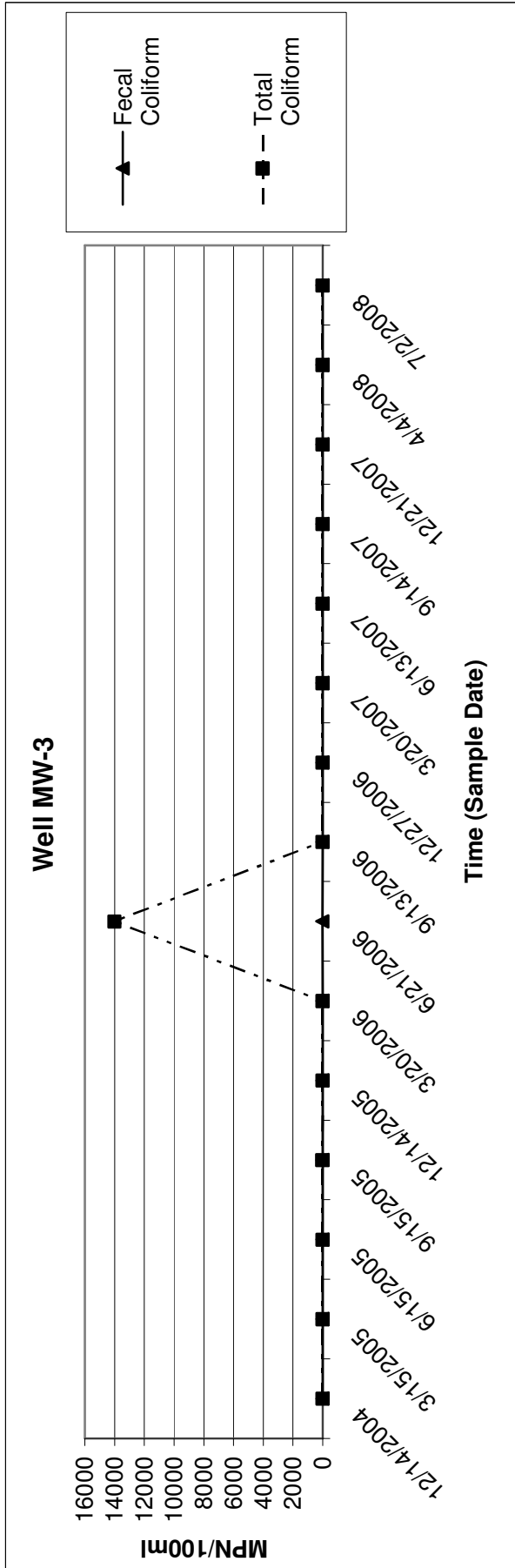


# Malibu Country Mart I

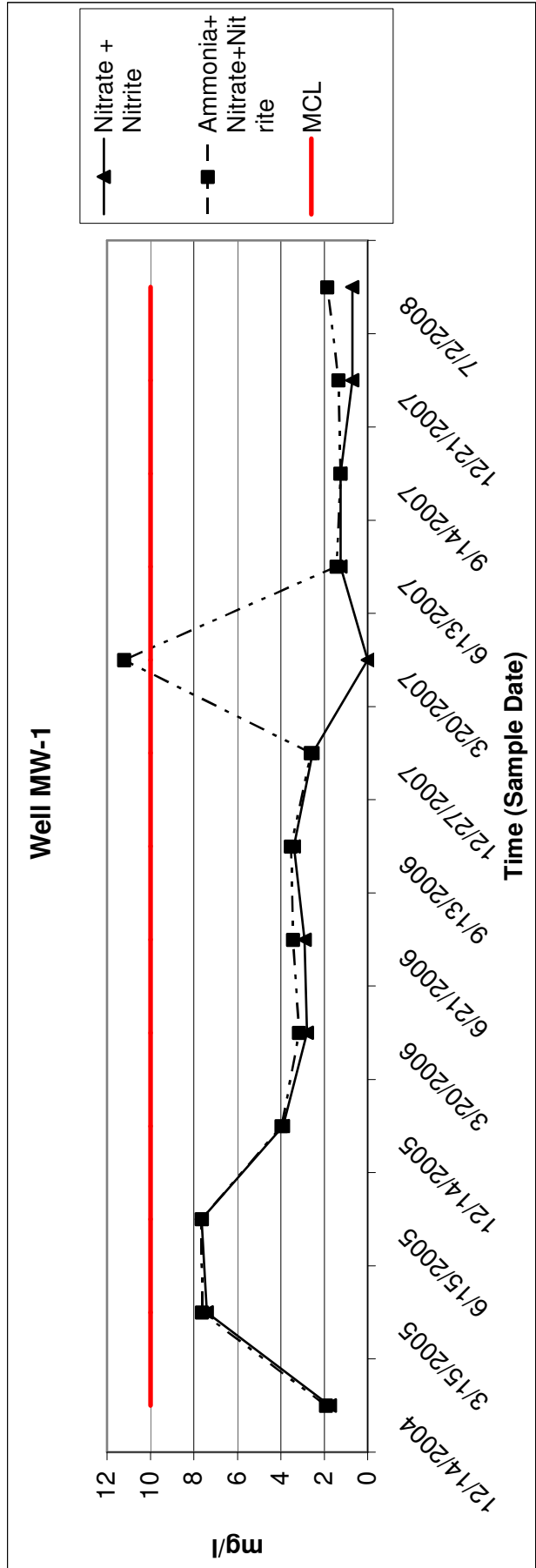
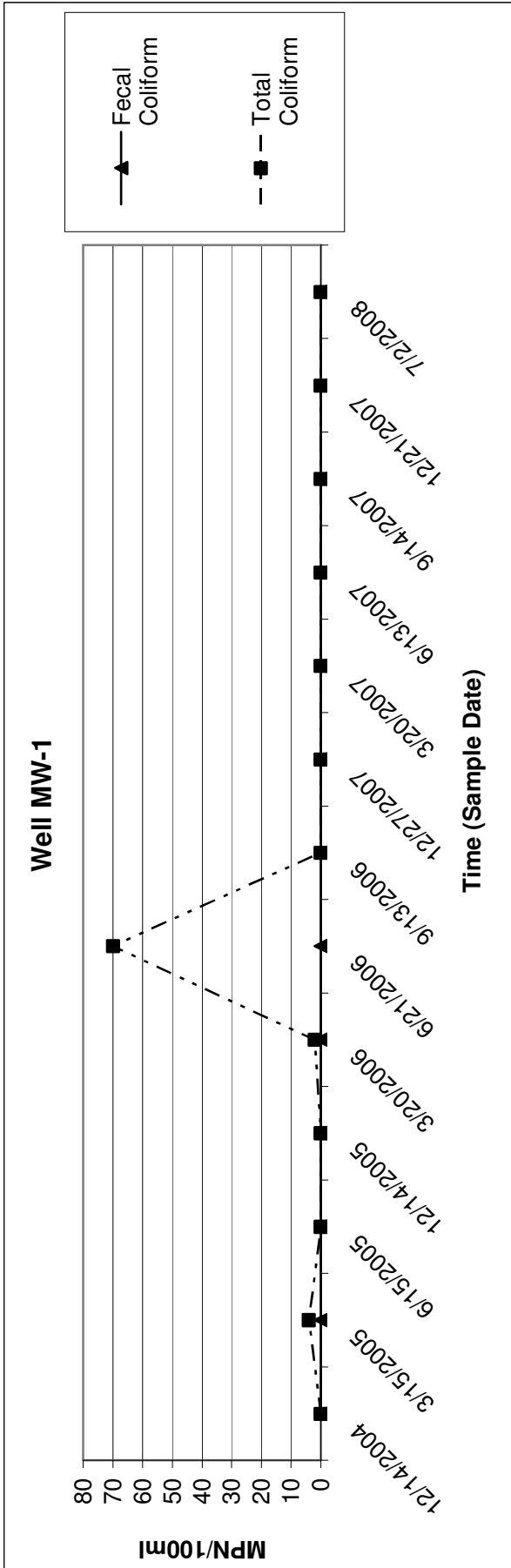




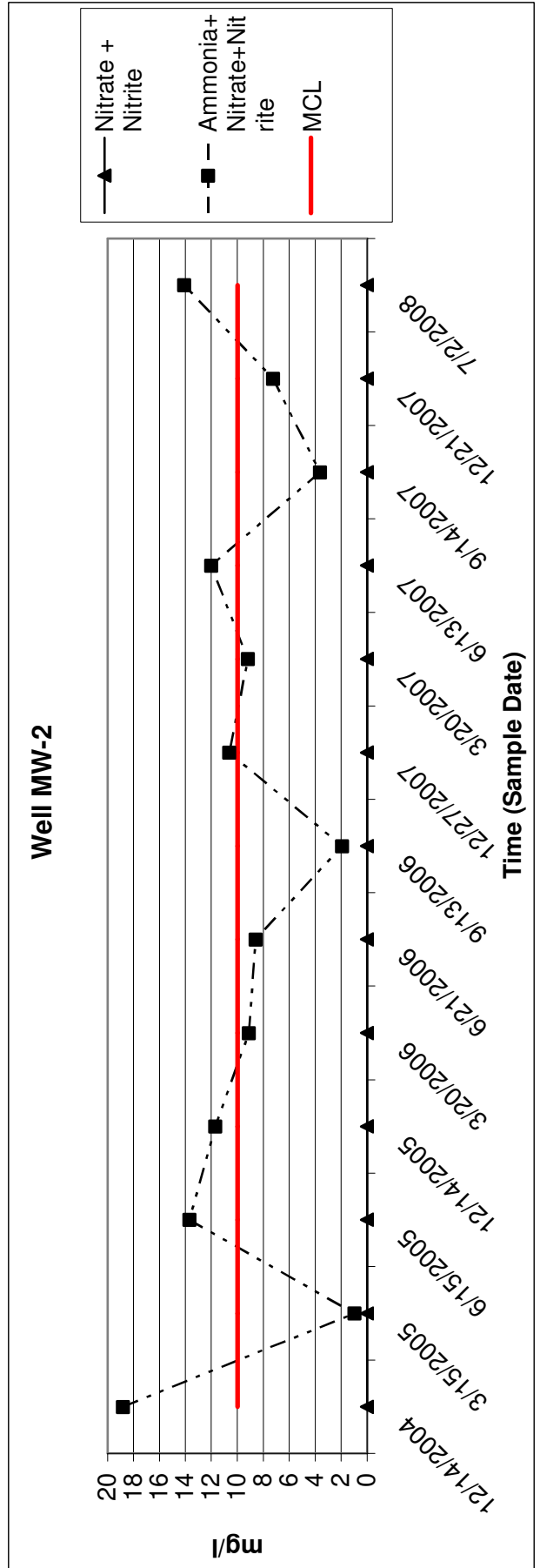
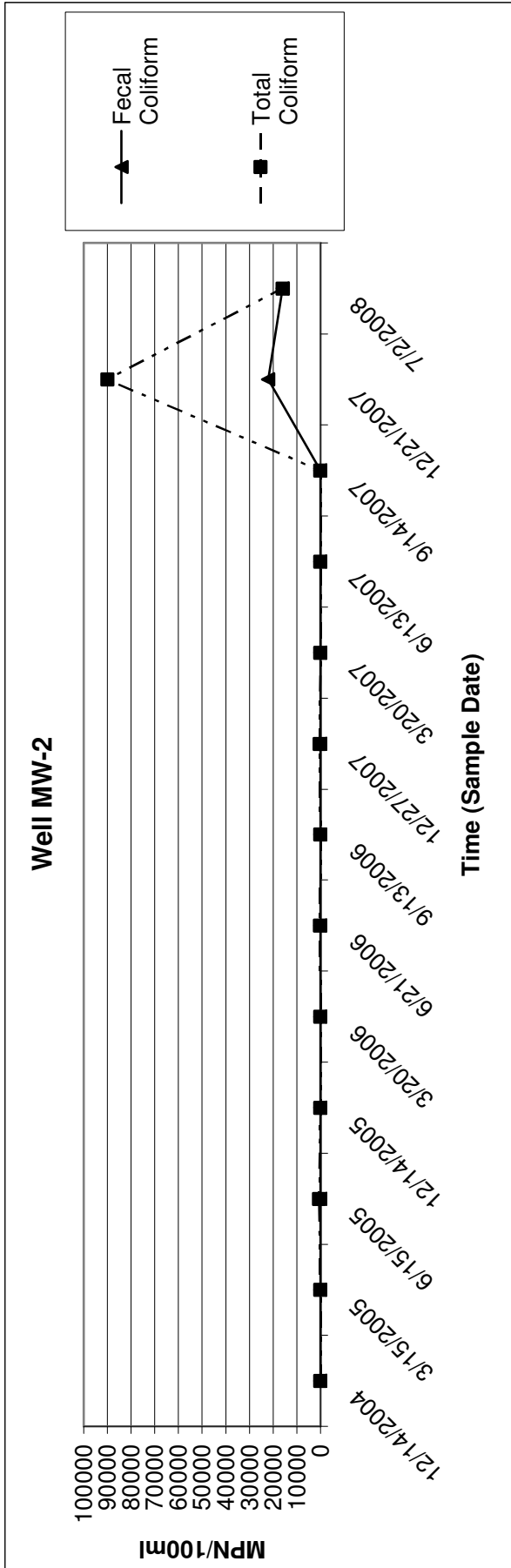
# Malibu Country Mart I



# Malibu Country Mart II

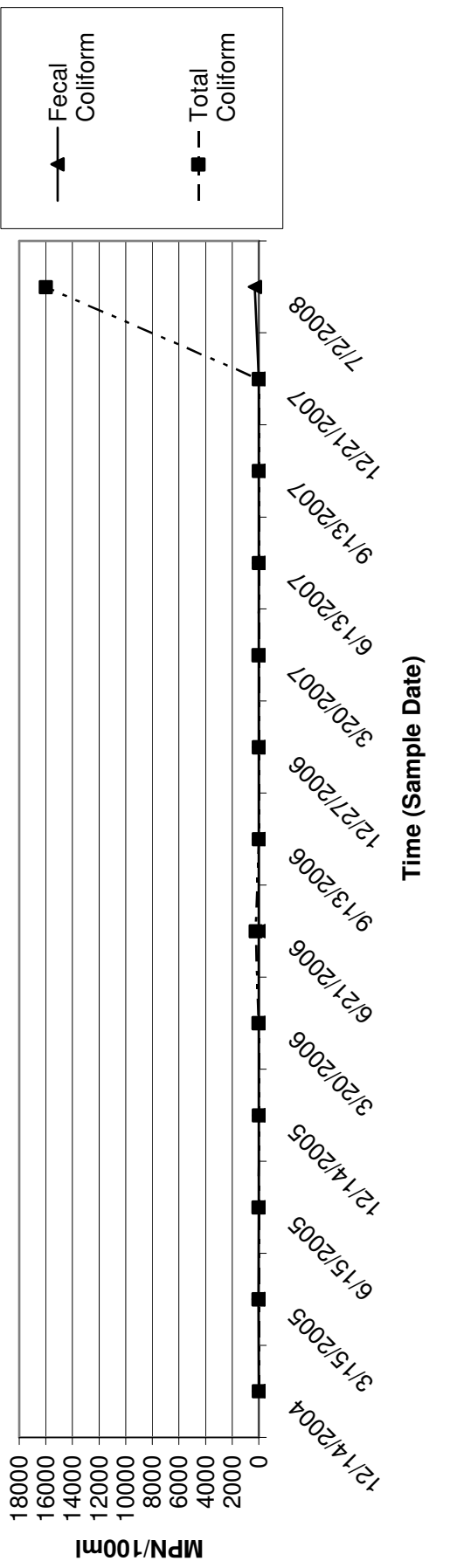


# Malibu Country Mart II

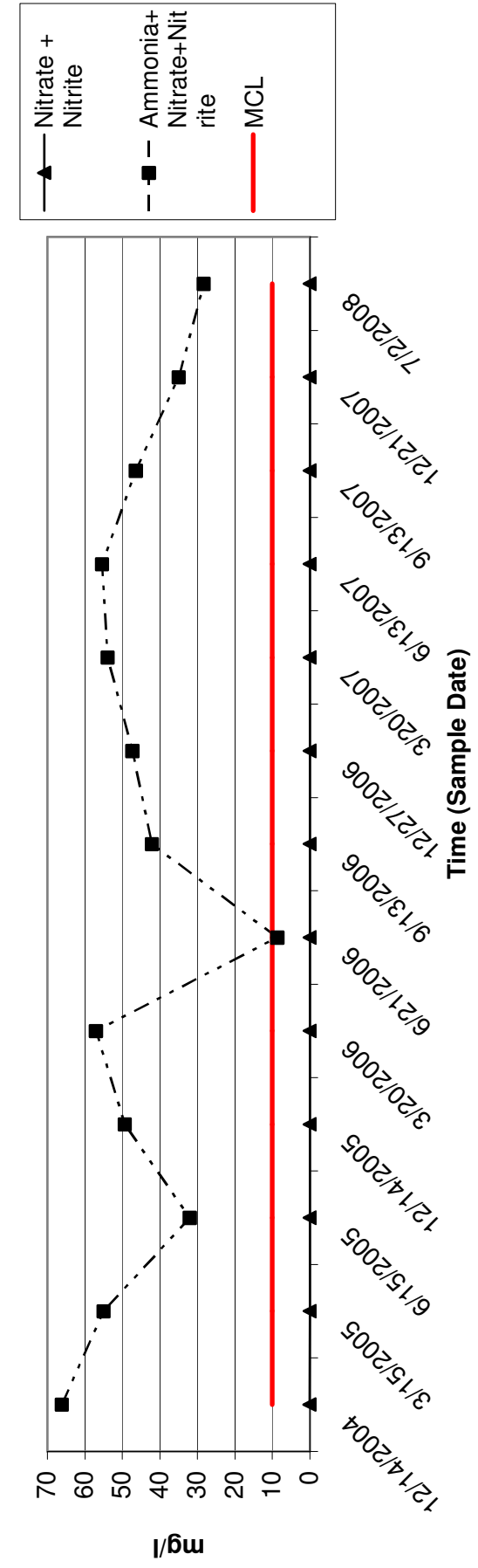


# Malibu Country Mart II

## Well MW-3

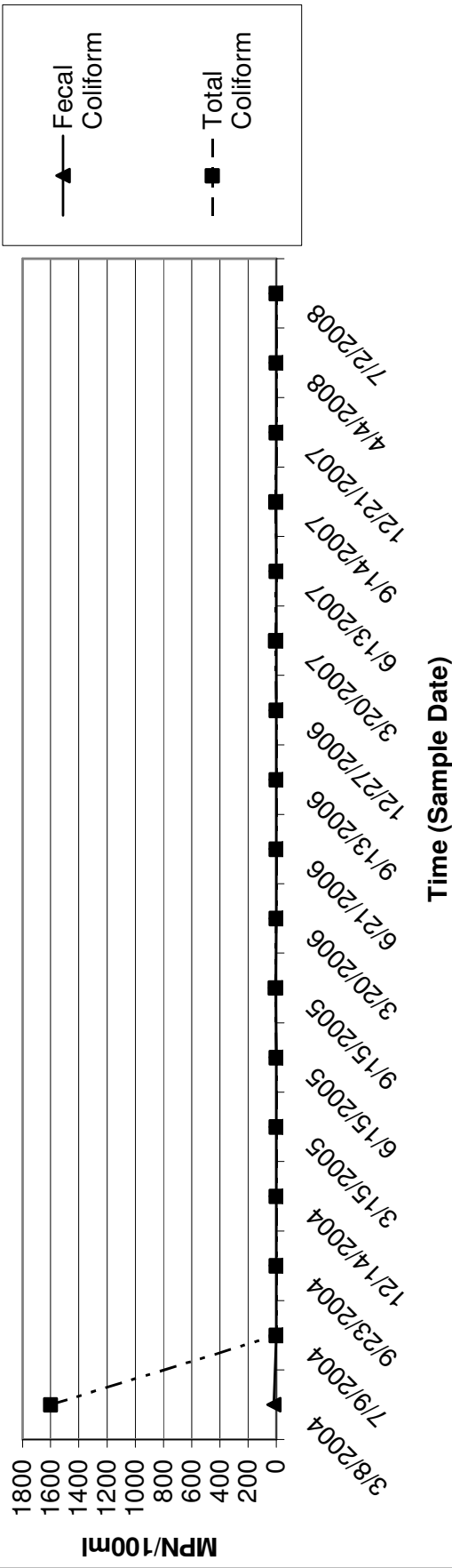


## Well MW-3

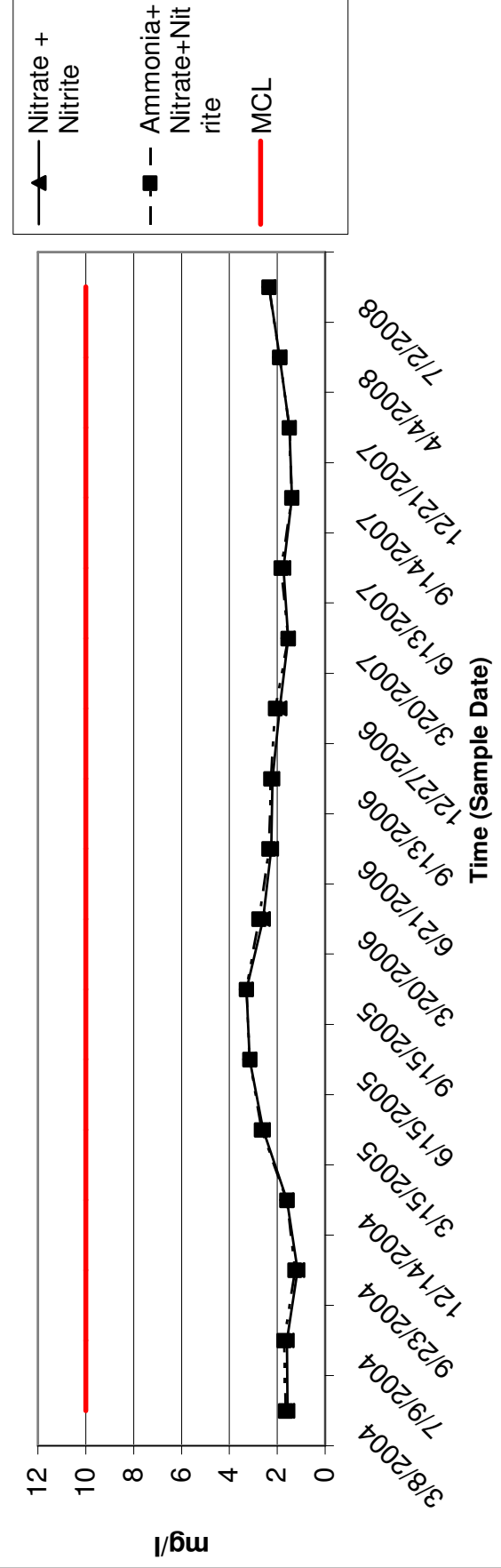


# Malibu Country Mart III

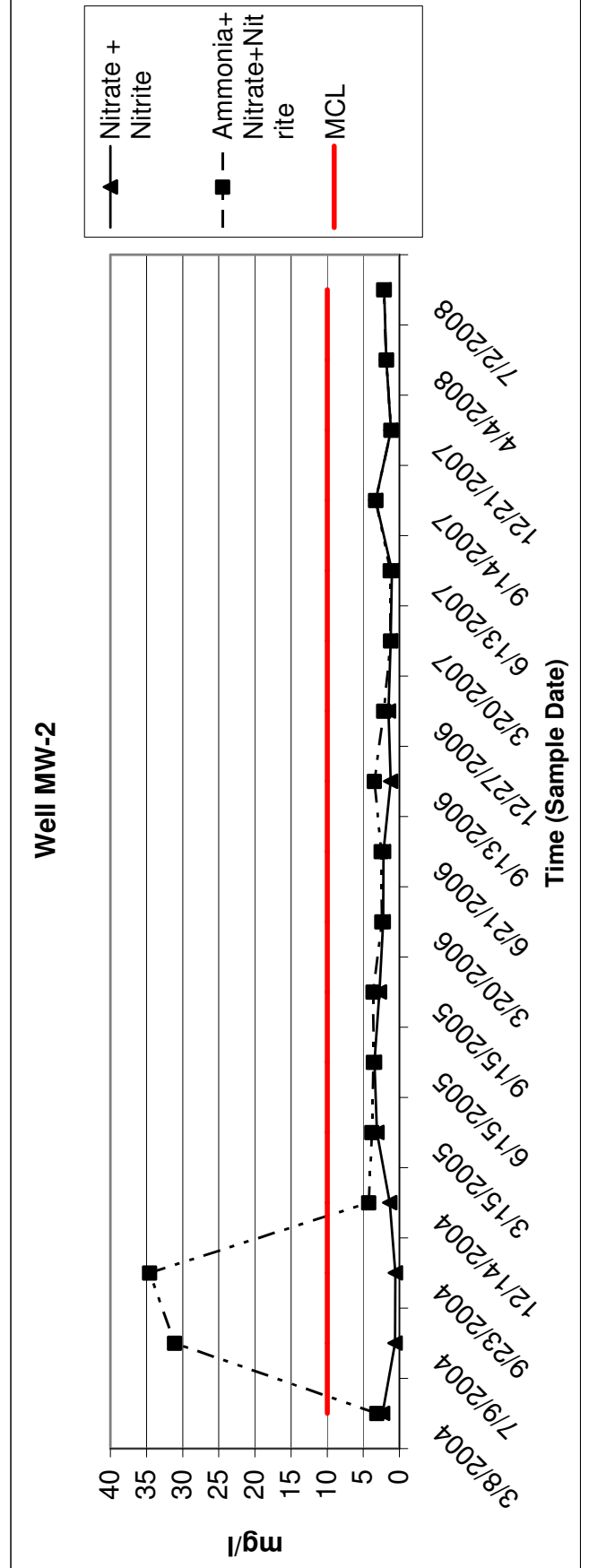
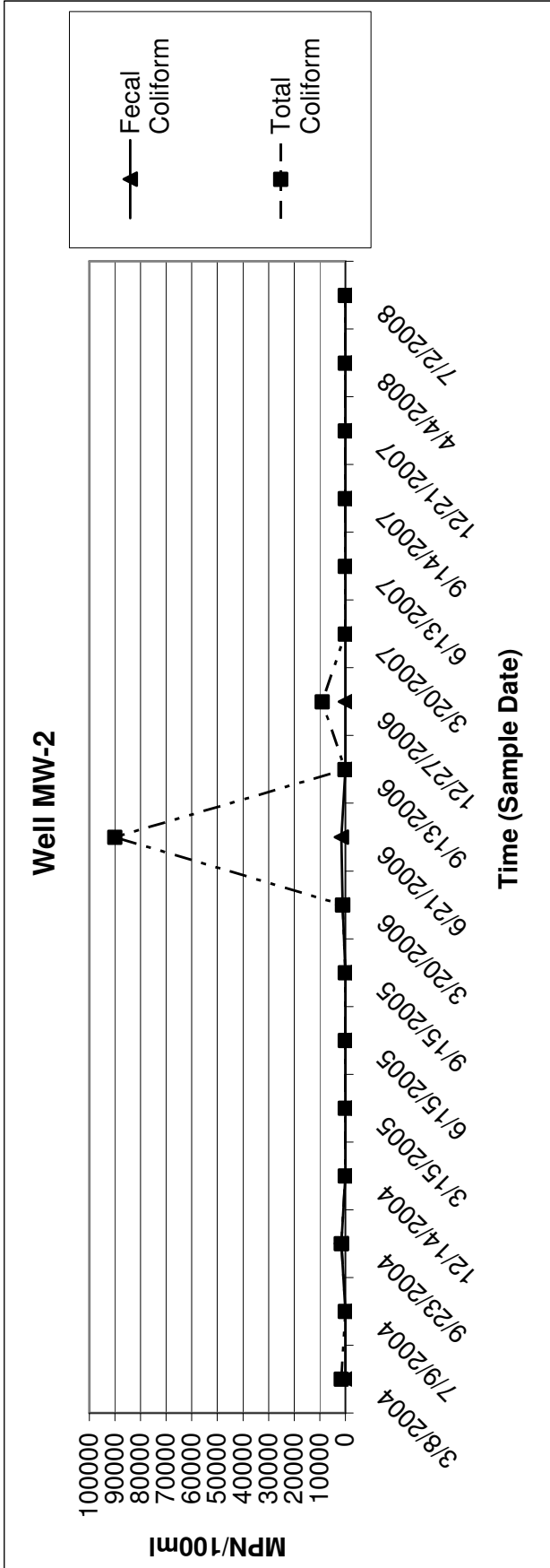
## Well MW-1



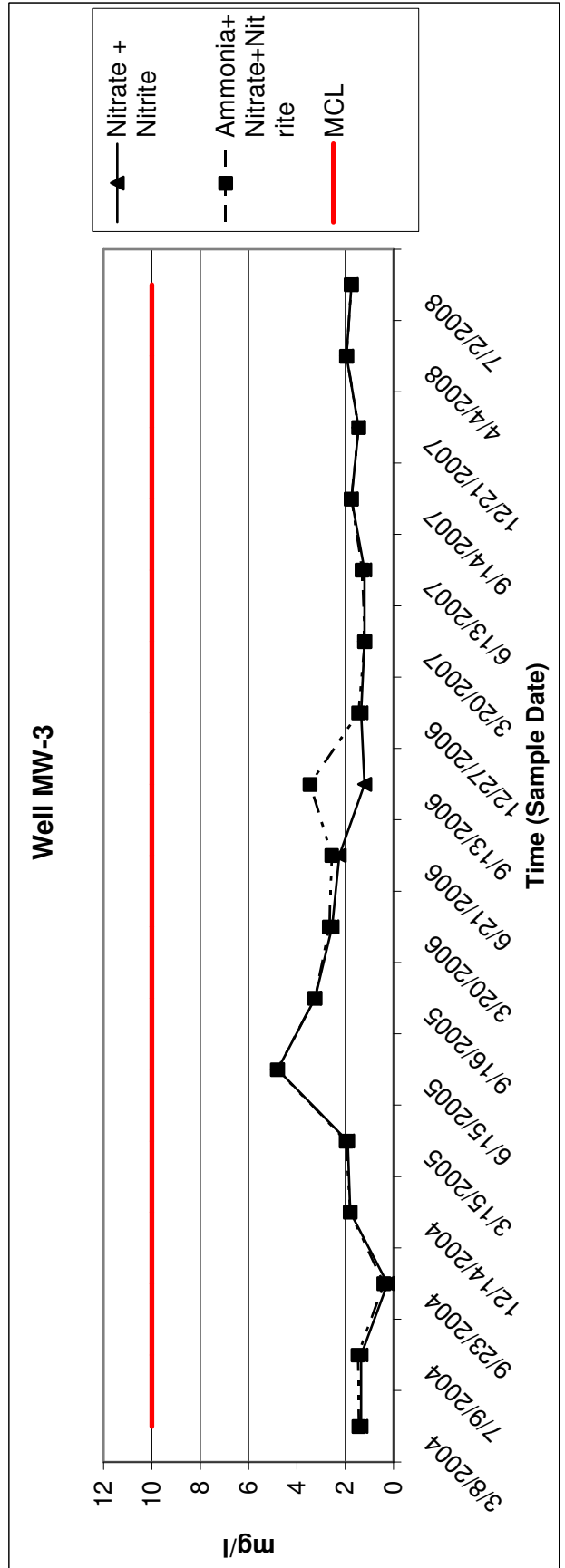
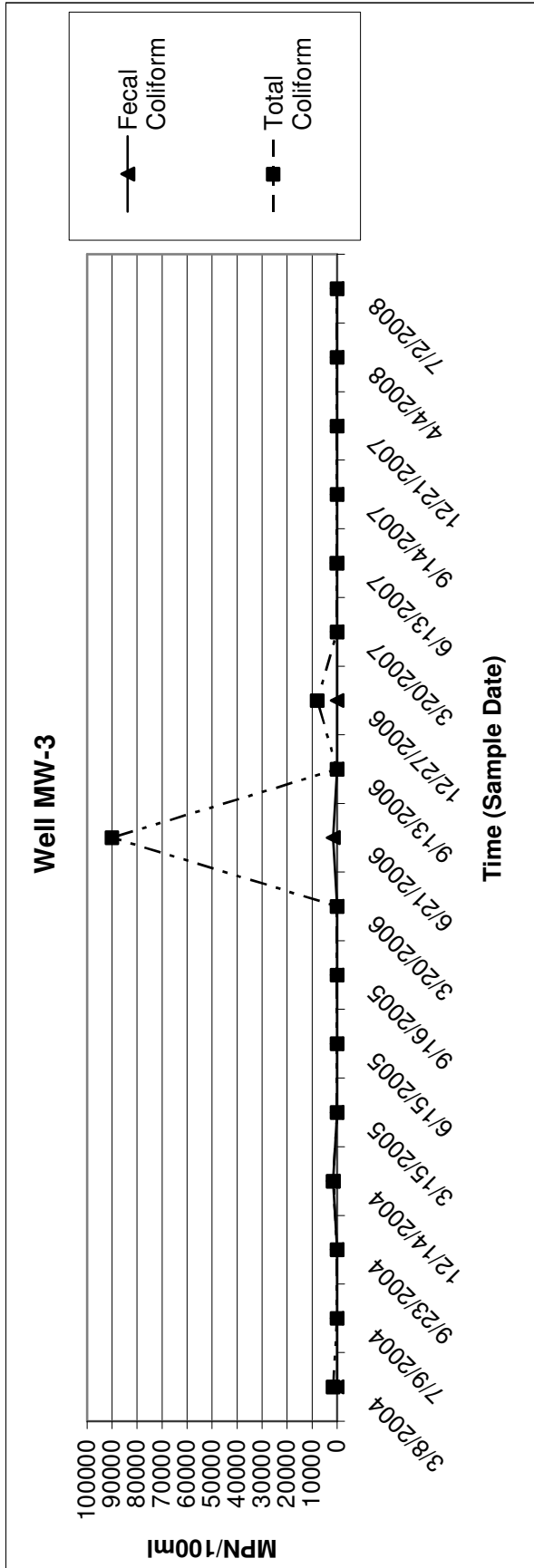
## Well MW-1



# Malibu Country Mart III

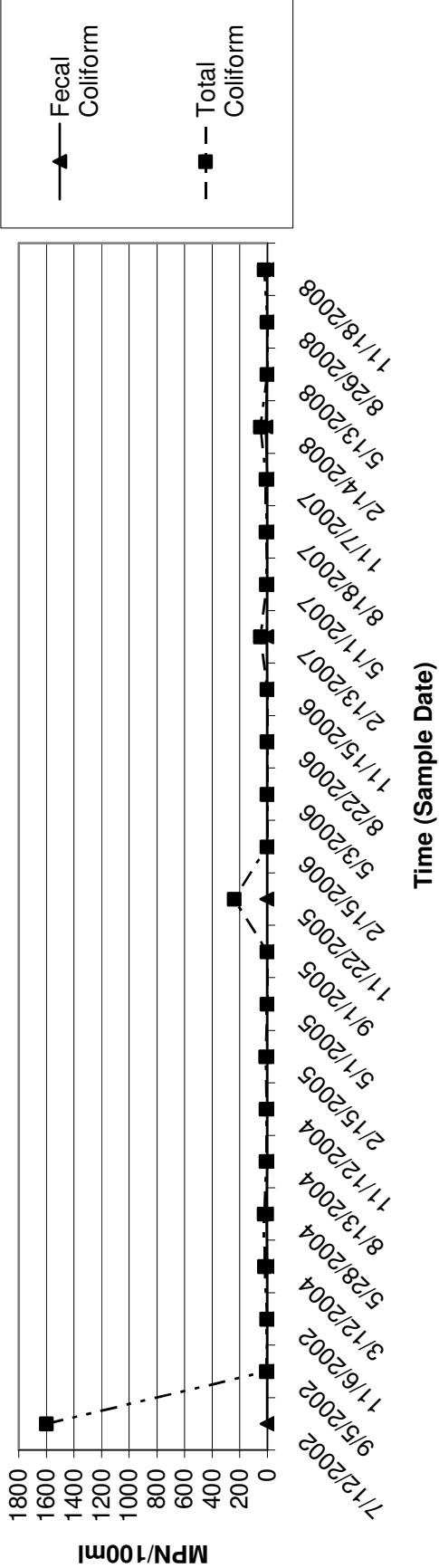


# Malibu Country Mart III

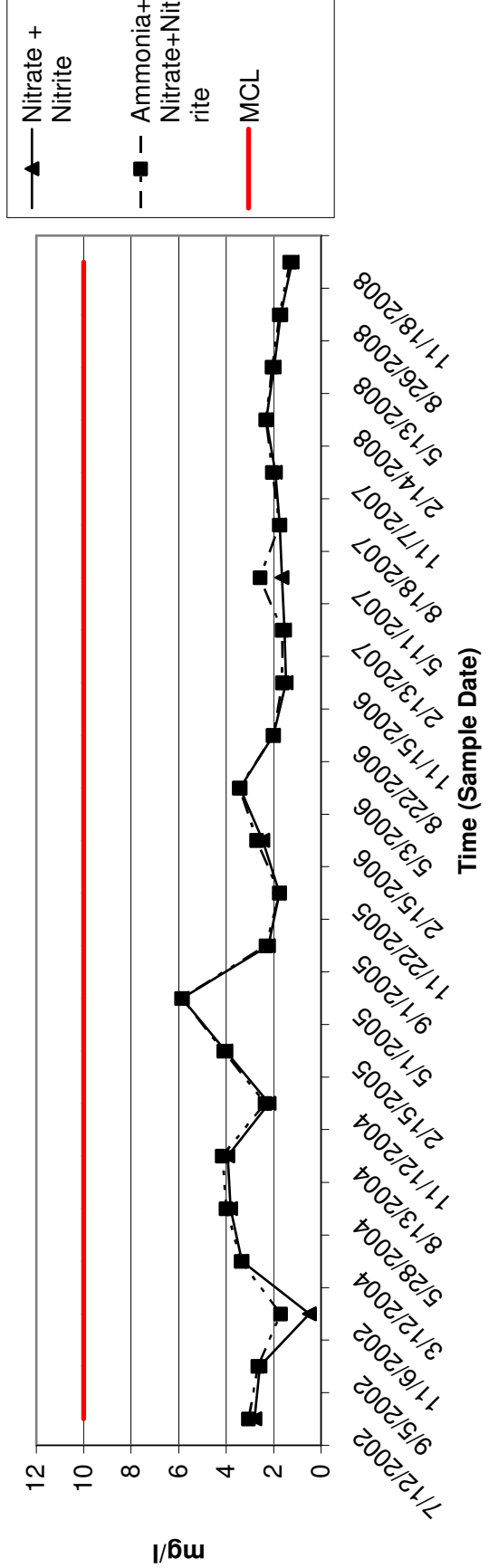


Malibu Creek Plaza

Well #1

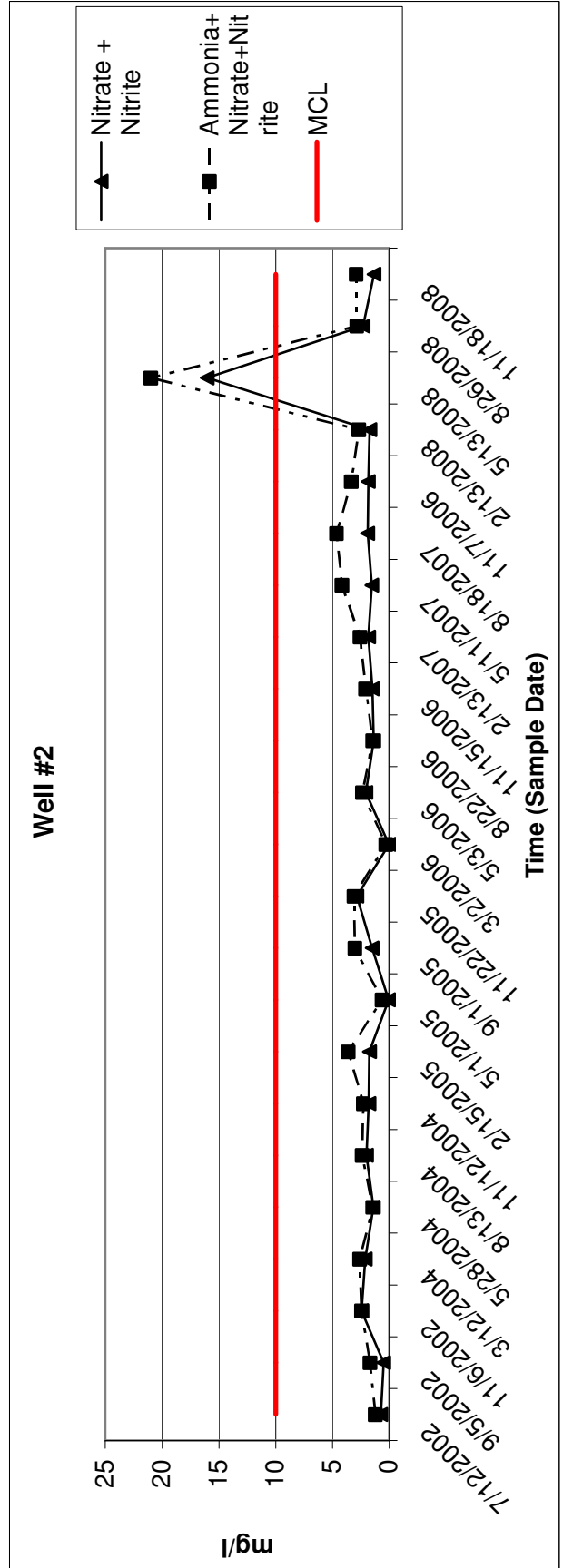
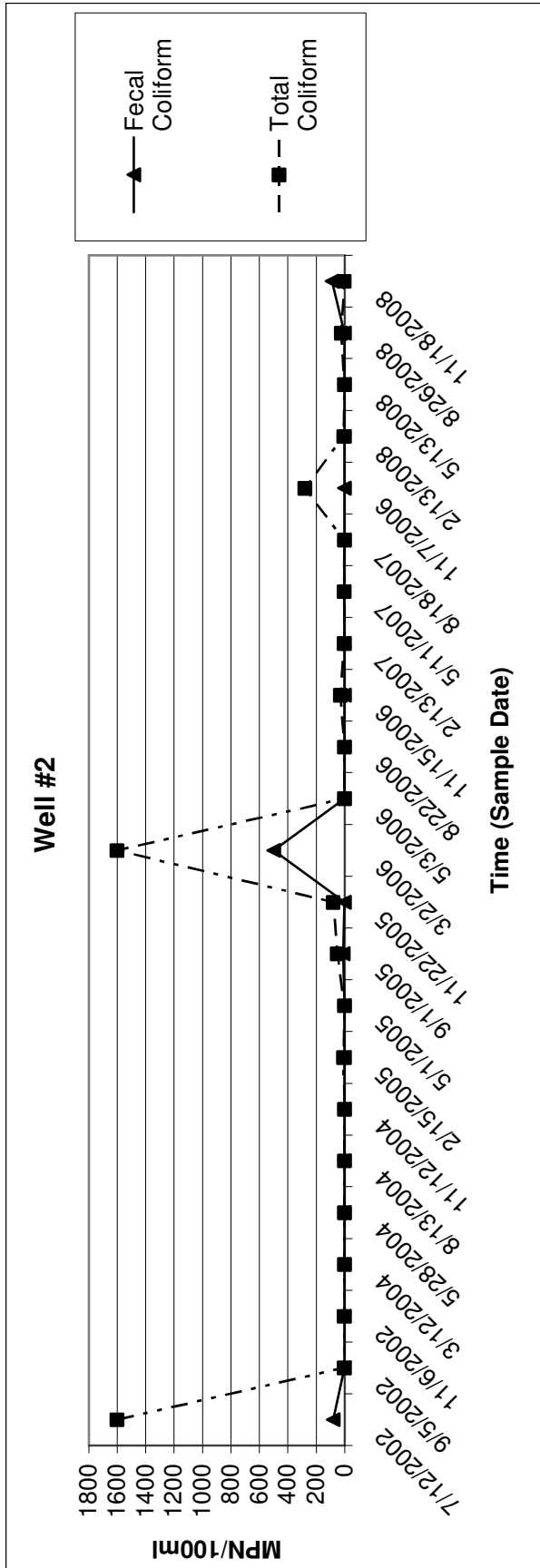


Well #1



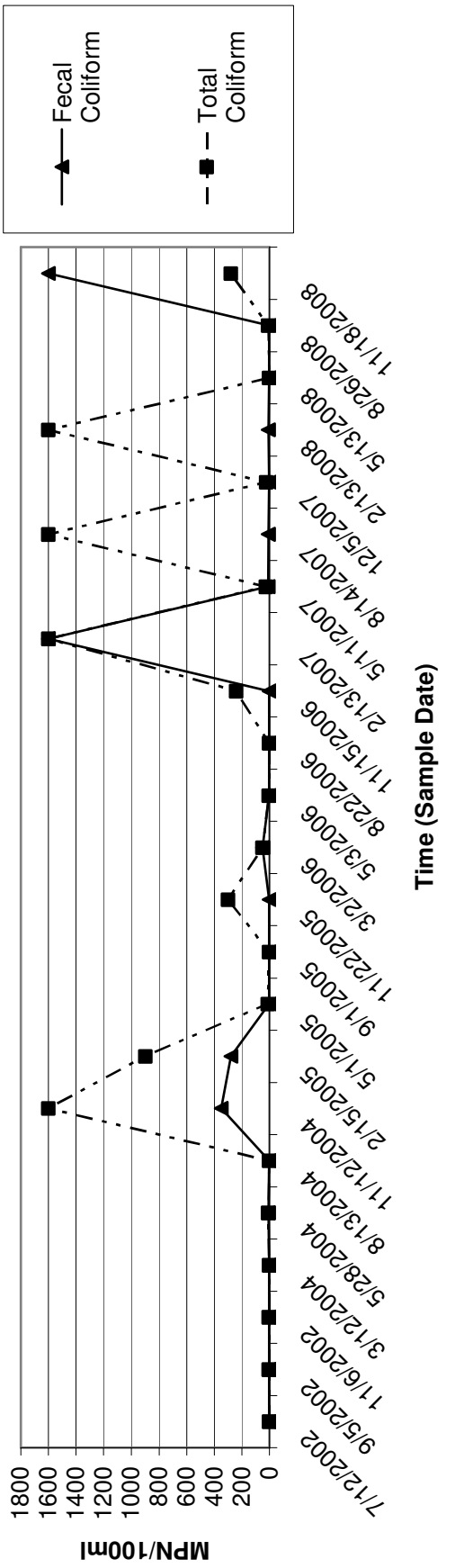


Malibu Creek Plaza

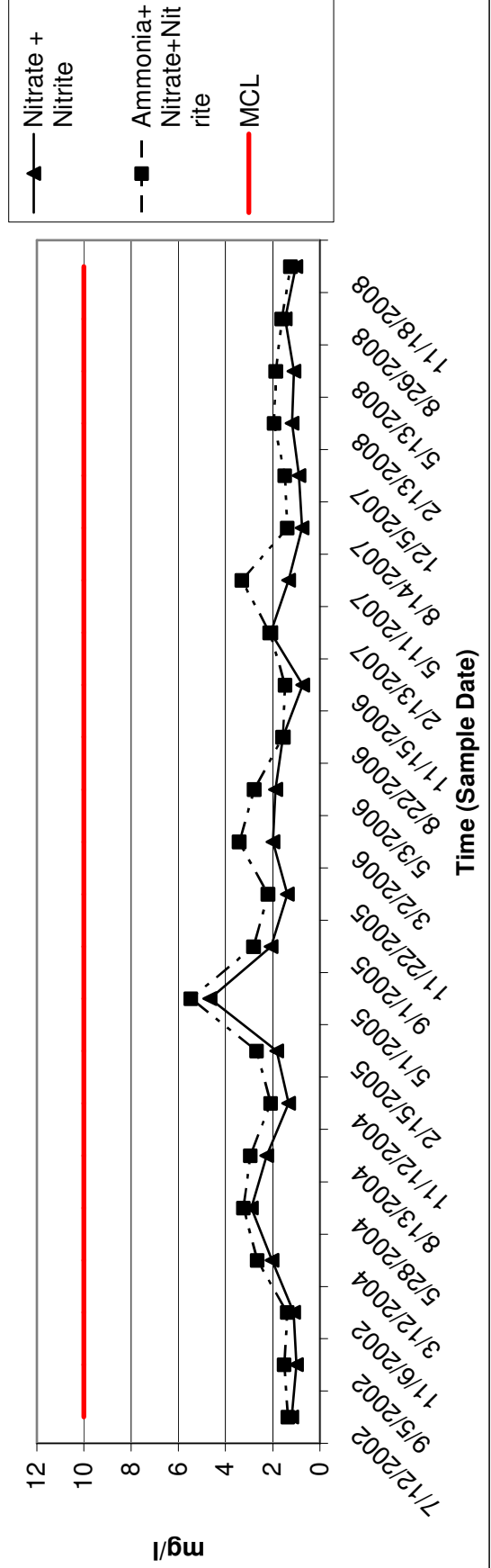


Malibu Creek Plaza

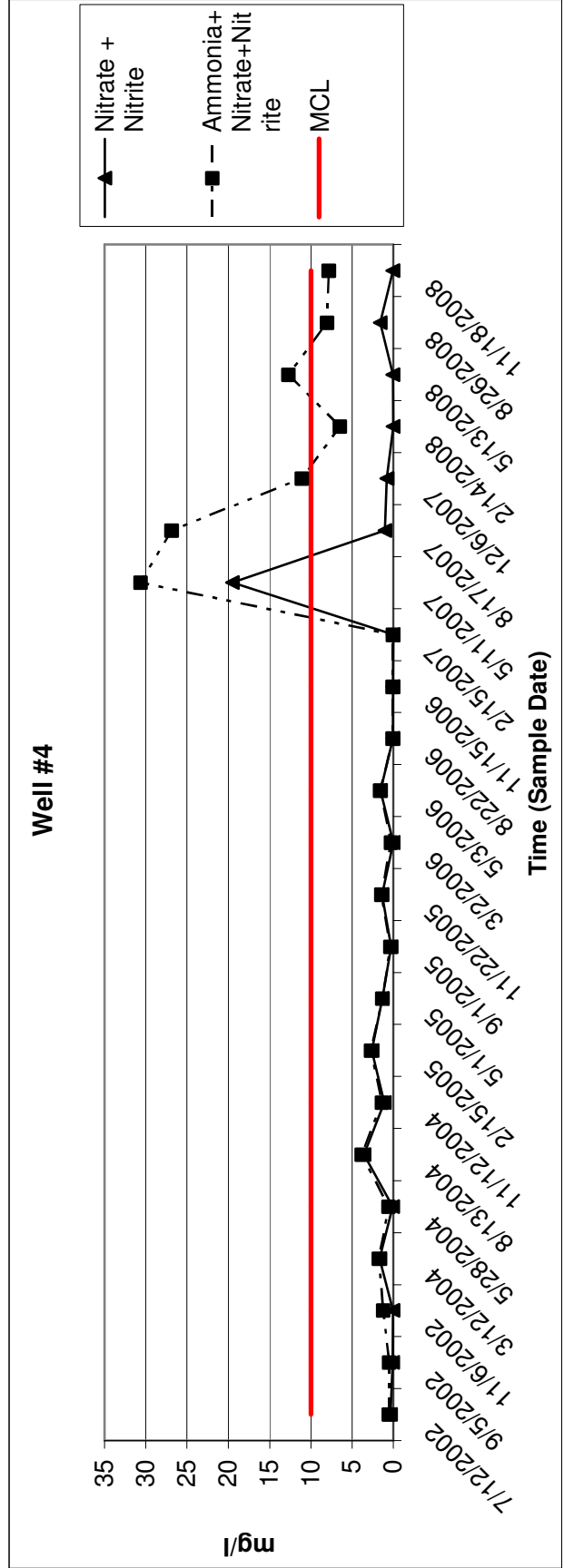
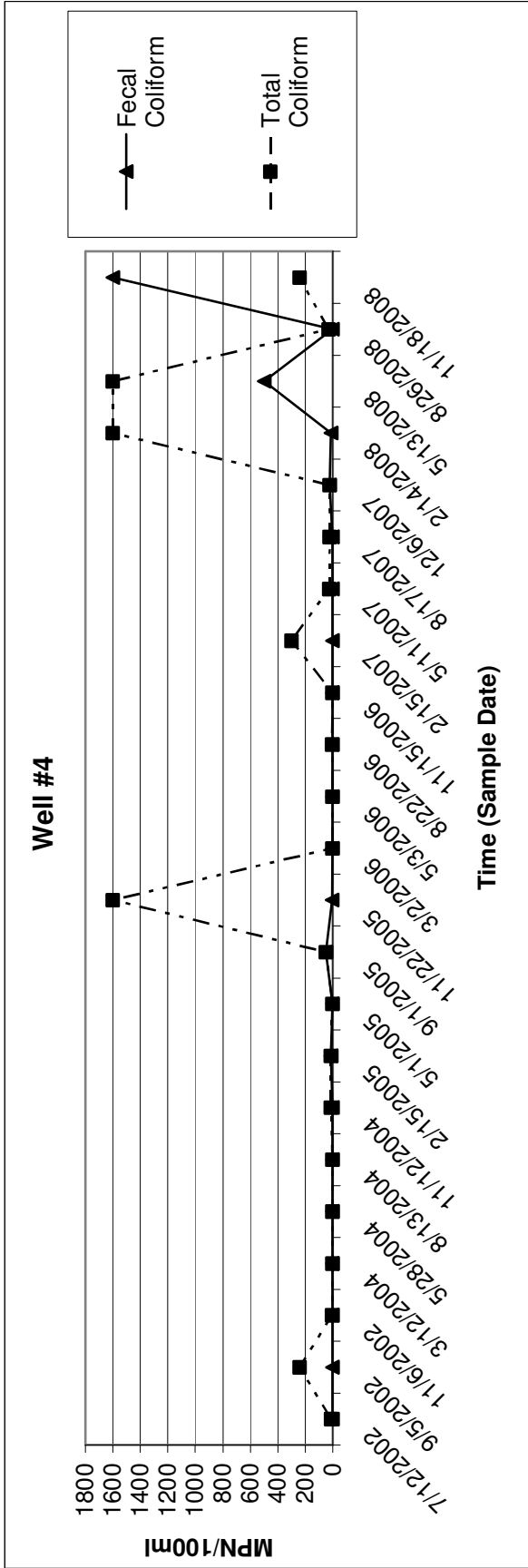
Well #3



Well #3

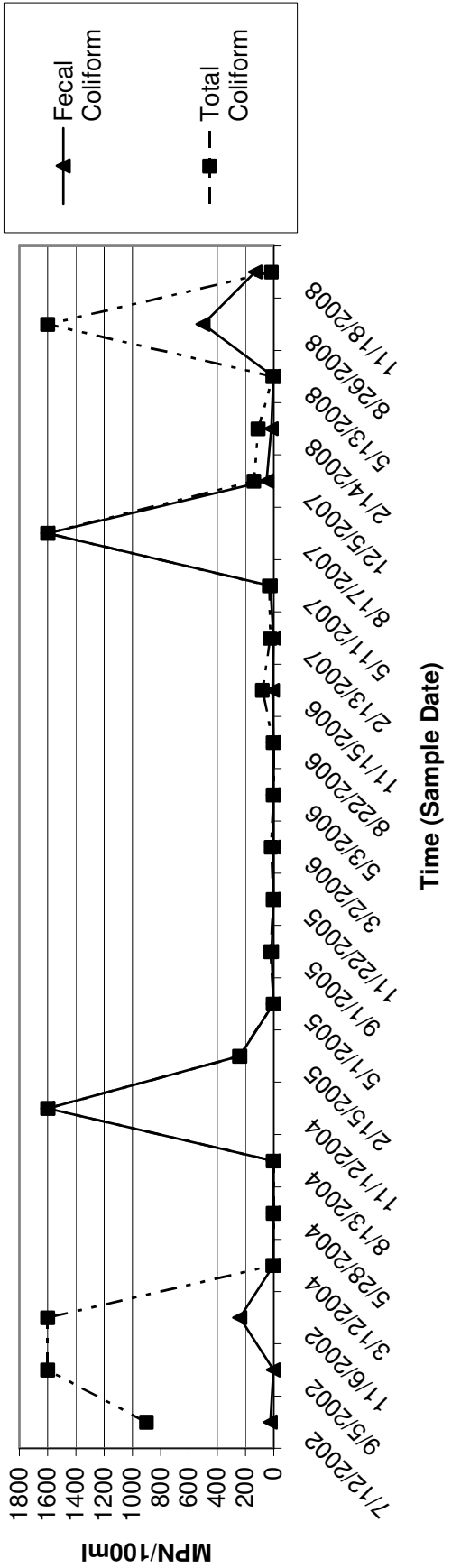


Malibu Creek Plaza

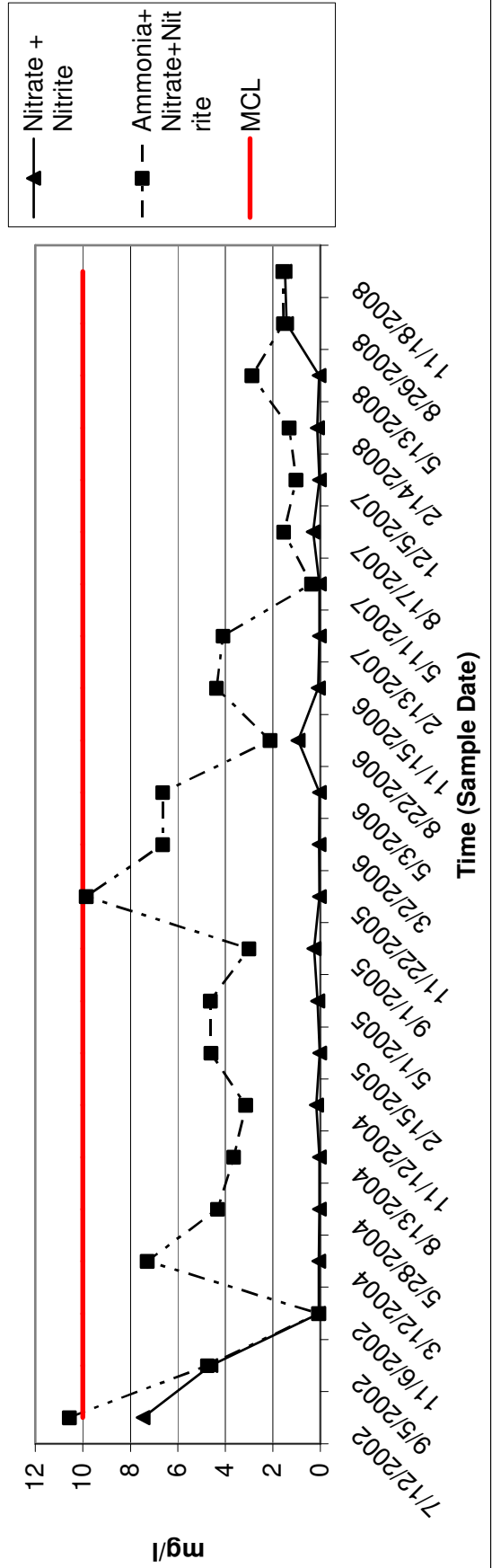


Malibu Creek Plaza

Well #5

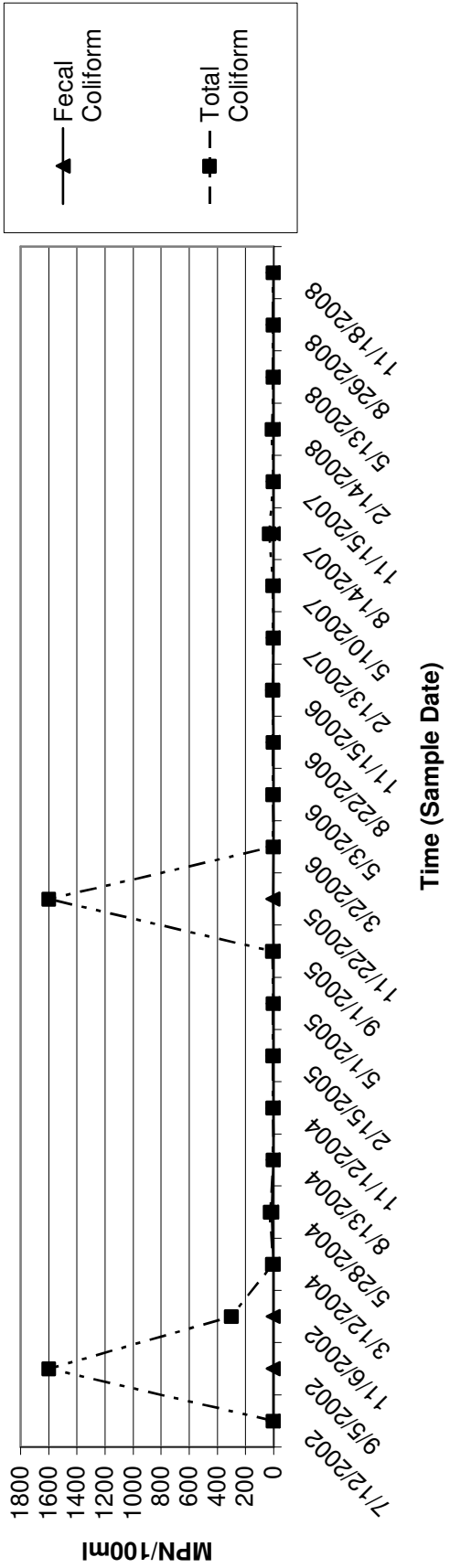


Well #5

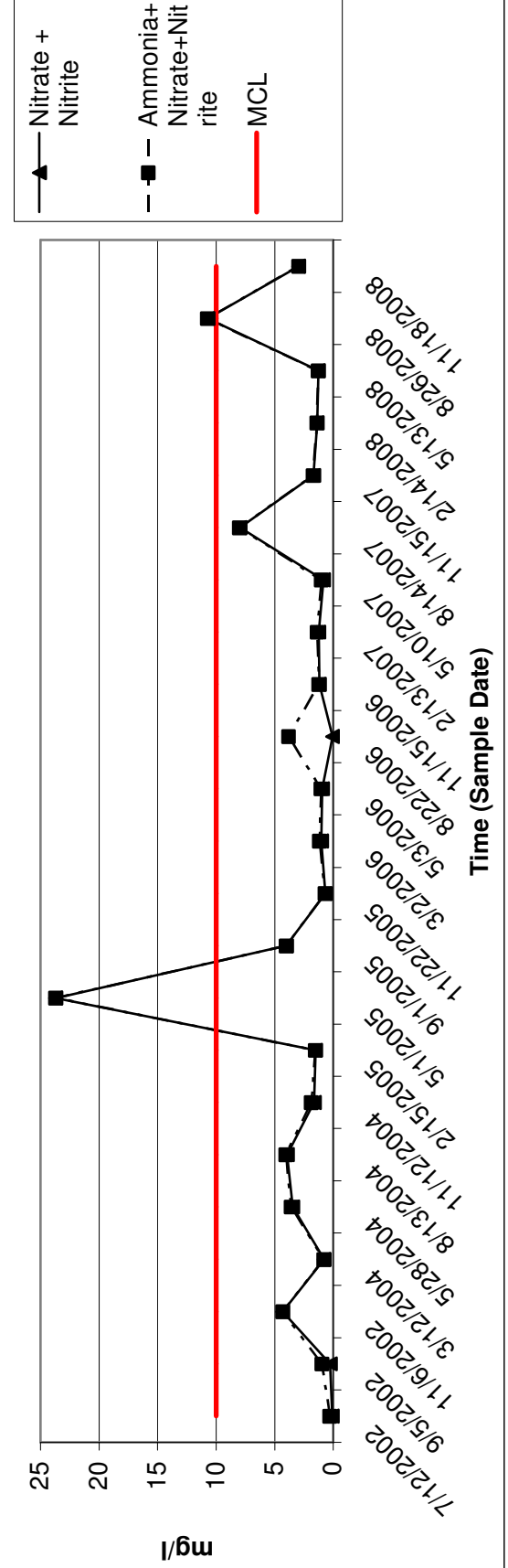


Malibu Creek Plaza

Well #6

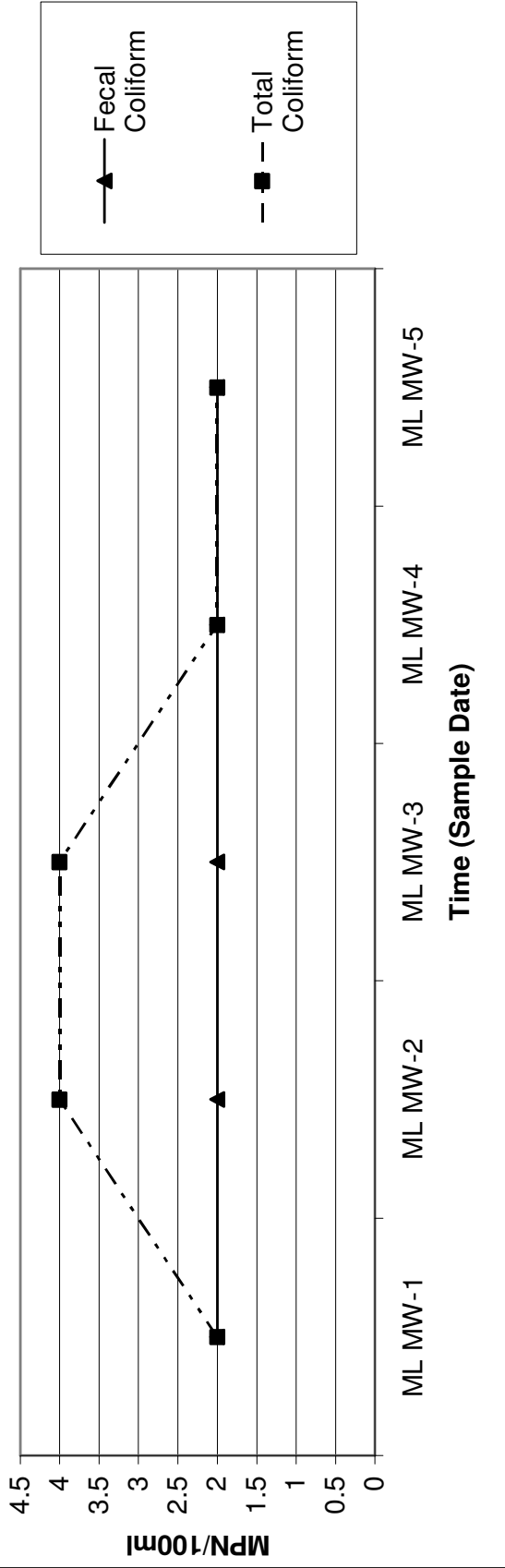


Well #6

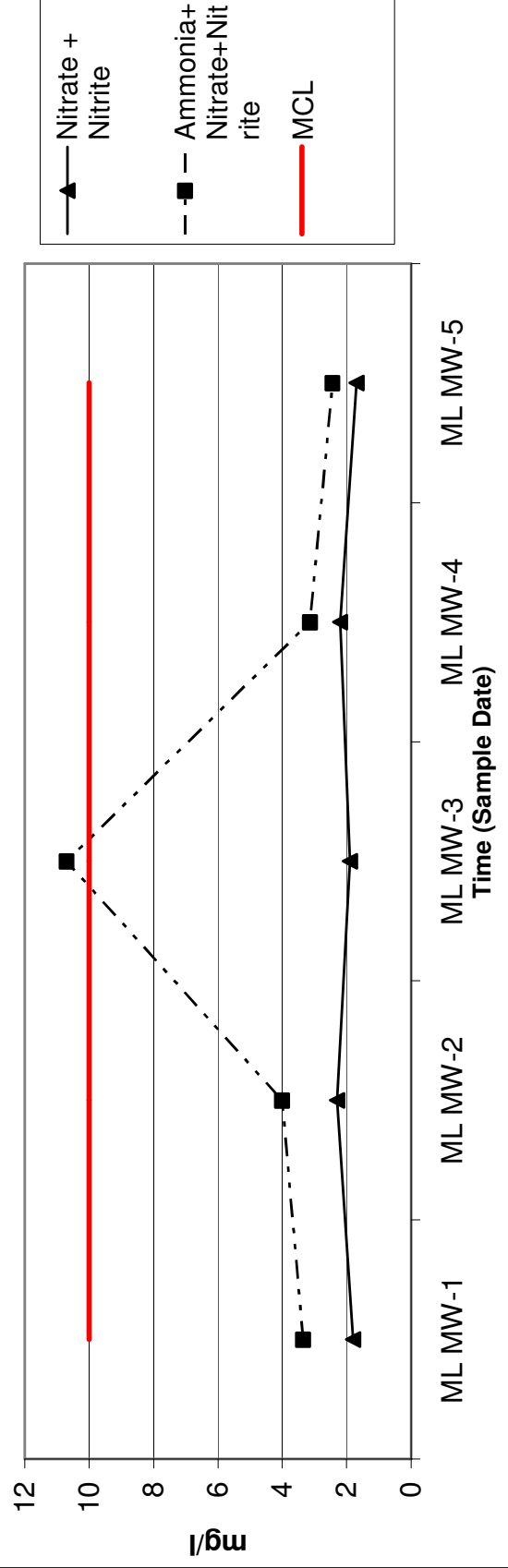


Malibu Lumber

ML MW-1, ML MW-2, ML MW-3, ML MW-4, ML MW-5

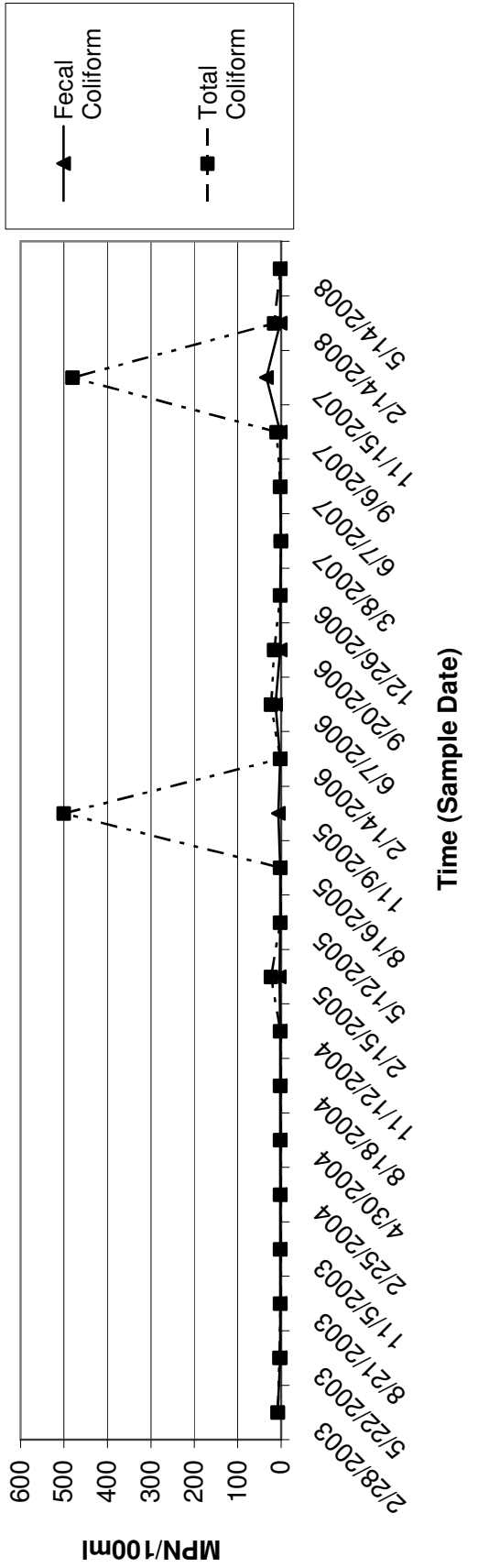


ML MW-1, ML MW-2, ML MW-3, ML MW-4, ML MW-5

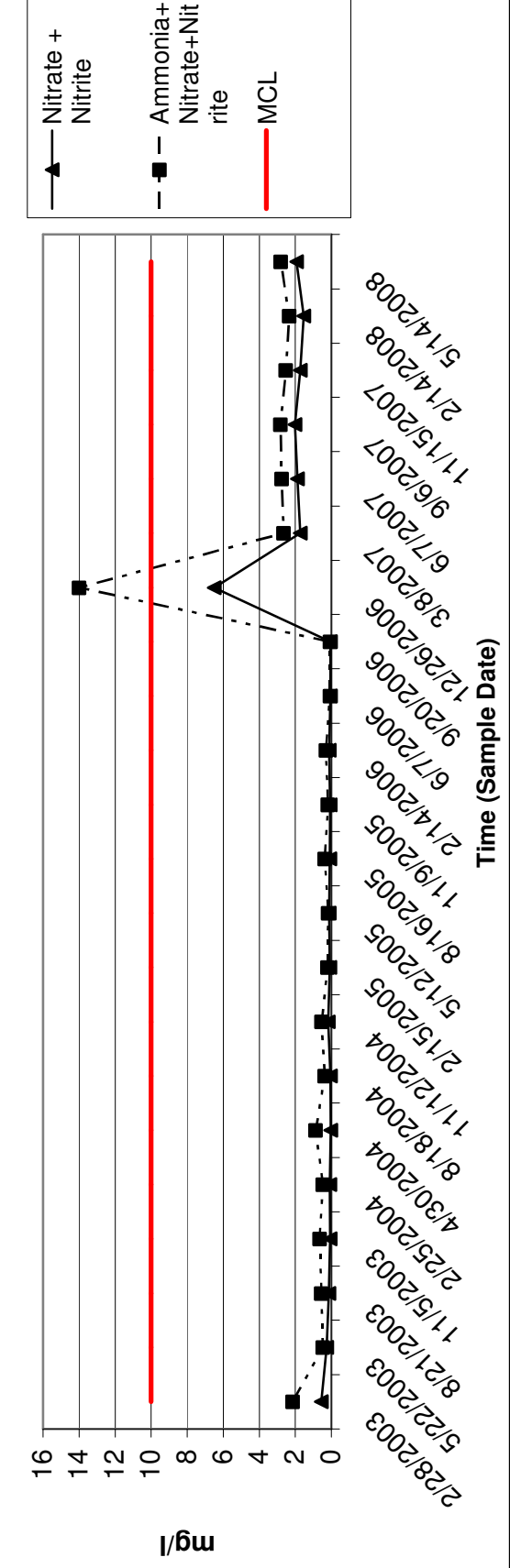


**Malibu Colony Plaza**

**Well # 1**

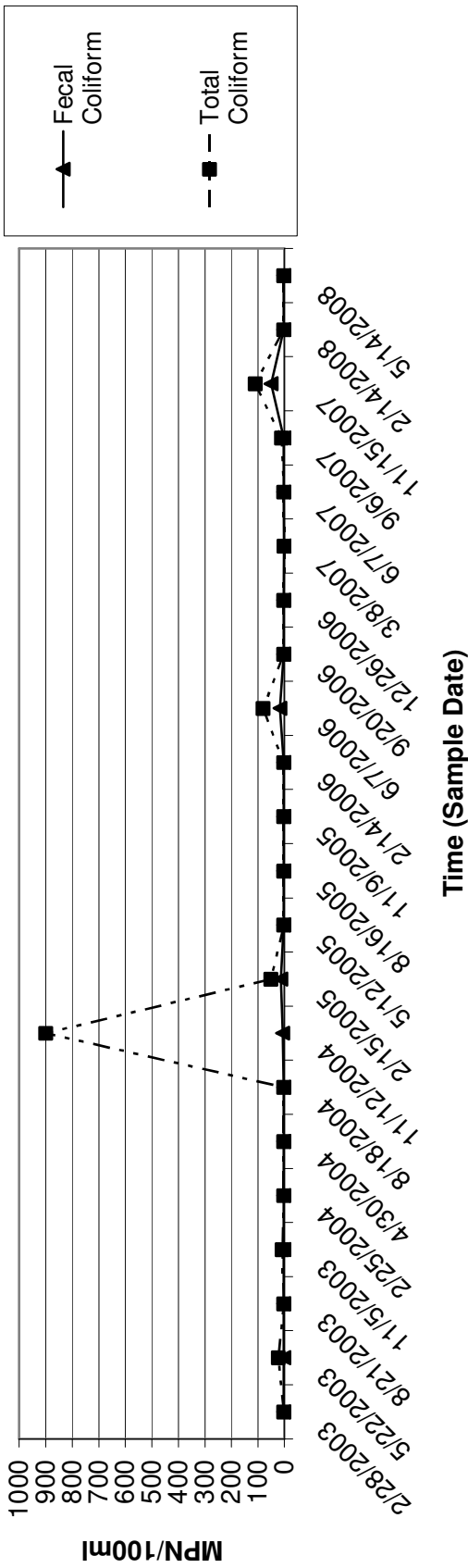


**Well # 1**

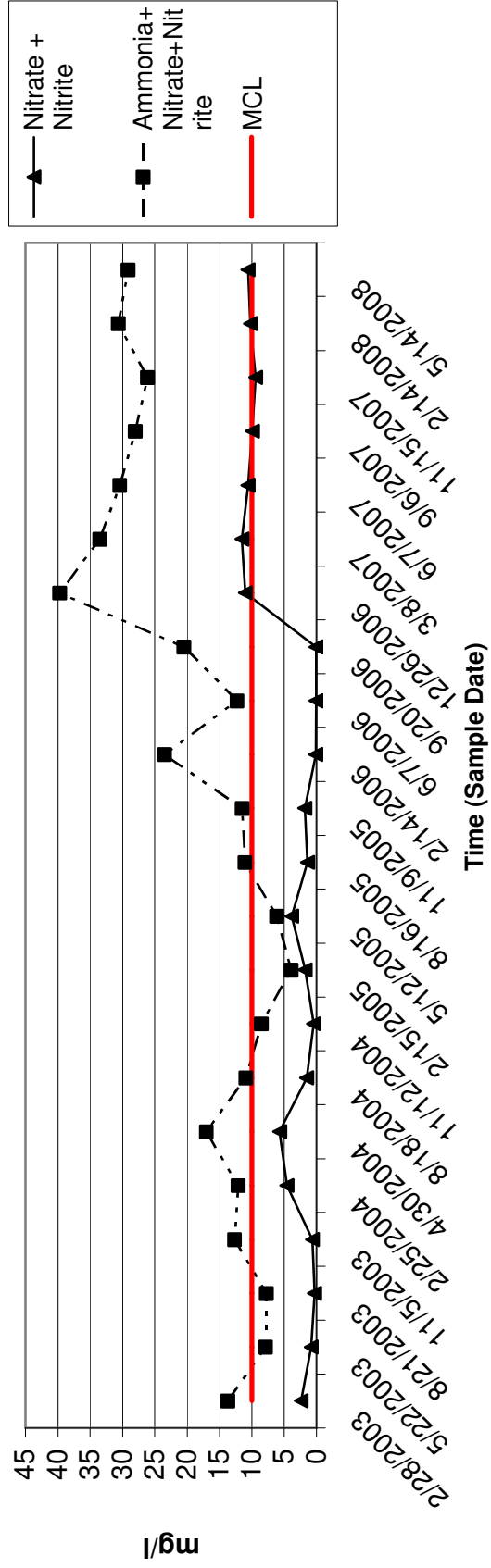


Malibu Colony Plaza

Well # 2



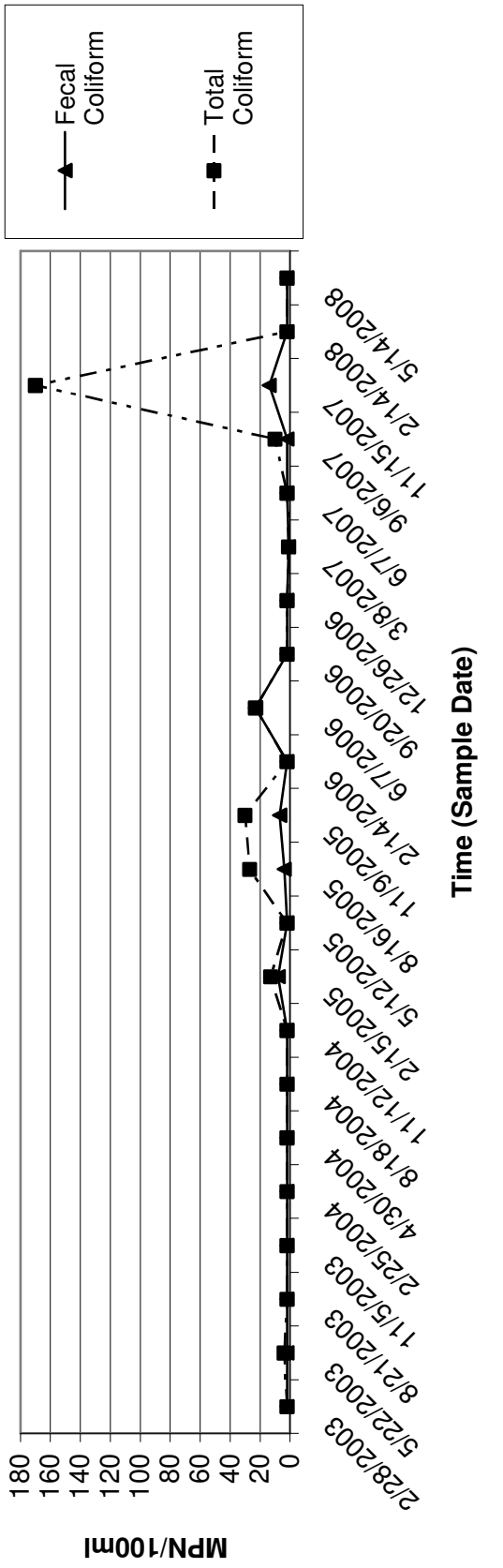
Well # 2



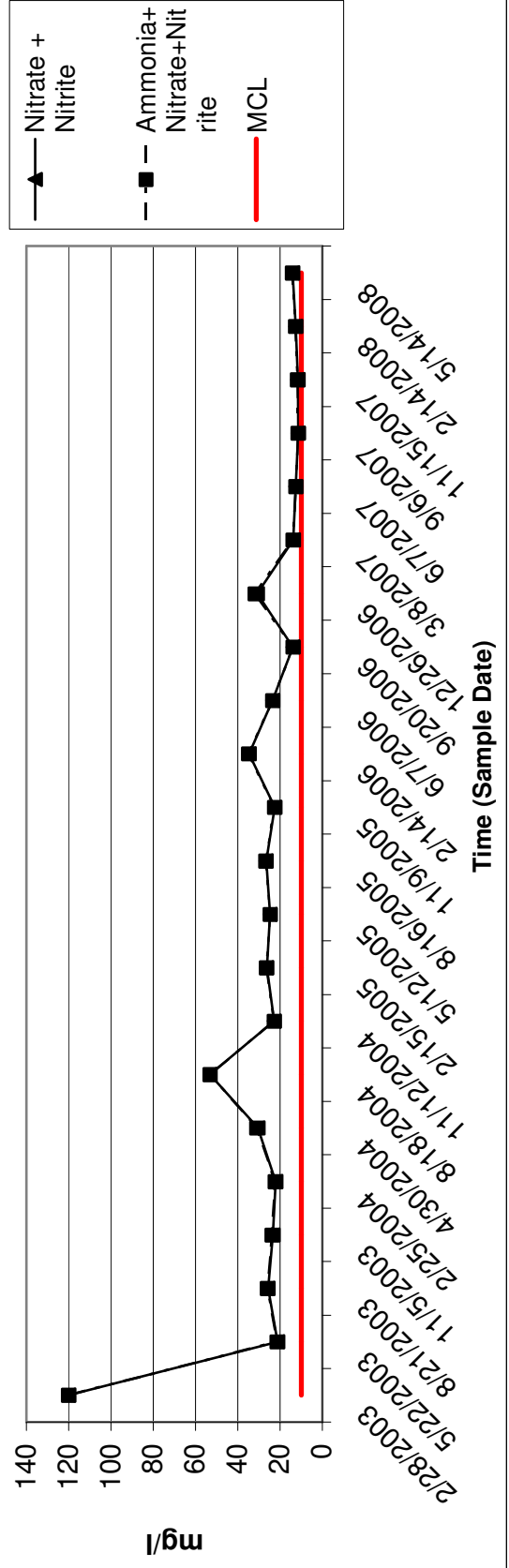


Malibu Colony Plaza

Well # 3

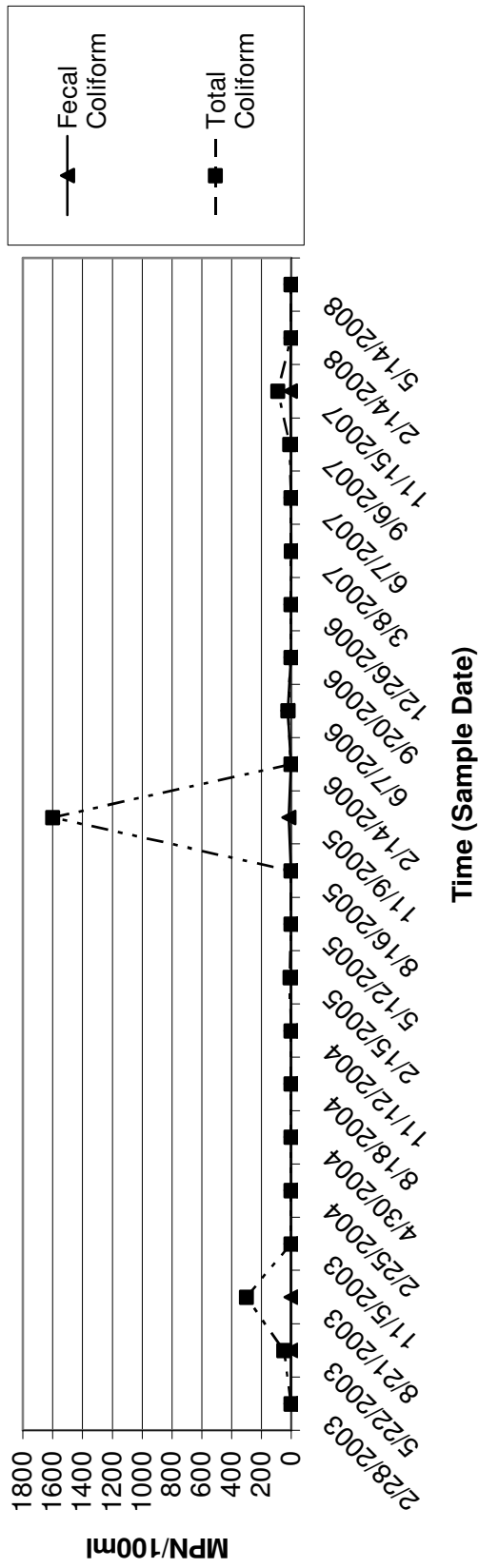


Well # 3

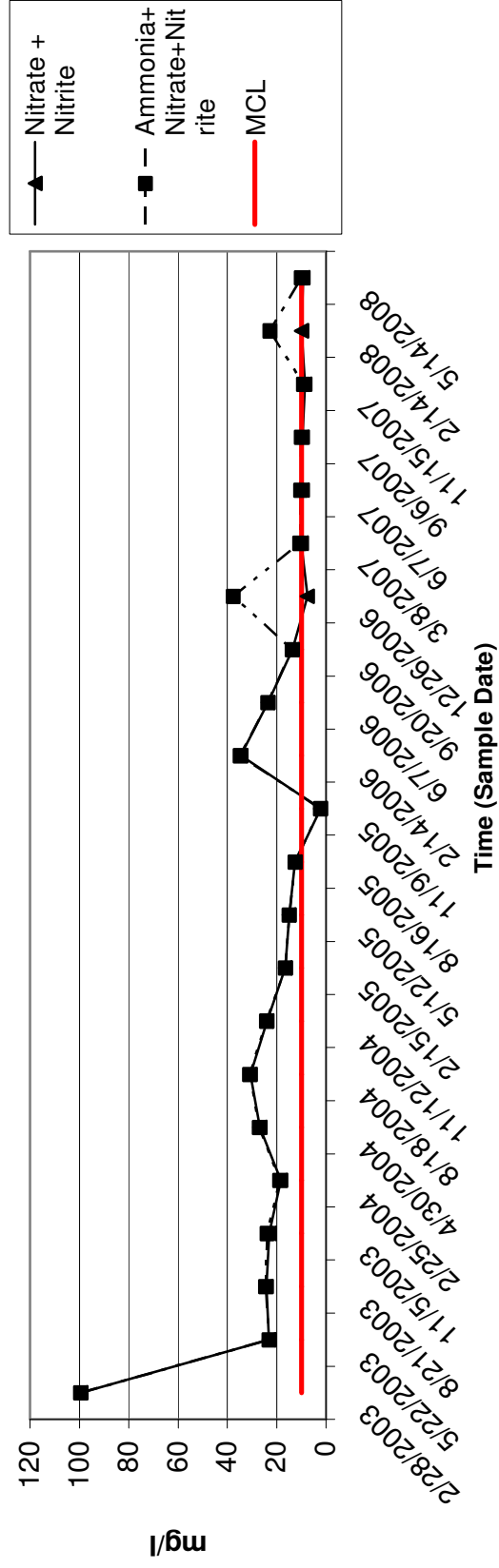


Malibu Colony Plaza

Well # 4

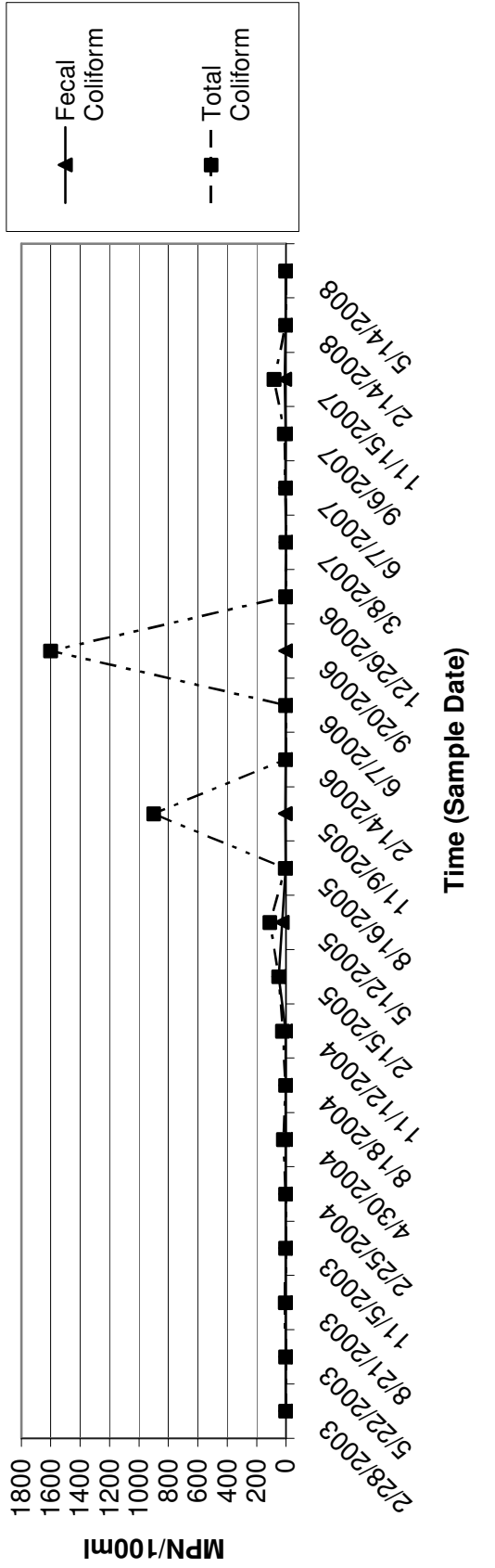


Well # 4

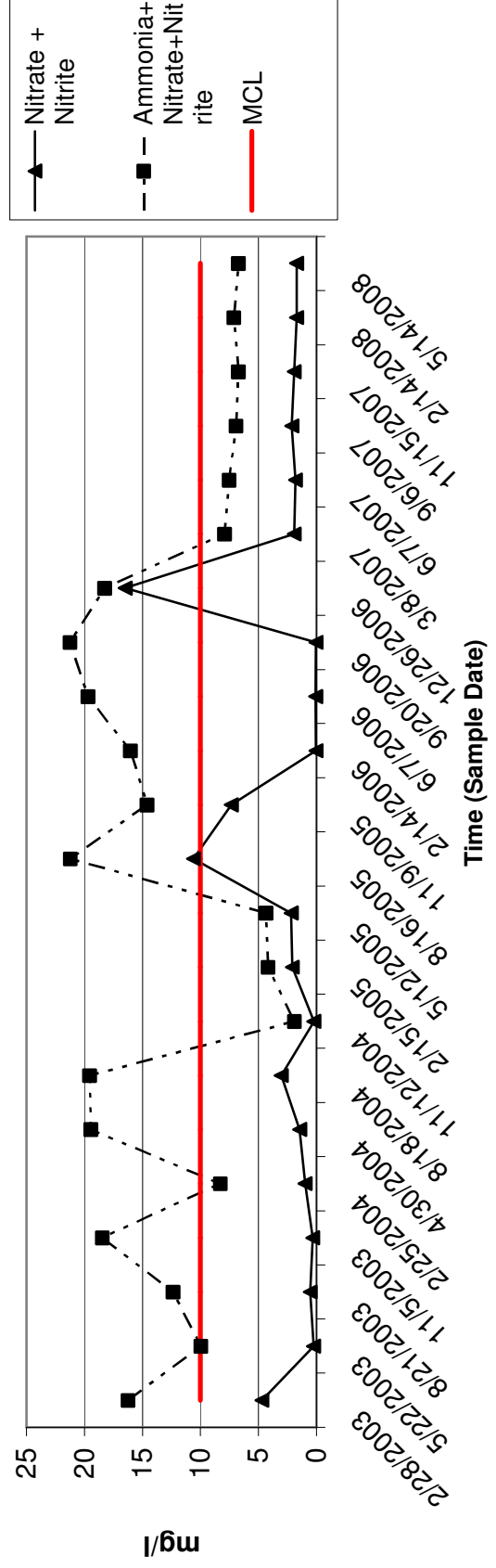


Malibu Colony Plaza

Well # 5

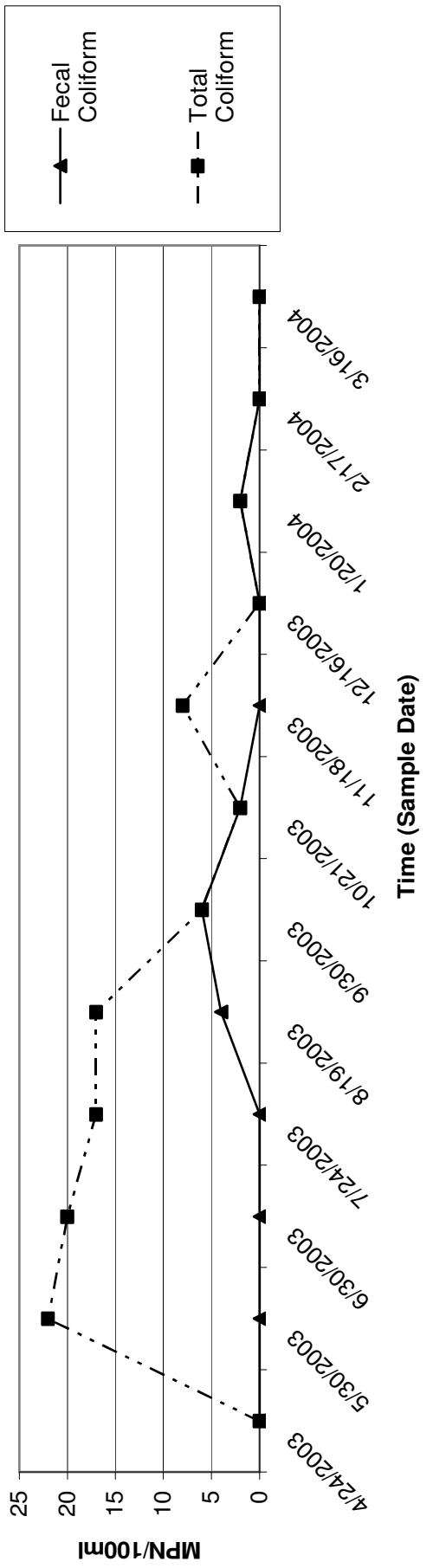


Well # 5

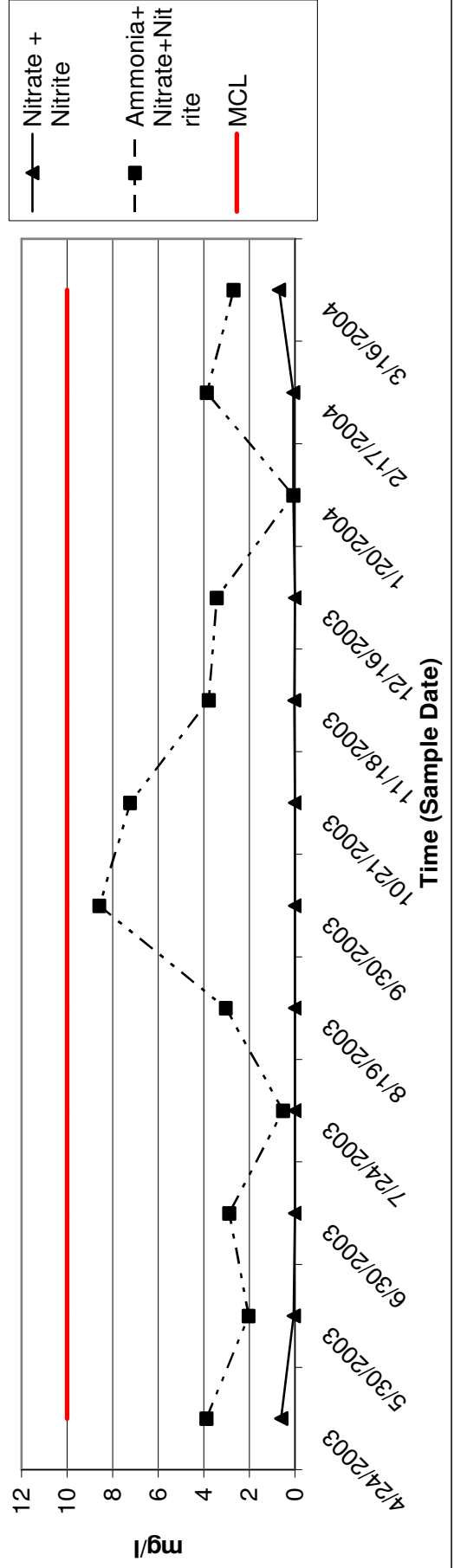


# Malibu Civic Center Area

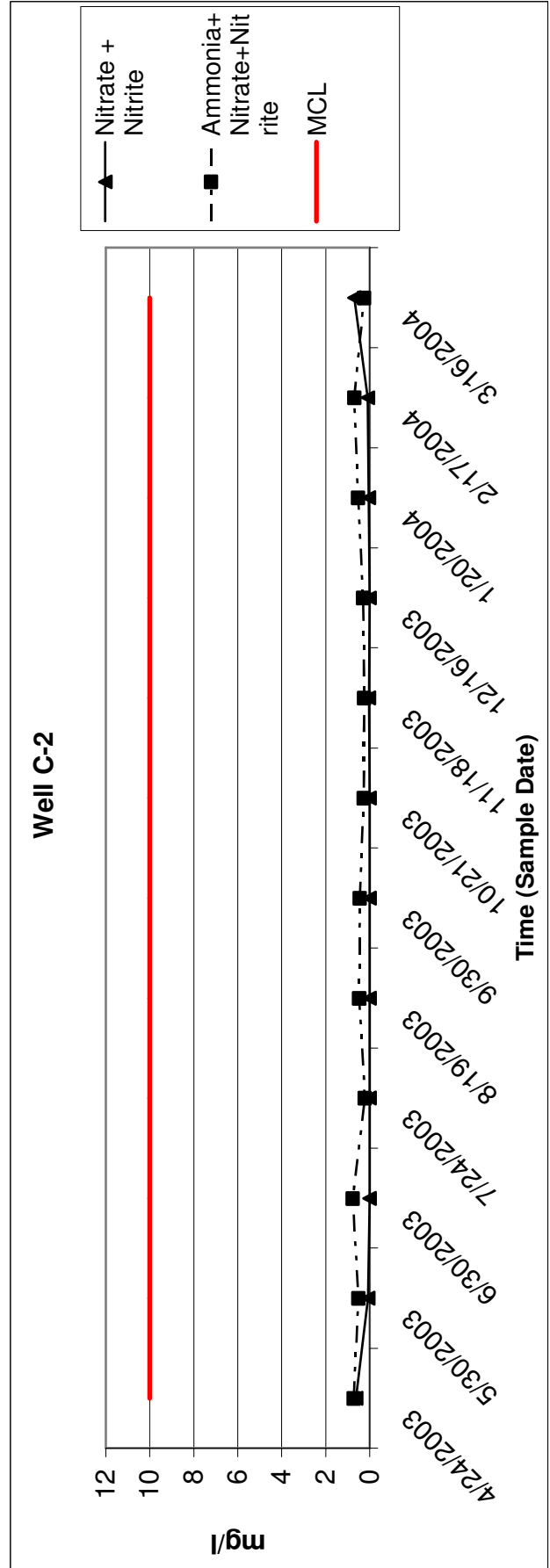
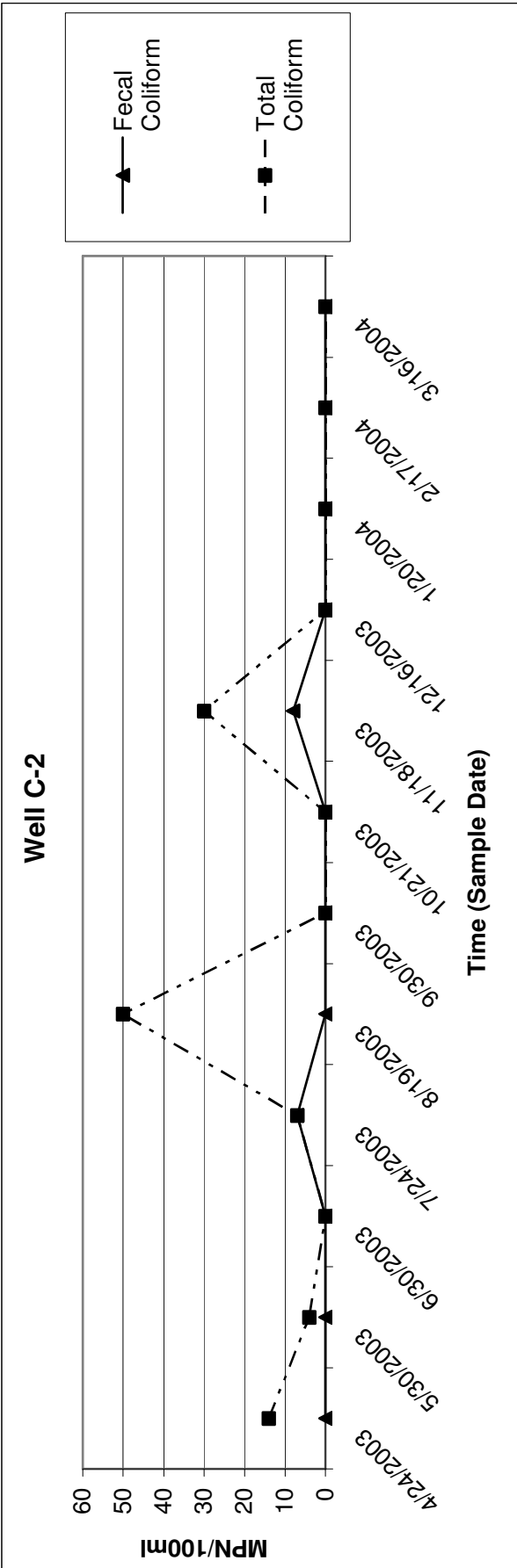
## Well C-1



## Well C-1

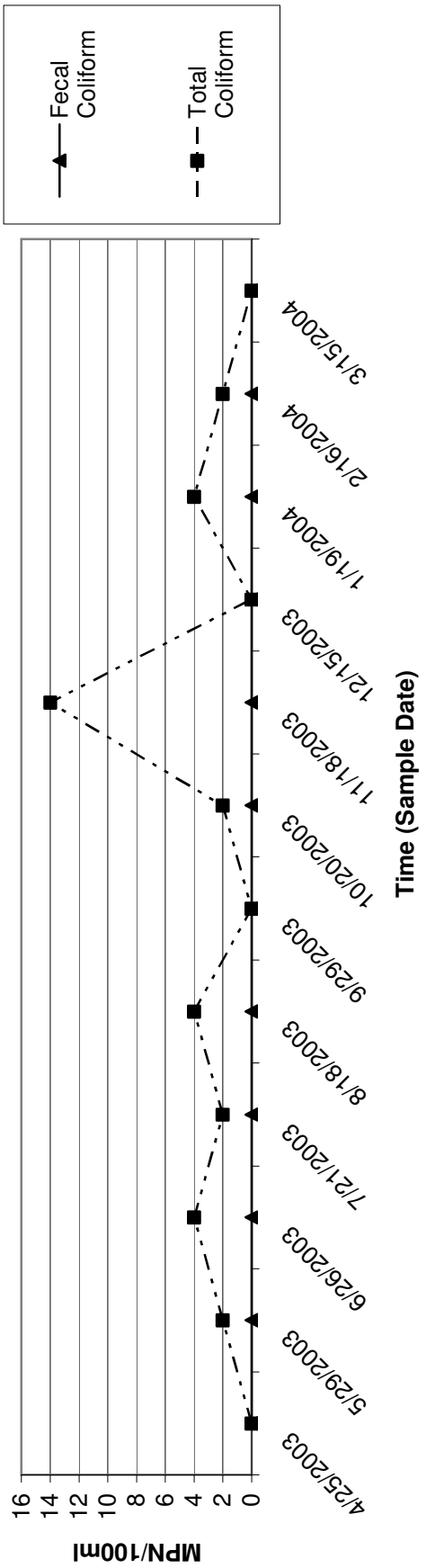


# Malibu Civic Center Area

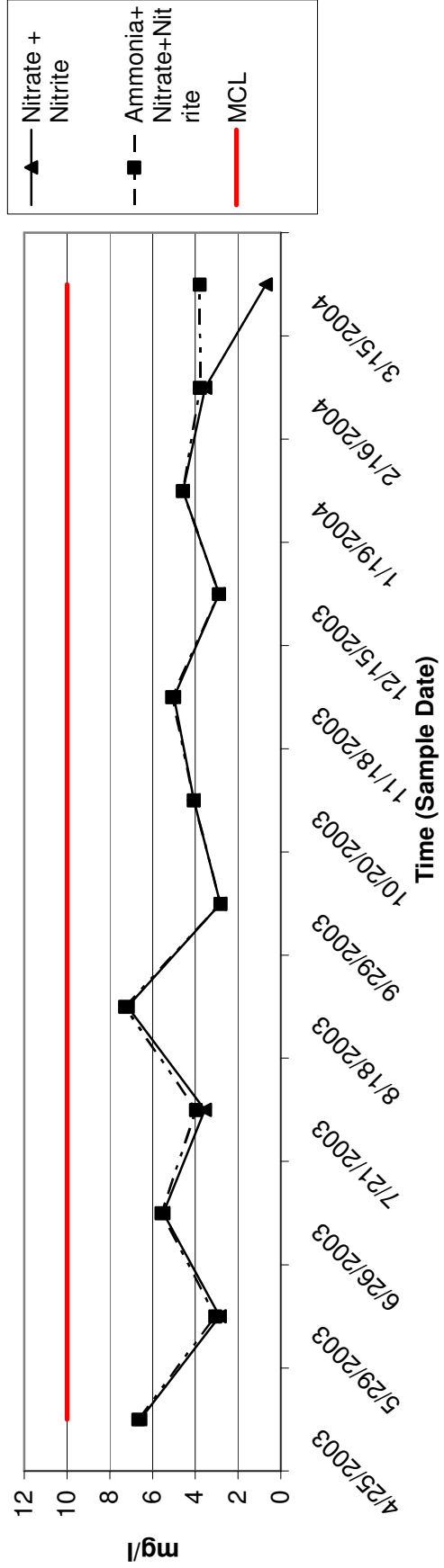


Malibu Civic Center Area

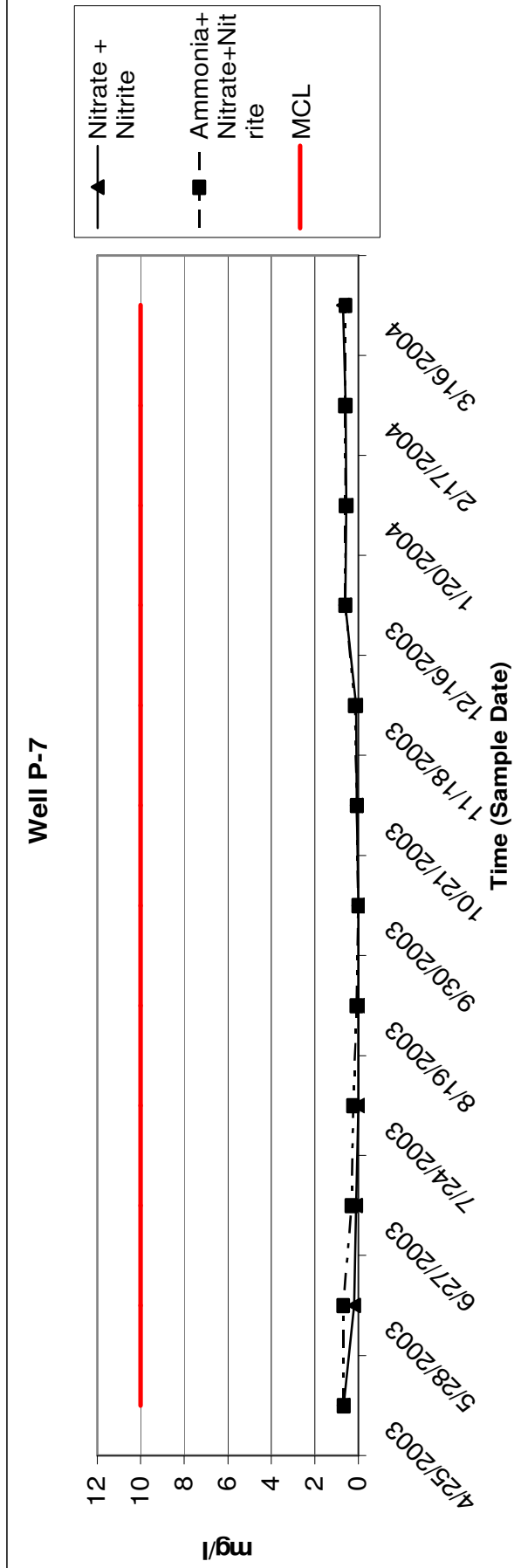
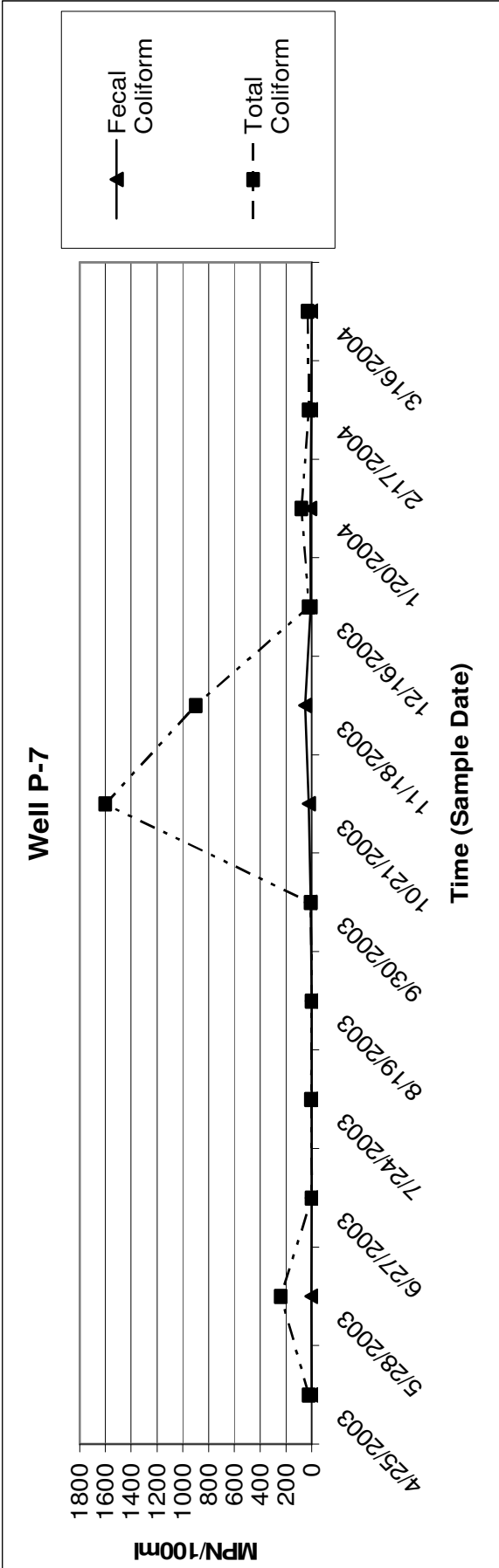
Well P-1



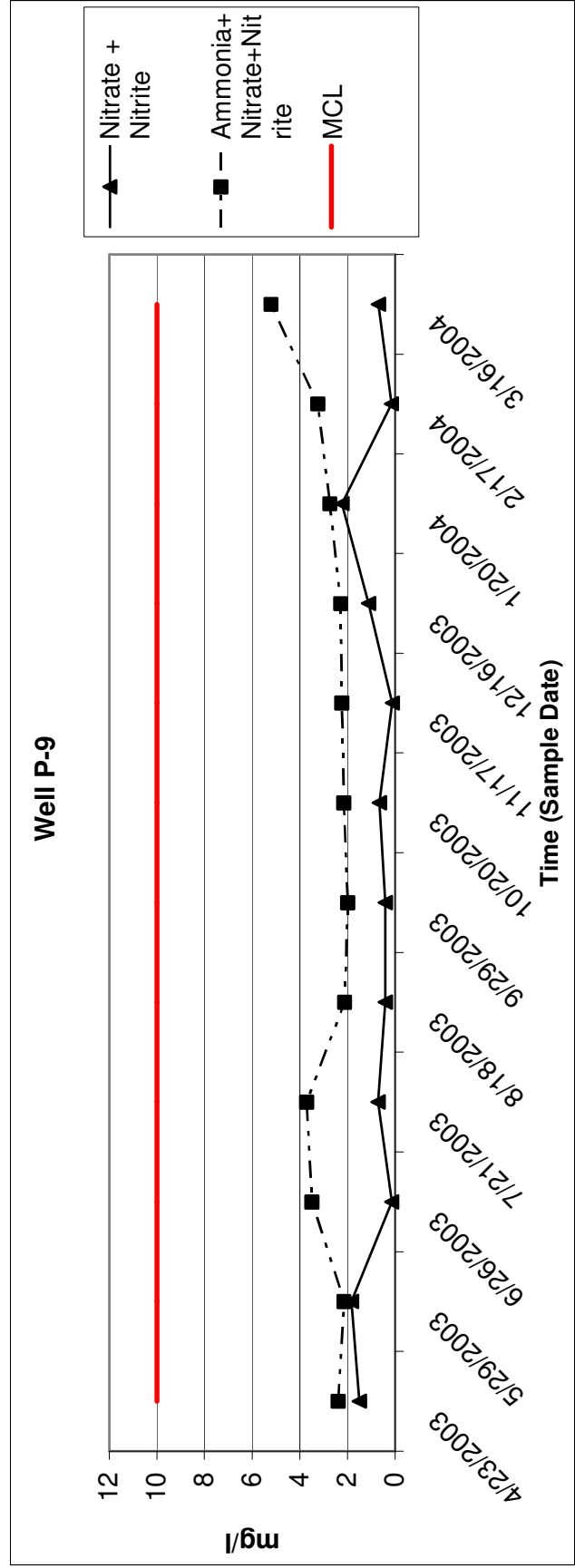
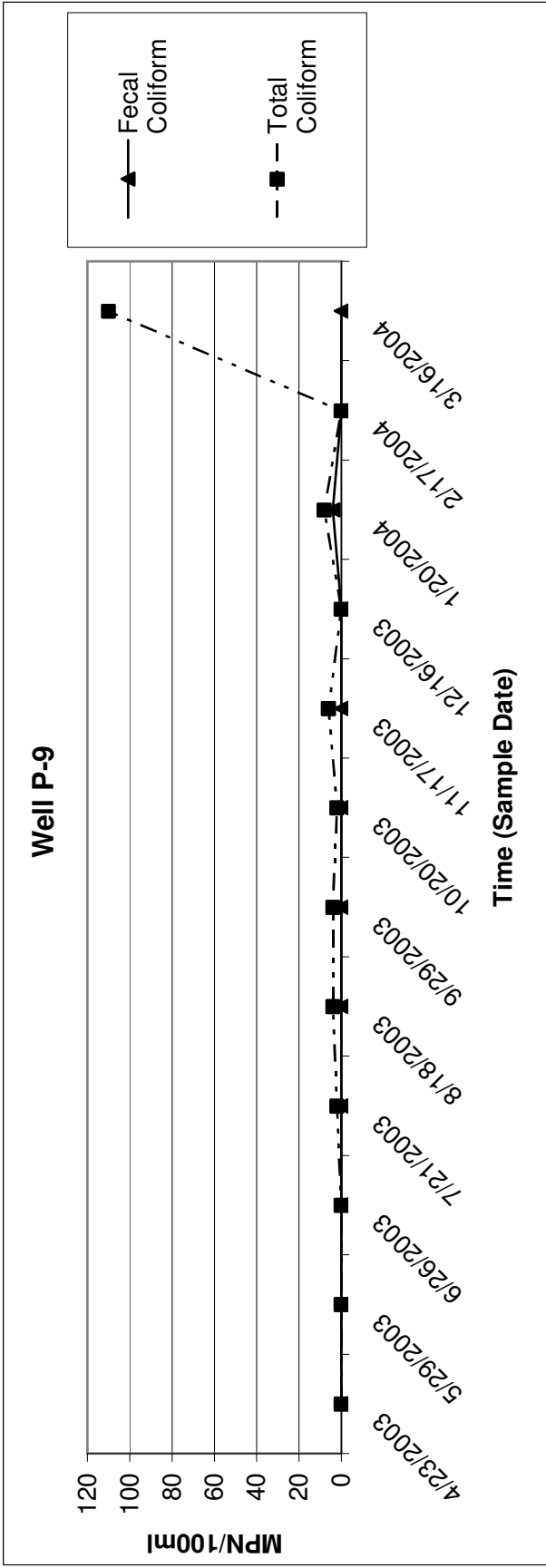
Well P-1



# Malibu Civic Center Area



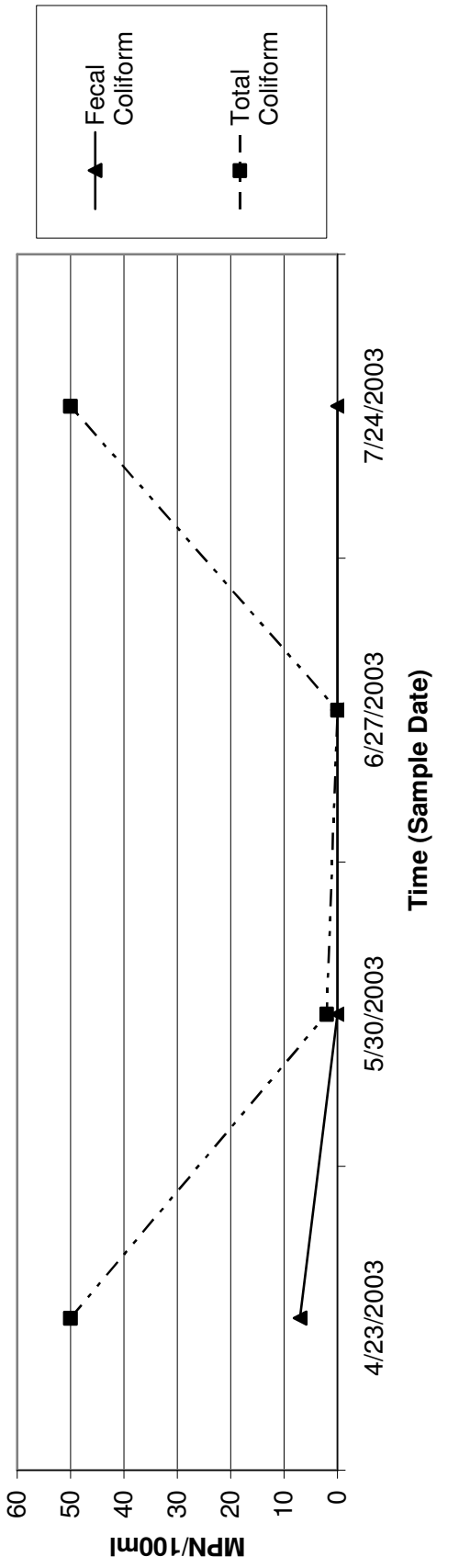
Malibu Civic Center Area



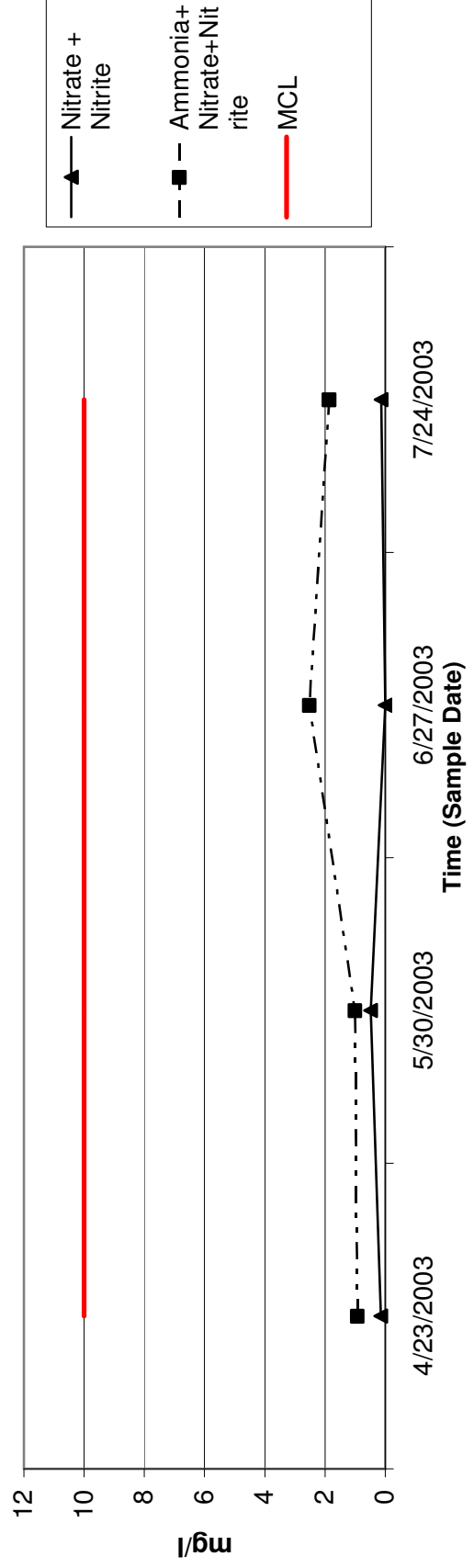


Malibu Civic Center Area

Well SMBRP-1

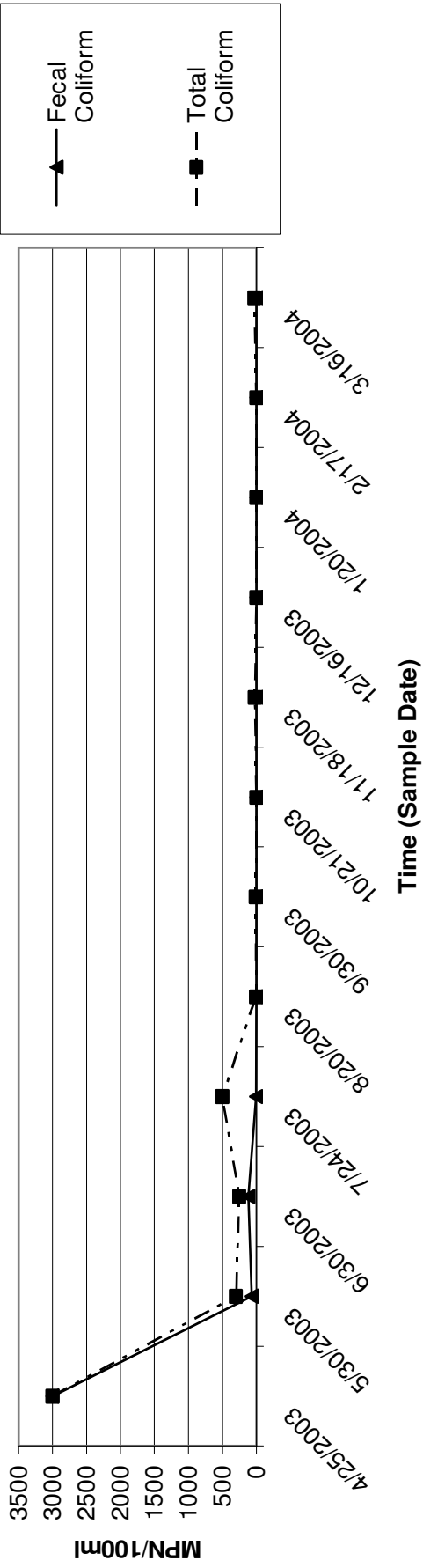


Well SMBRP-1

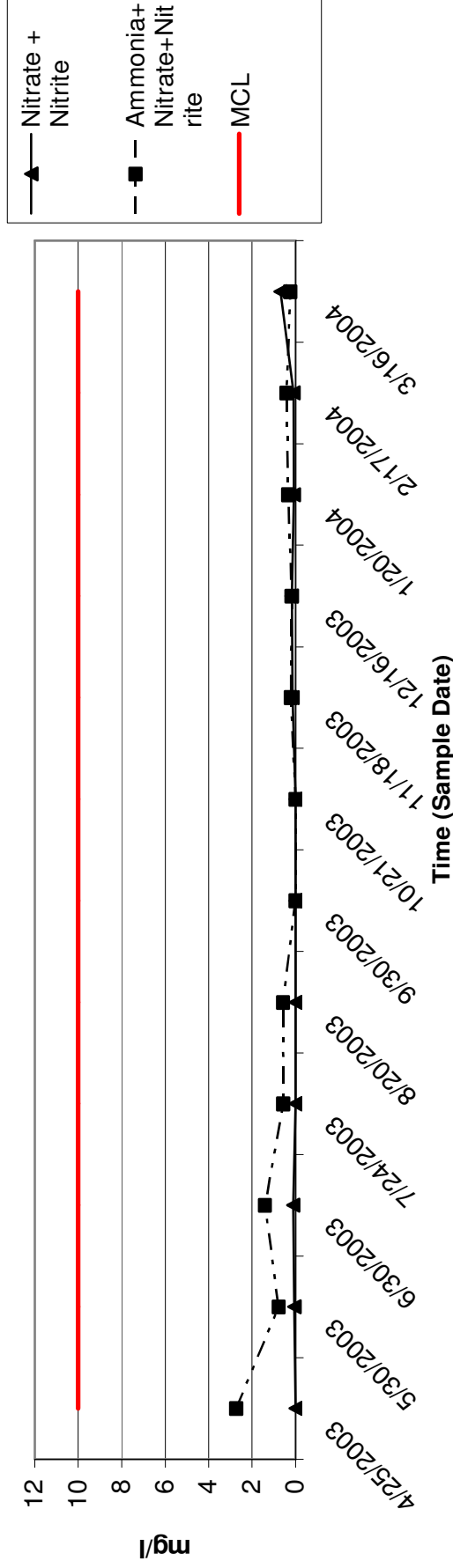


# Malibu Civic Center Area

## Well SMBRRP-2

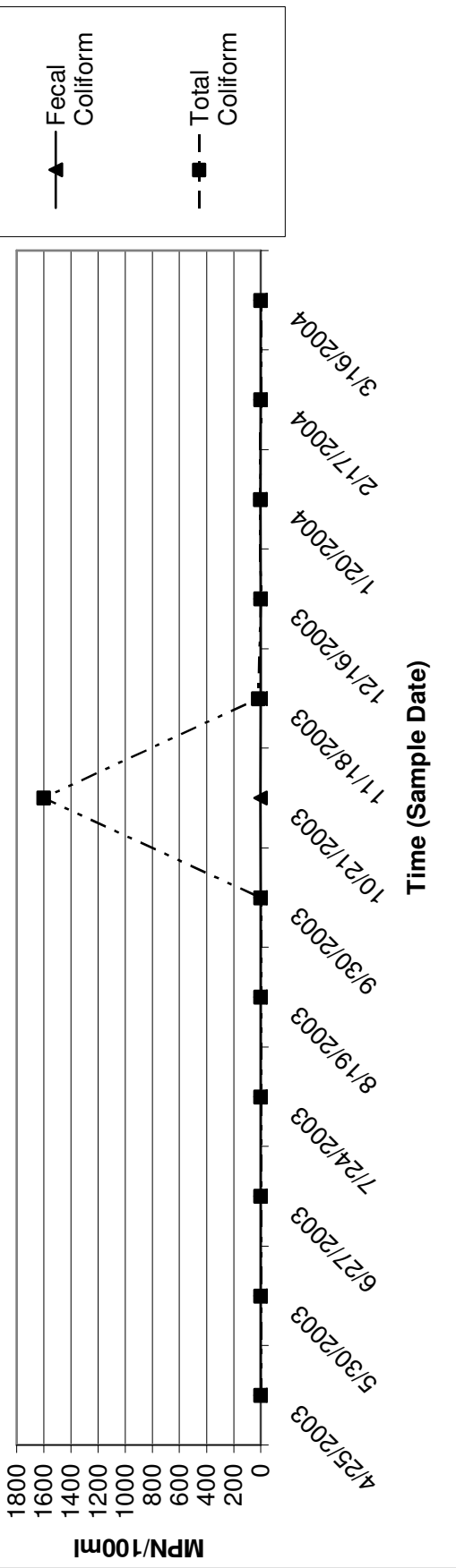


## Well SMBRRP-2

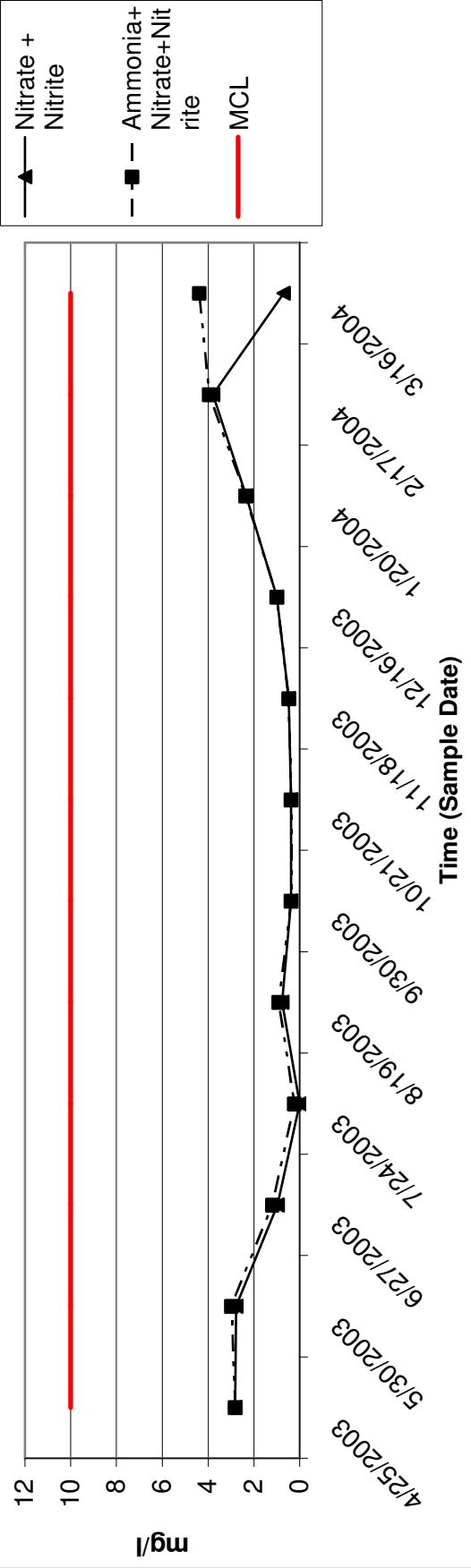


# Malibu Civic Center Area

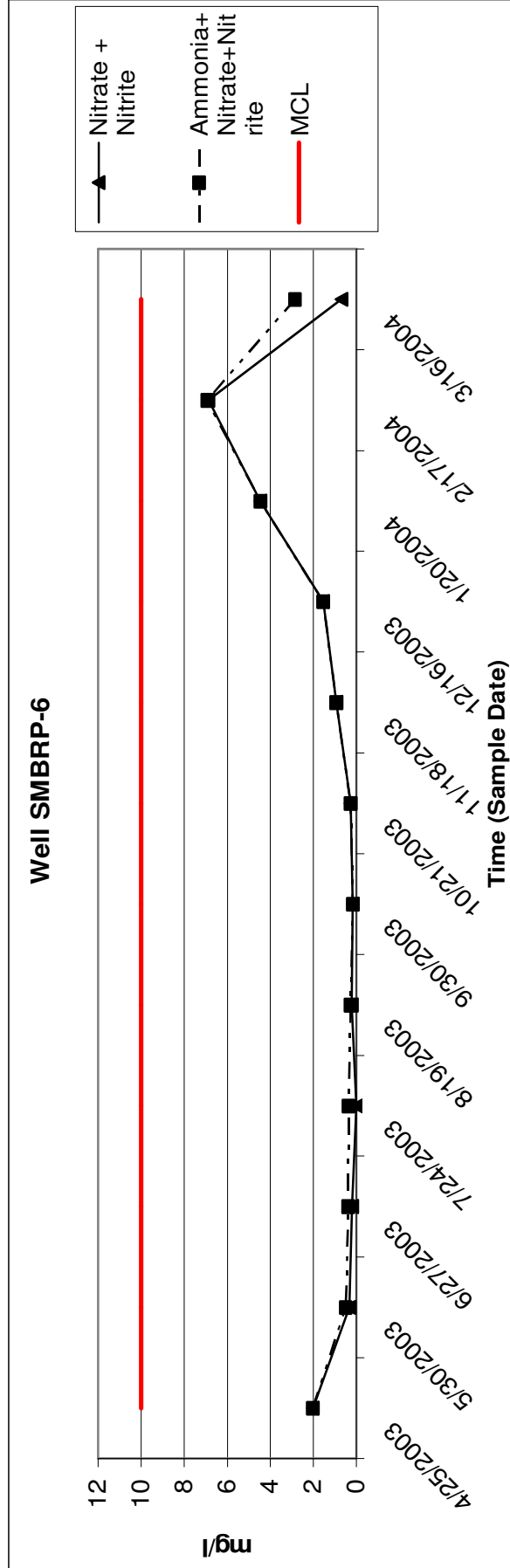
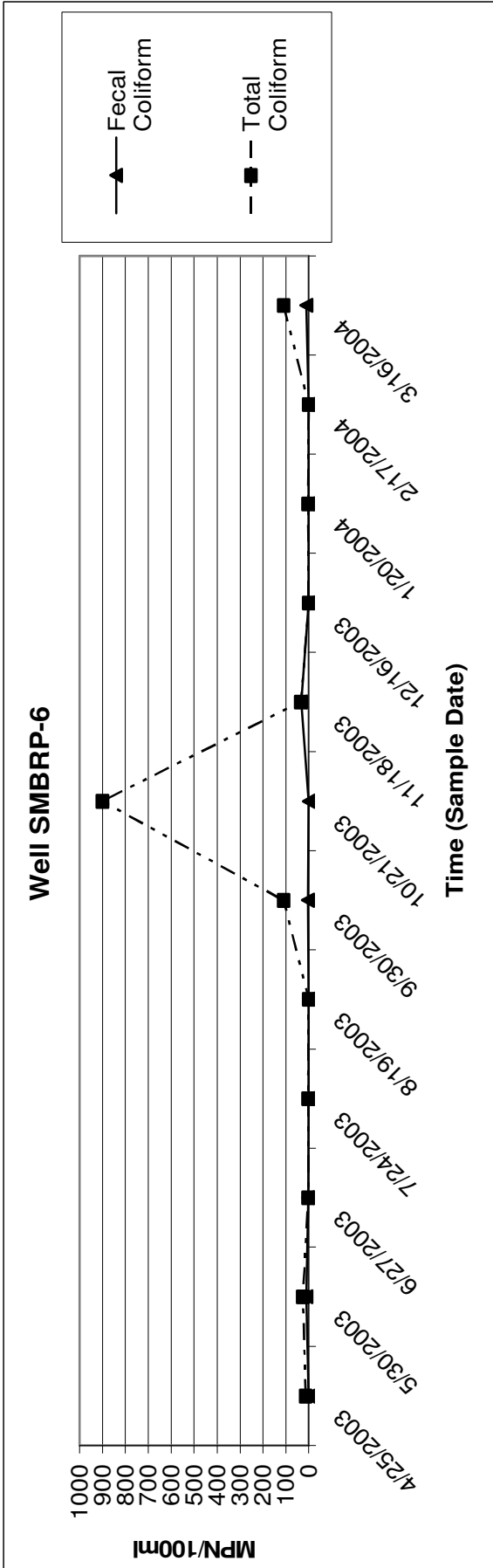
## Well SMBRRP-3c



## Well SMBRRP-3c

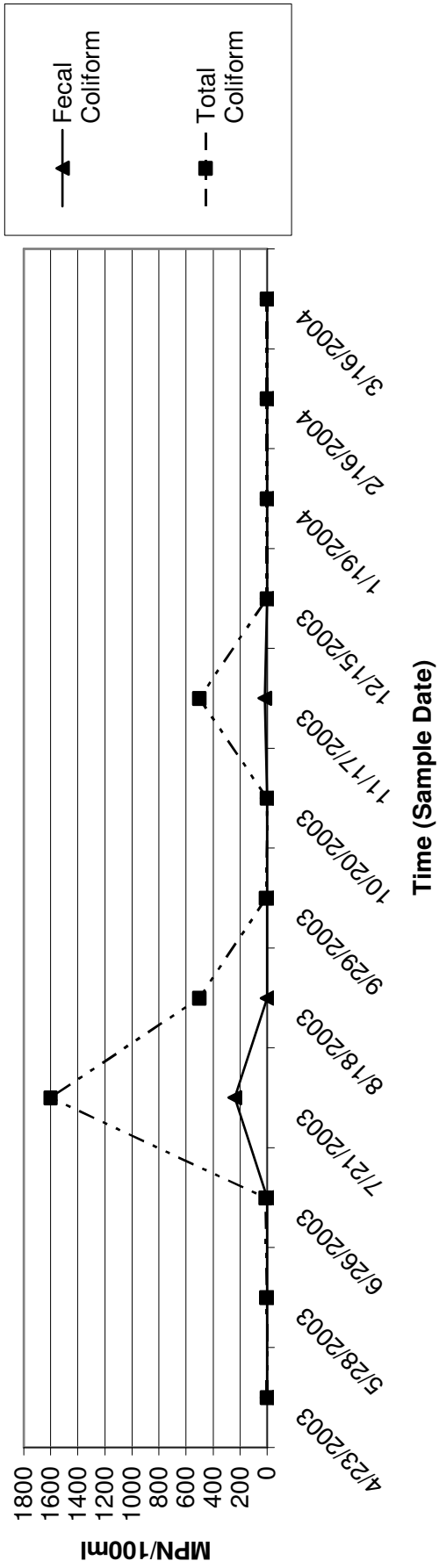


Malibu Civic Center Area

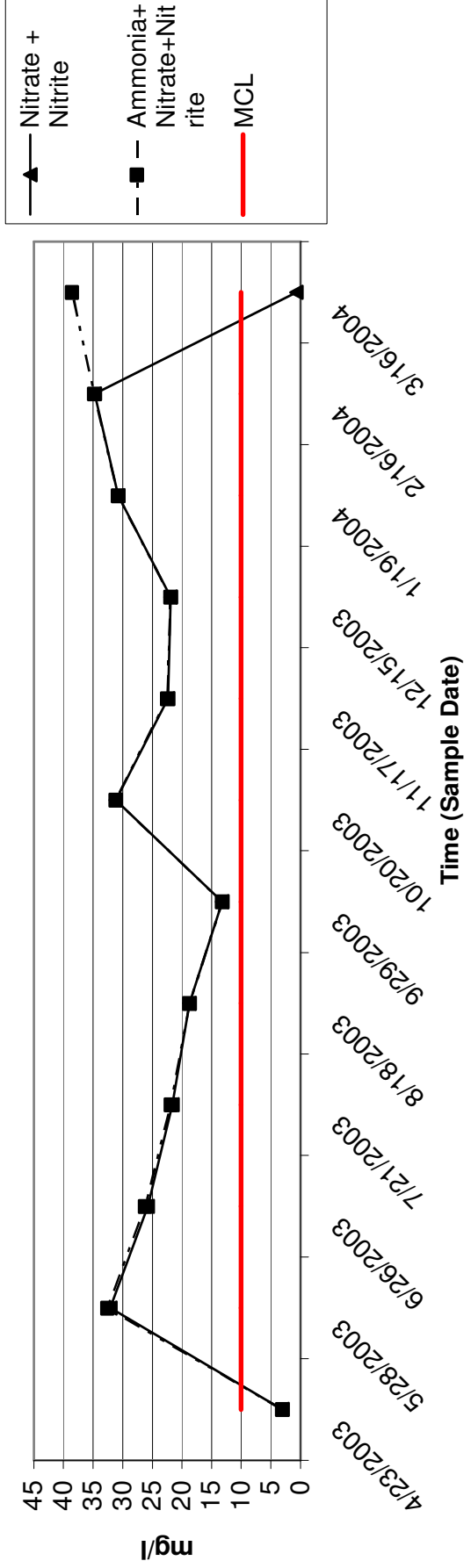


Malibu Civic Center Area

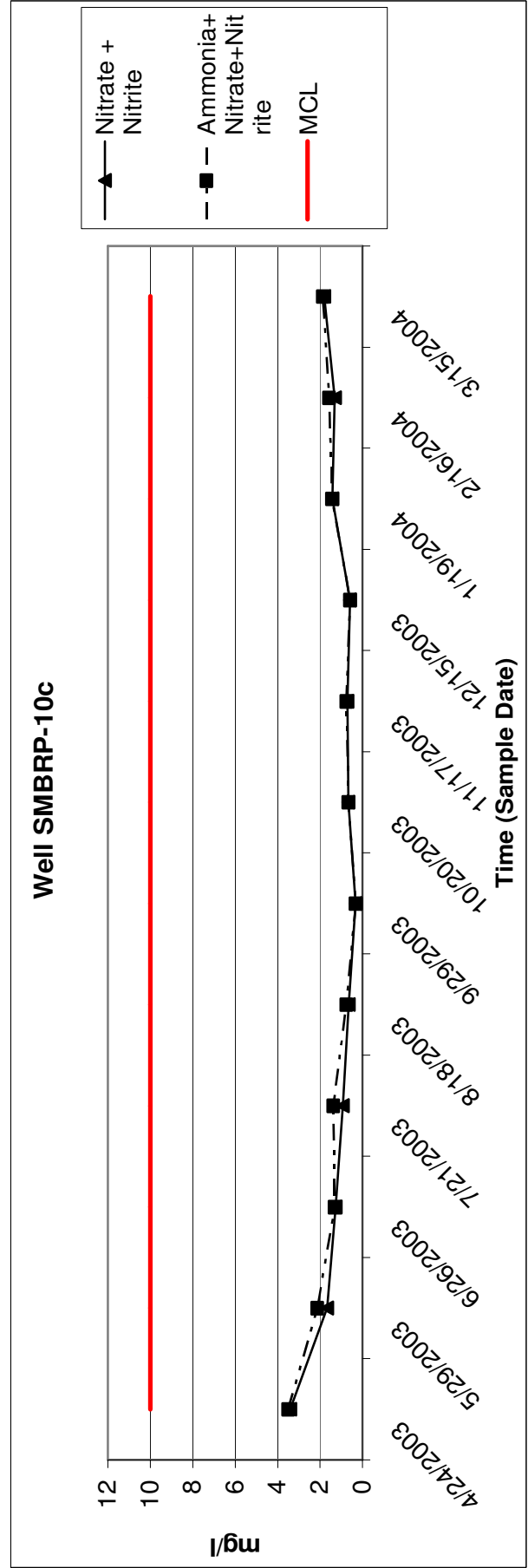
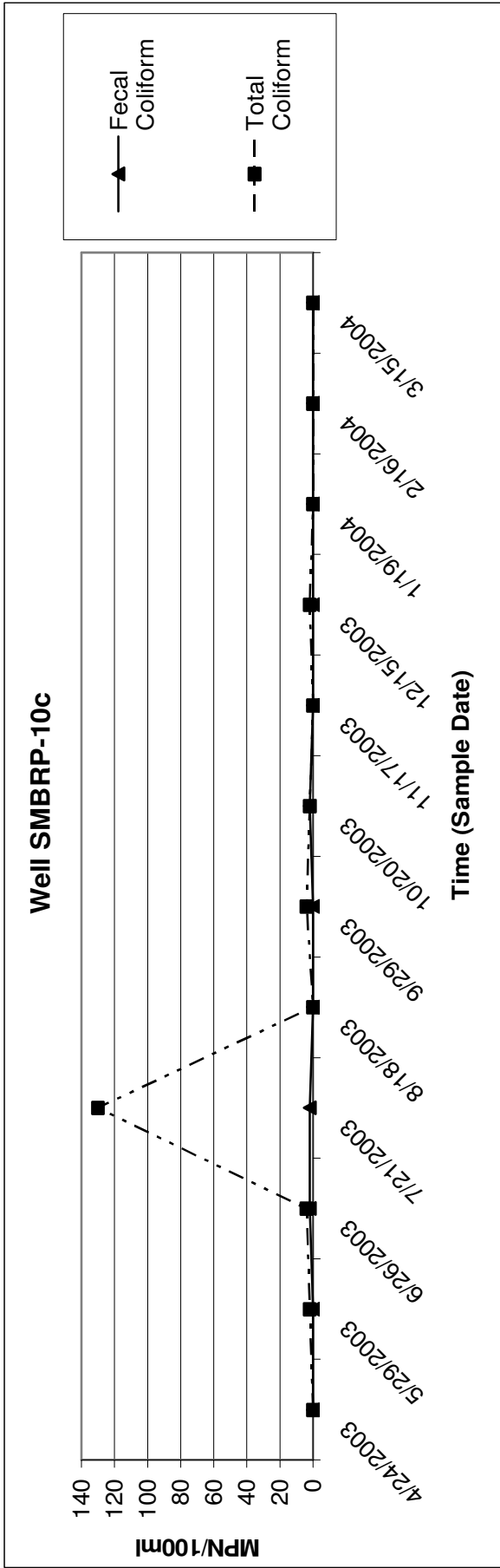
Well SMBRP-9



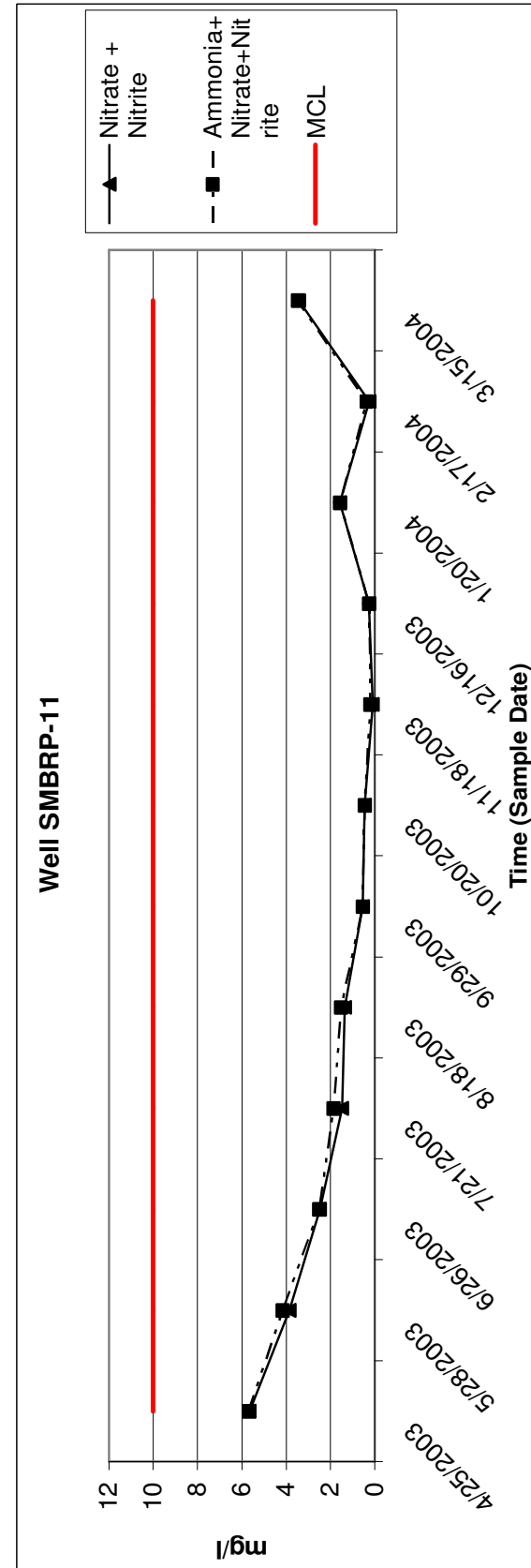
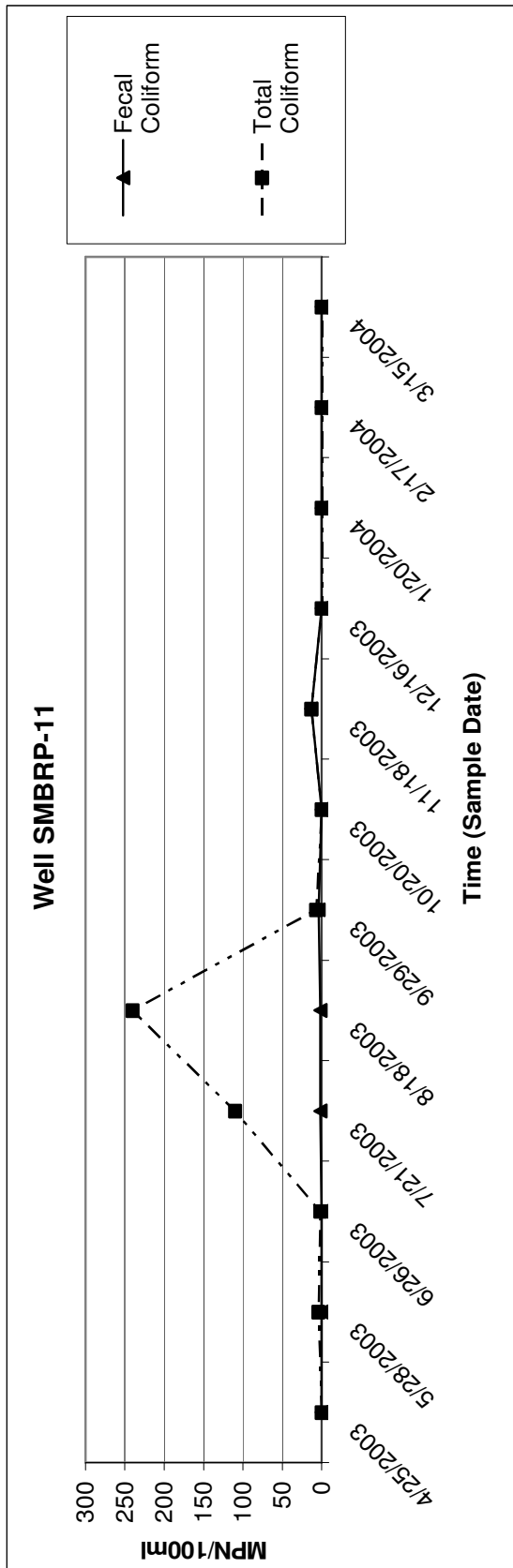
Well SMBRP-9



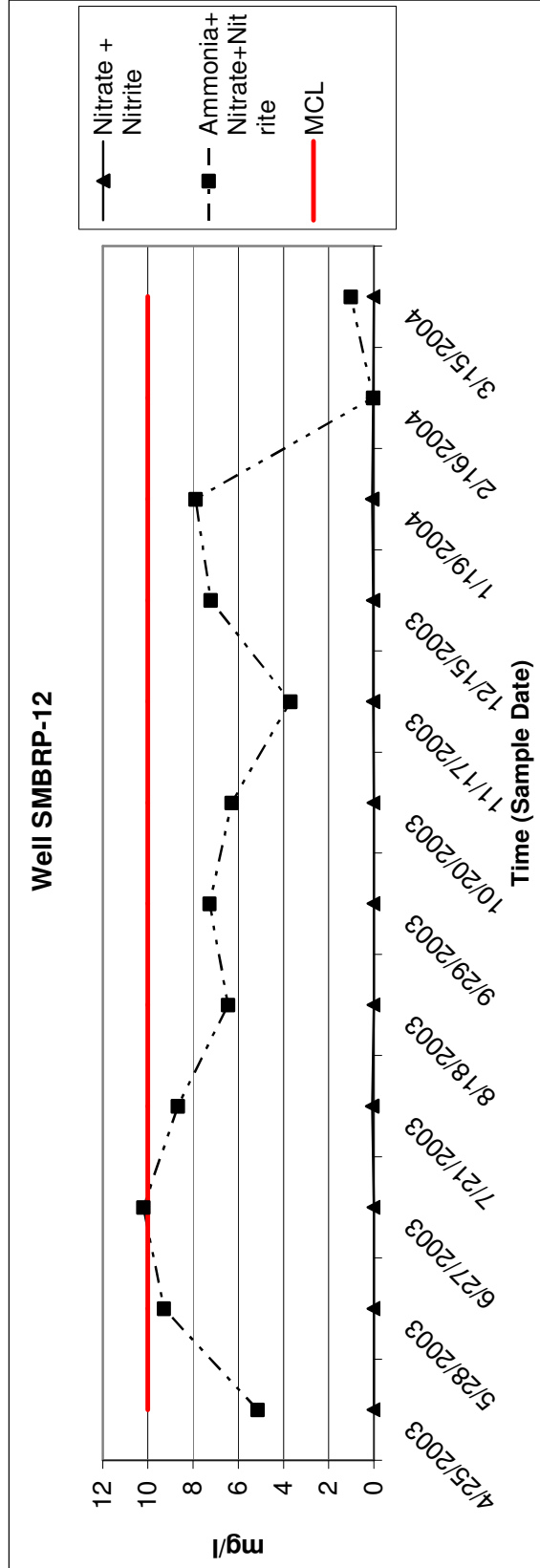
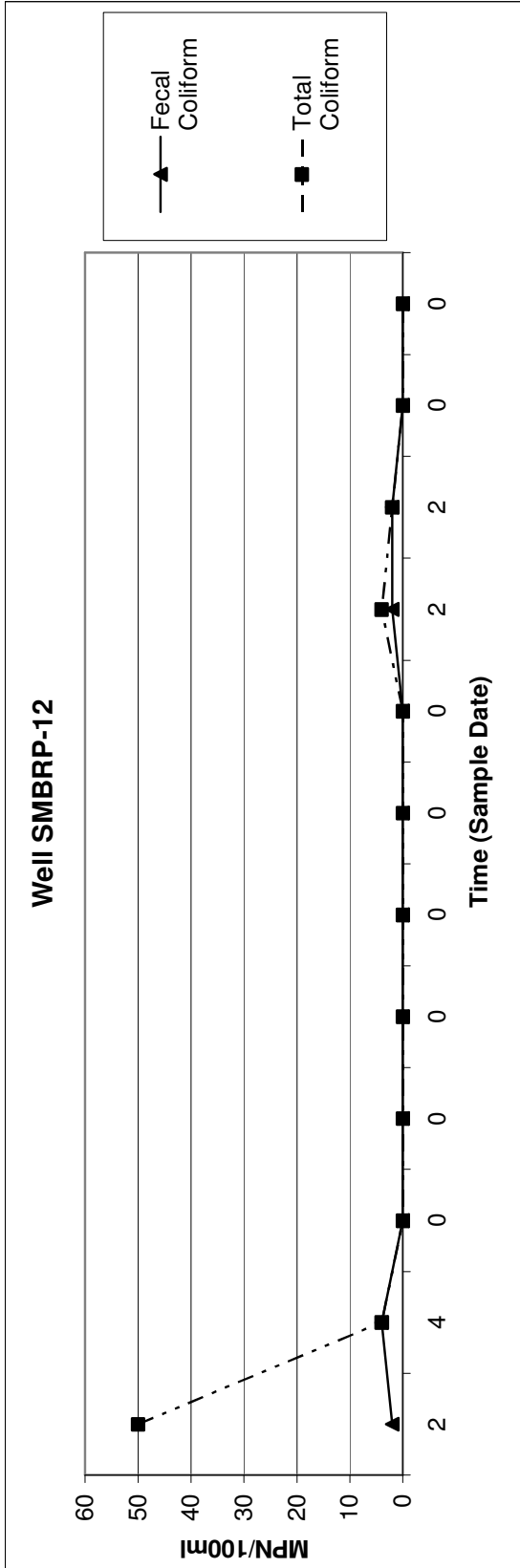
Malibu Civic Center Area



Malibu Civic Center Area



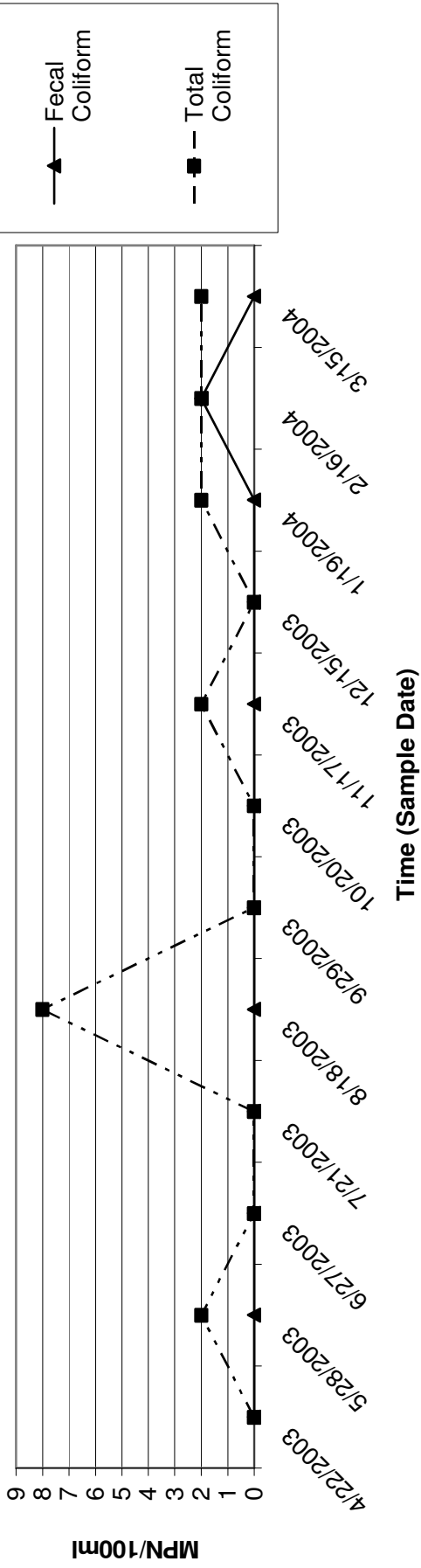
Malibu Civic Center Area



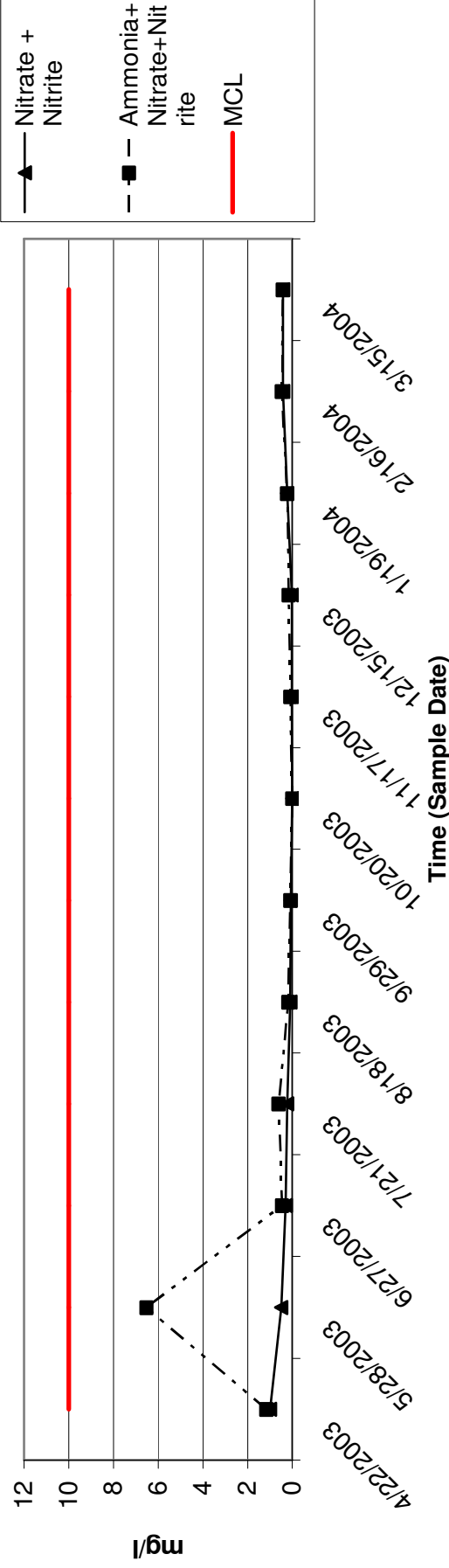


Malibu Civic Center Area

Well SMBRP-13

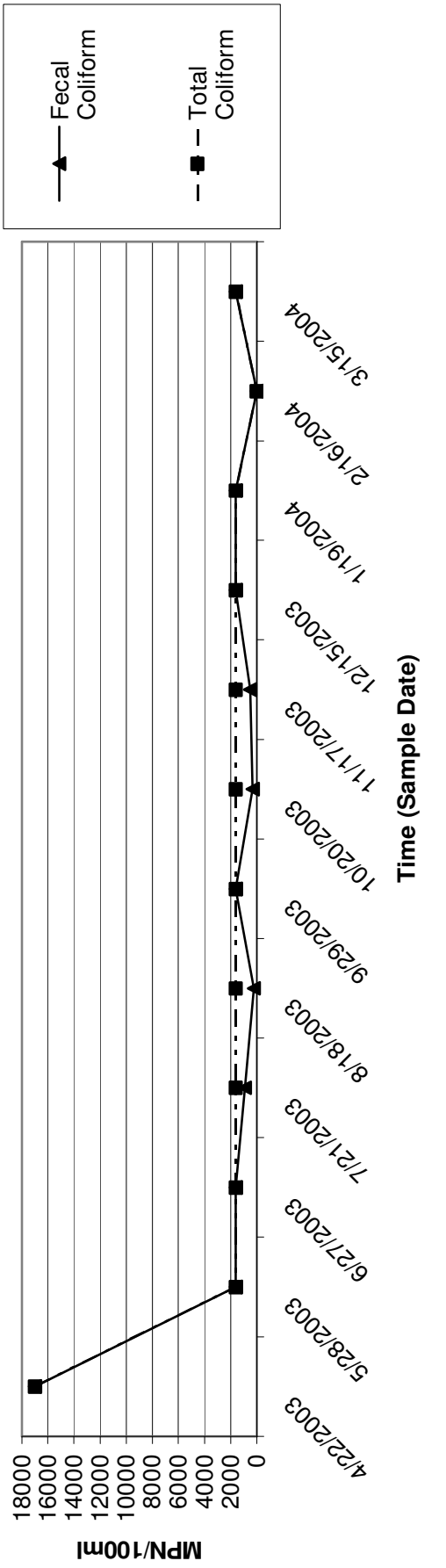


Well SMBRP-13

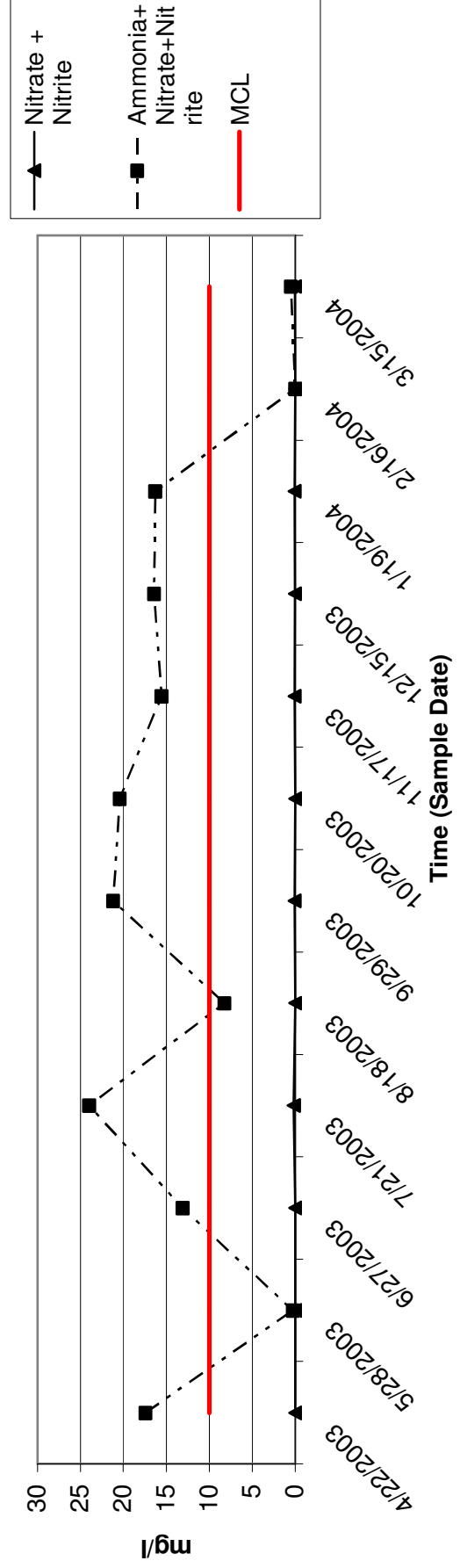


Malibu Civic Center Area

Well SMBRP-14

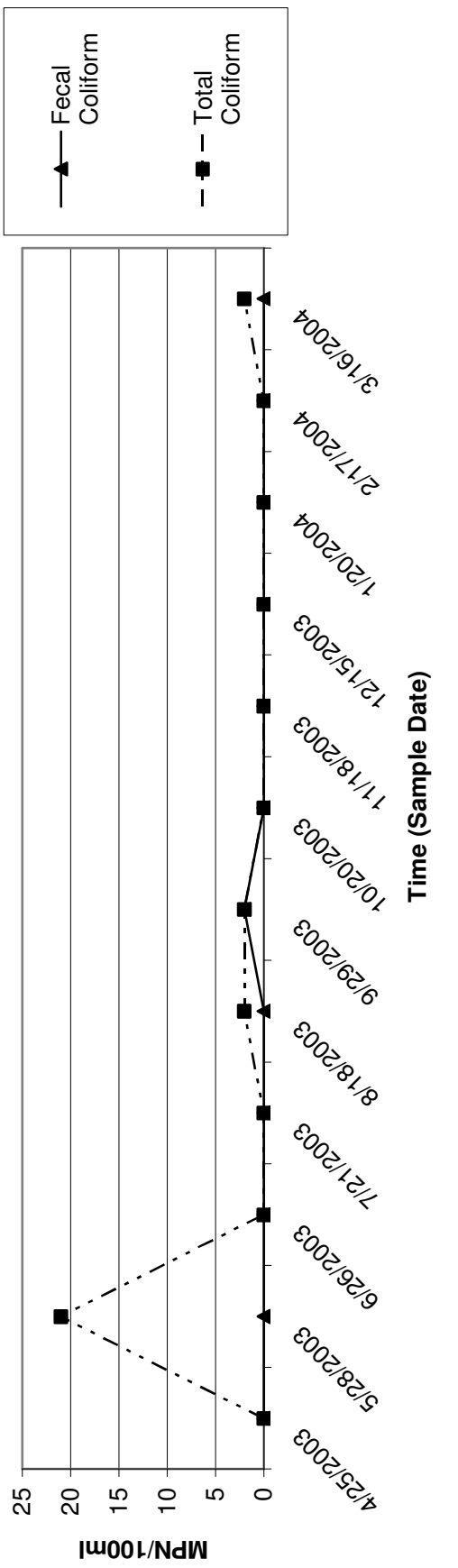


Well SMBRP-14

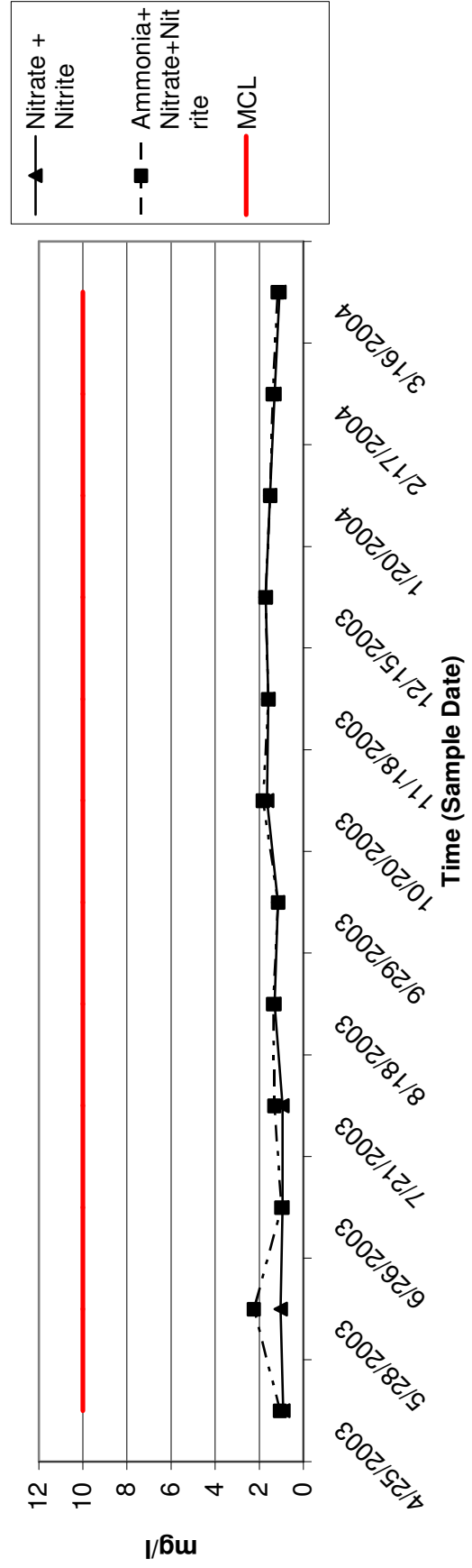


### Malibu Civic Center Area

Well SMBRP-15b

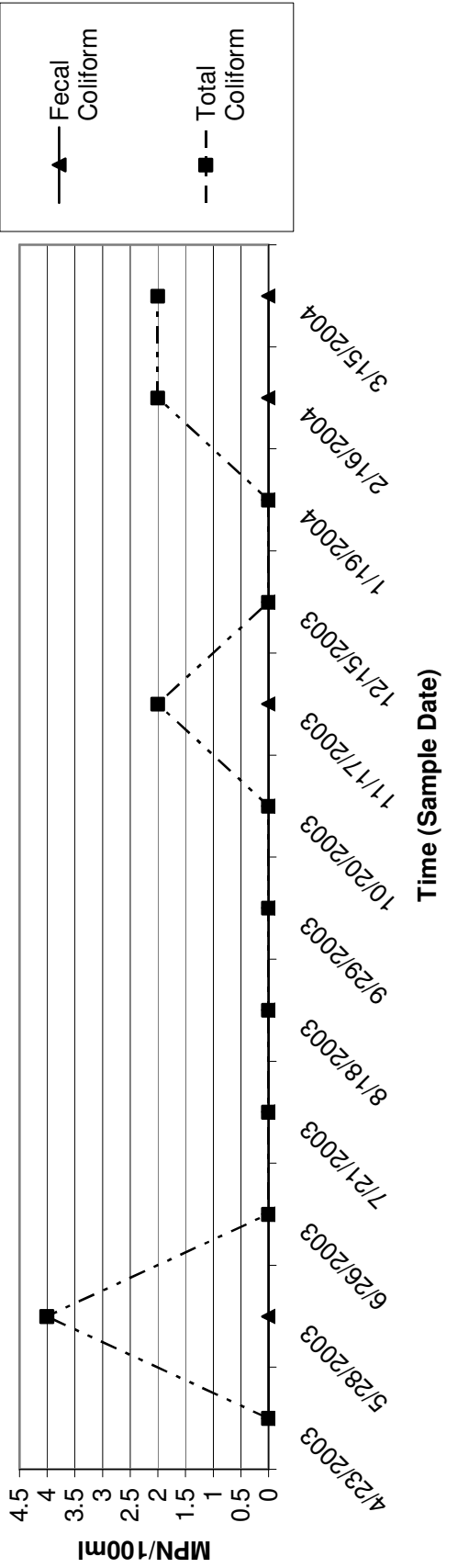


Well SMBRP-15b

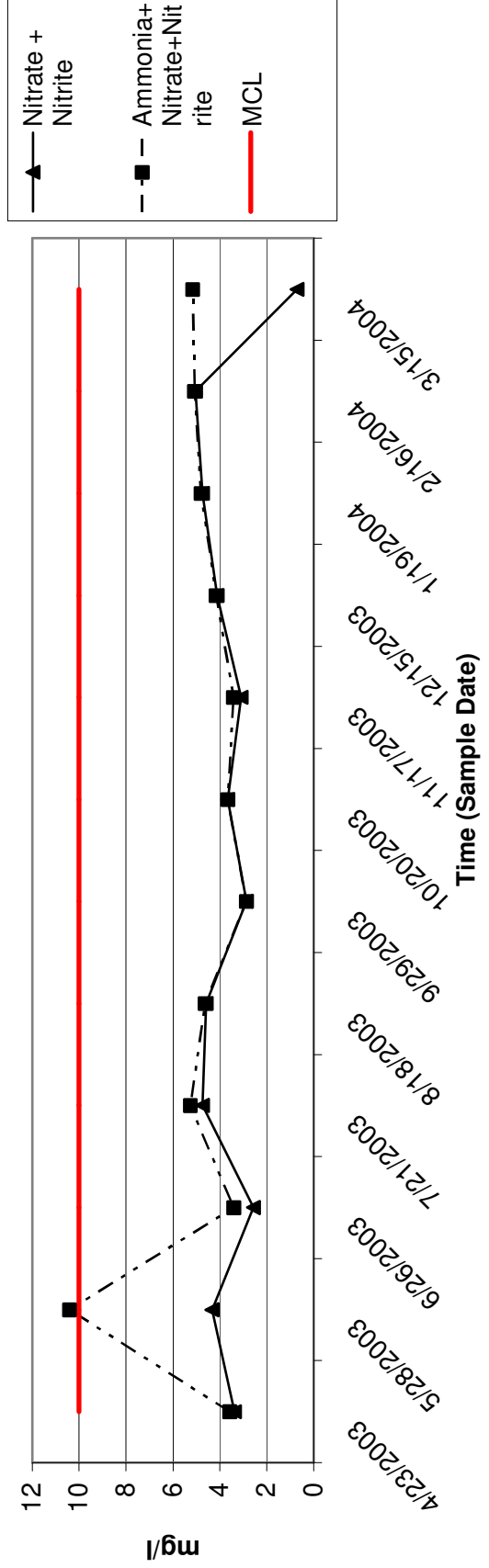


Malibu Civic Center Area

Well SMBRP-16

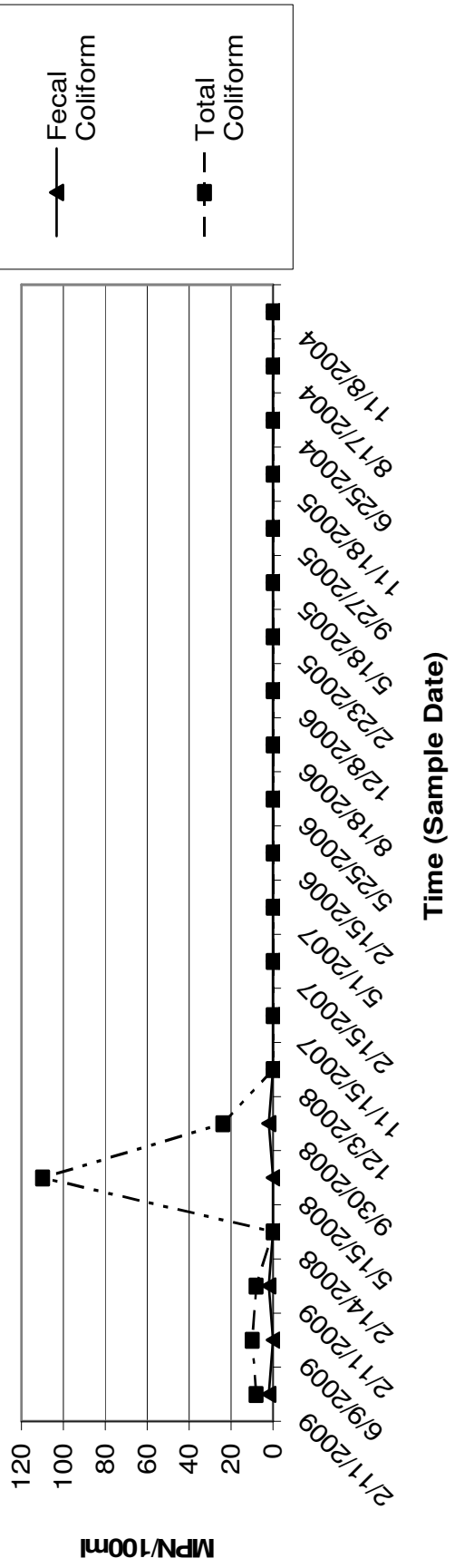


Well SMBRP-16

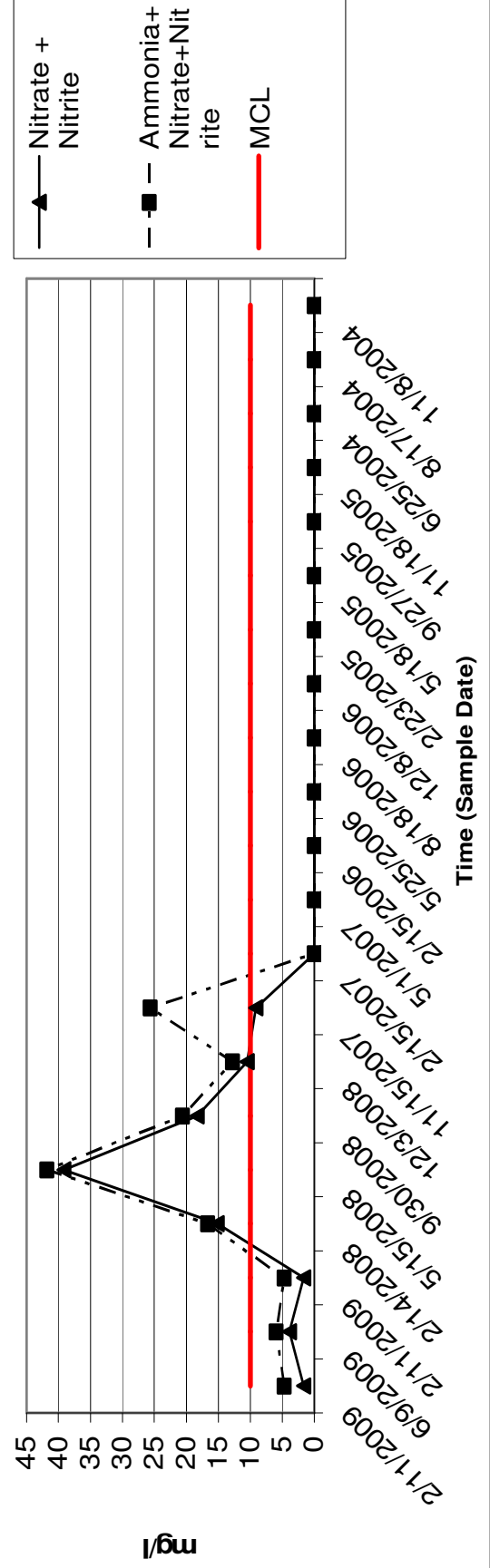


# Malibu Beach Inn

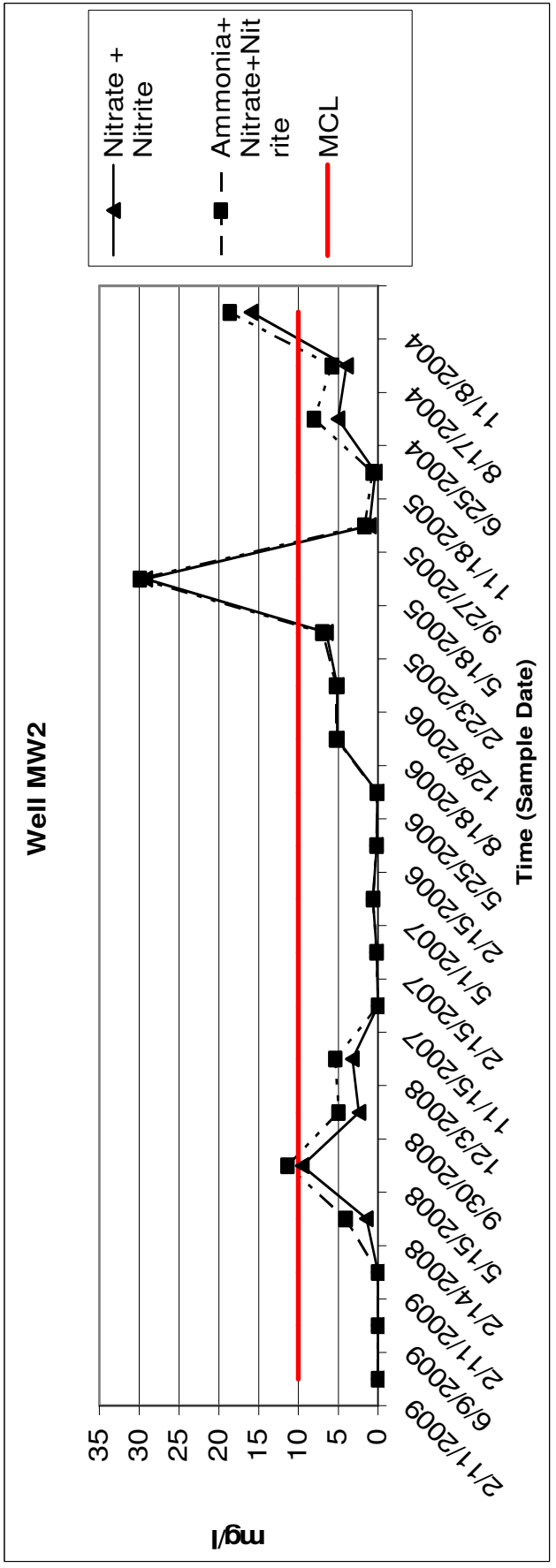
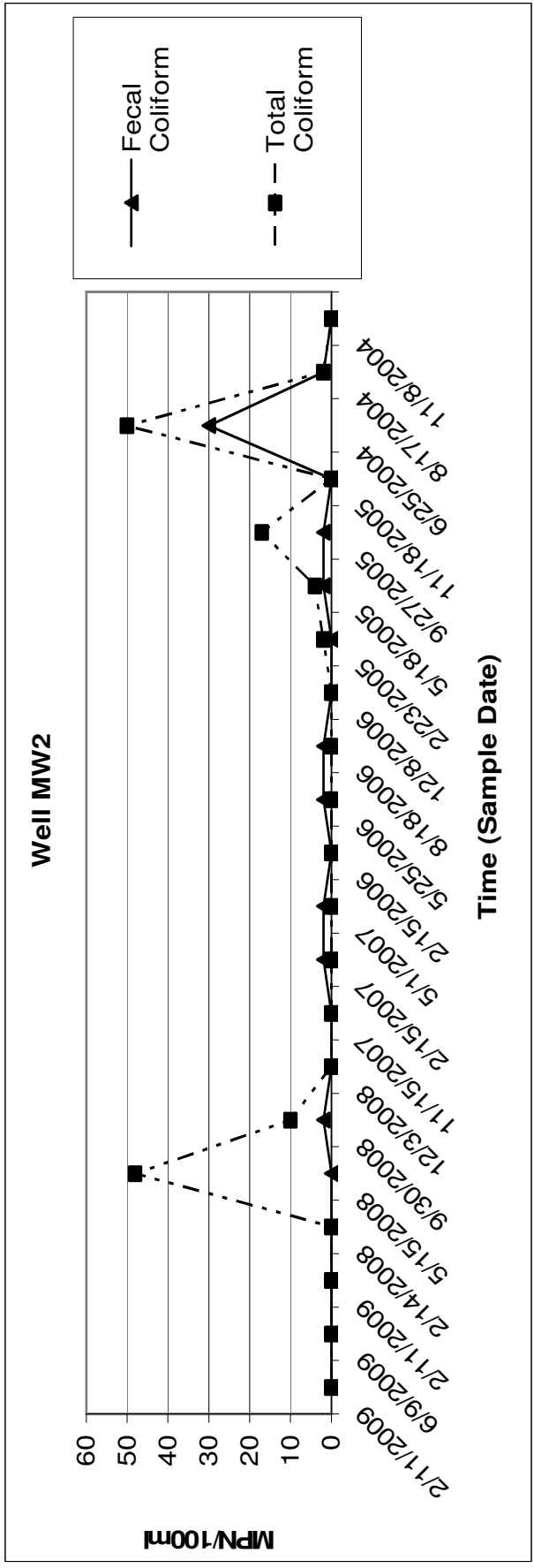
Well MW1



Well MW1

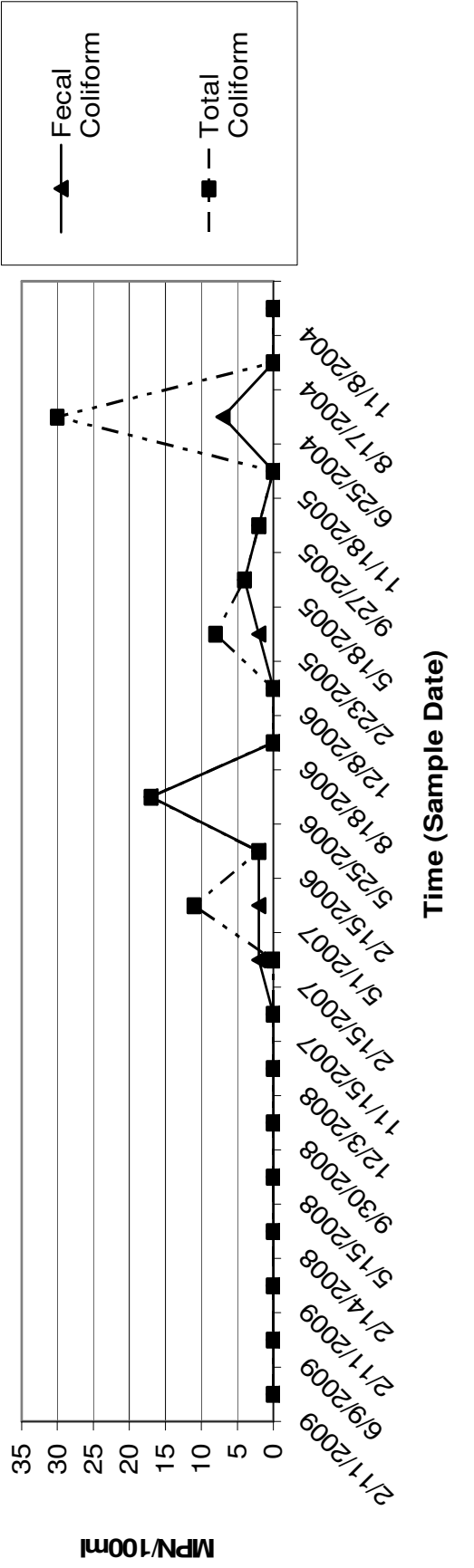


# Malibu Beach Inn

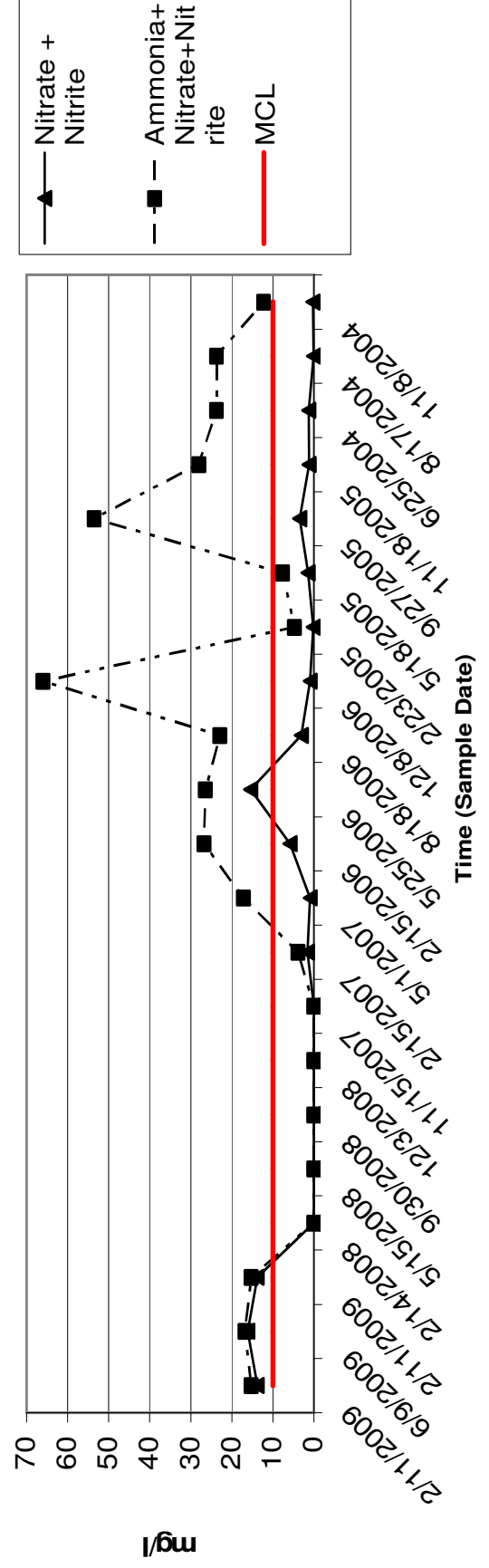


# Malibu Beach Inn

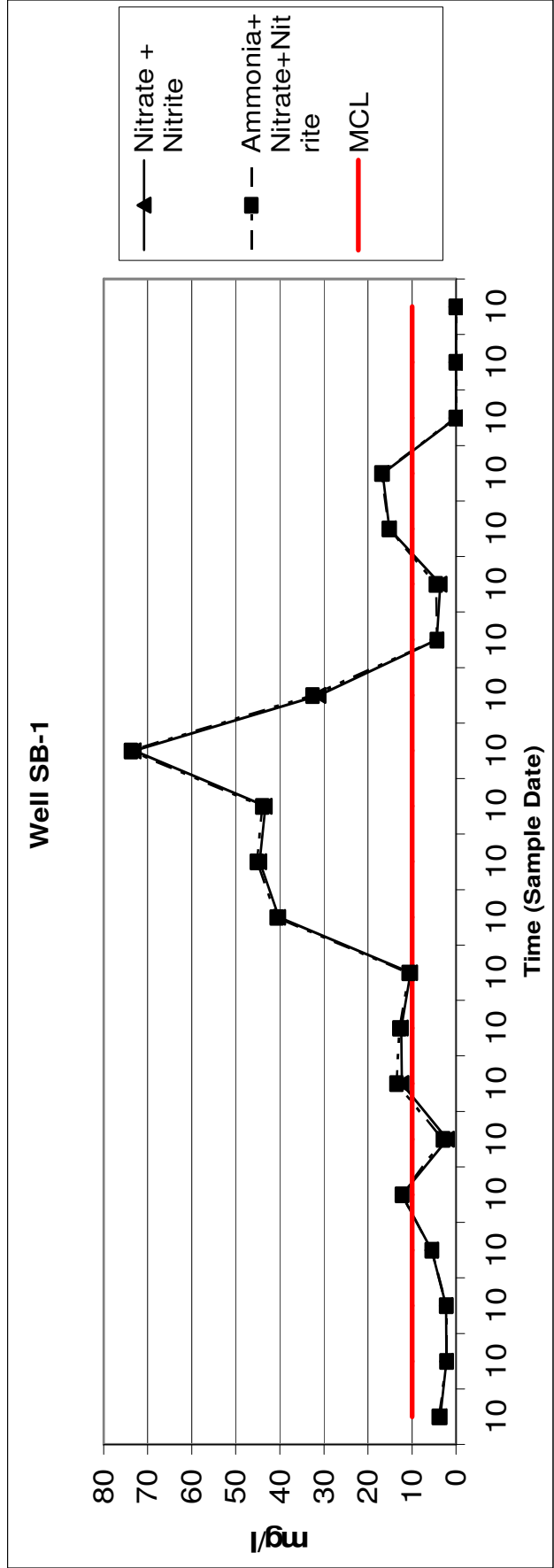
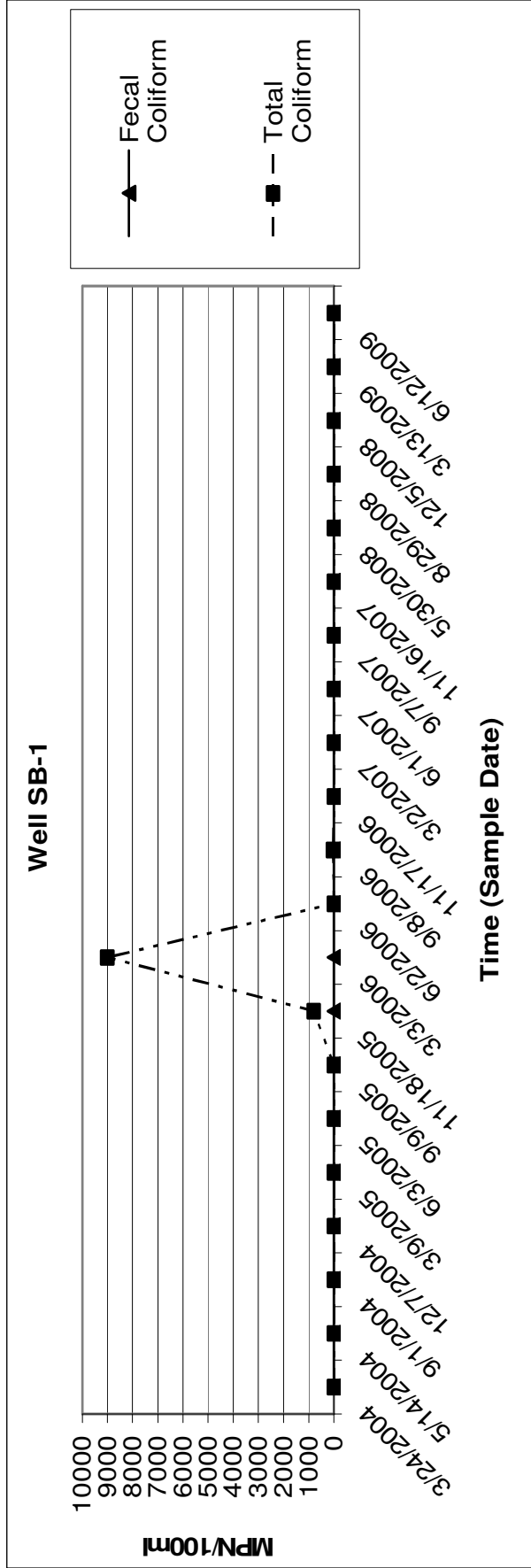
Well MW3



Well MW3



# Surfrider Beach

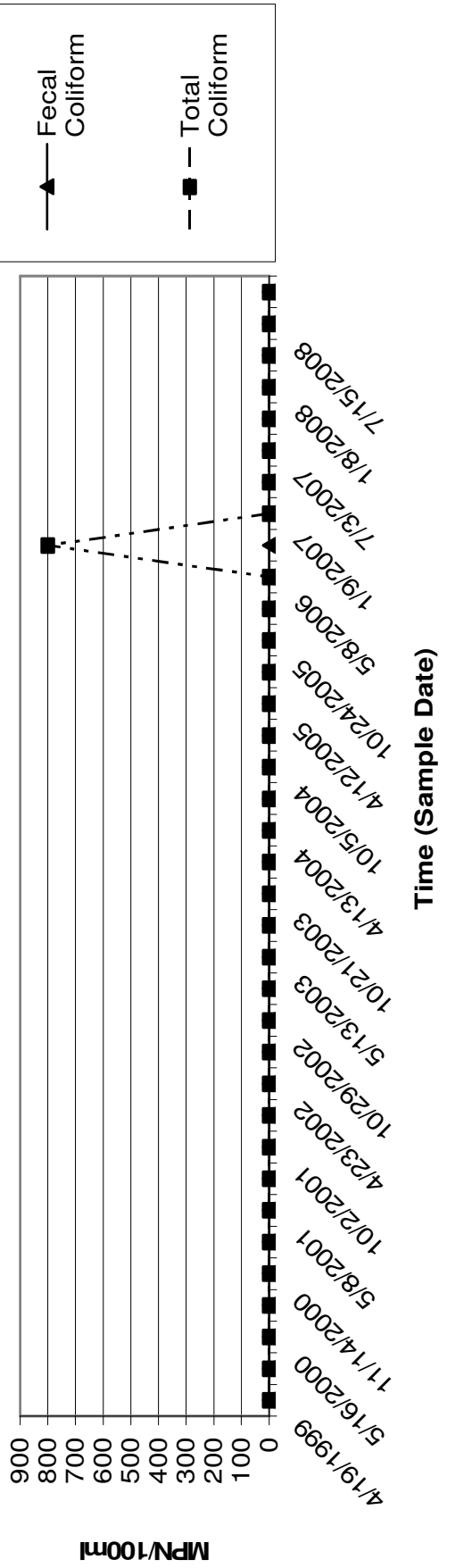




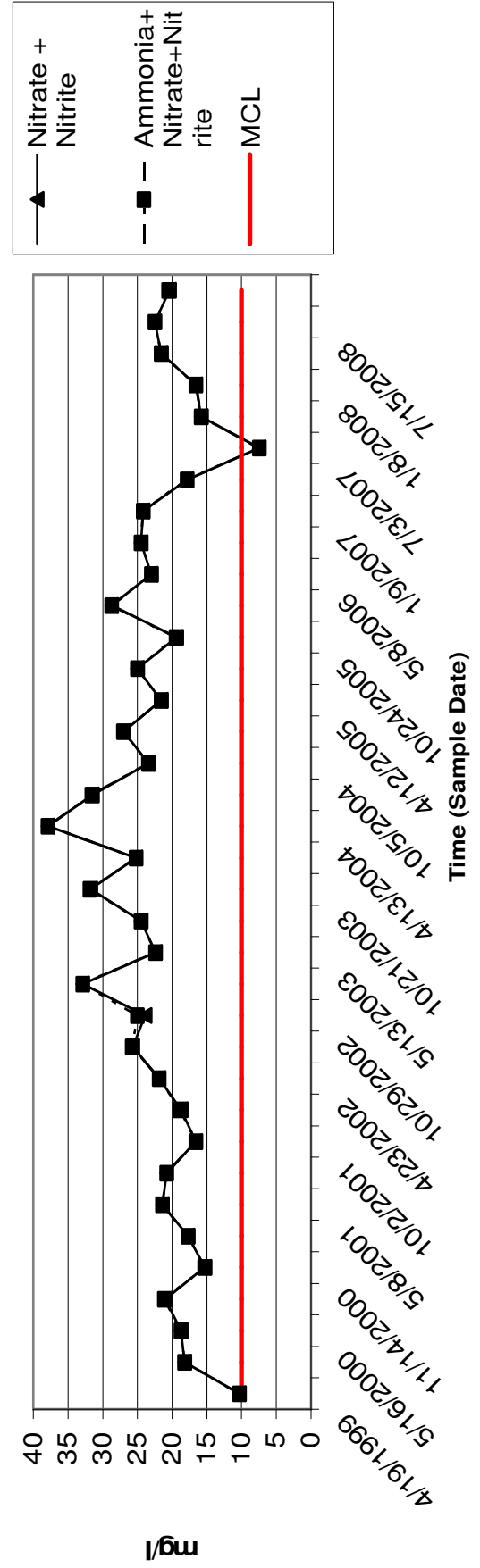


# Malibu Water Pollution Control Plant

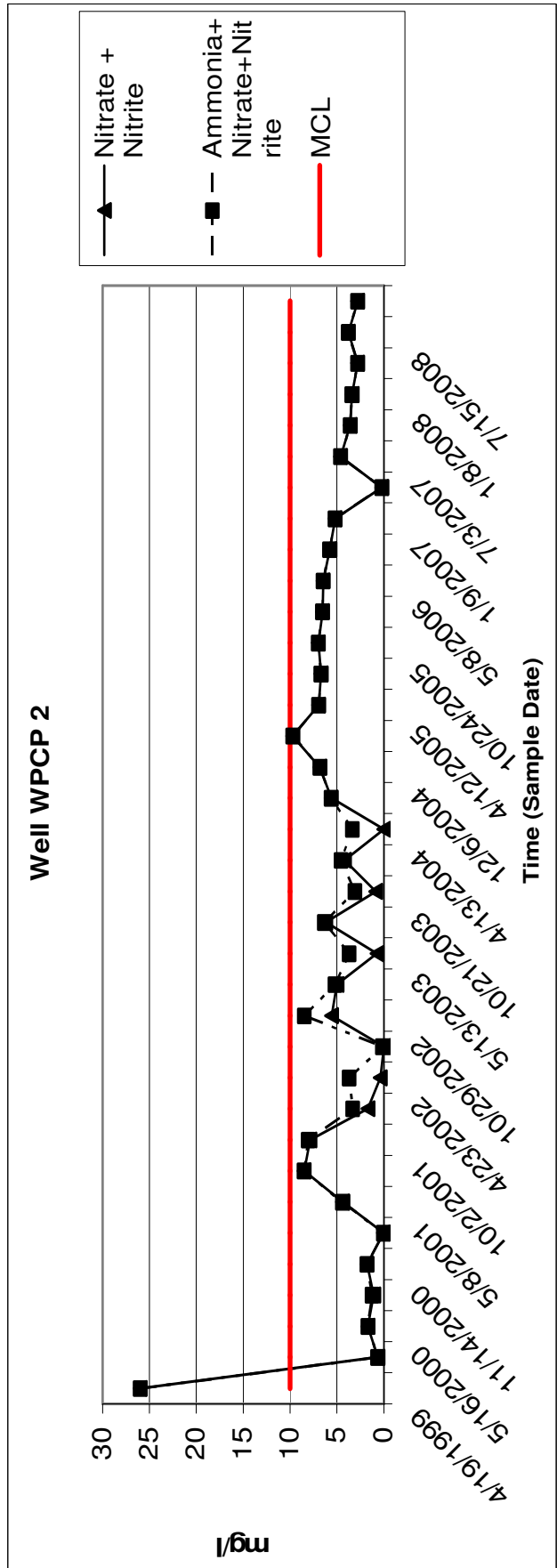
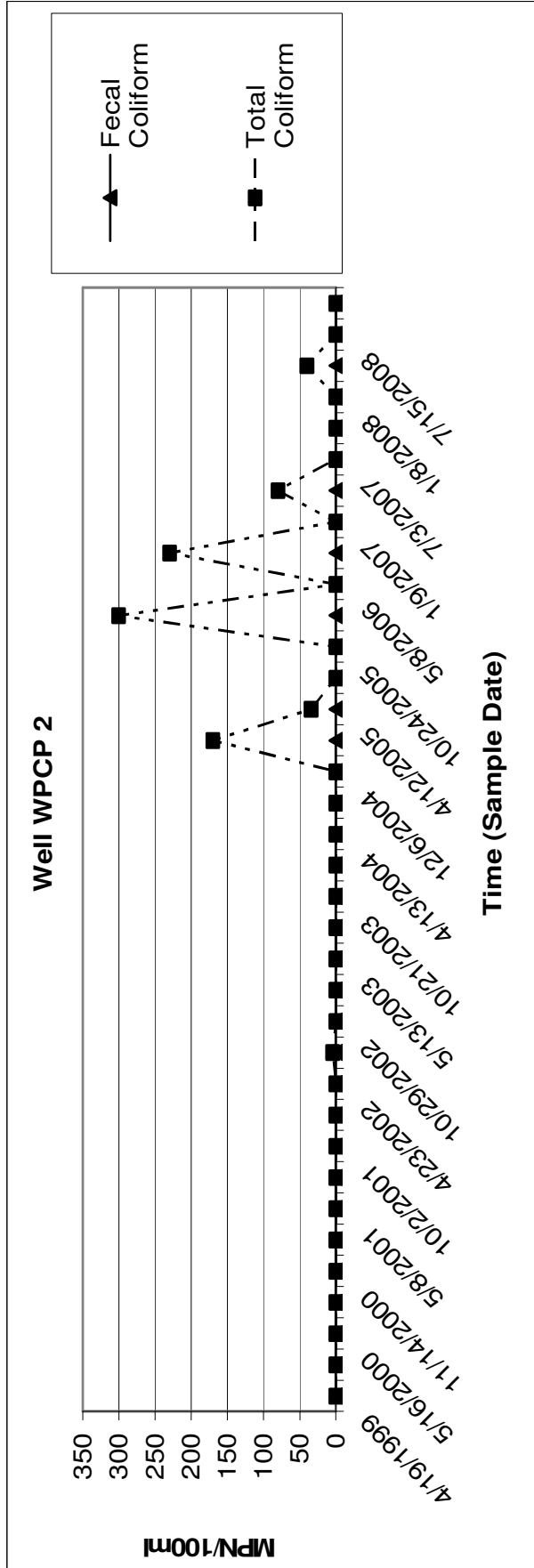
Well WPCP 1



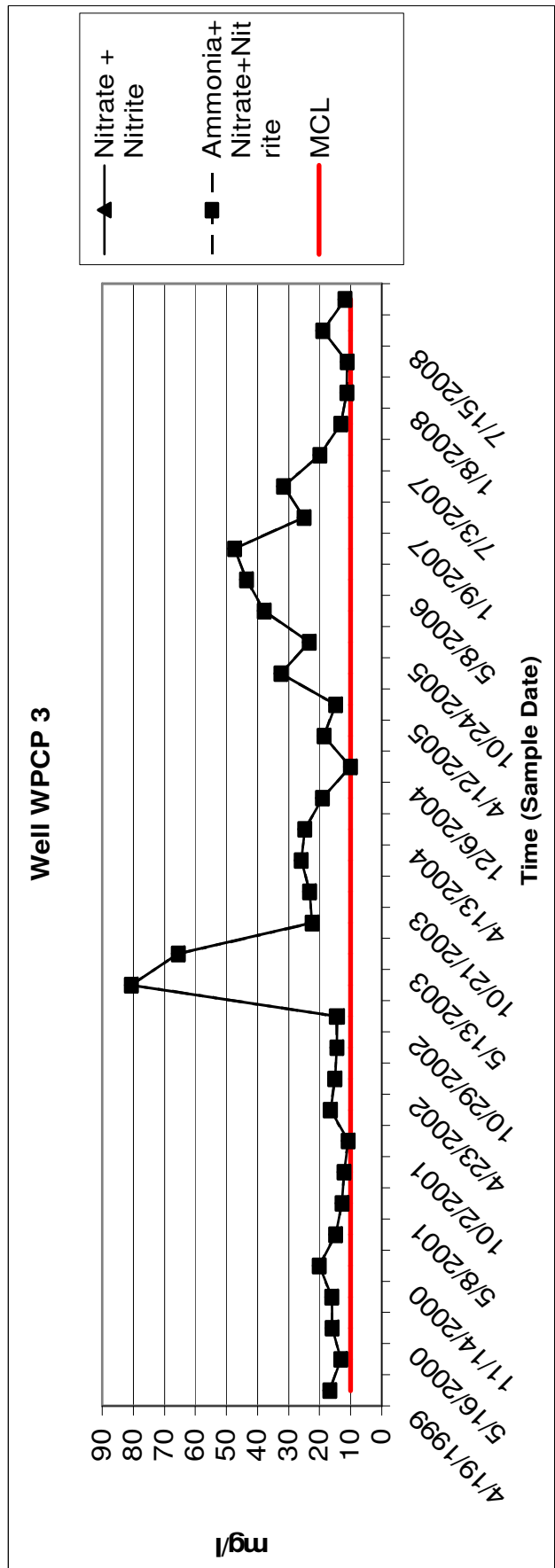
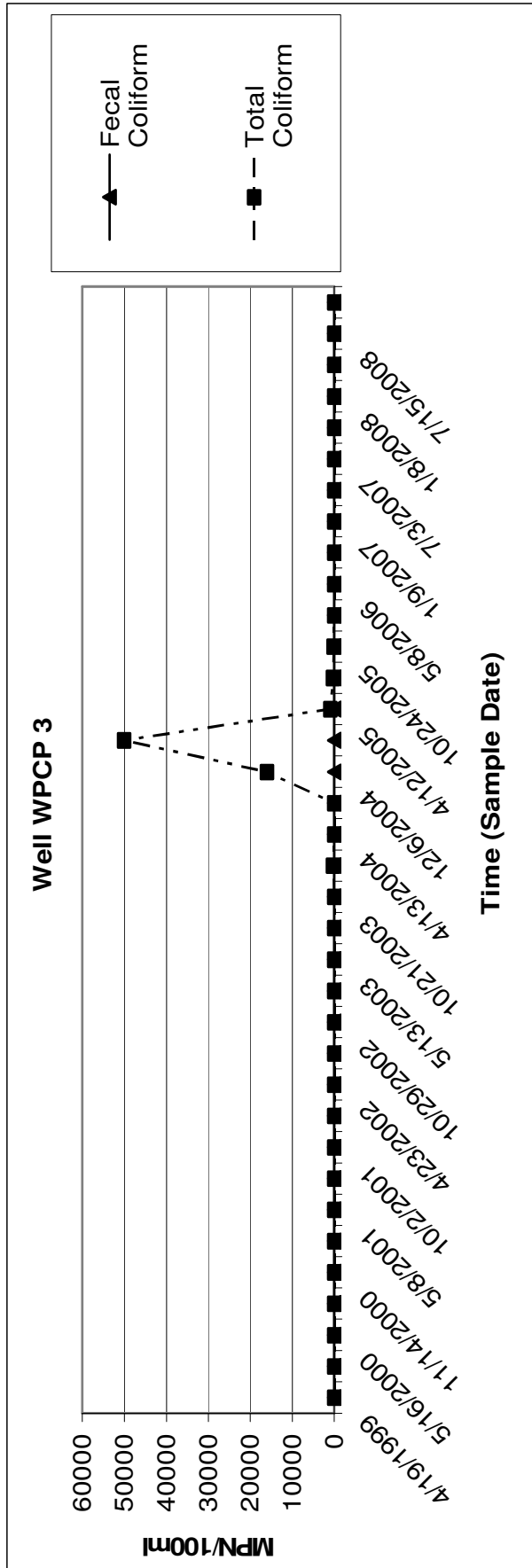
Well WPCP 1



# Malibu Water Pollution Control Plant

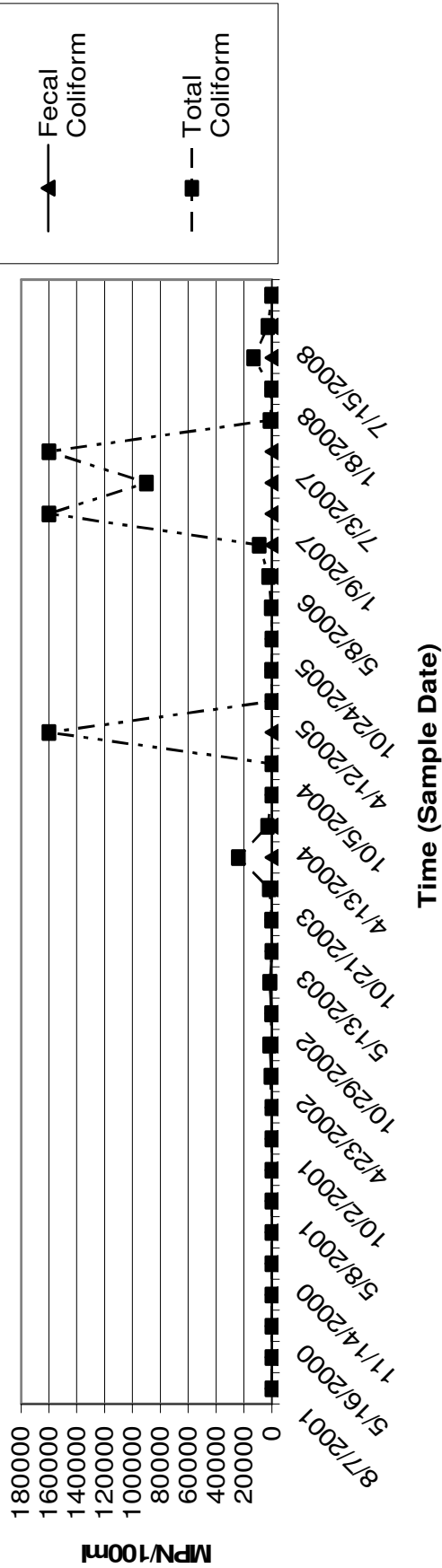


# Malibu Water Pollution Control Plant

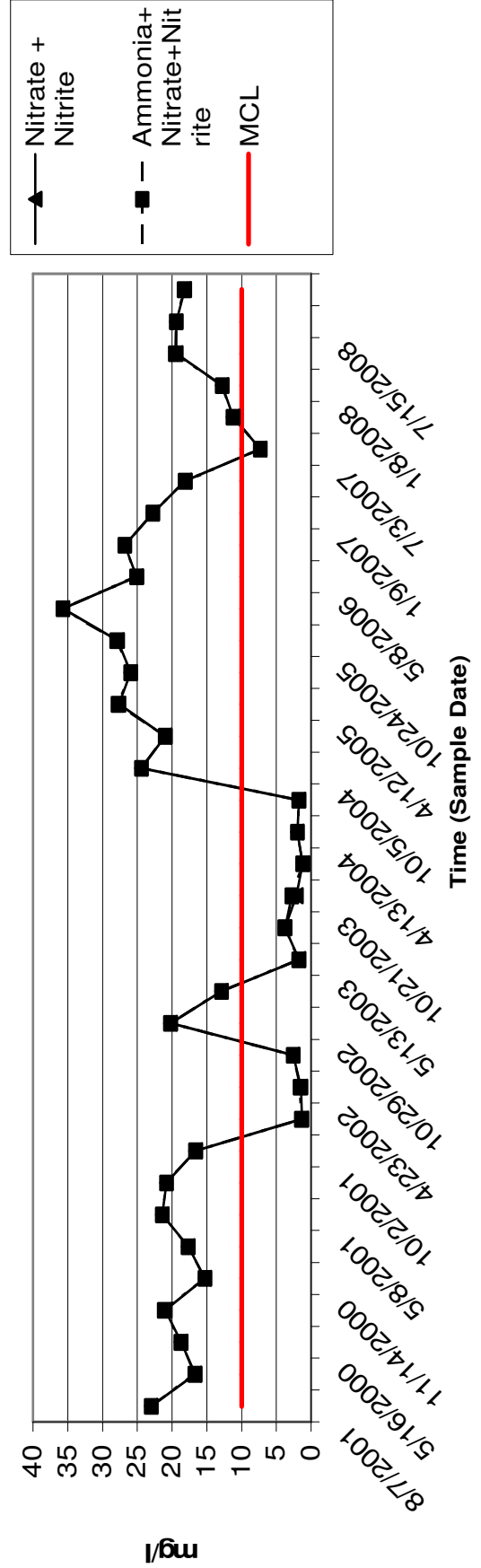


# Malibu Water Pollution Control Plant

Well WPCP 4

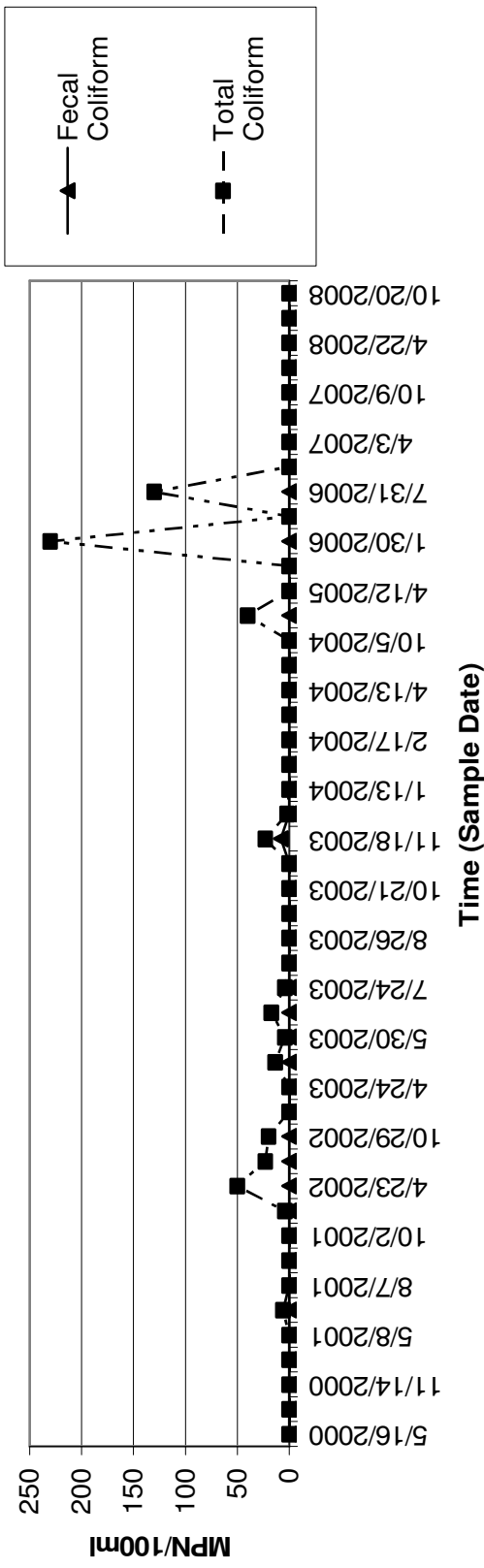


Well WPCP 4

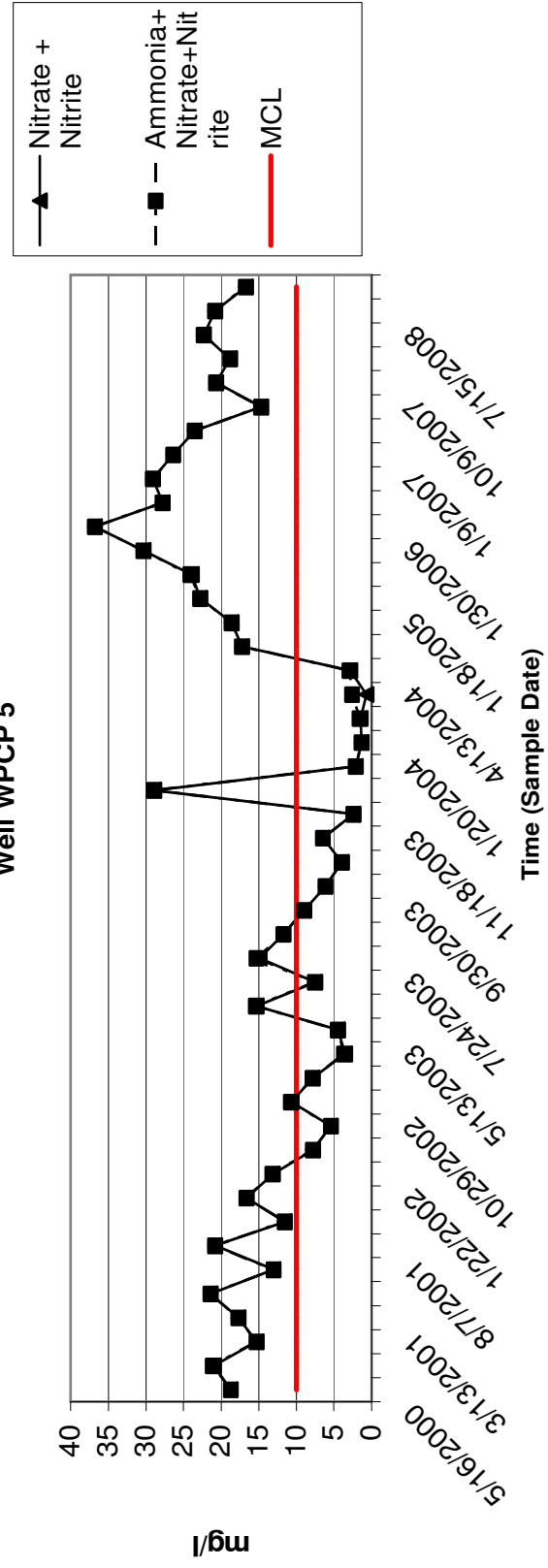


# Malibu Water Pollution Control Plant

## Well WPCP 5

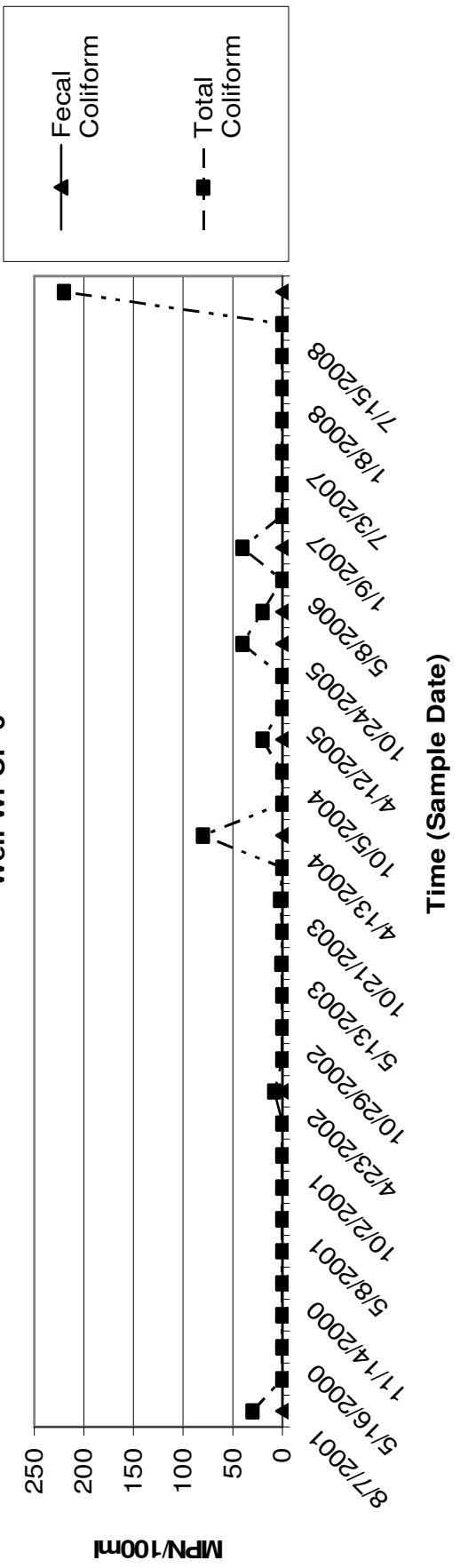


## Well WPCP 5



# Malibu Water Pollution Control Plant

Well WPCP 6



Well WPCP 6

