



**Pacific Gas and  
Electric  
Company**

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**Yvonne J. Meeks**  
Topock Project Manager  
Chromium Remediation Project Office  
Gas Transmission & Distribution

6588 Ontario Road  
San Luis Obispo, CA 93405

*Mailing Address*  
4325 South Higuera Street  
San Luis Obispo, CA 93401

805.546.5243  
Internal: 664.5243  
Fax:: 805.546.5232  
E-Mail: YJM1@pge.com

July 20, 2007

Mr. Aaron Yue  
Project Manager  
California Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, CA 90630

Subject: June 2007 Performance Monitoring Report  
Interim Measures Performance Monitoring Program  
PG&E Topock Compressor Station, Needles, California

Dear Mr. Yue:

Enclosed is the *Performance Monitoring Report for June 2007* for PG&E's Interim Measures (IM) performance monitoring program for the Topock project. This report presents the June 2007 performance monitoring results for the IM and summarizes the operations and performance evaluation for the June 2007 reporting period.

The monthly performance monitoring report is prepared and submitted in conformance with the IM reporting requirements described in Enclosure A of the Department of Toxic Substances Control's letter dated February 14, 2005.

Please contact me at (805) 546-5243 if you have any questions on the performance monitoring report.

Sincerely,

A handwritten signature in blue ink that reads 'Yvonne Meeks'.

Enclosure

# **Performance Monitoring Report for June 2007**

## **Interim Measures Performance Monitoring Program PG&E Topock Compressor Station Needles, California**

Prepared for  
**California Department of Toxic Substances Control**

on behalf of  
**Pacific Gas and Electric Company**

July 20, 2007

**CH2MHILL**  
155 Grand Avenue, Suite 1000  
Oakland, California 94612

**Performance Monitoring Report  
for June 2007**

**Interim Measures Performance Monitoring Program**

**PG&E Topock Compressor Station  
Needles, California**

**Prepared for  
California Department of Toxic Substances Control**

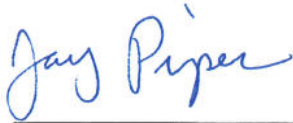
**on behalf of  
Pacific Gas and Electric Company**

**July 20, 2007**

This report was prepared under the supervision of a  
California Certified Engineering Geologist



Paul Bertucci, C.E.G. No. 1977  
Project Hydrogeologist



Jay Piper  
CH2M HILL Project Manager



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# Acronyms and Abbreviations

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µg/L	micrograms per liter (essentially the same as parts per billion [ppb])
cfs	cubic feet per second
Cr(T)	total chromium
Cr(VI)	hexavalent chromium
DTSC	California Department of Toxic Substances Control
gpm	gallons per minute
IM	Interim Measure
PG&E	Pacific Gas and Electric Company
PMP	Performance Monitoring Program
TDS	total dissolved solids
USBR	United States Bureau of Reclamation

# 1.0 Introduction

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Pacific Gas and Electric Company (PG&E) is implementing an Interim Measure (IM) to address chromium concentrations in groundwater at the Topock Compressor Station near Needles, California. The IM consists of groundwater extraction for hydraulic control of the plume boundaries in the Colorado River floodplain and management of extracted groundwater. Collectively, the groundwater extraction, treatment, and injection systems are referred to as Interim Measure Number 3 (IM No. 3). Currently, the IM No. 3 facilities include a groundwater extraction system (four extraction wells: TW-2D, TW-3D, TW-2S, and PE-1), conveyance piping, a groundwater treatment plant, and an injection well field for the discharge of the treated groundwater. Figure 1-1 shows the location of the IM No. 3 extraction, conveyance, treatment, and injection facilities.

In a letter dated February 14, 2005, the California Department of Toxic Substances Control (DTSC) established the criteria for evaluating the performance of the IM. As defined by DTSC, the performance standard for this IM is to “establish and maintain a net landward hydraulic gradient, both horizontally and vertically, that ensures that hexavalent chromium [Cr(VI)] concentrations at or greater than 20 micrograms per liter [µg/L] in the floodplain are contained for removal and treatment” (DTSC 2005). The DTSC directive also defined the monitoring and reporting requirements for the IM. A draft *Performance Monitoring Plan for Interim Measures in the Floodplain Area* (CH2M HILL 2005) was submitted to DTSC on April 15, 2005 (herein referred to as the Performance Monitoring Plan). The site monitoring, data evaluation, reporting, and response actions required under the February 2005 DTSC directive are collectively referred to as the IM Performance Monitoring Program for the floodplain area.

This monthly report has been prepared in compliance with DTSC’s requirements and documents the monitoring activities and performance evaluation of the IM hydraulic containment system for the period from June 1 through June 30, 2007. The results and status of IM performance monitoring during July 2007 will be reported in the next combined monthly and 2<sup>nd</sup> quarter performance monitoring report on August 30, 2007.

Figure 1-2 shows the locations of wells used for IM extraction, performance monitoring, and hydraulic gradient measurements. The performance monitoring wells that were in service/active during June 2007 are defined as:

- **Floodplain Wells** (monitoring wells on the Colorado River floodplain): MW-22, MW-27 cluster (three), MW-28 cluster (two), MW-29, MW-30 cluster (two), MW-32 cluster (two), MW-33 cluster (four), MW-34 cluster (three), MW-36 cluster (six), MW-39 cluster (six), MW-42 cluster (three), MW-43 cluster (three), MW-44 cluster (three), MW-45, MW-46 cluster (two), MW-49 cluster (three).
- **Intermediate Wells** (monitoring wells located immediately north, west, and southwest of the floodplain): MW-12, MW-19, MW-20 cluster (three), MW-21, MW-26, MW-31 cluster (two), MW-35 cluster (two), MW-47 cluster (two), MW-50 cluster (two), and MW-51.

- **Interior Wells** (monitoring wells located upgradient of IM pumping): MW-10 and MW-25.

Three extraction wells (TW-2D, TW-3D and TW-2S) are located on the MW-20 bench (Figure 1-1). In March 2005, extraction well PE-1 was installed on the floodplain approximately 450 feet east of extraction well TW-2D (Figure 1-1). Construction of the conveyance piping and power supply to well PE-1 was completed in January. Testing and commissioning of well PE-1 began on January 25, 2006, with full-time operation of the well beginning on January 26, 2006. Currently, both TW-3D and PE-1 are in full-time operation.

The wells screened in the unconsolidated alluvial fan and fluvial deposits that comprise the Alluvial Aquifer have been separated into three depth intervals to present groundwater quality and groundwater level data. The depth intervals of the Alluvial Aquifer – designated upper, middle, and lower – are based on grouping the monitoring wells screened at common elevations and do not represent distinct hydrostratigraphic units or separate aquifer zones. The subdivision of the aquifer into three depth intervals is an appropriate construct for presenting and evaluating groundwater quality data in the floodplain. The three-interval concept is also useful for presenting and evaluating lateral gradients, while minimizing effects of vertical gradients and observing the influence of pumping from partially-penetrating wells. It should be noted, however, that these divisions do not correspond to any distinct lithostratigraphic layers within the aquifer. The floodplain aquifer is considered to be hydraulically undivided.

## 2.0 Extraction System Operations

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Pumping data for the IM groundwater extraction system for the period June 1 through June 30, 2007 are shown in Table 2-1. During the reporting period, extraction wells TW-3D and PE-1 operated at a combined target pump rate of 135 gallons per minute (gpm), excluding periods of planned and unplanned downtime.

The June 2007 monthly average pumping rate was 136.3 gpm. A total of 5,891,722 gallons of groundwater was extracted and treated by the IM No. 3 treatment plant during June 2007. The IM No. 3 facility also treated approximately 11,140 gallons of water generated from the groundwater monitoring program and 3,300 gallons of water generated from injection well re-development during June 2007. The IM extraction system was in operation for 100 percent of this reporting period. An operations log for the extraction system during June 2007, including downtime, is included in Appendix A.

The concentrate (i.e., brine) from the reverse osmosis system was shipped offsite with shipping papers as a Resource Conservation and Recovery Act non-hazardous waste and transported to Liquid Environmental Solutions in Phoenix, Arizona for treatment and disposal. No containers of solids from the IM No. 3 facility were transported offsite during June 2007.

Daily inspections included general facility inspections, process control monitoring, and site security monitoring. Daily logs with documentation of inspections are maintained onsite.

Table 2-2 summarizes the analytical results of groundwater samples collected from the extraction well system during the June reporting period and prior months.



## 3.0 Chromium Sampling Results

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During June 2007, the groundwater monitoring wells in the floodplain area were sampled for Cr(VI), total chromium [Cr(T)], and field water quality parameters under the current monthly and biweekly schedules, in accordance with the approved groundwater monitoring plan and DTSC directives. Refer to PG&E's *Topock Groundwater and Surface Water Monitoring Report, First Quarter 2007* (CH2M HILL 2007a) and DTSC (2006) for the prior and current sampling plan and frequencies for groundwater wells in the performance monitoring area.

Table B-1 in Appendix B presents the groundwater sampling results for Cr(VI) and Cr(T), as well as groundwater elevation and selected field water quality parameters for monitoring wells in the floodplain area during June 2007 and the previous months. Table B-2 (Appendix B) presents the groundwater sampling data for the other wells monitored in the performance monitoring area during June 2007 and the previous months.

Figure 3-1 presents the Cr(VI) results distribution for June 2007, in plan view, for the groundwater wells monitoring the upper, middle, and lower depth intervals of the Alluvial Aquifer in the floodplain area. Interpretations of Cr(VI) contours at each depth interval are also provided on this figure. The actual locations of contours beyond well data points are not certain but are inferred using available site investigation and monitoring data (bedrock structure, hydraulic gradients, observed distribution of geochemically-reducing conditions, and Cr(VI) concentration gradients). The aquifer depth intervals, well screens, and June 2007 Cr(VI) sampling results and interpreted contours are also shown on Figure 3-1 in a vertical cross-section extending east-west across the floodplain. The California drinking water standard for Cr(T) is 50 µg/L.

Figure 3-2 presents the June 2007 Cr(VI) results for additional floodplain monitoring wells on a cross-section oriented parallel to the Colorado River (see Figure 1-2 for locations of the cross-sections). For ongoing IM performance evaluation, Cr(VI) concentration trend graphs and hydrographs for selected floodplain monitoring wells (MW-33-90, MW-34-100, and MW-36-100) are presented in Appendix B.

## 4.0 Hydraulic Gradient Results

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During the reporting period, water levels were recorded at intervals of 30 minutes with pressure transducers in 61 wells and two river monitoring stations (I-3 and RRB). The data are typically continuous, with only short interruptions for sampling or maintenance. The location of the wells monitored are shown on Figure 1-2 and listed in Section 1.0.

The monthly average and the minimum and maximum daily average groundwater and river elevations have been calculated from the pressure transducer data for the June reporting period and are summarized in Appendix C. Due to the 4<sup>th</sup> of July holiday, data collection began on June 29, 2007, two days before month end. Hence, groundwater elevation data from June 1 through June 28, 2007 were used for gradient evaluations for this reporting period.

Due to the variation in groundwater salinity at the site, the water level measurements need to be adjusted (density-corrected) to equivalent freshwater hydraulic heads prior to calculating groundwater elevations and gradients (Fetter 1994). The methods and procedures used for adjusting the performance monitoring water level data for salinity and temperature differences are described in the Performance Monitoring Plan. Groundwater elevation hydrographs (for June 2007) for all wells with transducers are included in Appendix C. The elevation of the Colorado River measured at the river gauge (I-3, Figure 1-2) during June 2007 is also shown on the hydrographs.

The June 2007 hydraulic data and groundwater gradient maps for the upper, middle, and lower depth intervals are shown on Figures 4-1, 4-2, and 4-3, respectively. The groundwater elevations for all depth intervals of the Alluvial Aquifer indicate strong landward hydraulic gradients within the IM No. 3 capture zone throughout the floodplain. To the west of the TW-3D and PE-1 pumping area, the hydraulic gradient in the upper depth interval is easterly and consistent with the regional gradient outside of the floodplain area. Note that several monitoring wells are significantly deeper than other wells in the lower aquifer zone. Due to vertical gradients present at the Topock site, water levels in deeper wells tend to be higher than water levels in shallower wells. Consequently, some of the wells with screen intervals significantly deeper than most of the lower zone wells exhibit water levels that are not contoured in the plan view on Figure 4-3.

The landward gradients measured during June 2007 were similar to gradients measured in May 2007, due to unchanging river levels over the last two reporting periods. The June 2007 average monthly groundwater elevations are presented and contoured in cross-section on Figure 4-4 (cross-section location shown on Figure 1-2). The groundwater elevation contours on this cross-section show the strong downward and landward hydraulic gradients produced by the combined pumping from IM extraction wells TW-3D and PE-1.

Table 4-1 summarizes the estimated and actual dam discharges and river elevations since January 2005. The actual Davis Dam average discharge for June 2007 of 16,212 cubic feet per second (cfs) was only slightly more than the United States Bureau of Reclamation (USBR) projected discharge of 16,000 cfs for the current reporting period. As a result, the actual

Colorado River elevation at I-3 (monthly average) was equal to the level predicted during the previous month by using the multiple regression method with USBR projections for the June reporting period.

Table 4-2 summarizes gradients measured between the three designated well pairs (MW-31-135/MW-33-150, MW-20-130/MW-34-80, and MW-20-130/MW-42-65) during June 2007. Pumping from extraction well PE-1 began on January 26, 2006. Since that time, the central well pair has been affected by PE-1 pumping. Pumping at well PE-1 would tend to lower the water level in well MW-34-80 and as a result decrease the apparent gradient in the central well pair. Nevertheless, average gradients in the three well pairs were landward at magnitudes that were two to more than four times the target value of 0.001 feet per foot (0.0024, 0.0041, and 0.0045, respectively). The landward gradients measured in June were similar to the average gradients for these well pairs in May 2007 due to constant river levels and consistent pumping operations over the reporting period.

## 5.0 Status of Operation and Monitoring

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Reporting of the IM extraction and monitoring activities will continue as described in the Performance Monitoring Plan. The next monthly monitoring report for the July 2007 reporting period will be submitted by August 30, 2007 with the second quarter performance monitoring report.

Per DTSC direction, PG&E will continue to operate both TW-3D and PE-1 at a target combined pumping rate of 135 gpm during July 2007, except for periods when planned and unplanned downtime occurs. Treated groundwater will be discharged into the IM No. 3 injection wells in accordance with Waste Discharge Requirements Order No. R7-2006-0060. Brine generated as a byproduct of the treatment process will continue to be transported offsite.

PG&E will continue to balance the pumping rates between wells TW-3D and PE-1 to maintain the target pumping rate and maintain appropriate hydraulic gradients across the Alluvial Aquifer. If, at any time, hydraulic data indicate that well PE-1 pumping has the potential to draw higher concentrations of chromium away from the capture zone of well TW-3D, PG&E will request authorization from DTSC to modify extraction system pump rates.

Current USBR projections show that the average Davis Dam release for July 2007 (14,900 cfs) will decrease compared to June 2007 (16,212 cfs) (Table 4-1). Based on July 19, 2007 USBR projections, it is anticipated that the Colorado River level at the I-3 gauge location during July 2007 will be lower (0.6 ft lower) compared to the average river level in June 2007.

With the initiation of pumping from PE-1 (late January 2006) and expansion of the IM monitoring well network, new gradient control well pairs will be defined by DTSC to account for the more complex gradient caused by pumping at both TW-3D and PE-1. Modifications and updates to the IM performance monitoring program will be incorporated pending DTSC approval and direction.

## 6.0 References

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California Department of Toxic Substances Control (DTSC). 2005. Letter. "Criteria for Evaluating Interim Measures Performance Requirements to Hydraulically Contain Chromium Plume in Floodplain Area, Pacific Gas & Electric Company, Topock Compressor Station." February 14.

\_\_\_\_\_. 2006. Letter to PG&E. "Modification of Groundwater and Shoreline Surface Water Sampling Frequencies at Pacific Gas & Electric Company, Topock Compressor Station, Needles, California" October 26.

CH2M HILL. 2005. *Draft Performance Monitoring Plan for Interim Measures in the Floodplain Area, PG&E Topock Compressor Station*. April 15.

\_\_\_\_\_. 2007a. *Groundwater and Surface Water Monitoring Report, First Quarter 2007, PG&E Topock Compressor Station*. May 31.

\_\_\_\_\_. 2007b. *Performance Monitoring Report for April 2007 and Quarterly Performance Evaluation, February through April 2007, PG&E Topock Compressor Station*. May 30.

Fetter, C.W. 1994. *Applied Hydrogeology*. Third Edition. Prentice-Hall.



**TABLE 2-1**  
Pumping Rate and Extracted Volume for IM System through June 2007  
*Interim Measures Performance Monitoring*  
*PG&E Topock Compressor Station*

<b>Extraction Well</b>	<b>June 2007 Period</b>		<b>Project To Date<sup>b</sup></b>
	<b>Average Pumping Rate<sup>c</sup> (gpm)</b>	<b>Volume Pumped (gal)</b>	<b>Cumulative Volume Pumped (gal)</b>
TW-2S	0	0	994,438
TW-2D	0	0	53,015,001
TW-3D	103.9	4,490,440	77,475,758
PE-1	32.4	1,401,282	25,151,496
<b>Total</b>	136.3	5,891,722	156,636,693
Volume Pumped from the MW-20 Well Cluster			1,527,724
Total Volume Pumped <sup>b</sup> (gal)			158,164,417
Total Volume Pumped (ac-ft)			485.4

gpm: gallons per minute.

gal: gallons.

ac-ft: acre-feet.

<sup>a</sup> Pumping results during the monthly period are based on readings collected between June 1, 2007 at 12:00 a.m. and June 30, 2007 at 11:59 p.m. (30 days).

<sup>b</sup> Interim Measure groundwater extraction at the Topock site was initiated in March 2004.

<sup>c</sup> The "Average Pumping Rate" is the overall average during the reporting period, including system downtime based on flow meter readings.

TABLE 2-2

Analytical Results for Extraction Wells, January 2007 through June 2007  
Interim Measures Performance Monitoring  
PG&E Topock Compressor Station

Well ID	Sample Date	Dissolved Total Chromium mg/L	Hexavalent Chromium mg/L	Total Dissolved Solids mg/L
TW-3D	10-Jan-07	2.58	2.44	5520
TW-3D	06-Feb-07	2.31	2.40	5780
TW-3D	07-Mar-07	2.50	2.42	6040
TW-3D	13-Jun-07	2.35	2.00	5570
* TW-3D/PE-1	04-Apr-07	1.25	1.63	5310
* TW-3D/PE-1	02-May-07	1.38	1.69	5480
PE-1	10-Jan-07	0.103	0.0889	5320
PE-1	06-Feb-07	0.0895	0.0808	5440
PE-1	07-Mar-07	0.091	0.0847	5500
PE-1	13-Jun-07	0.0481	0.052	4920

**NOTES:**

mg/L = concentration in milligrams per liter

Analytical results from inactive extraction wells are presented in Table B-2.

Groundwater samples from active extraction wells are taken at sample taps in Valve Vault 1 on the MW-20 Bench.

\* Well specific samples were not collected in April and May 2007. Results are presented from samples that were obtained from a sample point (SC-100B) on the influent conveyance system at the IM3 treatment system. These samples were unfiltered.



**TABLE 4-1**

Predicted and Actual Monthly Average Davis Dam Discharge and Colorado River Elevation at I-3  
*Interim Measures Performance Monitoring*  
*PG&E Topock Compressor Station*

Month	Davis Dam Release			Colorado River Elevation at I-3		
	Projected (cfs)	Actual (cfs)	Difference (cfs)	Predicted (ft AMSL)	Actual (ft AMSL)	Difference (feet)
January 2005	8,800	4,900	-3,900	453.4	452.4	-1.0
February 2005	8,000	4,820	-3,180	453.1	452.6	-0.5
March 2005	15,600	7,110	-8,490	455.8	452.9	-2.9
April 2005	16,700	16,306	-394	455.9	456.0	0.1
May 2005	16,700	15,579	-1,121	456.2	456.1	-0.1
June 2005	14,600	15,223	623	455.8	456.1	0.3
July 2005	15,400	15,612	212	456.0	456.0	0.0
August 2005	11,700	11,544	-156	454.6	454.8	0.2
September 2005	12,400	12,335	-65	454.6	NA	NA
October 2005	12,300	11,201	-1,099	454.5	454.3	-0.2
November 2005	10,900	10,216	-684	454.3	454.3	0
December 2005	6,900	6,745	-155	452.8	452.7	-0.1
January 2006	8,400	9,166	766	453.2	453.6	0.4
February 2006	11,100	10,790	-310	454.1	454.1	0.1
March 2006	13,000	12,429	-571	454.7	454.8	0.2
April 2006	16,600	18,300	1700	456.0	456.1	0.0
May 2006	15,500	16,818	1318	456.0	456.3	0.3
June 2006	16,100	17,547	1447	456.2	456.4	0.2
July 2006	14,700	15,171	-471	455.7	455.8	0.1
August 2006	12,900	12,871	29	454.9	455.1	0.1
September 2006	12,100	12,409	-309	454.7	454.7	0.0
October 2006	11,400	11,150	250	454.1	454.4	0.3
November 2006	8,300	8,222	78	452.9	453.3	0.4
December 2006	8,100	8,823	-723	453.0	453.4	0.4
January 2007	8,600	8,796	-196	453.2	453.6	0.4
February 2007	9,800	11,680	-1,880	453.6	454.3	0.7
March 2007	14,300	14,554	-254	455.1	455.6	0.5
April 2007	17,300	16,818	482	456.4	456.4	0.0
May 2007	16,800	16,199	601	456.5	456.4	-0.1
June 2007	16,000	16,212	-212	456.4	456.4	0.0
July 2007	14,900	--	--	455.8	--	--

**NOTES:**

- 1) Predicted Colorado River elevations (river levels) at I-3 are based upon BOR projections for Davis Dam releases and Lake Havasu elevations from the preceding month, using a multiple regression between historical dam releases and measured river levels at I-3 (updated monthly). This data is reported monthly by the US Department of Interior, at <http://www.usbr.gov/lc/region/g4000/24mo.pdf>
- 2) The difference in I-3 elevation is the difference between the I-3 elevation predicted, and the actual elevation measured at I-3. The main source of this difference is differences between BOR projections and actual dam releases/Havasu reservoir levels, rather than the multiple regression error.
- 3) NA = I-3 transducer data unavailable for month of September 2005 due to damage by debris.
- 4) I-3 elevation for the month of October 2006 limited to average of data from 10/4/2006 through 10/31/2006.
- 5) cfs = cubic feet per second; ft AMSL = feet above mean sea level

**TABLE 4-2**

Calculated Hydraulic Gradients for Well Pairs, June 2007

*Interim Measures Performance Monitoring**PG&E Topock Compressor Station*

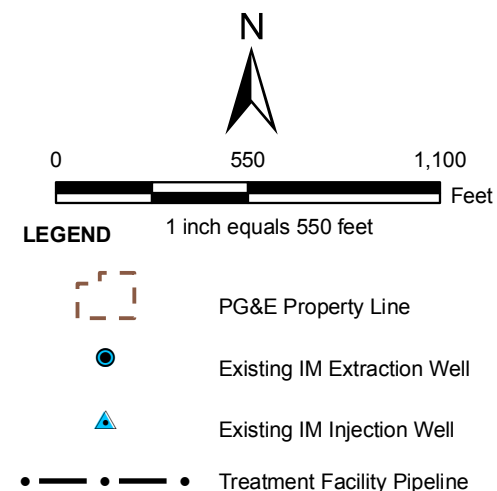
Well Pair <sup>1</sup>	Reporting Period	Mean Landward Hydraulic Gradient <sup>2</sup> (feet/foot)	Measurement Interval 2007
Northern Gradient Pair			
MW-31-135 / MW-33-150	June	0.0024	June 1 through June 28
Central Gradient Pair			
MW-20-130 / MW-34-80	June	0.0041	June 1 through June 28
Southern Gradient Pair			
MW-20-130 / MW-42-65	June	0.0045	June 1 through June 28

**NOTES:**<sup>1</sup> Refer to Figure 1-2 for location of well pairs<sup>2</sup> For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot

Data collection for June reporting period ended on June 29, 2007, so averages for June do not include data from June 29th and June 30th.

## Figures

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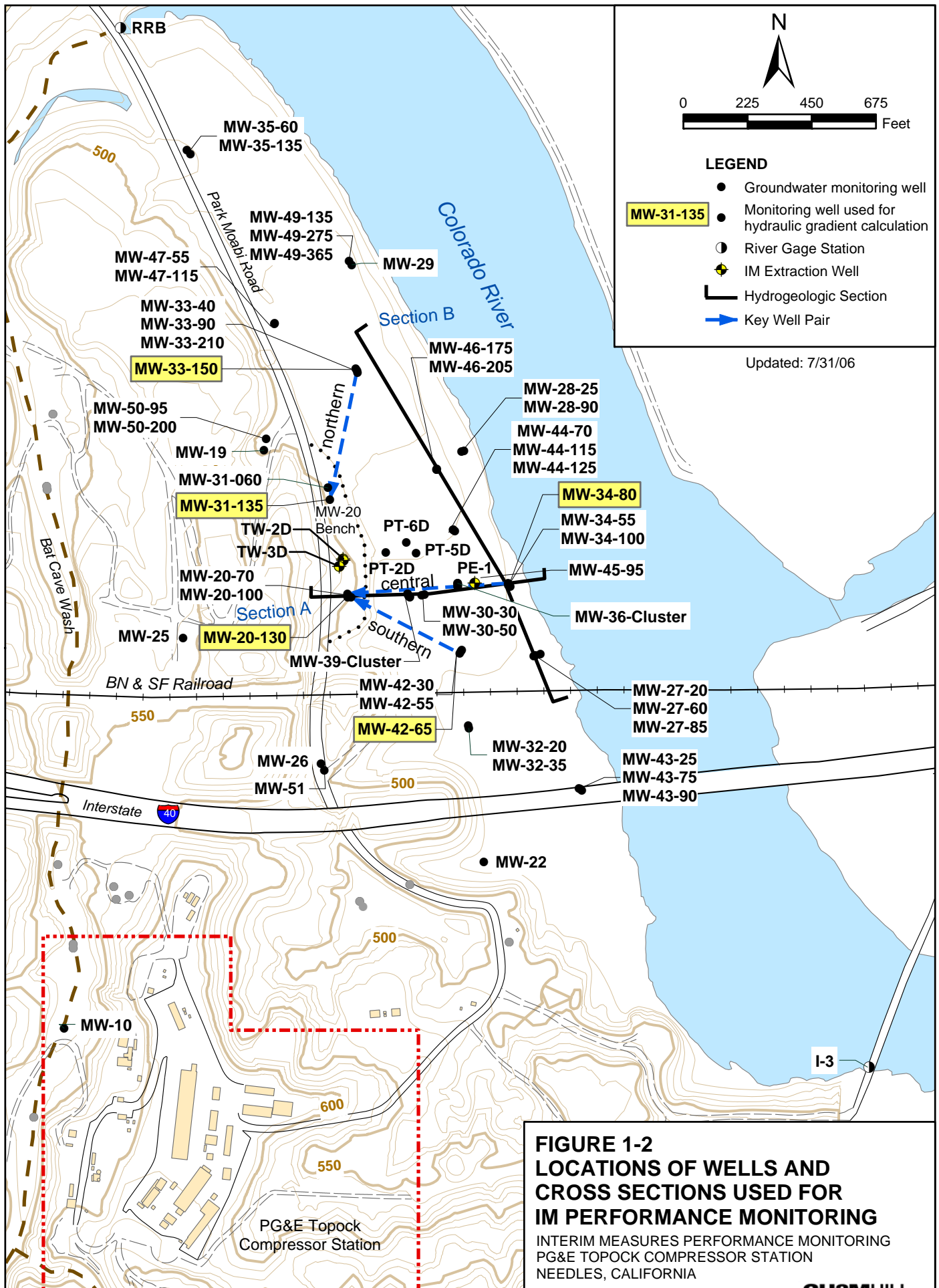


**Notes:** Location map shows Interim Measures No.3 (IM-3) facilities as of January 2006.  
Aerial photography taken May 2005.

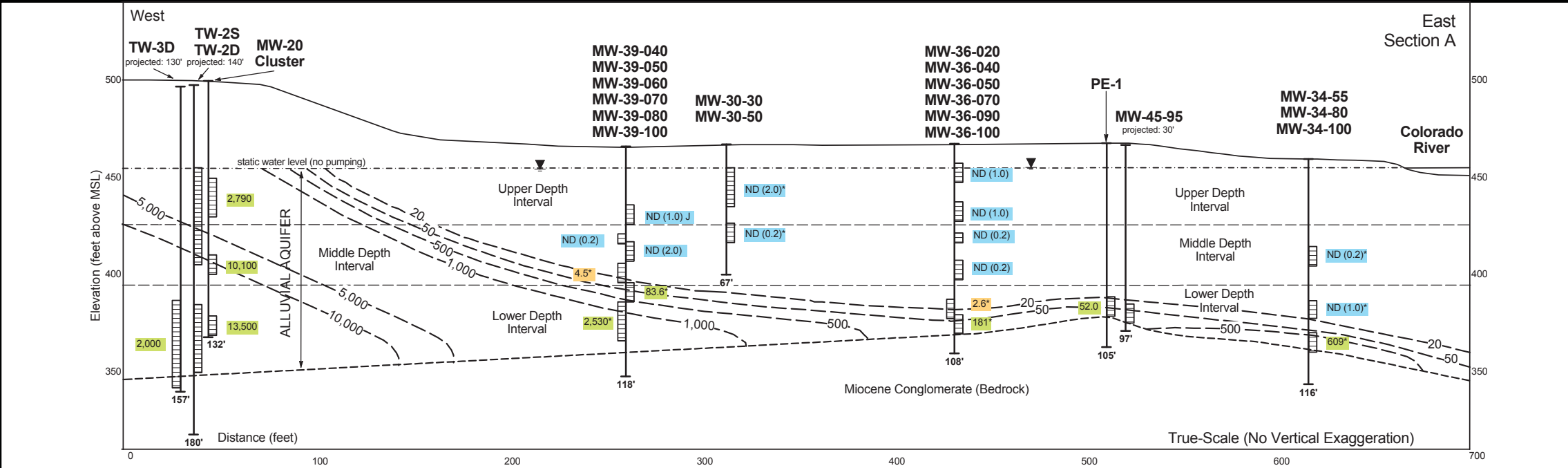
## FIGURE 1-1 LOCATIONS OF IM NO. 3 GROUNDWATER EXTRACTION, CONVEYANCE, AND TREATMENT FACILITIES

INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

**CH2MHILL**







**LEGEND**

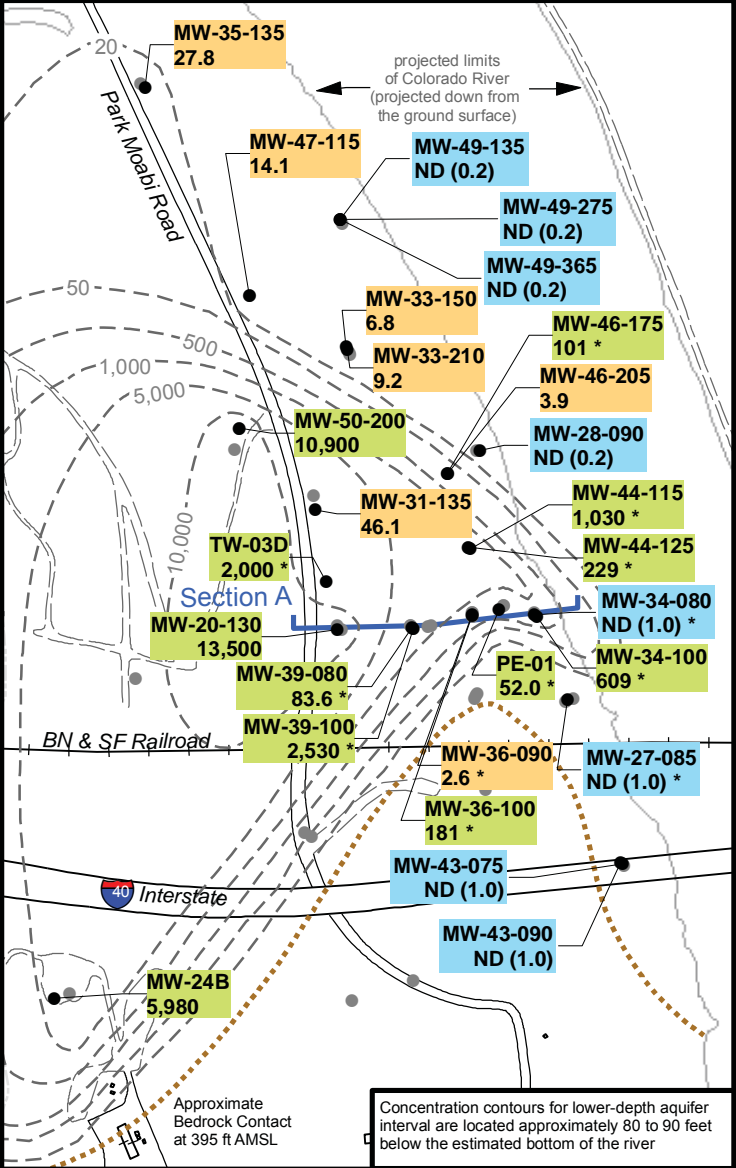
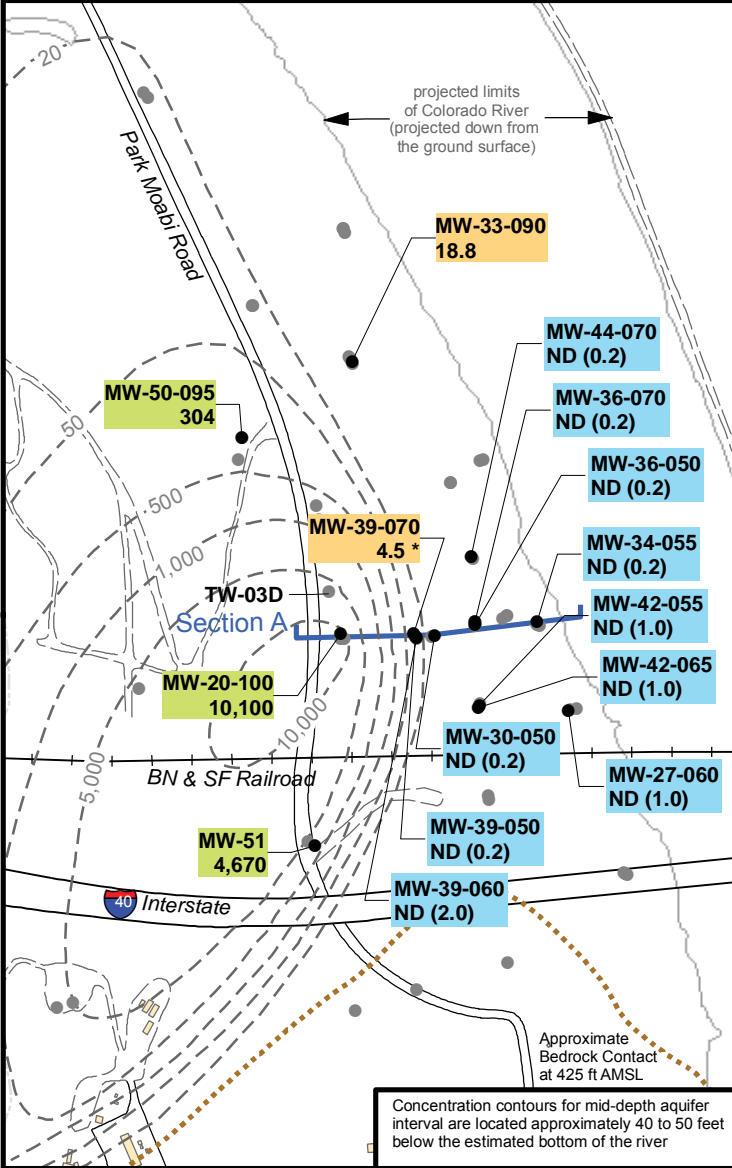
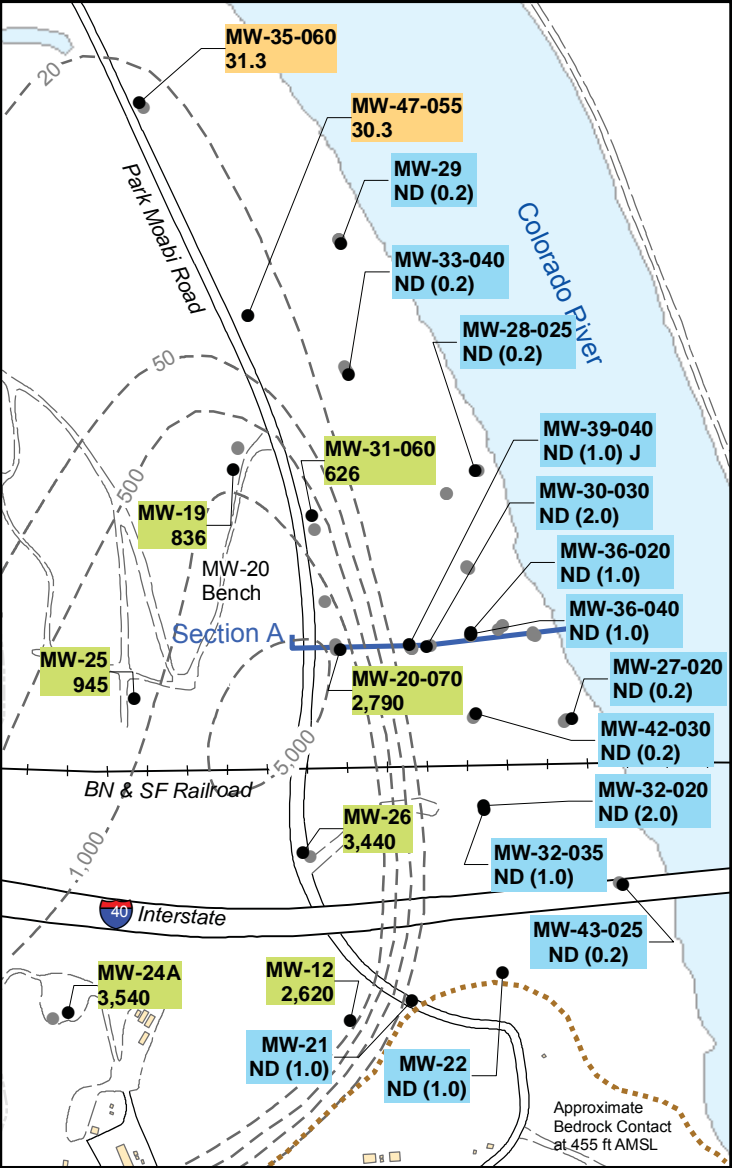
**Maximum Hexavalent Chromium [Cr(VI)] Concentrations in Groundwater, June 2007 Monitoring**

Concentrations in micrograms per liter (µg/L) equivalent to parts per billion (ppb)

ND = Not detected at listed reporting limit  
J = Concentration estimated by laboratory or data validation

\* Indicates samples from June 2007.  
All other results are from the October 2006 or March, April, or May 2007 quarterly sampling event.

Results posted are maximum concentrations from primary and duplicate samples.  
See Tables B-1 and B-2 for sampling data and other results.



**LEGEND**

**ND (1)** Not detected at listed reporting limit (ppb)

**41** Less than 50 ppb

**3,810** Greater than 50 ppb

-- 50 -- Inferred Cr(VI) concentration contour within aquifer depth interval

Contours incorporate the maximum concentration from wells within each depth interval

Hydrogeologic Section A (true-scale) showing aquifer depth intervals, well screens, and Cr(VI) sampling results.

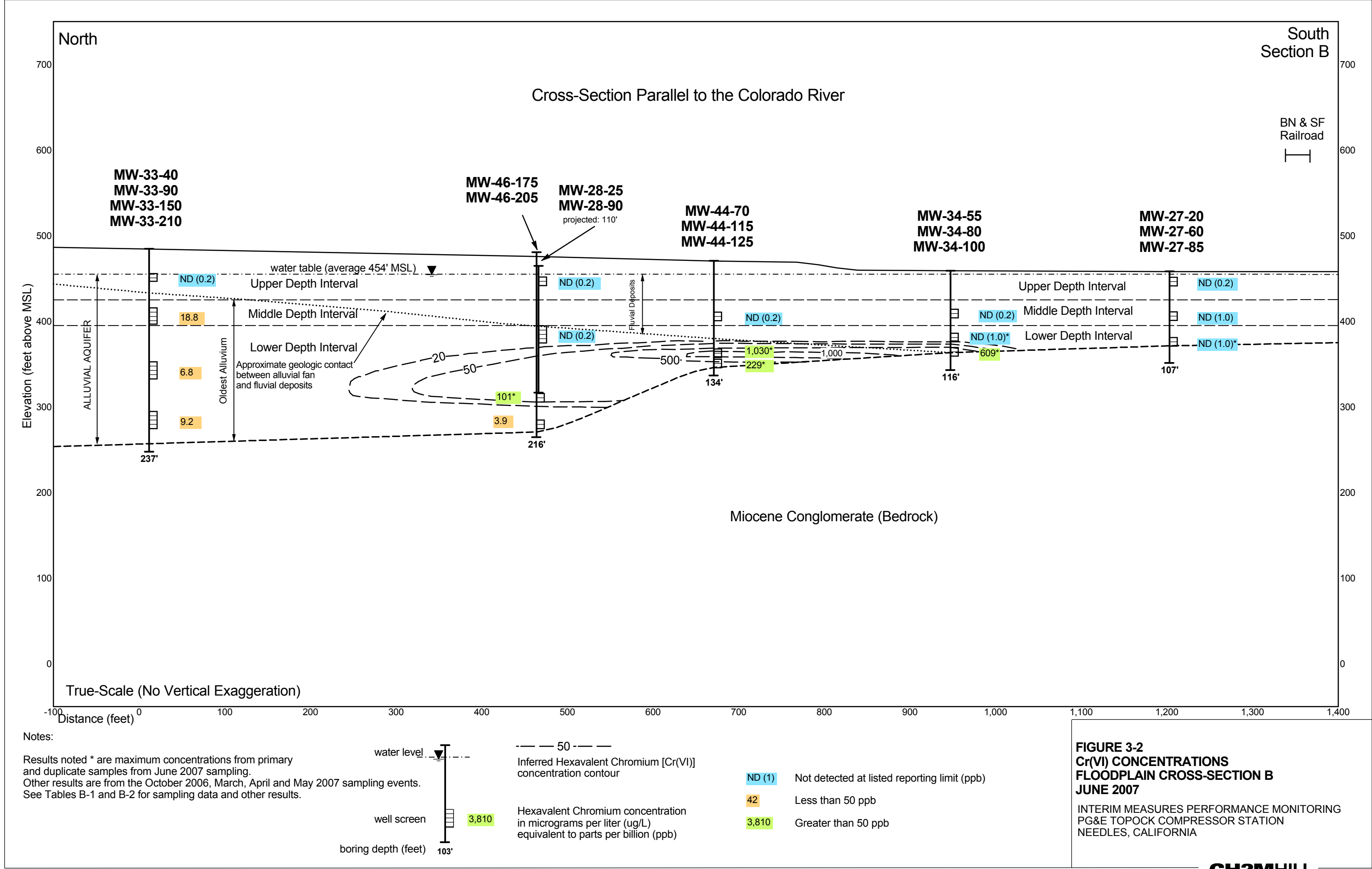
**NOTES ON CONTOUR MAPS**

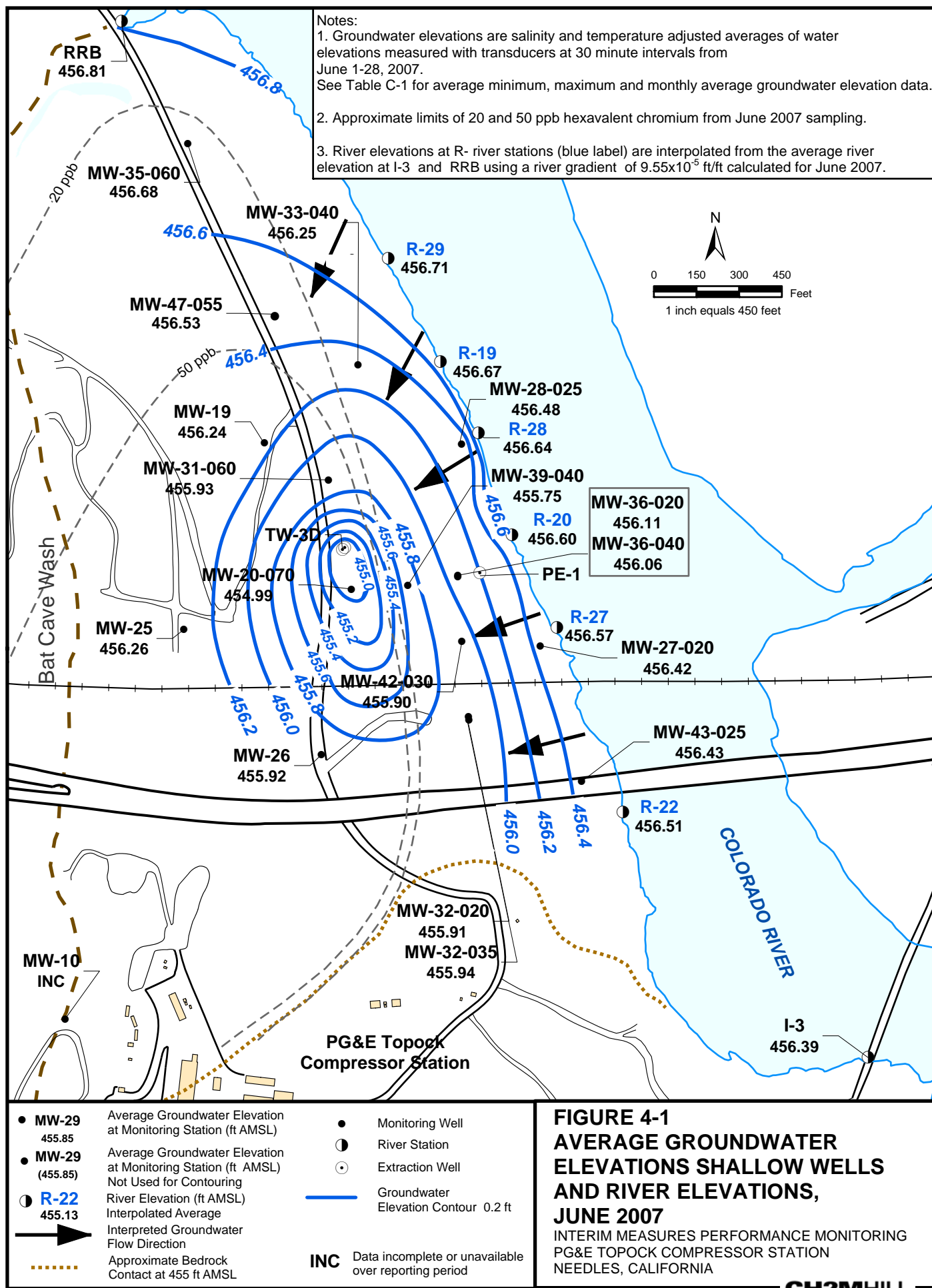
1. The Cr(VI) contour maps for 2006-2007 performance monitoring incorporate data from new wells and water quality data trends for the floodplain area. The contour maps provide additional interpretation of plume limits and do not reflect plume migration during performance monitoring

2. The locations of the Cr(VI) contours shown for depths 80-90 feet below the Colorado River (east and southeast of well clusters MW-34) are estimated based on hydrogeologic and geochemical conditions documented in site investigations 2004-2006. The actual locations of contours beyond well control points in these areas are not certain, but are inferred using available site investigation and monitoring data (bedrock structure, hydraulic gradients, observed distribution of geochemically reducing conditions and Cr(VI) concentration gradients). There are no data confirming the existence of Cr(VI) under the Colorado River.

**FIGURE 3-1**  
**MAXIMUM CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, JUNE 2007**

INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA







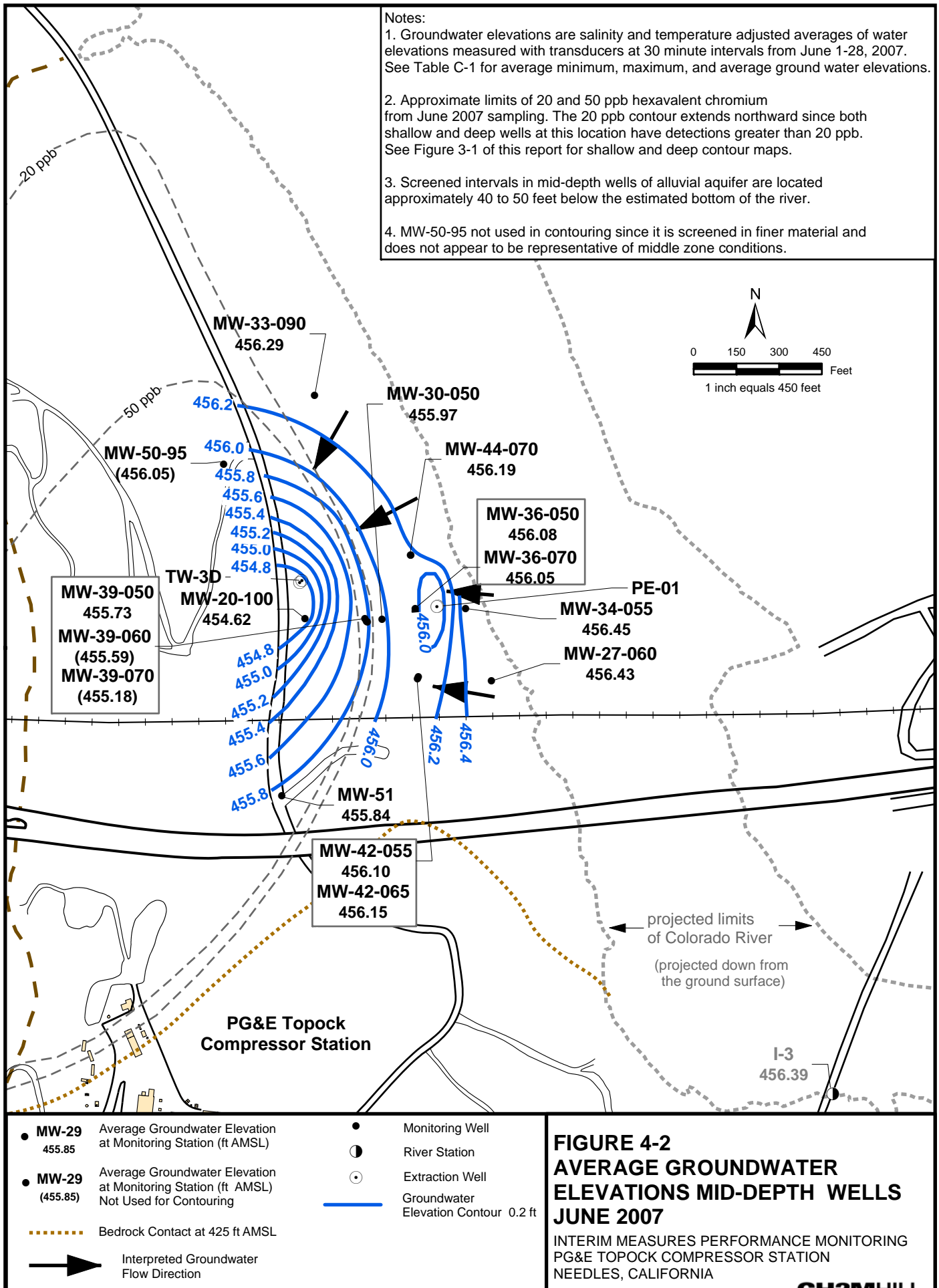
**Notes:**

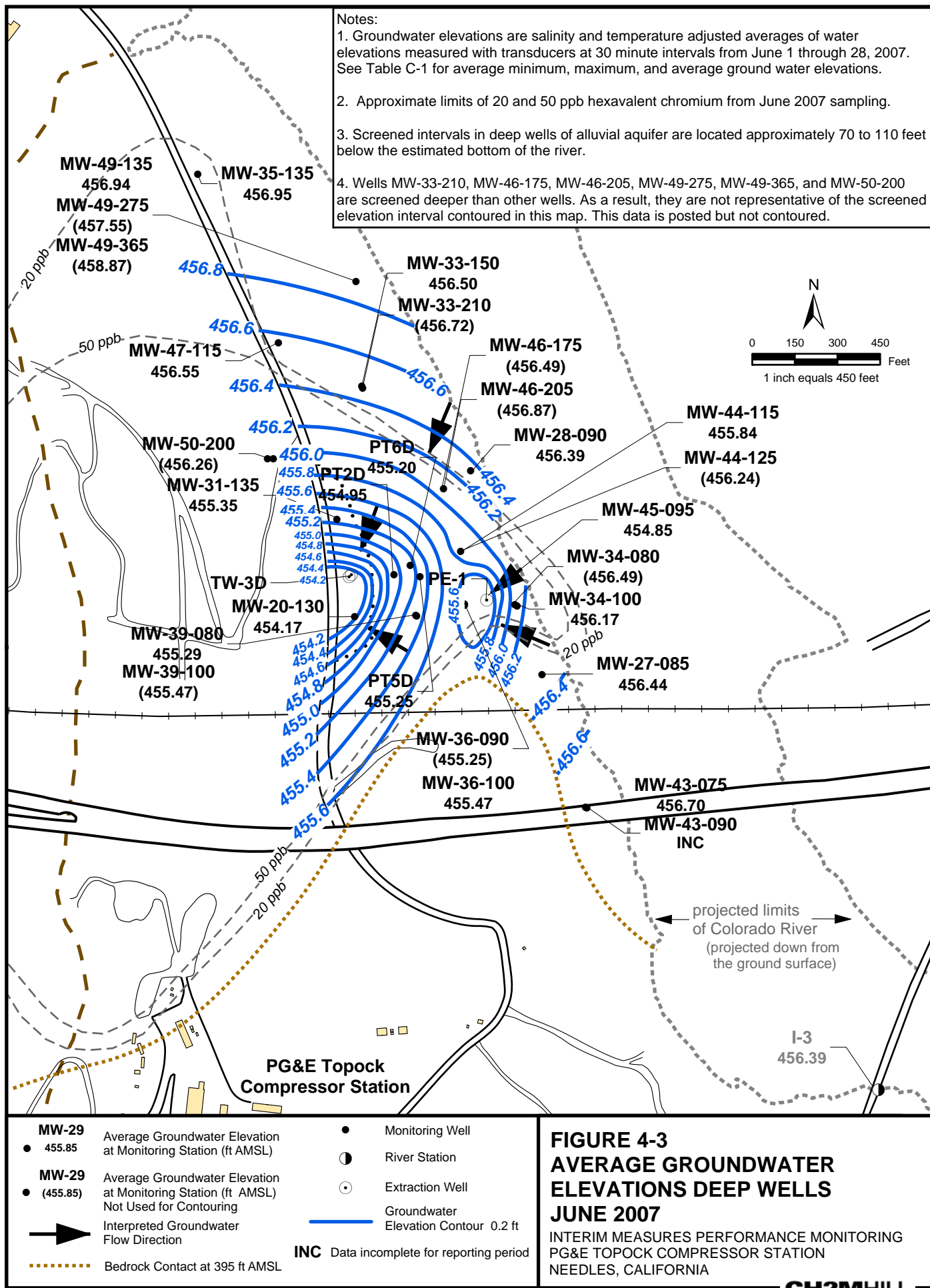
1. Groundwater elevations are salinity and temperature adjusted averages of water elevations measured with transducers at 30 minute intervals from June 1-28, 2007. See Table C-1 for average minimum, maximum, and average ground water elevations.

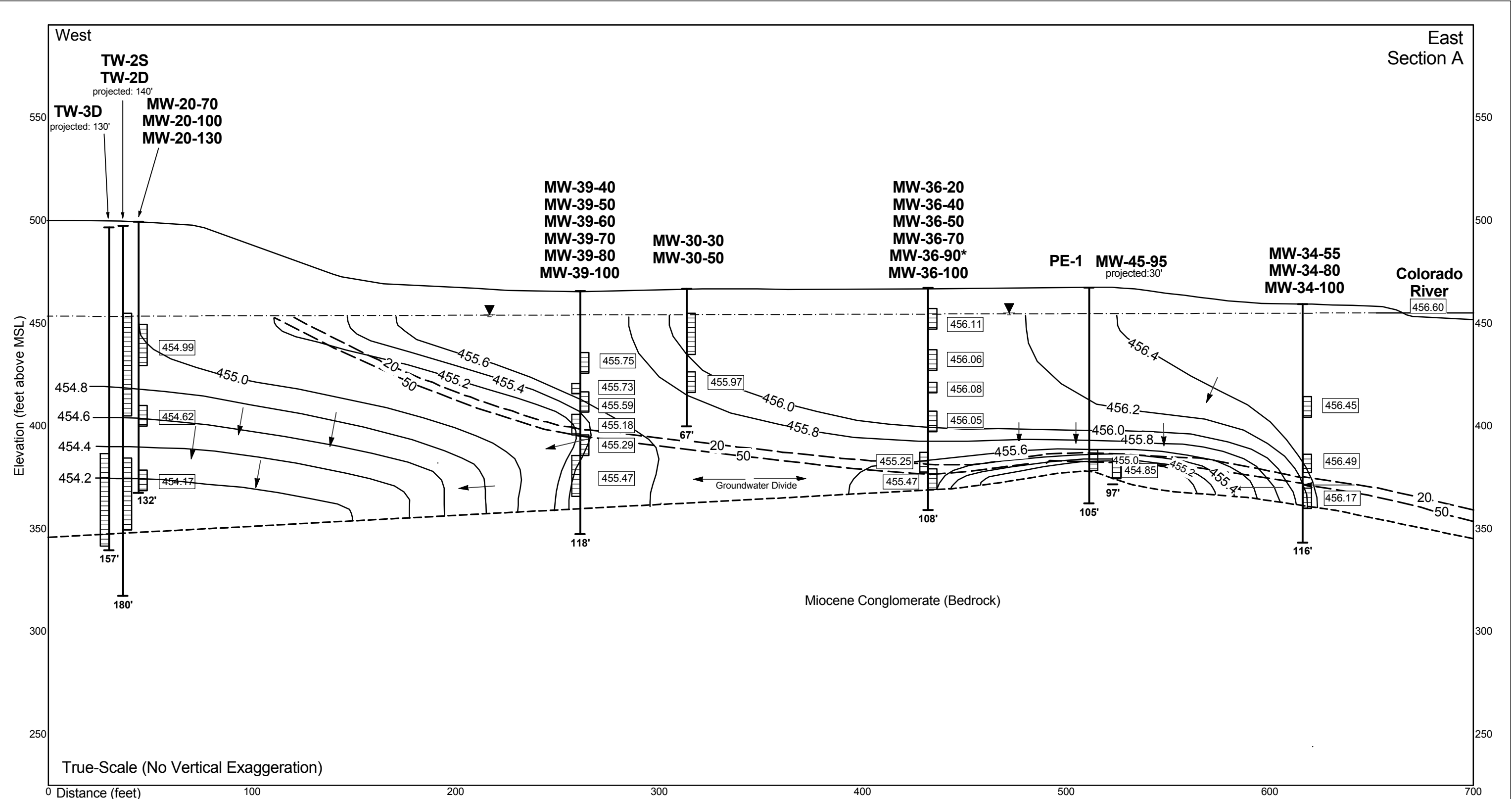
2. Approximate limits of 20 and 50 ppb hexavalent chromium from June 2007 sampling. The 20 ppb contour extends northward since both shallow and deep wells at this location have detections greater than 20 ppb. See Figure 3-1 of this report for shallow and deep contour maps.

3. Screened intervals in mid-depth wells of alluvial aquifer are located approximately 40 to 50 feet below the estimated bottom of the river.

4. MW-50-95 not used in contouring since it is screened in finer material and does not appear to be representative of middle zone conditions.







Notes: Results show average groundwater elevations for June 1 through 28, 2007 measured with transducers at 30 minute intervals.

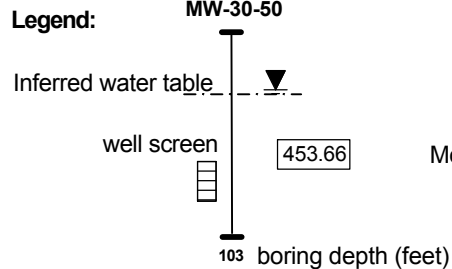
Groundwater elevations adjusted for salinity and temperature.

Well MW-36-90\* excluded from contouring.

See Table C-1 for monthly average, minimum, maximum, and average groundwater elevations.

River elevation (R-20) is the calculated average river level based upon the river gradient between RRB and I-3.

**Legend:**



— 20 —  
Inferred hexavalent chromium contour (ppb) June 2007

Monthly average groundwater head (ft AMSL)

— 453.5 —  
Groundwater head contour  
— 453.5 —  
Inferred groundwater head contour  
Interpreted groundwater flow direction

**FIGURE 4-4  
AVERAGE GROUNDWATER ELEVATIONS  
FOR WELLS ON FLOODPLAIN  
CROSS-SECTION A  
JUNE 2007**

INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

**CH2MHILL**

**Appendix A**  
**Extraction System Operations Log for**  
**Reporting Period**

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## **Appendix A**

### **Extraction System Operations Log for June 2007**

#### **PG&E Topock Interim Measures Performance Monitoring Program**

During June 2007, extraction wells TW-3D and PE-1 operated at a target pump rate of 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime. The operational run time for the IM groundwater extraction system (combined or individual pumping) was 100 percent during the June 2007 reporting period.

The IM No. 3 facility treated 5,891,722 gallons of extracted groundwater during June 2007. The IM No. 3 facility also treated approximately 11,140 gallons of water generated from the groundwater monitoring program, and 3,300 gallons of water generated from injection well re-development during June 2007. No containers of solids from the IM No. 3 facility were taken offsite during June 2007.

The IM No. 3 extraction and treatment system operated continuously during June 2007. However, extraction well PE-1 was offline on June 29<sup>th</sup> from 6:05 am until 6:07 am due to an incoming power imbalance with Needles Power. Extraction well TW-3D operated full-time during June 2007.

**Appendix B**  
**Chromium Sampling Results for Monitoring**  
**Wells in Floodplain Area**

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TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

Sample Date		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Shallow Wells								
MW-27-020	03-Oct-06	ND (0.2)	ND (1.0)	-176	0.5	1,240	455.0	M
MW-28-025	11-Oct-06	ND (0.2)	ND (1.0)	-111	1.5	1,860	454.4	453.7
MW-29	13-Oct-06	ND (0.2)	ND (1.0)	-56	5.3	4,770	454.9	455.0
MW-30-030	10-Oct-06	ND (2.0)	ND (1.0)	-129	1.4	56,500	454.3	453.6
MW-32-020	02-Oct-06	ND (5.0)	ND (1.0)	-122	0.9	59,800	454.5	M
	11-Dec-06	ND (2.0)	ND (1.0)	-110	1.8	61,300	453.8	455.4
	06-Mar-07	ND (2.0)	ND (1.0)	-84	0.1	39,700	454.5	454.7
	30-Apr-07	ND (2.0)	ND (1.0)	-165	4.6	34,900	456.0	456.0
MW-32-035	02-Oct-06	ND (1.0)	ND (1.0)	-162	0.7	20,000	454.5	M
	11-Dec-06	ND (1.0)	ND (1.0)	-149	1.5	23,700	454.2	455.4
	06-Mar-07	ND (1.0)	ND (1.0)	-66	0.0	14,800	454.7	454.7
	30-Apr-07	ND (1.0)	ND (1.0)	-158	3.8	23,500	456.0	456.0
MW-33-040	06-Oct-06	ND (0.2)	ND (1.0)	167	---	6,710	455.2	455.0
	14-Dec-06	ND (0.2)	1.20	31	2.8	7,080	454.0	453.2
	06-Mar-07	ND (0.2)	ND (1.0)	---	1.7	27,000	454.9	454.7
	02-May-07	ND (0.2)	ND (1.0)	-16	0.6	20,200	456.5	456.5
MW-36-020	02-Oct-06	ND (1.0)	ND (1.0)	-177	1.8	24,000	454.6	M
MW-36-040	05-Oct-06	ND (1.0)	ND (1.0)	-194	1.4	16,000	454.2	455.0
MW-39-040	05-Oct-06	ND (0.2)	ND (1.0)	-198	1.4	12,500	454.1	454.0
	14-Dec-06	ND (1.0)	ND (1.0)	-174	1.7	13,200	453.4	453.1
	05-Mar-07	ND (1.0)	ND (1.0)	-55	---	8,770	454.5	455.1
	03-May-07	ND (1.0) J	ND (1.0)	-195	2.0	---	456.2	456.8
MW-42-030	03-Oct-06	ND (1.0)	ND (1.0)	-160	0.9	19,700	454.4	M
	07-Mar-07	ND (0.2)	ND (1.0)	-109	0.0	14,400	454.2	454.5
MW-43-025	02-Oct-06	ND (0.2)	ND (1.0)	-172	0.6	1,310	454.8	M
	06-Mar-07	ND (0.2)	ND (1.0)	-168	0.0	6,410	455.0	454.8
Middle Wells								
MW-27-060	03-Oct-06	ND (1.0)	ND (1.0)	-122	0.8	14,300	455.0	M
MW-30-050	11-Oct-06	ND (0.2)	ND (1.0)	-113	0.8	8,280	454.4	454.6
	11-Oct-06 FD	ND (0.2)	ND (1.0)	FD	FD	FD	FD	FD
MW-33-090	06-Oct-06	17.3	20.9	110	0.9	12,500	455.2	454.5
	15-Dec-06	17.8 J	13.8	110	1.7	14,600	453.8	453.6
	15-Dec-06 FD	2.30 R	13.5	FD	FD	FD	FD	FD
	12-Mar-07	17.1	18.0	97	0.4	11,600	454.9	454.5
	02-May-07	18.8	16.8	18	0.0	16,000	456.4	456.2
MW-34-055	04-Oct-06	ND (0.2)	ND (1.0)	-178	2.2	3,080	455.0	453.9
MW-36-050	05-Oct-06	ND (0.2)	ND (1.0)	-165	1.4	4,200	454.9	455.1
MW-36-070	13-Jun-06	ND (0.2) J	ND (1.0)	---	---	7,840	456.0	455.9
	11-Jul-06	ND (1.0)	ND (1.0)	-108	0.6	7,320	455.3	454.8

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

Sample Date		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Middle Wells								
MW-36-070	09-Aug-06	ND (0.2)	ND (1.0)	-149	0.7	6,920	455.2	455.4
	07-Sep-06	ND (0.2)	ND (1.0)	-105	1.7	5,930	455.0	455.5
	02-Oct-06	ND (0.2)	ND (1.0)	-122	1.4	5,220	454.5	M
	14-Dec-06	ND (0.2)	ND (1.0) LF	-112	1.8	3,440	453.2	453.3
	07-Mar-07	ND (0.2)	ND (1.0)	-128	0.5	3,000	454.6	454.5
	01-May-07	ND (0.2)	ND (1.0)	-144	1.7	2,530	455.6	455.2
MW-39-050	05-Oct-06	ND (0.2)	ND (1.0)	-77	1.4	11,200	454.2	454.2
MW-39-060	05-Oct-06	ND (1.0)	ND (1.0)	-54	1.2	11,300	454.1	454.5
	05-Oct-06 FD	ND (2.0)	ND (1.0)	FD	FD	FD	FD	FD
MW-39-070	14-Jun-06	107 J	94.6	197	0.0	10,300	455.8	457.0
	12-Jul-06	77.0 J	66.7	74	0.9	9,570	455.0	456.4
	10-Aug-06	89.6	86.2	67	0.6	---	454.6	456.0
	07-Sep-06	155	153	21	1.7	9,760	454.9	454.7
	05-Oct-06	112	103	-1	1.2	12,200	453.6	453.9
	14-Dec-06	101	94.0	2	1.8	8,190	453.8	453.2
	05-Mar-07	35.0	37.2	219	---	8,310	453.6	455.1
	03-May-07	10.1 R	10.4	-18	2.1	16,700	455.5	456.6
	07-Jun-07	4.50	4.30 LF	-112	3.3	6,570	454.5	454.2
MW-42-055	03-Oct-06	ND (1.0)	ND (1.0)	-126	0.8	19,100	454.4	M
	14-Dec-06	ND (2.0)	ND (1.0)	-132	0.5	16,500	453.7	453.3
	07-Mar-07	ND (0.2)	ND (1.0)	-62	0.0	17,700	454.4	454.5
	07-Mar-07 FD	ND (0.2)	ND (1.0)	FD	FD	FD	FD	FD
	01-May-07	ND (1.0)	ND (1.0)	-139	1.5	14,900	456.0	455.6
MW-42-065	03-Oct-06	ND (1.0)	ND (1.0)	-50	0.7	20,400	454.4	M
	14-Dec-06	ND (2.0)	ND (1.0)	-42	0.6	18,300	453.8	453.4
	07-Mar-07	ND (0.2)	ND (1.0)	---	0.0	18,500	454.4	454.5
	01-May-07	ND (1.0)	ND (1.0)	-60	7.7	15,800	456.3	455.7
MW-44-070	13-Jun-06	ND (1.0)	ND (1.0)	-131	4.3	12,200	456.3	456.1
	13-Jun-06 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	15-Jun-06	ND (1.0)	ND (1.0)	-118	5.4	14,900	456.4	456.8
	04-Oct-06	ND (1.0)	ND (1.0)	-181	2.3	8,910	454.0	453.8
	14-Dec-06	ND (1.0)	ND (1.0)	-129	1.7	6,730	453.6	453.6
	09-Mar-07	ND (1.0)	ND (1.0)	-144	0.0	8,700	454.8	455.1
	03-May-07	ND (0.2)	ND (1.0)	-150	2.4	13,400	456.0	455.5
Deep Wells								
MW-27-085	14-Jun-06	ND (1.0)	ND (1.0)	-98	3.3	22,400	456.5	456.3
	12-Jul-06	ND (2.0)	ND (1.0)	-71	2.2	21,400	456.4	456.8
	08-Aug-06	ND (1.0)	ND (1.0)	-33	2.7	22,900	454.9	456.2
	06-Sep-06	ND (1.0)	ND (1.0)	-87	2.4	23,200	454.8	454.4
	13-Oct-06	ND (1.0)	ND (1.0)	-78	1.1	24,100	454.0	454.2
	16-Nov-06	ND (1.0)	ND (1.0)	-87	1.2	23,400	453.1	452.8
	11-Dec-06	ND (1.0)	ND (1.0)	-82	1.3	26,700	455.0	455.8

Refer to table footnotes for data qualifier explanation.



TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-27-085	10-Jan-07	ND (1.0)	4.40	-61	0.3	18,640	453.6	453.7
	06-Feb-07	ND (1.0)	ND (1.0)	-47	0.1	23,100	453.6	453.5
	07-Mar-07	ND (0.2)	ND (1.0)	-80	0.2	---	454.8	454.5
	03-Apr-07	ND (1.0)	ND (1.0)	-97	2.2	23,100	455.7	455.7
	01-May-07	ND (1.0)	1.00	-69	0.4	20,800	456.9	456.4
	13-Jun-07	ND (1.0)	ND (1.0)	-40	0.3	18,800	456.2	455.1
MW-28-090	15-Jun-06	ND (1.0)	ND (1.0)	-153	3.9	7,980	456.5	456.5
	13-Jul-06	ND (1.0) J	ND (1.0)	-150	1.6	---	456.7	457.1
	11-Aug-06	ND (0.2)	ND (1.0)	-159	0.6	12,300	456.1	456.5
	08-Sep-06	ND (0.2)	ND (1.0)	-133	3.2	7,830	454.3	454.1
	13-Oct-06	ND (0.2)	ND (1.0)	-156	1.0	9,700	454.8	454.9
	14-Dec-06	ND (1.0)	ND (1.0)	-160	0.3	7,590	453.7	453.7
	08-Mar-07	ND (1.0)	ND (1.0)	-154	4.1	6,910	454.7	454.7
	04-May-07	ND (0.2)	ND (1.0)	-156	0.2	7,492	456.9	456.8
MW-33-150	16-Jun-06	5.50	5.40	38	2.8	21,300	456.7	457.1
	13-Jul-06	7.40 J	6.70	-14	1.1	22,400	456.3	456.5
	11-Aug-06	9.30	8.10	-19	1.8	20,200	456.1	456.4
	08-Sep-06	7.40	4.10	28	1.8	17,900	454.9	454.3
	06-Oct-06	7.70	5.70	15	0.9	20,500	454.9	454.0
	13-Dec-06	10.8	9.80	-5	0.4	17,500	454.1	453.8
	06-Mar-07	6.90	7.00	37	0.0	---	455.0	454.7
	02-May-07	6.80	6.10	-65	0.9	31,200	456.2	456.0
MW-33-210	16-Jun-06	9.20	8.30	-27	2.9	23,600	456.8	456.9
	13-Jul-06	10.0 J	7.50	36	2.2	27,100	456.7	456.8
	08-Aug-06	9.80	8.70	70	3.1	23,900	455.8	454.8
	08-Sep-06	9.20	4.90	59	1.7	21,000	455.4	454.4
	06-Oct-06	10.2	10.0	28	0.9	24,000	455.4	454.2
	11-Dec-06	11.1	8.00	157	1.2	27,600	455.1	455.9
	05-Mar-07	11.2	11.0	-2	0.3	---	455.7	455.0
	02-May-07	9.20	9.30	-52	0.2	23,700	456.6	456.0
MW-34-080	14-Jun-06	ND (1.0)	ND (1.0)	-99	2.7	15,600	457.0	456.8
	12-Jul-06	ND (1.0)	ND (1.0)	-75	1.6	14,800	456.3	456.3
	08-Aug-06	ND (1.0)	ND (1.0)	-33	0.6	16,200	455.6	455.4
	06-Sep-06	ND (1.0)	ND (1.0)	-84	0.9	16,000	454.9	454.7
	04-Oct-06	ND (1.0)	ND (1.0)	-111	2.1	14,400	453.7	453.9
	16-Nov-06	ND (1.0)	ND (1.0)	-86	1.1	13,200	453.0	452.6
	12-Dec-06	ND (1.0)	ND (1.0)	-23	0.3	15,000	454.5	454.6
	09-Jan-07	ND (1.0)	3.20	-36	0.3	14,300	453.5	453.6
	05-Feb-07	ND (1.0)	ND (1.0)	-51	0.2	10,300	453.6	453.5
	05-Mar-07	ND (1.0)	ND (1.0)	-54	0.2	24,800	455.2	455.1
	02-Apr-07	ND (0.2)	ND (1.0)	-89	0.0	10,800	455.7	455.0
	30-Apr-07	ND (1.0)	1.10	-121	0.1	9,000	456.2	456.0
	13-Jun-07	ND (1.0)	ND (1.0)	-90	0.3	10,120	456.5	455.4

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

Sample Date		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-34-100	14-Jun-06	922	839	-2	3.2	20,800	456.6	456.6
	14-Jun-06 FD	921	864	FD	FD	FD	FD	FD
	28-Jun-06	976	1130	132	5.0	21,800	456.3	456.6
	12-Jul-06	823 J	851	27	1.5	19,300	456.1	456.6
	12-Jul-06 FD	828 J	864	FD	FD	FD	FD	FD
	26-Jul-06	859	955	36	2.2	---	456.3	456.7
	08-Aug-06	889	982	64	0.5	20,600	455.6	455.9
	28-Aug-06	922	945	69	1.3	28,900	453.8	453.6
	06-Sep-06	844	963	117	1.9	22,500	454.9	454.9
	06-Sep-06 FD	797	907	FD	FD	FD	FD	FD
	20-Sep-06	872	984	181	1.5	19,600	454.2	M
	04-Oct-06	910	889	0	2.0	20,700	454.5	453.9
	18-Oct-06	815	920	52	0.8	21,700	453.9	453.9
	01-Nov-06	832	752	33	1.6	20,200	453.9	453.5
	16-Nov-06	777	801	146	1.4	20,500	452.9	453.0
	30-Nov-06	744	712	115	0.9	21,900	452.4	452.2
	12-Dec-06	851	625 J	-16	0.3	21,000	454.1	454.5
	28-Dec-06	723	603	115	---	16,760	453.2	452.7
	09-Jan-07	797	830	52	0.2	---	453.2	453.6
	24-Jan-07	832	817	129	0.3	17,700	453.4	453.3
	05-Feb-07	780	646	-28	0.2	26,800	453.3	453.5
	05-Feb-07 FD	764	634	FD	FD	FD	FD	FD
	21-Feb-07	804	895	37	0.2	39,100	454.5	454.6
	07-Mar-07	806	788	71	0.2	37,800	454.5	454.6
	21-Mar-07	724	642	67	0.0	20,000	455.0	455.5
	02-Apr-07	749	786	9	0.0	22,800	455.1	455.1
	02-Apr-07 FD	720	800	FD	FD	FD	FD	FD
	18-Apr-07	687	641	114	0.0	18,100	456.2	456.4
	30-Apr-07	626	590	22	2.1	12,400	456.0	456.0
	30-Apr-07 FD	632	599	FD	FD	FD	FD	FD
	16-May-07	588	573	55	1.5	38,400	456.3	456.0
	30-May-07	597	656	76	1.9	33,500	456.4	456.0
13-Jun-07	609	644	127	0.7	17,470	456.4	455.8	
13-Jun-07 FD	608	633	FD	FD	FD	FD	FD	
27-Jun-07	574	536	63	4.4	20,600	456.6	456.1	
MW-36-090	13-Jun-06	10.9	9.00	---	---	10,300	455.4	456.4
	11-Jul-06	12.2	11.1	-34	0.8	14,000	454.2	455.3
	09-Aug-06	9.00	8.20	-96	0.8	9,190	454.7	455.9
	07-Sep-06	8.80	7.70	-55	1.7	8,400	454.7	455.4
	02-Oct-06	9.00	8.50	-20	1.0	8,270	453.6	M
	02-Oct-06 FD	8.90	10.8	FD	FD	FD	FD	FD
	15-Nov-06	ND (1.0)	2.40	-64	1.0	11,700	452.4	453.6
	14-Dec-06	3.80 J	5.80 J	-39	1.7	7,250	453.6	453.4
	14-Dec-06 FD	4.00	3.00 J	FD	FD	FD	FD	FD

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-36-090	10-Jan-07	6.00	9.70	-83	0.2	7,743	452.4	453.7
	05-Feb-07	5.40	4.90	-28	0.2	10,100	452.4	453.5
	07-Mar-07	3.10	3.70	28	0.4	7,470	453.7	454.5
	03-Apr-07	2.90	3.20	-17	2.2	6,970	454.8	455.5
	02-May-07	2.00	1.80	-35	0.0	7,580	455.8	457.0
	02-May-07 FD	1.90	1.80	FD	FD	FD	FD	FD
	12-Jun-07	2.60	2.80	-71	0.2	5,510	455.3	455.6
MW-36-100	15-Jun-06	496 J	465	7	3.6	18,200	455.5	456.2
	13-Jul-06	528	497	37	1.0	19,600	455.8	457.5
	09-Aug-06	551	474	67	1.6	14,600	455.1	456.3
	08-Sep-06	556	561	-10	2.6	16,200	453.5	454.0
	11-Oct-06	556	629	17	0.9	16,500	453.8	453.8
	14-Nov-06	657	764	13	1.0	17,900	452.6	453.1
	11-Dec-06	586	513	-64	1.1	21,700	453.8	455.7
	10-Jan-07	571	554	-55	0.3	20,300	452.8	453.7
	05-Feb-07	538	474	-66	0.2	23,800	452.7	453.5
	08-Mar-07	436	454	-62	3.7	15,700	453.8	454.7
	02-Apr-07	366	378	-58	0.0	16,600	454.4	455.3
	02-May-07	297	348	-51	0.0	16,100	455.8	456.8
	14-Jun-07	181	192	-118	0.5	13,950	455.8	456.1
MW-39-080	14-Jun-06	1000 J	934	184	0.0	15,100	455.9	456.8
	12-Jul-06	830 J	750	69	1.1	14,600	455.2	456.8
	10-Aug-06	481	447	78	0.6	15,800	454.5	455.4
	07-Sep-06	1160	1160	47	1.6	17,500	455.2	454.5
	05-Oct-06	580	594	76	1.2	19,500	454.3	454.3
	15-Nov-06	339	422	52	0.9	17,600	452.7	453.5
	14-Dec-06	326	272	44	1.7	17,300	453.9	453.2
	10-Jan-07	302	292	---	0.2	13,900	452.7	453.7
	08-Feb-07	286	247	105	0.3	24,600	452.1	452.3
	05-Mar-07	151	144	269	---	10,800	453.9	455.0
	04-Apr-07	112	126	157	0.0	13,400	455.3	456.8
	03-May-07	156	146	59	1.9	25,300	455.5	456.5
	12-Jun-07	83.6	72.7	12	0.3	13,217	455.4	455.9
MW-39-100	14-Jun-06	3270	3250	79	3.4	23,100	455.9	455.7
	13-Jul-06	3790	3470	80	1.5	26,200	455.7	457.4
	10-Aug-06	3230	3440	141	1.6	23,000	455.0	456.0
	10-Aug-06 FD	3170	3410	FD	FD	FD	FD	FD
	08-Sep-06	3290	3780	46	2.8	20,700	453.8	453.9
	11-Oct-06	3370	3500	87	1.2	23,100	454.5	454.4
	15-Nov-06	2850	3190	96	2.5	23,000	453.0	453.2
	15-Nov-06 FD	2960	3060	FD	FD	FD	FD	FD
	12-Dec-06	3820	3350	95	0.4	24,200	453.6	454.5
	10-Jan-07	2930	2560	75	0.5	19,570	452.9	453.7

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

Sample Date		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-39-100	08-Feb-07	2880	2400	74	0.3	---	452.4	452.3
	12-Mar-07	2850	2770	139	0.7	20,800	455.1	454.5
	04-Apr-07	3190	2990	170	2.7	25,000	455.5	456.9
	03-May-07	2670	2920	102	1.9	---	455.6	456.1
	13-Jun-07	2530	2730	48	0.6	20,490	455.4	454.8
MW-43-075	02-Oct-06	ND (1.0)	ND (1.0)	-128	1.2	17,900	454.3	M
	12-Dec-06	ND (1.0)	ND (1.0)	-109	1.2	17,400	454.7	454.7
	06-Mar-07	ND (1.0)	ND (1.0)	-151	0.0	---	455.4	454.9
	30-Apr-07	ND (1.0)	ND (1.0)	-213	0.0	12,000	457.0	456.4
MW-43-090	02-Oct-06	ND (1.0)	ND (1.0)	-108	0.4	23,600	455.3	M
	12-Dec-06	ND (1.0)	ND (1.0)	-85	0.5	25,200	454.9	454.7
	06-Mar-07	ND (1.0)	ND (1.0)	-97	0.0	37,300	455.7	455.0
	30-Apr-07	ND (1.0)	ND (1.0)	-150	1.4	14,000	457.3	456.2
MW-44-115	13-Jun-06	1420	1350	-26	3.3	17,700	455.7	455.9
	28-Jun-06	1600	1830	-37	4.0	16,800	455.7	456.5
	12-Jul-06	1700 J	1430	14	1.2	17,300	455.4	455.9
	26-Jul-06	1290	1530	-31	0.6	---	455.6	455.9
	09-Aug-06	1230	1460 LF	63	2.9	17,700	455.1	455.3
	23-Aug-06	1370	1440	93	0.6	16,800	454.8	455.0
	07-Sep-06	1380	1340	139	1.7	15,600	454.9	455.5
	21-Sep-06	911	1180	57	2.7	14,600	454.5	M
	05-Oct-06	1300	1310	3	2.9	18,400	454.7	454.4
	18-Oct-06	1250	1380	23	0.8	18,300	454.1	454.5
	15-Nov-06	1210	1480	19	1.5	14,000	453.1	453.5
	12-Dec-06	1310	1090	116	0.6	18,300	453.8	454.4
	09-Jan-07	1140	1260	-34	0.2	20,400	453.1	453.6
	06-Feb-07	1140	1020	-53	0.2	25,200	453.1	453.5
	09-Mar-07	1210	1340 LF	-33	0.1	---	454.4	455.1
	09-Mar-07 FD	1200	1340	FD	FD	FD	FD	FD
	02-Apr-07	1210	1420	-2	0.0	18,100	454.8	455.2
	04-May-07	1080	1190	-61	0.2	13,366	456.2	456.5
	14-Jun-07	1030	1110	-23	0.2	13,560	455.7	455.4
MW-44-125	28-Jun-06	---	---	-186	4.3	13,000	456.2	456.5
	11-Jul-06	373	395	-16	0.7	12,100	455.4	455.1
	11-Jul-06 FD	365	335	FD	FD	FD	FD	FD
	26-Jul-06	155	177	-140	1.9	---	456.1	455.9
	26-Jul-06 FD	157	180	FD	FD	FD	FD	FD
	09-Aug-06	218	227 LF	-93	0.6	16,800	455.7	455.7
	28-Aug-06	468	486	-188	1.1	17,700	454.7	454.2
	28-Aug-06 FD	462	540	FD	FD	FD	FD	FD
	07-Sep-06	314	297	-39	4.1	14,600	455.1	455.2
	07-Sep-06 FD	311	275	FD	FD	FD	FD	FD
	20-Sep-06	224	262	-130	0.4	16,700	453.9	M

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

		Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
					ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells									
MW-44-125	20-Sep-06	FD	226	261	FD	FD	FD	FD	FD
	05-Oct-06		284	280	-97	2.6	18,000	455.1	454.5
	18-Oct-06		304	327	-112	0.8	18,900	454.7	454.6
	18-Oct-06	FD	308	272	FD	FD	FD	FD	FD
	15-Nov-06		320	363	-119	1.3	14,200	453.6	453.7
	13-Dec-06		300	321	-67	0.8	14,200	454.1	454.3
	09-Jan-07		285	285	-92	0.2	22,700	453.4	453.6
	09-Jan-07	FD	284	268	FD	FD	FD	FD	FD
	06-Feb-07		213	190	-85	0.2	12,900	453.3	453.5
	09-Mar-07		258	287	-70	0.0	19,100	454.9	455.1
	03-Apr-07		296	272	-118	2.1	15,700	456.2	455.8
	03-May-07		254	326	-76	1.9	25,000	455.9	455.2
	03-May-07	FD	300	309	FD	FD	FD	FD	FD
14-Jun-07		229	258	-76	0.1	11,520	456.0	455.4	
MW-45-095a	13-Jul-06		197	202	45	1.4	22,200	454.5	456.1
	04-May-07		169	140	-84	0.3	10,337	455.2	456.7
MW-46-175	15-Jun-06		233	211	-16	3.2	19,900	456.8	456.9
	30-Jun-06		112	160	56	6.2	21,800	456.4	456.0
	30-Jun-06	FD	111	164	FD	FD	FD	FD	FD
	12-Jul-06		135 J	85.8	38	1.5	19,500	456.4	455.6
	27-Jul-06		174	206	16	0.7	---	456.4	456.6
	09-Aug-06		210	186	65	0.7	21,900	455.6	454.8
	09-Aug-06	FD	223	214	FD	FD	FD	FD	FD
	25-Aug-06		137	136	-24	1.1	19,800	455.4	454.9
	07-Sep-06		183	170	90	2.2	26,400	455.2	454.7
	21-Sep-06		190	244	43	2.3	18,300	455.5	M
	05-Oct-06		194	192	0	2.8	22,200	454.8	453.9
	05-Oct-06	FD	195	187	FD	FD	FD	FD	FD
	18-Oct-06		204	253	15	0.9	21,900	454.7	454.0
	15-Nov-06		163	147	-118	1.1	17,100	453.8	453.1
	13-Dec-06		187	174	-33	0.3	17,700	454.3	453.9
	10-Jan-07		138	133	-160	0.1	17,450	453.9	453.7
	08-Feb-07		130	108	-91	0.3	19,100	453.4	452.4
	08-Mar-07		153	147	222	0.0	14,100	455.1	455.0
	03-Apr-07		113	95.8	-135	2.0	20,700	455.7	455.5
	04-May-07		86.4	114	-137	0.2	16,514	456.6	456.4
14-Jun-07		101	109	-136	0.2	16,940	456.6	455.9	
MW-46-205	15-Jun-06		ND (1.0)	1.80	-147	2.9	24,100	457.1	457.2
	13-Jul-06		ND (1.0)	3.50	-152	1.0	24,900	456.9	457.4
	10-Aug-06		ND (1.0)	ND (1.0)	-88	1.3	22,900	456.2	455.4
	07-Sep-06		2.00	2.30	-37	1.6	26,000	455.7	454.5
	05-Oct-06		2.10	2.30	-96	2.4	27,500	455.2	453.9
	13-Dec-06		3.20	3.00	10	1.0	21,000	454.8	454.0

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, June 2006 through June 2007

Interim Measures Performance Monitoring

PG&amp;E Topock Compressor Station

Sample Date		Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-46-205	08-Mar-07	4.00	5.40	159	0.0	18,100	455.5	454.8
	04-May-07	3.90	3.10	-131	0.1	20,373	456.7	456.4
MW-49-135	12-Oct-06	ND (1.0)	ND (1.0)	-200	1.9	21,200	455.4	453.9
	15-Dec-06	ND (1.0)	ND (1.0)	-157	0.3	27,700	454.6	453.3
	09-Mar-07	ND (1.0)	ND (1.0)	-173	0.3	30,500	455.4	455.5
	04-May-07	ND (0.2)	ND (1.0)	-144	0.4	13,491	457.4	457.3
MW-49-275	12-Oct-06	ND (1.0)	ND (1.0)	-252	1.8	31,100	456.1	453.5
	15-Dec-06	ND (1.0)	ND (1.0)	-213	1.7	30,000	455.4	453.4
	09-Mar-07	ND (1.0)	ND (1.0)	-228	0.2	37,700	456.3	455.2
	04-May-07	ND (0.2)	ND (1.0)	-190	0.2	23,656	457.8	457.4
MW-49-365	12-Oct-06	ND (2.0)	ND (1.0)	-275	1.4	47,700	457.6	453.0
	15-Dec-06	ND (2.0)	1.10	-172	1.7	44,400	457.0	453.2
	09-Mar-07	ND (2.0)	ND (1.0)	-237	0.0	42,800	458.0	455.4
	04-May-07	ND (0.2)	ND (1.0)	-184	0.1	37,373	459.2	456.9

**NOTES:**

ND = not detected at listed reporting limit (RL)

FD = field duplicate

LF = lab filtered

J = concentration or RL estimated by laboratory or data validation

T = data from the downhole transducers to fill groundwater elevation data gaps at some locations

MSL = mean sea level

(---) = data not collected, available, rejected, or field instrumentation malfunctioned

µg/L= micrograms per liter

mV = oxidation-reduction potential (ORP)

µS/cm = microSiemens per centimeter

M = I-3 Transducer damaged

R = result exceeded analytical criteria for precision and accuracy; should not be used for project decision-making.

May 2007 results from MW-39-070 were rejected due to the sample exceeding holding time limits. This well was re-sampled on June 12, 2007.

Beginning in July 2005, samples analyzed for total chromium by EPA Method 6010B or 6020 were filtered and preserved in the field after sample collection, as per DTSC's June 30, 2005 letter.

The RLs for certain hexavalent chromium results from Method 7199 analyses have been elevated above the standard RL of 0.2 µg/L due to required sample dilution to accommodate matrix interferences.

Groundwater and river elevations in feet above mean sea level (MSL) rounded to 0.1 foot. River elevations from pressure transducer record at I-3.

Refer to table footnotes for data qualifier explanation.

TABLE B-2

Groundwater Sampling Results for Other Monitoring Wells in PMP Area, June 2006 through June 2007  
Interim Measures Performance Monitoring  
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
Shallow Wells						
MW-12	04-Oct-06	1740	1790	128	5.22	6510
	13-Dec-06	2050	1880	155	6.20	4660
	06-Mar-07	2630	2440	117	6.67	4940
	03-May-07	2620	2880	115	7.28	5600
MW-19	02-Oct-06	970	1300	44.0	---	2450
	15-Dec-06	1070 J	1090	76.0	6.64	2360
	06-Mar-07	1040	1030	95.0	7.03	2280
	02-May-07	836	777	109	---	2560
MW-20-070	03-Oct-06	3290	3390	117	7.47	3460
	03-Oct-06 FD	3410	3330	FD	FD	FD
	13-Dec-06	3430	3120	203	7.93	2890
	14-Mar-07	2820	2720	152	8.37	2260
	03-May-07	2790	3050	151	8.68	3210
MW-21	03-Oct-06	ND (1.0)	ND (1.0)	-67	6.90	15900
	13-Dec-06	ND (1.0)	ND (1.0)	-68	1.22	13000
	09-Mar-07	ND (1.0)	ND (1.0) LF	11.0	2.04	19700
	01-May-07	ND (1.0)	1.40	187	3.20	12300
MW-22	13-Oct-06	ND (1.0)	ND (1.0)	-105	0.97	42200
	08-Mar-07	ND (1.0)	ND (1.0)	-99	0.25	51300
MW-24A	03-Oct-06	4300	4260	101	2.87	3910
	14-Dec-06	3310	4250	76.0	0.33	---
	06-Mar-07	3540	3600	142	0.99	3230
MW-25	03-Oct-06	1140	1150	81.0	6.88	1720
	06-Mar-07	945	951	120	6.84	1350
	04-May-07	---	---	103	6.85	1520
MW-26	03-Oct-06	3590	3850	104	---	4140
	12-Mar-07	3440	3540	90.0	4.84	3590
MW-31-060	05-Oct-06	773	849	82.0	7.77	3440
	12-Mar-07	626	638	93.0	5.29	2650
MW-35-060	12-Oct-06	28.6	29.1	112	1.26	12200
	08-Mar-07	31.3	35.1	176	0.78	5660
	08-Mar-07 FD	30.8	32.7	FD	FD	FD
MW-47-055	10-Oct-06	56.9	56.8	6.00	2.83	5300
	14-Dec-06	61.2	82.0	28.0	2.19	3970
	06-Mar-07	54.6	53.0	55.0	3.09	9400
	04-May-07	30.3	31.6	112	2.28	4290
TW-02S	04-Oct-06	1920	2130	224	6.70	3470
Middle Wells						
MW-20-100	03-Oct-06	9520	10300	106	3.46	4340
	13-Dec-06	9610	9220 J	188	2.19	5200
	13-Dec-06 FD	9400	11500 J	FD	FD	FD
	14-Mar-07	9470	9270	153	3.01	2820

TABLE B-2

Groundwater Sampling Results for Other Monitoring Wells in PMP Area, June 2006 through June 2007  
Interim Measures Performance Monitoring  
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
MW-20-100	03-May-07	10100	9820	137	3.14	3980
	03-May-07 FD	10000	10500	FD	FD	FD
MW-50-095	10-Oct-06	278	277	24.0	2.85	7120
	12-Dec-06	273	262	112	2.40	4590
	07-Mar-07	274	372	108	2.99	5060
	02-May-07	304	264	135	31.4	3390
MW-51	06-Oct-06	4560	4590	119	3.79	13800
	12-Dec-06	4620	5360	129	3.07	10800
	06-Mar-07	4690	5090	252	2.48	---
	01-May-07	4670	5120	94.0	3.65	10300
<b>Deep Wells</b>						
MW-20-130	18-Oct-06	11600	16400	78.0	2.68	19500
	13-Dec-06	12000	10500	181	0.80	---
	13-Dec-06 FD	11800	10700	FD	FD	FD
	08-Mar-07	12800	11900	91.0	1.11	---
	08-Mar-07 FD	14400	12100	FD	FD	FD
	03-May-07	13400	16200	183	2.07	14700
	03-May-07 FD	13500	14800	FD	FD	FD
MW-24B	03-Oct-06	6120	5830	85.0	2.72	18700
	14-Dec-06	5520	5060	4.00	0.51	---
	05-Mar-07	5980	6100	10.0	1.40	16400
MW-31-135	05-Oct-06	85.7	81.7	65.0	2.91	13600
	08-Mar-07	51.0	55.2	142	0.60	8730
	08-Mar-07 FD	52.0	54.2	FD	FD	FD
MW-35-135	12-Oct-06	35.4	34.6	113	1.20	14400
	12-Oct-06 FD	34.0	30.8	FD	FD	FD
	08-Mar-07	32.0	39.2	218	0.22	8580
	04-May-07	27.2	26.2	28.0	2.15	---
	04-May-07 FD	27.8	25.2	FD	FD	FD
MW-47-115	10-Oct-06	ND (3.5)	6.90	-80	1.13	16800
	14-Dec-06	7.90	6.10	-25	0.36	14800
	06-Mar-07	10.6	10.8	-34	0.33	---
	04-May-07	14.1	13.0	126	0.20	13800
MW-50-200	10-Oct-06	9660	11800	93.0	2.99	28100
	12-Dec-06	10100	9250	123	3.17	20600
	07-Mar-07	12300	14600	114	3.22	25600
	30-Apr-07	10900	12100	65.0	4.75	23700
TW-02D	04-Oct-06	872	910	162	4.91	11900
TW-04	05-Jun-06	ND (1.0)	4.10	-131	0.00	18300
	09-Oct-06	28.5	26.6	12.0	1.11	24700
	07-Mar-07	35.2	31.1	37.0	0.28	25800
	07-Mar-07 FD	35.5	36.9	FD	FD	FD
TW-05	01-Jun-06	ND (1.0) J	ND (1.0)	17.0	1.51	10600



TABLE B-2

Groundwater Sampling Results for Other Monitoring Wells in PMP Area, June 2006 through June 2007  
Interim Measures Performance Monitoring  
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
TW-05	09-Oct-06	3.60	3.20	60.0	1.12	15800

**NOTES:**

Analytical results are validated.

ND = not detected at listed reporting limit (RL)

FD = field duplicate

LF = lab filtered

(---) = data not collected, available, or field instrumentation malfunctioned

µg/L = micrograms per liter

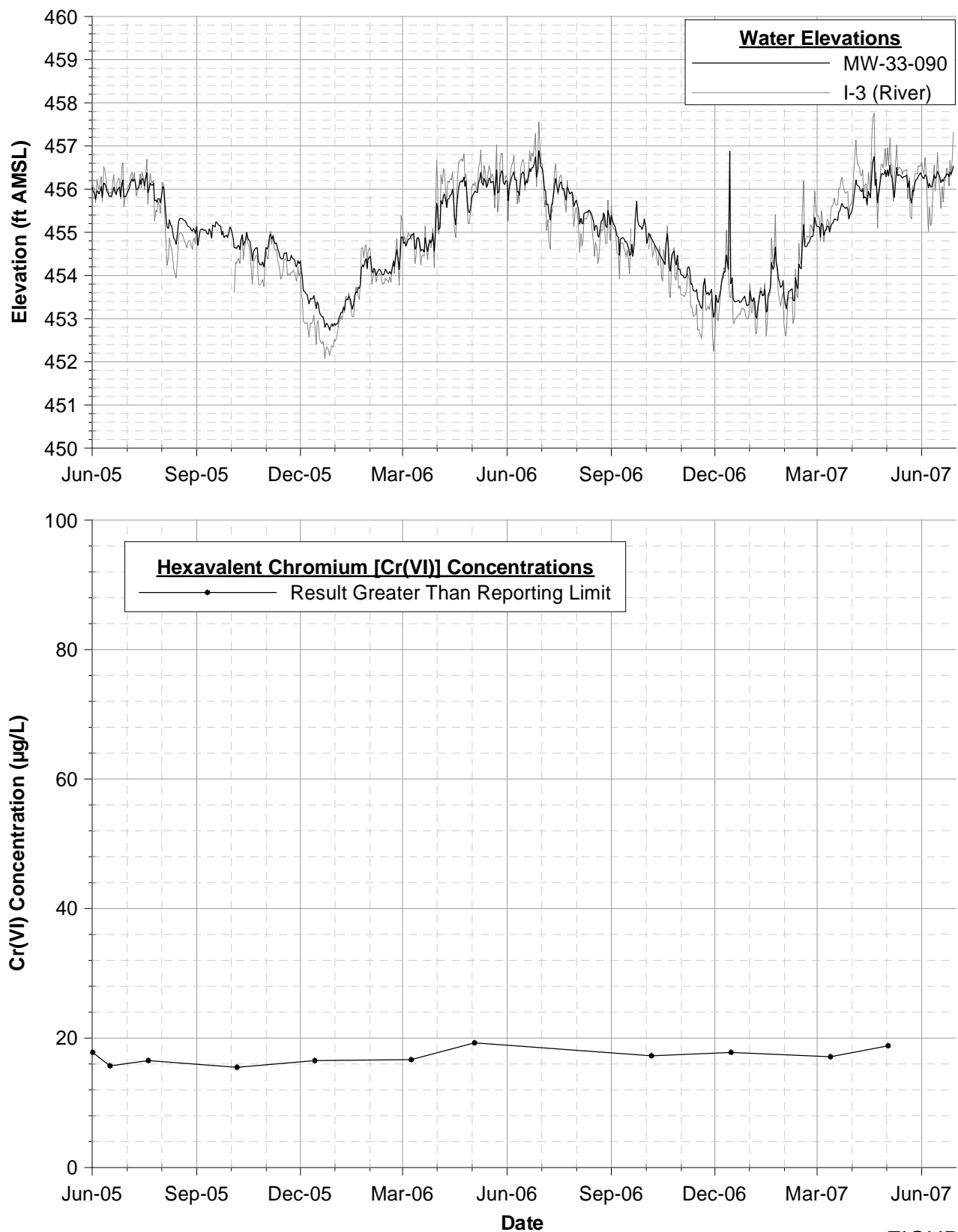
mg/L = milligrams per liter

mV = oxidation-reduction potential (ORP)

µS/cm = microSiemens per centimeter

PMP = Interim Measure Performance Monitoring Program

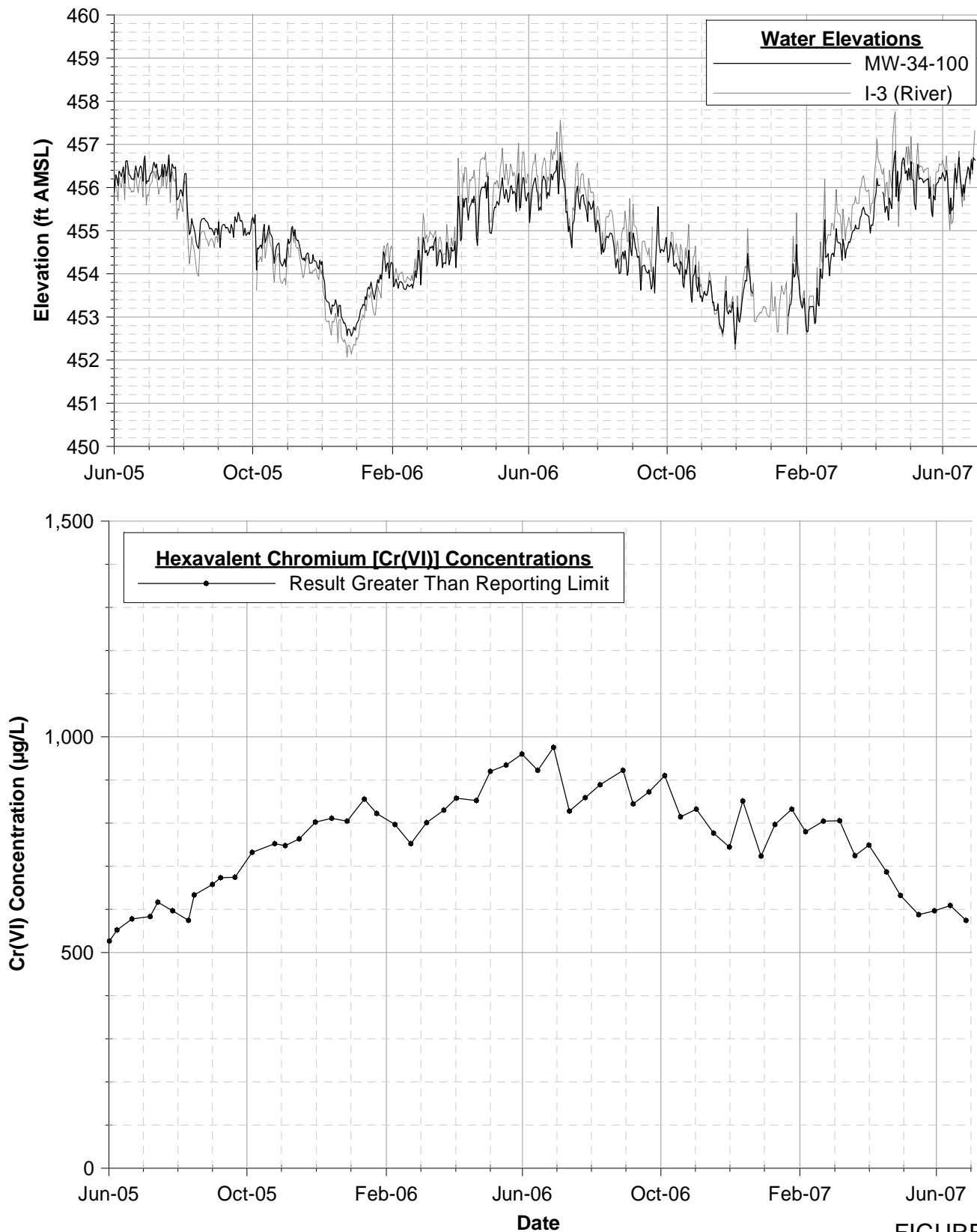
Samples analyzed for total chromium by EPA Method 6010B or 6020 were filtered and preserved in the field after sample collection, as per DTSC's June 30, 2005 letter.



**FIGURE B-1**  
**MW-33-90 CR(VI) CONCENTRATION &**  
**HYDROGRAPH - 6/1/2005 - 5/2/2007**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA

**Notes**

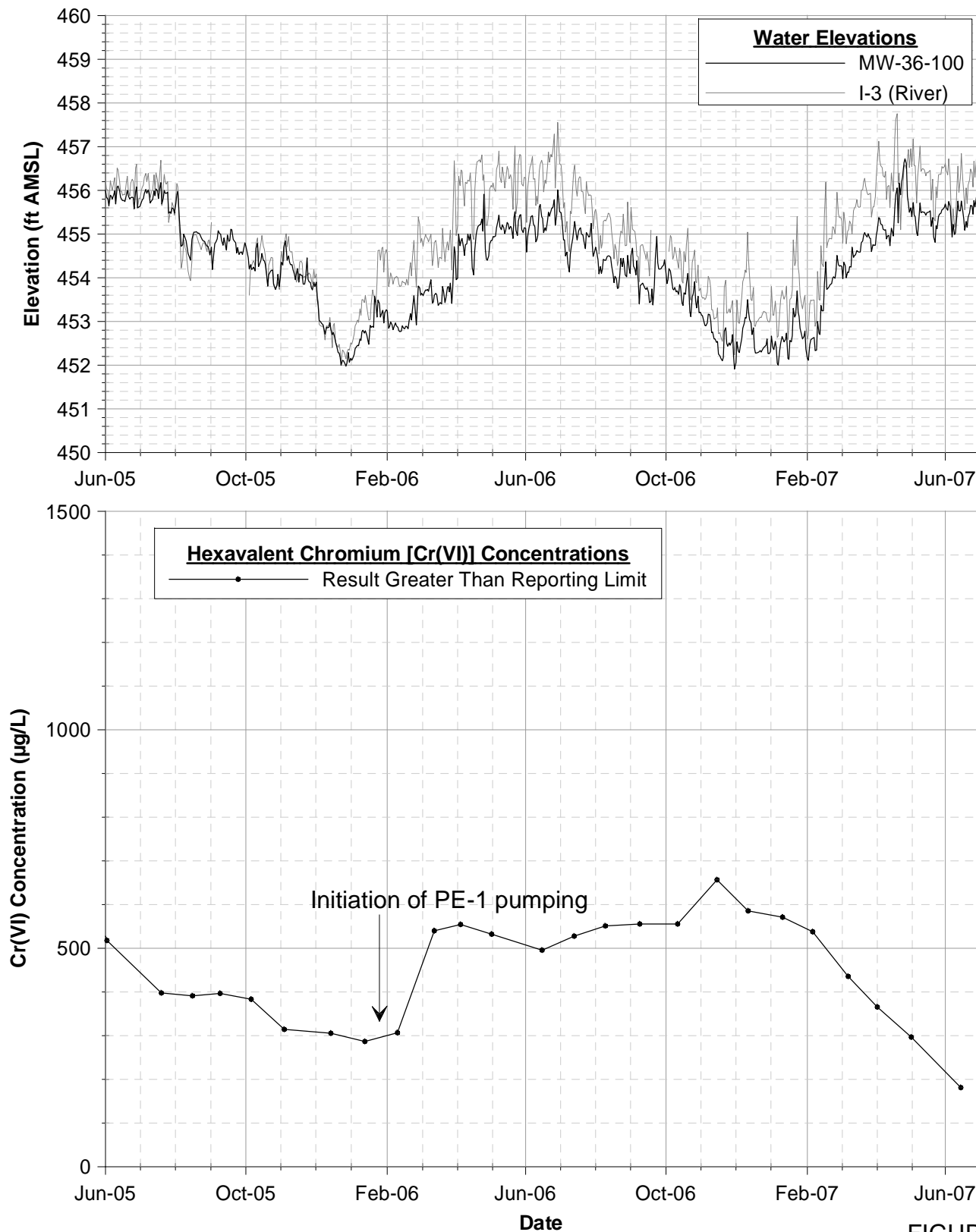
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
3. I-3 data is unavailable from 9/18/2006 through 10/4/2006.



**FIGURE B-2**  
**MW-34-100 CR(VI) CONCENTRATION &**  
**HYDROGRAPH - 6/1/2005 - 6/27/2007**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA

**Notes**

1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. No groundwater elevation data available during May 2005 due to transducer malfunction.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
4. I-3 data is unavailable from 9/18/2006 through 10/4/2006.
5. MW-34-100 data is unavailable from January 1 through January 15, 2007.



**FIGURE B-3**  
**MW-36-100 CR(VI) CONCENTRATION & HYDROGRAPH - 6/1/2005 - 6/14/2007**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA

**Notes**

1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
3. I-3 data is unavailable from 9/18/2006 through 10/4/2006.

**Appendix C**  
**Hydraulic Monitoring Data for Reporting Period**

**TABLE C-1**

Average, Minimum, and Maximum Groundwater Elevations, June 2007 Report  
*PG&E Topock Compressor Station*

<b>Well</b>	<b>Average (ft AMSL)</b>	<b>Maximum (ft AMSL)</b>	<b>Minimum (ft AMSL)</b>	<b># of Days reporting data</b>	<b>Aquifer Depth</b>
I-3	456.39	457.42	455.33	28	River Station
MW-19	456.24	456.31	456.16	28	Shallow
MW-20-070	454.99	455.07	454.91	28	Shallow
MW-20-100	454.62	454.80	454.47	28	Mid-Depth
MW-20-130	454.17	454.40	453.96	28	Deep
MW-25	456.26	456.30	456.23	23	Shallow
MW-26	455.92	455.98	455.87	28	Shallow
MW-27-020	456.42	456.83	456.02	28	Shallow
MW-27-060	456.43	457.05	455.79	28	Mid-Depth
MW-27-085	456.44	457.05	455.82	28	Deep
MW-28-025	456.48	456.94	456.02	28	Shallow
MW-28-090	456.39	457.09	455.68	28	Deep
MW-30-050	455.97	456.46	455.47	28	Mid-Depth
MW-31-060	455.93	456.06	455.82	28	Shallow
MW-31-135	455.35	455.58	455.13	28	Deep
MW-32-020	455.91	456.05	455.77	28	Shallow
MW-32-035	455.94	456.27	455.63	23	Shallow
MW-33-040	456.25	456.58	455.95	28	Shallow
MW-33-090	456.29	456.68	455.93	28	Mid-Depth
MW-33-150	456.50	456.88	456.13	28	Deep
MW-33-210	456.72	457.04	456.41	28	Deep
MW-34-055	456.45	457.17	455.71	28	Mid-Depth
MW-34-080	456.49	457.18	455.79	28	Deep
MW-34-100	456.17	456.81	455.50	28	Deep
MW-35-060	456.68	457.01	456.36	28	Shallow
MW-35-135	456.95	457.15	456.75	28	Deep
MW-36-020	456.11	456.58	455.63	28	Shallow
MW-36-040	456.06	456.61	455.50	28	Shallow
MW-36-050	456.08	456.65	455.50	28	Mid-Depth
MW-36-070	456.05	456.64	455.46	28	Mid-Depth
MW-36-090	455.25	455.72	454.76	28	Deep
MW-36-100	455.47	455.95	455.00	28	Deep
MW-39-040	455.75	456.22	455.26	28	Shallow
MW-39-050	455.73	456.19	455.26	28	Mid-Depth
MW-39-060	455.59	456.02	455.14	28	Mid-Depth
MW-39-070	455.18	455.54	454.81	28	Mid-Depth
MW-39-080	455.29	455.65	454.93	28	Deep

**TABLE C-1**

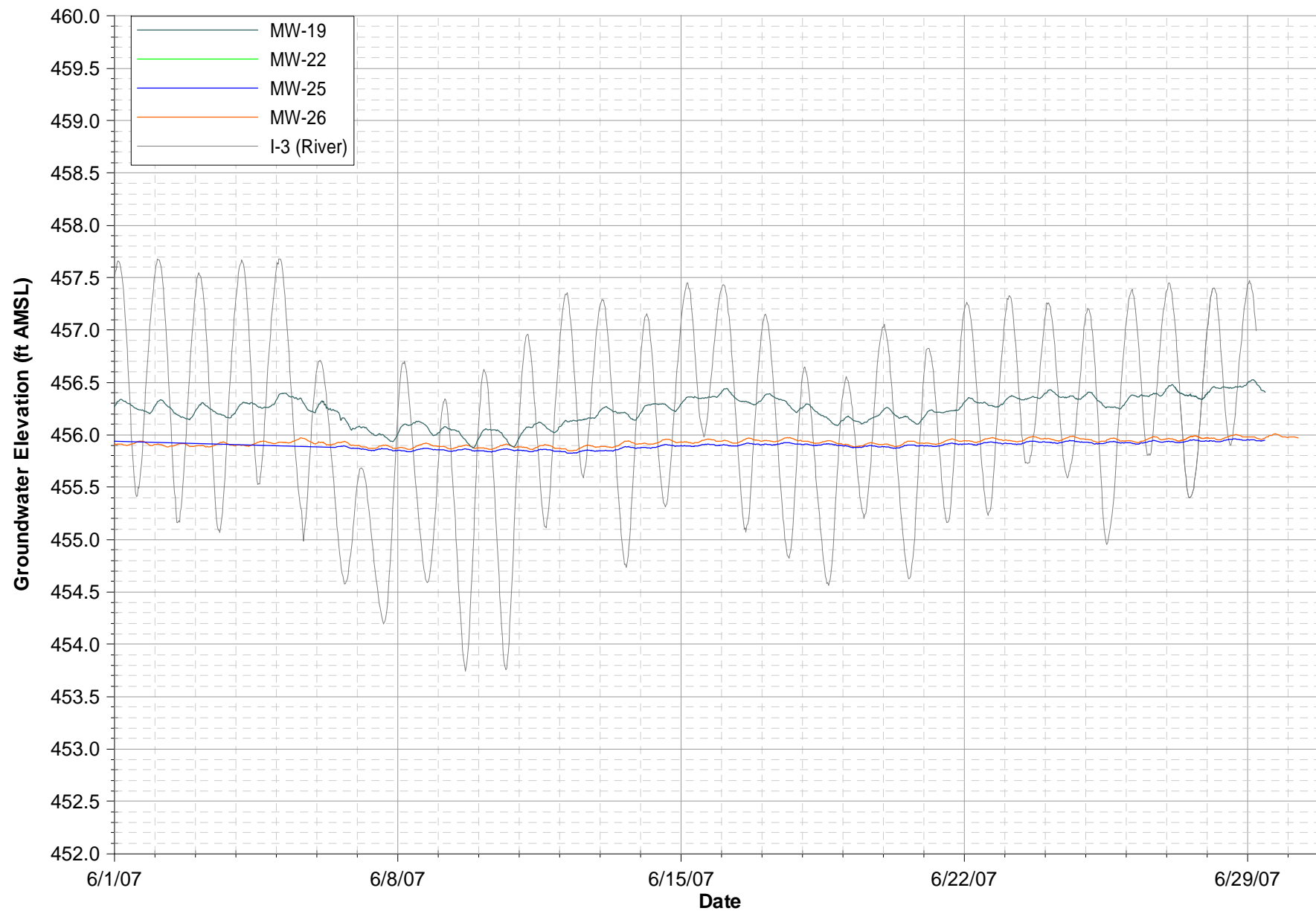
Average, Minimum, and Maximum Groundwater Elevations, June 2007 Report  
*PG&E Topock Compressor Station*

<b>Well</b>	<b>Average (ft AMSL)</b>	<b>Maximum (ft AMSL)</b>	<b>Minimum (ft AMSL)</b>	<b># of Days reporting data</b>	<b>Aquifer Depth</b>
MW-39-100	455.47	455.84	455.10	28	Deep
MW-42-030	455.90	456.28	455.51	28	Shallow
MW-42-055	456.10	456.50	455.69	28	Mid-Depth
MW-42-065	456.15	456.55	455.74	28	Mid-Depth
MW-43-025	456.43	457.08	455.83	25	Shallow
MW-43-075	456.70	457.39	456.05	25	Deep
MW-43-090	457.19	457.85	456.53	11	Deep
MW-44-070	456.19	456.85	455.53	28	Mid-Depth
MW-44-115	455.84	456.36	455.32	28	Deep
MW-44-125	456.24	456.77	455.72	28	Deep
MW-45-095	454.85	455.38	454.31	28	Deep
MW-46-175	456.49	456.94	456.04	28	Deep
MW-46-205	456.87	457.24	456.51	28	Deep
MW-47-055	456.53	456.70	456.36	28	Shallow
MW-47-115	456.55	456.76	456.35	28	Deep
MW-49-135	456.94	457.39	456.50	28	Deep
MW-49-275	457.55	457.82	457.29	28	Deep
MW-49-365	458.87	459.11	458.63	28	Deep
MW-50-095	456.05	456.17	455.92	28	Mid-Depth
MW-50-200	456.26	456.44	456.10	28	Deep
MW-51	455.84	455.88	455.80	28	Mid-Depth
PT2D	454.95	455.34	454.56	28	Deep
PT5D	455.25	455.67	454.81	28	Deep
PT6D	455.20	455.61	454.78	28	Deep
RRB	456.81	457.85	455.74	28	River Station

INC= Data incomplete over reporting period

Averages include data collected from June 1, 2007 through June 28, 2007

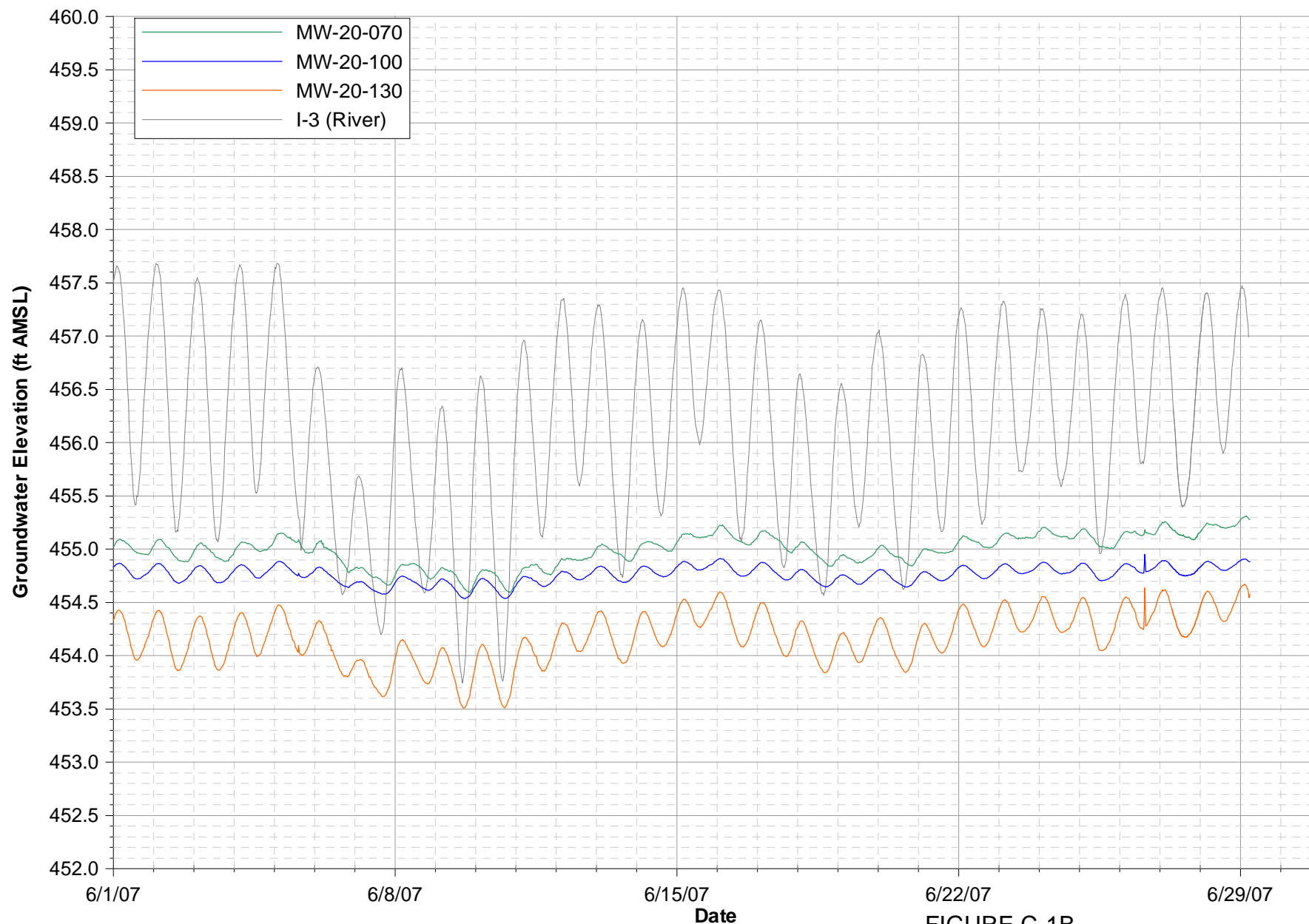
Transducer data for MW-10 is incomplete this month due to transducer failure. This transducer was replaced on June 30, 2007.



Notes:  
 Data subject to review.  
 MW-22 data unavailable after September 19, 2006.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

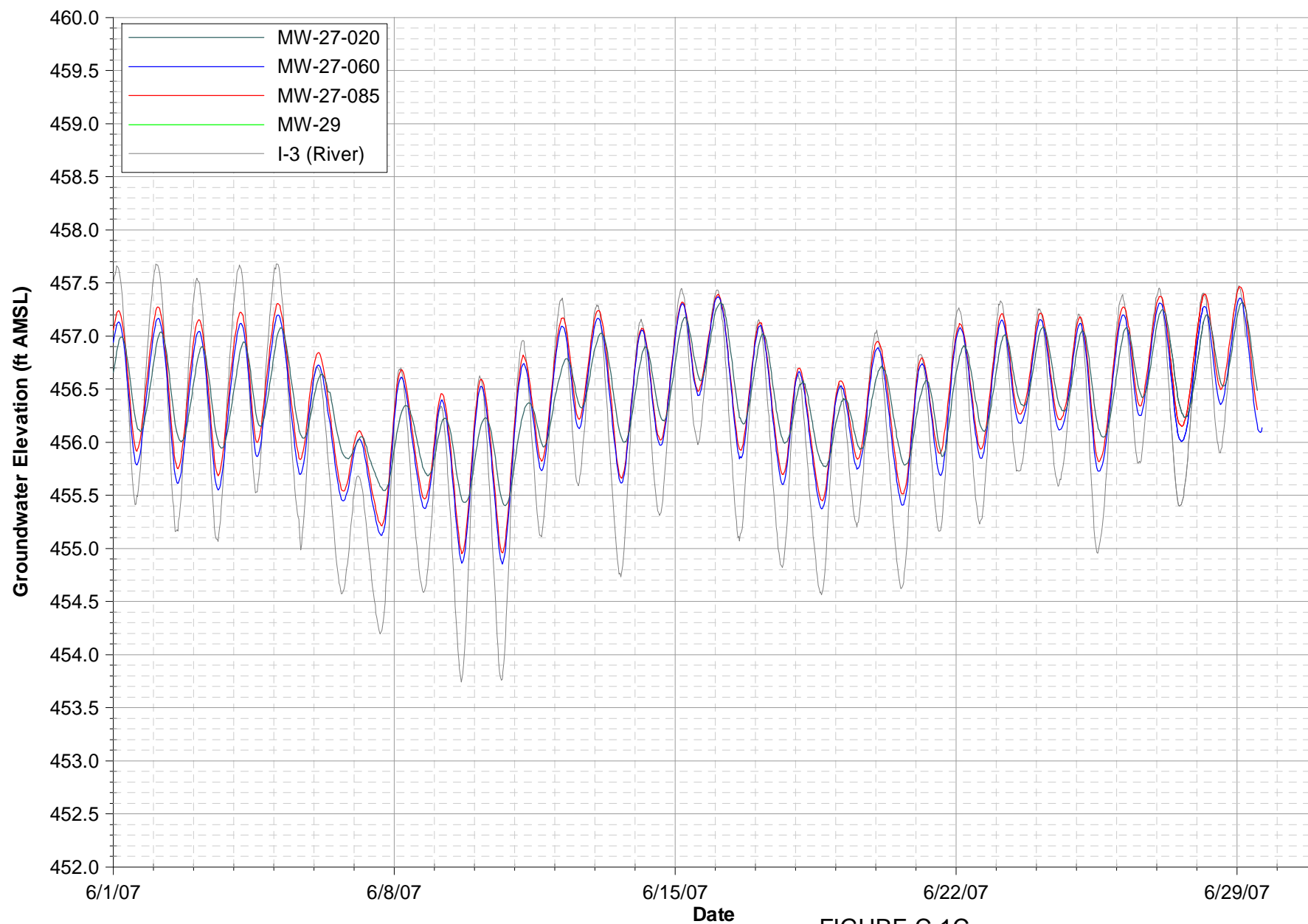
**FIGURE C-1A**  
**MW-19, MW-22, MW-25, AND MW-26 HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA





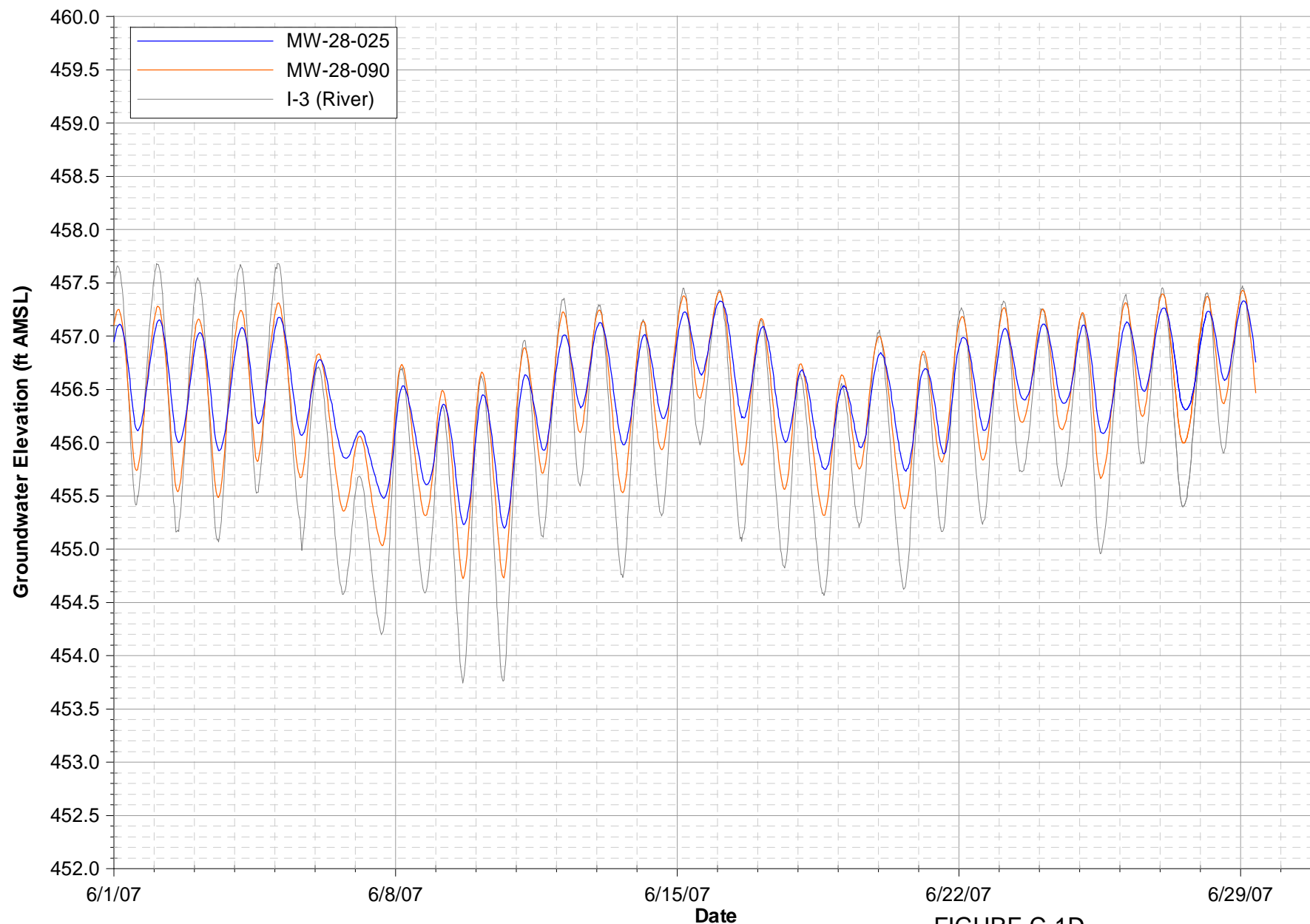
Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1B**  
**MW-20 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



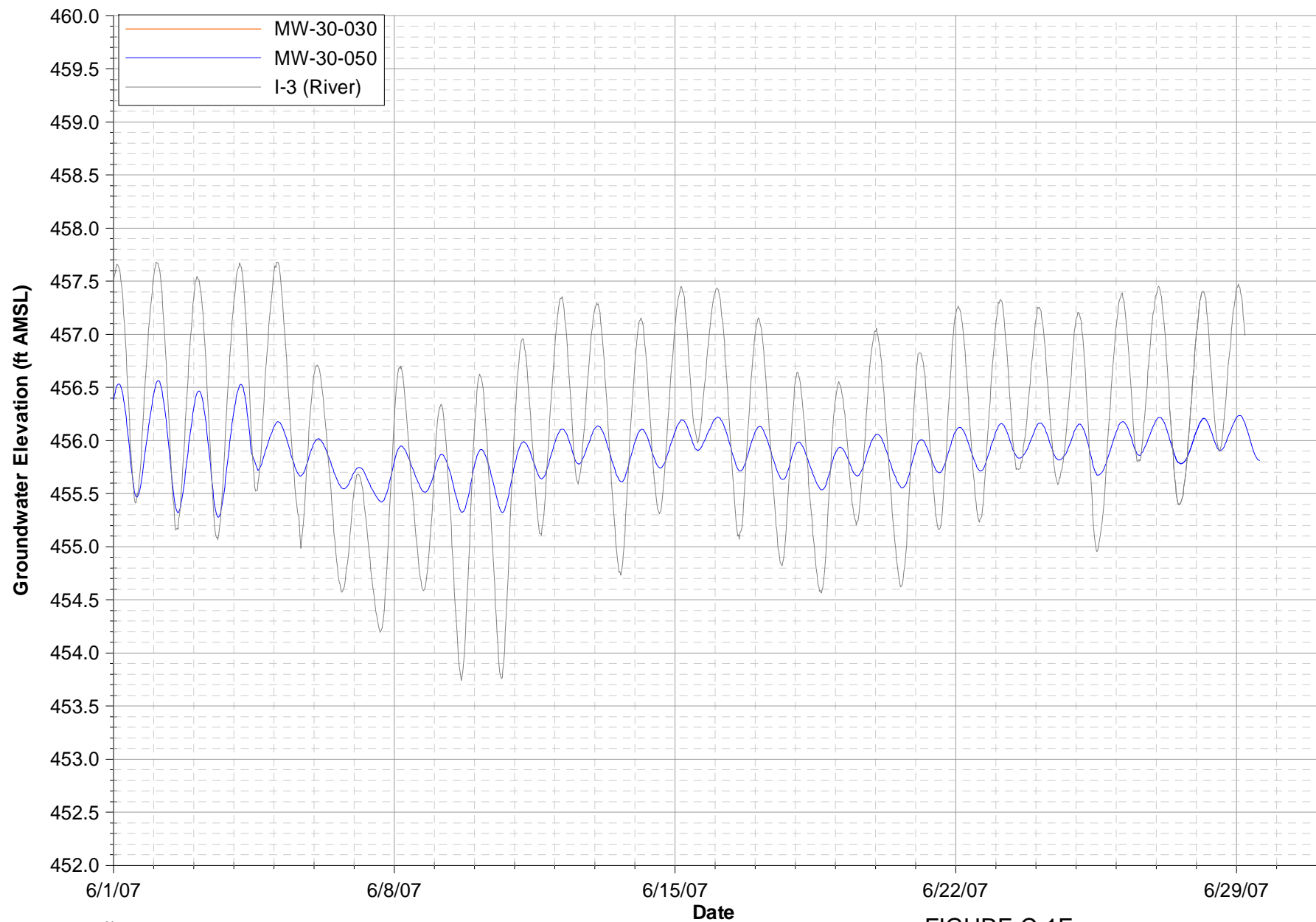
Notes:  
 Data subject to review.  
 MW-29 data unavailable after October 1, 2006.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1C**  
**MW-27 CLUSTER AND MW-29 HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



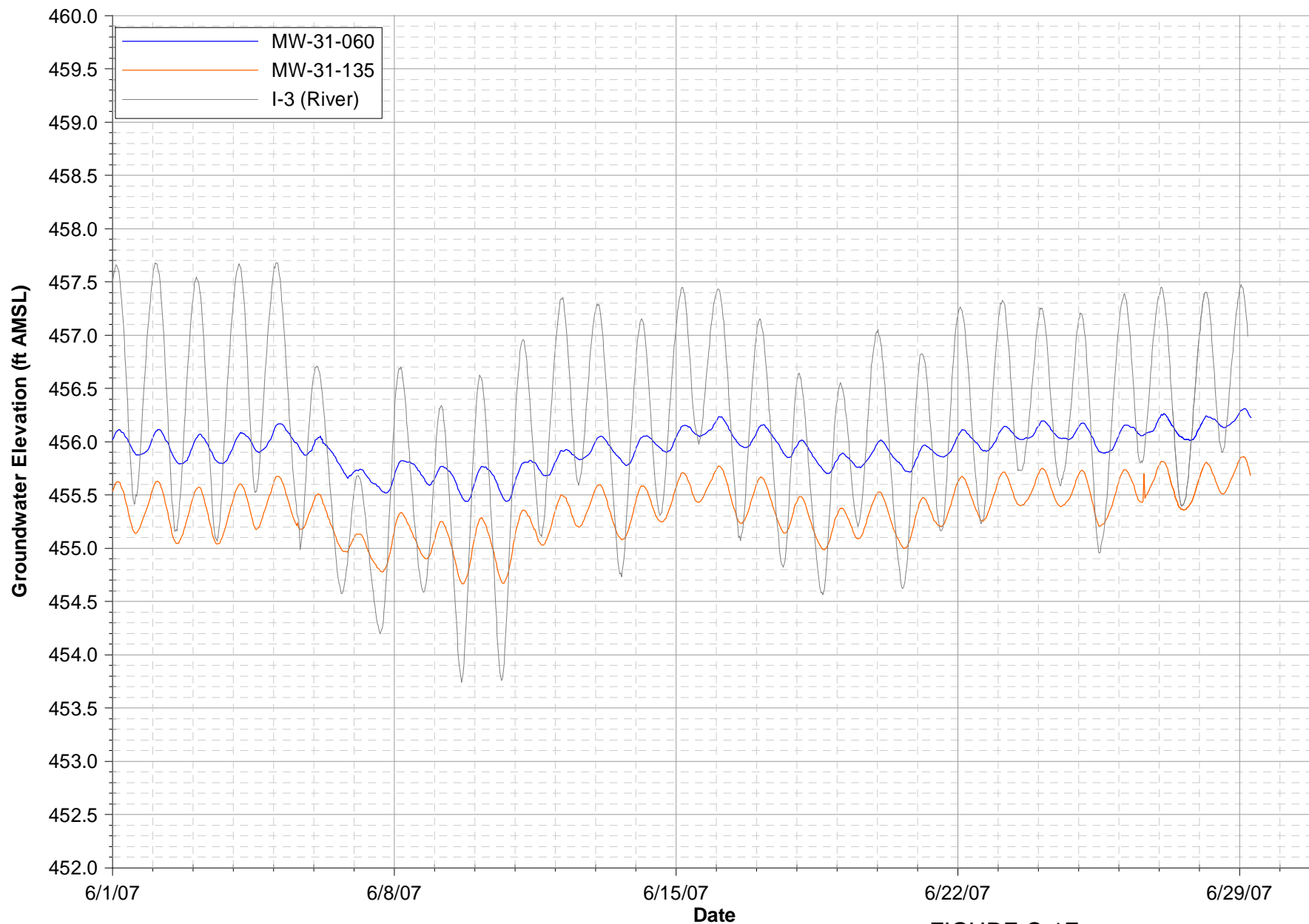
Notes:  
Data subject to review.  
Data collection began on June 29, 2007 to create additional time  
for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1D**  
**MW-28 WELL HYDROGRAPHS**  
INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA



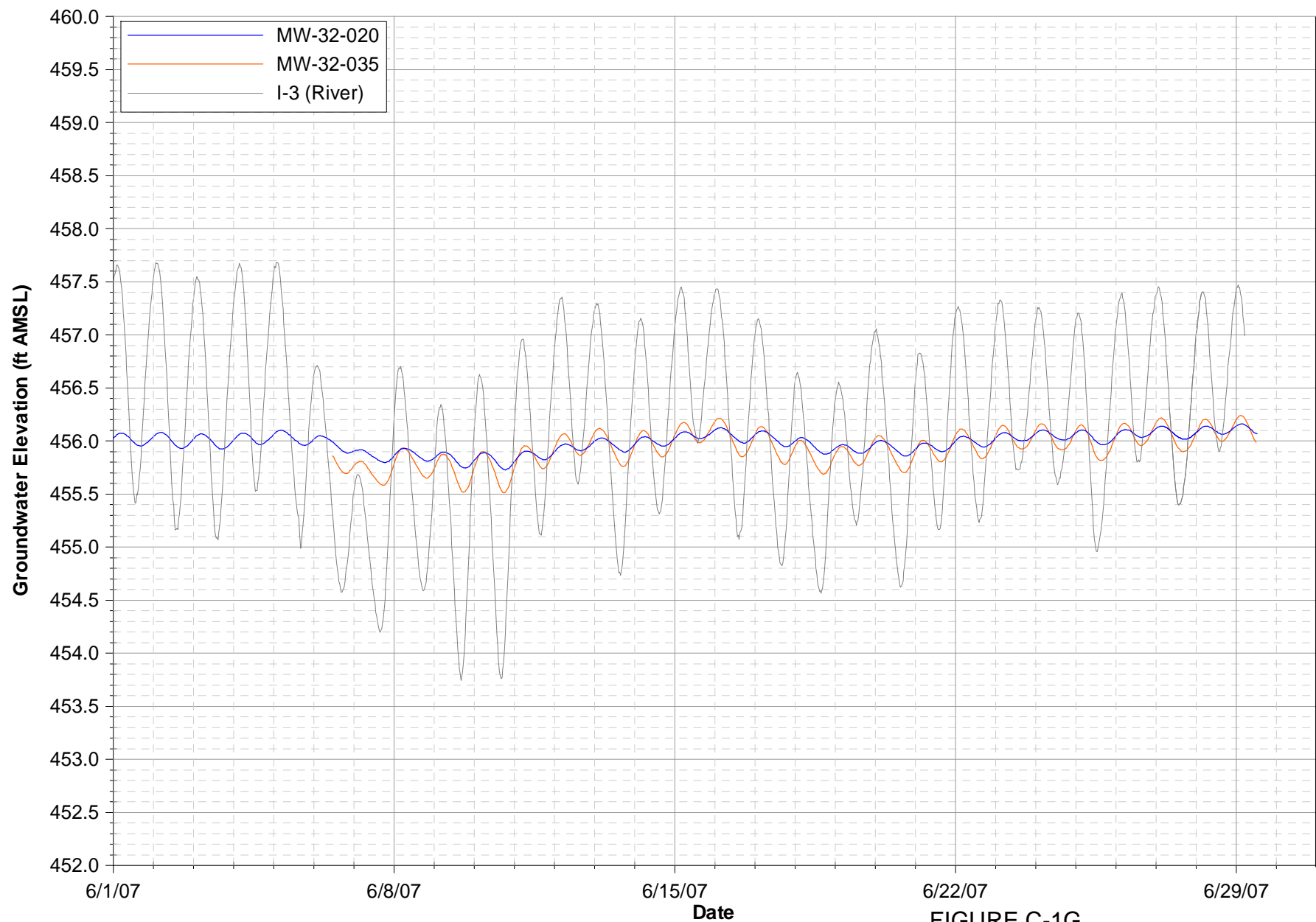
Notes:  
 Data subject to review.  
 MW-30-30 data unavailable after October 31, 2006.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1E**  
**MW-30 WELL HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



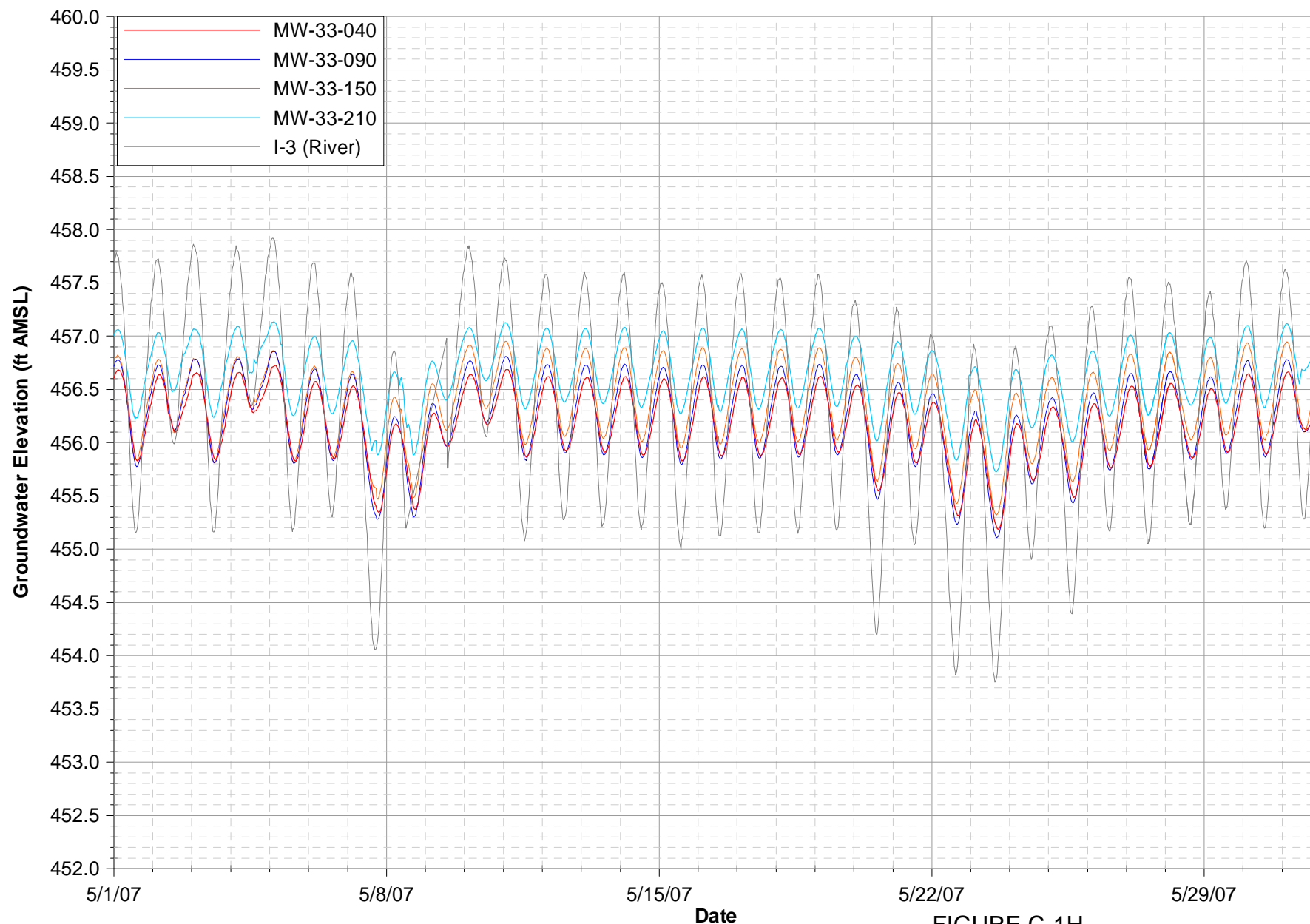
Notes:  
Data subject to review.  
Data collection began on June 29, 2007 to create additional time  
for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1F**  
**MW-31 WELL HYDROGRAPHS**  
INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA



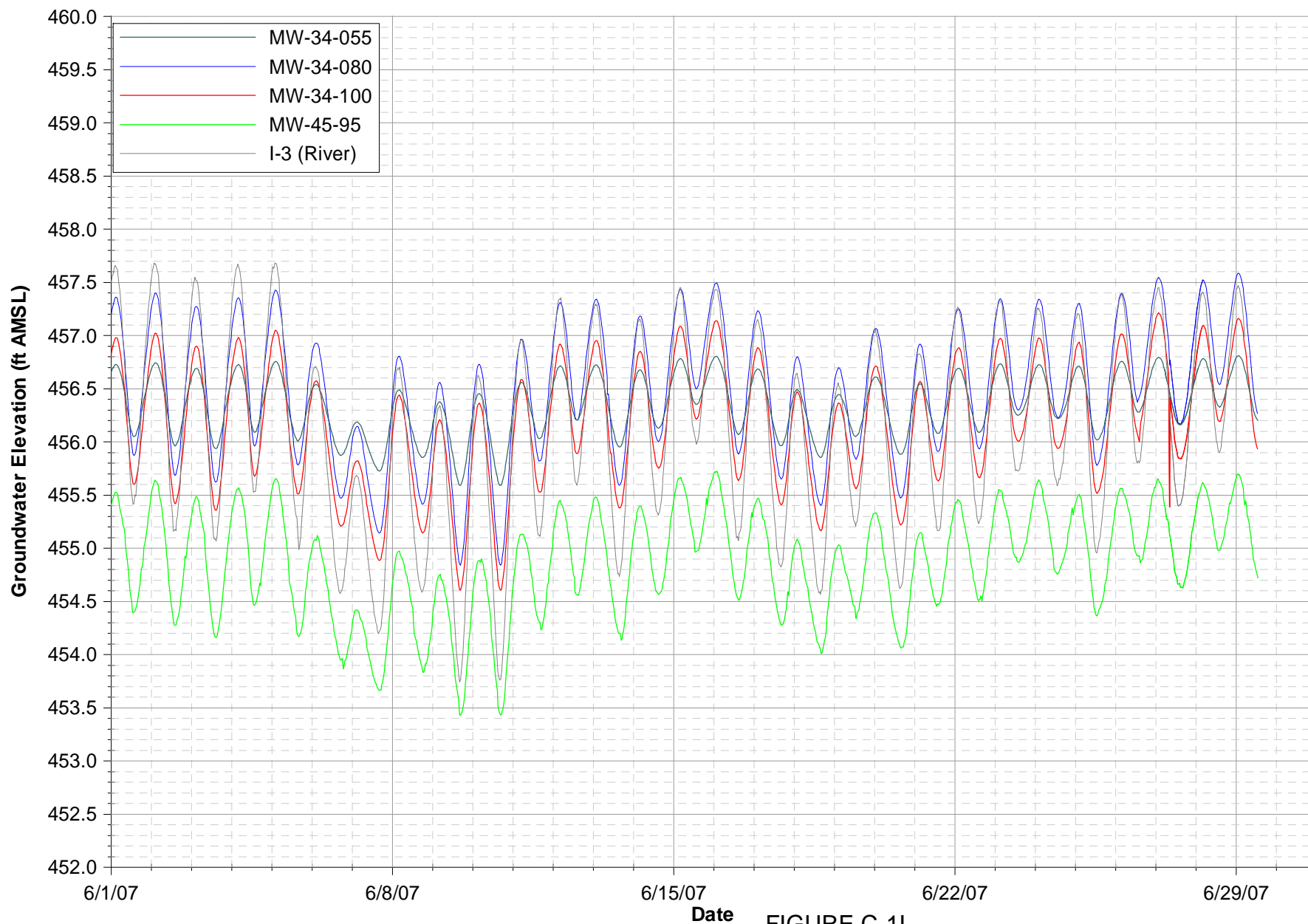
Notes:  
 Data subject to review.  
 MW-32-35 data unavailable prior to June 6, 2007.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1G**  
**MW-32 WELL HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

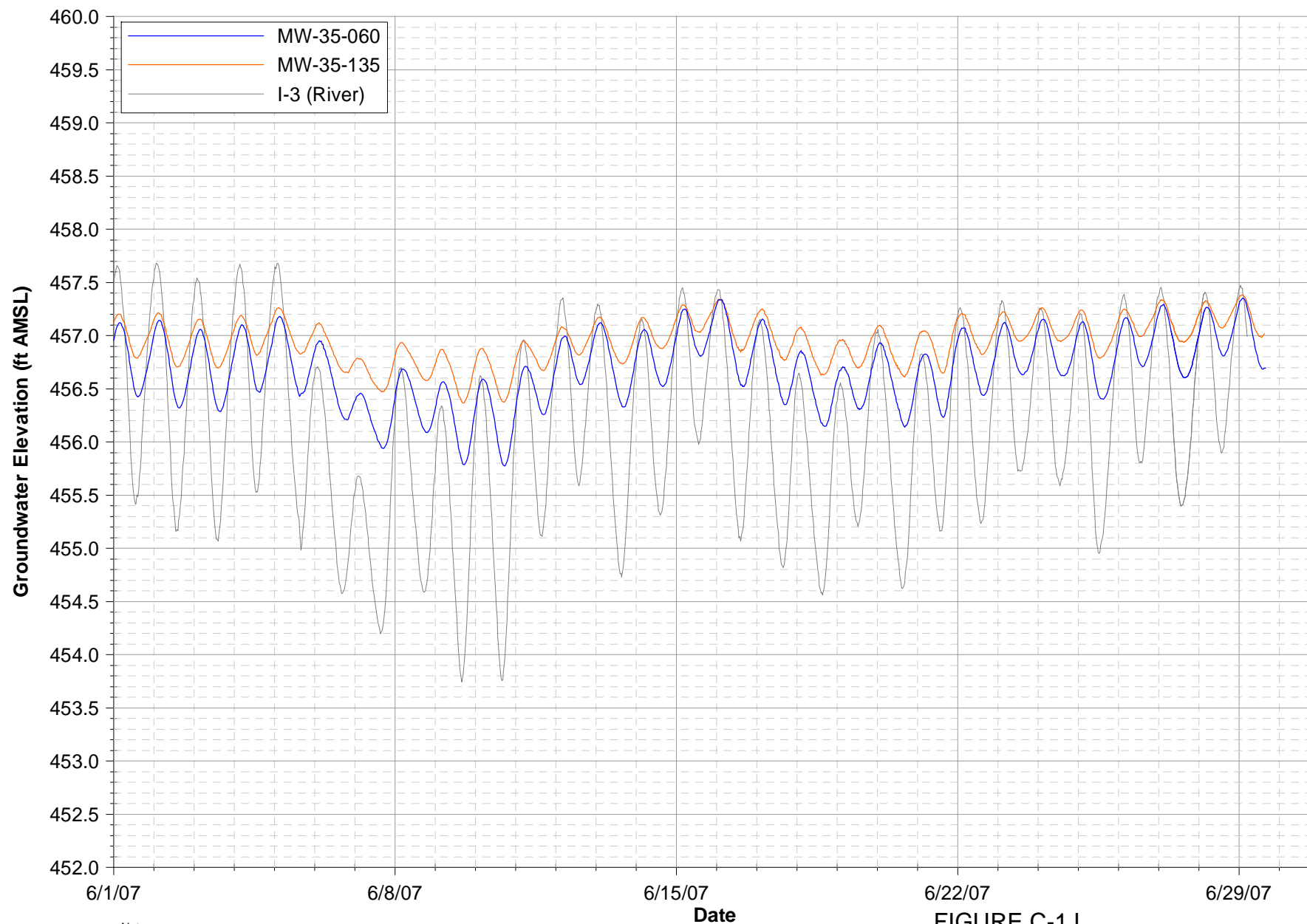
**FIGURE C-1H**  
**MW-33 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

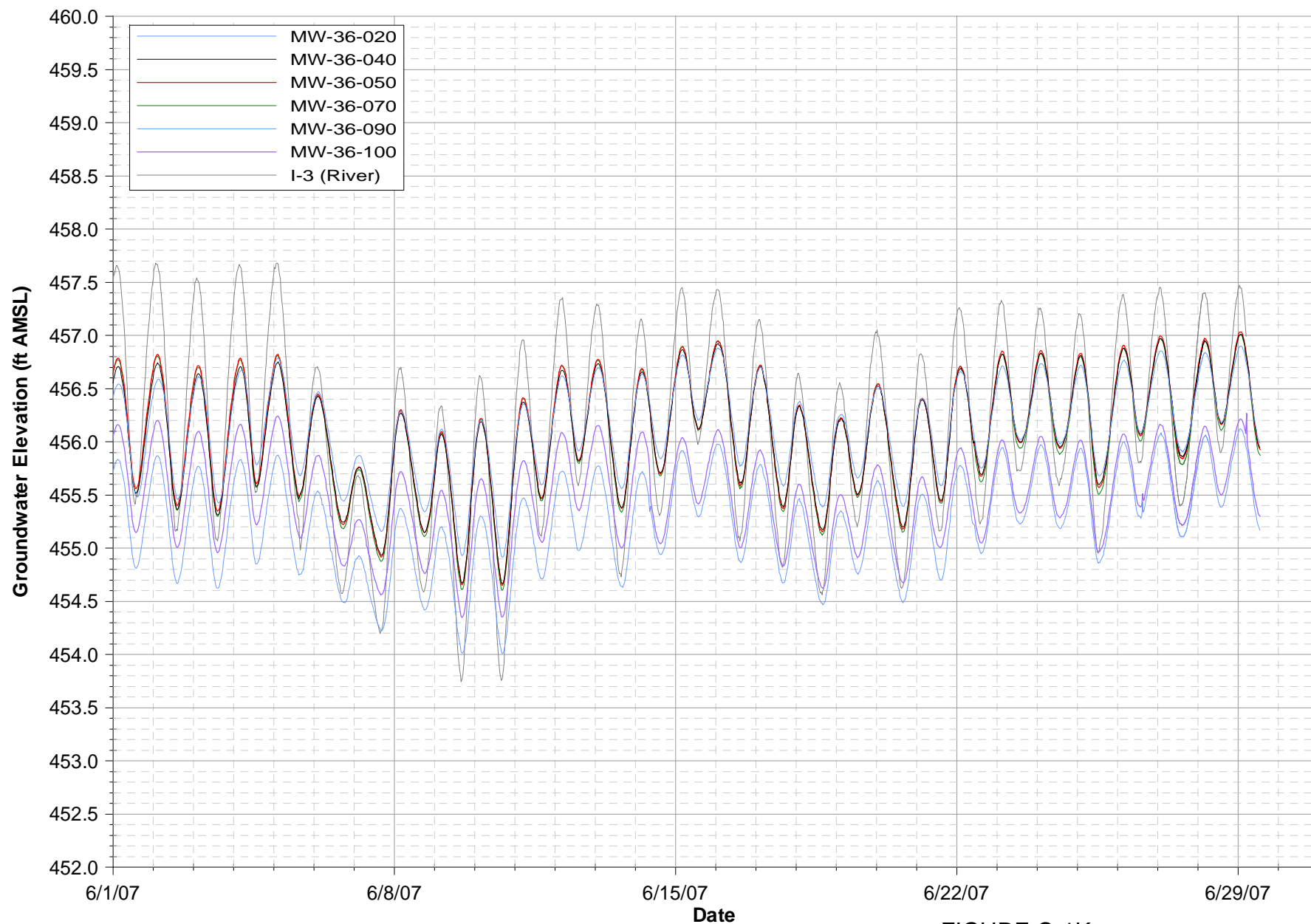
**FIGURE C-11**  
**MW-34 CLUSTER AND MW-45-95 HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA





Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1J**  
**MW-35 WELL HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA

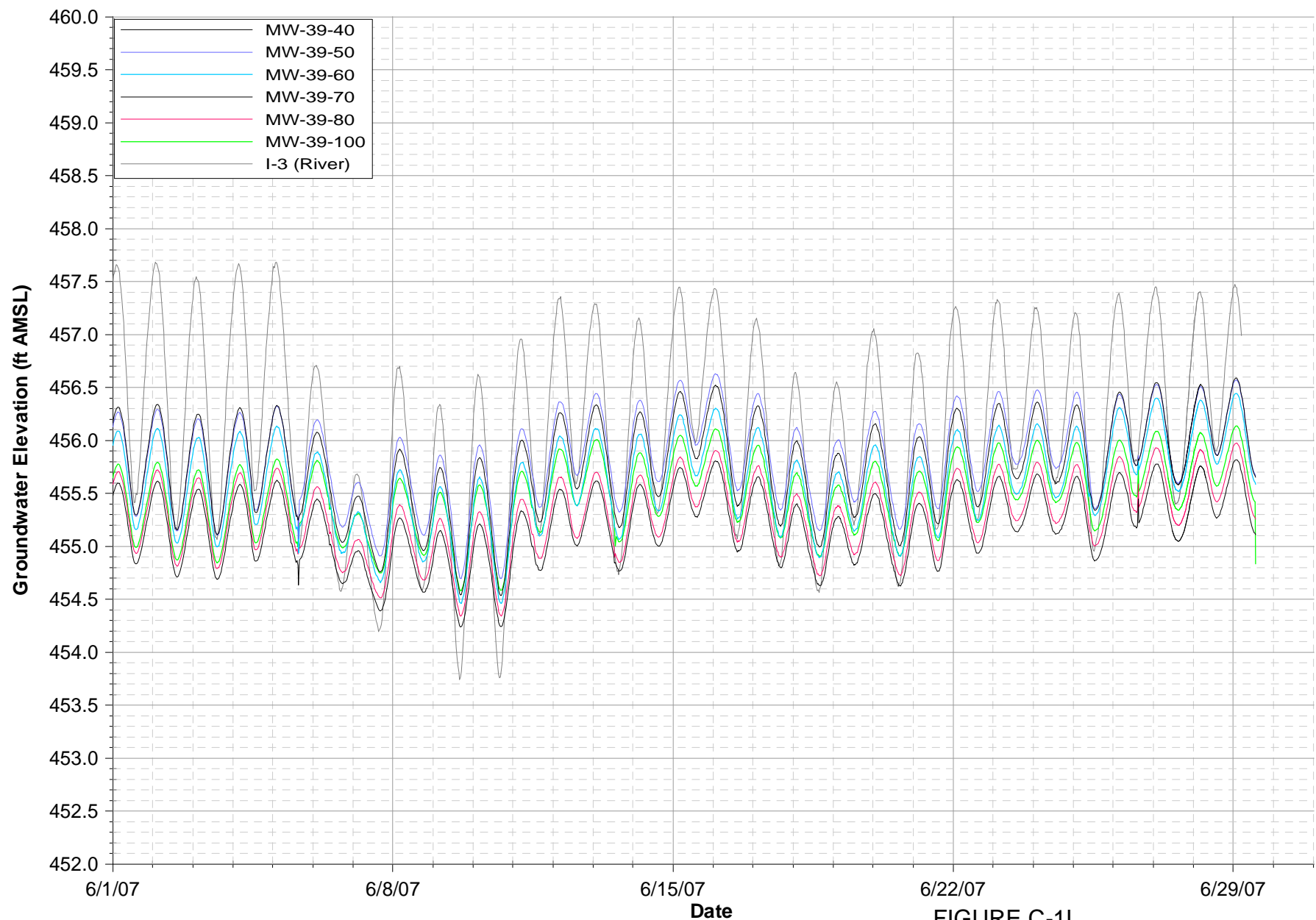


Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

## FIGURE C-1K

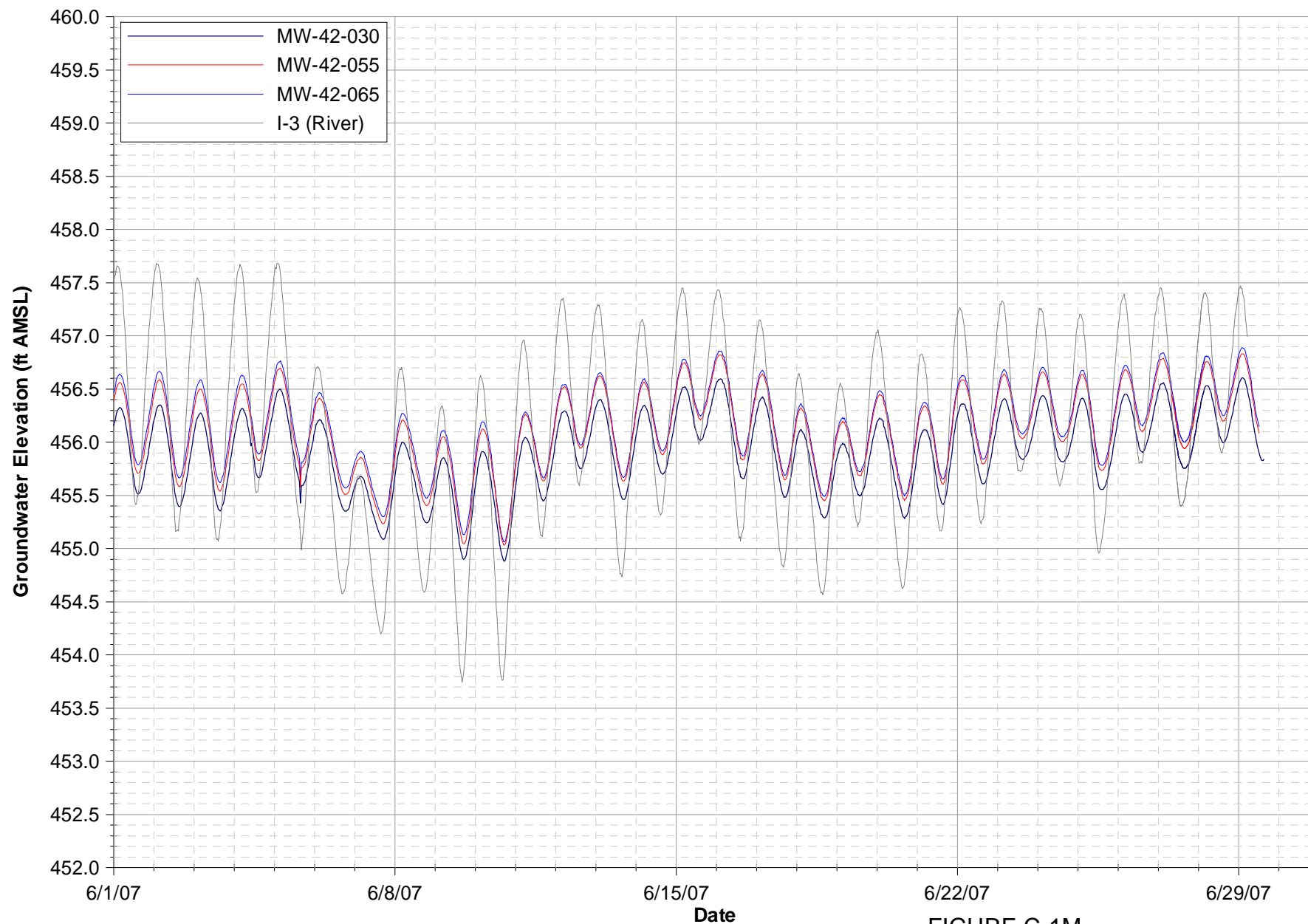
### MW-36 CLUSTER

INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



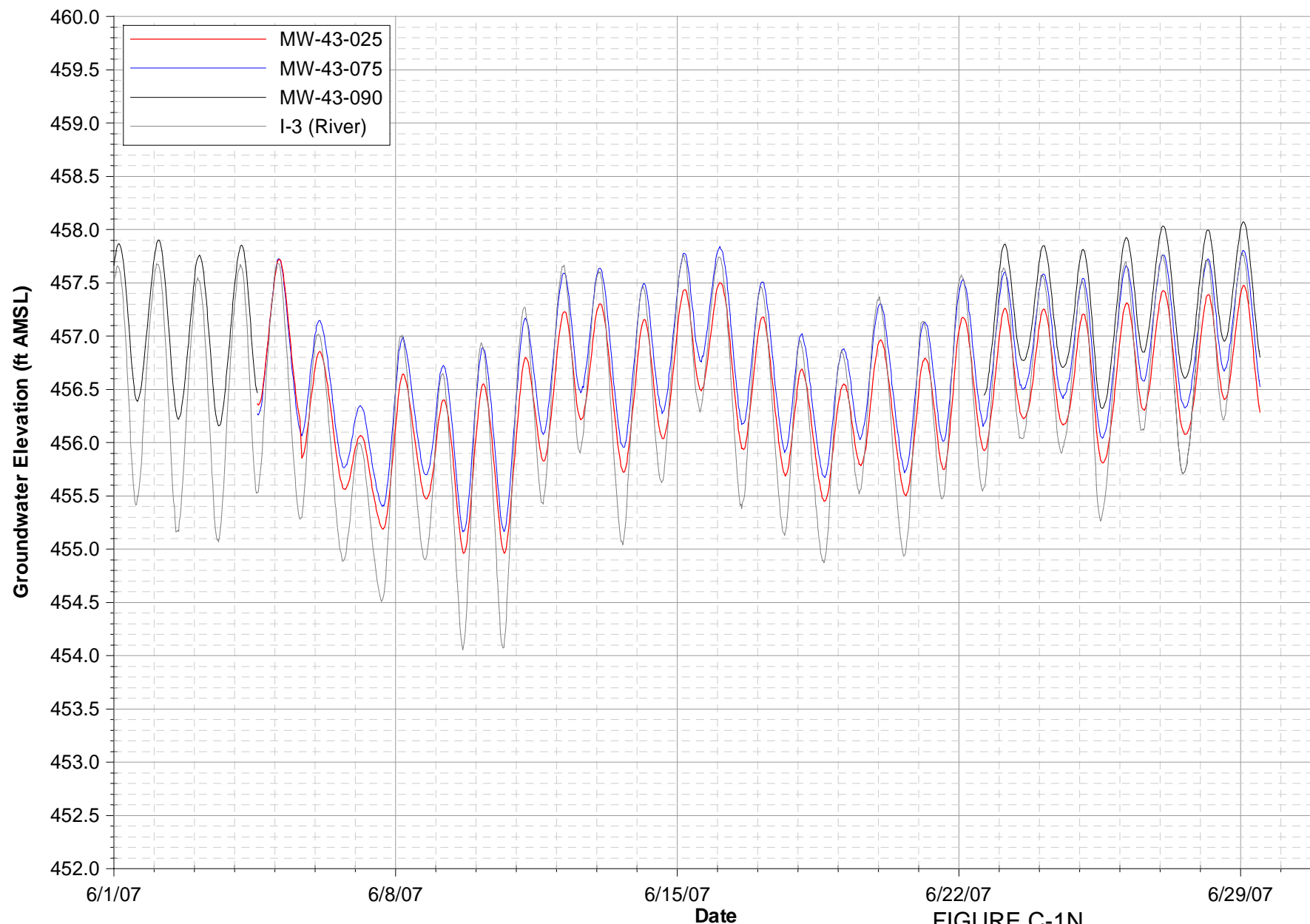
Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1L**  
**MW-39 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG & E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



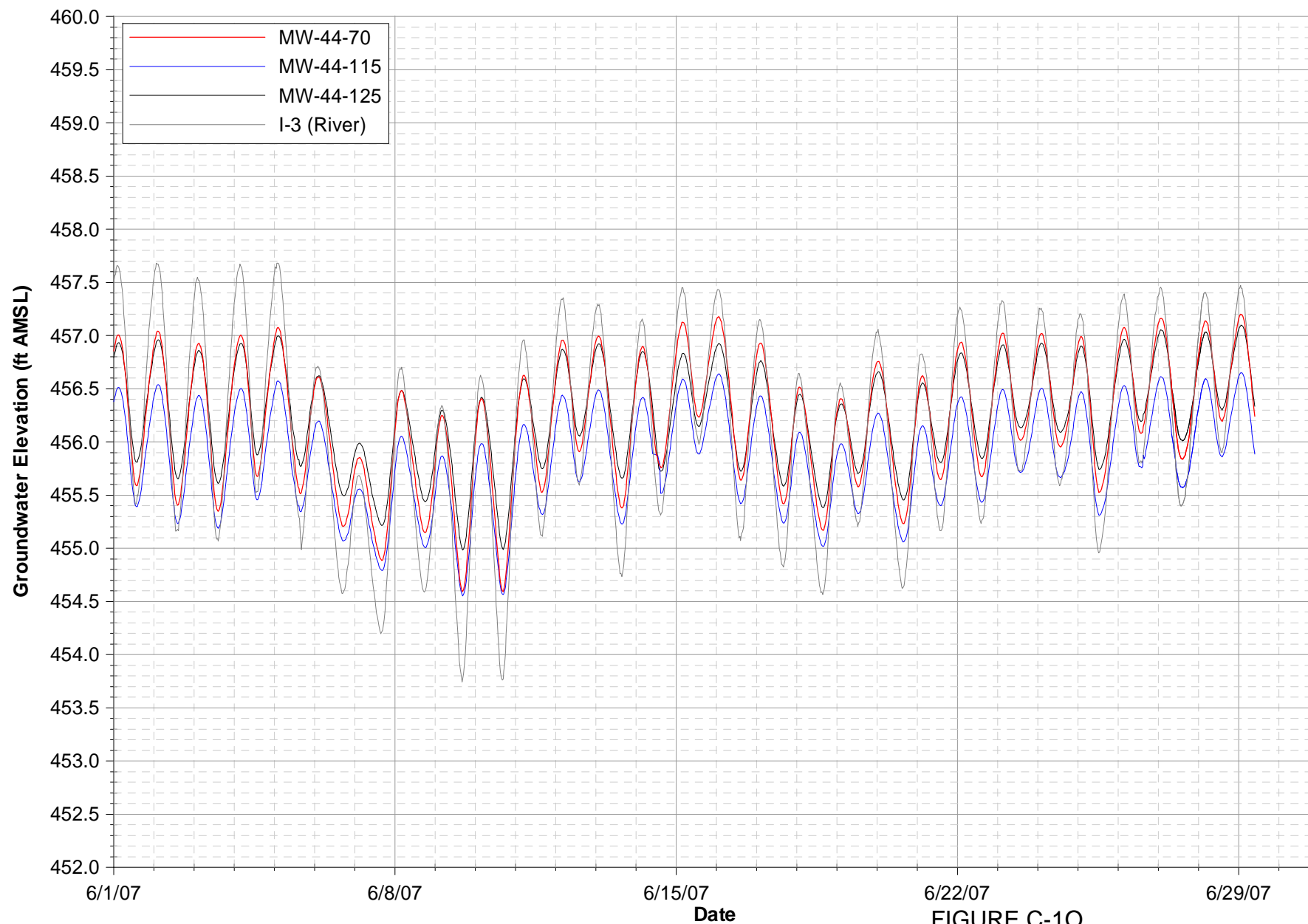
Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1M**  
**MW-42 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



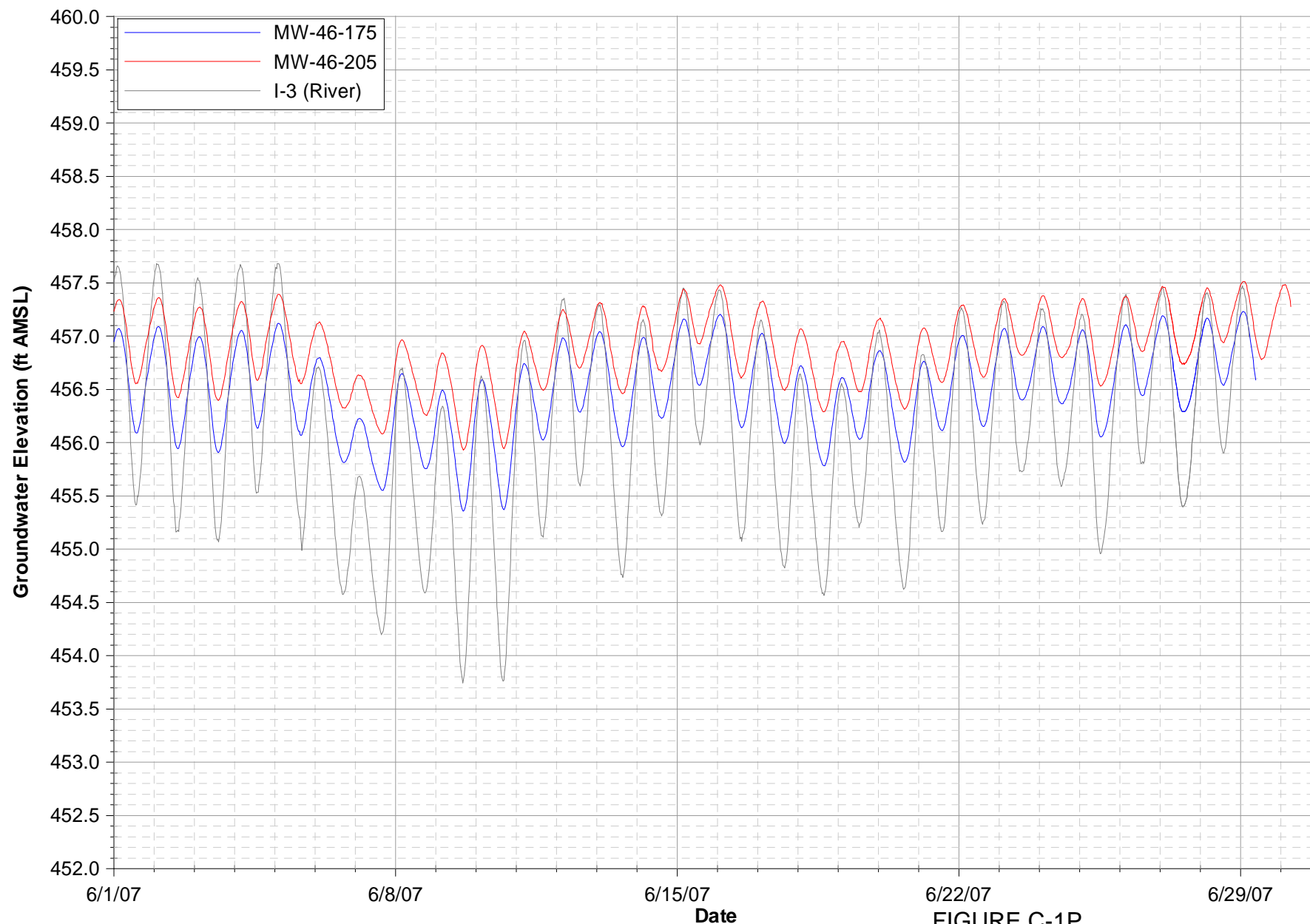
Notes:  
 Data subject to review.  
 MW-43-75 data unavailable prior to June 4, 2007.  
 MW-43-90 data unavailable between June 4 and June 22, 2007.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1N**  
**MW-43 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



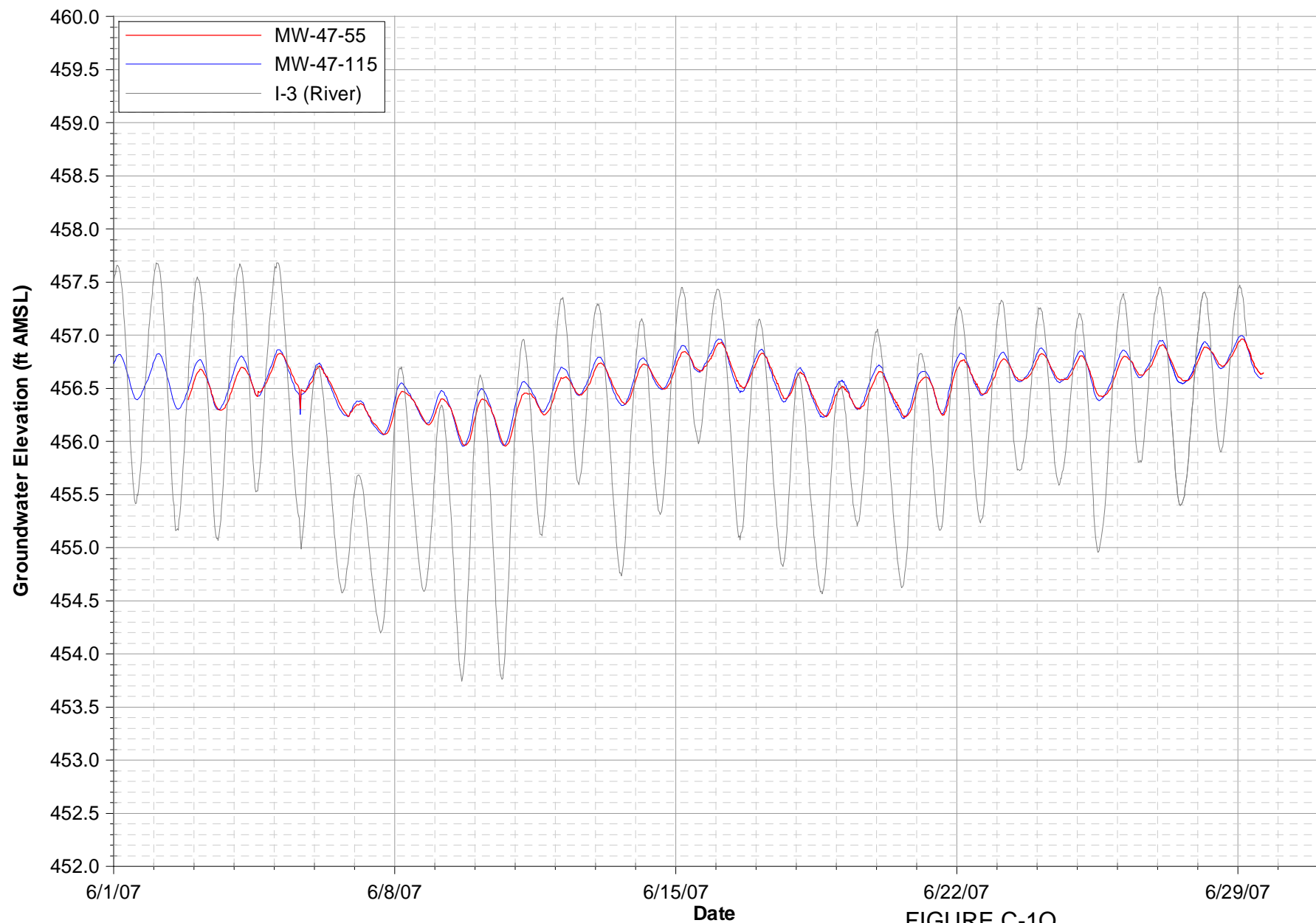
Notes:  
Data subject to review.  
Data collection began on June 29, 2007 to create additional time  
for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-10**  
**MW-44 CLUSTER HYDROGRAPHS**  
INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA



Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

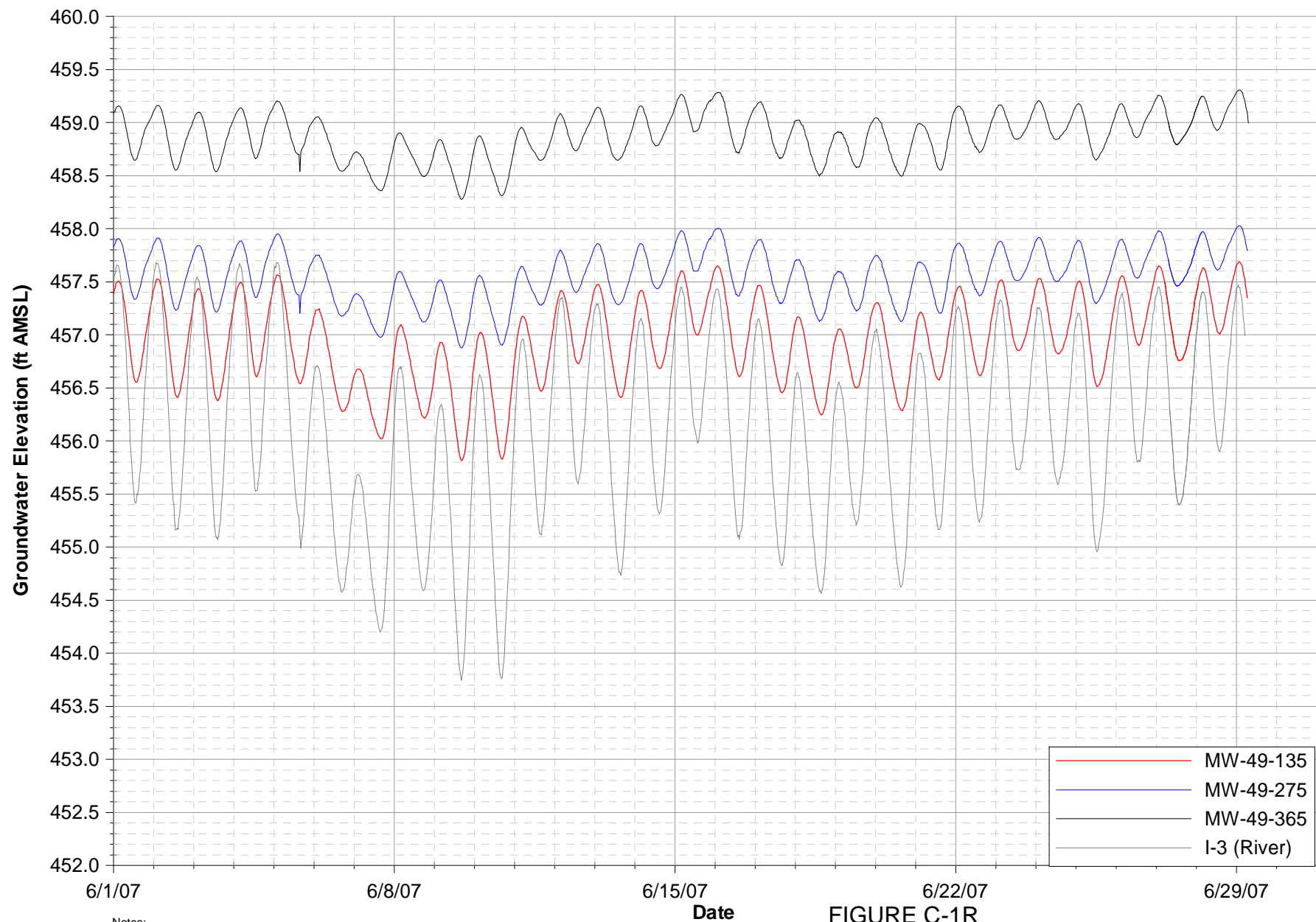
**FIGURE C-1P**  
**MW-46 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



Notes:  
 Data subject to review.  
 MW-47-55 data unavailable prior to June 3, 2007.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

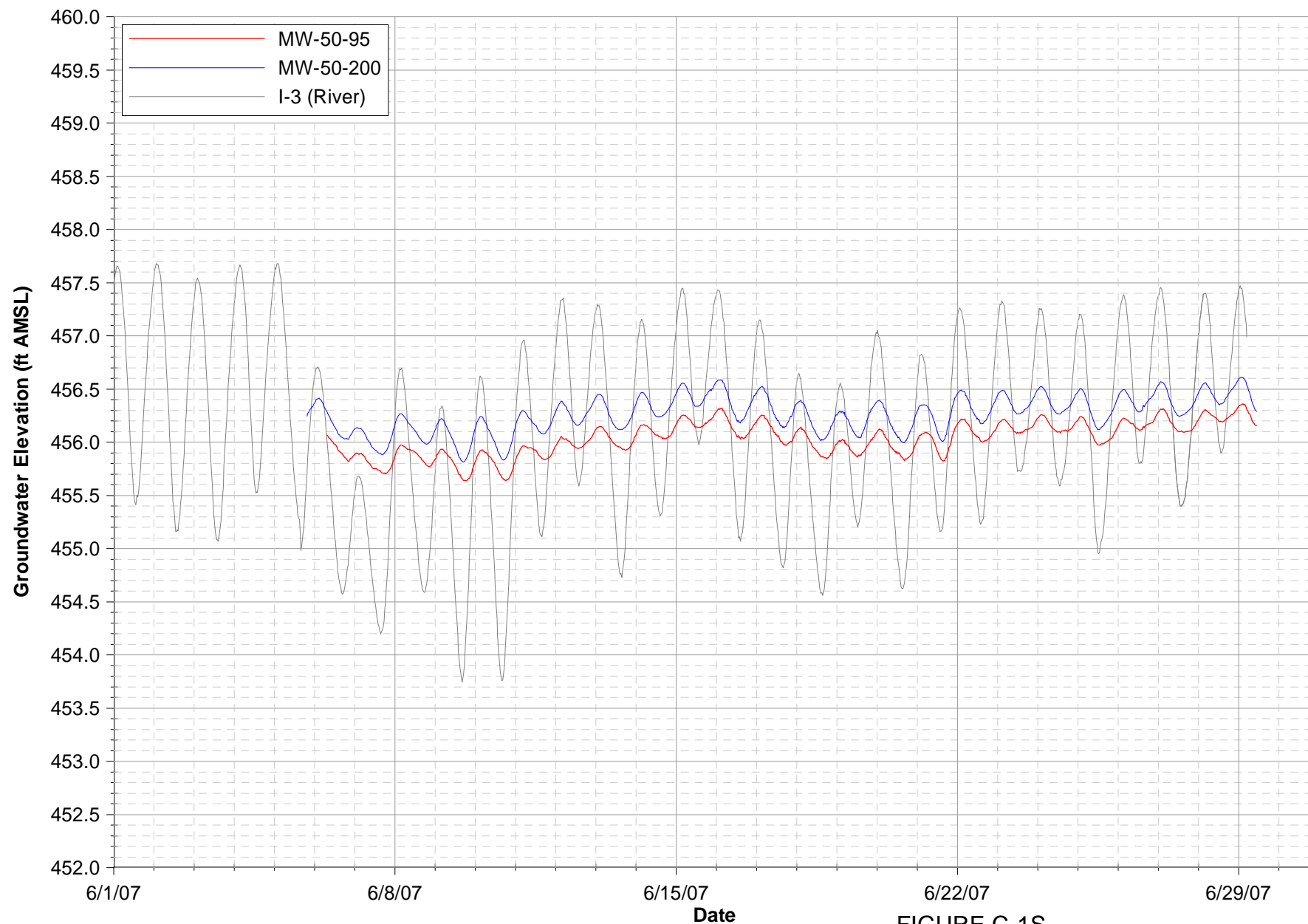
**FIGURE C-1Q**  
**MW-47 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA





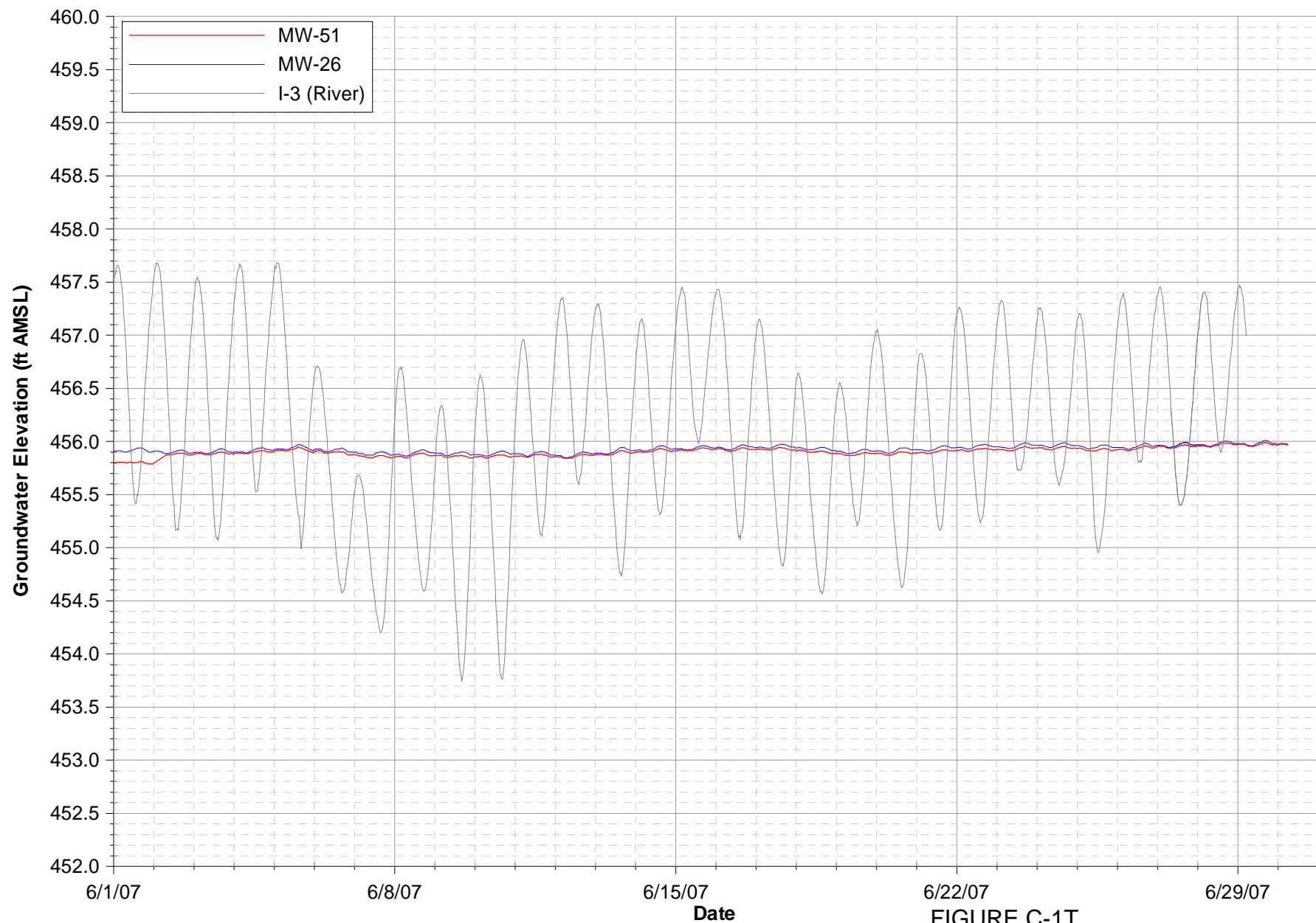
Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1R**  
**MW-49 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



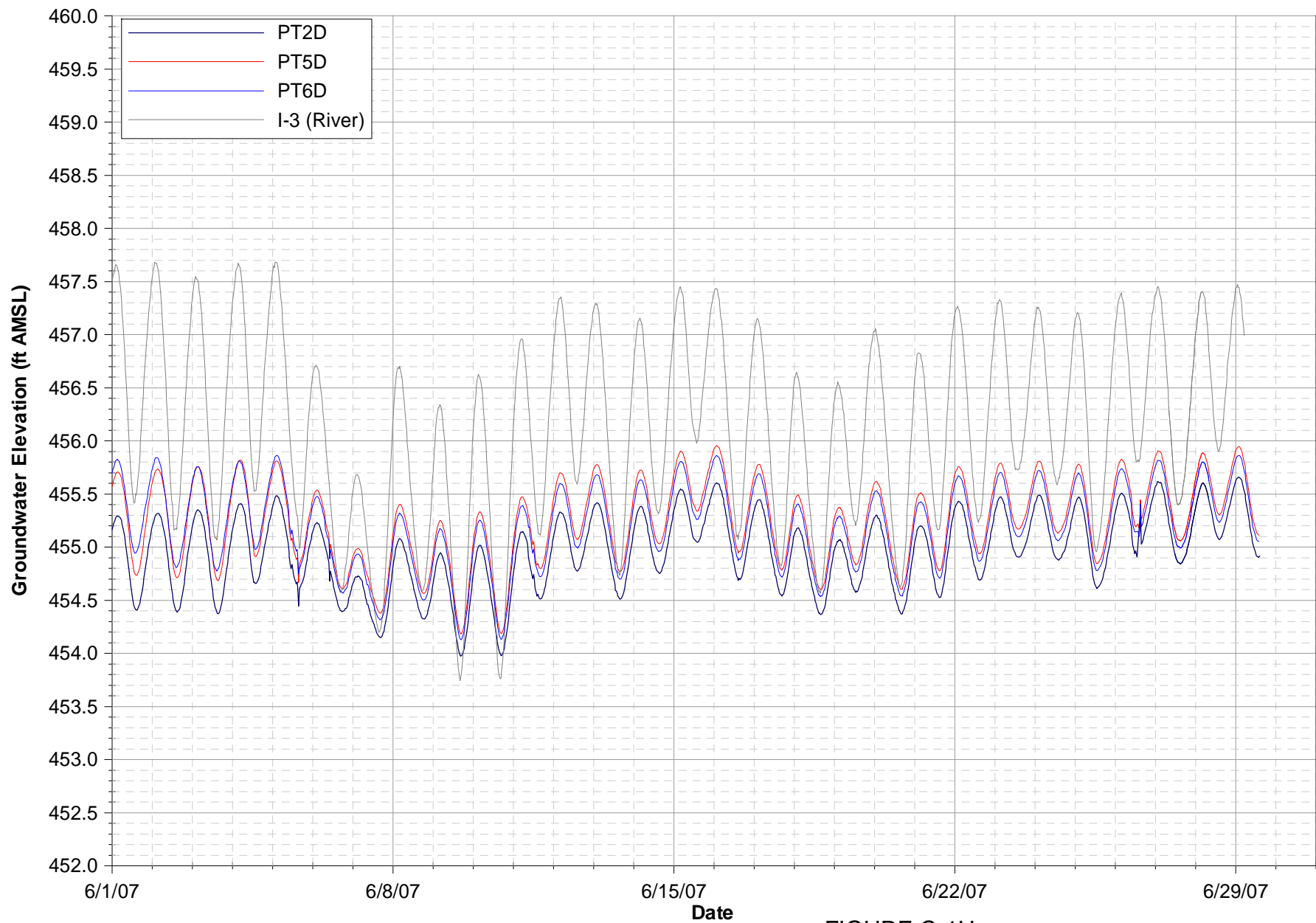
Notes:  
 Data subject to review.  
 MW-50-95 and MW-50-200 data unavailable Prior to June 6, 2007.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1S**  
**MW-50 CLUSTER HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



Notes:  
 Data subject to review.  
 Data collection began on June 29, 2007 to create additional time  
 for field staff to collect data, due to high summer temperatures at the field site.

**FIGURE C-1T**  
**MW-51 & MW-26 HYDROGRAPHS**  
 INTERIM MEASURES PERFORMANCE MONITORING  
 PG&E TOPOCK COMPRESSOR STATION  
 NEEDLES, CALIFORNIA



Note:  
Data subject to review.

**FIGURE C-1U**  
**INSITU PILOT STUDY WELL HYDROGRAPHS**  
INTERIM MEASURES PERFORMANCE MONITORING  
PG&E TOPOCK COMPRESSOR STATION  
NEEDLES, CALIFORNIA