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July 14, 2006

Christopher Guerre
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California Department of Toxic Substances Control
Geology and Corrective Action Branch
5796 Corporate Avenue
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Subject: Performance Monitoring Report for June 2006
Interim Measures Performance Monitoring Program
PG&E Topock Compressor Station, Needles, California

Dear Mr. Guerre:

Enclosed is the *Performance Monitoring Report for June 2006* for the Interim Measure Performance Monitoring Program at the PG&E Topock Compressor Station. This monitoring report documents the performance monitoring results for June 1 through 30, 2006, and has been prepared in conformance with DTSC's letter dated February 14, 2005.

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

Sincerely,

Paul Burton Ar Yvonne Meeks

Enclosure

Performance Monitoring Report for June 2006

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 14, 2006

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**Performance Monitoring Report
for June 2006**

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 14, 2006

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

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Acronyms and Abbreviations

µg/L	micrograms per liter
cfs	cubic feet per second
Cr(T)	total chromium
Cr(VI)	hexavalent chromium
DTSC	Department of Toxic Substances Control
gpm	gallons per minute
IM	Interim Measure
PG&E	Pacific Gas and Electric Company
PMP	Performance Monitoring Program
USBR	United States Bureau of Reclamation

1.0 Introduction

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. The groundwater extraction, treatment, and injection systems, collectively, 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 (PMP) 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, 2006. The next monthly report for the July 2006 reporting period will be submitted by August 30, 2006, along with the second quarterly performance monitoring report of 2006.

Figure 1-2 shows the locations of wells used for the IM extraction, performance monitoring, and hydraulic gradient calculation. During March 2006, eight additional groundwater monitoring wells (four well cluster sites) were installed as part of the 2006 IM performance monitoring drilling program (CH2M HILL 2006a). The new monitoring wells that were installed in March 2006 include MW-44 (three wells), MW-45 (one well), MW-46 (two wells), and MW-47 (two wells). The IM well-drilling program continued in April and included installation of additional groundwater monitoring wells at three more locations: MW-49 (three wells), MW-50 (two wells), and MW-51. The new performance monitoring wells installed in March and April have been equipped with pressure transducers and, as of the May 2006 reporting period, are being used for hydraulic monitoring in the floodplain area. Well MW-48, the final well in the IM drilling program, was installed in early May 2006. MW-48 is a bedrock monitoring well and will not be used for IM performance monitoring.

The performance monitoring wells, updated through June 2006, 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.

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

Pumping data for the IM groundwater extraction system for the period June 1 through June 30, 2006 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 2006 monthly average pumping rate was 129.9 gpm. A total of 5,612,324 gallons of groundwater was extracted and treated by the IM No. 3 treatment plant during June 2006. Approximately 4,080 gallons of purge water from the groundwater monitoring program were also treated at the IM No. 3 facility during June 2006. The operational run time for the IM extraction system was approximately 98 percent during this reporting period. An operations log for the extraction system during June 2006, 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 USFilter Corporation in Los Angeles, California for treatment and disposal. Two containers of solids (approximately 14 cubic yards each) from the IM No. 3 facility were transported to the Chemical Waste Management at the Kettleman Hills facility during June 2006.

Daily inspections included general facility inspections, flow measurements, 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. Future monitoring of the extraction well water quality will be completed at the frequency required by the Waste Discharge Requirements issued for the IM No. 3 treatment facility.

3.0 Chromium Sampling Results

During June 2006, the groundwater monitoring wells in the floodplain area were sampled for Cr(VI), total chromium [Cr(T)], and field water quality parameters under quarterly, monthly, biweekly, and weekly 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 2006* (CH2M HILL 2006b) 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 2006 and the previous months. Table B-2 (Appendix B) presents the groundwater sampling data for the other wells monitored in the PMP area during the evaluation period.

Figure 3-1 presents the Cr(VI) results distribution for June 2006 in plan view for the groundwater wells monitoring the upper, middle, and lower depth intervals of the Alluvial Aquifer in the floodplain area. The Cr(VI) contour maps for June 2006 performance monitoring have been revised to incorporate data from the new IM monitoring wells (listed in Section 1.0) and the water quality data trends observed in the floodplain area. The revised Cr(VI) contour maps presented on Figure 3-1 do not reflect plume migration during performance monitoring, but rather provide additional interpretation of the inferred distribution of Cr(VI) within the three depth intervals of the Alluvial Aquifer. The aquifer depth intervals, well screens, and June 2006 Cr(VI) sampling results and 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 2006 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). The hydrogeologic cross-sections presented on Figures 3-1 and 3-2 show the locations and sampling results for the new monitoring wells installed at MW-44, MW-45, and MW-46. For ongoing IM performance evaluation, Cr(VI) concentration trend graphs and hydrographs for key floodplain monitoring wells are presented on Figures B-1 (well MW-33-90), B-2 (well MW-34-100), and B-3 (well MW-36-100) in Appendix B.

4.0 Hydraulic Gradient Results

During the reporting period, water levels were recorded at intervals of 30 minutes with pressure transducers in 64 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 (June 1 through June 28, 2006) and are summarized in Appendix C, Table C-1. Data collection was conducted before the holiday weekend on June 29 and 30, so averaging was limited to 28 days in June 2006.

Reported groundwater elevations (or hydraulic heads) are adjusted for temperature and for salinity differences between wells (i.e., adjusted to a common freshwater equivalent), as described in the Performance Monitoring Plan. Groundwater elevation hydrographs (for June 2006) 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 2006 is also shown on the hydrographs.

The June 2006 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 very strong landward hydraulic gradients 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. The average groundwater elevations measured in the new IM monitoring wells during June 2006 are presented on the middle and lower depth interval gradient maps (Figures 4-2 and 4-3, respectively). The hydraulic data from some of the new monitoring wells are not contoured on these gradient maps due to the significant differences in well screen elevations (e.g., wells screened in the lower depth interval range from 395 to 117 feet above mean sea level). Further analysis and evaluation of hydraulic data from monitoring wells screened in similar elevation intervals in the aquifer will be pursued as part of the PMP.

The landward gradients measured during June 2006 were similar to May 2006. This was the result of a continued high net extraction rate (130 gpm) and rising Colorado River levels during the reporting period. The June 2006 average monthly groundwater elevations are also presented and contoured in cross-section on Figure 4-4 (cross-section location shown on Figure 1-2).

Table 4-1 summarizes the estimated and actual dam discharges and river elevations since April 2004. The actual Davis Dam average discharge for June 2006 of 17,547 cubic feet per second (cfs) was greater than the United States Bureau of Reclamation (USBR) projected discharge of 16,100 cfs for the current reporting period. The actual Colorado River elevation at I-3 (monthly average) was 0.2 foot greater than the level predicted 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 2006. 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 decrease the apparent gradient in the central well pair. Nevertheless, average gradients in the three well pairs were landward at magnitudes that were between two to four times the target value of 0.001 feet per foot (0.0023, 0.0037, and 0.0040 respectively). These gradients were similar to the average gradients measured in May 2006.

5.0 Status of Operation and Monitoring

Reporting of the IM extraction and monitoring activities will continue as described in the Performance Monitoring Plan. The next monitoring report will be a combined monthly (July reporting period) and second quarter 2006 (May, June, July inclusive) performance evaluation report. The second quarter 2006 report will be submitted by August 30, 2006.

As per DTSC direction, PG&E will continue to operate both TW-3D and PE-1 at a target combined pumping rate of 135 gpm, except for periods when planned and unplanned downtime occur during July 2006. Treated groundwater will be discharged into the IM No. 3 injection wells in accordance with Waste Discharge Requirements Order No. R7-2004-0103. Brine generated as a byproduct of the treatment process will continue to be transported offsite.

PG&E will 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 increase the pumping rate at TW-3D and decrease the rate at well PE-1. Extraction well TW-2D will continue serve as a backup extraction well to TW-3D and PE-1.

Current USBR projections show that the average Davis Dam release for July 2006 (14,700 cfs) will be less than in June 2006 (17,547 cfs). Based on July 13, 2006 USBR projections, it is anticipated that the Colorado River level at the I-3 gage location in July 2006 will decrease approximately 0.7 foot, compared to the average river level in June 2006. Future adjustments in pumping rates from the IM extraction system will be proposed based on expected river levels, observed groundwater gradients, potential system modifications, and other relevant factors.

The May 2006 Performance Monitoring Report proposed new gradient control wells for evaluating the hydraulic gradients produced from the current two-well extraction system (TW-3D and PE-1). The recommendation for modifying the well pairs used for demonstrating gradient control is being reviewed by the DTSC. Modifications and updates to the IM performance monitoring program will be incorporated pending DTSC approval and direction.

6.0 References

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.

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

_____. 2006a. *Technical Addendum No. 1, Well Installation Work Plan for Interim Measures Performance Monitoring, PG&E Topock Compressor Station.* January 27.

_____. 2006b. *Groundwater and Surface Water Monitoring Report, First Quarter 2006, PG&E Topock Compressor Station.* June 1.

TABLE 2-1
Pumping Rate and Extracted Volume for IM System through June 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Extraction Well	June 2006 Period ^a		Project To Date ^b
	Average Monthly Pumping Rate ^c (gpm)	Volume Pumped (gal)	Cumulative Volume Pumped (gal)
TW-2S ^a	0	0	994,438
TW-2D	0	0	52,875,356
TW-3D	95.6	4,128,962	26,165,120
PE-1	34.3	1,483,362	7,793,958
Total	129.9	5,612,324	87,828,872
Volume Pumped from the MW-20 Well Cluster			1,527,724
Total Volume Pumped (gal)			89,356,596
Total Volume Pumped (ac-ft)			274.2

gpm: gallons per minute.

gal: gallons.

ac-ft: acre-feet.

^a Pumping results during the monthly period are based on readings collected between June 1, 2006 at 12:00 a.m. and June 20, 2006 at 11:59 p.m. (30 days).

^b Interim Measure groundwater extraction at the Topock site was initiated in March 2004.

^c 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 2006 through June 2006
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-2D	18-Jan-06	1.98	2.18	6930
TW-2D	15-Mar-06	1.36	1.36	5220 J
TW-2D	03-May-06	1.12	1.12	---
TW-2S	15-Mar-06	2.87	2.72	1620 J
TW-2S	03-May-06	2.60	2.40	---
TW-3D	18-Jan-06	4.72	4.33	5090
TW-3D	08-Feb-06	2.88	3.25	5490
TW-3D	08-Mar-06	3.21	3.04	5380
TW-3D	06-Apr-06	2.71	2.95	5740
TW-3D	11-May-06	2.69	2.74	---
TW-3D	15-Jun-06	2.45	2.61	5510
PE-1	08-Feb-06	0.136	0.136	7380
PE-1	08-Mar-06	0.125	0.136	6830
PE-1	06-Apr-06	0.117	0.133	6680
PE-1	11-May-06	0.109	0.118	---
PE-1	15-Jun-06	0.0873	0.101	6050

NOTES:

mg/L = concentration in milligrams per liter (mg/L)

J = concentration or reporting limit estimated by laboratory or data validation.

(---) = data not collected.

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

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)
April 2004	17,400	17,354	-46	456.4	456.2	-0.2
May 2004	17,100	16,788	-312	456.3	456.3	0.0
June 2004	15,800	16,869	1,069	455.8	456.6	0.8
July 2004	14,000	14,951	951	455.2	455.9	0.7
August 2004	12,100	12,000	-100	454.5	454.9	0.4
September 2004	11,200	10,979	-221	454.2	454.6	0.4
October 2004	8,600	7,538	-1,062	453.2	453.5	0.3
November 2004	9,500	8,075	-1,425	453.6	453.4	-0.2
December 2004	6,200	8,090	1,890	452.4	453.3	0.9
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	0.0
March 2006	13,000	12,429	-571	454.7	454.8	0.1
April 2006	16,600	18,300	1700	456.0	456.1	0.1
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	----	----	455.7	----	----

Notes:

NA = I-3 transducer data unavailable for month of September 2005 due to damage by debris.

Projected Davis Dam releases, updated monthly, are reported by the US Department of Interior, Bureau of Reclamation at <http://www.usbr.gov/lc/region/g4000/24mo.pdf>; listed projections for April 2004 through July 2004 are from April 2004, and the remainder were from the beginning of each respective month.

Colorado River levels at I-3 are predicted from a linear regression between historical dam releases and measured river levels at I-3 (updated monthly).

cfs = cubic feet per second; ft AMSL = feet above mean sea level

TABLE 4-2

Average Hydraulic Gradients Measured at Well Pairs, June 2006

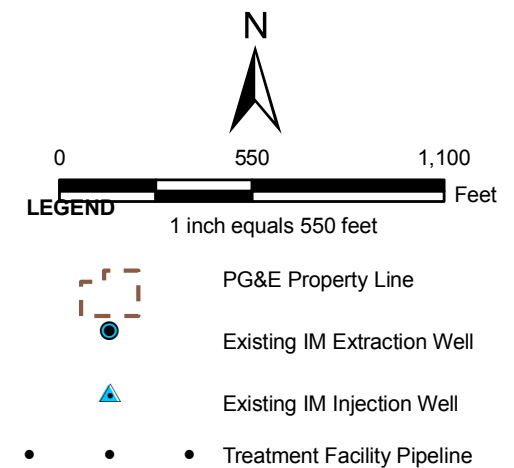
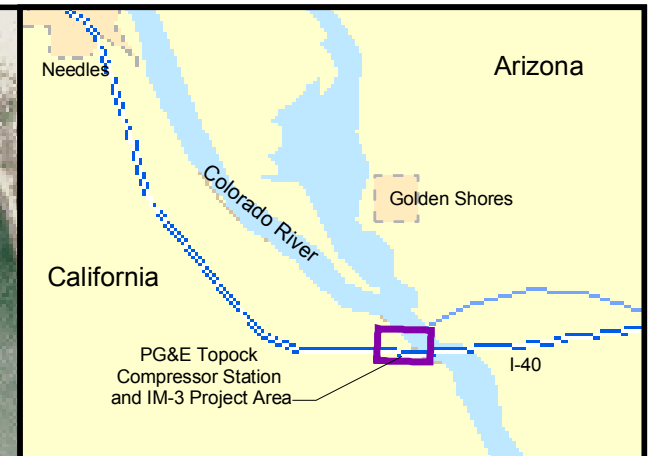
*Interim Measures Performance Monitoring**PG&E Topock Compressor Station*

Well Pair	Mean Landward Hydraulic Gradient (feet/foot)	Measurement Dates 2006
Northern Gradient Pair MW-31-135 / MW-33-150	0.0023	June 1 through 28
Central Gradient Pair MW-20-130 / MW-34-80	0.0037	June 1 through 28
Southern Gradient Pair MW-20-130 / MW-42-65	0.0040	June 1 through 28

Notes:

- 1) Refer to Figure 1-2 for location of well pairs
- 2) For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot
- 3) Extraction well PE-1 began pumping on 1/26/06. As a result, the gradient reported for the central well pair is affected by having an additional pumping well between wells used for gradient calculation.

Figures

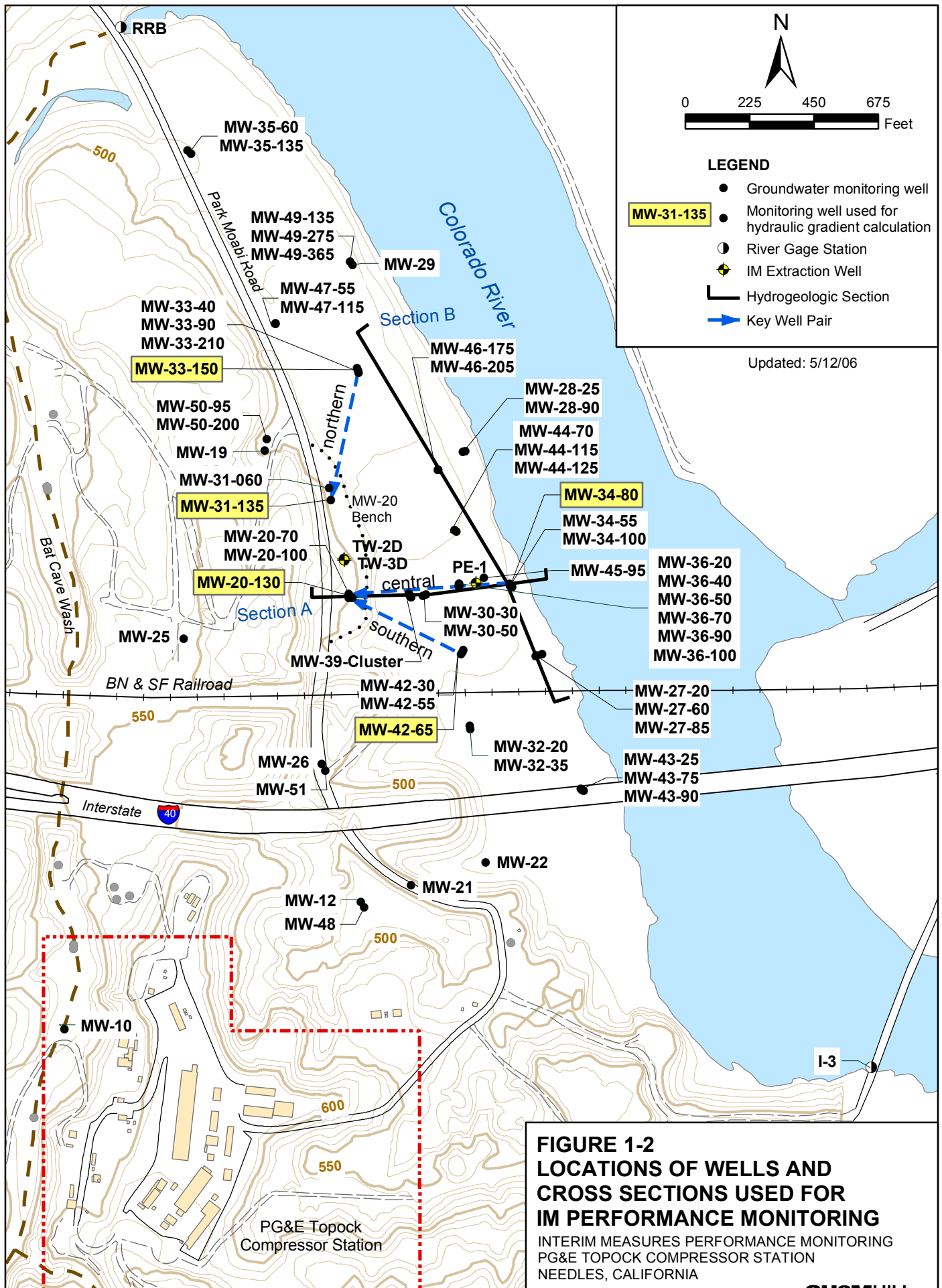


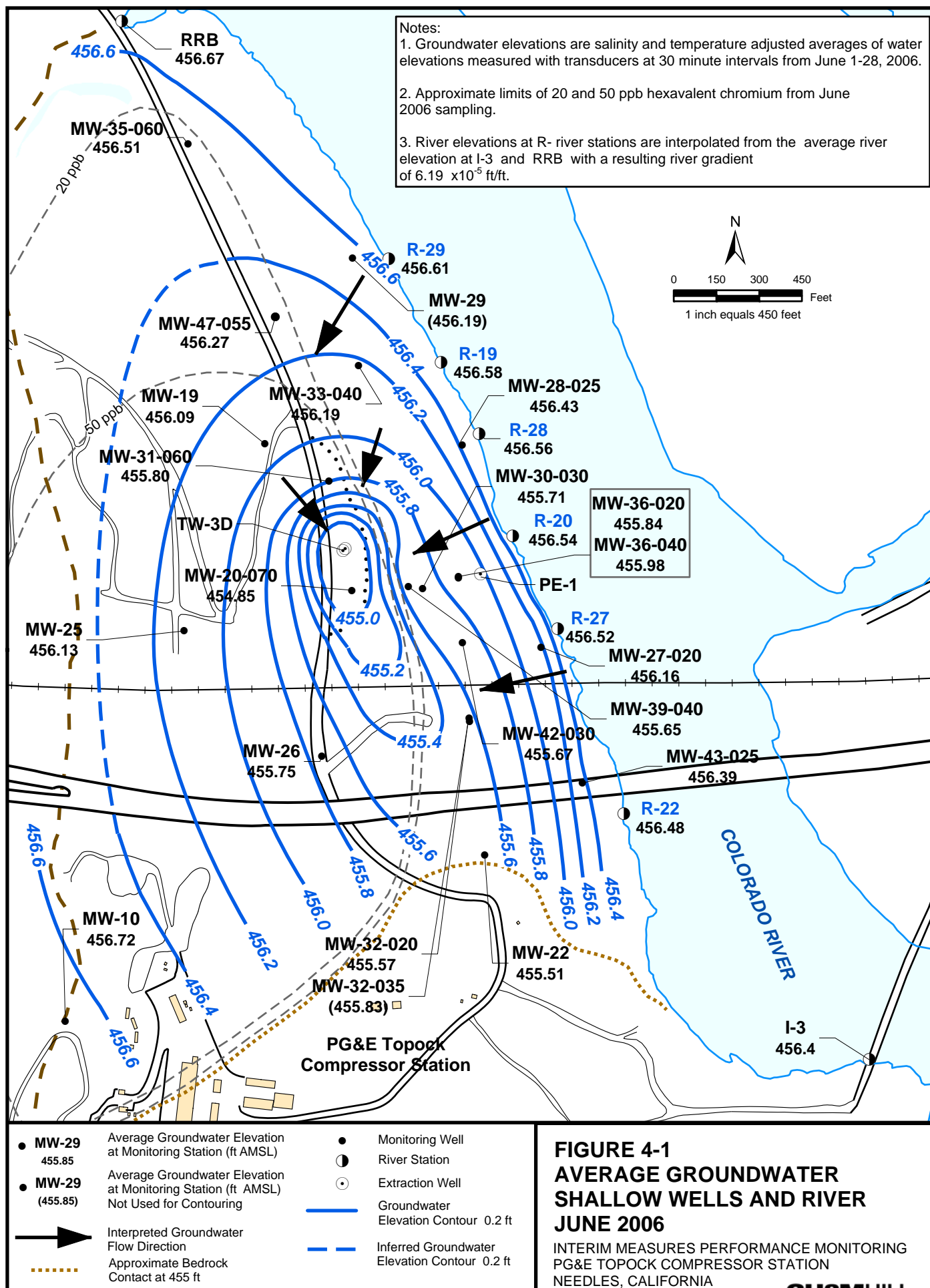
Notes: Location map shows Interim Measures No.3 (IM-3) facilities as of January 2006.
Aerial photography taken May 2005.

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

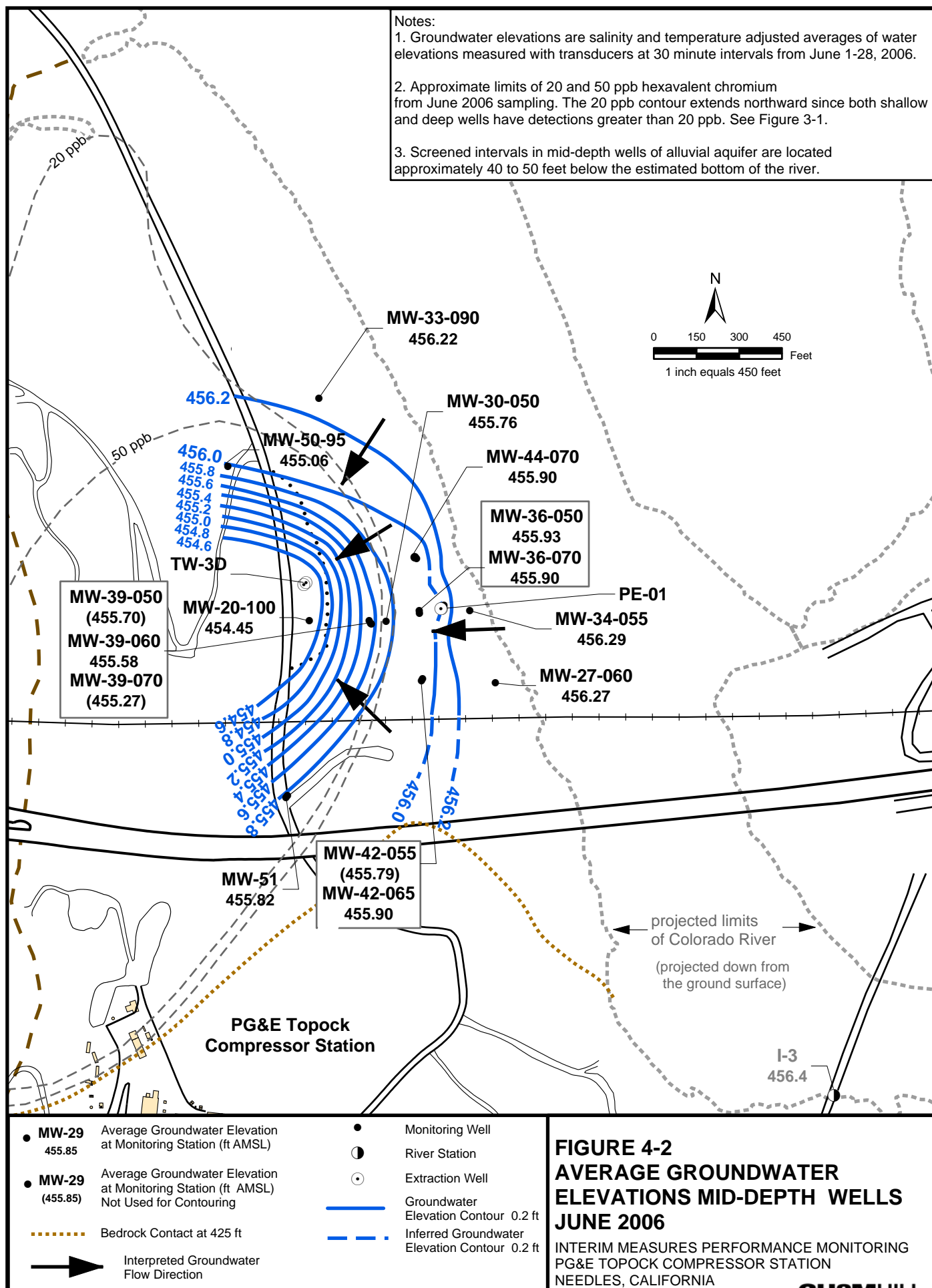
CH2MHILL



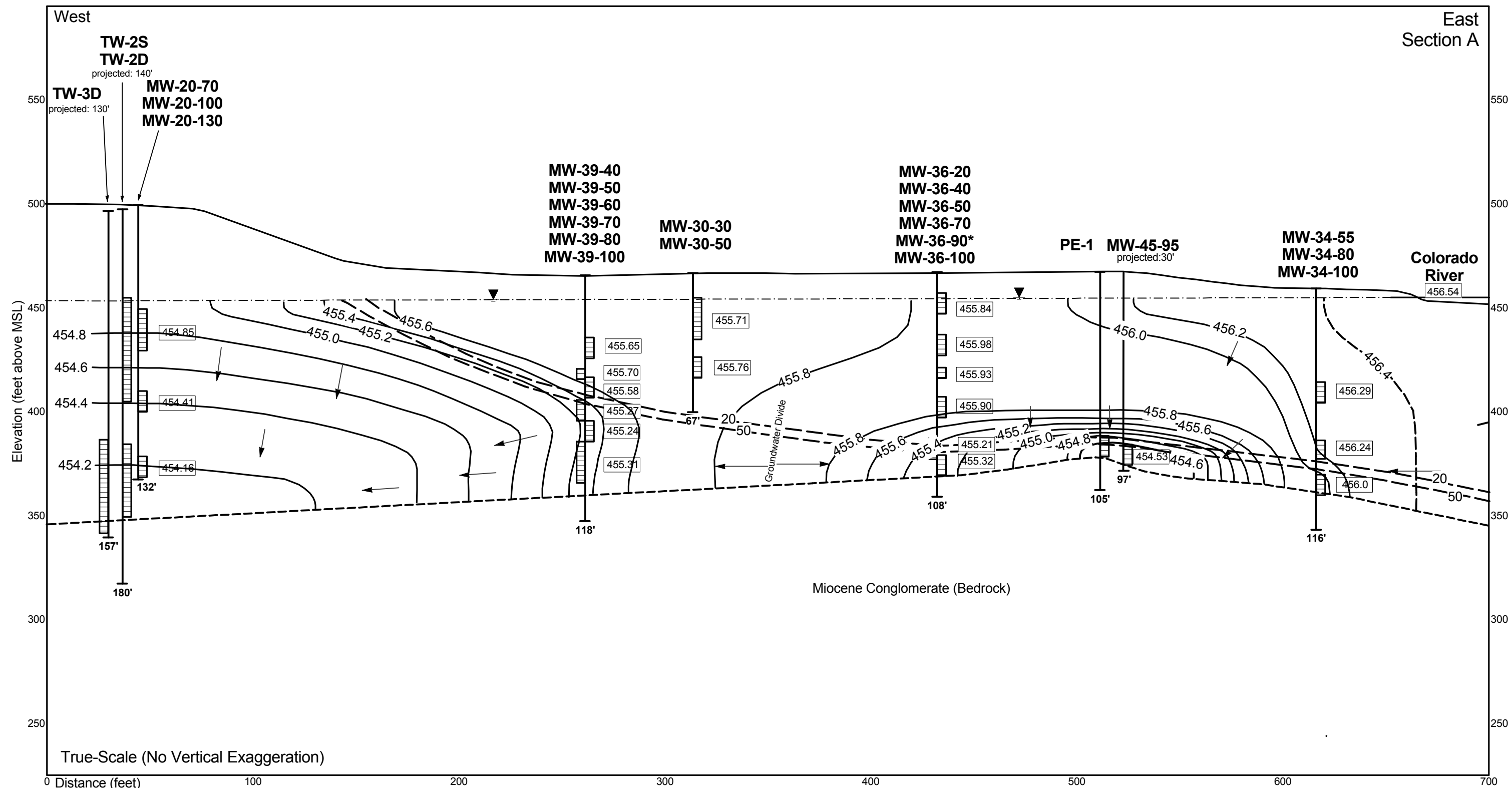


Notes:

1. Groundwater elevations are salinity and temperature adjusted averages of water elevations measured with transducers at 30 minute intervals from June 1-28, 2006.
2. Approximate limits of 20 and 50 ppb hexavalent chromium from June 2006 sampling. The 20 ppb contour extends northward since both shallow and deep wells have detections greater than 20 ppb. See Figure 3-1.
3. Screened intervals in mid-depth wells of alluvial aquifer are located approximately 40 to 50 feet below the estimated bottom of the river.







Notes:
Results show average groundwater elevations for June 1-28, 2006 measured with transducers at 30 minute intervals.
Groundwater elevations adjusted for salinity and temperature.

Well MW-36-90* excluded from contouring.

PE-1 pumping began on 1/26/06.
River elevation (R-20) is the calculated average river level based upon the river gradient between RRB and I-3.
Data subject to review.

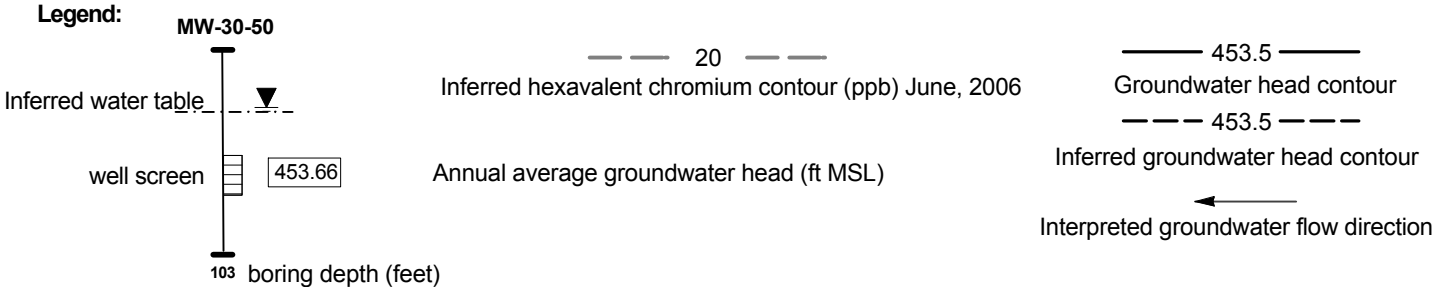


FIGURE 4-4
AVERAGE GROUNDWATER ELEVATIONS
FOR WELLS ON FLOODPLAIN
CROSS-SECTION A JUNE 2006
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Appendix A
Extraction System Operations Log for
June 2006

Appendix A

Extraction System Operations Log for June 2006

PG&E Topock Interim Measures Performance Monitoring Program

During June 2006, extraction wells TW-3D and PE-1 operated at a target pump rate of at 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 from TW-3D and PE-1) was approximately 98 percent during the June 2006 reporting period.

The IM No. 3 facility also treated approximately 4,080 gallons of water generated from the groundwater monitoring program during June 2006. Treatment of this water at the IM No. 3 facility was approved by the Regional Board on January 26, 2006, according to the conditions of Order No. R7-2004-0103. Three containers of solids (approximately 14 cubic yards each) from the IM No. 3 facility were transported to the Chemical Waste Management at the Kettleman Hills facility during June 2006.

Periods of planned and unplanned extraction system downtime during June 2006 are summarized below. The times shown are in Pacific Standard Time (PST) to be consistent with other data collected (e.g. water level data) at the site.

- **June 1, 2006 (unplanned):** The extraction well system was shut down from 2:29 a.m. until 2:40 a.m. to train new operators on re-starting the facility on back-up power. Extraction system downtime was 11 minutes.
- **June 3, 2006 (unplanned):** The extraction well system was shut down from 2:23 pm to 2:27 p.m. to switch to backup power due to sagging power from Needles Electric and from 4:38 pm to 5:00 p.m. to switch back to Needles power once proper power levels were restored. Extraction system downtime was 26 minutes.
- **June 4, 2006 (unplanned):** The extraction well system was shut down from 11:29 a.m. to 11:44 a.m. to switch to backup power due to sagging power from Needles Electric and from 6:10 p.m. to 6:24 p.m. to switch back to Needles power once proper power levels were restored. Extraction system downtime was 29 minutes.
- **June 6, 2006 (unplanned):** The extraction well system was shut down from 10:18 a.m. to 10:22 a.m. to re-start the extraction well system after a low water level alarm in PE-1 and from 2:48 p.m. to 2:54 p.m. to train new operators on re-starting the facility on back-up power. Extraction system downtime was 10 minutes.
- **June 8, 2006 (planned):** The extraction well system was shut down from 9:24 a.m. to 10:36 a.m. to switch from the east bank of microfilter modules to the west bank of microfilter modules. Extraction system downtime was 1 hour 12 minutes.
- **June 12, 2006 (unplanned):** The extraction well system was shut down from 1:52 p.m. to 3:41 p.m. to switch from the west bank of microfilter modules to the east bank of microfilter modules. Extraction system downtime was 1 hour 49 minutes.
- **June 13 and 14, 2006 (planned):** The extraction well system pump rate was reduced at 10:40 a.m. on June 13, 2006 due to suspected residual polymer fouling of the east bank of

microfilter modules that were brought into service on June 12. The west bank of modules that were taken out of service on June 12 were immediately cleaned using a caustic and sodium hypochlorite solutions to remove the suspected foulants. The reduced pump rate ranged between 80 and 90 gpm during this time. The west bank of modules was returned to service after cleaning was complete on June 14, 2006 (see June 14 downtime below) and the pump rate was back to the target rate of 135 gpm by 1:40 p.m.

- **June 14, 2006 (unplanned):** The extraction well system was shut down from 10:26 a.m. to 11:16 a.m. and from 12:23 p.m. to 1:02 p.m. to switch from the east bank of microfilter modules to the west bank of microfilter modules. Extraction system downtime was 1 hour 29 minutes.
- **June 24, 2006 (unplanned):** The extraction well system was shut down from 9:00 p.m. to 10:48 p.m. due to a loss of Needles Power and difficulties re-starting on back-up power. Extraction system downtime was 1 hour 36 minutes.
- **June 25, 2006 (unplanned):** The extraction well system was shut down from 6:13 a.m. to 6:26 a.m. to switch back to Needles Power and from 9:54 a.m. to 10:07 a.m. return to back-up power due to continuing sagging power supply. Extraction system downtime was 26 minutes.
- **June 26, 2006 (unplanned):** The extraction well system was shut down from 8:53 a.m. to 8:58 a.m. to switch back to Needles Power and from 12:43 p.m. to 1:06 p.m. for inspection of the onsite transformer by Needles Power. Extraction system downtime was 28 minutes.
- **June 29, 2006 (unplanned):** The extraction well system was shut down from 9:10 a.m. to 10:20 a.m. and from 10:27 p.m. to 11:01 p.m. to inspect and replace the air relief valves (ARVs) along the extraction well and brine pipelines between the MW-20 Bench and IM-3 Facility. The replacement of ARVs was completed as a follow-up preventative measure after replacing a leaking ARV on the treated water pipeline. Extraction system downtime was 1 hour 42 minutes.
- **June 30, 2006 (unplanned):** The extraction well system was shut down from 2:20 m. to 2:52 a.m., 7:33 a.m. to 7:53 a.m., and from 7:37 p.m. to 8:08 p.m. due to power supply losses from Needles Power. Extraction system downtime was 1 hour 52 minutes.

Appendix B
Chromium Sampling Results for Monitoring
Wells in Floodplain Area

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, January 2006 through June 2006
Interim Measures Performance Monitoring
PG&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	06-Mar-06	ND (0.2)	ND (1.0)	-153	0.4	910	455.0	455.1
	01-May-06	ND (0.2)	ND (1.0)	---	2.5	1,510	455.4	454.7
	14-Jun-06	ND (0.2)	---	-178	4.6	2,730	456.4	456.0
MW-28-025	09-Mar-06	ND (0.2)	ND (1.0)	-54	3.5	1,140	455.2	455.2
	05-May-06	ND (0.2)	ND (1.0)	-126	0.8	1,260	456.3	455.8
MW-29	13-Apr-06	ND (0.2)	ND (1.0)	-142	4.2	4,220	455.7	455.2
	05-May-06	ND (0.2)	ND (1.0)	-128	1.3	4,430	456.0	455.4
MW-30-030	13-Mar-06	ND (5.0)	ND (1.0)	-99	1.1	55,600	454.1	454.2
	02-May-06	ND (2.0)	ND (1.0)	-104	2.4	54,600	455.4	455.7
MW-32-020	10-Mar-06	ND (2.0)	ND (1.0)	-125	0.4	---	454.4	455.1
	04-May-06	ND (1.0)	ND (1.0)	-120	0.4	25,500	455.2	454.9
MW-32-035	10-Mar-06	ND (2.0)	ND (1.0)	-161	0.1	9,570	454.7	454.9
	04-May-06	ND (1.0)	ND (1.0)	-171	0.3	16,500	455.5	455.1
MW-33-040	09-Mar-06	ND (0.2)	ND (1.0) LF	---	---	---	454.8	455.2
	04-May-06	ND (0.2)	ND (1.0) LF	12	5.3	4,580	455.5	454.8
MW-36-020	07-Mar-06	ND (1.0)	ND (1.0)	-148	2.5	18,900	---	455.2
	01-May-06	ND (1.0)	ND (1.0)	-180	5.3	20,100	455.5	456.0
MW-36-040	07-Mar-06	ND (1.0)	ND (1.0)	-166	3.3	17,000	454.4	454.6
	01-May-06	ND (1.0)	ND (1.0)	-179	5.1	13,500	455.4	455.0
MW-39-040	07-Mar-06	ND (1.0)	ND (1.0)	-162	3.0	8,450	454.1	454.3
	02-May-06	ND (1.0)	ND (1.0)	-188	0.1	8,150	455.6	456.4
MW-42-030	07-Mar-06	ND (1.0)	ND (1.0)	-154	0.4	11,400	454.3	454.5
	02-May-06	ND (1.0)	ND (1.0)	-160	2.3	18,500	455.2	455.2
MW-43-025	10-Mar-06	ND (0.2)	ND (1.0)	-153	0.3	1,350	455.3	455.4
	04-May-06	ND (0.2)	ND (1.0)	-176	0.4	1,280	456.2	455.4
Middle-Depth Wells								
MW-27-060	07-Mar-06	ND (1.0)	ND (1.0)	-118	2.5	13,700	454.8	454.9
	01-May-06	ND (1.0)	ND (1.0)	-140	1.0	12,100	455.7	455.1
MW-30-050	09-Mar-06	ND (1.0)	ND (1.0)	-81	2.4	8,800	454.2	454.2
	02-May-06	ND (1.0)	ND (1.0)	-102	2.8	14,300	455.6	456.1
MW-33-090	08-Mar-06	16.7	14.3	-42	0.3	10,200	454.9	455.0
	03-May-06	16.1	16.4	-44	0.4	10,400	455.5	454.7
	03-May-06 FD	19.3	15.3	FD	FD	FD	FD	FD
MW-34-055	08-Mar-06	ND (1.0)	ND (1.0)	-106	---	8,460	454.4	454.4
	03-May-06	ND (0.2)	ND (1.0)	-117	0.3	7,580	456.3	456.0
MW-36-050	07-Mar-06	ND (1.0)	ND (1.0)	-110	2.7	8,400	454.5	454.8
	07-Mar-06 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	01-May-06	ND (0.2)	ND (1.0)	-162	3.6	6,810	454.8	454.7
MW-36-070	10-Feb-06	ND (10)	ND (1.0)	-91	2.7	12,600	453.5	453.7
	07-Mar-06	ND (1.0)	ND (1.0)	-67	2.5	9,720	454.6	455.0

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, January 2006 through June 2006
Interim Measures Performance Monitoring
PG&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-Depth Wells								
MW-36-070	06-Apr-06	ND (1.0)	ND (1.0)	---	1.8	7,740	455.5	456.0
	01-May-06	ND (1.0)	ND (1.0)	-130	4.6	8,180	455.7	455.4
	13-Jun-06	ND (0.2) J	ND (1.0)	---	---	7,840	456.1	455.9
MW-39-050	12-Jan-06	ND (10)	ND (1.0)	-9	2.8	18,300	453.0	453.9
	08-Mar-06	ND (1.0)	ND (1.0)	71	2.3	16,000	454.3	455.0
	02-May-06	ND (1.0)	ND (1.0)	-45	0.2	9,380	455.4	455.3
MW-39-060	08-Mar-06	7.10	2.70	12	2.1	---	453.8	454.3
	08-Mar-06 FD	6.90	2.40	FD	FD	FD	FD	FD
	02-May-06	1.10	1.40	-39	0.2	12,000	455.3	454.8
MW-39-070	10-Feb-06	338	340	48	2.8	15,500	452.9	454.0
	08-Mar-06	200	169	201	2.8	16,300	453.5	454.5
	06-Apr-06	223	204	88	2.1	12,300	454.8	456.3
	02-May-06	137	123	31	0.2	11,200	455.0	455.7
	14-Jun-06	107 J	94.6	197	0.0	10,300	455.9	457.0
MW-42-055	07-Mar-06	ND (1.0)	ND (1.0)	-122	0.3	16,500	454.3	454.4
	02-May-06	ND (1.0)	ND (1.0)	-138	2.2	21,400	456.1	455.0
MW-42-065	07-Mar-06	ND (1.0)	ND (1.0)	-58	0.4	20,100	454.4	454.3
	02-May-06	ND (1.0)	ND (1.0)	-76	2.2	25,400	455.3	454.6
MW-44-070	09-Mar-06	ND (1.0)	ND (1.0)	-393	2.4	6,970	453.2	454.0
	23-Mar-06	ND (1.0) J	ND (1.0)	-166	2.4	7,600	454.1	454.1
	04-Apr-06	ND (1.0)	ND (1.0)	-96	1.6	9,200	455.3	455.3
	04-May-06	ND (1.0)	ND (1.0)	-156	4.5	10,000	455.6	455.3
	15-Jun-06	ND (1.0)	ND (1.0)	-118	5.4	14,900	456.4	456.8
Deep Wells								
MW-27-085	12-Jan-06	ND (1.0)	ND (1.0)	-91	2.8	22,600	453.4	453.3
	08-Feb-06	ND (1.0)	ND (1.0)	-82	2.6	21,100	453.9	453.7
	06-Mar-06	ND (1.0)	ND (1.0)	-92	0.2	15,800	454.8	454.8
	03-Apr-06	ND (1.0)	ND (1.0)	-102	2.5	18,200	454.5	454.3
	01-May-06	ND (1.0)	ND (1.0)	-104	0.9	18,300	455.1	454.7
	14-Jun-06	ND (1.0)	ND (1.0)	-98	3.3	22,400	456.4	456.3
MW-28-090	10-Jan-06	ND (1.0)	ND (1.0)	-140	3.3	11,000	453.6	453.8
	09-Feb-06	ND (0.2) J	ND (1.0)	-156	2.8	8,830	453.8	453.8
	06-Mar-06	ND (1.0)	ND (1.0)	-151	0.3	6,830	454.4	454.4
	06-Apr-06	ND (1.0)	ND (1.0)	---	2.1	8,160	455.5	455.4
	05-May-06	ND (1.0)	ND (1.0)	-150	0.8	8,690	455.9	456.2
	15-Jun-06	ND (1.0)	ND (1.0)	-153	3.9	7,980	456.4	456.5
MW-33-150	10-Jan-06	6.40	5.00	27	3.7	21,800	453.7	453.6
	07-Feb-06	4.30 J	6.40	-61	2.7	20,400	455.2	453.9
	08-Mar-06	4.20	3.20	-55	0.3	20,400	454.9	455.2
	06-Apr-06	4.50	3.00	39	2.1	18,300	455.5	455.2
	03-May-06	6.60	5.50	-23	1.0	17,100	455.4	454.5
	16-Jun-06	5.50	5.40	38	2.8	21,300	456.6	457.1

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, January 2006 through June 2006
Interim Measures Performance Monitoring
PG&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-33-210	10-Jan-06	7.60	5.20	13	3.2	24,200	454.0	453.3
	07-Feb-06	9.00	7.20	-14	2.7	22,800	454.6	454.0
	06-Mar-06	10.7	6.50	-37	0.2	16,600	455.1	454.5
	13-Apr-06	4.20	ND (4.2)	21	6.8	18,100	455.7	454.7
	05-May-06	10.0	8.80	34	0.4	20,100	456.4	456.5
	16-Jun-06	9.20	8.30	-27	2.9	23,600	456.7	456.9
MW-34-080	11-Jan-06	ND (1.0)	ND (1.0)	-38	3.1	18,100	453.6	453.3
	08-Feb-06	ND (1.0)	ND (1.0)	-22	2.6	16,400	454.1	454.2
	09-Mar-06	ND (1.0)	ND (1.0)	-12	2.2	15,100	454.8	454.8
	03-Apr-06	ND (1.0)	ND (1.0)	-38	2.4	13,500	454.4	454.0
	03-May-06	ND (1.0)	ND (1.0)	-68	0.2	13,800	456.3	455.3
	14-Jun-06	ND (1.0)	ND (1.0)	-99	2.7	15,600	456.9	456.8
MW-34-100	12-Jan-06	837	771	104	3.2	21,000	454.0	454.0
	12-Jan-06 FD	856	764	FD	FD	FD	FD	FD
	23-Jan-06	822	716	136	2.6	23,300	454.0	453.8
	08-Feb-06	797	706	65	2.5	20,100	453.8	453.8
	08-Feb-06 FD	785	708	FD	FD	FD	FD	FD
	22-Feb-06	752	831	225	3.0	21,900	---	453.6
	22-Feb-06 FD	748	846	FD	FD	FD	FD	FD
	08-Mar-06	800	857	-8	---	18,600	454.2	454.3
	08-Mar-06 FD	801	773	FD	FD	FD	FD	FD
	23-Mar-06	830	851	113	2.2	18,400	454.1	454.4
	23-Mar-06 FD	828	855	FD	FD	FD	FD	FD
	03-Apr-06	858	910	42	2.8	16,800	454.1	454.1
	21-Apr-06	852	873	---	---	---	---	455.8
	03-May-06	900	946	-10	0.3	18,200	455.2	454.8
	03-May-06 FD	920	946	FD	FD	FD	FD	FD
	17-May-06	935	1180	44	3.1	23,800	455.2	455.2
	17-May-06 FD	930	1190	FD	FD	FD	FD	FD
	31-May-06	960	929	104	3.1	16,100	456.6	456.3
	14-Jun-06	922	839	-2	3.2	20,800	456.5	456.6
	14-Jun-06 FD	921	864	FD	FD	FD	FD	FD
	28-Jun-06	976	1130	132	5.0	21,800	456.2	456.6
MW-36-090	12-Jan-06	245	223	13	2.8	19,500	452.8	453.4
	10-Feb-06	71.8	71.4	37	3.4	16,100	453.0	453.8
	07-Mar-06	33.0	27.5	42	3.1	14,700	453.7	454.4
	04-Apr-06	23.5	15.7	5	2.4	12,700	455.4	455.3
	01-May-06	22.8	18.3	24	4.4	11,400	454.3	454.6
	13-Jun-06	10.9	9.00	---	---	10,300	455.7	456.4
MW-36-100	12-Jan-06	287	288	28	2.9	21,600	452.8	453.3
	09-Feb-06	307	288	18	2.6	19,700	452.9	453.6
	13-Mar-06	540	531	-16	0.2	17,400	453.1	453.7
	05-Apr-06	554	492	24	0.1	15,300	453.7	455.3
	02-May-06	532	517	23	2.7	21,900	454.4	454.8

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, January 2006 through June 2006
Interim Measures Performance Monitoring
PG&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-36-100	15-Jun-06	496 J	465	7	3.6	18,200	455.4	456.2
MW-39-080	12-Jan-06	2280	2060	58	2.9	18,200	452.4	453.7
	10-Feb-06	1750	1610	66	2.6	18,900	453.0	454.0
	08-Mar-06	1420	1400	154	2.2	20,900	453.7	454.6
	06-Apr-06	1200	1120	86	2.0	15,800	454.8	456.2
	02-May-06	1410	1450	61	0.2	14,900	454.9	455.0
	14-Jun-06	1000 J	934	184	0.0	15,100	455.9	456.8
MW-39-100	12-Jan-06	4720	4280	121	3.6	22,900	452.6	453.7
	09-Feb-06	4500	4310	120	2.9	21,700	453.1	453.5
	13-Mar-06	4070	4640	51	0.7	20,400	452.9	453.9
	05-Apr-06	4470	4050	73	0.9	18,300	454.2	454.9
	05-Apr-06 FD	4460	4330	FD	FD	FD	FD	FD
	02-May-06	3680	3480	67	3.5	---	454.4	454.7
	14-Jun-06	3270	3250	79	3.4	23,100	455.8	455.7
MW-43-075	11-Jan-06	ND (1.0)	ND (1.0)	-134	3.2	18,400	453.7	453.7
	10-Feb-06	ND (1.0)	ND (1.0)	-154	3.0	18,500	454.4	454.3
	10-Mar-06	ND (1.0)	ND (1.0)	-149	0.1	14,400	455.4	455.4
	03-Apr-06	ND (1.0)	ND (1.0)	-148	2.3	15,000	454.9	454.2
	04-May-06	ND (1.0)	ND (1.0)	-167	0.3	15,400	456.6	456.1
MW-43-090	11-Jan-06	ND (1.0)	ND (1.0)	-89	3.3	26,500	454.1	453.8
	10-Feb-06	ND (1.0)	ND (1.0)	-112	2.8	25,900	453.9	454.2
	10-Mar-06	ND (2.0)	ND (1.0)	-116	0.0	21,100	455.5	455.1
	03-Apr-06	ND (1.0)	ND (1.0)	-97	2.3	21,100	455.2	454.3
	04-May-06	ND (1.0)	ND (1.0)	-124	0.4	22,400	456.6	455.9
MW-44-115	14-Mar-06	735 J	730	-11	1.5	16,500	452.8	454.2
	22-Mar-06	1440	1970	-74	3.0	---	453.4	453.8
	04-Apr-06	1550	1620	37	1.8	15,800	455.4	455.3
	04-Apr-06 FD	1570	1570	FD	FD	FD	FD	FD
	20-Apr-06	1680	1650	-38	0.4	11,400	455.0	455.4
	20-Apr-06 FD	1680	1610	FD	FD	FD	FD	FD
	26-Apr-06	1560	1580	-27	2.5	15,800	456.1	455.8
	04-May-06	1710	1870	-21	4.9	17,300	454.9	454.8
	10-May-06	1490	1550	7	2.2	22,700	454.9	454.7
	17-May-06	1560	1880	-10	1.9	19,600	455.5	456.1
	31-May-06	1610	1580	-11	0.2	13,100	455.0	455.5
	31-May-06 FD	1610	1600	FD	FD	FD	FD	FD
	13-Jun-06	1420	1350	-26	3.3	17,700	455.6	455.9
	28-Jun-06	1600	1830	-37	4.0	16,800	455.6	456.5
MW-44-125	09-Mar-06	66.6 R	67.5 R	-419	2.6	13,500	453.0	454.1
	22-Mar-06	362	430	-280	1.5	15,000	453.9	453.7
	04-Apr-06	372	374	10	1.9	15,600	455.9	455.5
	20-Apr-06	461	504	-138	0.0	11,400	455.3	455.9
	26-Apr-06	480	485	-147	2.5	16,200	456.4	456.0

Refer to table footnotes for data qualifier explanation.

TABLE B-1

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

Interim Measures Performance Monitoring

PG&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	26-Apr-06	FD	479	493	FD	FD	FD	FD	
	04-May-06		584	592	-144	4.4	17,200	455.7	455.4
	10-May-06		634 J	667	-96	2.2	23,000	455.5	454.9
	17-May-06		612	740	-103	1.7	19,700	455.9	456.1
	31-May-06		413	398	-95	0.4	13,600	455.6	455.6
	13-Jun-06		ND (1.0)	ND (1.0)	-131	4.3	12,200	456.6	456.1
	13-Jun-06	FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	28-Jun-06		ND (1.0)	3.20	-186	4.3	13,000	455.9	456.5
MW-45-095a	24-Mar-06		259	216	-20	2.3	16,100	453.3	454.6
MW-45-095b	24-Mar-06		332	327	-12	2.1	16,700	452.0	454.5
MW-46-175	14-Mar-06		287	279	-44	2.2	19,500	455.2	454.5
	24-Mar-06		213	173	-93	1.9	19,900	456.4	454.7
	07-Apr-06		208 J	186	-116	2.1	18,500	455.8	455.9
	04-May-06		222	237	-27	4.8	20,800	455.2	454.7
	18-May-06		227	268	-17	2.6	20,500	455.4	454.8
	31-May-06		139 J	169	37	1.2	15,900	455.7	455.3
	15-Jun-06		233	211	-16	3.2	19,900	456.5	456.9
	30-Jun-06		112	160	56	6.2	21,800	456.0	M
	30-Jun-06	FD	111	164	FD	FD	FD	FD	FD
MW-46-205	14-Mar-06		ND (1.0)	ND (1.0)	-117	2.3	22,600	455.1	454.9
	24-Mar-06		ND (1.0)	ND (1.0)	-202	1.7	24,000	456.5	454.4
	07-Apr-06		ND (1.0) J	ND (1.0)	-200	1.9	22,400	460.2	456.2
	04-May-06		ND (1.0)	ND (1.0)	-177	4.6	25,900	455.5	454.8
	15-Jun-06		ND (1.0)	1.80	-147	2.9	24,100	456.8	457.2
MW-49-135	25-Apr-06		ND (1.0) J	ND (1.0)	-167	2.4	18,800	455.8	455.2
	18-May-06		ND (1.0)	ND (1.0)	-178	2.3	17,100	456.6	455.8
MW-49-275	25-Apr-06		ND (1.0)	ND (1.0)	-143	3.3	29,400	455.4	454.9
	18-May-06		ND (1.0)	ND (1.0)	-214	2.2	26,700	456.4	455.1
MW-49-365	26-Apr-06		ND (2.0)	ND (1.0)	-244	2.2	37,600	458.0	455.1
	16-May-06		ND (2.0)	ND (1.0)	-192	1.8	44,900	458.3	455.5

Refer to table footnotes for data qualifier explanation.

TABLE B-1

Groundwater Sampling Results for Floodplain Monitoring Wells, January 2006 through June 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

NOTES:

ND = not detected at listed reporting limit (RL)

FD = field duplicate

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

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.

TABLE B-2

Groundwater Sampling Results for Other Monitoring Wells in PMP Area, January 2006 through June 2006
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	18-Apr-06	1210	1300	91.0	7.28	3460
	01-May-06	1250	1280	-38	---	3840
MW-19	09-Mar-06	1090	1080	227	7.43	3850
	02-May-06	1130	1120	38.0	3.30	2450
MW-20-070	10-Mar-06	5170	4510	228	7.32	5830
	05-May-06	4100	4440	97.0	7.21	3050
MW-21	09-Mar-06	---	---	---	4.20	15100
	02-May-06	ND (1.0)	ND (1.0)	-77	---	11500
MW-22	15-Mar-06	ND (2.0)	ND (1.0)	---	8.54	34800
	03-May-06	ND (1.0) J	ND (1.0)	-88	4.14	34200
MW-24A	06-Mar-06	3490	3980	239	5.17	3140
MW-25	09-Mar-06	1360	1430	210	7.40	2750
	03-May-06	1390	1300	98.0	7.72	2110
	03-May-06 FD	1280	1310	FD	FD	FD
MW-26	08-Mar-06	3280	3020	170	9.16	3840
	01-May-06	3210	3110	---	---	3290
MW-31-060	15-Mar-06	1020	1010	217	7.01	2750
	15-Mar-06 FD	1000	1010	FD	FD	FD
	01-May-06	952	959	---	---	2740
MW-35-060	14-Mar-06	31.6	24.3	42.0	2.92	---
	01-May-06	25.7	26.4	-37	---	6770
MW-47-055	23-Mar-06	10.9 J	7.90	-94	2.98	5800
	16-May-06	24.0	27.3	22.0	2.89	4430
TW-02S	15-Mar-06	2720	2870	-38	7.53	3200
	03-May-06	2400	2600	80.0	6.75	3150
Middle-Depth Wells						
MW-20-100	10-Mar-06	10100	10200	198	3.77	4360
	05-May-06	10400	12100	98.0	5.20	3760
MW-50-095	09-May-06	199	194	30.0	3.00	5480
	24-May-06	218	221	50.0	3.42	---
MW-51	12-May-06	4370	4630	92.0	2.51	12100
	30-May-06	4130	4530	17.0	1.53	10600
Deep Wells						
MW-20-130	10-Mar-06	10700	10600	213	3.49	14500
	05-May-06	12000	13700	97.0	2.21	12400
MW-24B	07-Mar-06	5650	5970	199	2.59	17200
MW-31-135	15-Mar-06	173	186	33.0	3.05	13400
	09-May-06	154	146 LF	82.0	2.75	15900
MW-35-135	10-Mar-06	28.0	24.0	103	2.44	12400
	10-Mar-06 FD	26.5	25.7	FD	FD	FD
	02-May-06	21.0	20.7	0.00	2.70	13000

TABLE B-2

Groundwater Sampling Results for Other Monitoring Wells in PMP Area, January 2006 through June 2006
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-47-115	23-Mar-06	ND (2.0) J	ND (1.0)	-161	2.32	15600
	16-May-06	1.40	5.10	-67	1.93	18400
MW-50-200	09-May-06	7750	7360	-11	1.91	20200
	24-May-06	5810	5910	60.0	4.11	37000
TW-02D	15-Mar-06	1360	1360	5.00	5.20	8470
	03-May-06	1120	1120	82.0	6.10	8490
TW-04	18-May-06	1.00	6.40	-97	0.56	15600
	05-Jun-06	ND (1.0)	4.10	-131	0.00	18300
TW-05	10-May-06	1.10 J	1.30	-161	0.60	15100
	01-Jun-06	ND (1.0) J	ND (1.0)	17.0	1.51	10600

NOTES:

Analytical results are validated.

ND = not detected at listed reporting limit (RL)

FD = field duplicate

J = concentration or RL estimated by laboratory or data validation

(---) = 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.

MW-21 was not sampled in March 2006 because the well was purged dry and did not produce enough water within 24 hours.

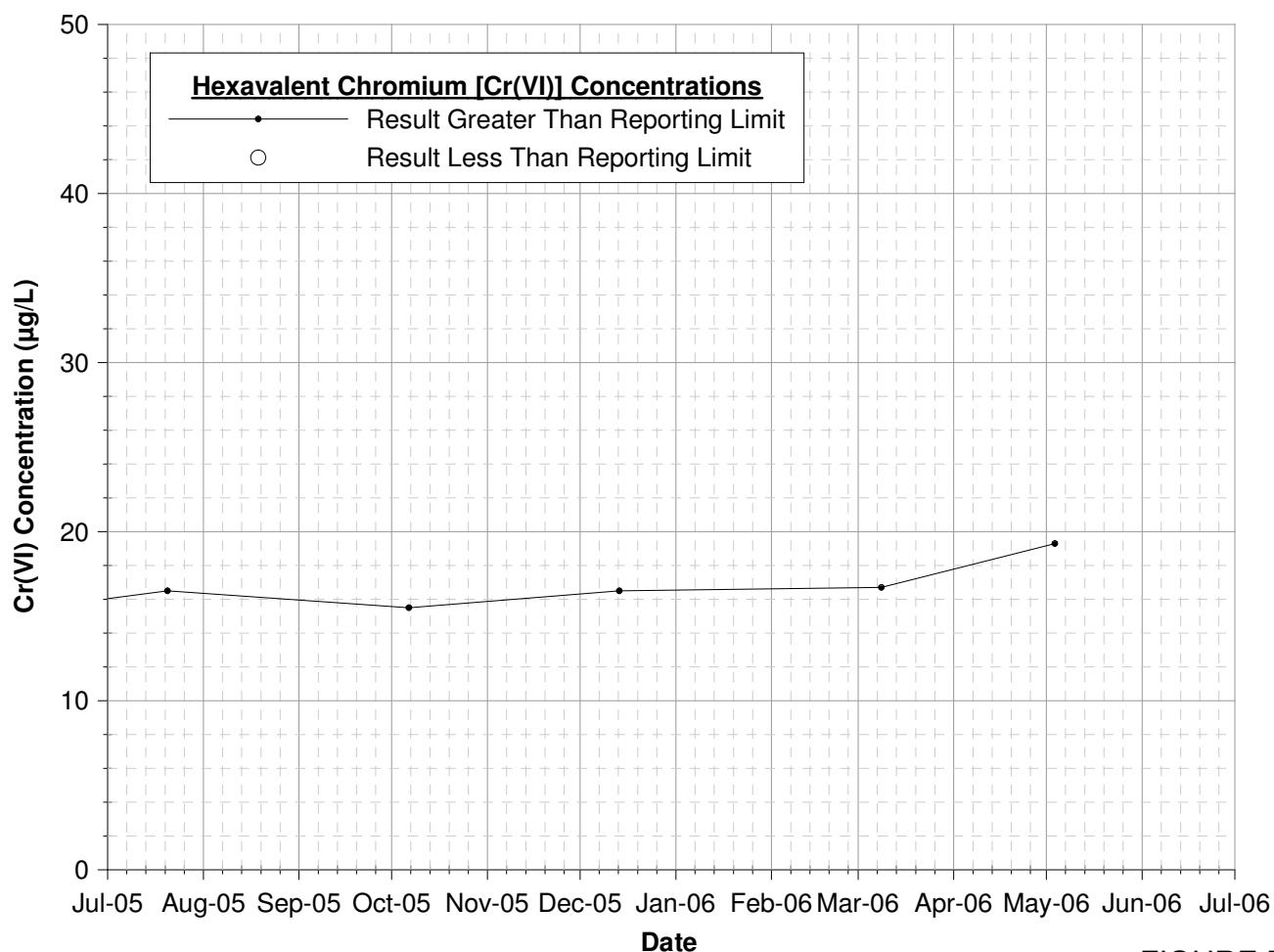
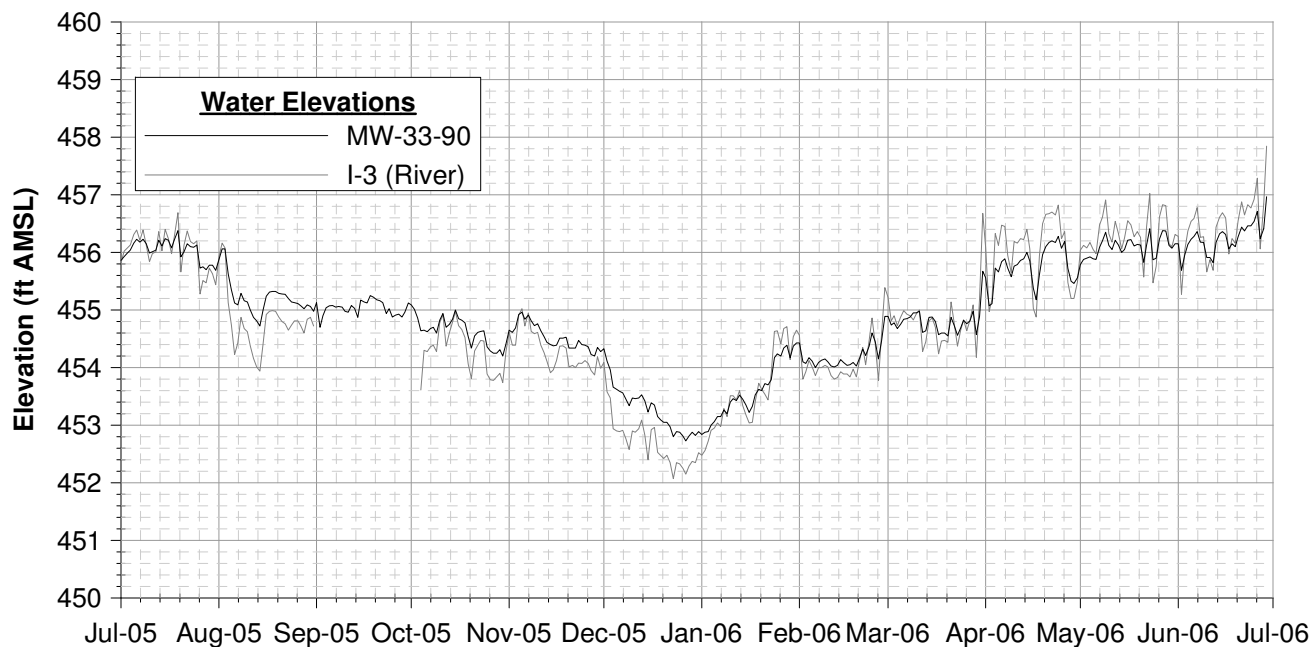


FIGURE B-1
MW-33-90 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 6/29/2006

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. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
4. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.

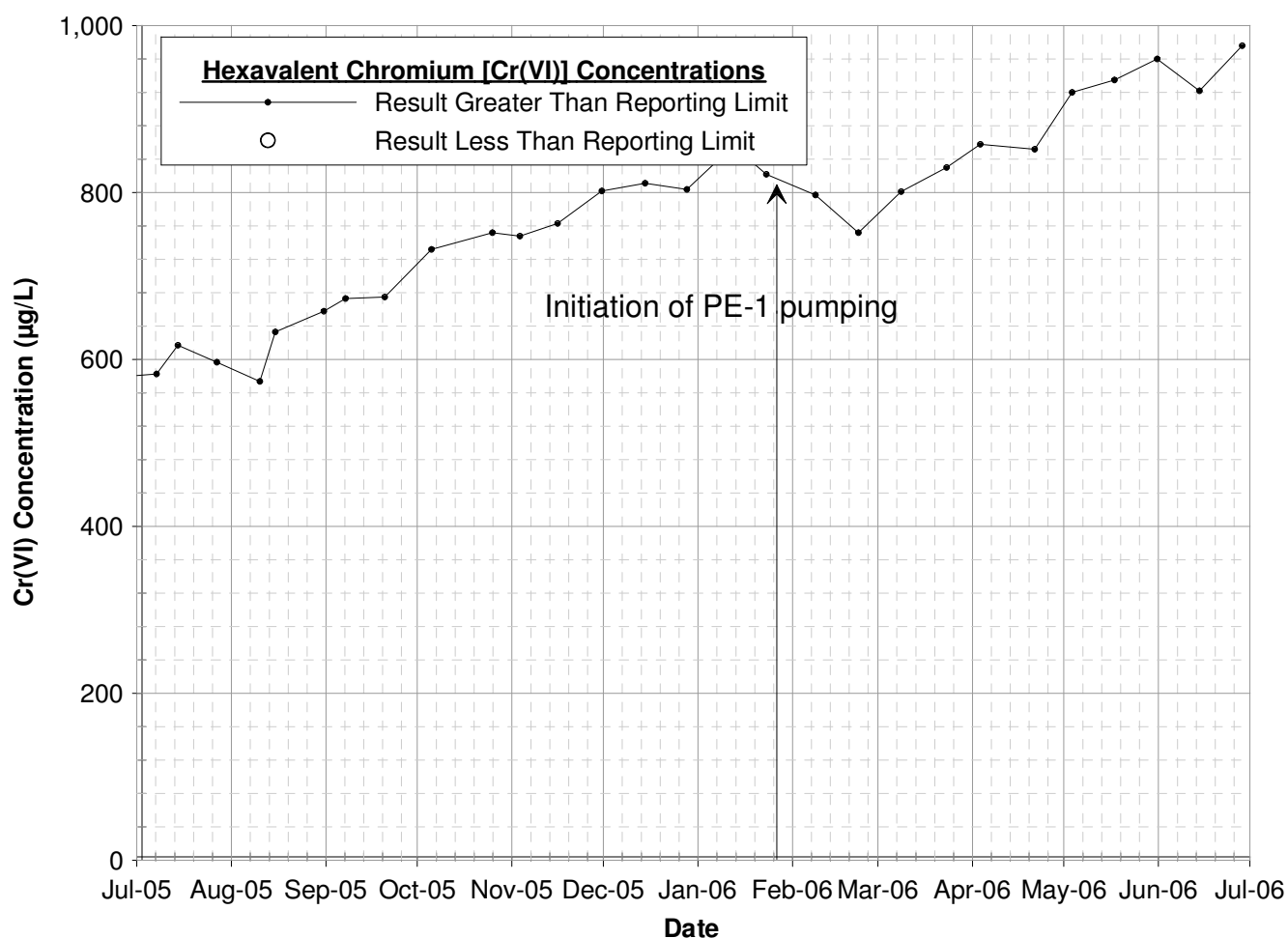
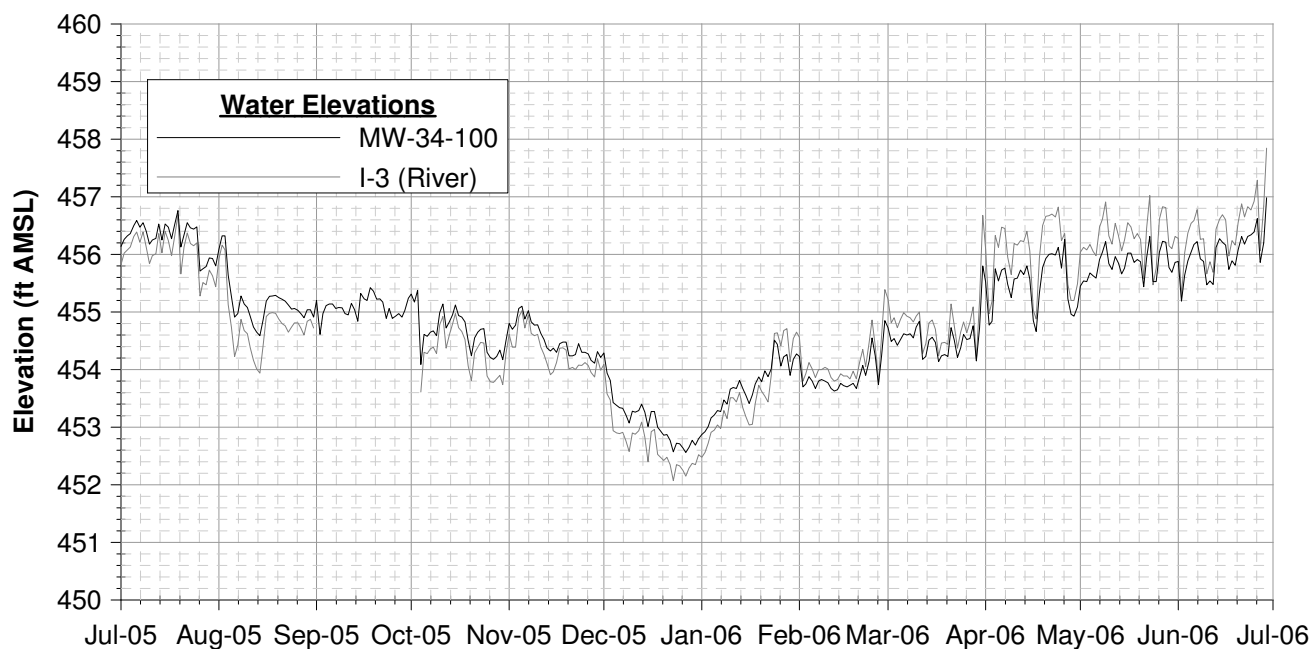


FIGURE B-2
MW-34-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 6/29/06
 INTERIM MEASURES PERFORMANCE MONITORING
 PG&E TOPOCK COMPRESSOR STATION
 NEEDLES, CALIFORNIA

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. Data subject to review.
4. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
5. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.

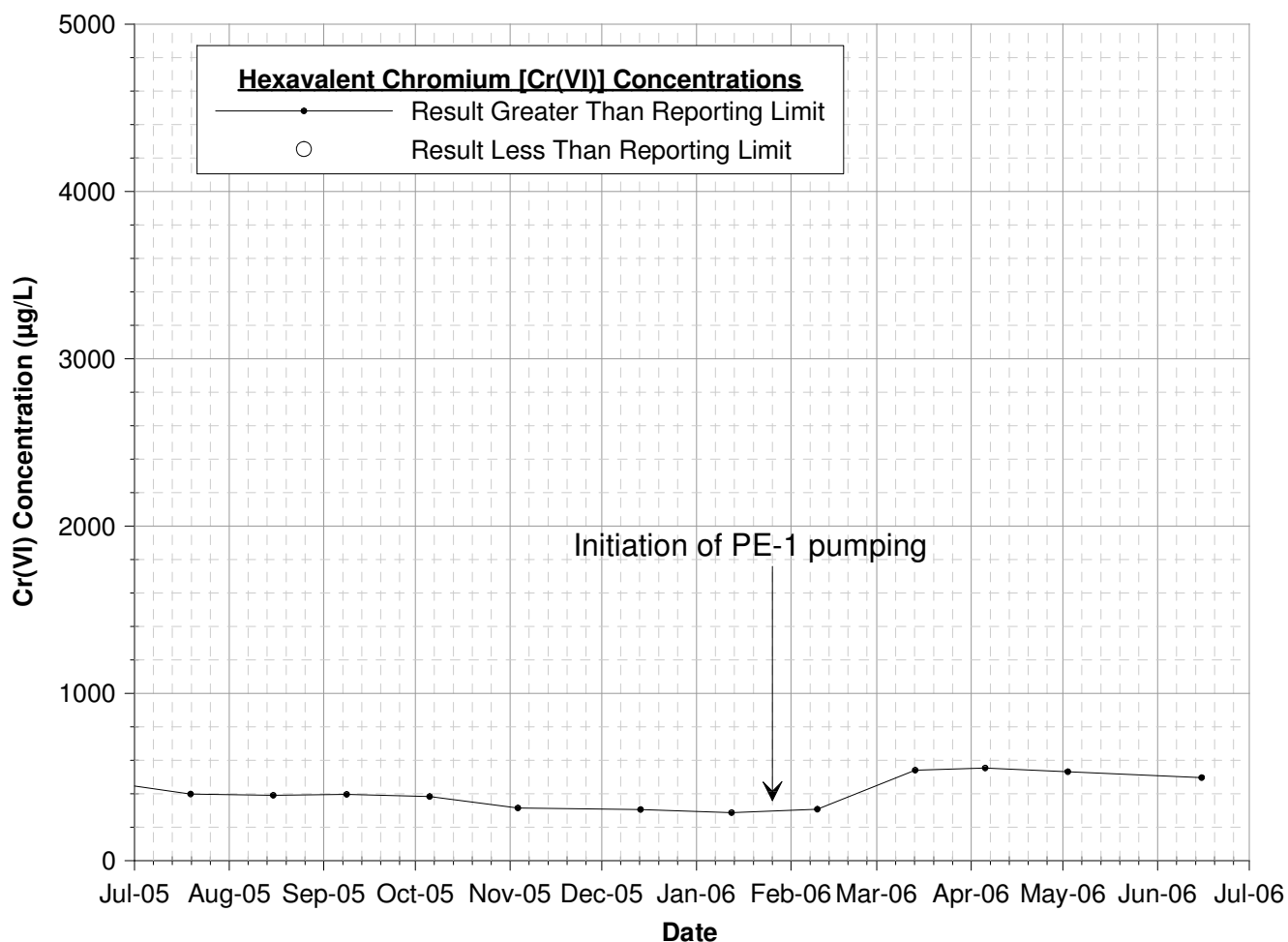
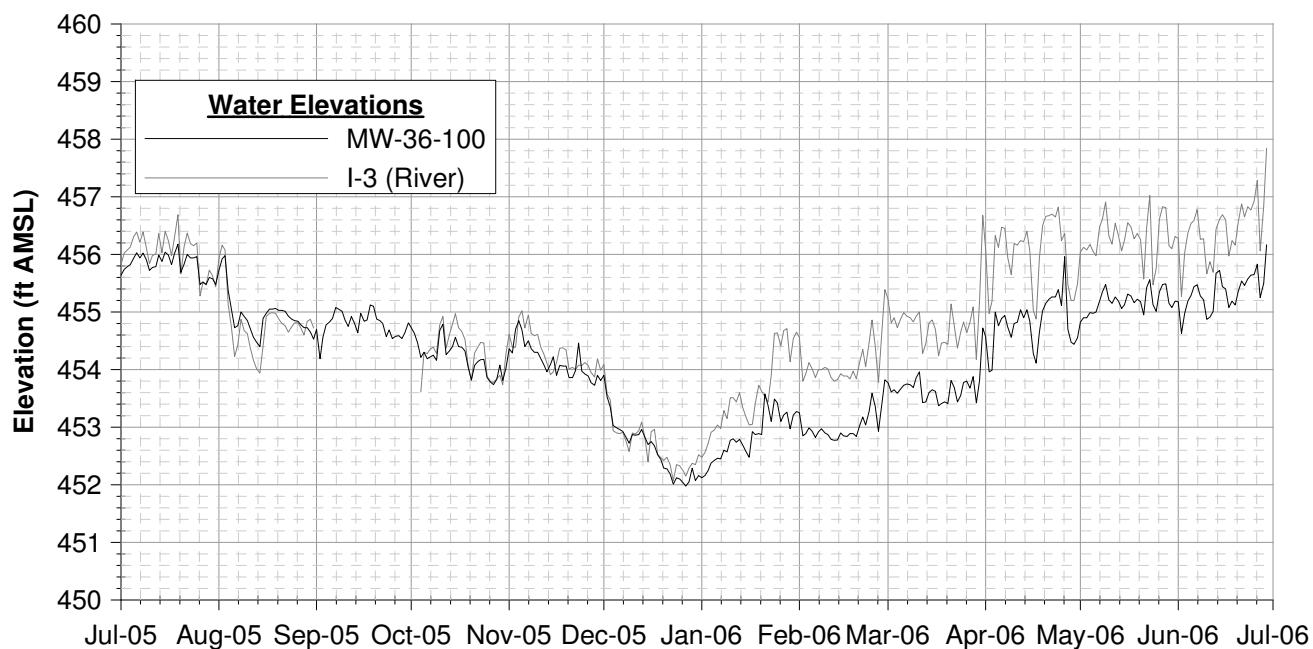


FIGURE B-3
MW-36-100 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 6/29/06
 INTERIM MEASURES PERFORMANCE MONITORING
 PG&E TOPOCK COMPRESSOR STATION
 NEEDLES, CALIFORNIA

Notes

1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
4. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.

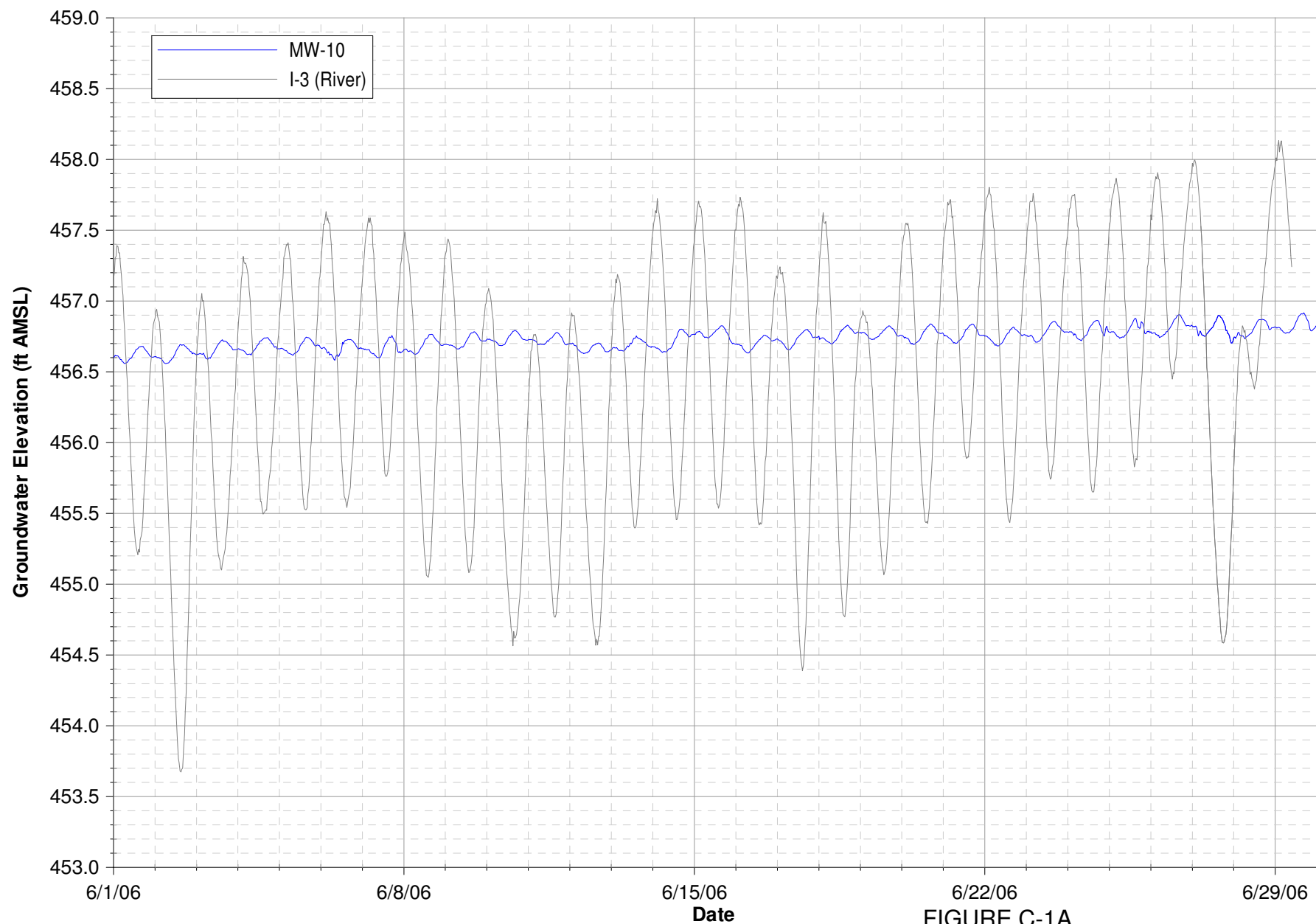
Appendix C
Hydraulic Monitoring Data for Reporting Period

TABLE C-1

Monthly Average, Minimum, and Maximum Groundwater Elevations, June 2006
 Interim Measures Performance Monitoring
 PG&E Topock Compressor Station

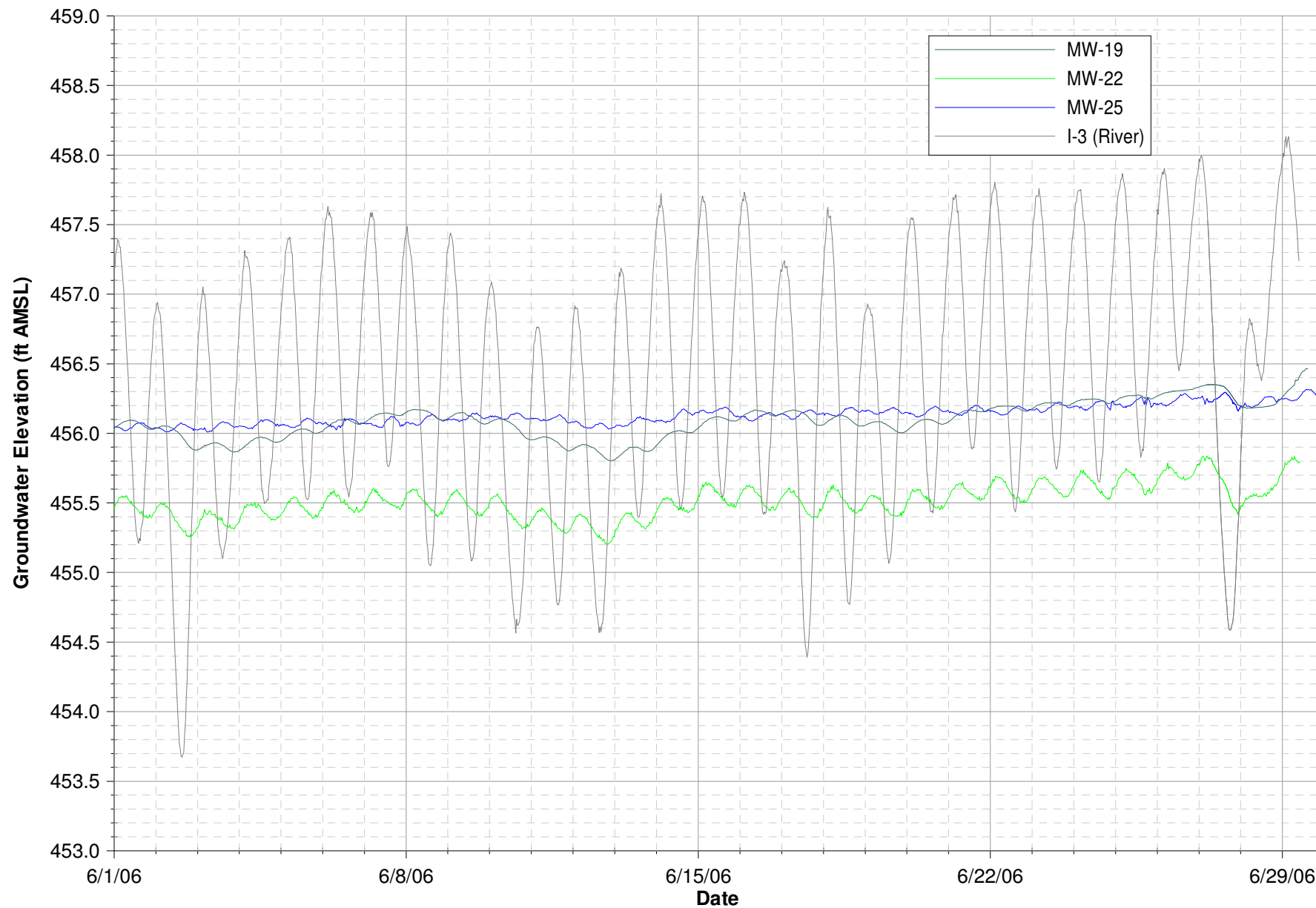
Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	Aquifer Depth
I-3	456.40	455.26	457.50	River Station
MW-10	456.72	456.66	456.79	Shallow
MW-19	456.09	456.04	456.12	Shallow
MW-20-070	454.85	454.75	454.98	Shallow
MW-20-100	454.45	454.25	454.84	Mid-Depth
MW-20-130	454.16	453.88	454.71	Deep
MW-22	455.51	455.42	455.60	Shallow
MW-25	456.13	456.09	456.17	Shallow
MW-26	455.75	455.69	455.81	Shallow
MW-27-020	456.16	455.78	456.54	Shallow
MW-27-060	456.27	455.61	456.92	Mid-Depth
MW-27-085	456.19	455.54	456.83	Deep
MW-28-025	456.43	455.92	456.93	Shallow
MW-28-090	456.12	455.36	456.85	Deep
MW-29	456.19	456.13	456.22	Shallow
MW-30-030	455.71	455.51	455.90	Shallow
MW-30-050	455.76	455.21	456.29	Mid-Depth
MW-31-060	455.80	455.67	455.94	Shallow
MW-31-135	455.09	454.83	455.46	Deep
MW-32-020	455.57	455.41	455.72	Shallow
MW-32-035	455.83	455.47	456.18	Shallow
MW-33-040	456.19	455.84	456.53	Shallow
MW-33-090	456.22	455.82	456.63	Mid-Depth
MW-33-150	456.30	455.89	456.70	Deep
MW-33-210	456.55	456.21	456.89	Deep
MW-34-055	456.29	455.50	457.05	Mid-Depth
MW-34-080	456.24	455.48	456.97	Deep
MW-34-100	456.00	455.29	456.69	Deep
MW-35-060	456.51	456.17	456.86	Shallow
MW-35-135	456.12	455.92	456.33	Deep
MW-36-020	455.84	455.32	456.33	Shallow
MW-36-040	455.98	455.38	456.56	Shallow
MW-36-050	455.93	455.31	456.53	Mid-Depth
MW-36-070	455.90	455.26	456.51	Mid-Depth
MW-36-090	455.21	454.67	455.82	Deep
MW-36-100	455.32	454.77	455.92	Deep
MW-39-040	455.65	455.13	456.15	Shallow
MW-39-050	455.70	455.19	456.19	Mid-Depth
MW-39-060	455.58	455.10	456.05	Mid-Depth
MW-39-070	455.27	454.86	455.74	Mid-Depth
MW-39-080	455.24	454.83	455.71	Deep
MW-39-100	455.31	454.89	455.78	Deep
MW-42-030	455.67	455.25	456.07	Shallow
MW-42-055	455.79	455.36	456.21	Mid-Depth
MW-42-065	455.90	455.47	456.31	Mid-Depth
MW-43-025	456.39	455.73	457.06	Shallow
MW-43-075	456.55	455.84	457.27	Deep
MW-43-090	456.76	456.05	457.49	Deep
MW-44-070	455.90	454.18	456.68	Mid-Depth
MW-44-115	455.57	454.99	456.14	Deep
MW-44-125	455.70	455.12	456.25	Deep
MW-45-095a	454.53	453.79	455.82	Deep
MW-46-175	456.12	455.63	456.60	Deep
MW-46-205	456.35	455.96	456.75	Deep
MW-47-055	456.27	456.10	456.45	Shallow
MW-47-115	456.32	456.11	456.55	Deep
MW-49-135	456.72	456.24	457.19	Deep
MW-49-275	457.03	456.75	457.30	Deep
MW-49-365	458.45	458.21	458.69	Deep
MW-50-095	456.06	455.95	456.19	Deep
MW-50-200	456.33	456.16	456.52	Deep
MW-51	455.82	455.77	455.87	Mid-Depth
RRB	456.63	455.53	457.49	River Station
TW-02D	454.86	454.20	457.00	Deep
TW-04	456.62	456.34	456.85	Deep
TW-05	456.06	455.95	456.19	Deep

Note: INC Data Incomplete or unavailable over reporting period.



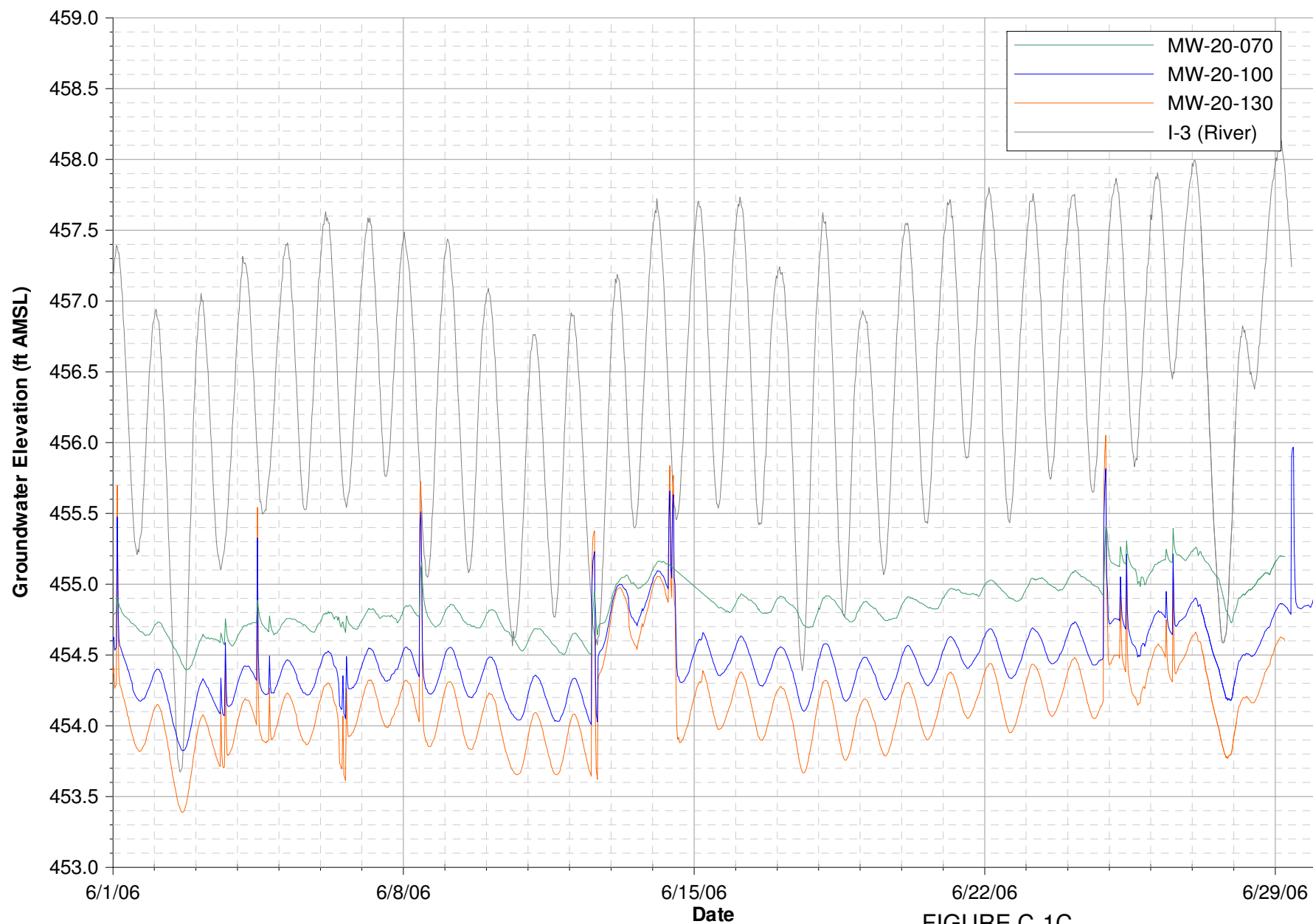
Note: Data subject to review.

FIGURE C-1A
MW-10 HYDROGRAPH
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA



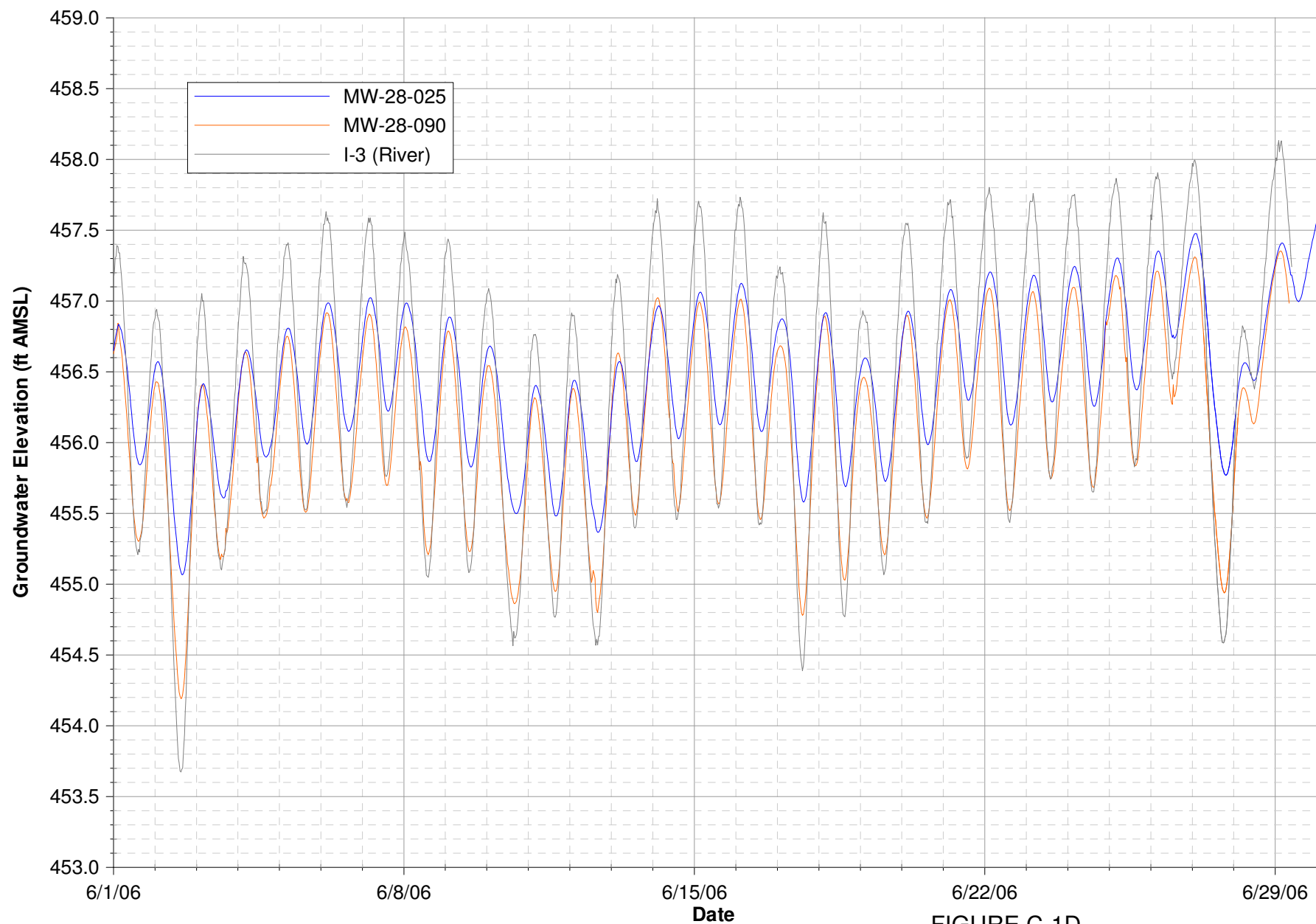
Note: Data subject to review.
MW-19 transducer failed 5/6/06, new transducer installed 5/10/06.

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



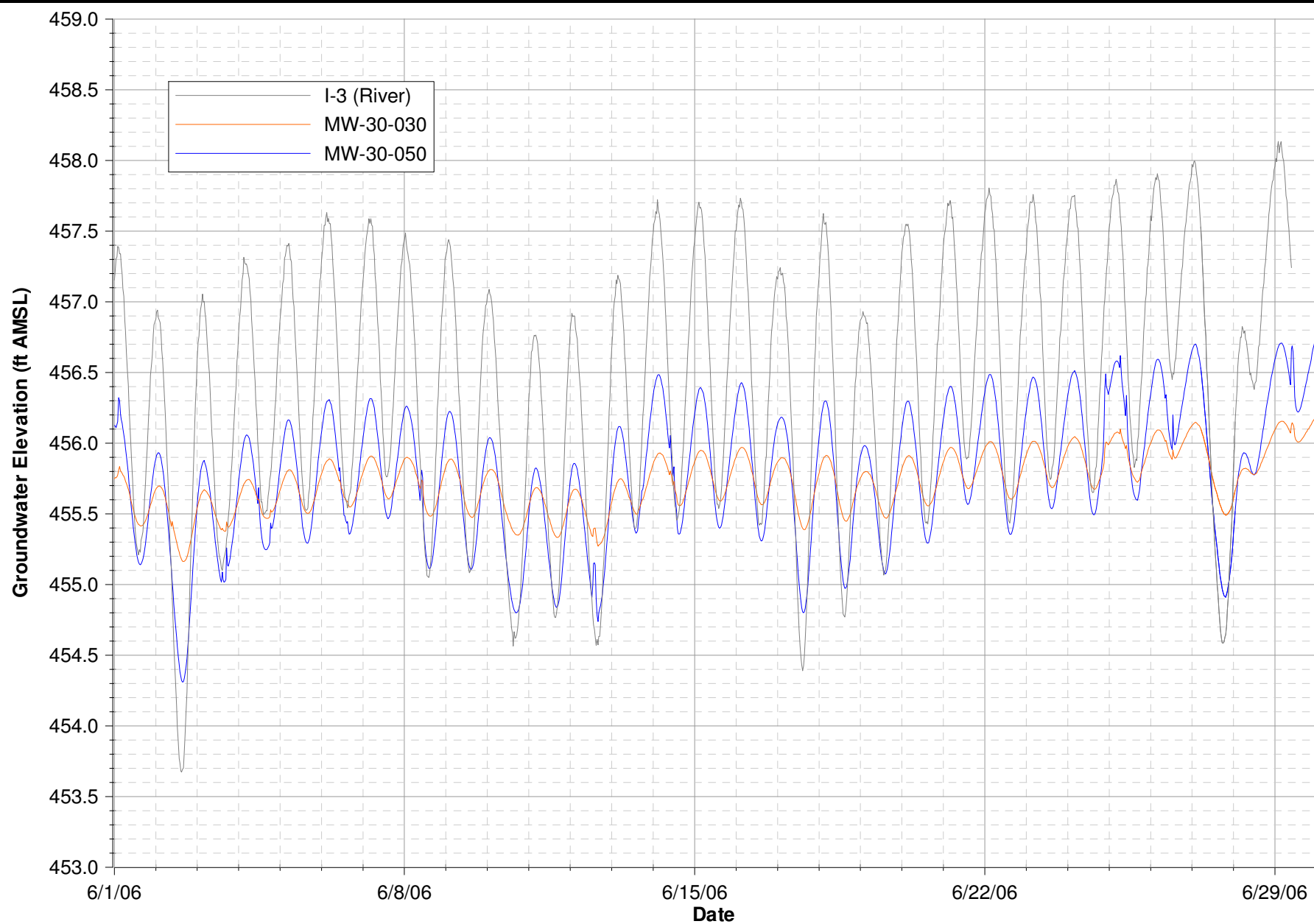
Note: Data subject to review.

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



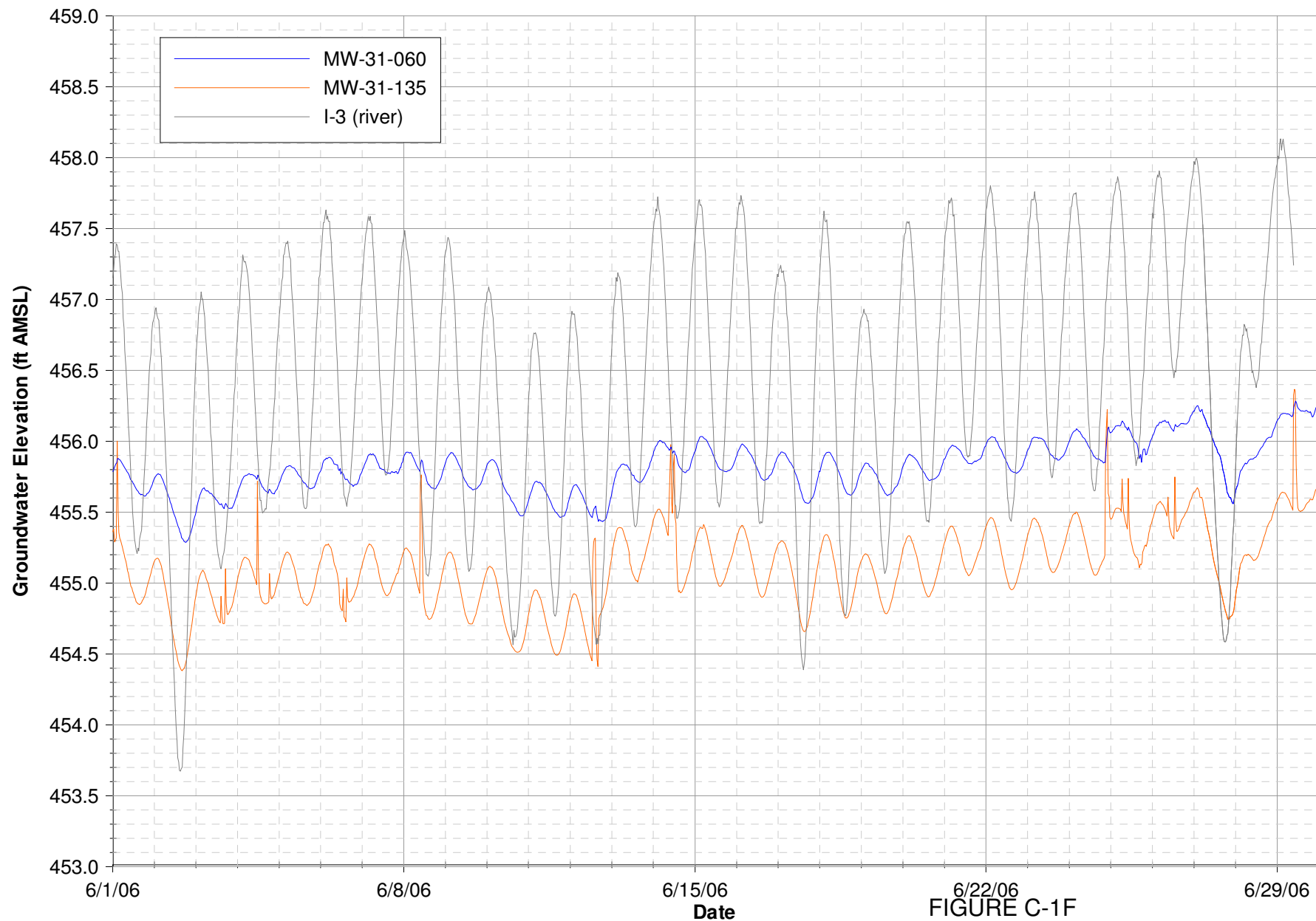
Note: Data subject to review.

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



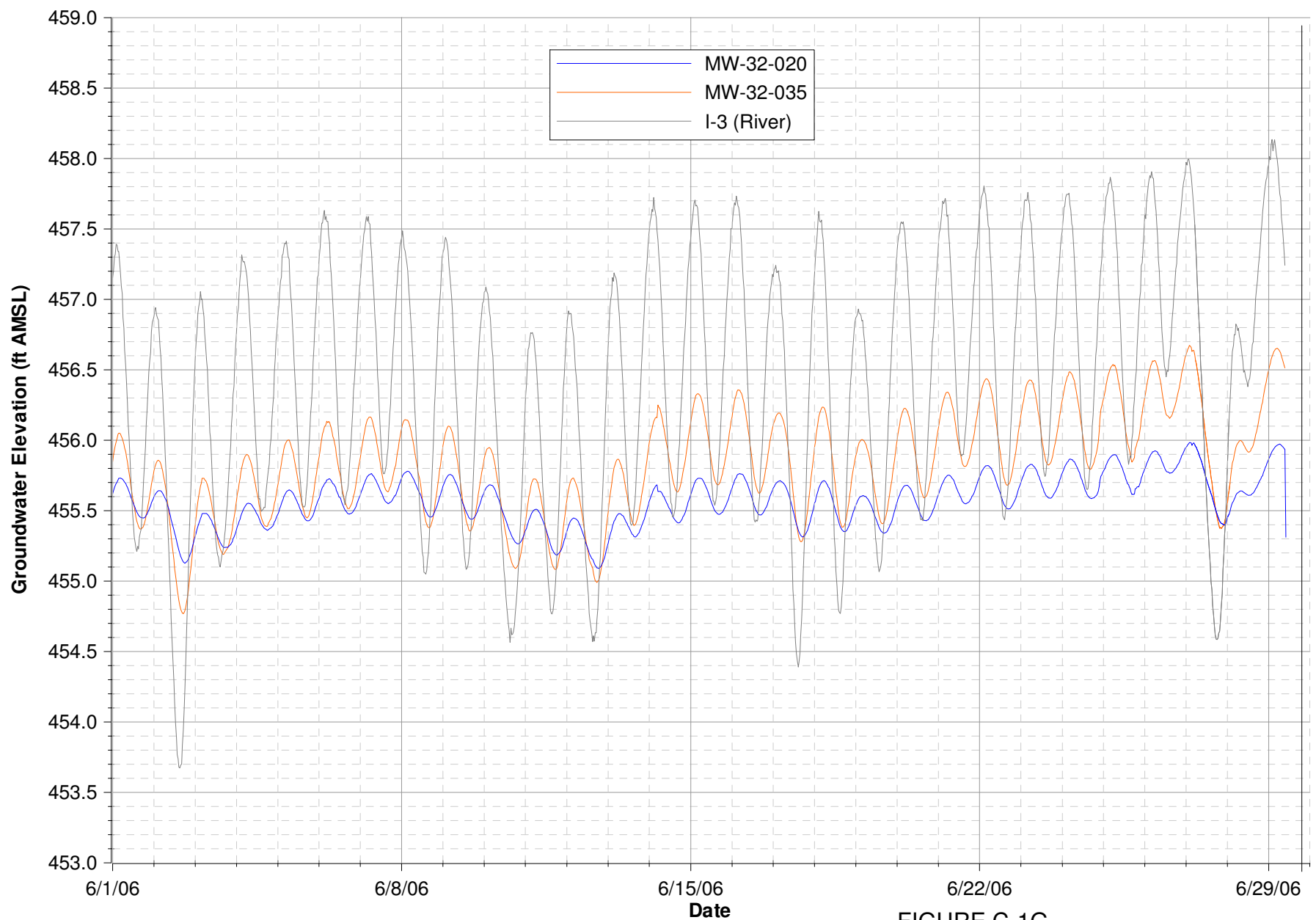
Note: Data subject to review.

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



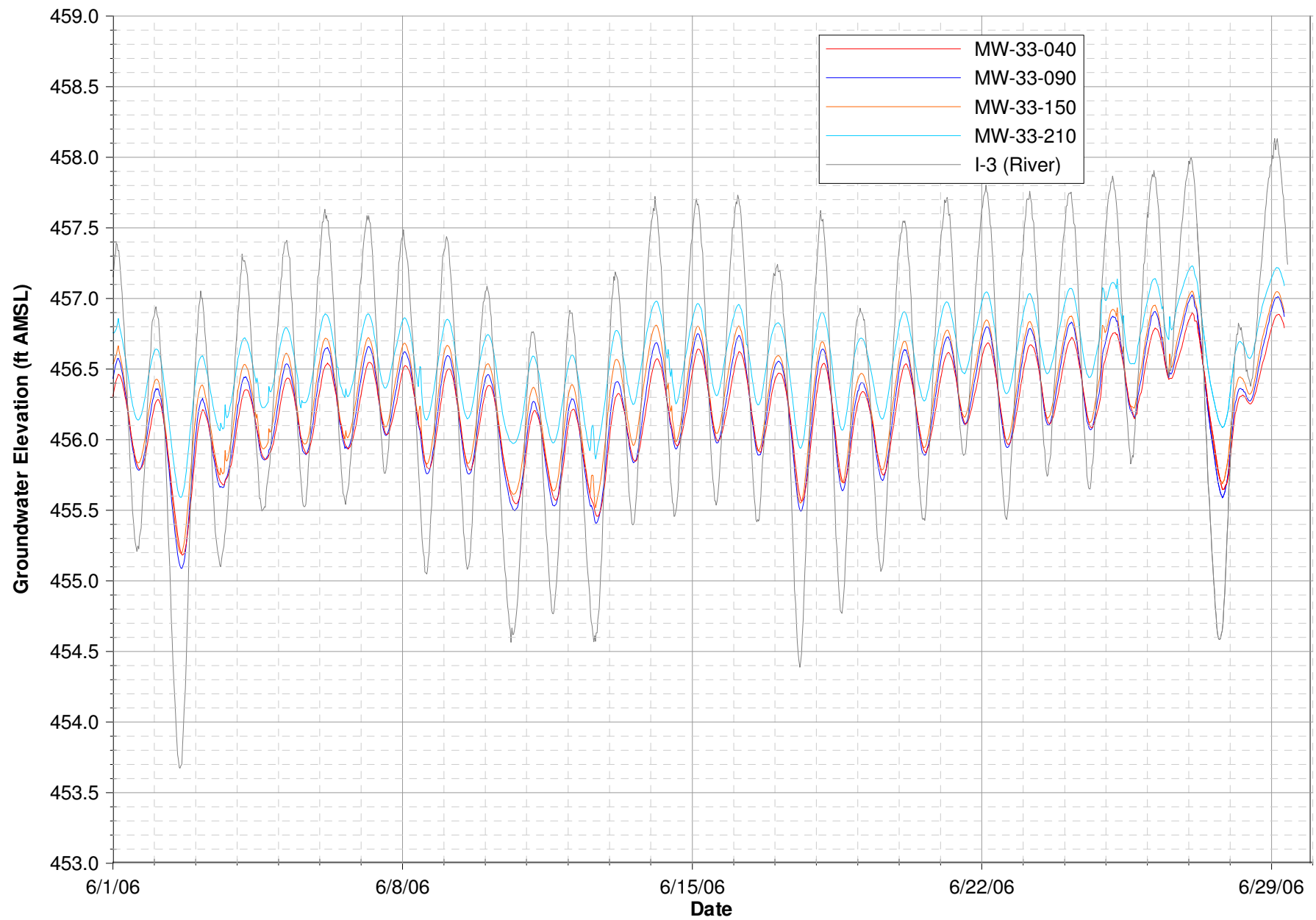
Note: Data subject to review.

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



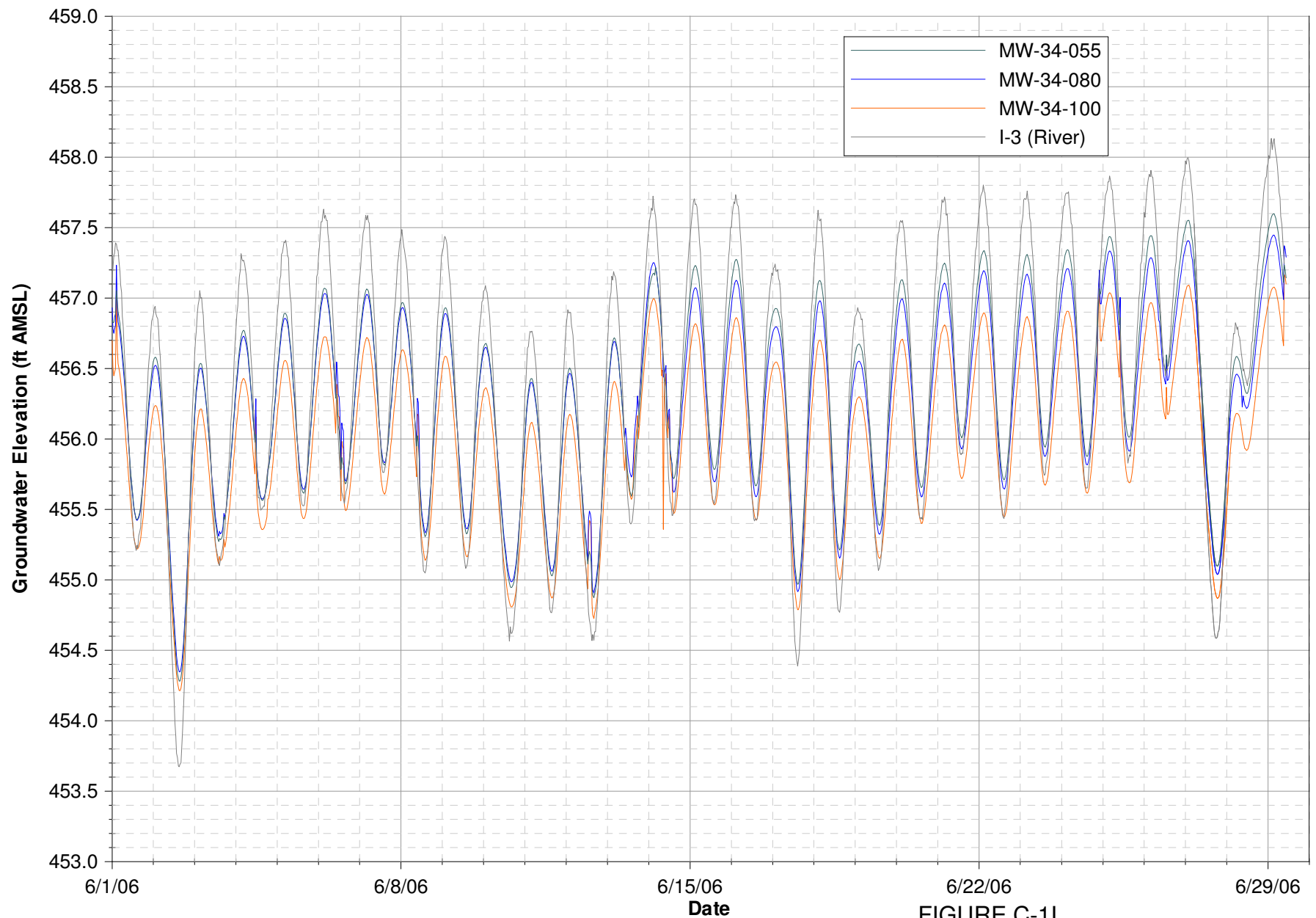
Note: Data subject to review.

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



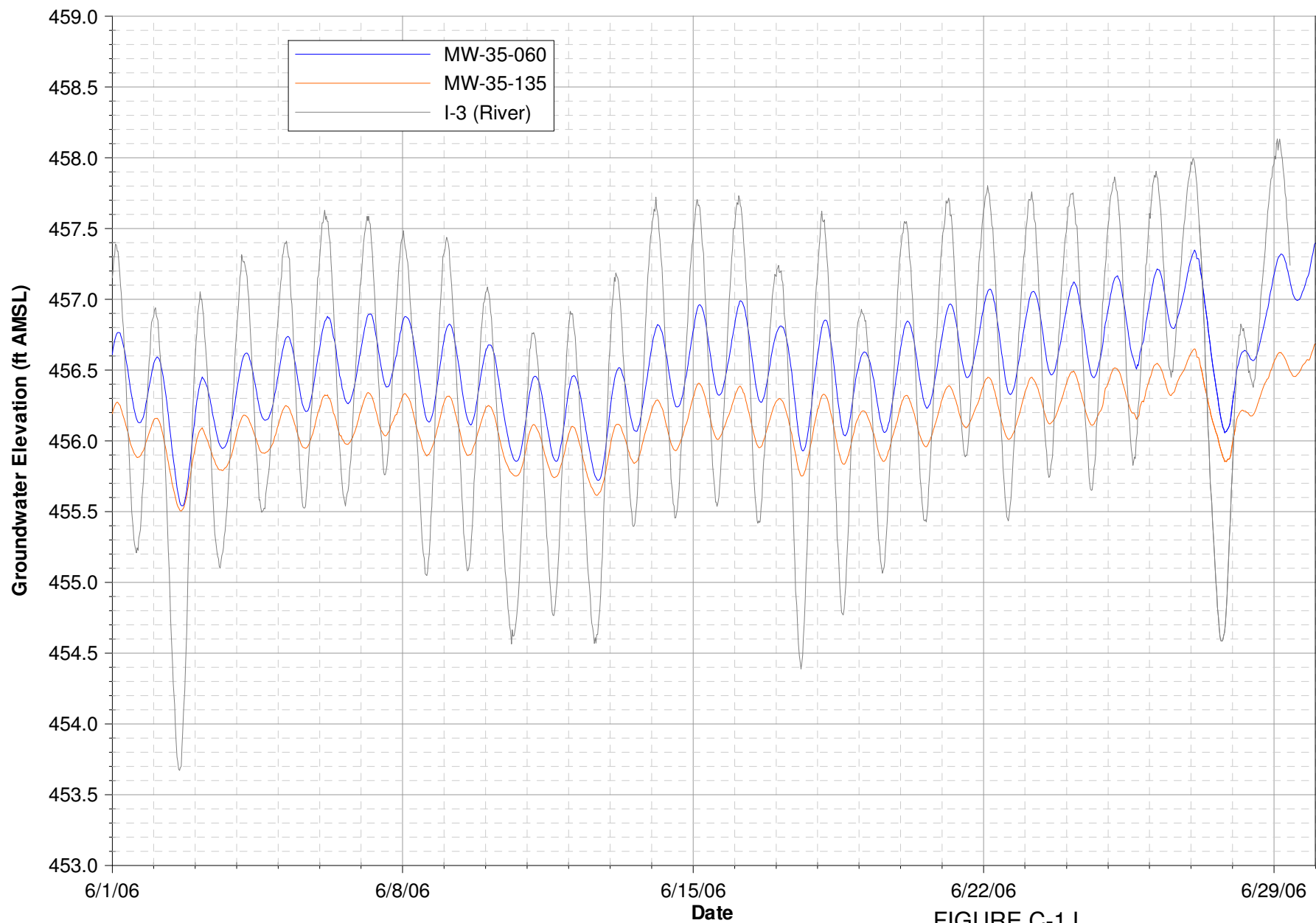
Note: Data subject to review.

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



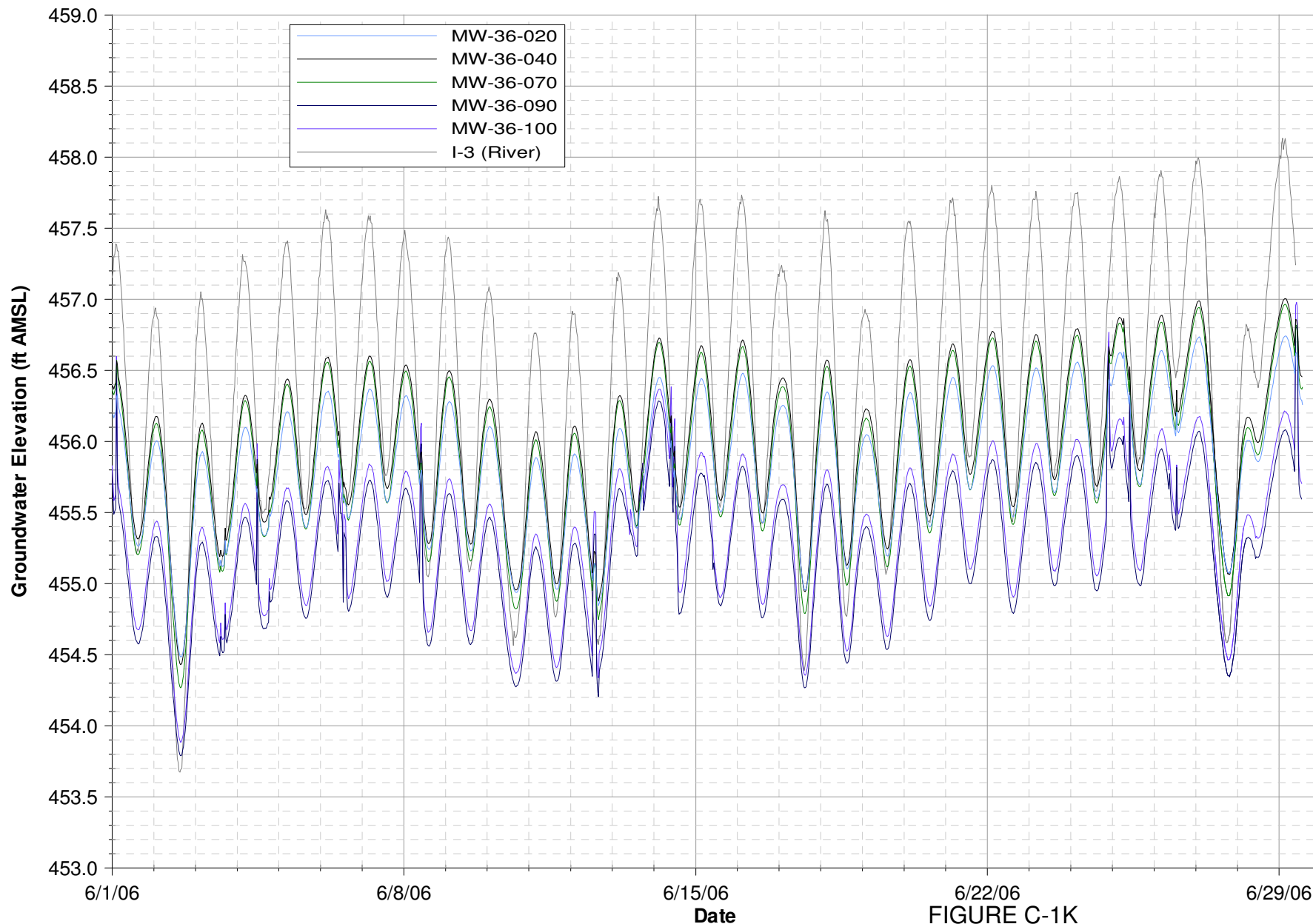
Note: Data subject to review.

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



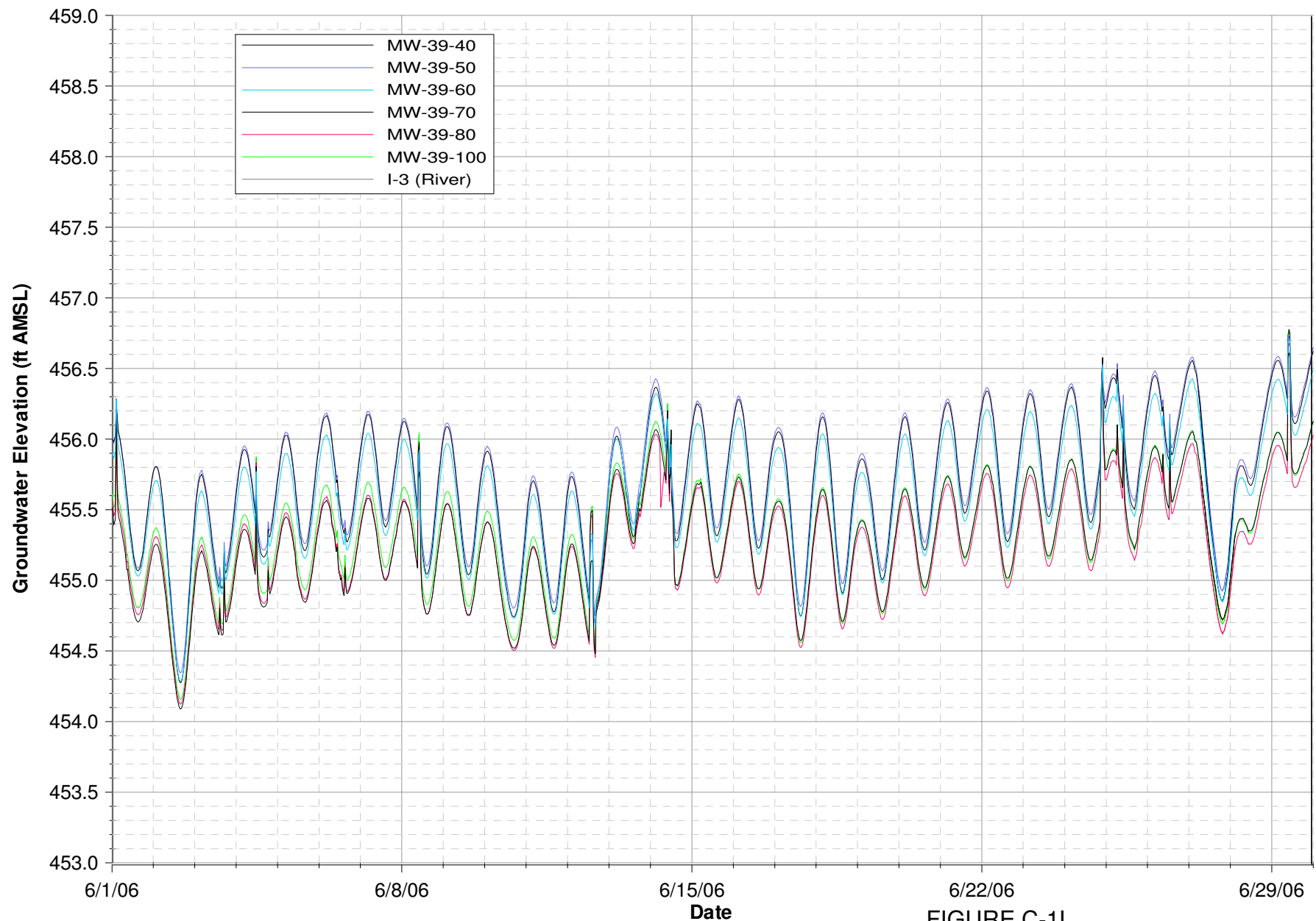
Note: Data subject to review.

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



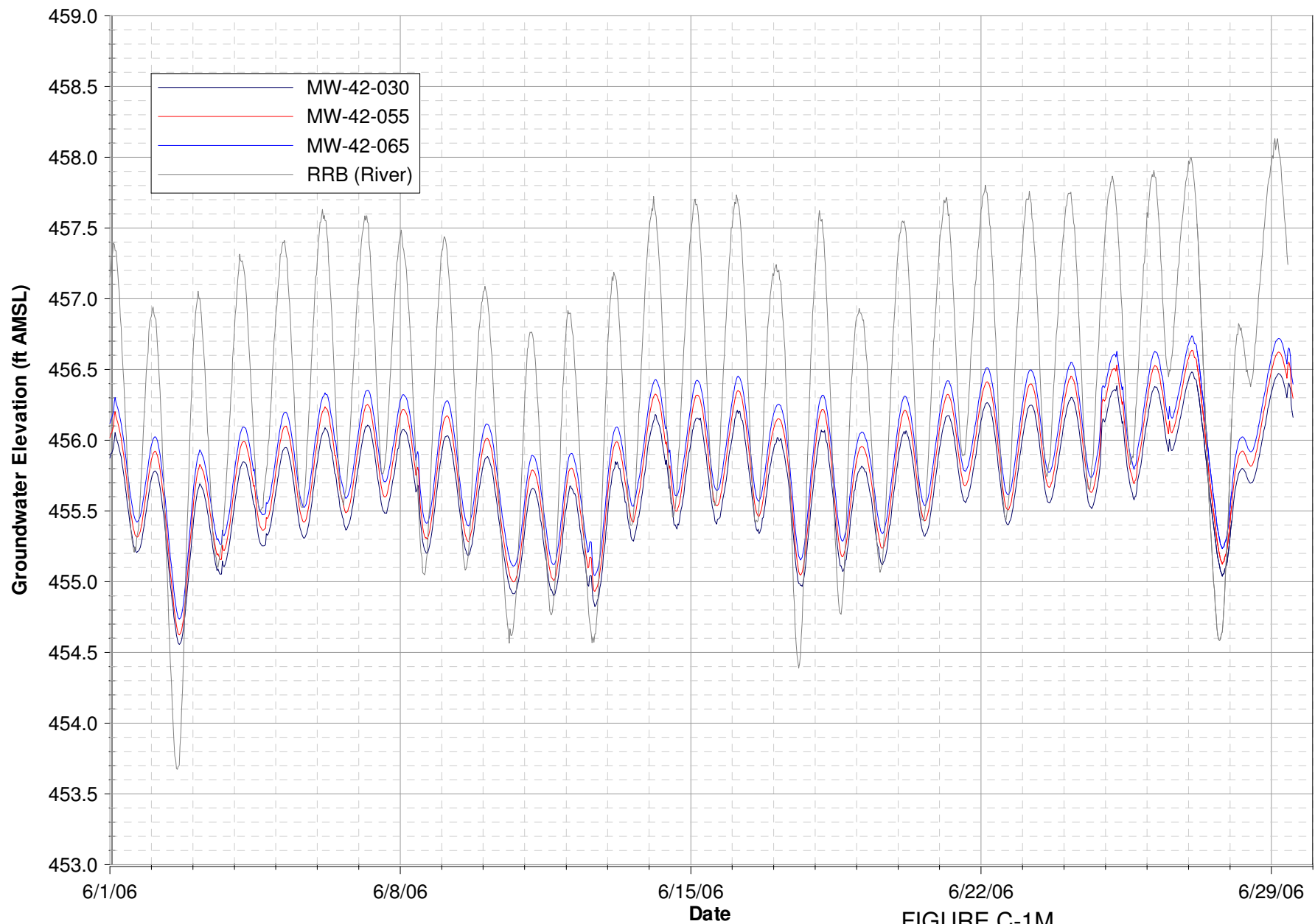
Note: Data subject to review.

FIGURE C-1K
MW-36 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA



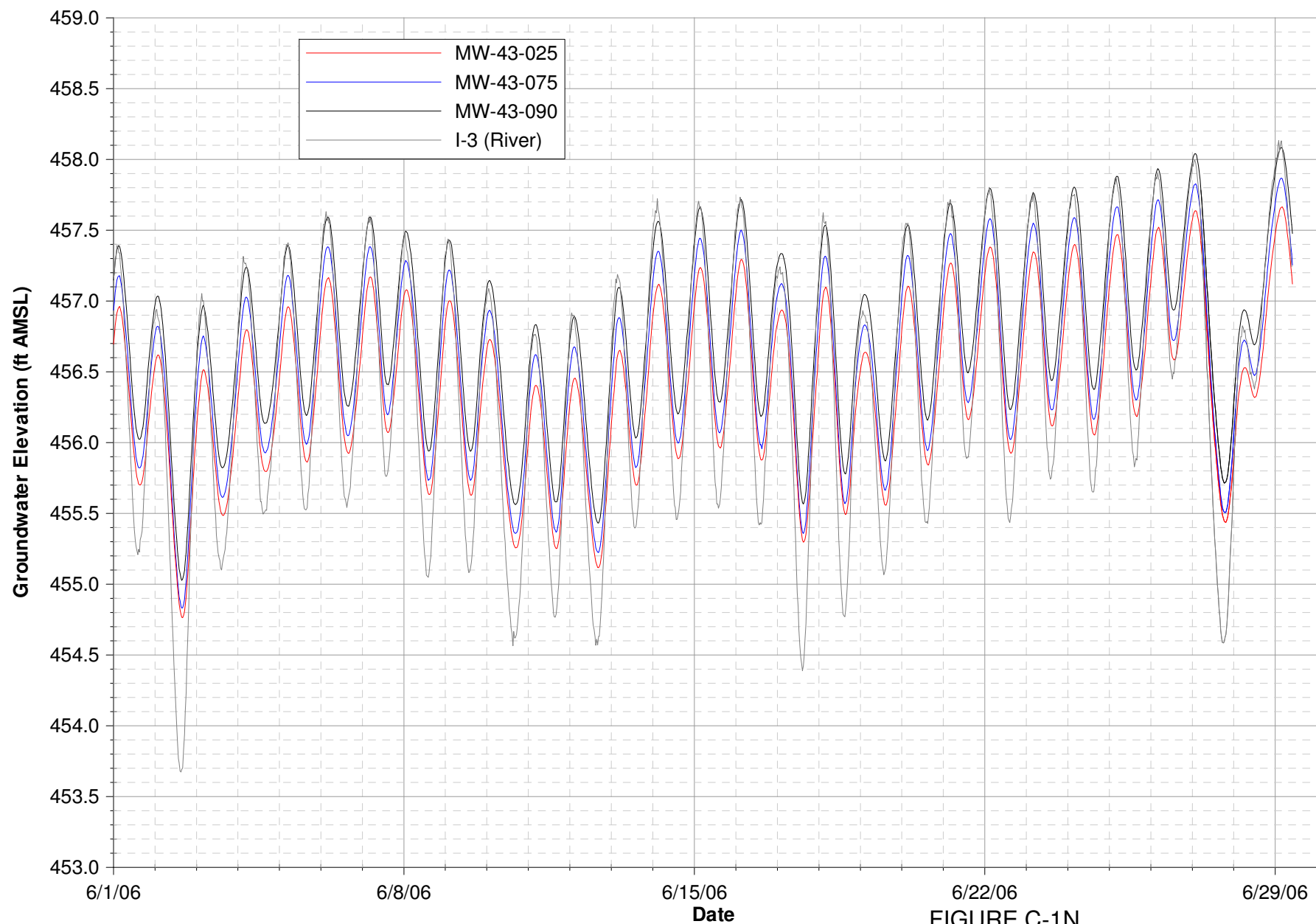
Note: Data subject to review.
Data missing from MW-39-70 from 5/11 through 5/16/2006

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



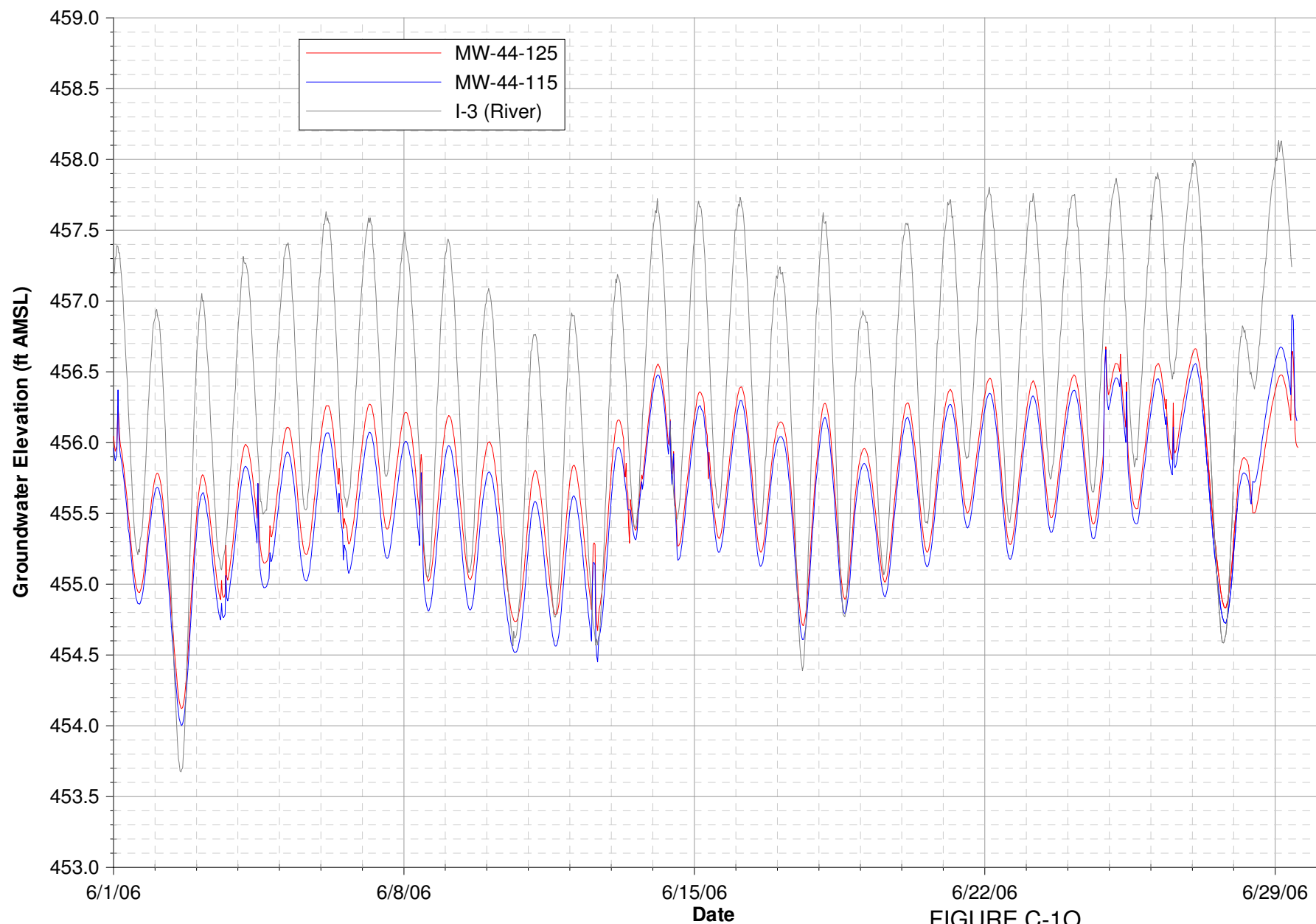
Note: Data subject to review.

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



Note: Data subject to review.

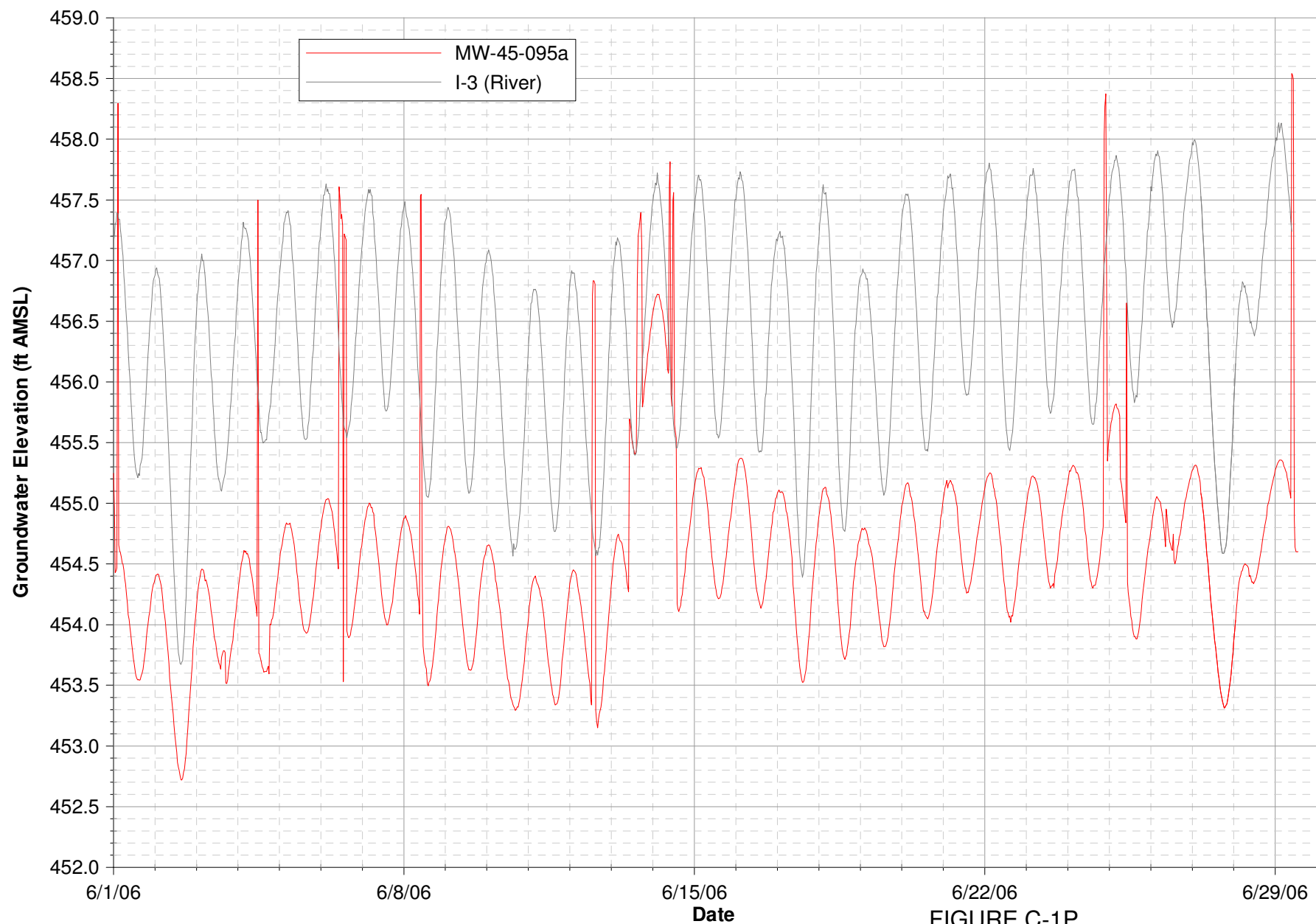
FIGURE C-1N
MW-43 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA



Note: Data subject to review.

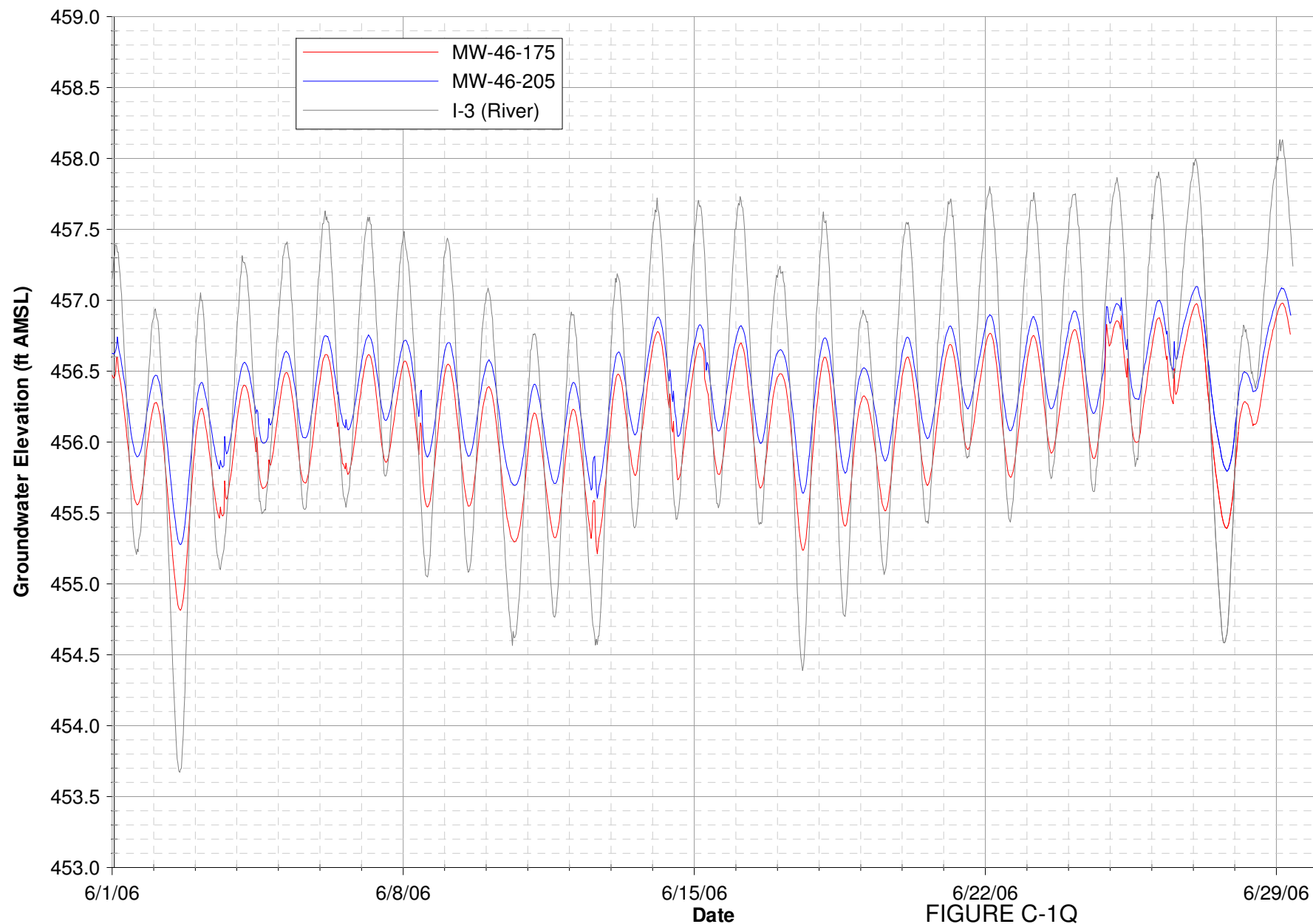
FIGURE C-10

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



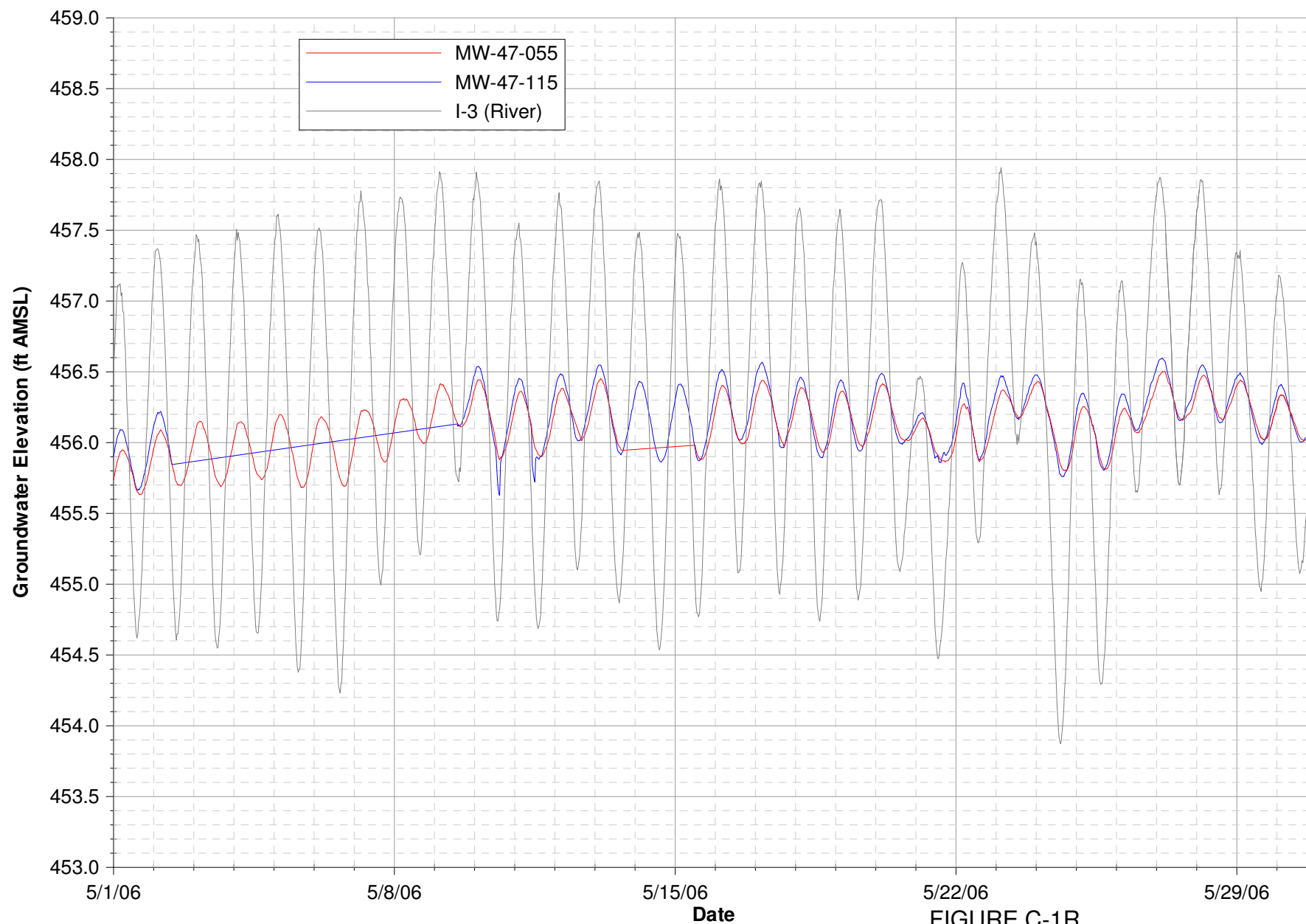
Note: Data subject to review.

FIGURE C-1P
MW-45 HYDROGRAPH
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA



Note: Data subject to review.

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

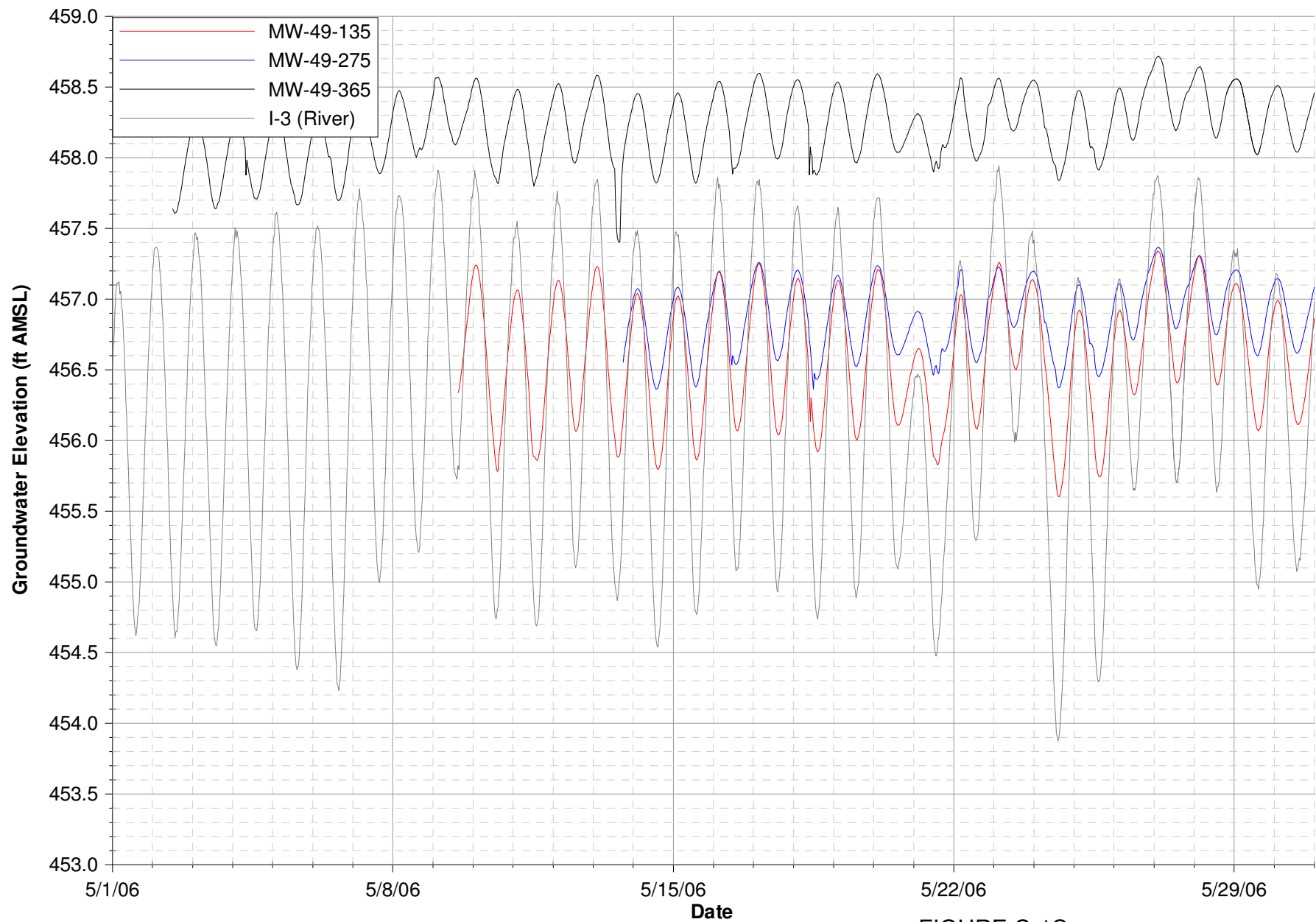


Note: Data subject to review.
Data missing from MW-47-115 from 5/02 through 5/10/2006

FIGURE C-1R

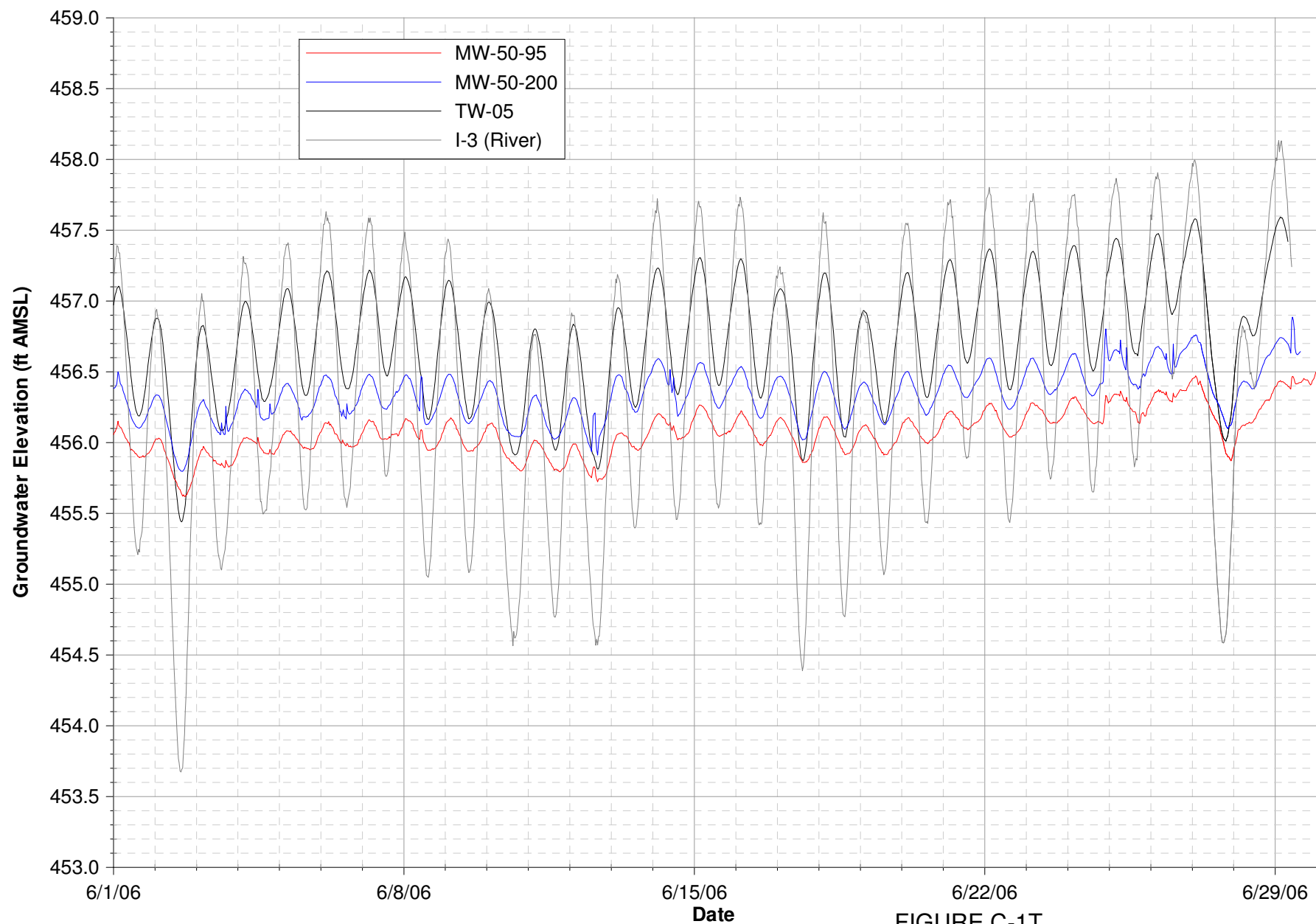
MW-47 WELL HYDROGRAPHS

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



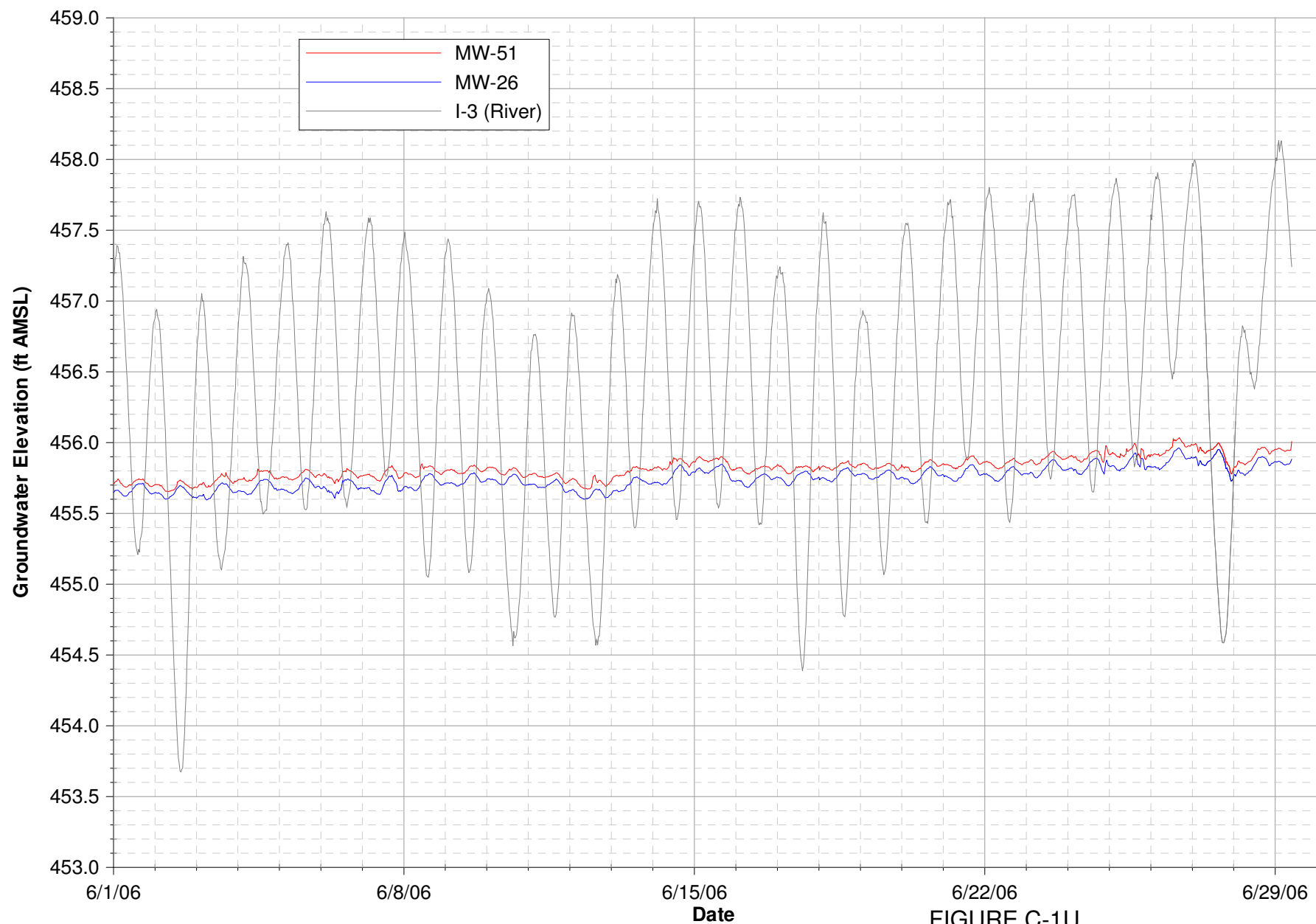
Note: Data subject to review.
 Transducers installed in MW-49 wells on 5/2/06.
 Transducer in MW-49-135 failed, re-installed on 5/9/06.
 Transducer in MW-49-275 failed, re-installed on 5/13/06.

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



Note: Data subject to review.

FIGURE C-1T
MW-50 CLUSTER & TW-5 HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA



Note: Data subject to review.

FIGURE C-1U

MW-51 & MW-26 HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA