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August 30, 2007

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

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

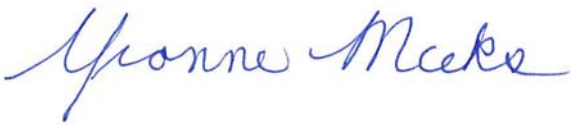
Dear Mr. Yue:

Enclosed is the *Performance Monitoring Report for July 2007 and Quarterly Performance Evaluation, May through July 2007* for PG&E's Interim Measures (IM) performance monitoring program for the Topock project. This report presents the July 2007 performance monitoring results for the IM and summarizes the operations and performance evaluation for the second quarter 2007 reporting period.

The quarterly 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,



Enclosure

Performance Monitoring Report for July and Quarterly Performance Evaluation, May through July 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

August 30, 2007

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August 30, 2007

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 (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 of Substances Control
gpm	gallons per minute
IM	Interim Measure
IM No. 3	Interim Measure Number 3
PG&E	Pacific Gas and Electric Company
PMP	Performance Monitoring Program
TDS	total dissolved solids
USBR	United States Bureau of Reclamation

SECTION 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. (All figures are located at the end of the report.)

In a letter dated February 14, 2005, the California Department of Toxic of 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 concentrations at or greater than 20 micrograms per liter [µg/L] in the floodplain are contained for removal and treatment" (Enclosure A, DTSC February 14, 2005 letter). 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* was submitted to DTSC on April 15 (CH2M HILL, 2005a) (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 combined monthly and quarterly report has been prepared in compliance with DTSC's requirements and documents the monitoring activities and performance evaluation of the IM hydraulic containment system. The second quarterly reporting period covers monitoring activities from May 1 through July 31, 2007.

1.1 Report Organization

In support of the IM performance evaluation, this combined July 2007 monthly and second quarter 2007 monitoring report presents documentation for:

- Monthly performance monitoring results and extraction and treatment operations for July 2007 (Section 2.0).
- Evaluation of performance data, including the extraction system, chromium trends in the floodplain monitoring wells, hydraulic gradients, and river levels during the quarterly period of May through July 2007 (Section 3.0).
- Conclusions (Section 4.0).

SECTION 2.0

Performance Monitoring Report for July 2007

2.1 Introduction

Figure 2-1 shows the locations of wells used for IM extraction, performance monitoring, and hydraulic gradient measurements. The performance monitoring wells that were in service/ active as of July 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-30-50, 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), and 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 2006. Testing and commissioning of well PE-1 began on January 25, with full-time operation of the well beginning on January 26, 2006. Currently, both extraction wells PE-1 and TW-3D are in full-time operation.

The wells screened in the unconsolidated alluvial fan and fluvial deposits, which 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 lithostratigraphic layers within the aquifer. The floodplain aquifer is considered to be hydraulically undivided.

2.2 Extraction System Operations

Pumping data for the IM No. 3 groundwater extraction system for the period of July 1 through 31, 2007 are presented in Table 2-1. (All tables are located at the end of the report.) During July, 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 July 2007 monthly average pumping rate was 132.2 gpm. A total of 5,902,012 gallons of groundwater was extracted and treated by the IM No. 3 treatment plant during July 2007. The operational run time for the IM extraction system was over 99 percent during this reporting period. An operations log for the extraction system during July 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. One container of solids from the IM No. 3 facility was disposed of at the Kettleman Hills Chemical Waste Management facility during July 2007.

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 for chromium and total dissolved solids (TDS) in groundwater samples collected from the IM extraction well system during the July reporting period and prior months. Chromium and TDS concentrations have been decreasing at well PE-1 since March 2007.

2.3 Chromium Sampling Results

During July 2007, the groundwater monitoring wells in the floodplain area were sampled for hexavalent chromium [Cr(VI)], total chromium [Cr(T)], and field water quality parameters under semiannual, quarterly, 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) for the prior and current sampling plan and frequencies for groundwater wells in the performance monitoring area.

Figure 2-2 presents a plan view of the Cr(VI) groundwater results (updated July 2007) for the wells monitoring the upper, middle, and lower depth intervals of the Alluvial Aquifer in the floodplain area. The aquifer depth intervals, well screens, and updated Cr(VI) results and contours are also shown on Figure 2-2 in a vertical cross-section extending east-west across the floodplain. The California drinking water standard for Cr(T) is 50 µg/L.

Figure 2-3 presents the Cr(VI) results (updated July 2007) for additional floodplain monitoring wells on a cross-section oriented parallel to the Colorado River (see Figure 2-1 for locations of the cross-sections).

Cr(VI) concentration trend graphs and hydrographs for key floodplain monitoring wells are presented in Appendix B for ongoing IM performance evaluation. Table B-1 (Appendix B)

presents the groundwater sampling results for Cr(VI), Cr(T), groundwater elevation, and selected field water quality parameters for monitoring wells in the floodplain area from July 2006 through July 2007. Table B-2 presents the groundwater sampling data for the other wells monitored in the PMP area from July 2006 through July 2007.

2.4 Hydraulic Gradient Results

During July 2007, water levels were recorded with pressure transducers at 30-minute intervals in 61 wells and two river monitoring stations (I-3 and RRB). The data loggers typically run continuously, with only short interruptions for sampling or maintenance. The location of the wells monitored are shown on Figure 2-1 and are listed in Section 2.1.

The daily minimum, maximum, and average groundwater and river elevations have been calculated from the pressure transducer data for the July 2007 reporting period and are summarized in Appendix C. 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 July 2007 for all wells with transducers are included in Appendix C. The Colorado River elevation (I-3 gage station) during July 2007 is also shown on the hydrographs.

The July 2007 hydraulic data and groundwater gradient maps for the upper, middle, and lower depth intervals are shown on Figures 2-4, 2-5, and 2-6, respectively. A review of the groundwater elevation contours indicates strong landward hydraulic gradients within the IM 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. The average groundwater elevations measured in IM monitoring wells during July 2007 are presented on the middle and lower depth interval gradient maps (Figures 2-5 and 2-6, respectively). The water levels from some of the deep monitoring wells are not contoured on the deep gradient maps. Many of the monitoring wells drilled in 2006 are significantly deeper than other wells in the lower aquifer interval. 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 other wells exhibit water levels that do not contour well with nearby shallower lower zone wells.

The average monthly groundwater elevations for several of the monitoring well clusters in the floodplain are presented and contoured in cross-section on Figure 2-7 (location of cross-section shown on Figure 2-1). The groundwater elevation contours on this cross-section show the strong downward and landward hydraulic gradients produced by the combined pumping from extraction wells TW-3D and PE-1.

Table 2-3 is a summary of the estimated and actual Davis Dam releases and river elevations since April 2004. The actual Davis Dam July 2007 release (14,897 cubic feet per second [cfs]) was essentially the same as the United States Bureau of Reclamation (USBR)-projected

release for the July reporting period (14,900 cfs). The projected Colorado River elevation at I-3 (monthly average) is calculated using a multiple regression method that considers both the Davis Dam release and the Lake Havasu level. Current USBR projections show that the average Davis Dam release for August 2007 (12,100 cfs) will be less than July 2007 (14,897 cfs). Based on the regression method results using August 10, 2007 USBR projections for both Davis Dam release and Lake Havasu elevation, it is anticipated that the Colorado River level at the I-3 gage location in August 2007 will decrease 1.3 feet compared to the July 2007 river stage.

Table 2-4 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 July 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 decrease the apparent gradient in the central well pair. Nevertheless, average gradients in the three well pairs during July 2007 were landward at magnitudes that were from two to greater than three times the target value of 0.001 feet per foot (0.0024, 0.0036, and 0.0035, respectively). The landward gradients measured during July 2007 in the central and southern gradient well pairs were less than those measured during June 2007. This was the result of slightly lower average extraction rates and lower river levels during July relative to June 2007.

2.5 Status of Operation and Monitoring

Reporting of the IM extraction and monitoring activities will continue as described in the Performance Monitoring Plan. Pending formal approval from DTSC, monthly performance monitoring reports will no longer be submitted. As a result, the next performance report will be the third quarter 2007 monitoring report, which will present operations and performance monitoring data from August 1 through October 31, 2007. The third quarter report will be submitted by November 30, 2007.

Per DTSC direction, PG&E will continue to operate wells TW-3D and PE-1 at a target combined pumping rate of 135 gpm during August 2007, except for periods when planned and unplanned downtime occurs. Extracted groundwater treated at the IM No. 3 facility 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 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. Well TW-2D will serve as a backup to extraction wells TW-3D and PE-1.

SECTION 3.0

Quarterly Performance Evaluation for May through July 2007

3.1 Extraction System Operations

From May through July 2007 (considered second quarter 2007), 17,845,406 gallons of groundwater were extracted and treated by the IM No. 3 system. This resulted in removal of an estimated 223 pounds of chromium from the aquifer during the quarter. The average extraction rate, including system downtime, for the IM system during the quarter was 134.7 gpm. A summary of the quarterly average extraction rates and cumulative volumes by extraction well is provided in Table 2-1.

3.2 Cr(VI) Distribution and Trends in Floodplain Area

The distribution of Cr(VI) in the upper, middle, and lower depth intervals of the Alluvial Aquifer in the performance monitoring area for the second quarter 2007 is shown in plan view and cross-section on Figure 2-2. The Cr(VI) concentration contours shown for the Alluvial Aquifer are based on the results of July 2007 sampling and the recent quarterly monitoring events. Overall, the Cr(VI) concentration contours for second quarter 2007 are similar to the Cr(VI) distribution maps presented in the prior performance monitoring reports (CH2M HILL, 2007b-c). See Tables B-1 and B-2 (Appendix B) for the complete sampling results from July 2006 through July 2007 for the wells in the PMP area.

Figure 3-1 presents Cr(VI) concentration trend graphs for six selected deep monitoring wells in the floodplain area through July 2007 sampling. Sampling data since July 2005 are plotted for wells MW-34-100, MW-36-90, MW-36-100, MW-44-115, MW-44-125, and MW-46-175. The locations of the deep wells selected for performance evaluation are shown on Figure 2-1.

The effects of PE-1 pumping are evident in the sampling data from wells MW 36-90 and MW-36-100 (Figure 3-1). Since the initiation of PE-1 pumping, the Cr(VI) concentrations at MW-36-90 have decreased and have remained steady at less than 10 µg/L since August 2006. Concentrations increased in the deeper well MW-36-100 (well screen adjacent to PE-1 well screen) upon initiation of pumping at PE-1 but have steadily decreased since January 2007. The concentration trend for MW-34-100 (Figure 3-1) has shown both short-term declines and increases in concentrations since PE-1 pumping commenced. However, since June 2006, concentrations at this well have shown a general downward trend. The Cr(VI) result from July 12, 2007 sampling of MW-34-100 (558 µg/L) is the lowest concentration measured at this well since August 2005. Landward gradients have been present at this location since IM pumping began; therefore, the concentrations measured at MW-34-100 do not indicate any movement of the plume toward the river.

Monitoring well clusters MW-44 and MW-46, installed in spring 2006, are located within the Cr(VI) plume (approximately 190 feet and 400 feet north of PE-1). The concentration trend for well MW-44-115 has been generally downward since July 2006. Sampling data from well MW-44-125 show stable concentrations since October 2006. Concentrations in well MW-46-175 decreased from March 2006 until May 2007 but have been generally stable this quarter. The MW-44 and MW-46 well clusters are within the hydraulic capture of IM pumping (Figure 2-6).

Cr(VI) concentration trend graphs and hydrographs for selected floodplain monitoring wells are presented in Appendix B. In addition to the wells presented on Figure 3-1, declining Cr(VI) concentrations have been observed at the MW-39-70 and MW-39-80 wells (Figures B-3 and B-4, Appendix B), reflecting the pumping influence from TW-3D. The chromium concentrations (<20 µg/L) observed in the MW-33 cluster wells remained consistent with previous results during the quarterly reporting period. Stable or decreasing concentrations were observed in the other wells in the floodplain area where Cr(VI) has been detected in prior monitoring (Table B-1).

3.3 Other Water Quality Data for Floodplain Wells

Common water quality parameters (temperature, pH, oxidation-reduction potential, dissolved oxygen, and specific conductance) were measured in the field during well purging and groundwater sampling, as outlined in *Sampling and Analysis Field Procedures Manual, PG&E Topock Program* (CH2M HILL, 2005b). The field water quality data measured from July 2006 through July 2007 are presented in Tables B-1 and B-2 (Appendix B). Due to the density differences in groundwater caused by salinity variations, the groundwater elevations measured in the wells have been adjusted, or normalized, to a freshwater equivalent (Fetter, 1994).

Table D-1 in Appendix D presents the results of the general chemistry and stable isotope analyses for 14 PMP monitoring wells and two river stations during sampling events from March 2005 through May 2007 (no samples collected during June or July 2007). Figure 2-1 shows the locations of the monitoring wells sampled for the performance monitoring parameters. Water samples were analyzed for TDS, chloride, sulfate, nitrate, bromide, calcium, potassium, magnesium, sodium, boron, alkalinity, deuterium, and oxygen-18 to monitor the effects of IM pumping on groundwater chemistry.

Groundwater concentrations for water quality constituents have remained consistent and stable in most wells since monitoring of these wells began in 2004. However, there are some wells where significant changes in water quality have occurred in response to the hydraulic gradients created by IM pumping. Concentrations of TDS, chloride, sulfate, and other water quality parameters have decreased in wells MW-30-50 and MW-34-55 since IM pumping began (Table D-1). These trends are likely the result of the continued landward and downward hydraulic gradients induced by IM pumping (pulling shallower, less-saline groundwater landward and downward). Initiation of pumping from PE-1 in January 2006 has increased downward hydraulic gradients near MW-34-55, resulting in an increasing river influence (lower TDS) at this location. TDS and associated water quality parameters at the MW-20 cluster wells MW-20-70 and MW-20-100 have been relatively steady since March 2005. However, TDS and associated water quality parameters at MW-20-130 have increased

since June 2005. This is presumably a result of this well's proximity to extraction well TW-3D, where strong horizontal gradients are pulling higher TDS water towards the extraction well.

Chemical performance monitoring data at shallow floodplain wells MW-32-20 and MW-32-35 show overall increasing concentrations of TDS, reflecting an influx of more saline groundwater at this location over the monitoring period. In recent sampling data, little change in general chemistry concentrations was observed in shallow interior wells MW-25 and MW-26. Further assessment of the general chemistry data for monitoring wells in the PMP area will be presented in the future annual IM performance evaluation reports.

3.4 Hydraulic Gradients and River Levels during Quarterly Period

Average monthly groundwater and river elevations, contour maps of groundwater elevations, and hydraulic gradients between key monitoring wells are reported in each of the monthly monitoring periods. The groundwater contour maps for the upper, middle, and lower depth intervals for May, June, and July 2007 are included in this report as follows:

- July 2007: Figures 2-4 through 2-6 presented in this report
- June 2007: Appendix C, Figures C-2A through C-2C
- May 2007: Appendix C, Figures C-2D through C-2F

A review of the groundwater elevation contour maps indicates very strong landward hydraulic gradients within the IM capture zone throughout the floodplain. That is, the inferred groundwater flow lines from the floodplain monitoring wells where Cr(VI) is detected greater then 20 μg/L are oriented towards the TW-3D and PE-1 extraction wells within the IM capture zone.

Average quarterly groundwater elevations (May through July 2007 inclusive) for the deep wells are presented and contoured in plan view on Figure 3-2. The average quarterly groundwater elevations are also presented and contoured in floodplain cross-section A-A′ (Figure 3-3). The floodplain cross-section also shows where the current IM pumping in the deep interval of the Alluvial Aquifer is occurring at TW-3D and PE-1. The landward hydraulic gradients for the deep monitoring wells presented on Figures 3-2 and 3-3 are consistent with the strong landward gradients measured and presented in the 2006 and early 2007 monitoring reports (CH2M HILL, 2007b-c).

The hydraulic gradients measured for the May through July 2007 (second quarter) reporting period use the original gradient wells pairs defined for the single MW-20 bench pumping center:

- MW-31-135 and MW-33-150 (northern gradient pair)
- MW-20-130 and MW-34-80 (central gradient pair)
- MW-20-130 and MW-42-65 (southern gradient pair)

The average hydraulic gradients measured between these gradient well pairs in May, June, and July 2007 are summarized in Table 3-1. The mean landward hydraulic gradients for

each of the well pairs exceeded the target gradient of 0.001 feet/foot during each month of the second quarter 2007 reporting period.

The current gradient well pairs were selected to measure the landward gradients associated with pumping from extraction well TW-3D. The existing north and south gradient control well pairs slightly underestimate the true landward gradients because these wells are slightly misaligned with the direction of the gradient. The central well pair greatly underestimates the gradient due to the influence of pumping from PE-1 on water levels in MW-34-80. Pending direction by DTSC, more optimally-located well pairs will be used for measuring and reporting gradients from the dual-pumping extraction system.

Figure 3-4 presents a graphical display of the measured hydraulic gradients and pumping rates and river levels throughout the second quarter 2007 reporting period. River levels during May through July 2007 were high, and the combined pumping was maintained at monthly average rates of 132 to 136 gpm, resulting in strong landward gradients in the IM capture zone during second quarter 2007.

3.5 Projected River Levels during the Next Quarter

Colorado River stage near the Topock Compressor Station is measured at the I-3 location and is directly influenced by releases from Davis Dam and, to a lesser degree, from Lake Havasu elevations, both of which are controlled by the USBR. Total releases from Davis Dam follow a predictable annual cycle, with largest monthly releases typically in spring and early summer and smallest monthly releases in late fall-winter (November and December). Superimposed on this annual cycle is a diurnal cycle determined primarily by daily fluctuations in electric power demand. Releases within a given 24-hour period often fluctuate over a wider range of flows than that of monthly average flows over an entire year.

The corresponding river stage at the I-3 station fluctuates in a similar pattern. The monthly average stage at I-3 typically peaks in the early summer and reaches its low point in the winter. Following Davis Dam releases, river stage also fluctuates on a diurnal cycle, though greatly attenuated. The magnitude of the daily river stage fluctuations at I-3 is less than the magnitude of the monthly average river stage fluctuations over a typical year.

Figure 3-5 shows river stage measured at I-3 superimposed on the projected I-3 river levels based on actual Davis Dam discharge and Lake Havasu levels. This graph shows that the formula used to calculate I-3 levels provides a very good estimate of the actual levels at I-3 over a wide range of river levels. The future projections shown on this graph are based on USBR long-range projections of Davis Dam release and Lake Havasu level. The river stage data and USBR projections indicate the highest river levels of the year typically occur in April, May, and June. Current USBR projections show that the lowest water levels will occur in November through December 2007 and January 2008. Because water demand is based on climatic factors, there is more uncertainty in these projections further into the future.

SECTION 4.0

Conclusions

The groundwater elevation and hydraulic gradient data for May, June, and July 2007 performance monitoring indicate that the minimum landward gradient target (0.001 feet/foot) was exceeded throughout the second quarter reporting period. As illustrated in Figure 3-4, the landward gradients during May, June, and July 2007 were two to four times the required minimum magnitude in all well pairs. The IM pumping was sufficient to meet the minimum gradient targets during each of the three months of the second quarter 2007.

A total of 17,845,406 gallons of groundwater was extracted and treated by the IM No. 3 system during the second quarter (May through July) 2007 reporting period. An estimated 223 pounds of chromium were removed and treated by the IM system during this quarter. The average pumping rate for the IM extraction system during second quarter 2007, including system downtime, was 134.7 gpm.

Overall, the Cr(VI) concentrations observed in the floodplain monitoring wells are either stable or decreasing. During second quarter 2007, the groundwater Cr(VI) concentrations at wells MW-34-100, MW-36-100, MW-39-70, MW-39-80, and MW-39-100 declined relative to the previous quarter. Concentrations at wells MW-46-175 and the MW-44 cluster remained stable during the second quarter period. All of the wells are within the IM extraction system capture zone (Figure 2-6).

Chromium concentrations at well MW-34-100 have shown a steady downward trend since July 2006 (Figure 3-1). The recent July 12, 2007 Cr(VI) sampling result of 558 µg/L is the lowest concentration measured since August 2005. Landward gradients have been present at this well since IM pumping began, so the concentrations observed at this location do not indicate plume movement towards the east.

Based on the hydraulic and chemical performance monitoring data and evaluation presented in this report, the IM performance standard has been met for the second quarter May through July 2007 reporting period. Performance monitoring and evaluation of the IM hydraulic containment system will continue in accordance with the Performance Monitoring Plan and as directed by the DTSC.

SECTION 5.0

References

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Tables

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

Extraction Well ID	July 2007 Period [a]		Project to Date [b]
	Average Pumping Rate [c] (gpm)	Volume Pumped (gal)	Cumulative Volume Pumped (gal)
TW-02D	0.0	0	53,015,001
TW-03D	100.2	4,472,504	81,948,262
PE-01	32.0	1,429,508	26,581,004
Total	**132.1**	**5,902,012**	161,544,267
	Volume Pumped from the MW-20 Well Cluster		1,527,724
	Total Volume Pumped (gal)		163,071,991
	Total Volume Pumped (ac-ft)		500.4

NOTES:

gpm gallons per minute
gal gallons
ac-ft acre-feet

[a] Pumping results during the monthly period are based on readings collected between July 1, 2007 at 12:00 a.m. and July 31, 2007 at 11:59 p.m. (31 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 downtimg based on flow meter readings.

TABLE 2-2
Analytical Results for Extraction Wells, February 2007 through July 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Sample Date	Dissolved Total Chromium µg/L	Hexavalent Chromium µg/L	Total Dissolved Solids mg/L
TW-3D	06-Feb-07	2310	2400	5780
TW-3D	07-Mar-07	2500	2420	6040
TW-3D	13-Jun-07	2350	2000	5570
TW-3D	11-Jul-07	2390	2000	5390
* TW-3D/PE-1	04-Apr-07	1250	1630	5310
* TW-3D/PE-1	02-May-07	1380	1690	5480
PE-1	06-Feb-07	89.5	80.8	5440
PE-1	07-Mar-07	91.0	84.7	5500
PE-1	13-Jun-07	48.1	52.0	4920
PE-1	11-Jul-07	39.7	47.1	4320

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 2-3

Predicted and Actual Monthly Average Davis Dam Discharge and Colorado River Elevation at I-3

Interim Measures Performance Monitoring

PG&E Topock Compressor Station

	Davis Dam Release			Colorado River Elevation at I-3		
Month	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	14,897	3	455.8	456.0	0.2
August 2007	12,100	--	--	454.7	--	--

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 2-4

Average Hydraulic Gradients for Well Pairs, July 2007

Interim Measures Performance Monitoring

PG&E Topock Compressor Station

Well Pair[1]	Reporting Period	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Interval 2007
Northern Gradient Pair			
MW-31-135 / MW-33-150	July	0.0024	July 1 through July 31
Central Gradient Pair			
MW-20-130 / MW-34-80	July	0.0036	July 1 through July 31
Southern Gradient Pair			
MW-20-130 / MW-42-65	July	0.0035	July 1 through July 31

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

TABLE 3-1

Average Hydraulic Gradients Measured at Well Pairs, May through July 2007

Interim Measures Performance Monitoring

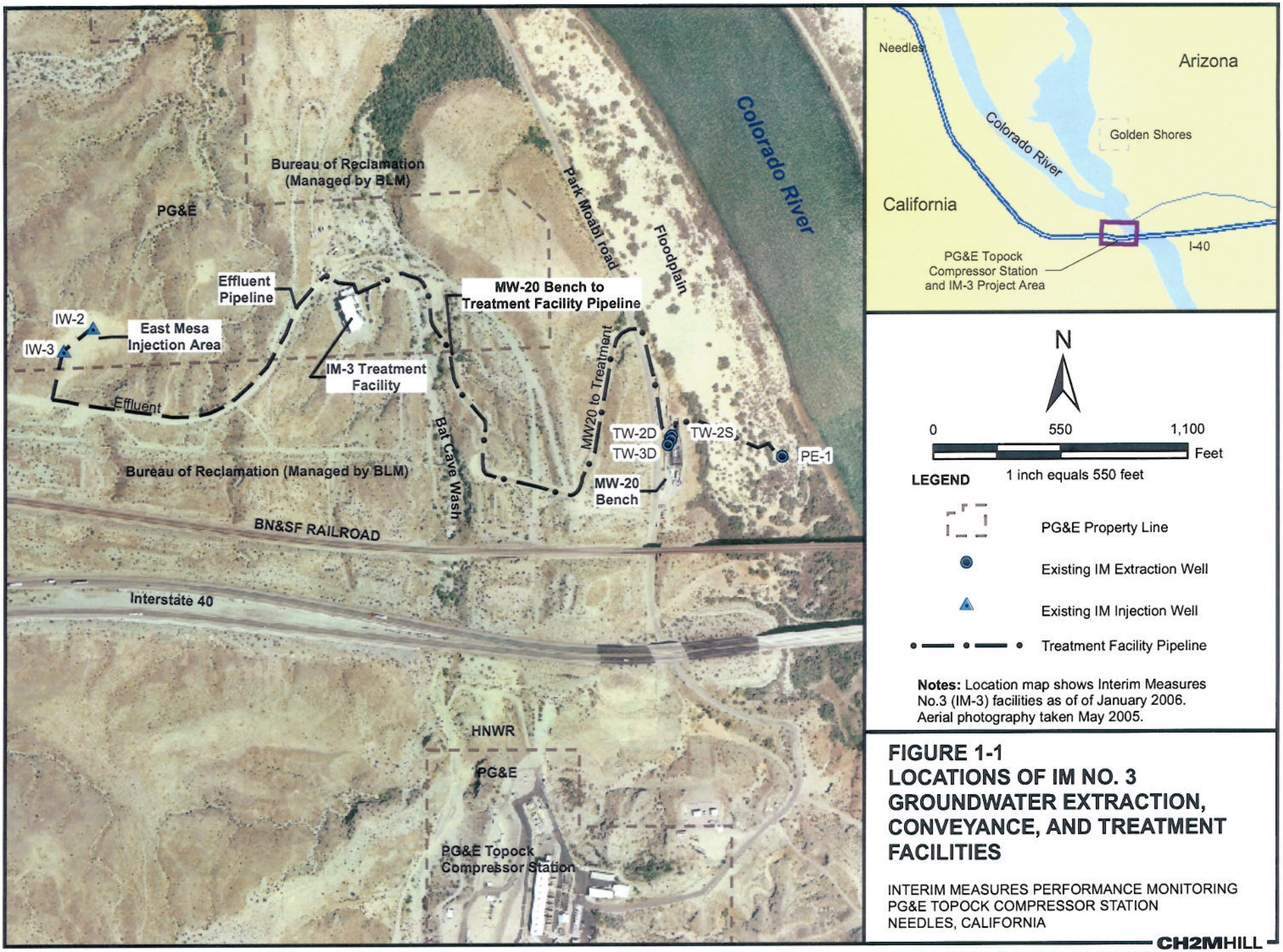
PG&E Topock Compressor Station

Well Pair[1]	Reporting Period	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Dates[3] 2007
Northern Gradient Pair			
MW-31-135 / MW-33-150	May	0.0024	May 1 through May 30
	June	0.0024	June 1 through June 28
	July	0.0024	July 1 through July 31
Central Gradient Pair			
MW-20-130 / MW-34-80	May	0.0042	May 1 through May 30
	June	0.0041	June 1 through June 28
	July	0.0036	July 1 through July 31
Southern Gradient Pair			
MW-20-130 / MW-42-65	May	0.0045	May 1 through May 30
	June	0.0045	June 1 through June 28
	July	0.0035	July 1 through July 31

NOTES:

1. Refer to Figure 2-1 for location of well pairs
2. For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot
3. Refer to Section 2.4 and prior monitoring reports (CH2M HILL 2007b-c) for discussion of monthly gradients.

Figures



Notes: Location map shows Interim Measures No.3 (IM-3) facilities as of 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

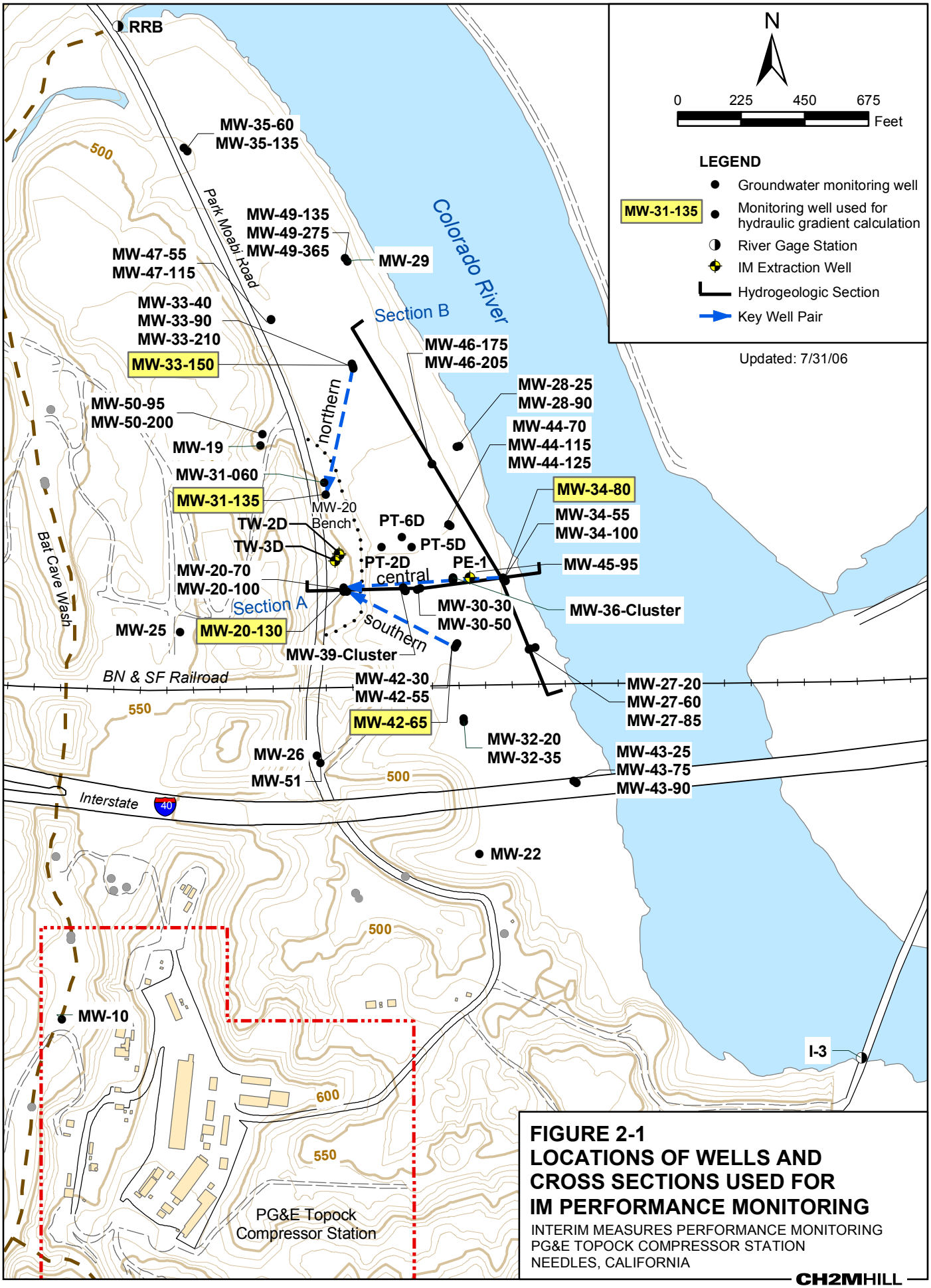


FIGURE 2-1
LOCATIONS OF WELLS AND CROSS SECTIONS USED FOR IM PERFORMANCE MONITORING
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

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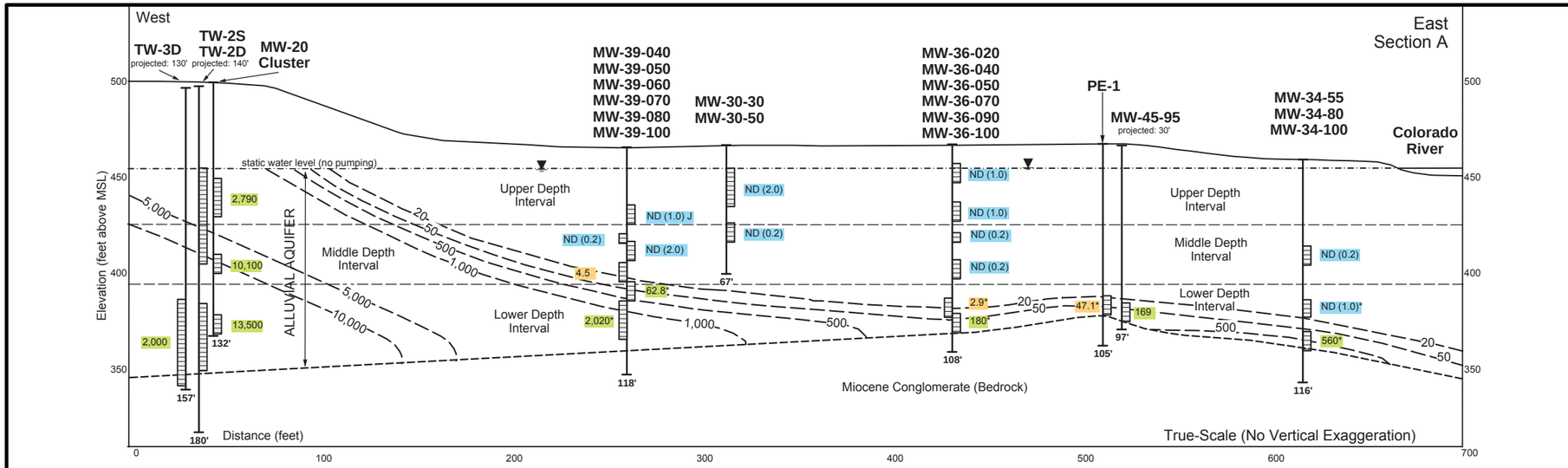
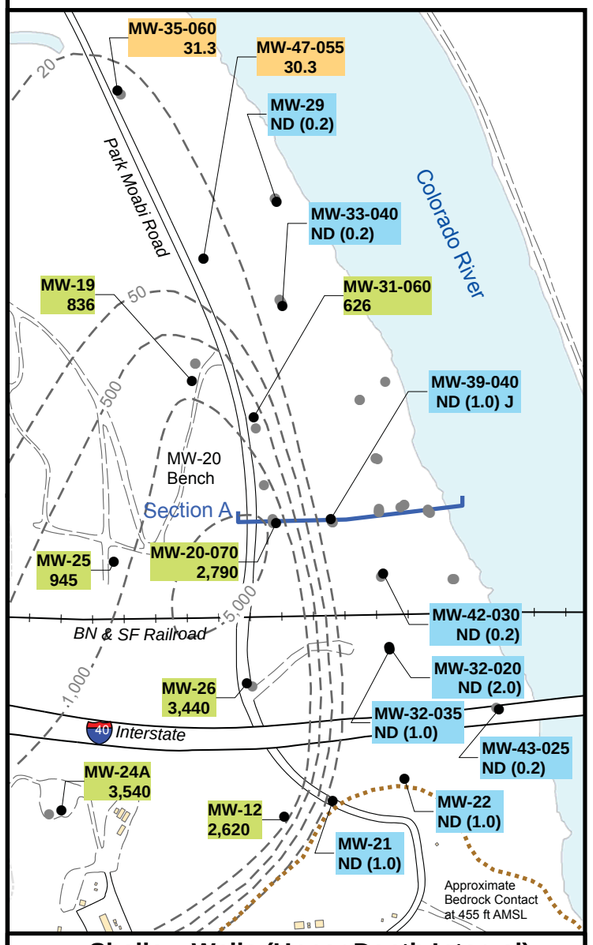
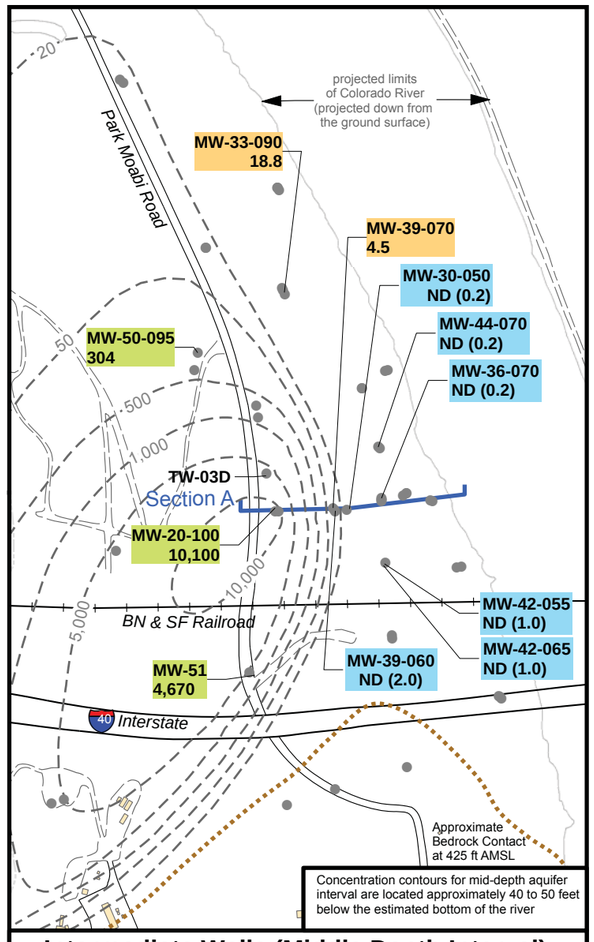
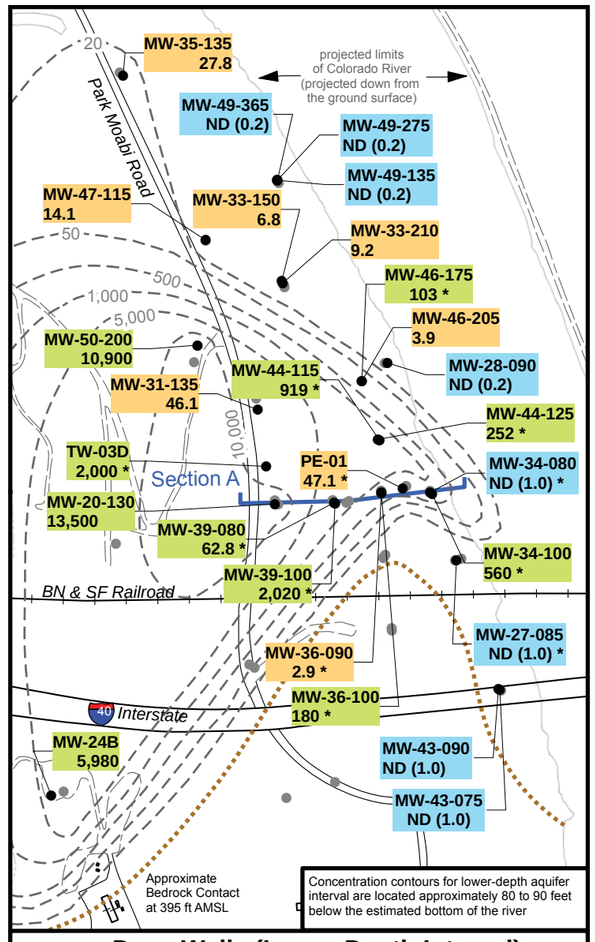




Shallow Wells (Upper Depth Interval)



Intermediate Wells (Middle Depth Interval)



Deep Wells (Lower Depth Interval)

LEGEND

Maximum Hexavalent Chromium [Cr(VI)] Concentrations in Groundwater, July 2007 Update

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 July 2007.
All other results are from the March through June 2007 and October 2006 sampling events.

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

N
0 275 550
Feet

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 2-2
MAXIMUM CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, JULY 2007 UPDATE

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

CH2MHILL

North

South
Section B

Cross-Section Parallel to the Colorado River

BN & SF Railroad

MW-33-40
MW-33-90
MW-33-150
MW-33-210

MW-46-175
MW-46-205

MW-28-25
MW-28-90
projected: 110'

MW-44-70
MW-44-115
MW-44-125

MW-34-55
MW-34-80
MW-34-100

MW-27-20
MW-27-60
MW-27-85

Elevation (feet above MSL)

700
600
500
400
300
200
100
0

water table (average 454' MSL)

ALLUVIAL AQUIFER

Oldest Alluvium

Fluvial Deposits

Upper Depth Interval
Middle Depth Interval
Lower Depth Interval

Approximate geologic contact between alluvial fan and fluvial deposits

ND (0.2)
18.8
6.8
9.2
237'

ND (0.2)
ND (0.2)
103*
3.9
216'

20
50
500
1,000

ND (0.2)
919*
252*
134'

ND (0.2)
ND (1.0)*
560*
116'

ND (0.2)
ND (1.0)
ND (1.0)*
107'

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

-100 0 100 200 300 400 500 600 700 800 900 1,000 1,100 1,200 1,300 1,400
Distance (feet)

Notes:

* Indicates samples from July 2007.
Other results are from March - June 2007 and October 2006 sampling.
See Table B-1 for sampling data.

Results posted are maximum concentrations from primary and duplicate samples.

water level
well screen
boring depth (feet) 103'
3,810

-— — 50 -— —
Inferred Hexavalent Chromium [Cr(VI)] concentration contour

Hexavalent Chromium concentration in micrograms per liter (ug/L) equivalent to parts per billion (ppb)

ND (1)	Not detected at listed reporting limit (ppb)
42	Less than 50 ppb
3,810	Greater than 50 ppb

FIGURE 2-3
Cr(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B,
JULY 2007 UPDATE

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

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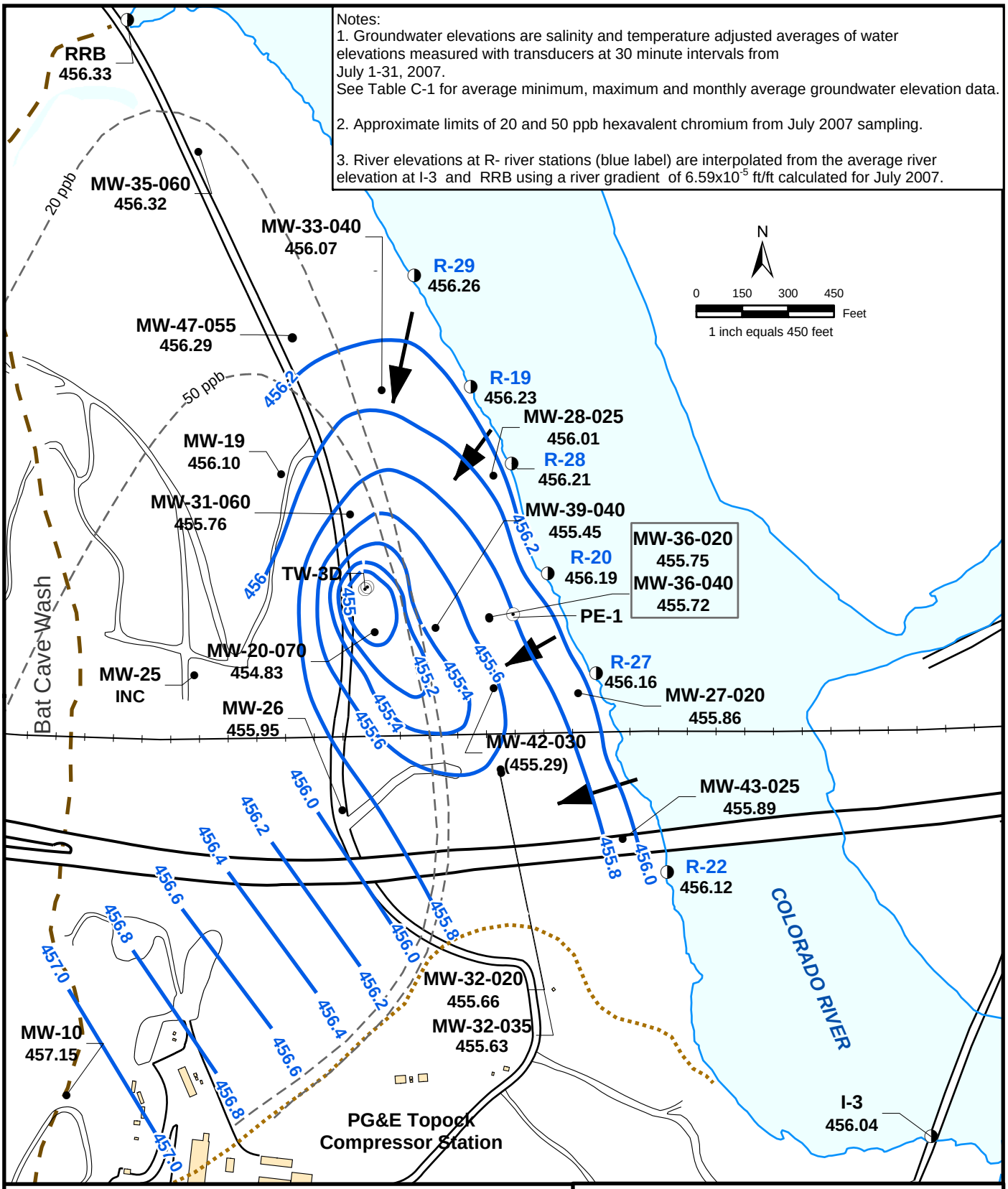

FIGURE 2-4
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, JULY 2007

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

CH2MHILL

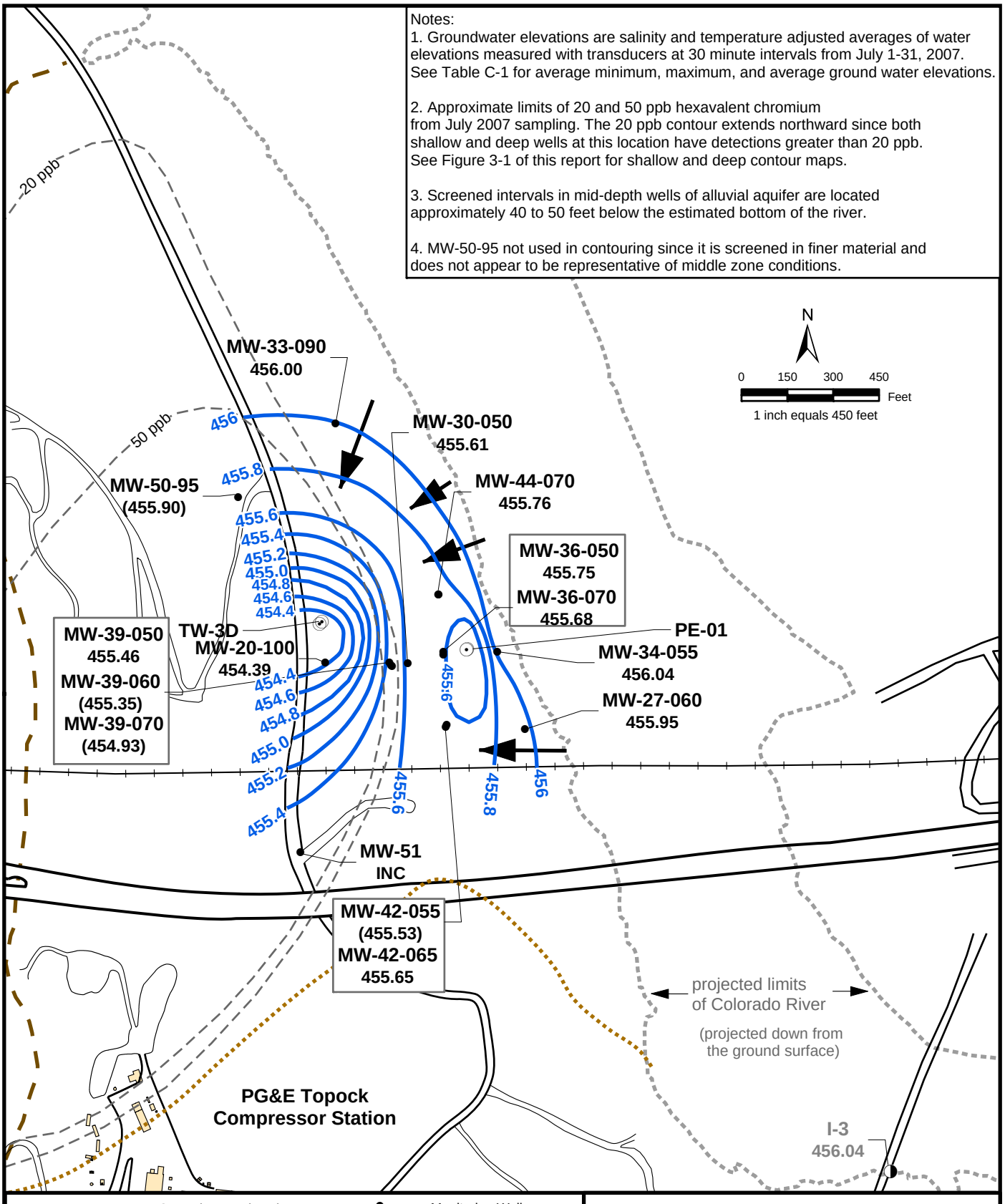

FIGURE 2-5
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS JULY 2007

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

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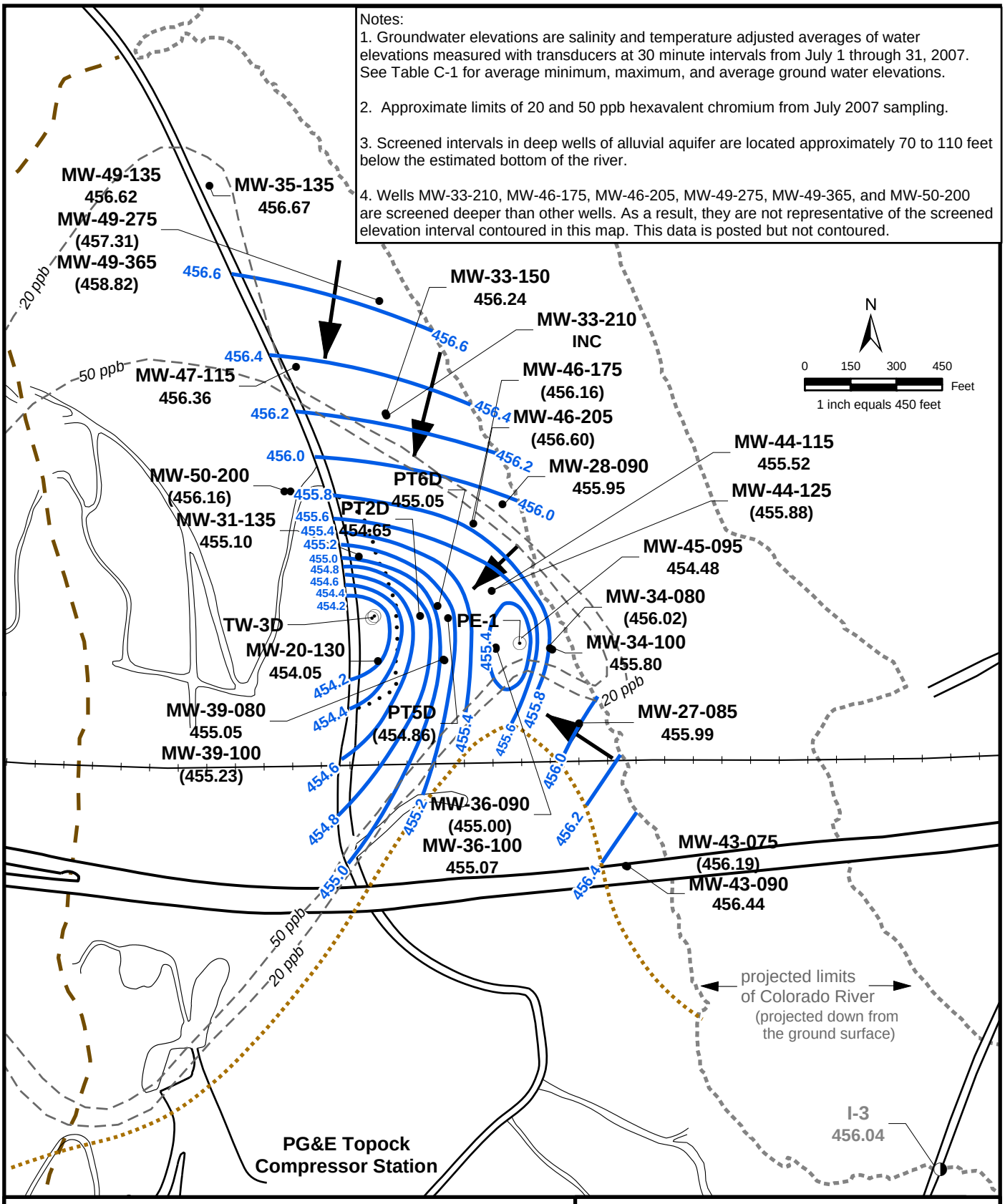

FIGURE 2-6
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS JULY 2007

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

CH2MHILL

West

East
Section A

TW-2S
TW-2D
projected: 140'

TW-3D
projected: 130'

MW-20-70
MW-20-100
MW-20-130

MW-39-40
MW-39-50
MW-39-60
MW-39-70
MW-39-80
MW-39-100

MW-30-30
MW-30-50

MW-36-20
MW-36-40
MW-36-50
MW-36-70
MW-36-90*
MW-36-100

PE-1

MW-45-95
projected:30'

MW-34-55
MW-34-80
MW-34-100

Colorado River
456.19

Elevation (feet above MSL)

550
500
450
400
350
300
250

454.83
454.39
454.05
455.45
455.46
455.35
454.93
455.05
455.23
455.61
455.75
455.72
455.75
455.68
455.00
455.07
454.48
456.04
456.02
455.80

454.8
454.6
454.4
454.2
455.0
455.2
455.4
455.6
455.8
456.0
20
50

132'
157'
180'
118'
67'
108'
105'
97'
116'

Groundwater Divide

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

0 Distance (feet) 100 200 300 400 500 600 700

Notes: Results show average groundwater elevations for July 1 through 31, 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:

MW-30-50
Inferred water table
well screen
453.66 Monthly average groundwater head (ft AMSL)
103 boring depth (feet)

20 Inferred hexavalent chromium contour (ppb) July 2007

453.5 Groundwater head contour

453.5 Inferred groundwater head contour

Interpreted groundwater flow direction

FIGURE 2-7
AVERAGE GROUNDWATER ELEVATIONS FOR WELLS ON FLOODPLAIN CROSS-SECTION A JULY 2007

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

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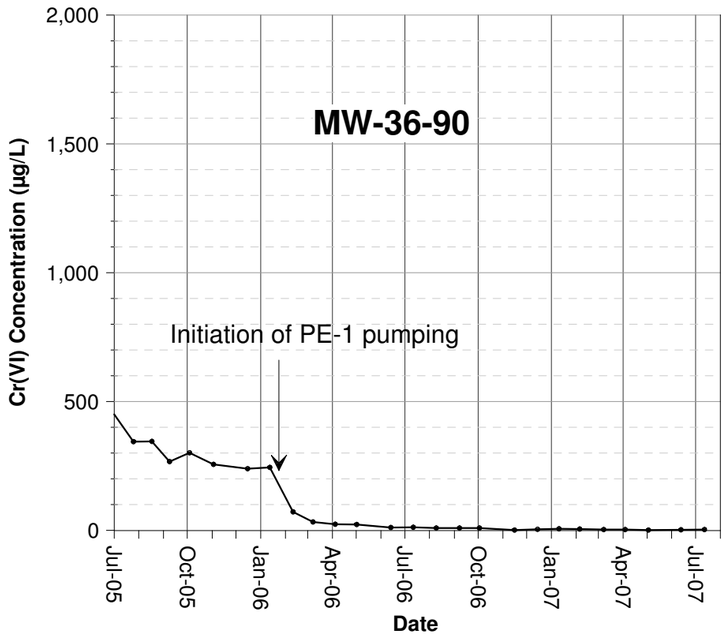

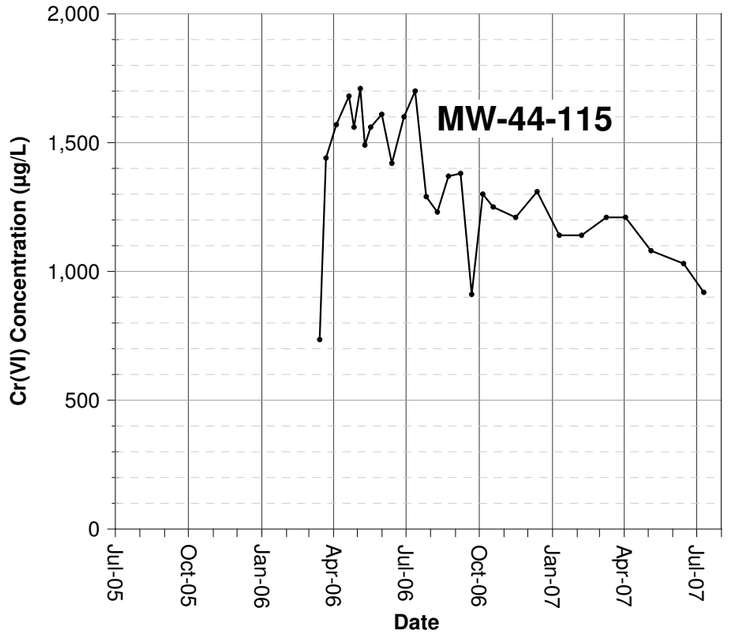

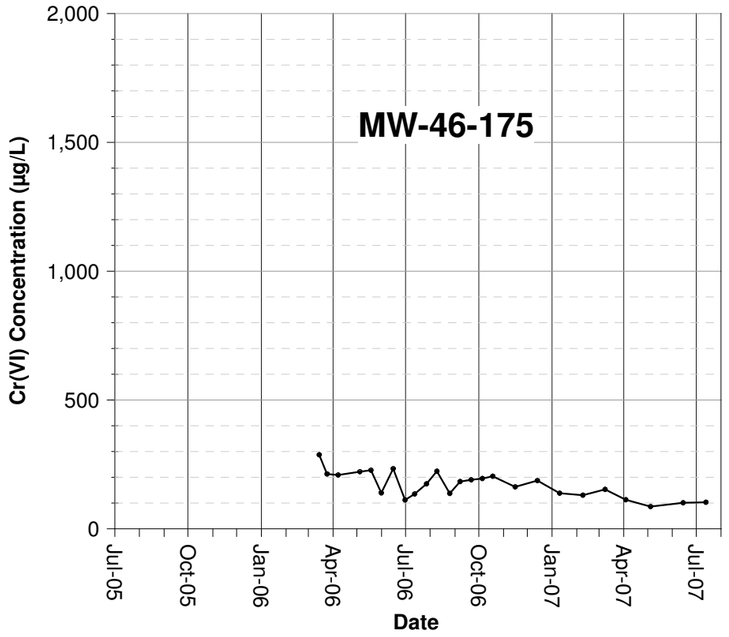

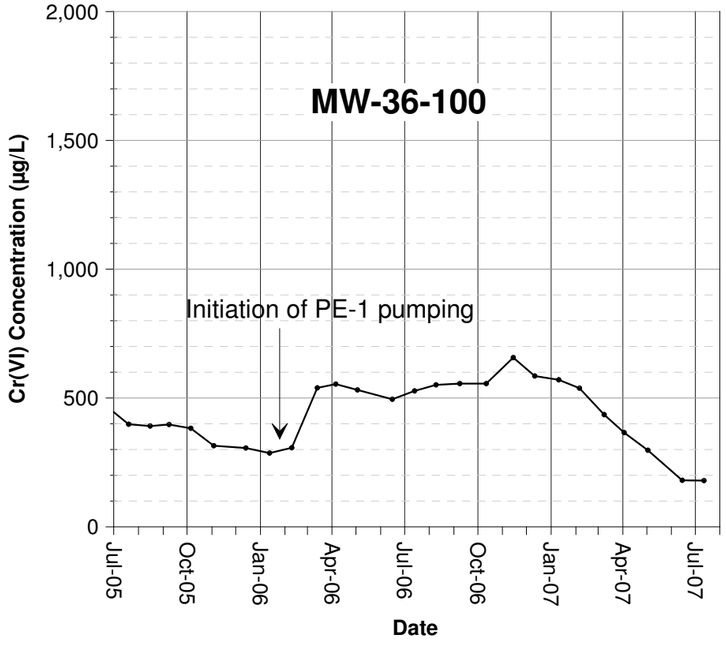

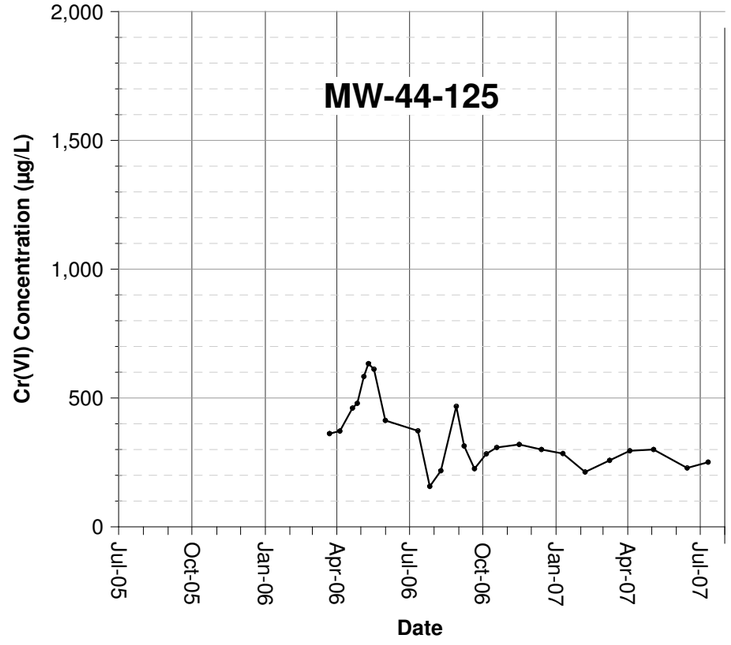

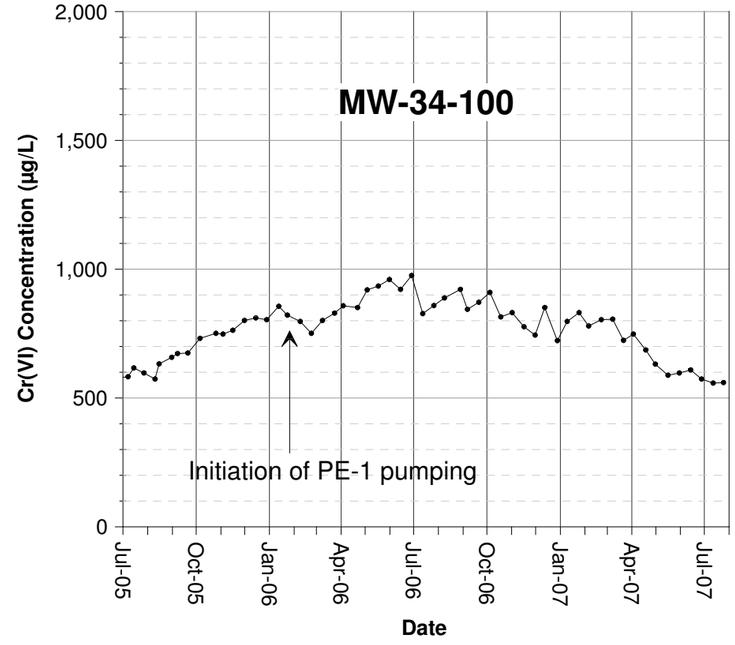

Notes
1. Hexavalent chromium [Cr(VI)] results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
3. MW-36 wells selected to monitor effects of PE-1 pumping on plume west of PE-1. MW-44 wells, MW-46-175, and MW-34-100 selected to monitor concentrations within the plume.

FIGURE 3-1
Cr(VI) CONCENTRATION TRENDS IN SELECTED PERFORMANCE MONITORING WELLS JULY 2005 THROUGH JULY 2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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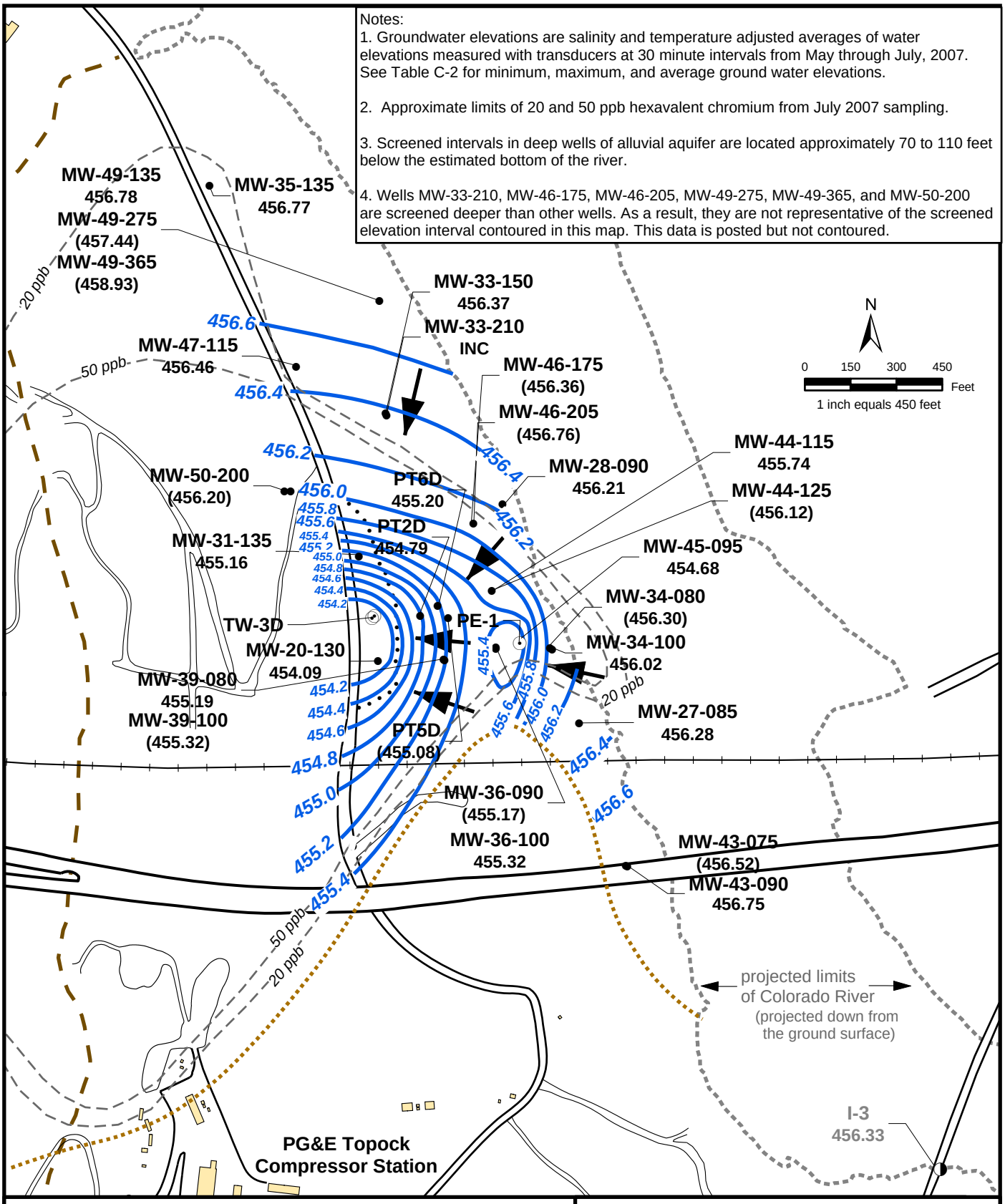

FIGURE 3-2
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MAY THROUGH JULY 2007

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

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West

East
Section A

TW-2S
TW-2D
projected: 140'

TW-3D
projected: 130'

MW-20-70
MW-20-100
MW-20-130

MW-39-40
MW-39-50
MW-39-60
MW-39-70
MW-39-80
MW-39-100

MW-30-30
MW-30-50

MW-36-20
MW-36-40
MW-36-50
MW-36-70
MW-36-90*
MW-36-100

PE-1

MW-45-95
projected:30'

MW-34-55
MW-34-80
MW-34-100

Colorado River
456.48

Elevation (feet above MSL)

550
500
450
400
350
300
250

454.93
454.54
454.09
455.63
455.63
455.51
455.08
455.19
455.32
455.79
455.97
455.96
455.97
455.92
455.17
455.32
454.68
456.30
456.30
456.02

454.8
454.6
454.4
454.2
455.0
455.4
455.6
455.2
20
50
455.8
456.0
456.4
456.2

132'
157'
180'
118'
67'
108'
105'
97'
116'

Groundwater Divide

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

0 Distance (feet) 100 200 300 400 500 600 700

Notes:
Results show average groundwater elevations for May 1 through July 31, 2007 measured with transducers at 30 minute intervals.

Groundwater elevations adjusted for salinity and temperature.
Well MW-36-90* is excluded from contouring.
River elevation (R-20) is the calculated average river level based upon the river gradient between RRB and I-3.

Legend:

MW-30-50 — well screen

Inferred water table

453.66 — Monthly average groundwater head (ft AMSL)

103 boring depth (feet)

20 — Inferred hexavalent chromium contour (ppb) July 2007

453.5 — Groundwater head contour

453.5 — Inferred groundwater head contour

Interpreted groundwater flow direction

FIGURE 3-3
AVERAGE GROUNDWATER ELEVATIONS FOR WELLS ON FLOODPLAIN CROSS-SECTION A MAY THROUGH JULY 2007

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

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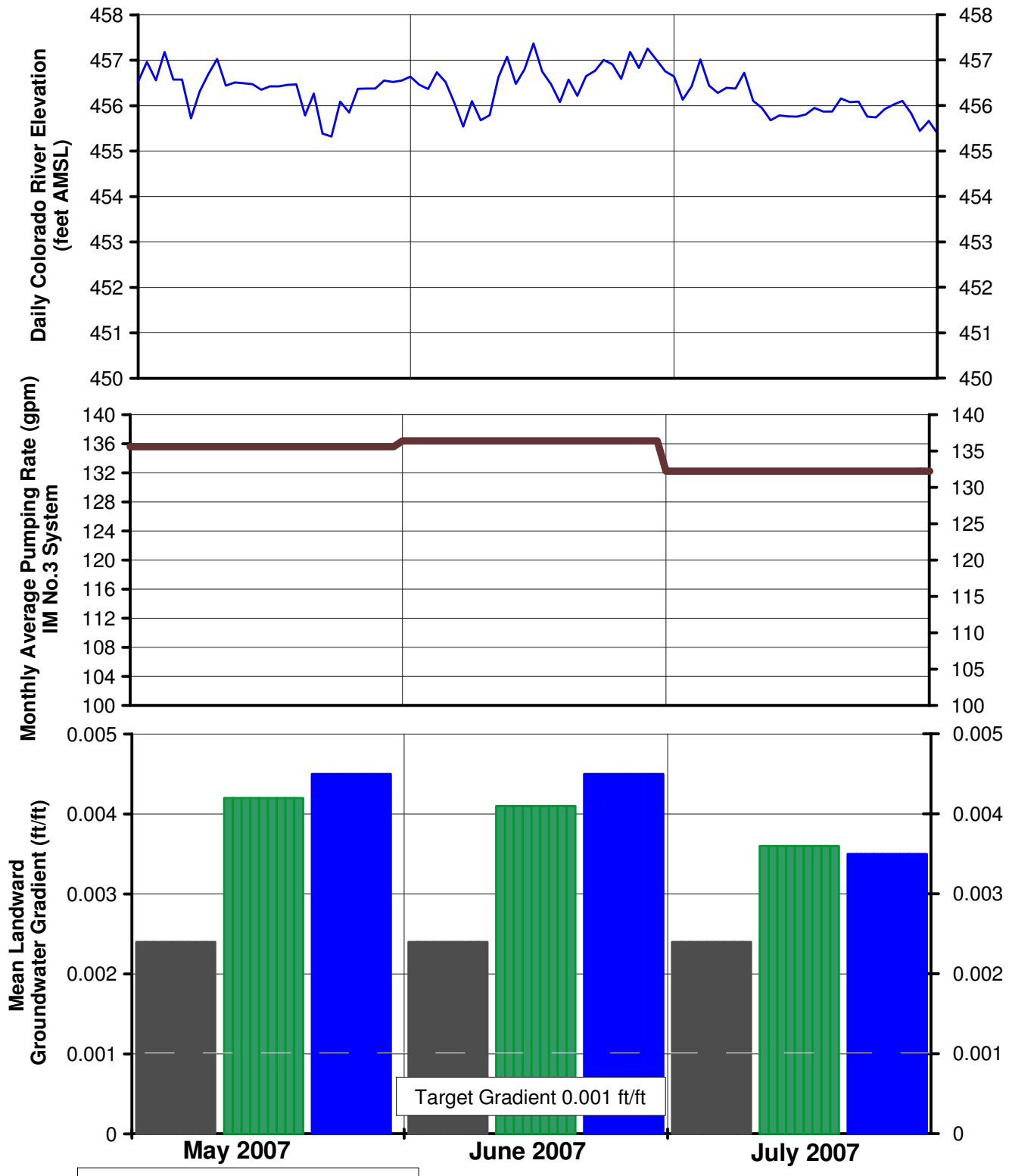

Notes:

1) For IM pumping, the target landward gradient for well pairs is 0.001 feet/foot.
2) Refer to Table 2-1 and Section 2.1 for discussion of pumping data.
3) Pumping rate plotted is the combined rate of extraction wells TW-3D and PE-1 in operation each month.
4) Refer to Table 3-1 and Section 2.4 for discussion of gradient data.

FIGURE 3-4
MEASURED HYDRAULIC GRADIENTS, RIVER ELEVATION AND PUMPING RATE MAY 2007 THROUGH JULY 2007
INTERIM MEASURE PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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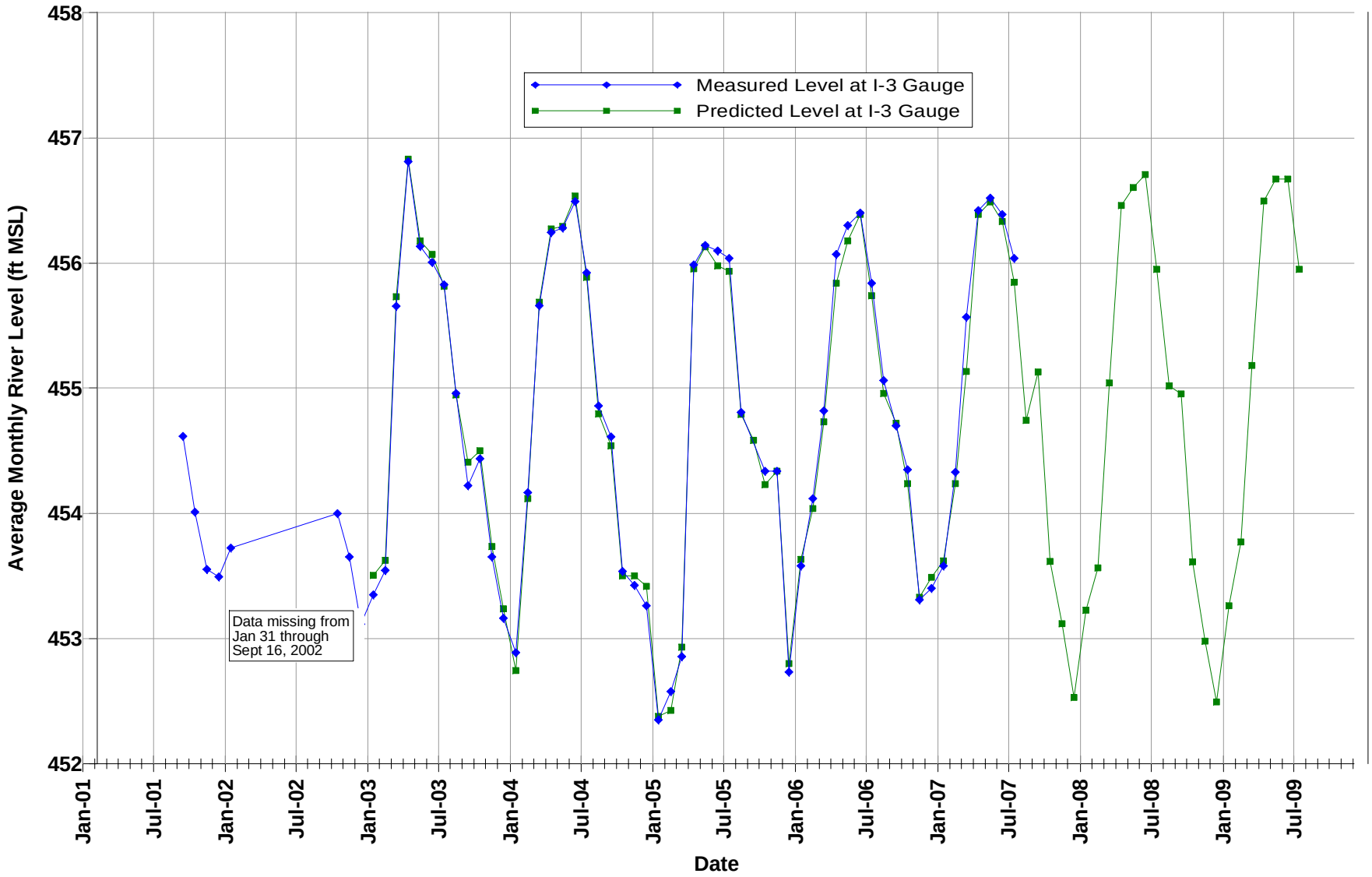

Note:
Projected river level is calculated based on monthly averages of Davis Dam release and stage in Lake Havasu as of August 10, 2007.
Measured data through July 31, 2007.
I-3 data unavailable from September 18 through October 4, 2006
River projections at I-3 are based upon June 2007 USBR projections.

FIGURE 3-5
PAST AND PREDICTED FUTURE RIVER LEVELS AT TOPOCK COMPRESSOR STATION

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

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Appendix A
Extraction System Operations Log for July 2007

Appendix A
Extraction System Operations Log for July 2007
PG&E Topock Interim Measures Performance Monitoring Program

During July 2007, 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) was over 99% percent during the July 2007 reporting period.

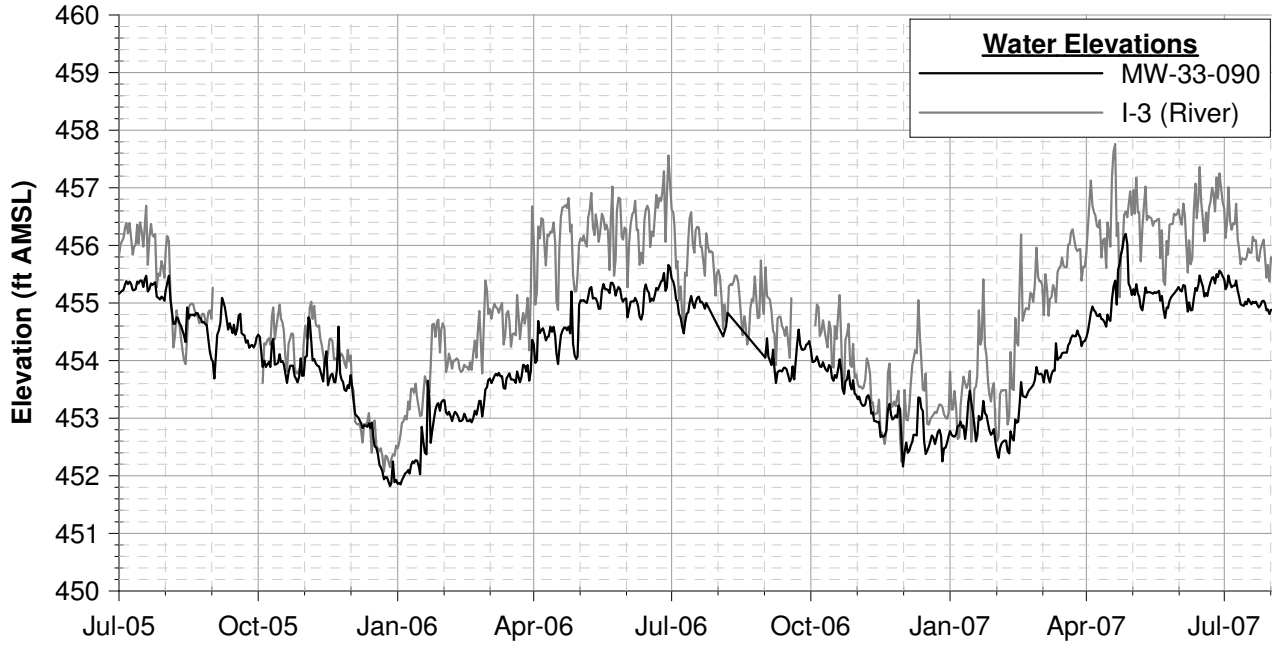
The IM No. 3 facility treated approximately 5,902,012 gallons of extracted groundwater during July 2007. The IM No. 3 facility also treated approximately 4,335 gallons of water generated from the groundwater monitoring program. No injection well development was completed during July 2007. One container of solids from the IM No. 3 facility was taken offsite during July 2007.

Periods of planned and unplanned extraction system down time (that together resulted in 0.4 percent downtime during July 2007) 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.

- **July 3, 2007 (unplanned)**: The extraction well system was temporarily offline from 11:14 am until 11:19 am to switch to generator power after a Needles power outage. Extraction system downtime was 5 minutes.
- **July 9, 2007 (unplanned)**: The extraction well system was temporarily offline from 12:00 pm until 12:05 pm to return operations to Needles power supply from generator power supply. Extraction system downtime was 5 minutes.
- **July 11, 2007 (planned):** The extraction well system was temporarily offline from 8:30 am until 9:00 am to replace an air relief valve on the air compressor storage tank. The repairs were completed with onsite parts. The extraction system downtime was 30 minutes.
- **July 15, 2007 (unplanned):** The extraction well system was temporarily offline from 7:21 pm until 9:02 pm to replace the drive belts on the iron oxidation system air blower and replace a fitting on the seal water distribution system. The repairs were completed with onsite spare parts. The extraction system downtime was 1 hour 41 minutes.
- **July 23, 2007 (unplanned)**: The extraction well system was temporarily offline from 9:52 pm until 9:57 pm to switch to generator power after a Needles power outage. Extraction system downtime was 5 minutes.
- **July 24, 2007 (planned):** The extraction well system was temporarily offline from 10:37 am until 10:46 am to switch microfilter module banks and begin clean-in-place procedure for the offline microfilter modules. The extraction system downtime was 9 minutes.

- **July 28, 2007 (unplanned)**: The extraction well system was temporarily offline from 8:12 pm until 8:17 pm to return operations to Needles power supply from generator power supply. Extraction system downtime was 5 minutes.
- **July 29, 2007 (unplanned)**: The extraction well system was temporarily offline from 5:40 am until 5:45 am to switch to generator power after a Needles power outage. Extraction system downtime was 5 minutes.
- **July 30, 2007 (unplanned)**: The extraction well system was temporarily offline from 4:50 pm until 4:55 pm to return operations to Needles power supply from generator power supply. Extraction system downtime was 5 minutes.

Appendix B
Chromium Sampling Results for Monitoring Wells in Floodplain Area



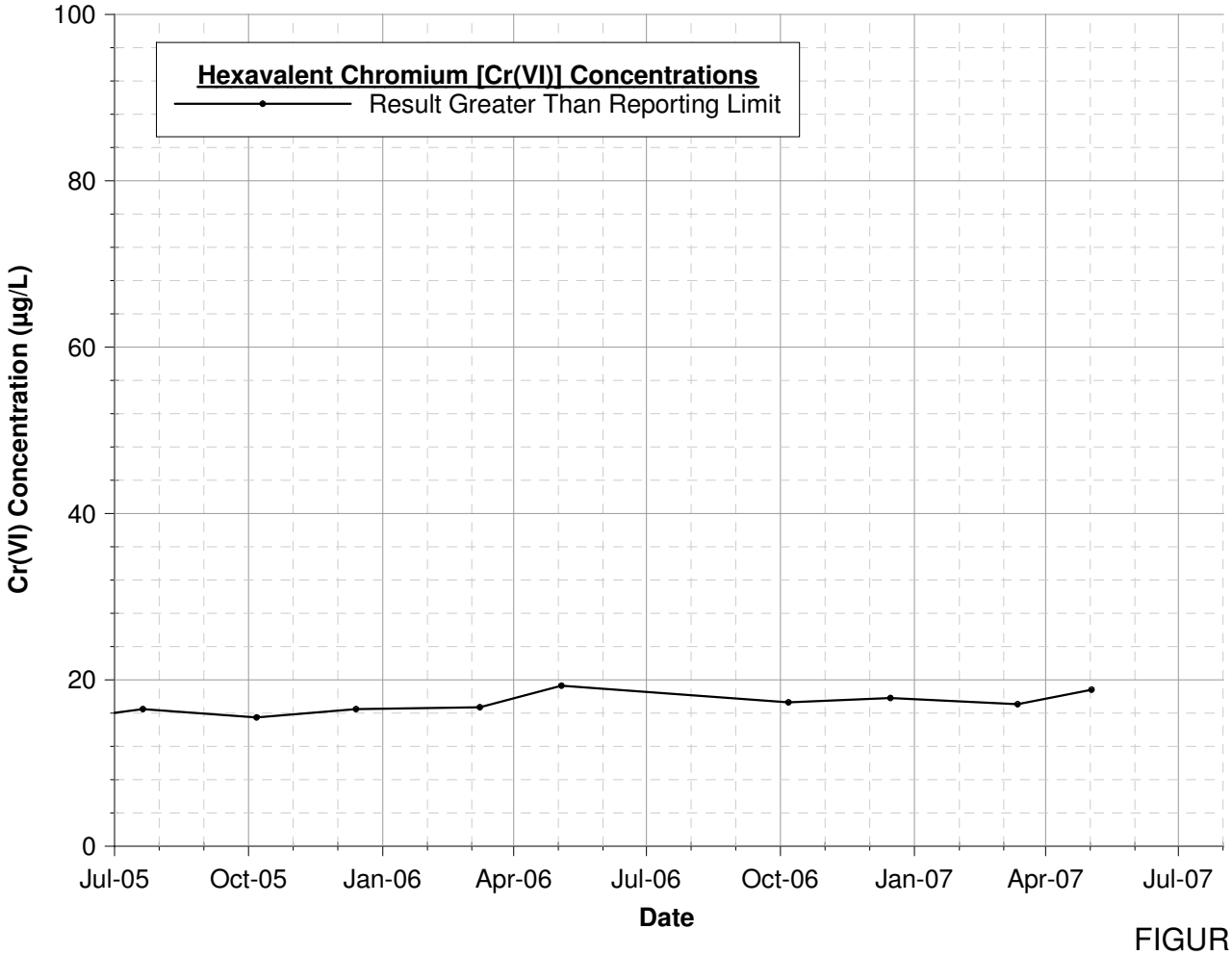


FIGURE B-1
MW-33-90 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 5/2/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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.

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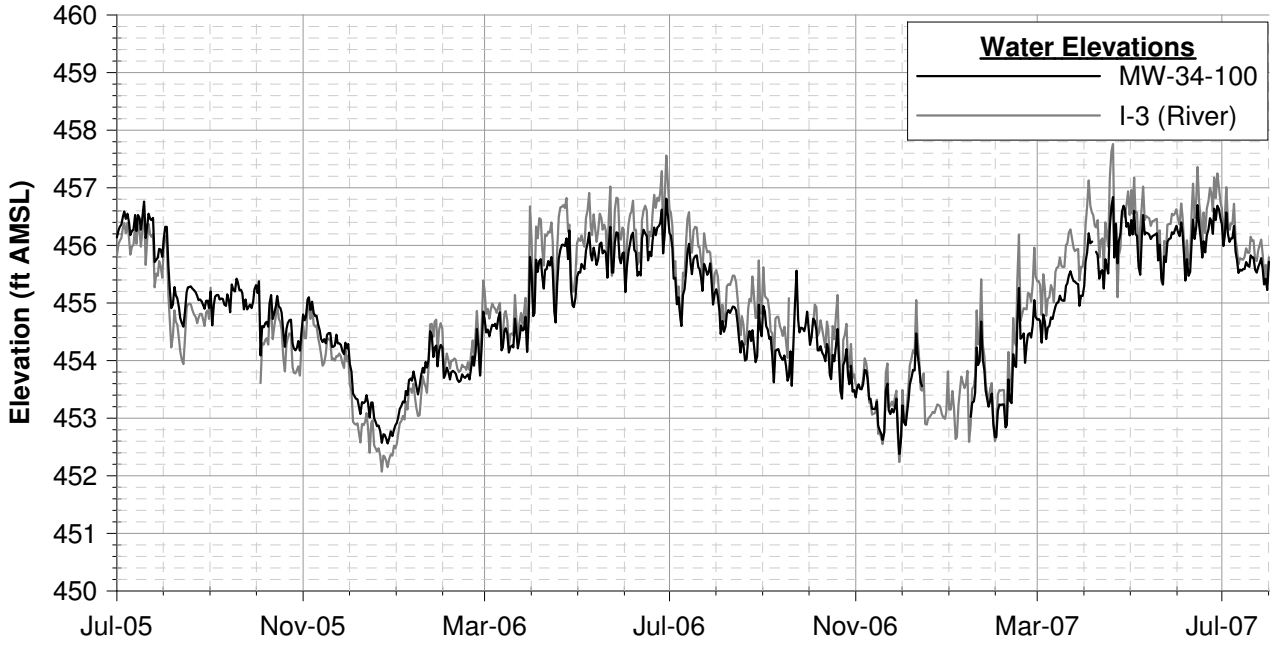

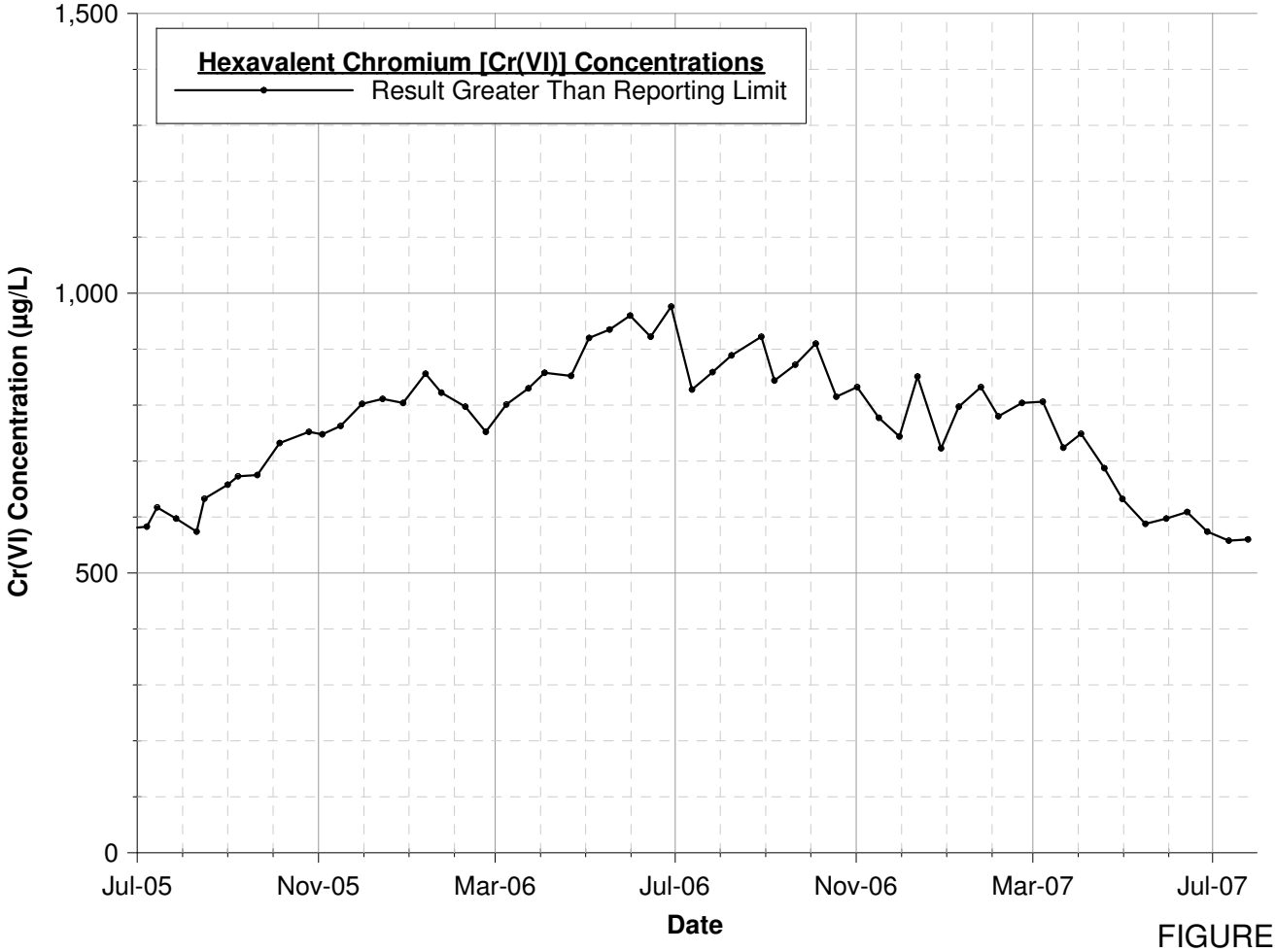

FIGURE B-2
MW-34-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 7/24/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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.
4. MW-34-100 data is unavailable from January 1 through January 15, 2007.

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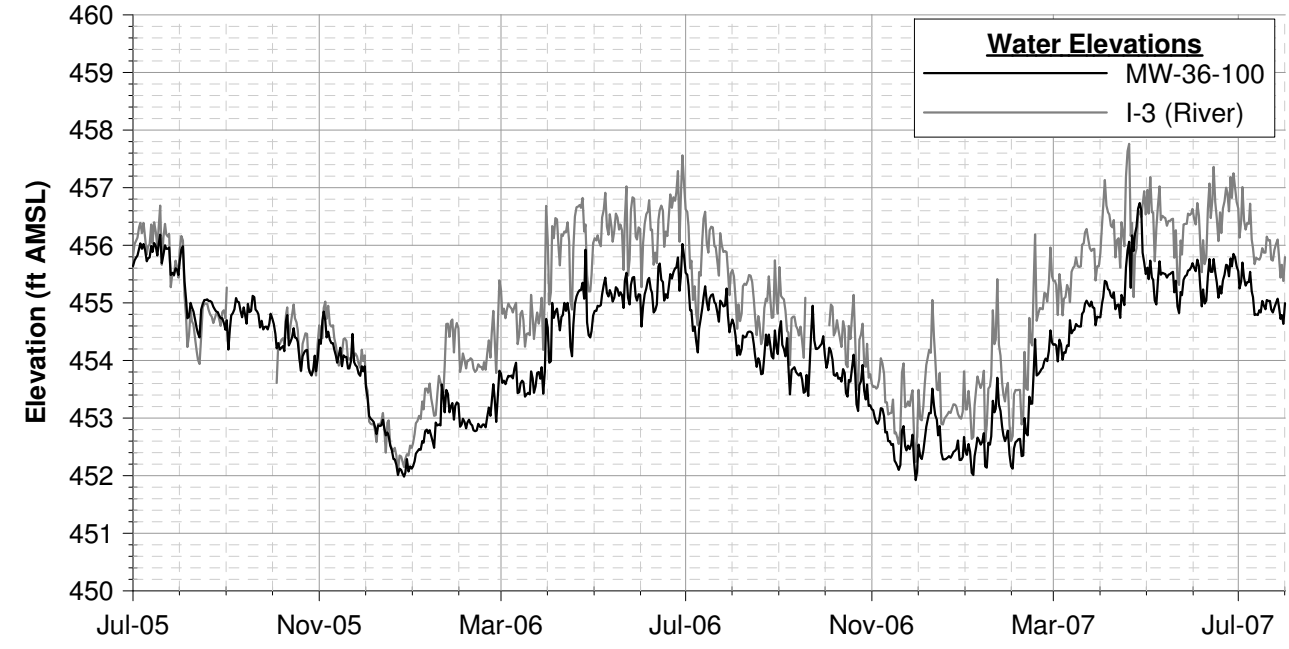

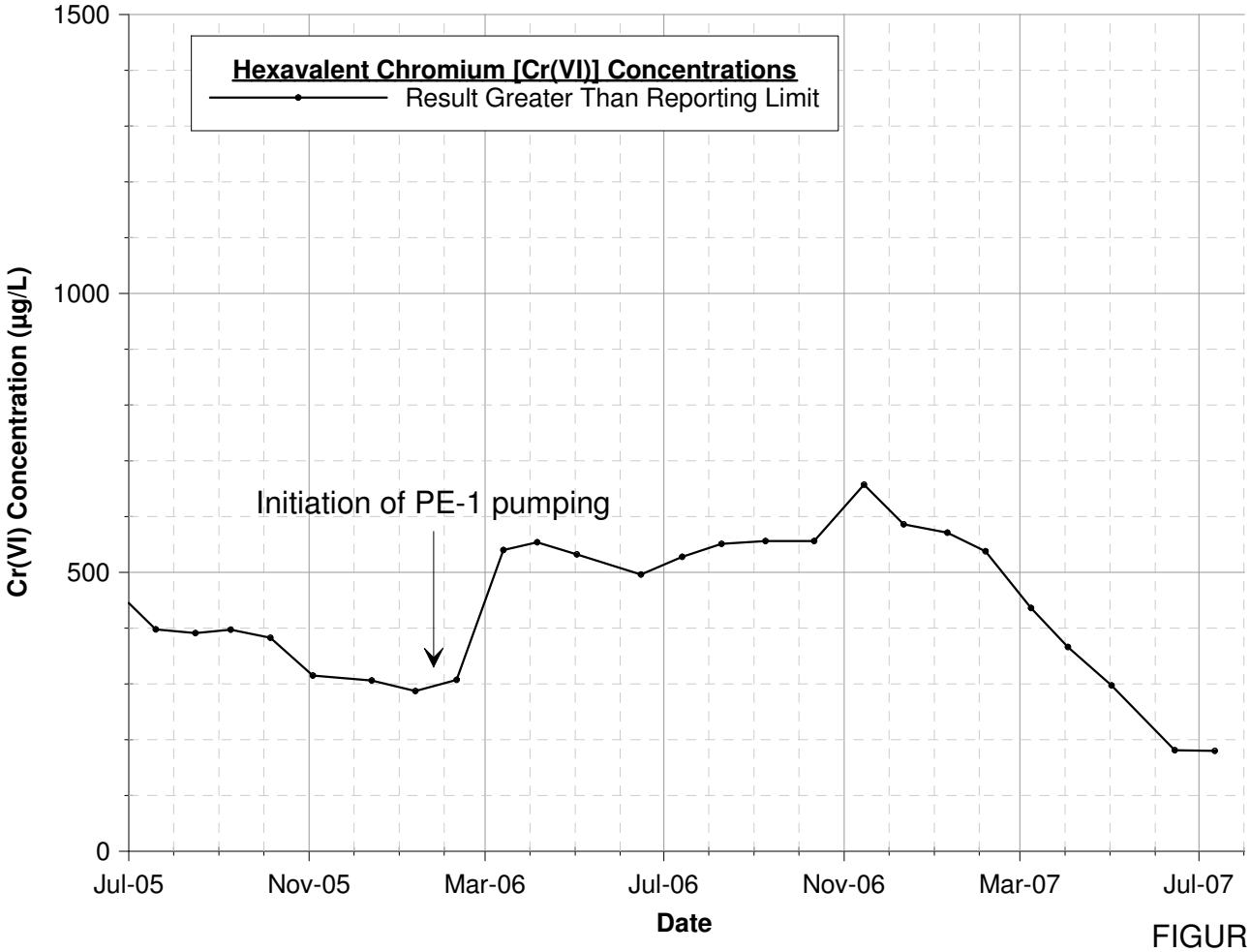

FIGURE B-3
MW-36-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 7/11/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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.

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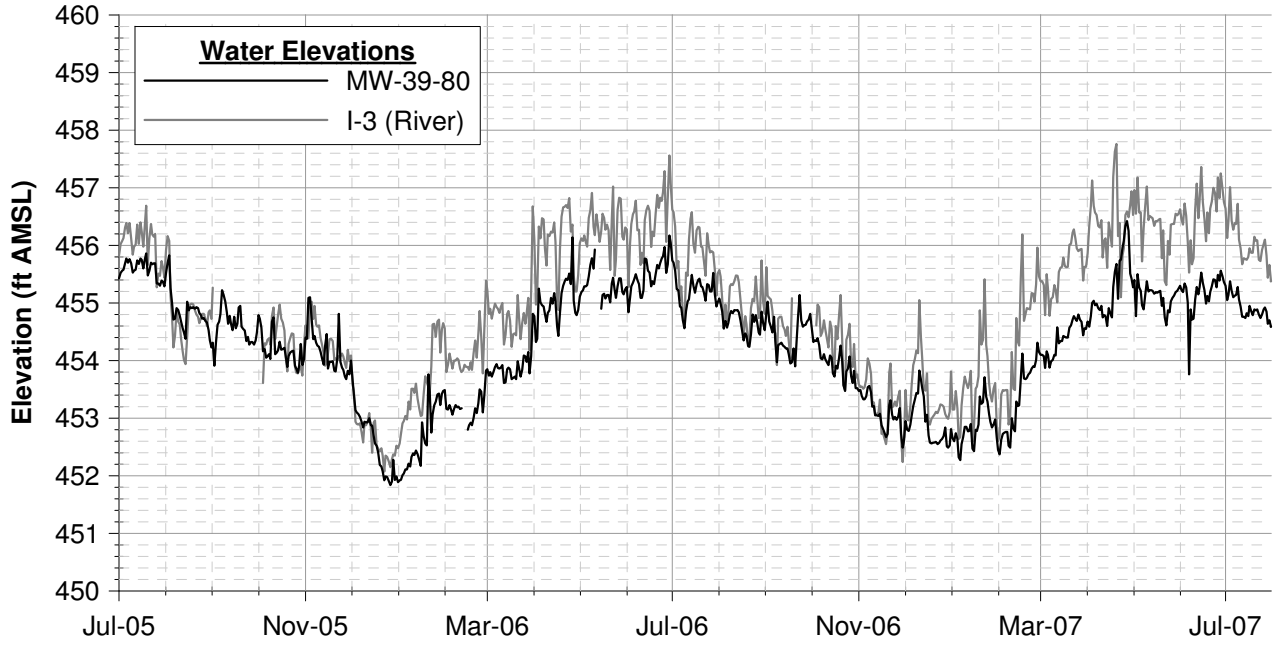

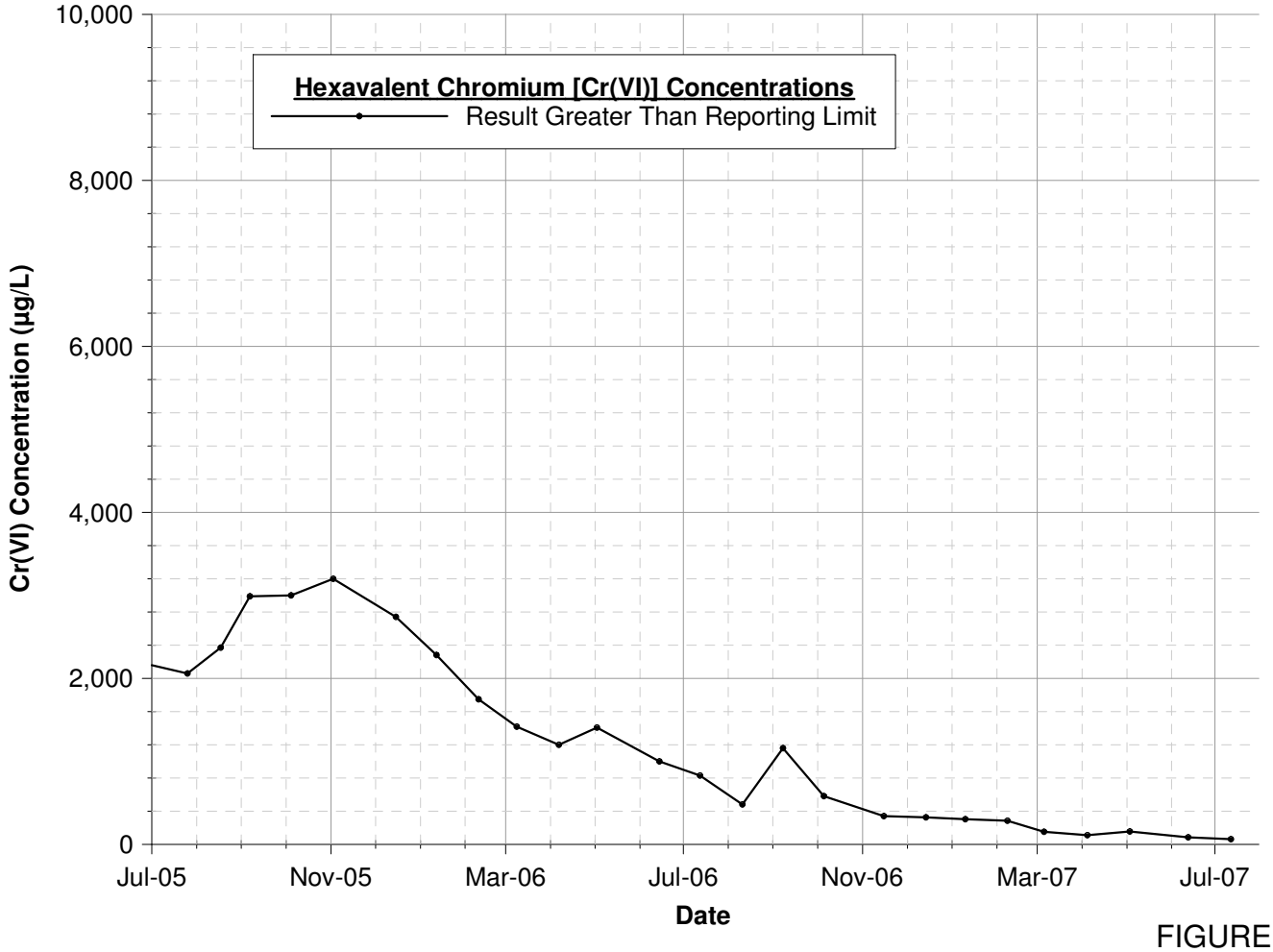

FIGURE B-4
MW-39-80 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 7/11/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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.

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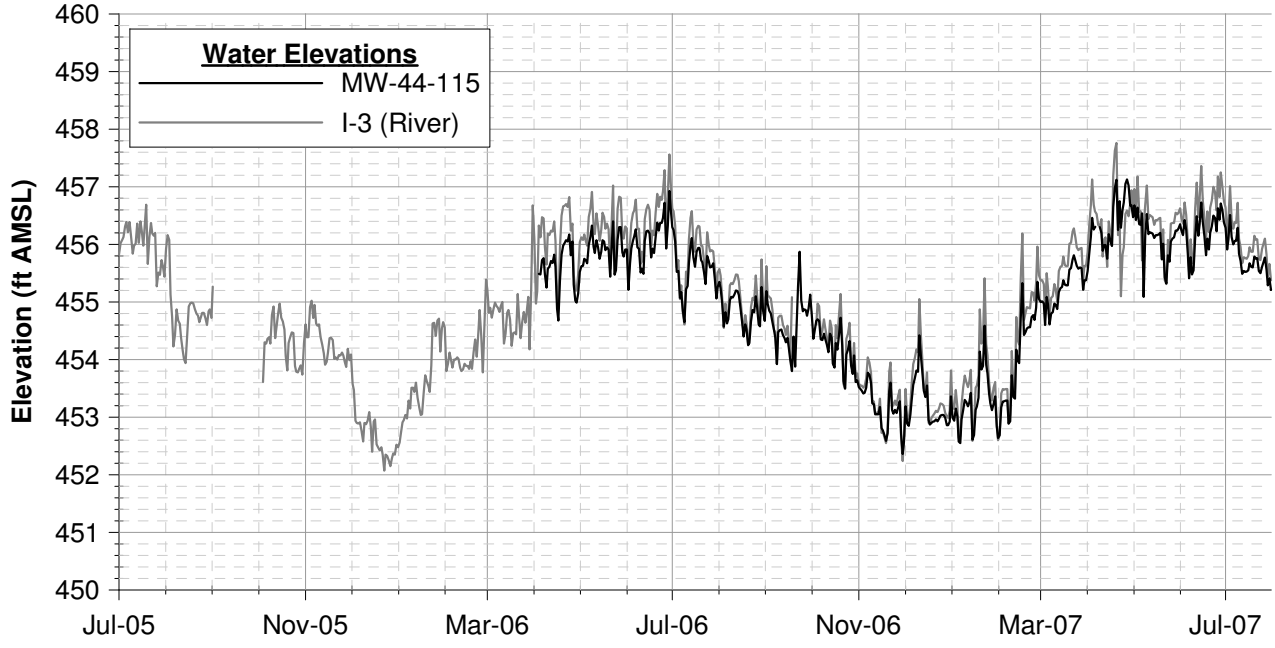

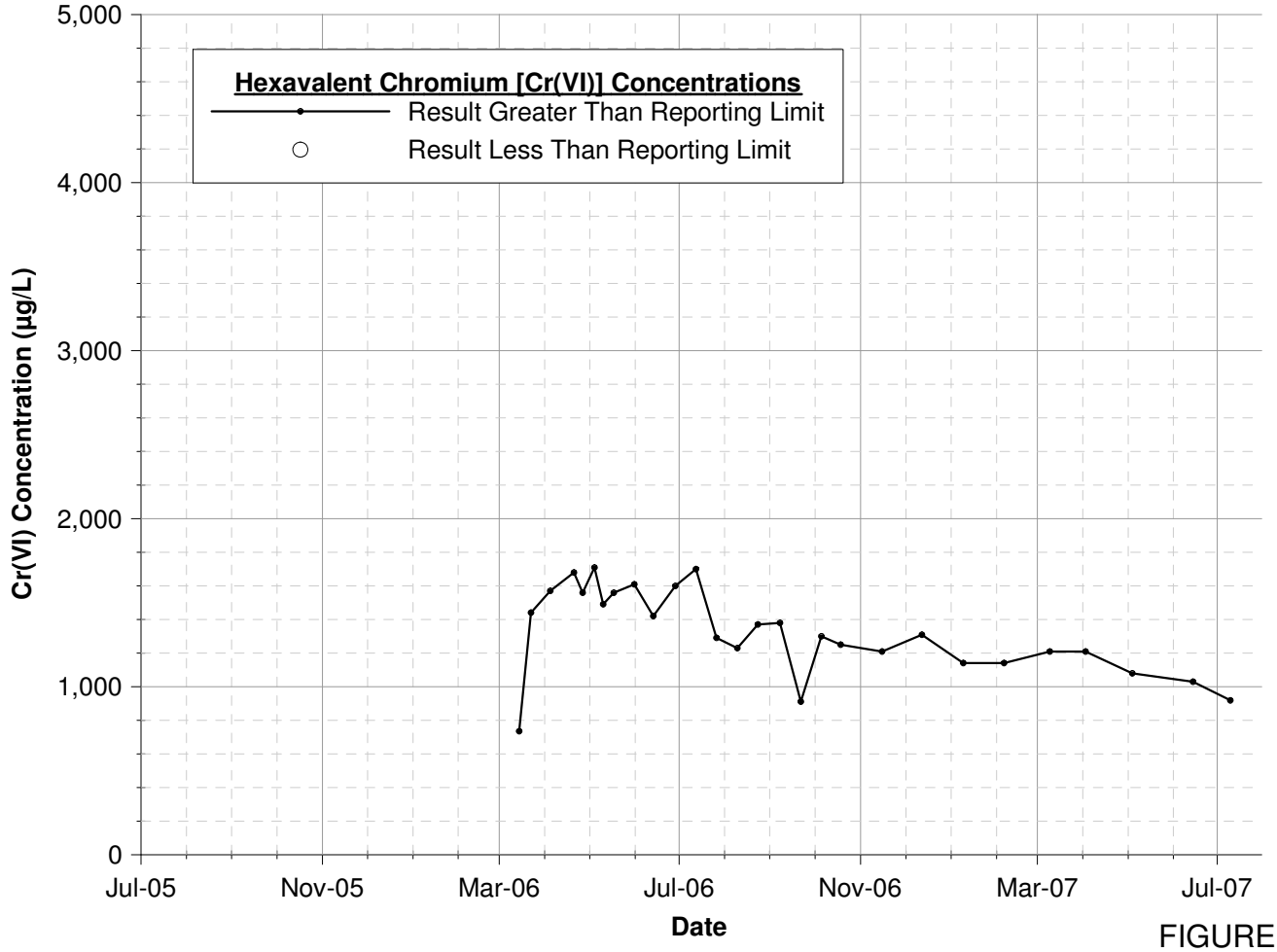

FIGURE B-5
MW-44-115 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 7/11/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.

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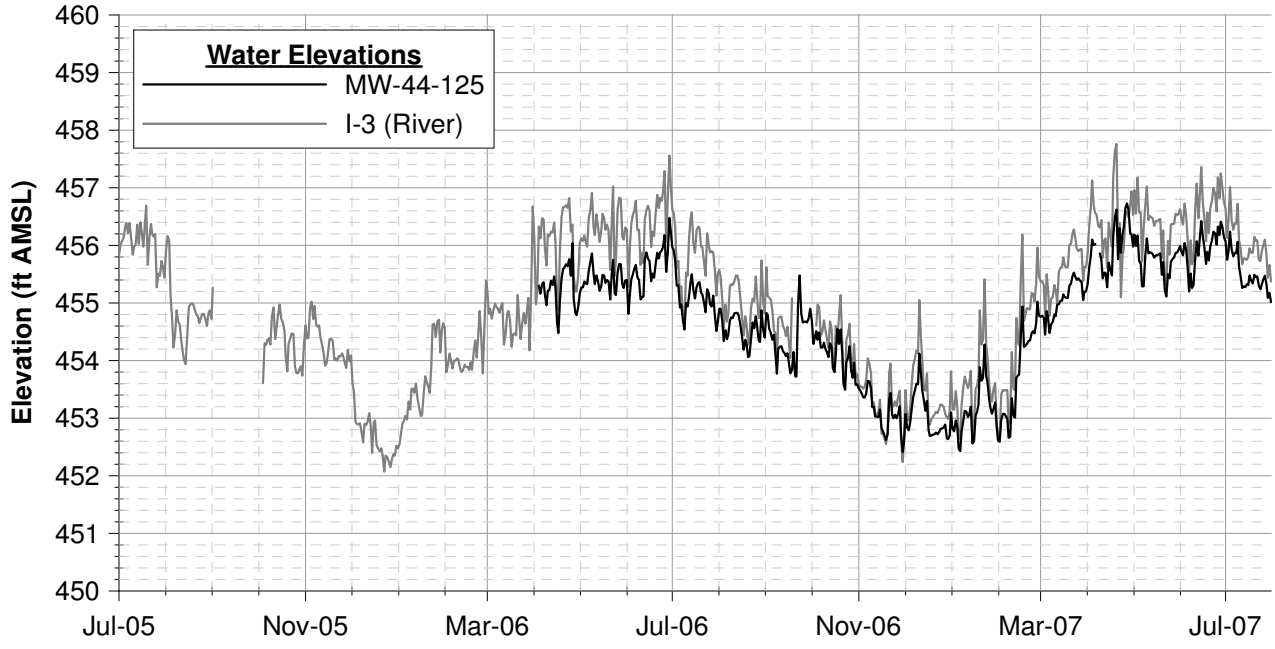

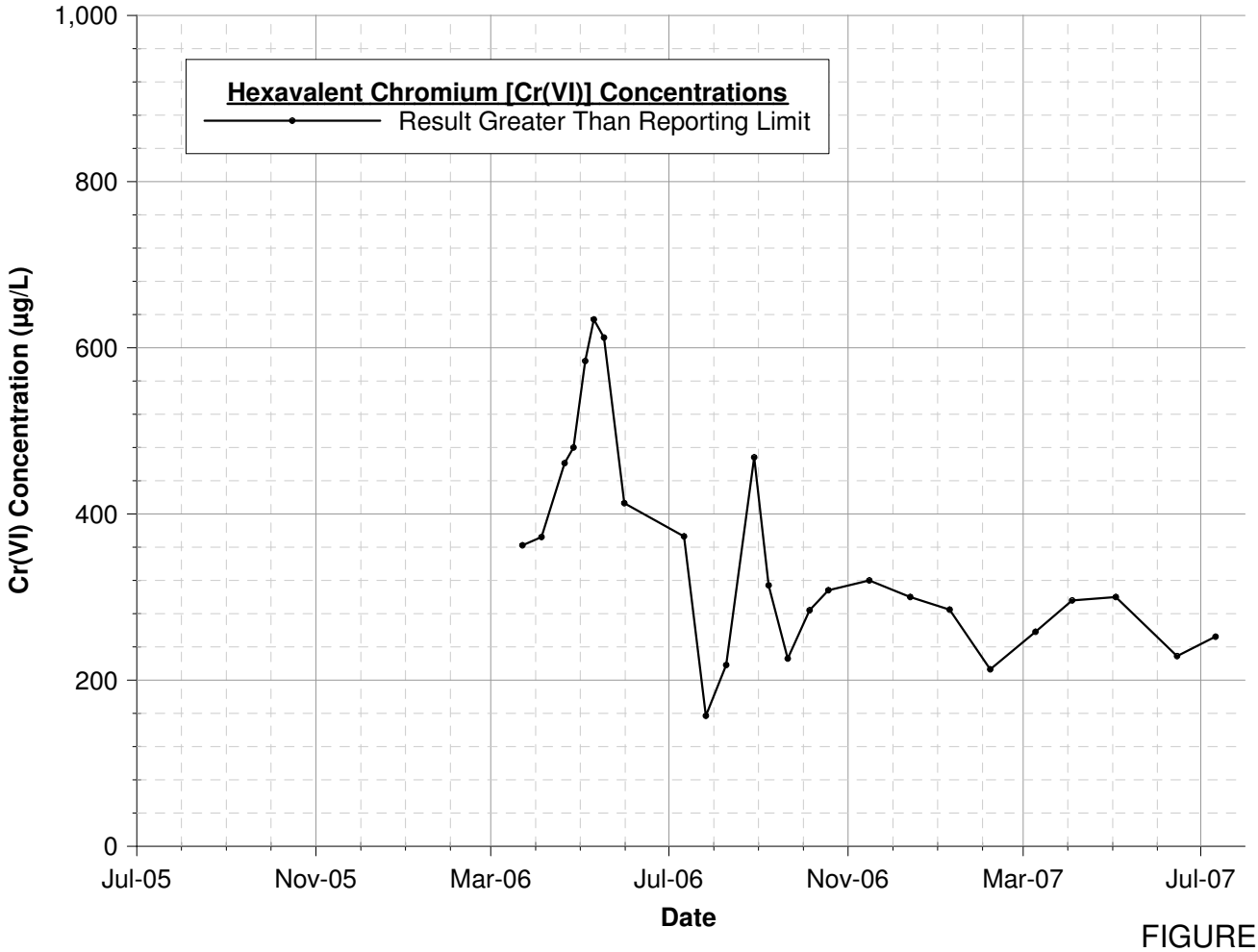

FIGURE B-6
MW-44-125 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 7/11/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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. Initial sampling results from 3/9/06 are not plotted because the well was not fully developed at this time.
4. Non-detect results from the 6/28/06 sampling event are not shown while these data undergo a more rigorous field QC evaluation.

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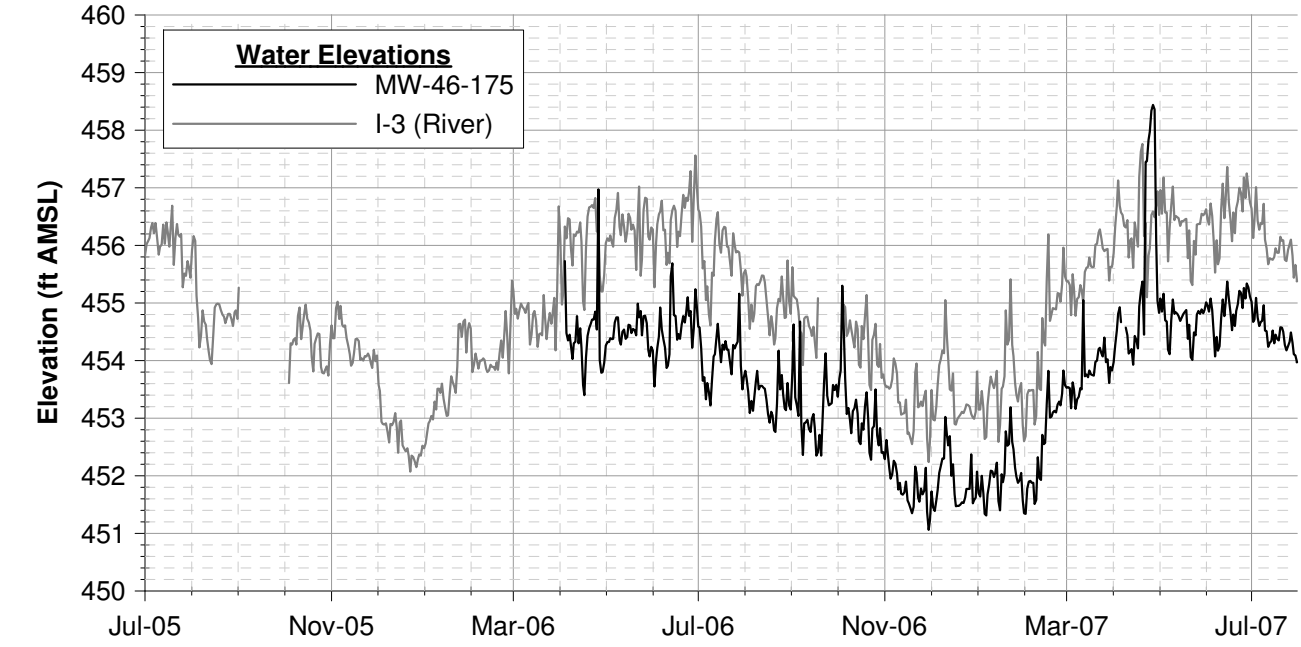

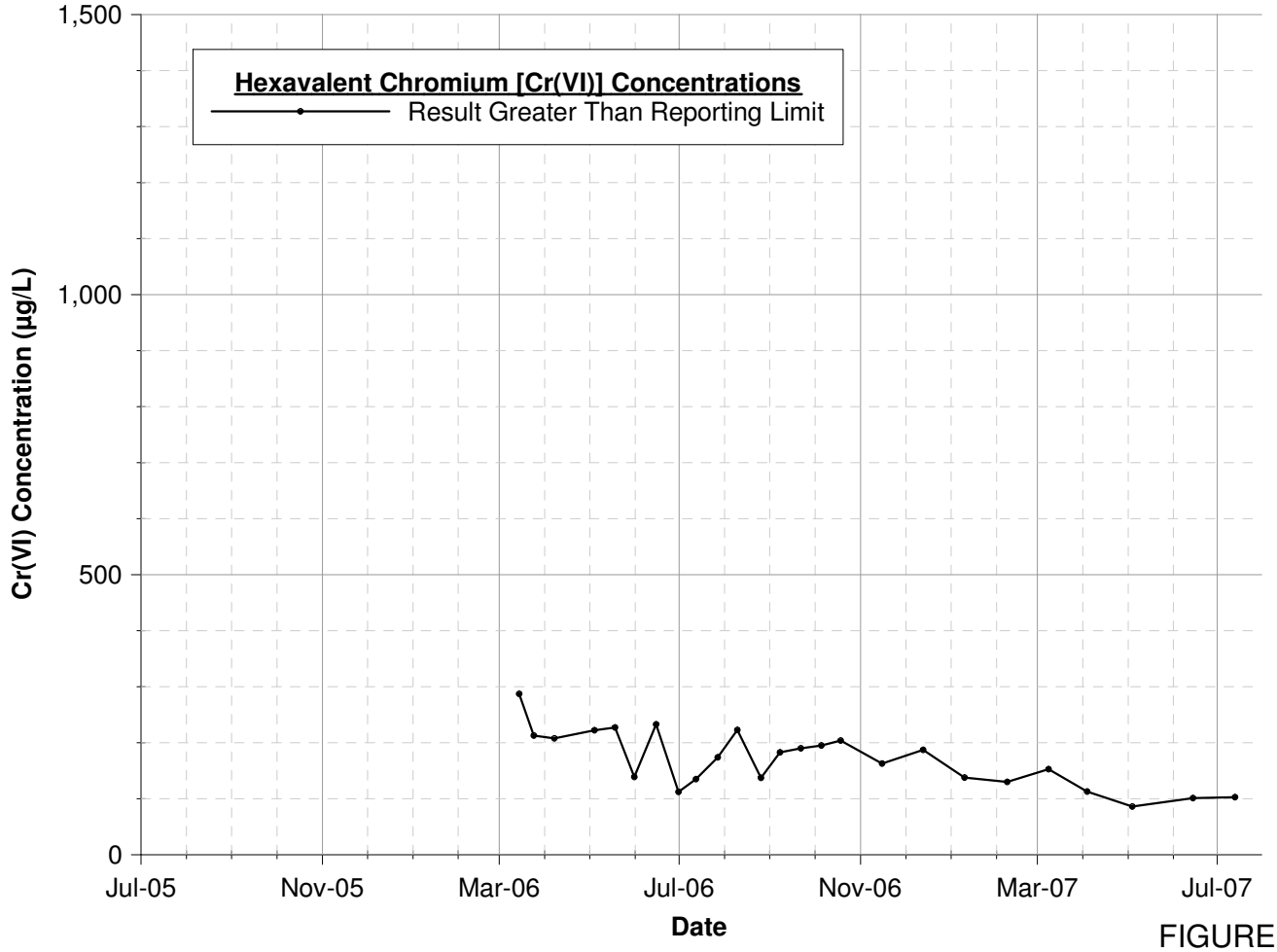

FIGURE B-7
MW-46-175 CR(VI) CONCENTRATION & HYDROGRAPH - 7/1/2005 - 7/31/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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	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	11-Jul-06	ND (1.0)	ND (1.0)	-108	0.6	7,320	455.3	454.8
	09-Aug-06	ND (0.2)	ND (1.0)	-149	0.7	6,920	455.2	455.4

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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 Wells								
MW-36-070	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	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	454.7
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	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	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
	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	455.6

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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-27-085	11-Jul-07	ND (1.0)	ND (1.0)	-54	0.0	20,100	453.9	455.8
MW-28-090	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	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	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	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	455.9
	11-Jul-07	ND (1.0)	ND (1.0)	-79	0.0	14,800	456.1	455.3
MW-34-100	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

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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-34-100	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	456.3
	13-Jun-07 FD	608	633	FD	FD	FD	FD	FD
	27-Jun-07	574	536	63	4.4	20,600	456.6	456.6
	12-Jul-07	557	520	45	0.0	25,000	455.9	456.0
	12-Jul-07 FD	558	521	FD	FD	FD	FD	FD
	25-Jul-07	560	627	52	0.0	18,000	455.7	455.5
MW-36-090	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
	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	456.1
	12-Jul-07	2.90	3.10	-135	0.0	6,530	454.9	455.5
MW-36-100	13-Jul-06	528	497	37	1.0	19,600	455.8	457.5

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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-36-100	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	456.6
	12-Jul-07	180	219	-67	0.0	17,400	455.1	455.6
MW-39-080	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	456.4
	12-Jul-07	62.8	56.2	-12	0.0	16,600	454.7	455.0
MW-39-100	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
	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	455.3
	12-Jul-07	2020	2430	77	0.0	20,800	455.2	455.1
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

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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-43-075	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	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	455.9
	10-Jul-07	919	1060	23	3.6	16,300	455.3	455.1
MW-44-125	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
	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

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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	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	455.9
	11-Jul-07	252	283	-94	0.0	17,000	456.3	456.2
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	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	456.4
	13-Jul-07	103	101	-254	0.0	20,900	456.1	455.8
MW-46-205	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
	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

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, July 2006 through July 2007
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-49-365	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 presssure transducer record at I-3.

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, July 2006 through July 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
	18-Jul-07	---	---	-43.9	2.89	2710
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

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, July 2006 through July 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	14-Mar-07	9470	9270	153	3.01	2820
	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
Deep Wells						
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
	18-Jul-07	---	---	-57.9	3.02	15400
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
	01-May-07	46.1	47.4	-3.0	2.78	9550
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	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

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, July 2006 through July 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.

Appendix C
Hydrographs and Hydraulic Gradient Maps for Reporting Period

TABLE C-1

Average, Minimum, and Maximum Groundwater Elevations, July 2007 Report
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	Minimum [1] (ft AMSL)	Maximum [1] (ft AMSL)	Average [1] (ft AMSL)	Number of Days reporting data
I-3	River Station	455.39	457.02	456.04	31
MW-10	Shallow Wells	457.06	457.22	457.15	31
MW-19	Shallow Wells	455.84	456.40	456.10	31
MW-20-070	Shallow Wells	454.61	455.11	454.83	31
MW-20-100	Middle Wells	454.15	454.69	454.39	31
MW-20-130	Deep Wells	453.82	454.39	454.05	31
MW-25	Shallow Wells	456.42	456.46	456.44	11
MW-26	Shallow Wells	455.82	456.08	455.95	31
MW-27-020	Shallow Wells	455.42	456.45	455.86	31
MW-27-060	Middle Wells	455.42	456.68	455.95	31
MW-27-085	Deep Wells	455.14	456.76	455.99	31
MW-28-025	Shallow Wells	455.49	456.67	456.01	31
MW-28-090	Deep Wells	455.40	456.73	455.95	31
MW-30-050	Middle Wells	455.14	456.23	455.61	31
MW-31-060	Shallow Wells	455.47	456.11	455.76	31
MW-31-135	Deep Wells	454.81	455.49	455.10	31
MW-32-020	Shallow Wells	455.41	456.13	455.66	31
MW-32-035	Shallow Wells	455.23	456.17	455.63	31
MW-33-040	Shallow Wells	455.68	456.57	456.07	31
MW-33-090	Middle Wells	455.59	456.54	456.00	31
MW-33-150	Deep Wells	455.86	456.76	456.24	31
MW-34-055	Middle Wells	455.47	456.83	456.04	31
MW-34-080	Deep Wells	455.48	456.80	456.02	31
MW-34-100	Deep Wells	455.24	456.58	455.80	31
MW-35-060	Shallow Wells	455.91	456.84	456.32	31
MW-35-135	Deep Wells	456.36	457.03	456.67	31
MW-36-020	Shallow Wells	455.30	456.35	455.75	31
MW-36-040	Shallow Wells	455.22	456.38	455.72	31
MW-36-050	Middle Wells	455.25	456.45	455.75	31
MW-36-070	Middle Wells	455.18	456.36	455.68	31
MW-36-090	Deep Wells	454.57	455.57	454.99	31
MW-36-100	Deep Wells	454.65	455.68	455.07	31
MW-39-040	Shallow Wells	455.01	456.04	455.45	31
MW-39-050	Middle Wells	455.02	456.03	455.46	31
MW-39-060	Middle Wells	454.94	455.89	455.35	31
MW-39-070	Middle Wells	454.59	455.39	454.93	31
MW-39-080	Deep Wells	454.69	455.53	455.05	31
MW-39-100	Deep Wells	454.55	455.71	455.22	31
MW-42-030	Shallow Wells	454.87	455.83	455.29	31
MW-42-055	Middle Wells	455.11	456.09	455.53	31
MW-42-065	Middle Wells	455.24	456.20	455.65	31
MW-43-025	Shallow Wells	455.31	456.66	455.89	31
MW-43-075	Deep Wells	455.61	456.97	456.19	31
MW-43-090	Deep Wells	455.86	457.25	456.44	31
MW-44-070	Middle Wells	455.22	456.52	455.76	31
MW-44-115	Deep Wells	455.02	456.24	455.52	31
MW-44-125	Deep Wells	454.81	456.56	455.88	31

TABLE C-1

Average, Minimum, and Maximum Groundwater Elevations, July 2007 Report
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	Minimum[1] (ft AMSL)	Maximum[1] (ft AMSL)	Average[1] (ft AMSL)	Number of Days reporting data
MW-45-095a	Deep Wells	453.98	455.10	454.48	31
MW-46-175	Deep Wells	455.75	456.75	456.16	31
MW-46-205	Deep Wells	456.24	457.10	456.60	31
MW-47-055	Shallow Wells	455.96	456.69	456.29	31
MW-47-115	Deep Wells	456.05	456.74	456.36	31
MW-49-135	Deep Wells	456.19	457.21	456.62	31
MW-49-275	Deep Wells	457.03	457.68	457.31	31
MW-49-365	Deep Wells	458.56	459.14	458.82	31
MW-50-095	Middle Wells	455.64	456.19	455.90	31
MW-50-200	Deep Wells	455.94	456.42	456.16	31
PT2D	Deep Wells	453.96	455.13	454.62	31
PT5D	Deep Wells	454.46	455.36	454.85	31
PT6D	Deep Wells	454.27	455.54	455.02	31
RRB	River Station	455.70	457.31	456.33	31

NOTES

Averages include data collected from 7/1/2007 through 7/31/2007

ft AMSL feet above mean sea level

[1] minimium, maximum and average of daily groundwater elevation averages

TABLE C-2

Average, Minimum, and Maximum Groundwater Elevations, May through July 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	Minimum [1] (ft AMSL)	Maximum [1] (ft AMSL)	Average [1] (ft AMSL)	Number of Days reporting data
I-3	River Station	455.32	457.28	456.32	92
MW-10	Shallow Wells	456.44	457.22	456.99	42
MW-19	Shallow Wells	455.84	456.45	456.16	92
MW-20-070	Shallow Wells	454.61	455.22	454.92	92
MW-20-100	Middle Wells	453.12	454.82	454.52	92
MW-20-130	Deep Wells	452.39	454.47	454.06	92
MW-25	Shallow Wells	456.02	456.46	456.27	49
MW-26	Shallow Wells	455.73	456.08	455.90	92
MW-27-020	Shallow Wells	455.42	456.74	456.16	92
MW-27-060	Middle Wells	455.42	456.96	456.22	92
MW-27-085	Deep Wells	455.14	456.99	456.24	92
MW-28-025	Shallow Wells	455.49	456.95	456.29	92
MW-28-090	Deep Wells	455.40	456.95	456.20	92
MW-30-050	Middle Wells	455.14	456.42	455.79	92
MW-31-060	Shallow Wells	455.47	456.19	455.85	92
MW-31-135	Deep Wells	454.74	455.57	455.15	92
MW-32-020	Shallow Wells	455.41	456.19	455.82	92
MW-32-035	Shallow Wells	455.23	456.37	455.81	64
MW-33-040	Shallow Wells	455.68	456.65	456.20	92
MW-33-090	Middle Wells	455.59	456.68	456.17	92
MW-33-150	Deep Wells	455.70	456.87	456.36	92
MW-33-210	Deep Wells	456.20	457.19	456.68	60
MW-34-055	Middle Wells	455.47	457.08	456.30	92
MW-34-080	Deep Wells	455.48	457.03	456.28	92
MW-34-100	Deep Wells	455.24	456.70	456.02	92
MW-35-060	Shallow Wells	455.91	457.05	456.54	92
MW-35-135	Deep Wells	455.45	457.12	456.75	92
MW-36-020	Shallow Wells	455.30	456.58	455.97	84
MW-36-040	Shallow Wells	455.22	456.63	455.96	92
MW-36-050	Middle Wells	455.25	456.64	455.97	92
MW-36-070	Middle Wells	455.18	456.60	455.92	92
MW-36-090	Deep Wells	454.57	455.79	455.16	92
MW-36-100	Deep Wells	454.65	455.86	455.32	92
MW-39-040	Shallow Wells	454.78	456.25	455.63	92
MW-39-050	Middle Wells	455.02	456.25	455.63	92
MW-39-060	Middle Wells	454.94	456.09	455.51	92
MW-39-070	Middle Wells	453.77	455.56	455.08	92
MW-39-080	Deep Wells	454.69	455.72	455.19	92
MW-39-100	Deep Wells	454.55	455.84	455.30	92
MW-42-030	Shallow Wells	454.87	456.10	455.57	92
MW-42-055	Middle Wells	455.11	456.32	455.80	92
MW-42-065	Middle Wells	455.24	456.41	455.90	92
MW-43-025	Shallow Wells	455.31	456.98	456.15	58
MW-43-075	Deep Wells	455.61	458.23	456.71	92
MW-43-090	Deep Wells	455.84	457.98	456.81	92
MW-44-070	Middle Wells	455.10	456.73	456.02	92
MW-44-115	Deep Wells	455.02	456.43	455.74	92

TABLE C-2

Average, Minimum, and Maximum Groundwater Elevations, May through July 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

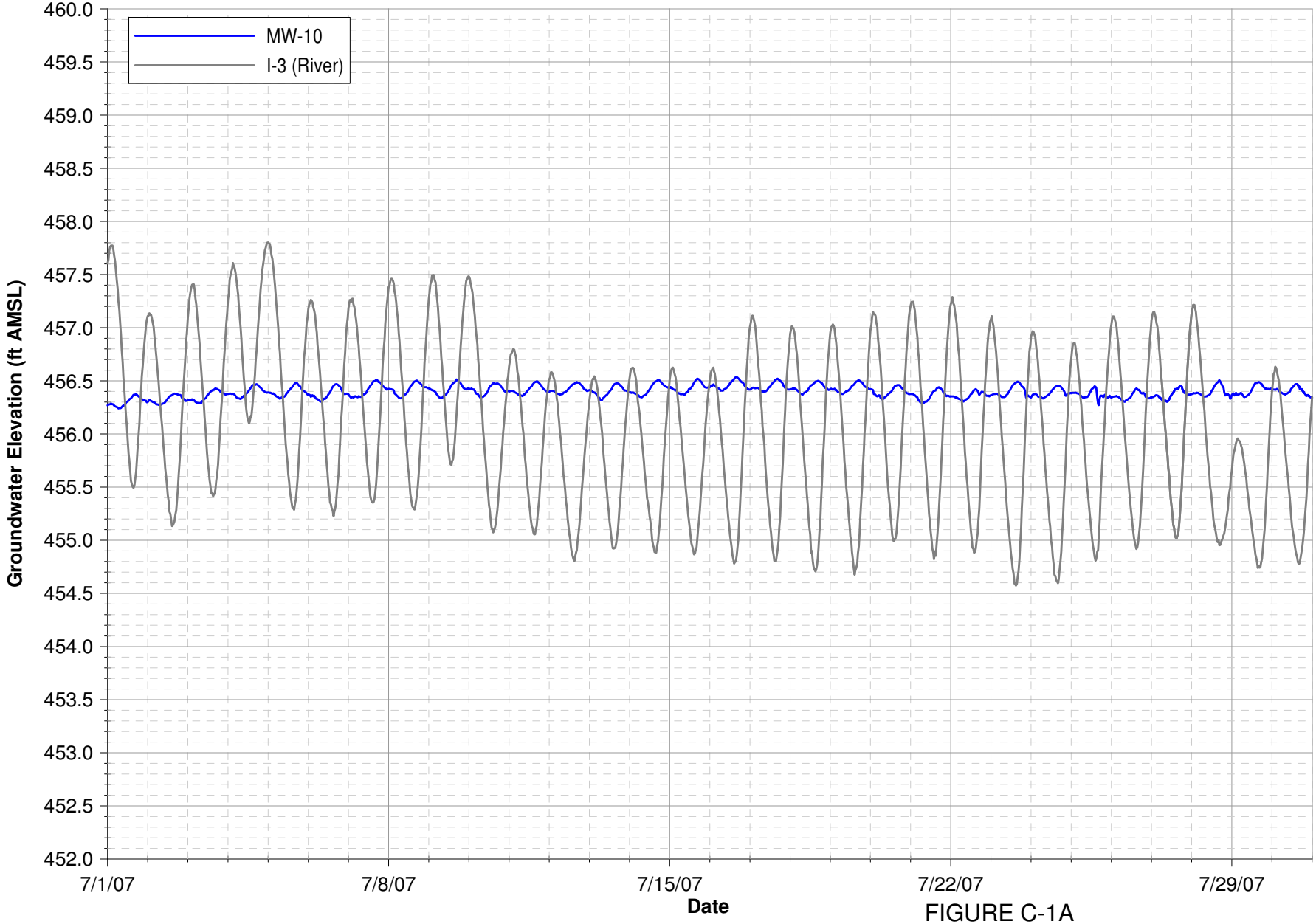
Well ID	Aquifer Zone	Minimum[1] (ft AMSL)	Maximum[1] (ft AMSL)	Average[1] (ft AMSL)	Number of Days reporting data
MW-44-125	Deep Wells	454.81	456.86	456.10	92
MW-45-095a	Deep Wells	453.98	455.38	454.68	92
MW-46-175	Deep Wells	455.75	456.90	456.36	92
MW-46-205	Deep Wells	455.13	457.22	456.73	92
MW-47-055	Shallow Wells	455.96	456.80	456.41	87
MW-47-115	Deep Wells	455.19	456.82	456.45	92
MW-49-135	Deep Wells	456.15	457.35	456.78	92
MW-49-275	Deep Wells	457.03	457.81	457.44	92
MW-49-365	Deep Wells	457.84	459.27	458.92	92
MW-50-095	Middle Wells	453.09	456.25	455.80	89
MW-50-200	Deep Wells	455.89	456.47	456.20	89
MW-51	Middle Wells	447.61	456.01	455.60	61
PT2D	Deep Wells	453.96	455.28	454.76	92
PT5D	Deep Wells	453.97	455.59	455.06	92
PT6D	Deep Wells	454.27	455.69	455.17	92
RRB	River Station	455.70	457.50	456.62	92

NOTES

Averages include data collected from 5/1/2007 through 7/31/2007

ft AMSL feet above mean sea level

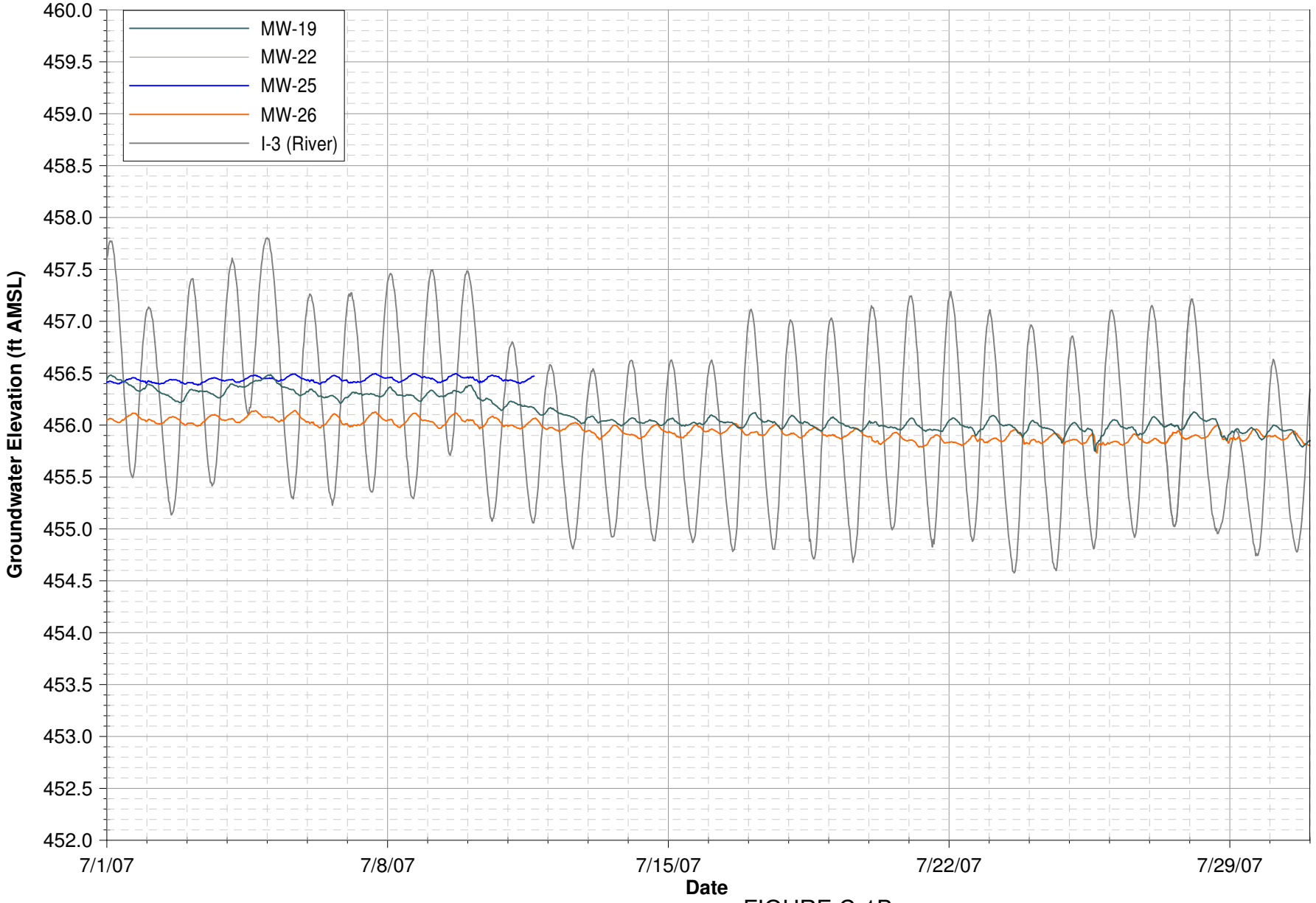
[1] minimium, maximum and average of daily groundwater elevation averages



Note:
Data subject to review.

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

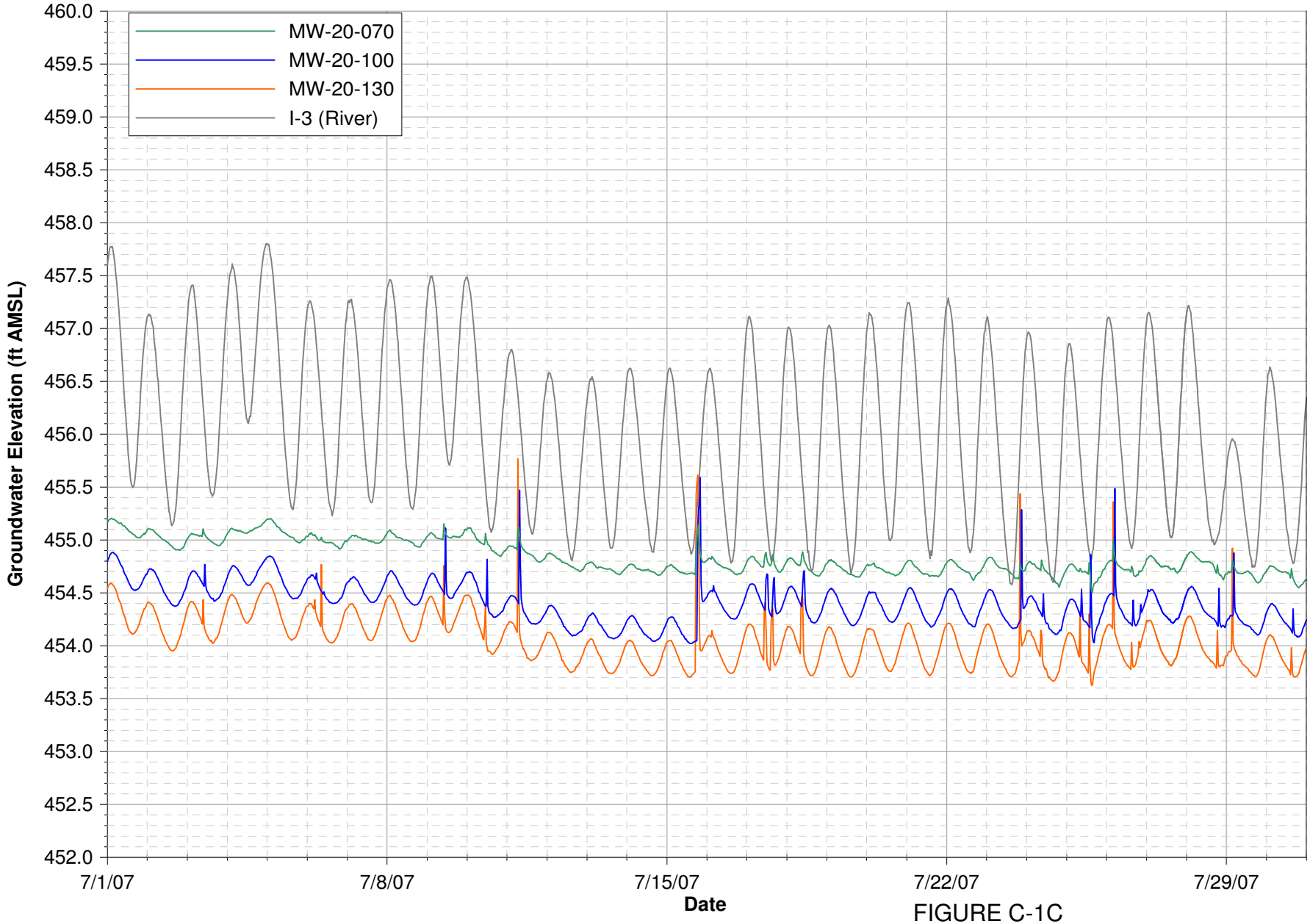
CH2MHILL



Notes:
Data subject to review.
MW-22 data unavailable after September 19, 2006.
MW-25 data unavailable after July 11, 2007.

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

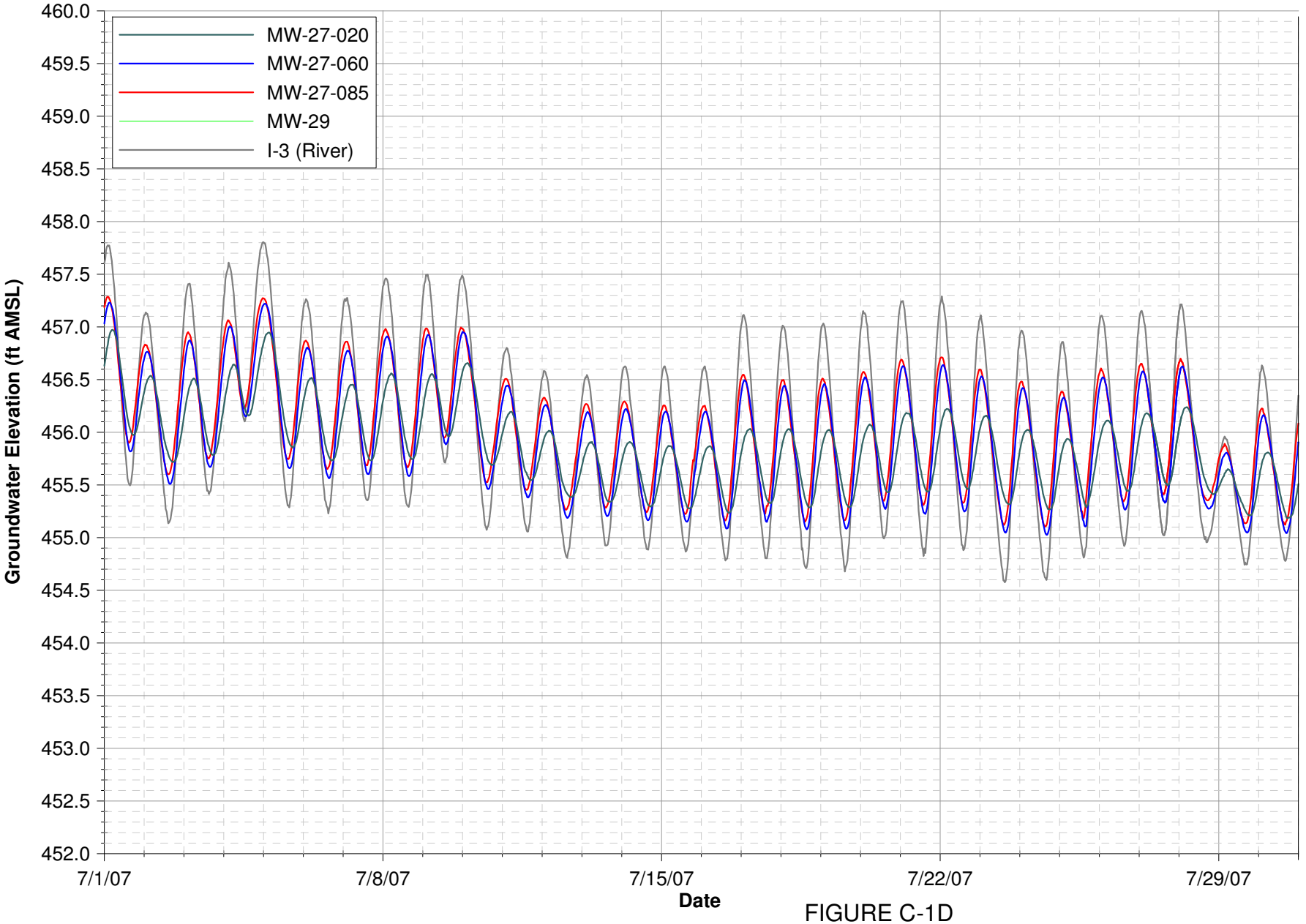
CH2MHILL



Notes:
Data subject to review.

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

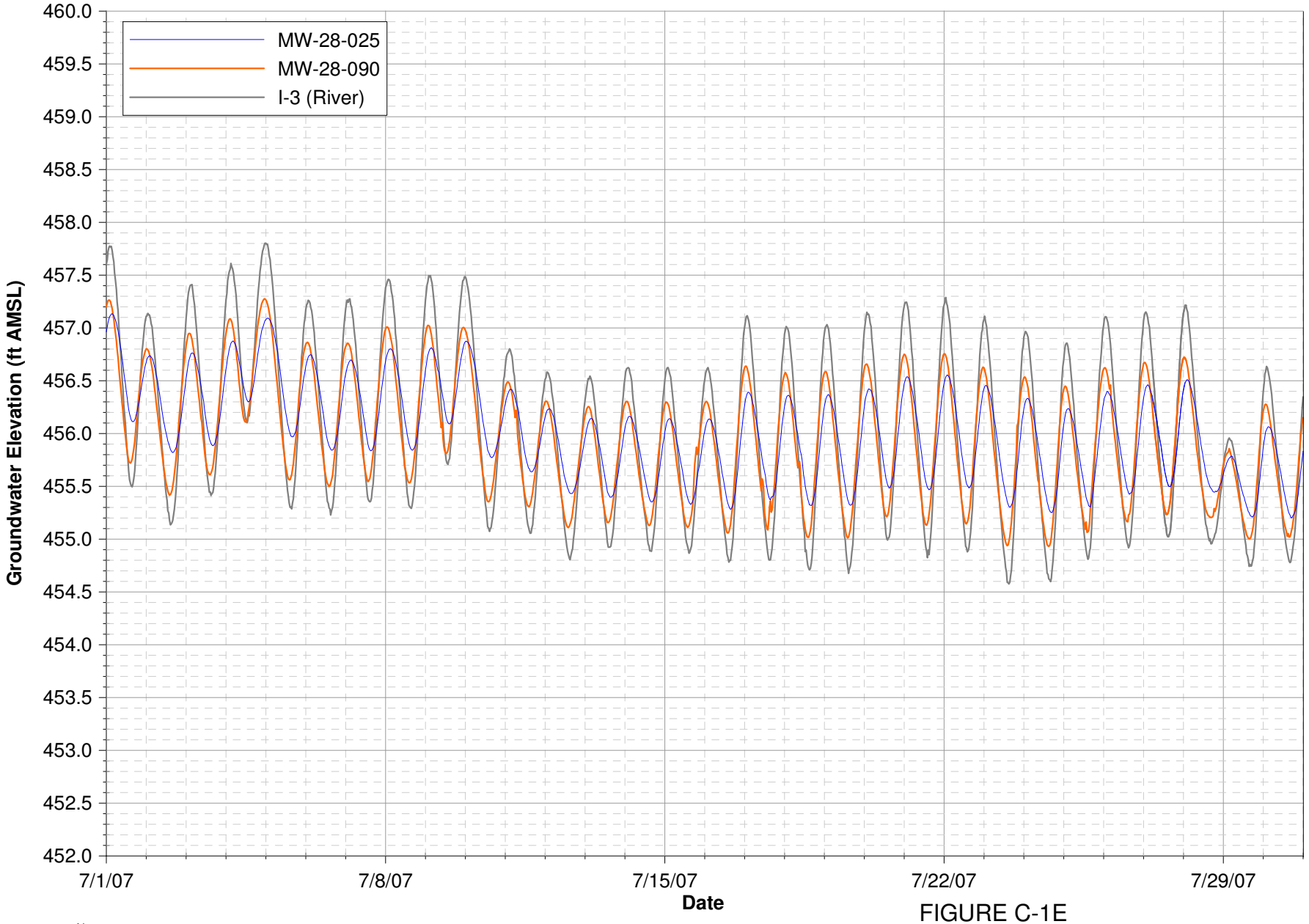
CH2MHILL



Notes:
Data subject to review.
MW-29 data unavailable after October 1, 2006.

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

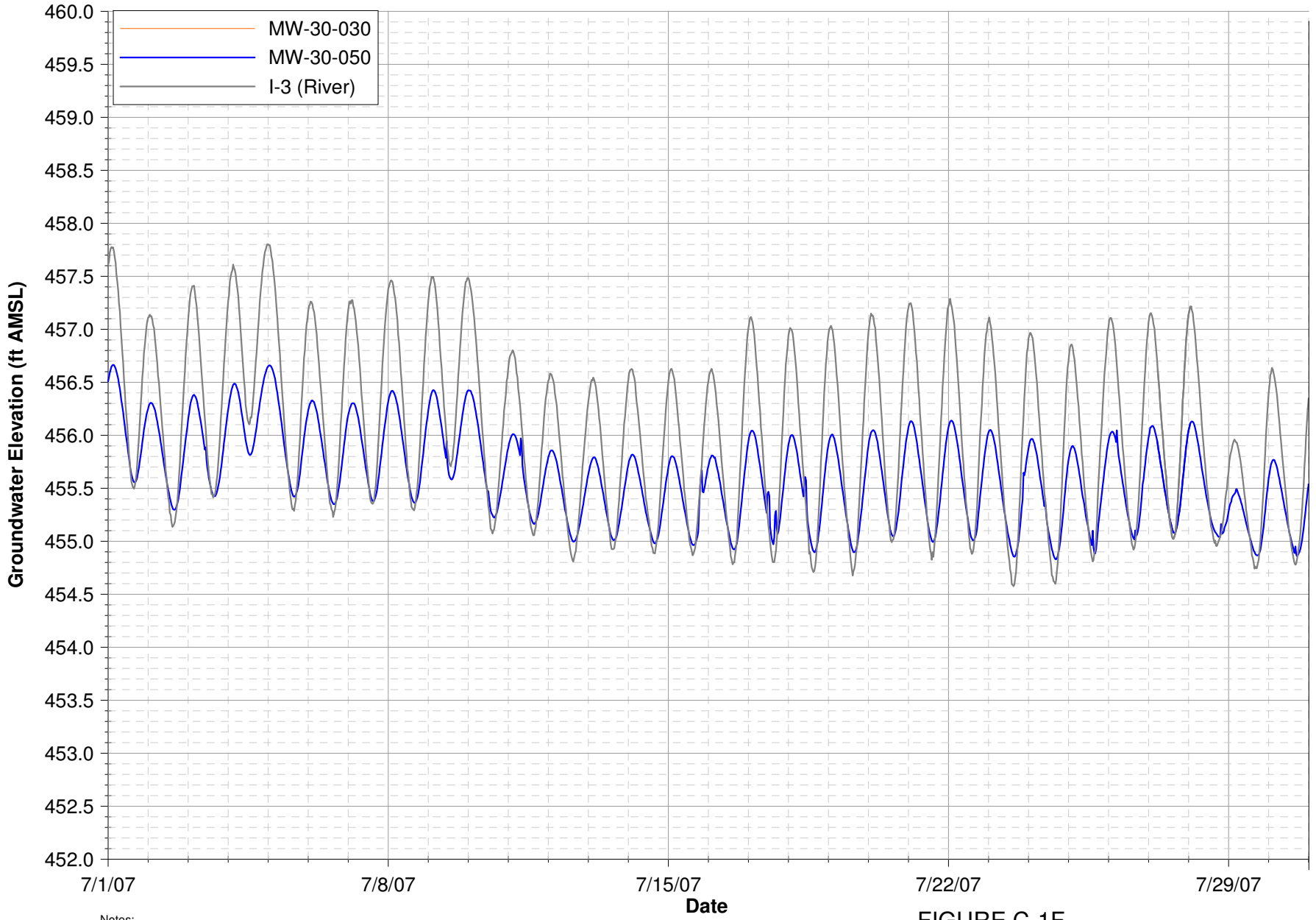
CH2MHILL



Notes:
Data subject to review.

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

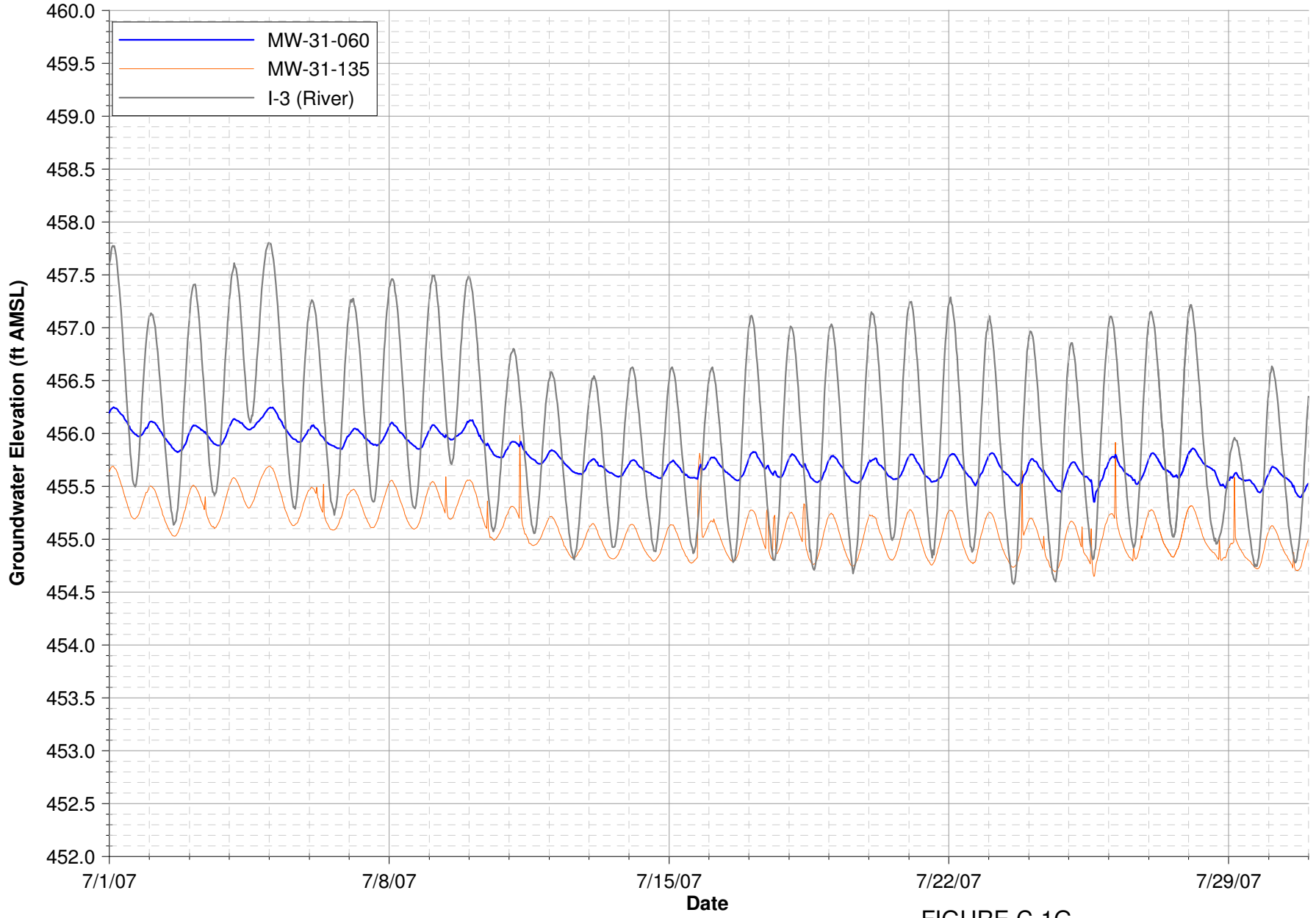
CH2MHILL



Notes:
Data subject to review.
MW-30-30 data unavailable after October 31, 2006.

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

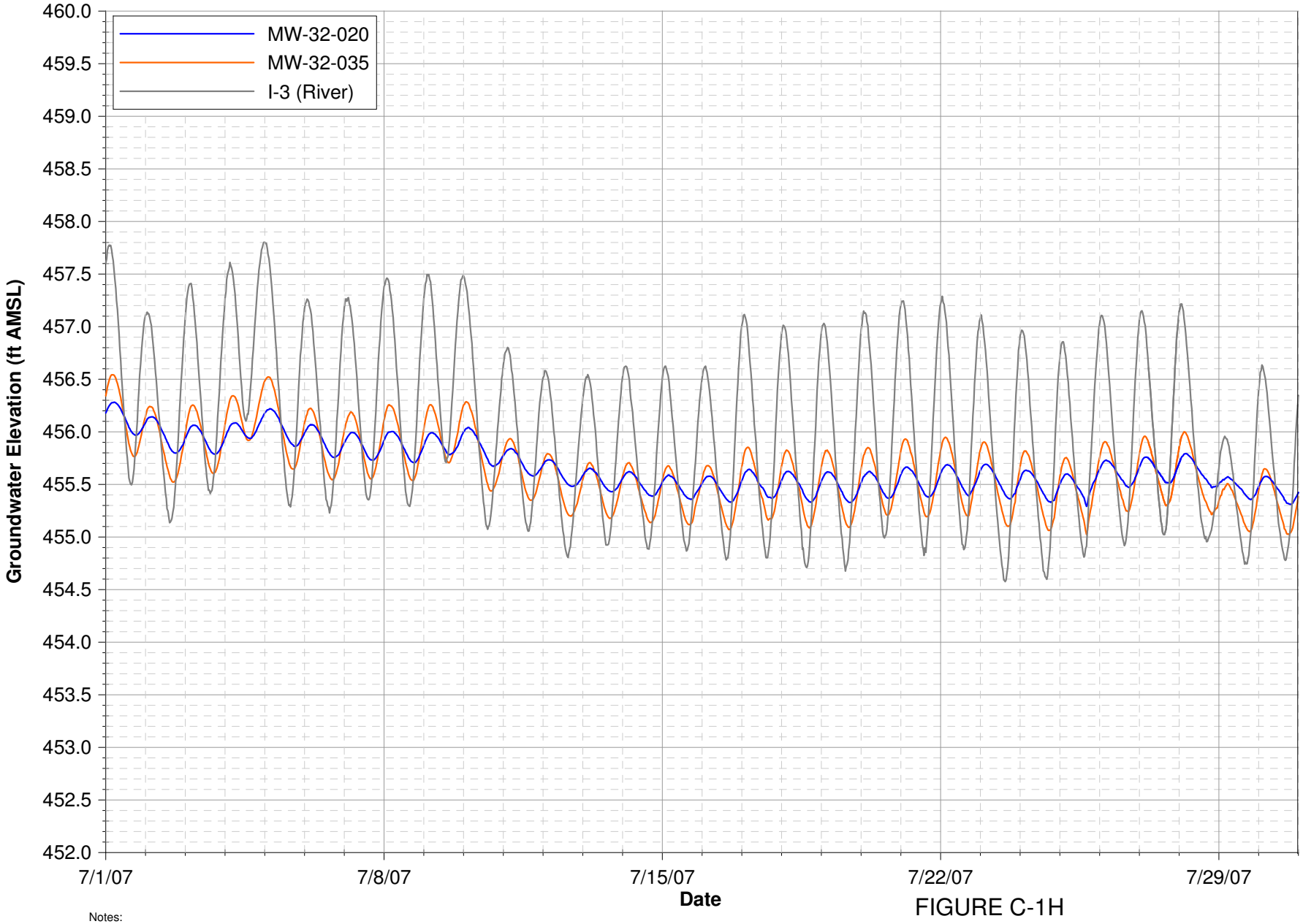
CH2MHILL



Notes:
Data subject to review.

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

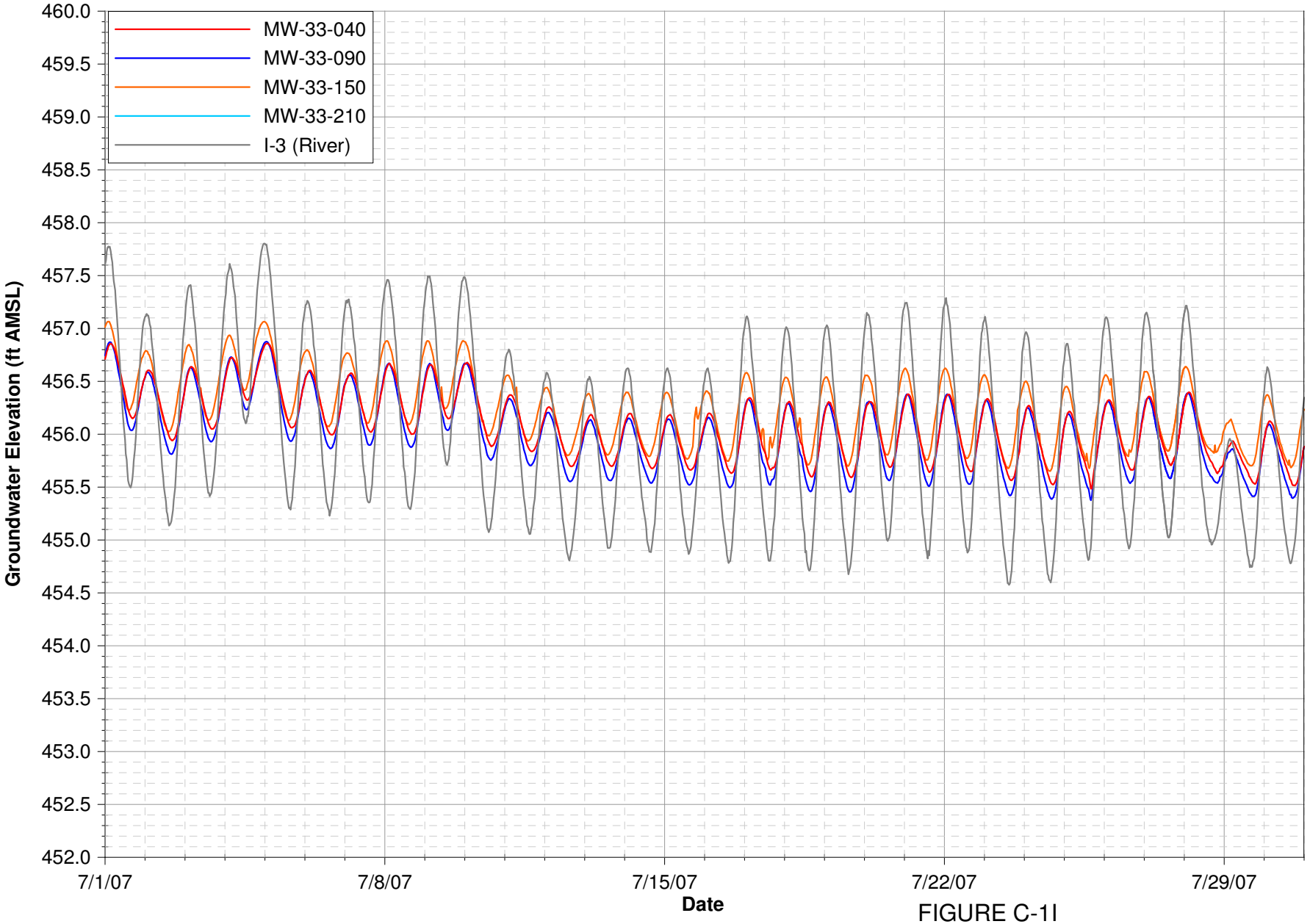
CH2MHILL



Notes:
Data subject to review.

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

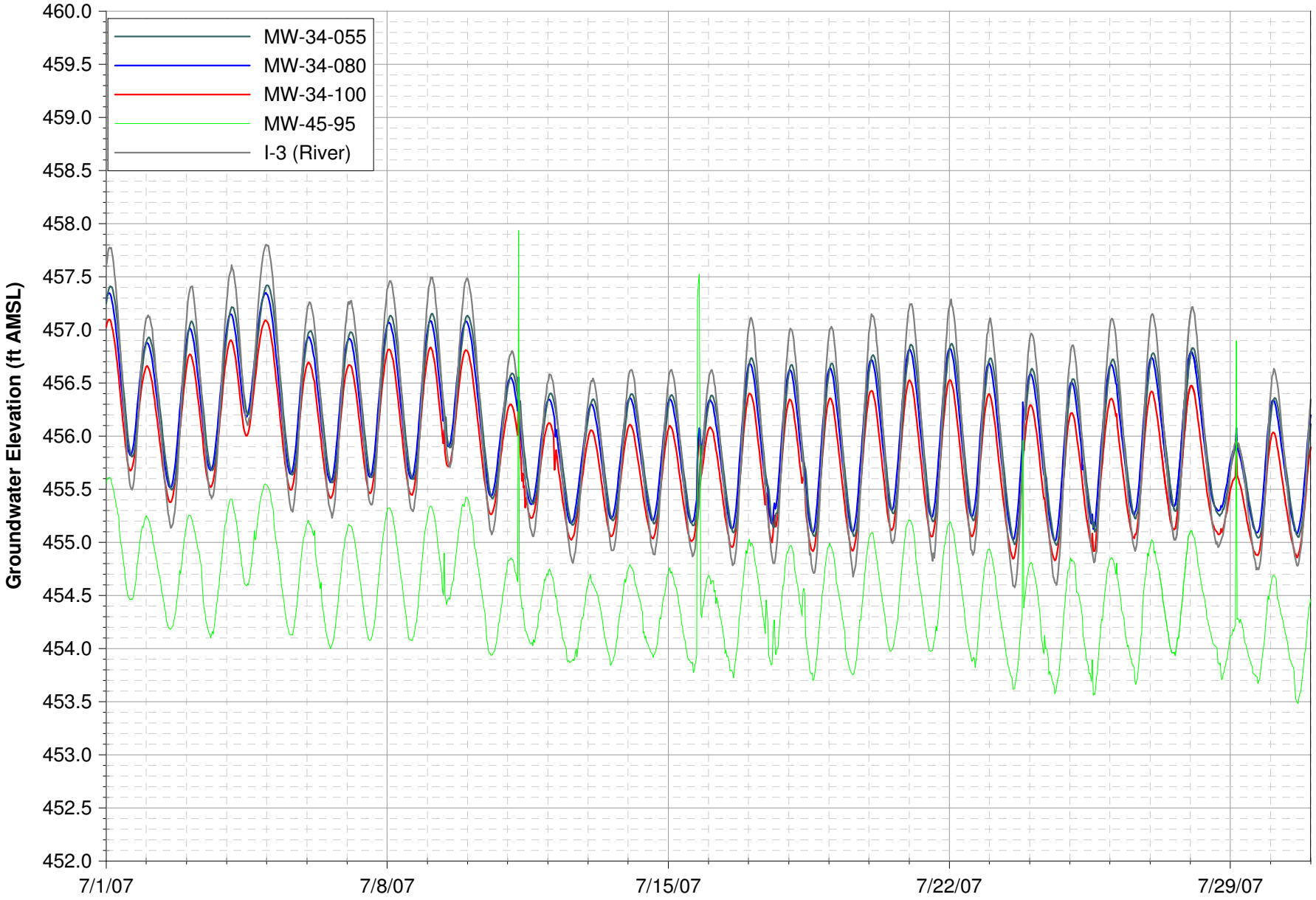
CH2MHILL



Notes:
Data subject to review.

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

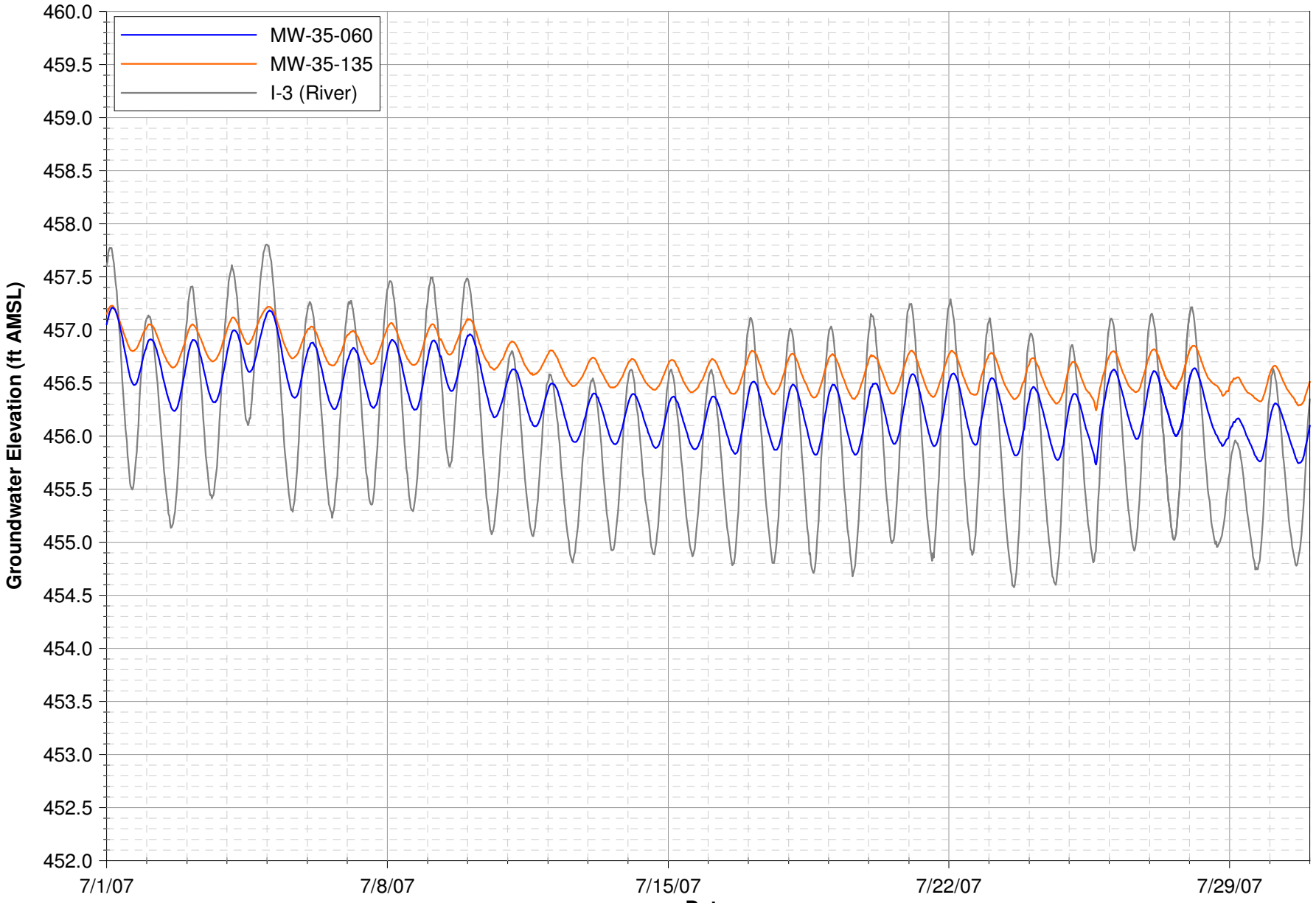
CH2MHILL



Notes:
Data subject to review.

FIGURE C-1J
MW-34 CLUSTER AND MW-45-95 HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

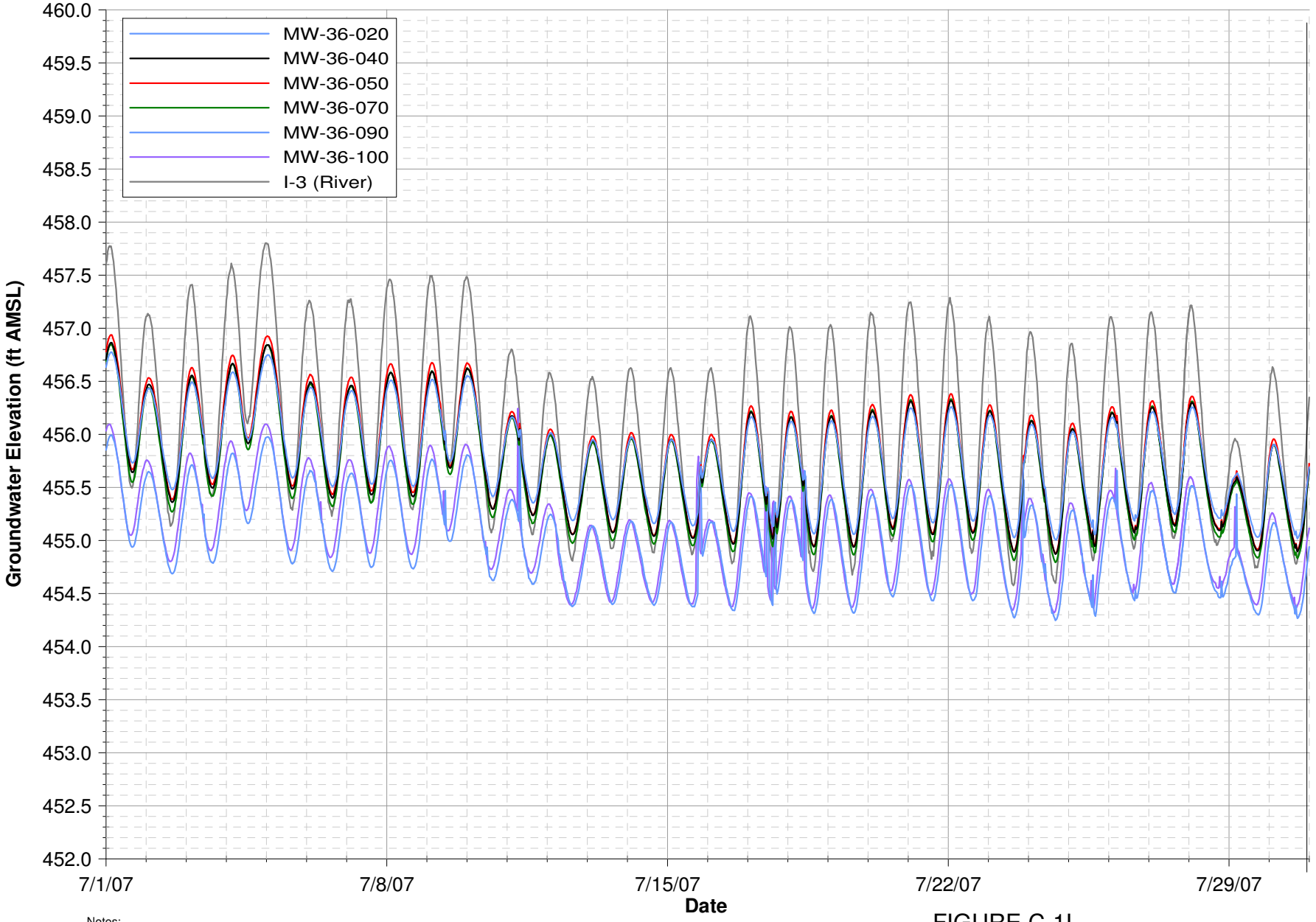
CH2MHILL



Notes:
Data subject to review.

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

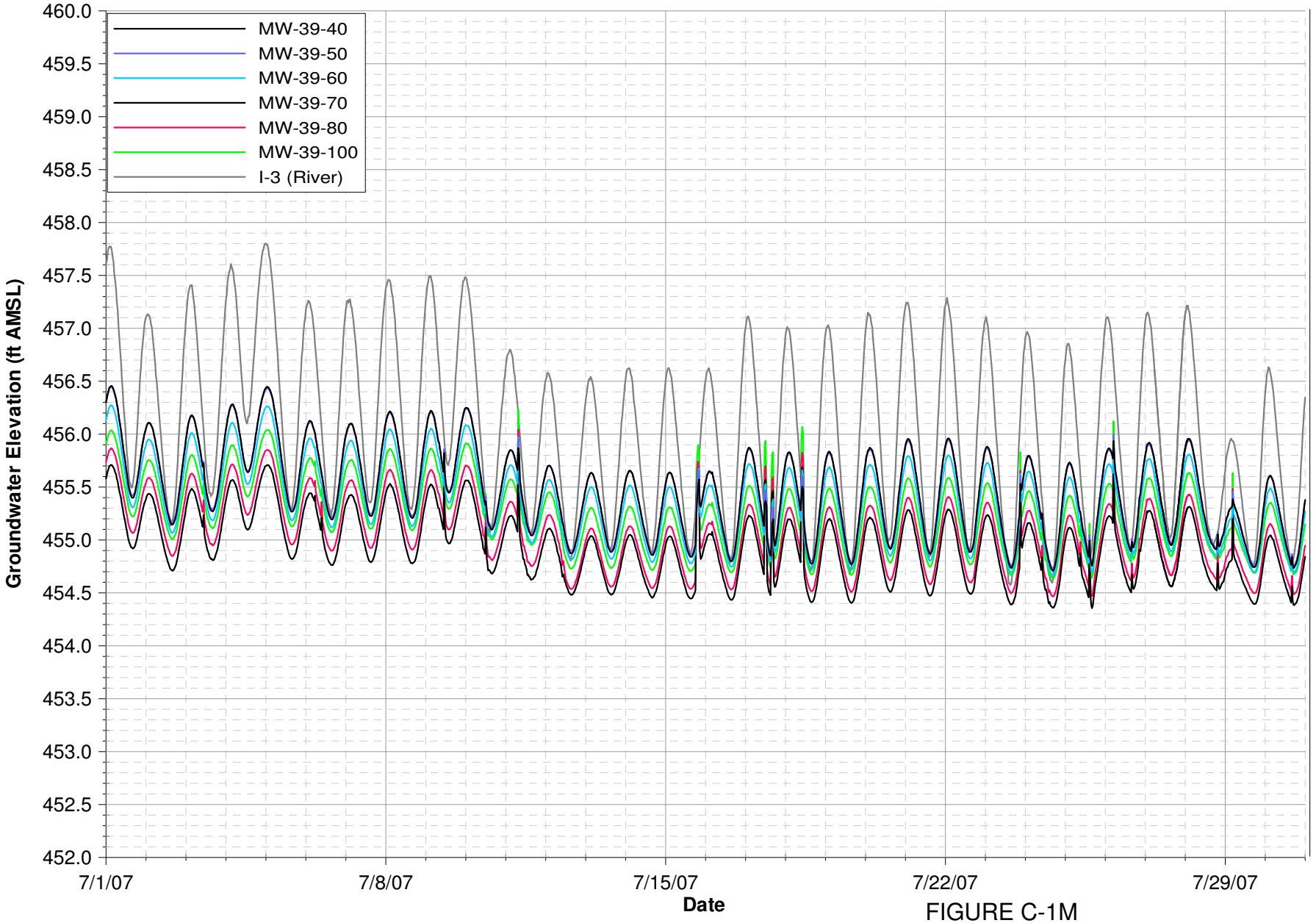
CH2MHILL



Notes:
Data subject to review.

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

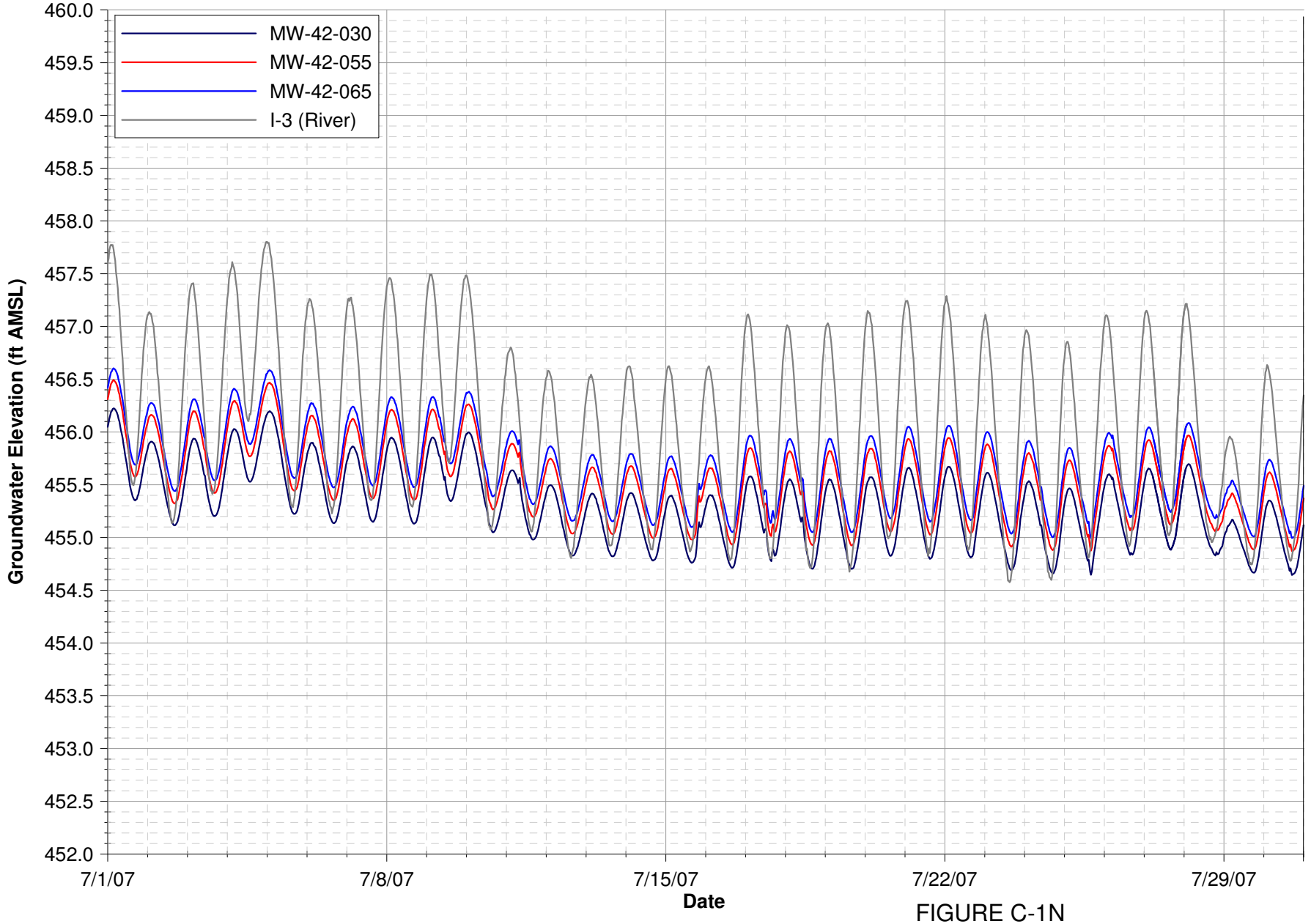
CH2MHILL



Notes:
Data subject to review.

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

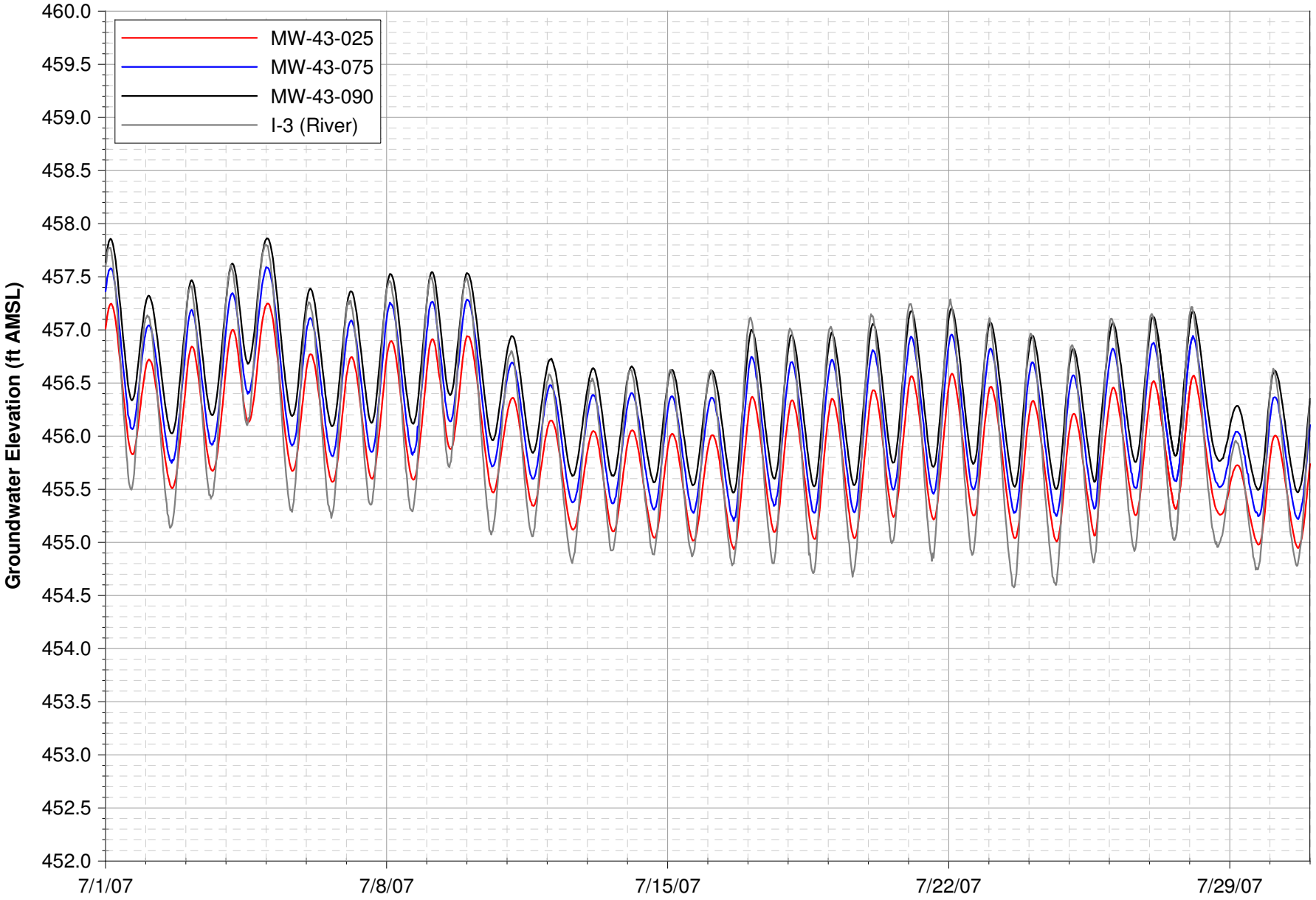
CH2MHILL



Notes:
Data subject to review.

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

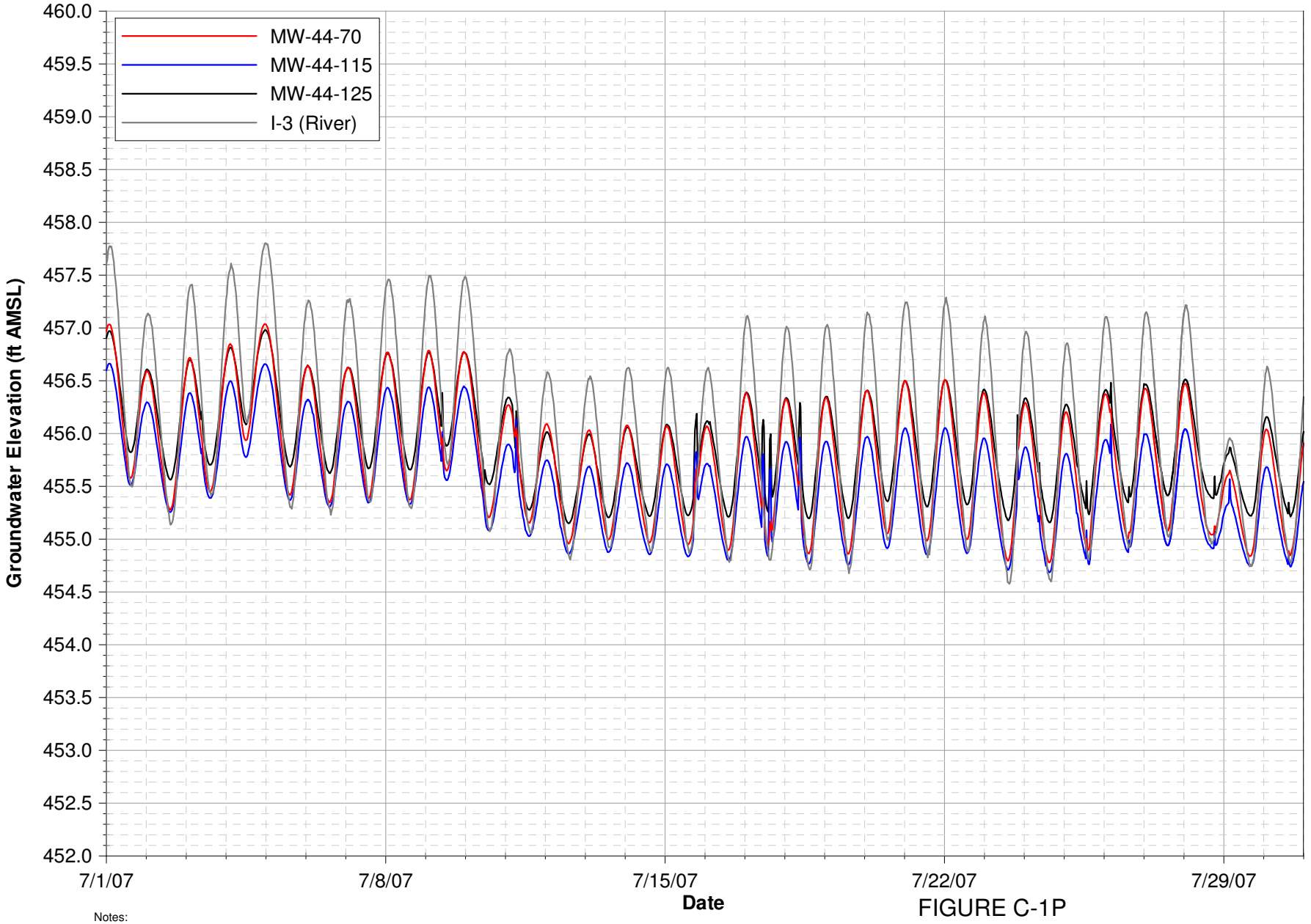
CH2MHILL



Notes:
Data subject to review.

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

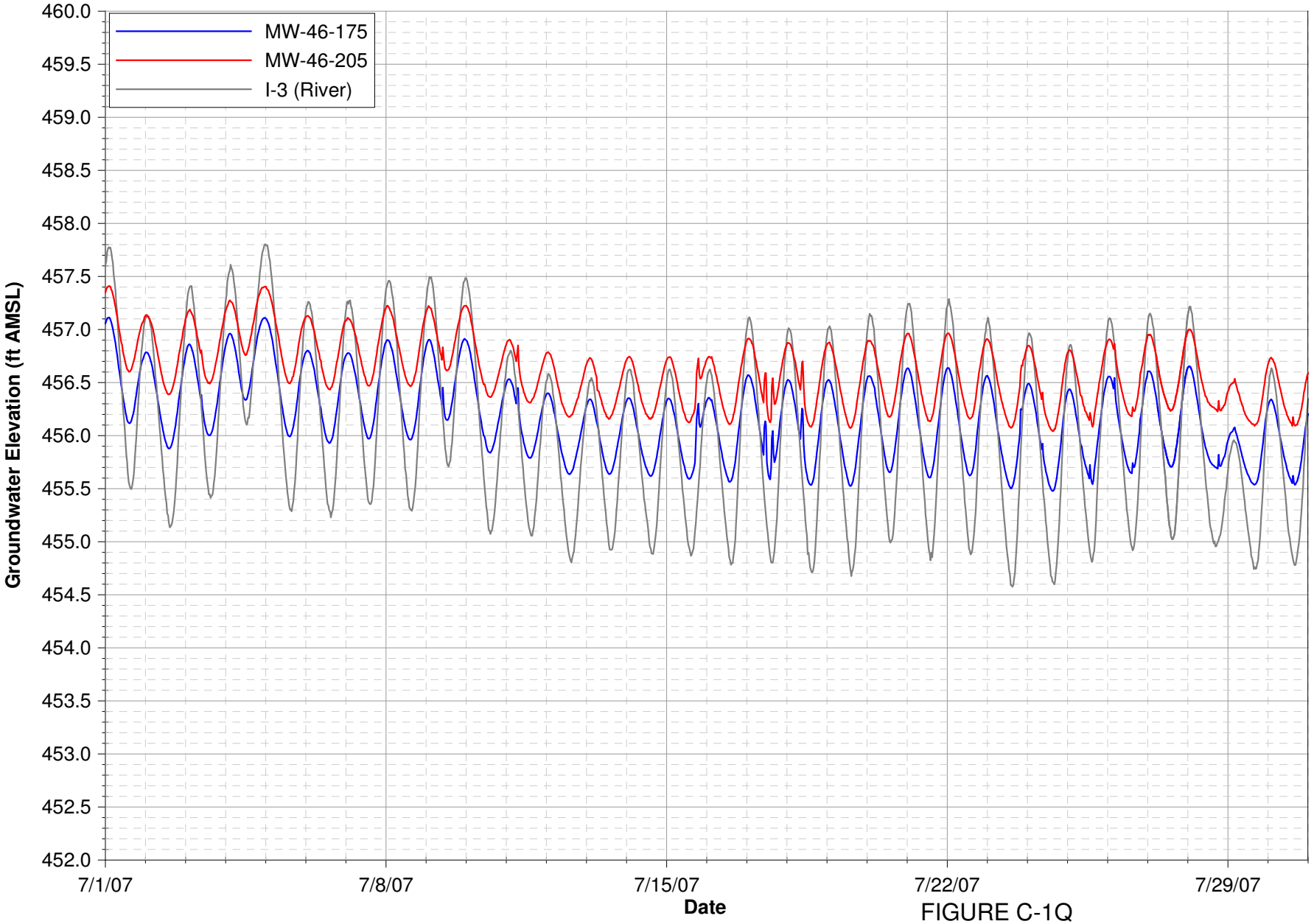
CH2MHILL



Notes:
Data subject to review.

FIGURE C-1P
MW-44 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

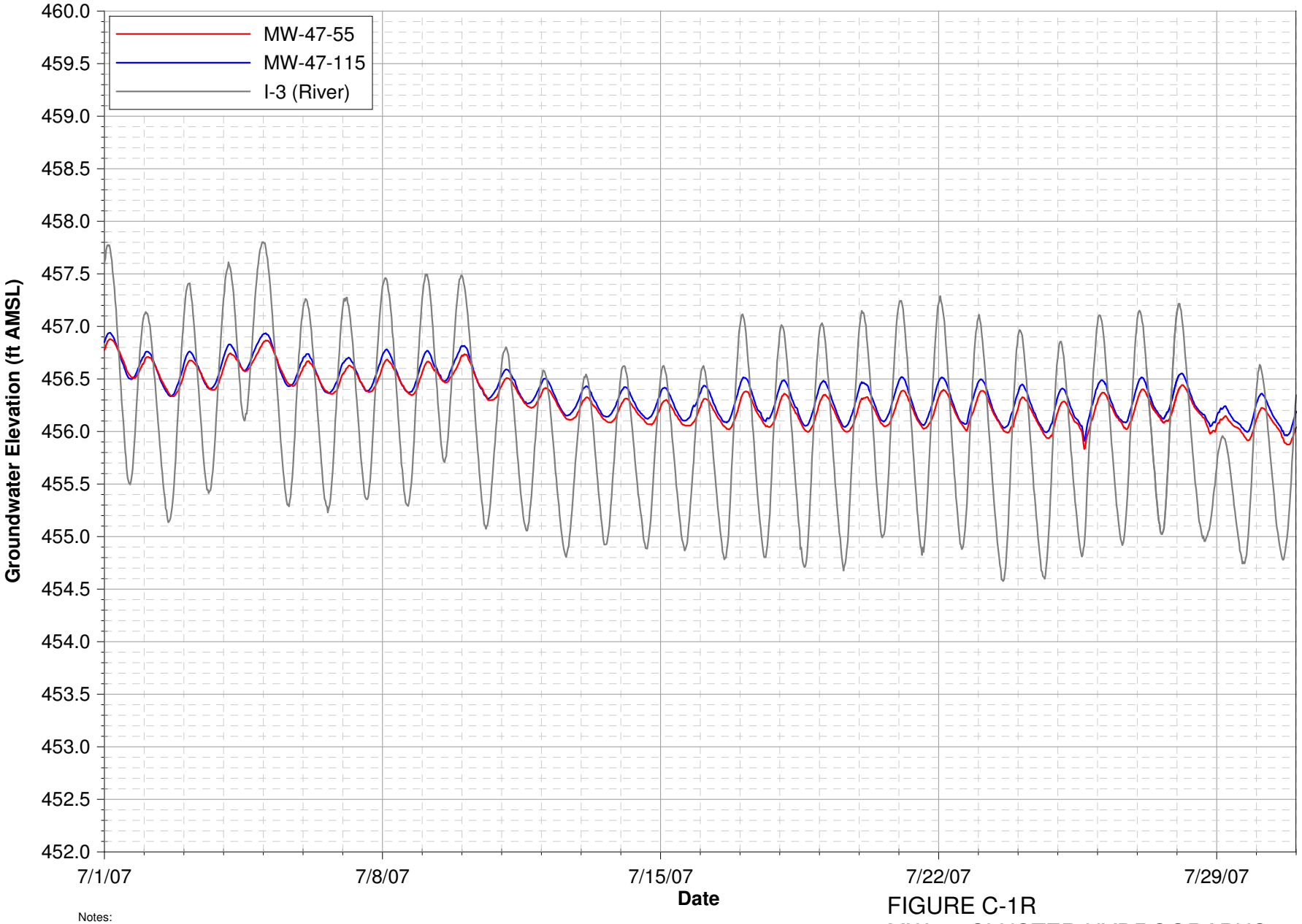
CH2MHILL



Notes:
Data subject to review.

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

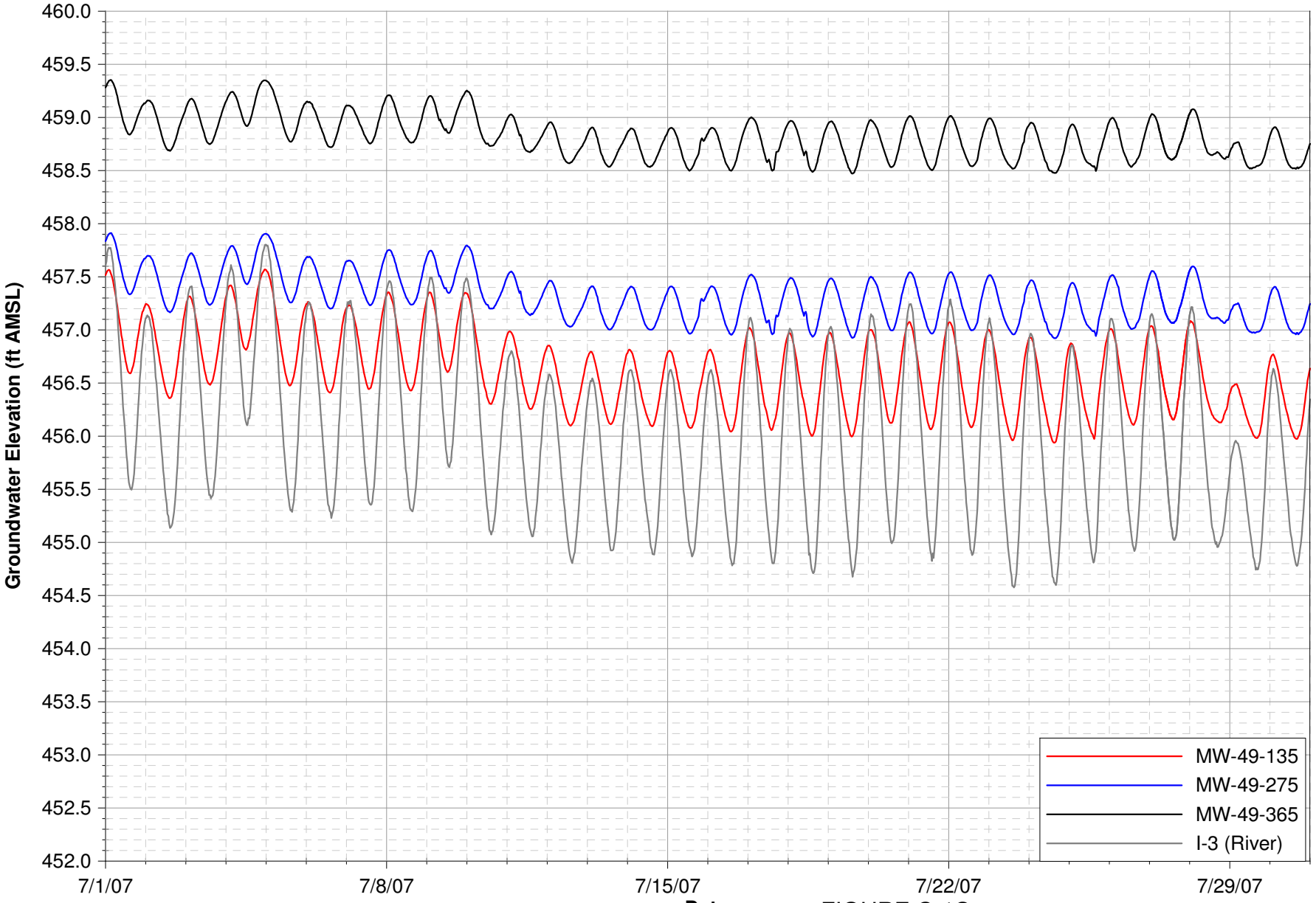
CH2MHILL



Notes:
Data subject to review.

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

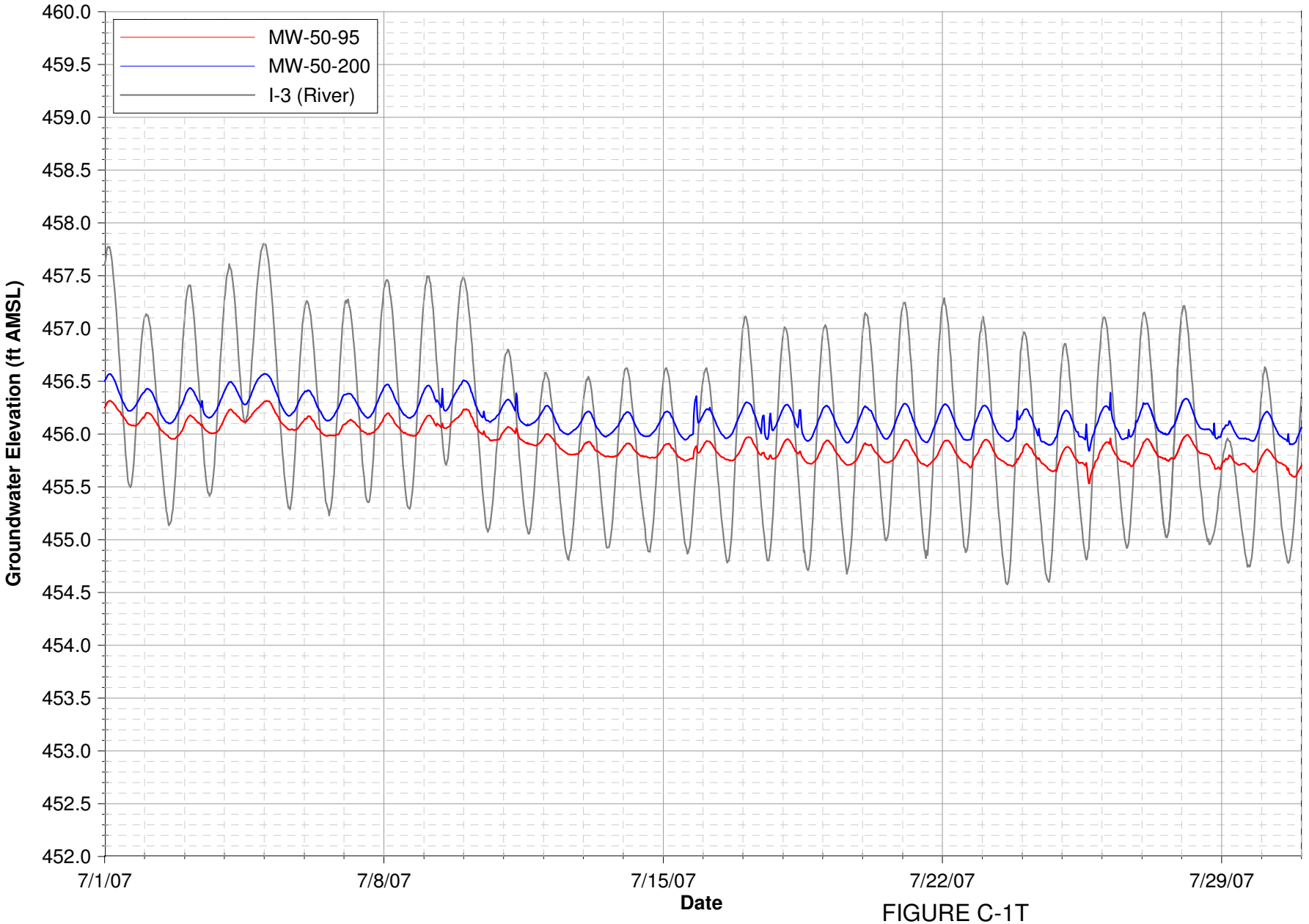
CH2MHILL



Notes:
Data subject to review.

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

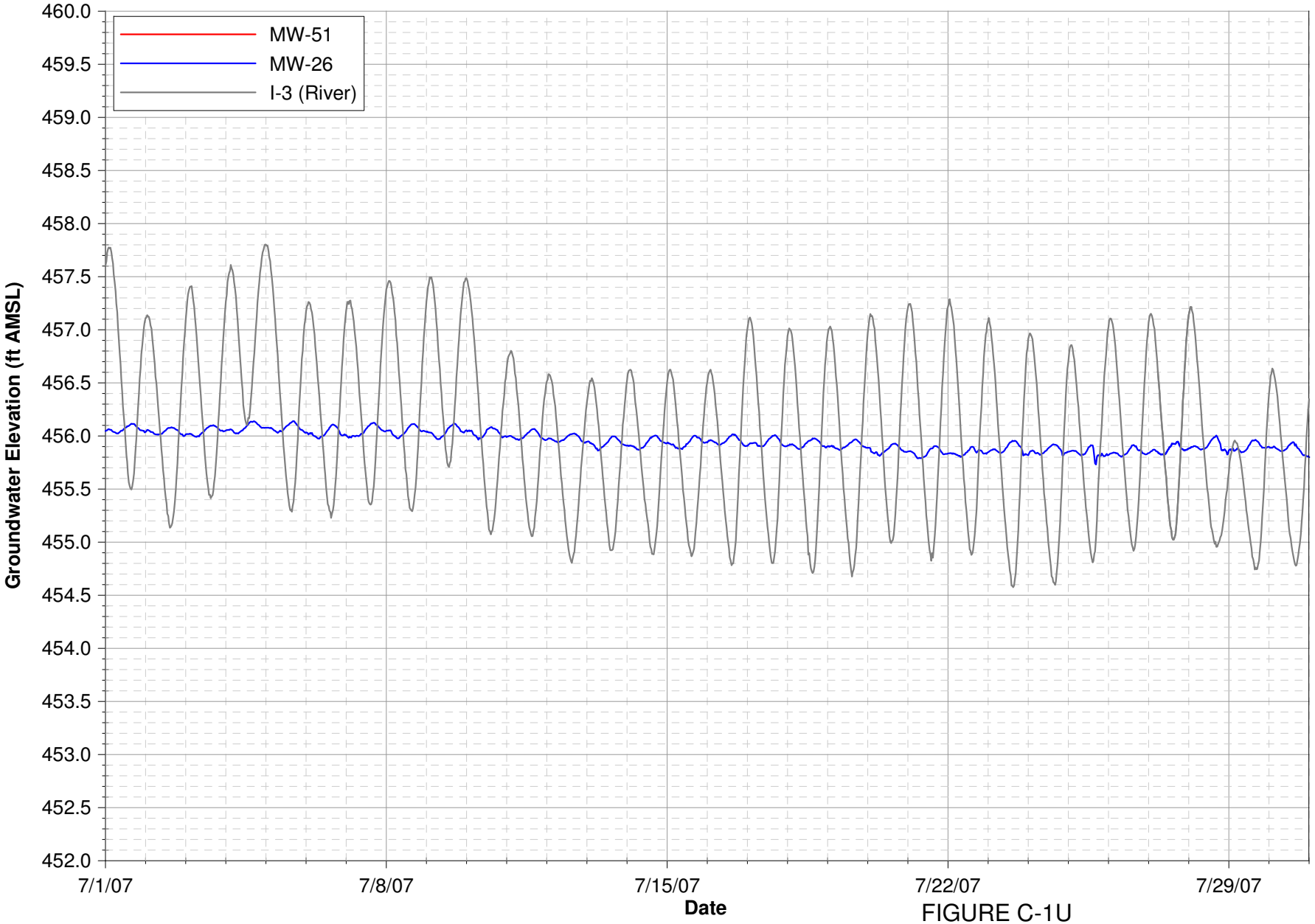
CH2MHILL



Notes:
Data subject to review.

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

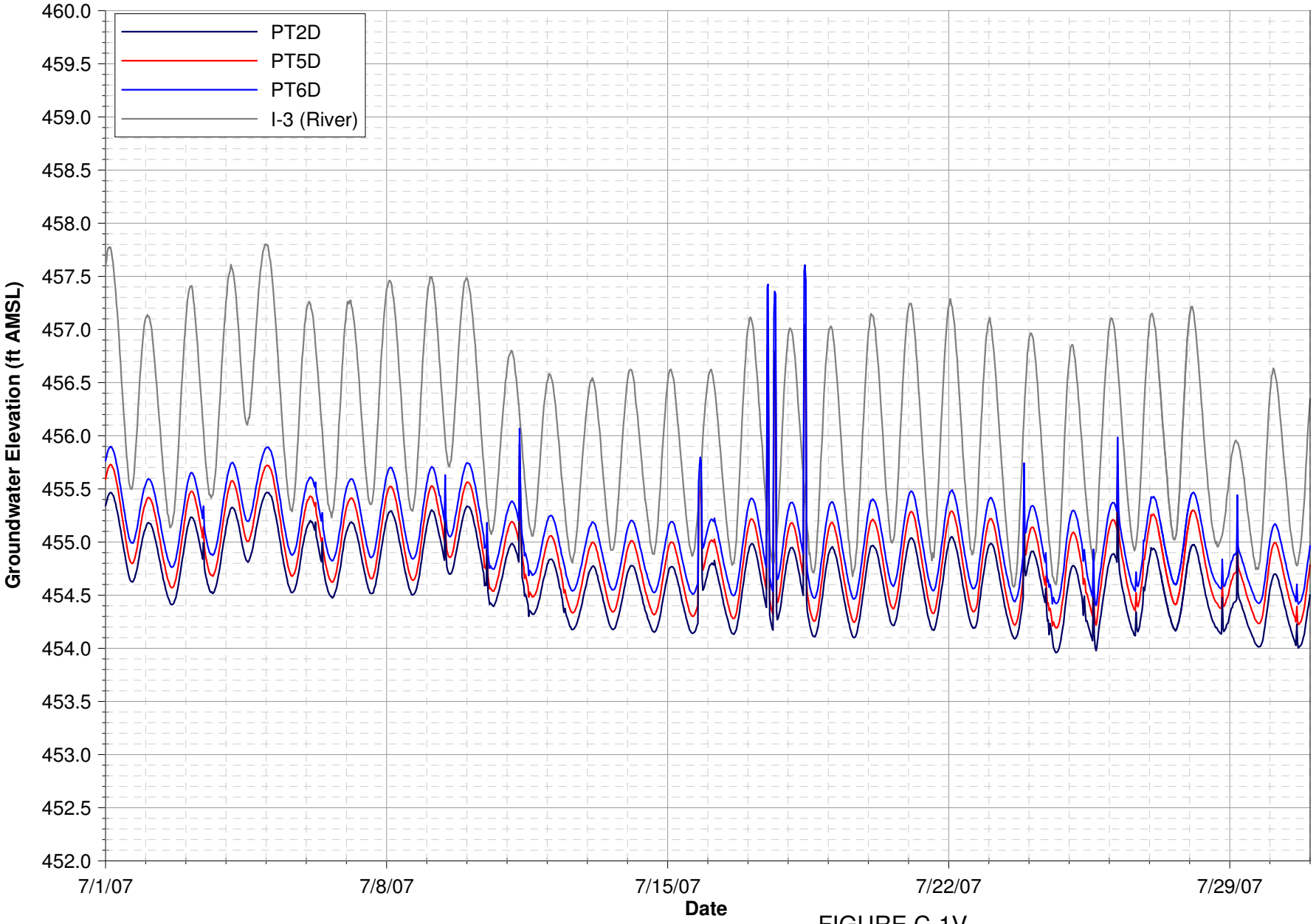
CH2MHILL



Notes:
Data subject to review.
MW-51 data unavailable after June 30, 2007.

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

CH2MHILL



Note:
Data subject to review.

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

CH2MHILL

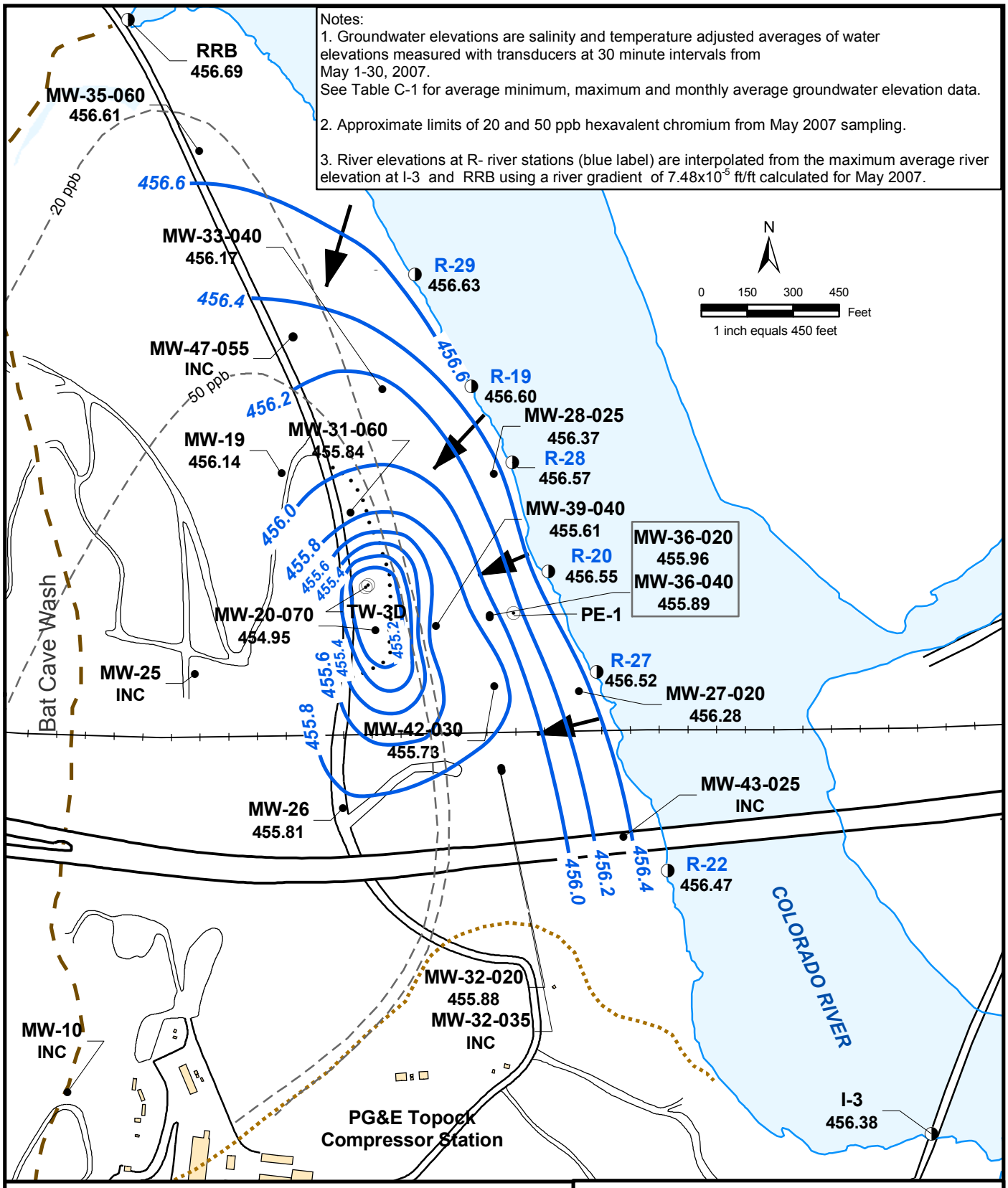


FIGURE C-2A
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, MAY 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_UA_MAY07_NEW.MXD
IM_AVERAGE_GROUNDWATER_UA_MAY07_NEW.PDF 8/16/2007 15:09:00

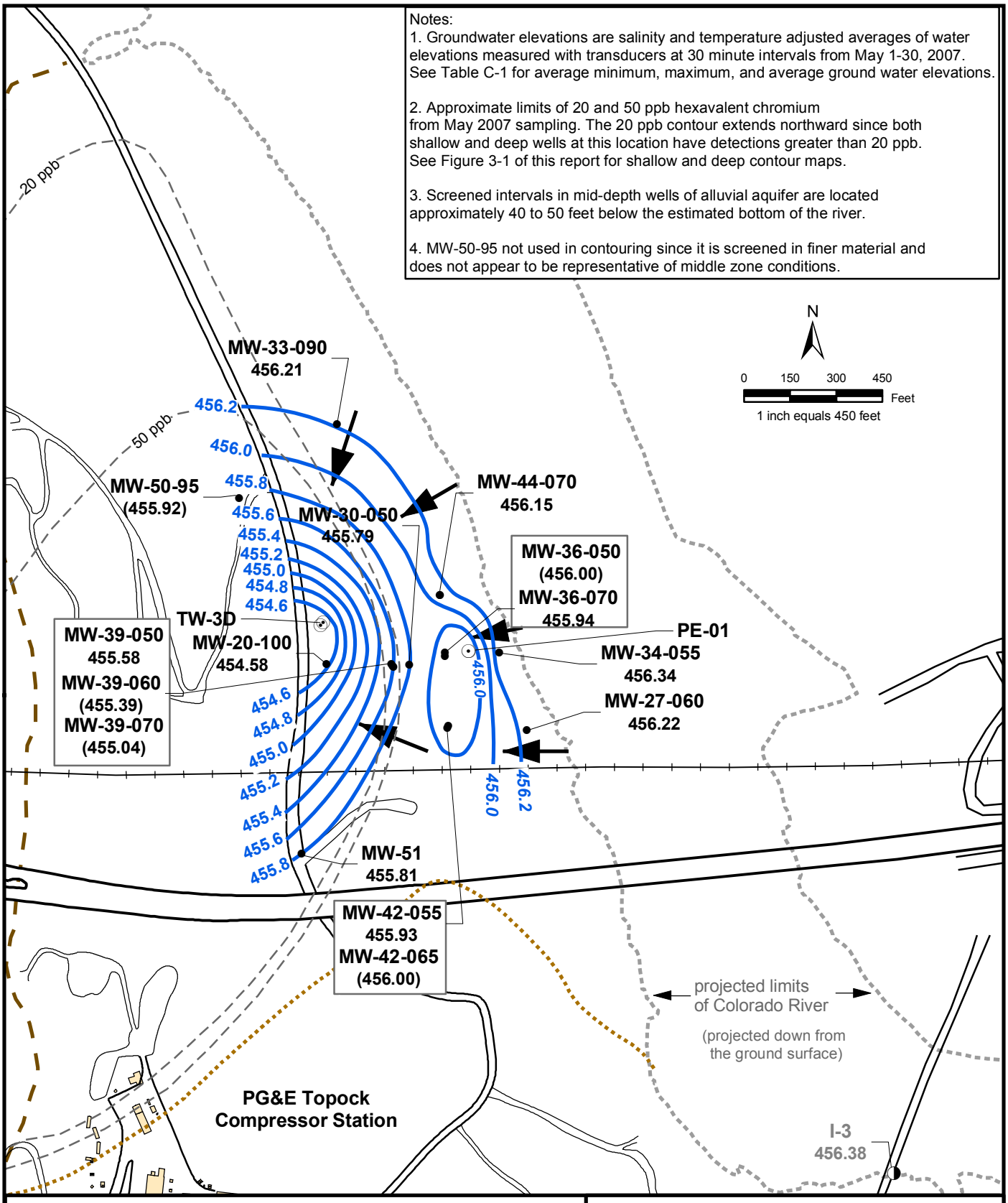


FIGURE C-2B
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS MAY 2007

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

CH2MHILL

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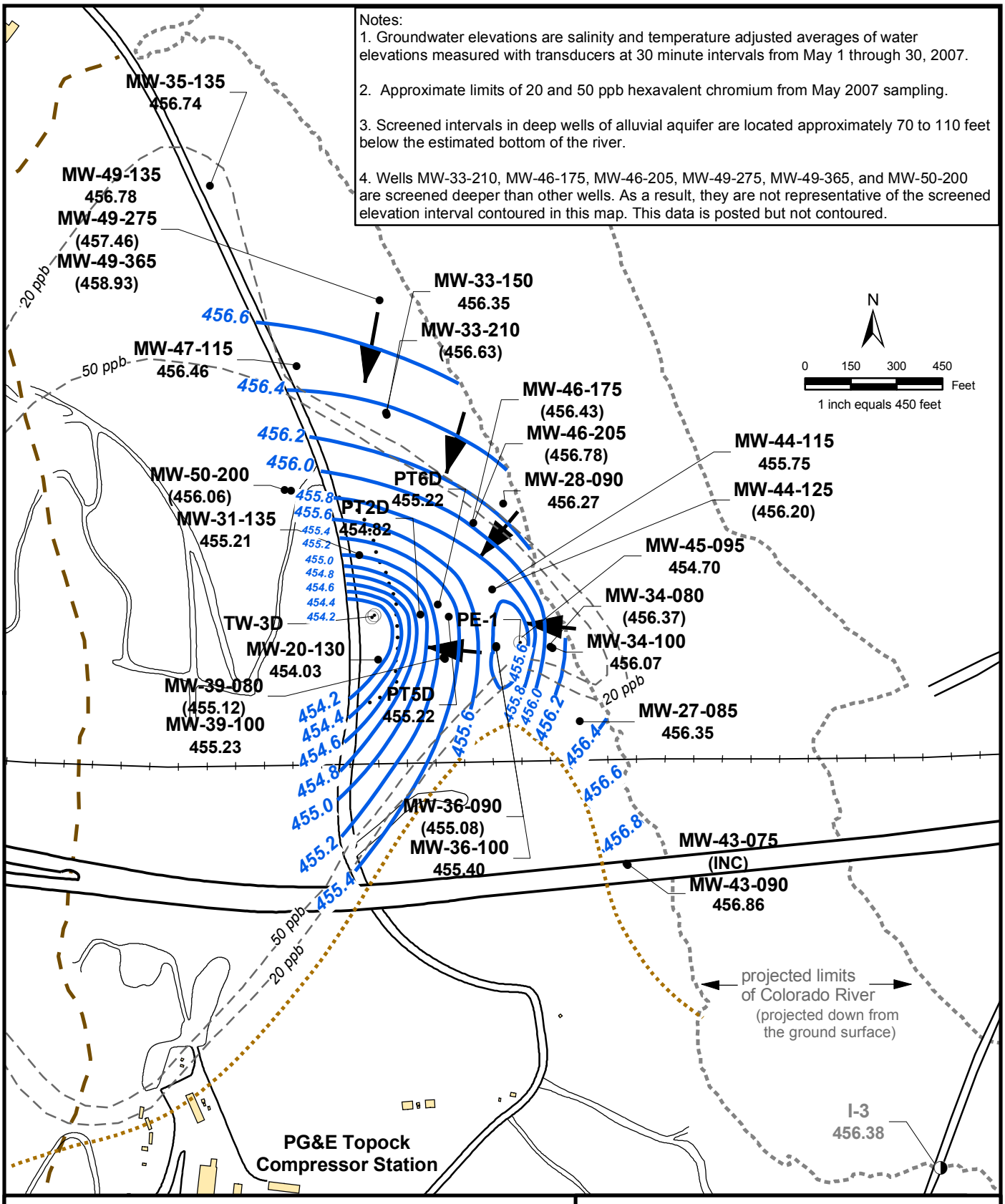

FIGURE C-2C
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MAY 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_LA_MAY_07_NEW.MXD
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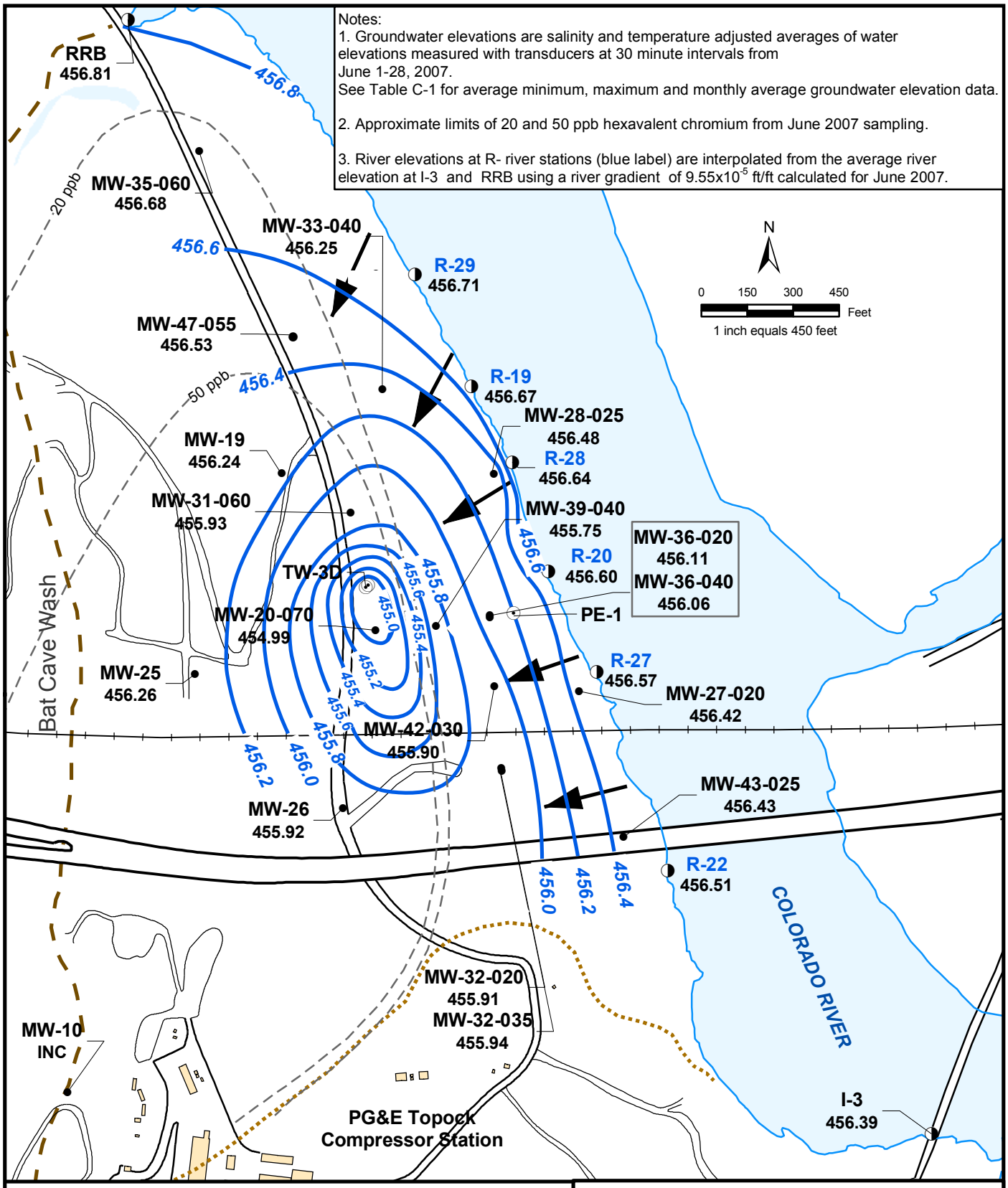

FIGURE C-2D
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, JUNE 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_UA_JUNE07_NEW.MXD
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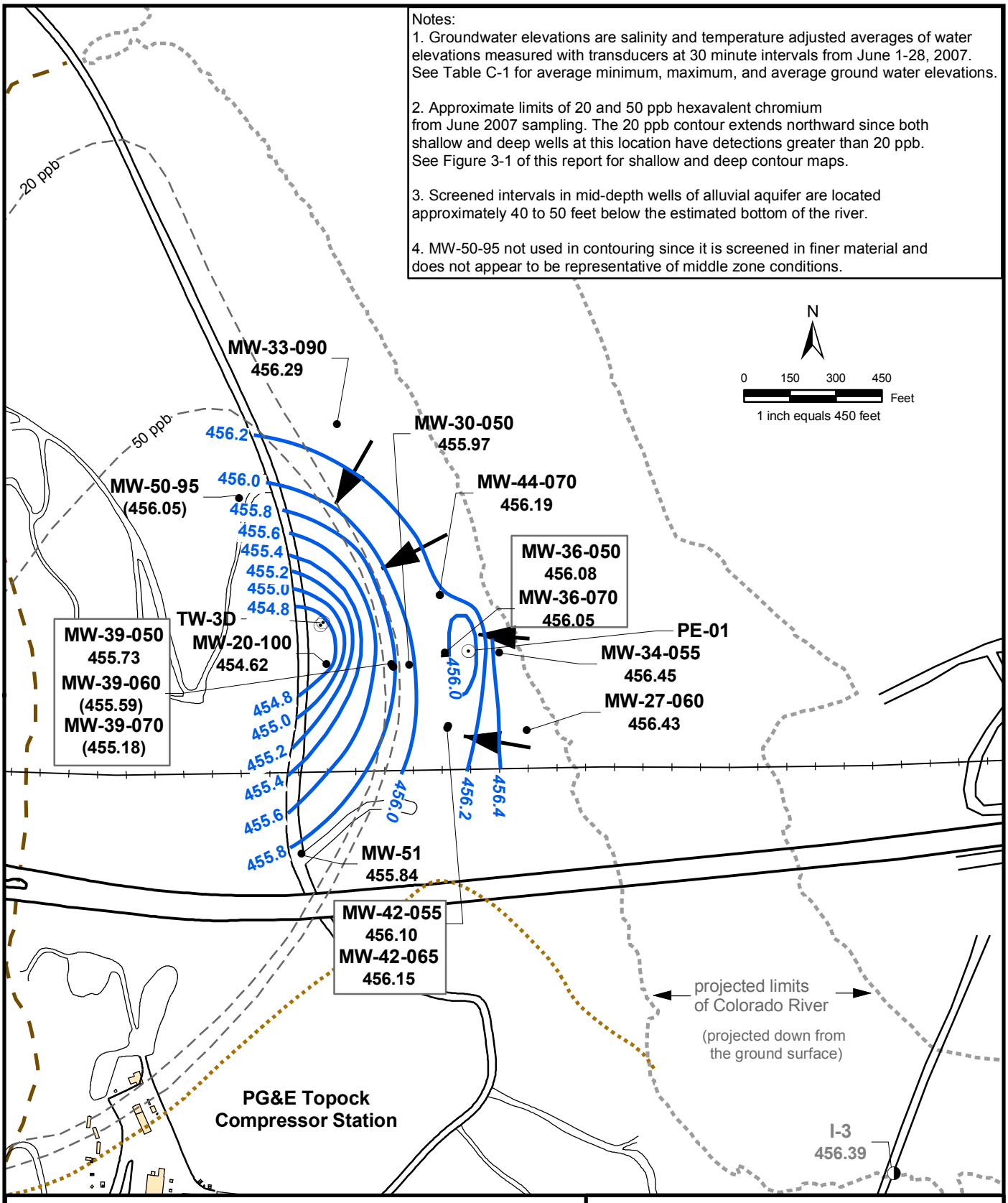

FIGURE C-2E
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS JUNE 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_MA_JUNE07_NEW.MXD
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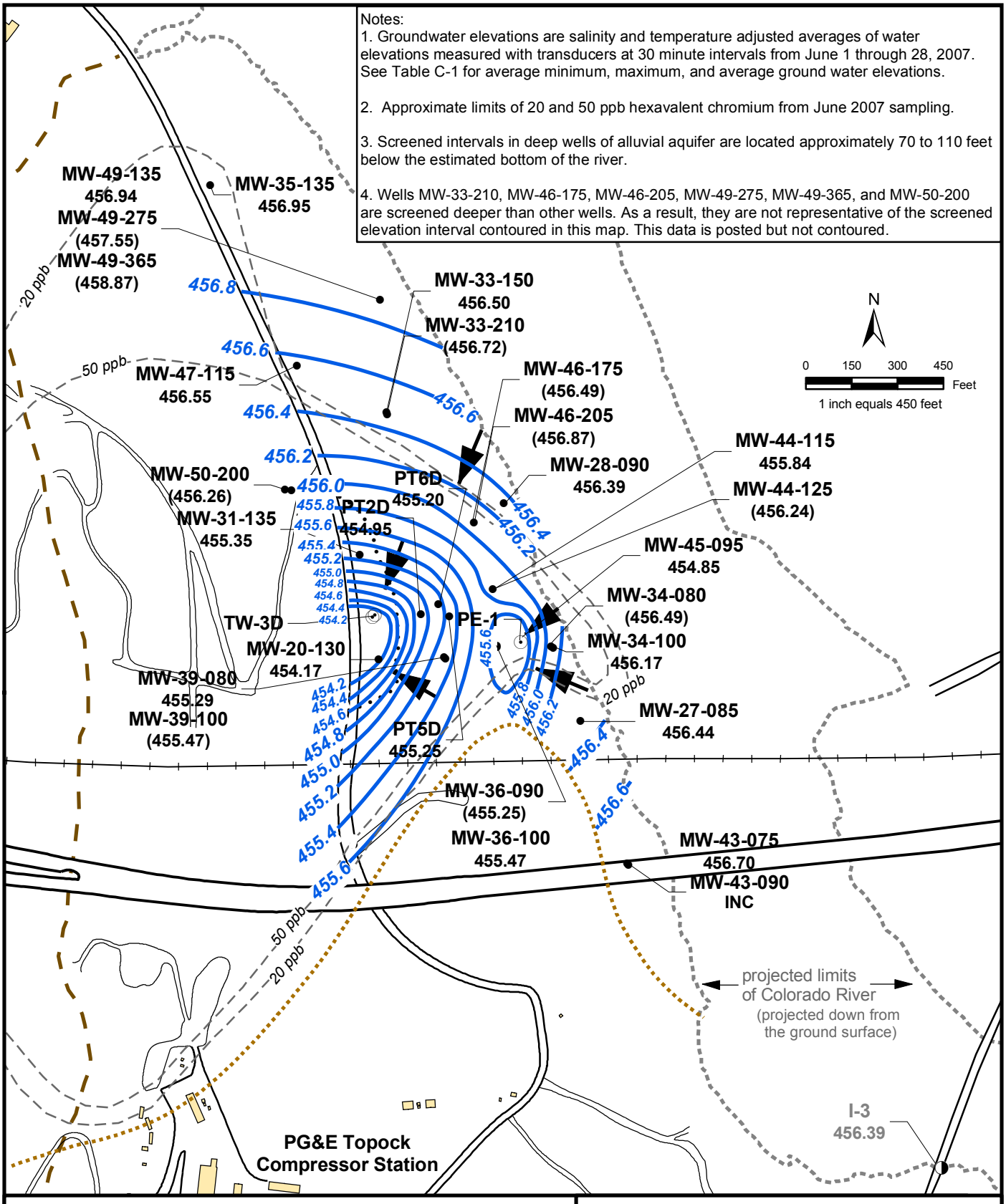

FIGURE C-2F
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS JUNE 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_LA_JUNE_07_NEW.MXD
IM_AVERAGE_GROUNDWATER_LA_JUNE_07_NEW.PDF 8/16/2007 15:11:14

Appendix D
Chemical Performance Monitoring Analytical Results

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through July 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-20-70	10-Mar-05	1940	-7.1	-59.0	740	378	9.98	ND (1)	198	55.4	9.89	431	0.412	81.7
	15-Jun-05	1980	-7	-60.0	749	388	9.79	ND (1)	189	55.4	10.5	433	0.414	73.8
	15-Jun-05 FD	2050	-8.3	-57.0	760	392	9.81	ND (1)	204	60.7	11.4	468	0.445	71.3
	11-Oct-05	1950	-7.2	-57.0	737	359	9.48	0.641	198	49.9	14.6	323	0.402	69.9
	15-Dec-05	1830	-7.1	-49.0	645	326	9.9	ND (1)	138	42.3	14.5	267	0.441	77.8
	10-Mar-06	1940	-7.2	-54.0	679	358	10.5	ND (0.5)	161	48.6	9.22	424	0.427	82.2
	05-May-06	1750	-8.2	-55.9	696	376	9.86	0.574	162	49.2	9.55	461	0.476	74.5
	03-Oct-06	1890	-8.1	-60.4	677	357	13	ND (5)	158	47.6	9.82	472	0.535	85
	03-Oct-06 FD	1840	-8.1	-60.5	669	352	12.9	ND (5)	154	45.9	9.51	466	0.515	80
	13-Dec-06	1910	-7.6	-61.2	678	352	12.7	0.699	149	44.3	9.09	458	0.459	77.5
	14-Mar-07	1740	-8.5	-64.3	689	358	13.7	0.641	139	42.2	8.83	451	0.503	80
	03-May-07	1750	-8.4	-66.7	697	344	25.1	ND (1)	139	41.2	8.65	390	0.477	77.5
MW-20-100	10-Mar-05	2490	-5.2	-49.0	466	511	9.98	ND (1)	133	19.8	8.98	712	0.859	84.2
	15-Jun-05	2500	-4.7	-46.0	921	506	9.02	ND (1)	137	21.3	9.06	592	0.713	84
	11-Oct-05	2400	-5.3	-48.0	887	484	8.87	0.731	170	23.7	15.2	500	0.718	82.3
	15-Dec-05	2340	-5.4	-40.0	813	404	9.65	ND (1)	136	21.4	14.8	406	0.709	82.7
	10-Mar-06	2500	-5.6	-50.3	861	475	9.94	ND (0.5)	171	27	7.75	597	0.803	92.5
	05-May-06	2260	-5.1	-46.4	927	522	9.99	ND (1)	193	32	10.8	577	0.716	82.5
	03-Oct-06	2320	-5.8	-51.5	863	456	13.4	ND (5)	202	34.4	10.9 J	568	0.874	90
	13-Dec-06	1960	-6.2	-54.4	861	459	12.3	0.83	205	32.2	11.4	579	0.889	97.5
	13-Dec-06 FD	2200	-6.2	-54.5	874	457	12.2	0.851	205	32.2	9.55	575	0.881	92.5
	14-Mar-07	2180	-6.8	-57.8	847	477	14.2	0.785	194	31.7	9.9	521	0.715	87.5
	03-May-07	2300	-7.3	-59.2	879	493	23.2	ND (1)	209	36	12 J	559	0.699	87.5
	03-May-07 FD	2330	-6.7	-59.3	888	484	19.7	ND (1)	208	34.6	9.63 J	532	0.686	87.5
MW-20-130	09-Mar-05	5520	-5.8	-56.0	3120	1080	10.9	ND (1)	219	12.1	24.7	2250	1.9	68.9
	09-Mar-05 FD	6200	-5.4	-51.0	3080	1080	10.9	ND (1)	231	12.8	25.4	2390	1.99	68.9
	15-Jun-05	7790	-5	-48.0	3410	1230	11.1	ND (1)	352	23.2	31.3	2980	2.75	68.7
	07-Oct-05	7330	-5	-47.0	3010	1210	10.9	1.04 J	349	13.9	38.4	2070	2.41	72.4
	16-Dec-05	7860	-5.8	-43.0	3260	1000	10.7	ND (2.5)	324	16.3	44.4	1780	1.98	63.2
	10-Mar-06	8610	-5.5	-48.8	3370	1250	10.6	ND (0.5)	312	18.9	27.7	2730	2.03	74.5
	05-May-06	7700	-5.3	-47.2	3900	1280	8.95	ND (1)	349	20.3	27.7	2810	2.4	69.2

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through July 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-20-130	18-Oct-06	8450	-6.3	-51.4	3680	1100	11.5	ND (5)	358	20.9	28	2870	2.28	70
	13-Dec-06	7890	-6	-54.9	3970	1250	10.6	0.896	335	19.7	27.6	2900	2.31	72.5
	13-Dec-06 FD	8250	-5.9	-54.4	3950	1260	10.5	1.09	328	19.1	27.3	2830	2.24	72.5
	08-Mar-07	8450	-6.5	-57.7	3930	1240	11.3	1.08	353	21.3	27	2760	2.24	70
	08-Mar-07 FD	8510	-6.6	-57.4	3900	1210	11.3	1.06	351	21.3	26.8	2750	2.19	72.5
	03-May-07	8150	-7.7	-60.0	4020	1310	9.8 J	ND (1)	338	22.5	27.8	2550	2.49	75
	03-May-07 FD	8100	-6.9	-60.1	3950	1290	20.4 J	ND (1)	338	21.9	27.3	2550	2.47	72.5
MW-25	09-Mar-05	877	-8.4	-62.0	247	169	3.64	ND (0.5)	77.6	16.1	6.24	211	0.441	158
	14-Jun-05	942	-8.6	-61.0	289	183	3.89	ND (0.5)	93.5	20	8.91	253	0.464	137
	14-Jun-05 FD	980	-7.2	-59.0	294	185	3.94	ND (0.5)	100	20.9	9.06	268	0.475	137
	04-Oct-05	950	-8.2	-68.0	252	171	3.77	ND (0.5)	83.3	14.9	9.93	164	0.362	141
	04-Oct-05 FD	910	-8.3	-60.0	251	171	3.75	ND (0.5)	94.6	15.3	10.2	185	0.371	146
	14-Dec-05	838	-8.4	-55.0	224	158	3.74	ND (0.5)	75.5	14.5	9.8	143	0.396	153
	14-Dec-05 FD	896	-8.4	-50.0	219	155	3.75	ND (0.5)	73	14.1	9.71	151	0.382	156
	09-Mar-06	910	-8.4	-64.1	245	164	3.83	ND (0.5)	76.4	15.6	6.97	210	0.39	170
	03-May-06	907	-9	-59.4	272	172	3.95	ND (0.5)	78	17.3	7.38	222	0.418	150
	03-May-06 FD	924	-9	-61.0	274	173	3.94	ND (0.5)	79.7	17.8	7.53	245	0.431	155
	03-Oct-06	892	-8.9	-62.7	222	158	4.09	ND (0.5)	73.3	15	7.25	206	0.466	163
	06-Mar-07	843	-9	-66.9	221	164	3.95	ND (0.5)	72.9	14.4	6.85	203	0.459	160
MW-26	08-Mar-05	1840	-8.8	-70.0	756	370	4.48	ND (0.5)	166	41.6	10.7	439	0.557	98.7
	08-Mar-05 FD	1800	-8.7	-70.0	708	338	4.45	ND (0.5)	166	40.9	11.4	438	0.559	96.1
	13-Jun-05	2130	-8.2	-65.0	847	371	4.9	ND (0.5)	178	44.6	14	511	0.663	103
	04-Oct-05	2120	-7.8	-68.0	779	372	4.88	0.601	166	40.4	19.8	352	0.526	109
	12-Dec-05	2610	-8.5	-55.0	788	372	4.88	0.546	162	39.9	20.3	349	0.613	99.7
	08-Mar-06	2070	-8.6	-60.4	772	324	4.9	ND (0.5)	155	38.1	11.7	434 J	0.621	121
	01-May-06	2130	-8.9	-62.7	927	382	4.87	ND (0.5)	165	42	12.8	555	0.723	121
	03-Oct-06	2220	-8.8	-63.0	894	370	6.22	ND (2.5)	170	43.9	12.8	510	0.692	105
	12-Mar-07	2280	-9	-67.0	917	387	6.02	0.646	163	41.6	12.9	621	0.622	90
MW-27-20	08-Mar-05	1250	-12	-102.0	190	432	ND (0.5)	ND (0.5)	137	56.6	4.89	195	ND (0.2)	215
	18-Jul-05	---	-11.9	-98.0	81.9	228	ND (0.5)	ND (0.5)	96.1	30.1	4.27	94.8	ND (0.2)	160

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through July 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-27-20	05-Oct-05	742	-11.8	-102.0	91.1	252	ND (0.5)	ND (0.5)	88.6	31.4	5.48	81	ND (0.2)	175
	14-Dec-05	1020	-11.7	-91.0	118	347	ND (0.5)	ND (0.5)	116	41.8	6.96	116	ND (0.2)	216
	06-Mar-06	664	-12.1	-90.9	89.7	231	ND (0.2)	ND (0.2)	89.1	28.8	4.9	103	ND (0.2)	385
	14-Jun-06	730	-12	-89.8	98.3	272	ND (0.5)	ND (0.5)	91.1	28.5	2.79 J	96.9	ND (0.2)	195
	03-Oct-06	600	-13.1	-96.6	90.8	261	ND (0.5)	ND (0.5)	102	34.5	6.45	113	ND (0.2)	160
MW-28-25	10-Mar-05	880	-12.2	-95.0	112	302	ND (0.5)	ND (0.5)	129	36.3	3.5	122	ND (0.2)	204
	15-Jun-05	974	-11.6	-91.0	108	359	ND (0.5)	ND (0.5)	133	38.9	6.54	117	ND (0.2)	221
	06-Oct-05	884	-11.7	-95.0	99.8	300	ND (0.5)	ND (0.5)	123	37	6.61	88.7	ND (0.2)	197
	16-Dec-05	1010	-11.4	-90.0	128	348	ND (0.5)	ND (0.5)	134	41.5	6.46	107	ND (0.2)	212
	09-Mar-06	746	-11.5	-93.9	84.4	225	ND (0.5)	ND (0.5)	98.5	27.5	4.15 J	88.5	ND (0.2)	244
	05-May-06	741	-11.4	-90.3	110	302	ND (0.5)	ND (0.5)	117	35.7	5.77	118	ND (0.2)	216
	11-Oct-06	1050	-12.2	-95.0	86.3	247	ND (0.5)	ND (0.5)	133	40.8	5.47	132	ND (0.2)	225
MW-30-30	10-Mar-05	38800	-9.8	-79.0	16000	4270	ND (5)	7.91	1590	1600	95.4	13600	4.97	421
	07-Oct-05	36400	-8.5	-75.0	17600	4000	ND (0.5)	ND (10)	1020	842	93.6	7650	5.2	521
	15-Dec-05	35700	-8.7	-59.0	19700	4070	ND (1)	3.13	1060	894	110	8540	6.14	504
	13-Mar-06	39700 J	-8.8	-70.5	18600	4530	ND (0.5)	ND (50)	1050	892	77.2	11300	4.62	650
	02-May-06	32400	-10.3	-70.7	15400	3300	ND (0.5)	ND (5)	882	828	59.4	10280	3.95	756
	10-Oct-06	29400	-9.4	-68.7	17800	4400	ND (2.5)	ND (2.5)	729	653	55	10200	4.32	550
MW-30-50	10-Mar-05	6470 J	-8.3	-68.0	4660	672	ND (0.5)	1.03	335	107	16.5	2040	1.15	324
	07-Oct-05	6860	-9.4	-79.0	3060	857	ND (0.5)	0.899 J	438	101	37	1780	1.27	252
	16-Dec-05	5850	-10.5	-65.0	2360	578	ND (0.5)	0.645	265	77.9	32.9	1260	1.19	212
	09-Mar-06	5380	-9.8	-83.5	2420	651	ND (0.5)	ND (0.5)	226	66.2	14.6	1640	1.18	275
	02-May-06	5420	-10.4	-73.6	2380	612	ND (0.5)	3.41	243	70.3	16.4	1750	1.22	261
	11-Oct-06	4170	-10.7	-82.2	1980	468	ND (0.5)	ND (0.5)	171	48.5	14	1370	1.11	290
	11-Oct-06 FD	3930	-11	-82.6	1810	462	ND (0.5)	ND (0.5)	163	46.1	14.1	1340	1.08	298
MW-31-60	09-Mar-05	1540	-8.6	-63.0	649	210	4.94	ND (0.5)	108	17.3	5.97	424	0.401	76.6
	13-Jun-05	1660	-8.2	-65.0	745	207	4.12	ND (0.5)	121	18.9	6.57	403	0.388	70
	06-Oct-05	1660	-8.6	-65.0	691	206	4.01	ND (0.5)	109	16.5	9.75	308	0.462	77.3
	13-Dec-05	1620	-8.7	-54.0	669	199	4.14	ND (0.5)	87	15.4	9.32	275	0.359	73
	15-Mar-06	1560 J	-8.6	-65.6	661	191	4.37	ND (0.5)	106	17.5	7.3	403	0.393	89.3

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Chemical Performance Monitoring Results, March 2005 through July 2007
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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-31-60	15-Mar-06 FD	1640 J	-8.6	-64.9	662	192	4.34	ND (0.5)	101	16.8	6.94	391	0.383	81.9
	01-May-06	1630	-9.6	-63.2	691	209	4.58	ND (0.5)	118	20.1	7.78	467	0.449	79.6
	05-Oct-06	1620	-9.4	-66.3	687	205	5	ND (0.5)	113	20.6	9.6 J	325	0.464	80
	12-Mar-07	1750	-9.3	-69.0	757	222	4.93	ND (0.5)	116	20.3	6.05	454	0.402 J	72.5
MW-32-20	09-Mar-05	12500	-7.2	-65.0	6930	1660	ND (0.5)	3.51	838	302	36.9	4000	2.76	123
	17-Jun-05	10200	-9	-67.0	4810	690	ND (0.5)	ND (2.5)	566	231	23.3	2620	1.75	676
	04-Oct-05	28800	-7.8	-65.0	14200	2420	ND (5)	6.19	1380 J	613 J	91.1 J	5400 J	4.75 J	733
	16-Dec-05	24600	-7.8	-61.0	12200	2140	ND (1)	3.48	1470	552	90.4	4950	4.16	861
	10-Mar-06	20900	-8.3	-65.5	10600	1970	ND (0.5)	ND (0.5)	1350	530	56.1	6440	3.54	432
	04-May-06	16900	-8.1	-64.9	9430	1380	ND (0.5)	2.35	937	445	46	4780	2.87	218
	02-Oct-06	46200 J	-8.6	-67.1	20200	3190	ND (2.5)	7.3	1870	1070	87	11300	6.34	660
	11-Dec-06	37900	-8	-67.0	17900	3020	ND (5)	7.67	1530	785	81.7	8420	4.98	825
	06-Mar-07	27600	-8.7	-72.7	16200	2210	0.925	5.93	1460	635	64.4	7110	3.92	765
	30-Apr-07	17700	-9.6	-78.1	9820	1310	ND (0.2)	3.78	965	484	51.4	5520	3.02	770
MW-32-35	09-Mar-05	3560	-8.2	-68.0	1770	465	ND (0.5)	0.845	312	85.5	13	944	1.07	260
	17-Jun-05	7550	-9.5	-72.0	3520	787	ND (0.5)	ND (2.5)	506	120	14.8	2110	1.18	223
	04-Oct-05	8340	-8.3	-70.0	3840	765	ND (0.5)	ND (5)	567	134	29.3	1530	1.26	208
	16-Dec-05	7660	-8.8	-63.0	3510	710	ND (1)	1.02	606	128	30	1580	1.25	219
	10-Mar-06	9230	-8.6	-74.0	4210	1010	ND (0.5)	ND (0.5)	654	129	19.2	2360	1.13	234
	04-May-06	9840	-9.1	-67.8	4960	1130	ND (0.5)	ND (0.5)	693	148	19.5	2800	1.38	218
	02-Oct-06	11200	-9.4	-71.4	5430	1050	ND (2.5)	ND (2.5)	839	165	23.9	3260	1.48	290
	11-Dec-06	10400	-9	-70.4	5090	1000	ND (0.5)	1.9	845	173	22.5	2620	1.43	338
	06-Mar-07	12600	-10.2	-75.4	6070	1200	ND (0.5)	2.65	1080	209	23.5	2910	1.35	360
	30-Apr-07	12100	-9.9	-78.7	6610	1280	ND (0.2)	2.6	1250	273	26.2	3280	1.35	475
MW-34-55	10-Mar-05	6230	-10.8	-82.0	2620	739	ND (0.5)	0.654	366	71.3	29.1	1900	1.19	240
	15-Jul-05	---	-10.3	-84.0	2250	607	ND (0.5)	ND (0.5)	247	52	16.5	1420	1.02	242
	05-Oct-05	5150	-10.6	-88.0	2170	619	ND (0.5)	ND (0.5)	272	59.1	25.8	1230	1.2	232
	14-Dec-05	5100	-10.8	-74.0	2150	552	ND (0.5)	0.588	217	45	27.2	965	0.937	236
	08-Mar-06	4850	-10.8	-86.8	2080	593	ND (0.5)	ND (0.5)	256	54.2	13.5	1640	0.956	272
	03-May-06	4320	-11.5	-84.3	2070	500	ND (0.5)	ND (0.5)	198	44.8	11.1	1360	0.846	302

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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-34-55	04-Oct-06	1680 J	-12.2	-94.8	443	230	ND (0.5)	ND (0.5)	37.6	8.08	4.59	536	0.54	368
MW-34-80	08-Mar-05	6940	-10.4	-83.0	4180	1040	ND (0.5)	1.01	439	68.1	28	2750	1.65	304
	15-Mar-05	8980	---	---	3920	ND (5)	ND (1)	---	445	65.7	29.7	2990	---	288
	30-Jun-05	7840	-8.4	-82.0	3910	979	ND (0.5)	ND (0.5)	497	76.5	27.7	2670	1.66	302
	05-Oct-05	10200	-10.1	-85.0	3880	1060	ND (0.5)	ND (0.5)	429	72.5	47.4	1660	1.57	302
	14-Dec-05	8800	-10.2	-71.0	3700	880	ND (0.5)	0.854	432	68.3	54.9	1710	1.54	297
	09-Mar-06	7830	-9.9	-86.8	3520	986	ND (0.5)	ND (0.5)	383	65.8	24	2420	1.49	313
	03-May-06	7950	-11.7	-77.6	3700	921	ND (0.5)	ND (0.5)	425	70.3	23.9	2480	1.38	297
	04-Oct-06	7080	-11.3	-81.8	3210	786	ND (0.5)	0.737	341	65.4	21.1	2170	1.31	268
	12-Dec-06	6510	-10.5	-80.9	3190	789	ND (0.5)	0.742	298	62.9	18.9	2040	1.26	288
	05-Mar-07	6360 J	-11.5	-85.8	3300	783	ND (0.5)	0.72	315	68.3	19.4	2020	1.29	205
	30-Apr-07	6390	-11.5	-88.9	3320 J	889 J	ND (0.2)	ND (1)	282	57	18.6	2080	1.33	245
Surface Water Stations														
R-27	07-Mar-05	669	-12.3	-102.0	92.7	244	ND (0.5)	ND (0.5)	82.8	31.3	4.72	108	ND (0.2)	136
	14-Jun-05	686	-11.4	-92.0	90.9	266	ND (0.5)	ND (0.5)	81.9	29.8	6.04	98.9	ND (0.2)	127
	05-Oct-05	678	-11.6	-94.0	85.1	255	ND (0.5)	ND (0.5)	101	36.2	6.56	91.2	ND (0.2)	130
	16-Dec-05	718	-11.7	-87.0	87.9	253	ND (0.5)	ND (0.5)	85.5	29.5	5.99	75.6	ND (0.2)	126
	06-Mar-06	656	-11.8	-92.1	90.6	268	ND (0.5)	ND (0.5)	83.5	29.4	5.44 J	101	ND (0.2)	144
	03-May-06	567	-12.8	-93.9	93.1	267	ND (0.5)	ND (0.5)	87	31.1	3.12 J	106	ND (0.2)	139
	04-Oct-06	752 J	-12.2	-94.9	91.5	261	ND (0.5)	ND (0.5)	82.9	31.5	6.24 J	98.1	ND (0.2)	128
	20-Dec-06	680	-12.7	-98.1	94.5	266	ND (0.5)	ND (0.5)	83.2	30.9	3.64	106	ND (0.2)	138
	13-Mar-07	750 J	-13	-99.5	96.5	267	0.537	ND (0.5)	86.9	31.3	4.73	106	ND (0.2)	130
	08-May-07	715 J	-12.9	-103.6	92.6	269	ND (0.5)	ND (0.5)	84.3	29.8	5.55	100	ND (0.2)	143
R-28	08-Mar-05	651	-12.5	-102.0	90.4	231	ND (12.5)	ND (0.5)	83.7	31.4	5.02	107	ND (0.2)	132
	14-Jun-05	680	-11.6	-95.0	91.2	268	ND (0.5)	ND (0.5)	78.5	28.5	5.08	94.5	ND (0.2)	127
	05-Oct-05	672	-11.6	-94.0	85.5	255	ND (0.5)	ND (0.5)	85.7	30.4	6.3	77	ND (0.2)	122
	16-Dec-05	710	-11.5	-83.0	88.1	254	ND (0.5)	ND (0.5)	87.2	29.8	6.11	76.8	ND (0.2)	126
	06-Mar-06	675	-12.3	-93.4	91	270	ND (0.5)	ND (0.5)	76.6	26.6	5.22 J	91.5	ND (0.2)	146
	03-May-06	586	-13	-92.1	93.4	270	ND (0.5)	ND (0.5)	88.1	31.4	4.04 J	107	ND (0.2)	136
	04-Oct-06	644 J	-12.6	-95.3	90.9	259	ND (0.5)	ND (0.5)	84.2	32.1	6.17 J	96.5	ND (0.2)	133

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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Surface Water Stations														
R-28	20-Dec-06	615	-12.4	-99.6	93.3	262	ND (0.5)	ND (0.5)	85.7	32	4.66	108	ND (0.2)	143
	14-Mar-07	710	-12.8	-100.4	96.7	268	0.534	ND (0.5)	87.9	31	5.71	105	ND (0.2)	133
	09-May-07	690	-13	-102.3	95.8	271	ND (0.5)	ND (0.5)	86.1	30.5	5.92	103	ND (0.2)	143

NOTES:

FD = field duplicate sample
ND =parameter not detected at the listed reporting limit.
J = concentration or reporting estimated by laboratory or data validation
R = result exceeded analytical criteria for precision and accuracy; should not be used for project decision-making
(---) = data not collected or available

Results in milligrams per liter (mg/L), except Oxygen-18 and Deuterium, which are expressed as differences from global standards in parts per thousand.

Alkalinity reported as carbonate (CaCO3). Nitrate reported as Nitrogen (N).

Monitoring wells MW-30-30 and MW-30-50 were not sampled during the June 2005 monitoring event due to floodplain inaccessibility.