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May 30, 2007

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

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

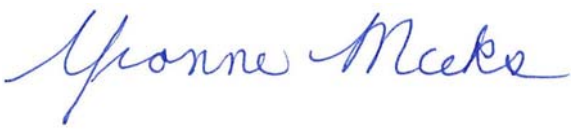
Dear Mr. Yue:

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

May 30, 2007

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Oakland, CA 94612

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and
Quarterly Performance Evaluation, February through April 2007

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May 30, 2007

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

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Appendixes

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
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 first quarterly reporting period covers monitoring activities from February 1 through April 30, 2007. The next monthly report for the May 2007 reporting period will be submitted by June 20, 2007.

1.1 Report Organization

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

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

SECTION 2.0

Performance Monitoring Report for April 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 April 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 April 1 through 30, 2007 are presented in Table 2-1. (All tables are located at the end of the report.) During the April reporting period, extraction wells TW-3D and PE-1 operated at a combined target pump rate of 135 gallons per minute (gpm), excluding periods of planned and unplanned downtime.

The April 2007 monthly average pumping rate was 104.0 gpm. A total of 4,492,972 gallons of groundwater was extracted and treated by the IM No. 3 treatment plant during April 2007. The operational run time for the IM extraction system was 78 percent during this reporting period.

In accordance with prior approval from DTSC, the IM No. 3 facility was shut down from April 22 to April 28, 2007 for planned maintenance activities. The planned maintenance was intentionally scheduled during a time of high river levels (which generally occur from March through July) when landward gradients are present in the floodplain even in the absence of pumping from extraction wells. The DTSC pre-approved this outage on April 12, and requested that PG&E document any notable issues found during the maintenance activities that would have affected the integrity or operation of the IM No. 3 treatment plant be included in the April 2007 PMP report.

Maintenance activities included pipe and tank visual inspections and cleaning, equipment maintenance, and general repairs. Based on the maintenance work completed, there were no issues identified that pose an imminent risk to the integrity or operation of the IM No. 3 facility. Items identified that will be addressed during a future outage include:

- Small areas of bare metal were observed inside the clarifier; however, there was no visual evidence of corrosion. These areas will be re-coated during a future maintenance event.
- Spotting on the reverse osmosis unit high-pressure pump casing, which may indicate corrosion. The spotting will be monitored, and a spare pump is onsite if the active pump fails.

The extraction system downtime associated with the April 2007 maintenance event and other periods of downtime are documented 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 April 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 April reporting period and prior months.

2.3 Chromium Sampling Results

During April 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, Fourth Quarter 2006 and Annual Summary* (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 April 2007 Cr(VI) distribution results for the groundwater wells monitoring the upper, middle, and lower depth intervals of the Alluvial Aquifer in the floodplain area. The aquifer depth intervals, well screens, and April 2007 Cr(VI) sampling 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 April 2007 Cr(VI) results 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 April 2006 through April 2007. Table B-2 presents the groundwater sampling data for the other wells monitored in the PMP area from April 2006 through April 2007.

2.4 Hydraulic Gradient Results

During April 2007, water levels were recorded at intervals of 30 minutes with pressure transducers in 61 wells and two river monitoring stations (I-3 and RRB). The data 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 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 April reporting period (April 1 to 30, 2007) and are summarized in Appendix C, Table C-1. 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 April 2007) for all wells with transducers are included in Appendix C. The Colorado River elevation (I-3 gage station) during April 2007 is also shown on the hydrographs. Average groundwater elevations for this reporting period include data during the time when the IM extraction system was purposely shut down for maintenance activities (April 22 to 28, 2007).

The April 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. The landward gradients measured during April 2007 were less than those measured during March 2007. This was the result of the lower-than-normal monthly average pumping rate (104 gpm) associated with the planned one-week shutdown of the IM extraction system.

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 April 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, installed in spring 2006, are not contoured on the deep gradient maps. Many of the new monitoring wells are significantly deeper than other wells in the lower aquifer zone. Due to vertical gradients present at the Topock site, water levels in deeper wells tend to be higher than water levels in shallower wells. Consequently, some of the new wells with screen intervals significantly deeper than existing wells exhibit water levels that do not contour well with nearby shallower lower zone wells.

During April 2007, MW-35-135, and 16 other wells were re-surveyed. The resurveyed measuring point elevation for MW-35-135 was 0.51 feet higher than the existing measuring point elevation from the original 2004 survey. With this correction to MW-35-135 elevation, water levels in that well are much more consistent with those in surrounding wells; water levels in MW-35-135 based on the previous elevation survey had been anomalously low. The Topock project database has been updated with the corrected reference elevation, and the April deep well contour map (Figure 2-6) reflects this change in elevation. With this correction, hydraulic capture in the northern portion of the floodplain has been determined to be greater than depicted in previous performance monitoring reports. The sixteen other wells resurveyed in April 2007 had insignificant changes to reference elevations.

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 IM 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 April 2007 release (16,818 cubic feet per second [cfs]) was slightly less than the United States Bureau of Reclamation (USBR) projected release for the April reporting period (17,300 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 May 2007 (16,800 cfs) will be almost the same as for April 2007 (16,818 cfs). Based on the regression method results using May 9, 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 May 2007 will be the essentially the same as the average level in April 2007.

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 April 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. In addition, the IM extraction system was shut down for one week of the reporting period for maintenance activities. Nevertheless, average gradients in the three well pairs during April 2007 were landward at magnitudes that were from two to greater than three times the target value of 0.001 foot per foot (0.0022, 0.0036, and 0.0037, respectively). The April gradients were less than the average gradients for these well pairs measured in March 2007 reporting period due to the one-week IM extraction system shutdown.

2.5 Status of Operation and Monitoring

Reporting of the IM extraction and monitoring activities will continue as described in the Performance Monitoring Plan. The next monitoring report for May 2007 will be submitted by June 20, 2007.

Per DTSC direction, PG&E will continue to operate both well TW-3D and well PE-1 at a target combined pumping rate of 135 gpm during May 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. If, at any time, hydraulic data indicate that PE-1 pumping has the potential to draw higher concentrations of chromium away from the capture zone of well TW-3D, PG&E will request authorization from DTSC to increase the pumping rate at well TW-3D and decrease the rate at well PE-1. Well TW-2D will serve as a backup to extraction wells TW-3D and PE-1.

SECTION 3.0

Quarterly Performance Evaluation for February through April 2007

3.1 Extraction System Operations

From February through April 2007 (considered first quarter 2007), 15,778,481 gallons of groundwater were extracted and treated by the IM No. 3 system. This resulted in removal of an estimated 213 pounds of chromium from the aquifer. The average extraction rate, including system downtime, for the IM system during the quarter was 123.2 gpm. The average extraction rate for the first quarter 2007 is lower than previous quarters, due to the one-week (April 22 through 28, 2007) IM extraction system shutdown for annual maintenance activities. A summary of the quarterly average extraction rates and volumes by extraction well is provided in Table 2-1. The IM No. 3 shutdown is summarized in Section 2.2 and Appendix A of this report.

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 first 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 April 2007 sampling and the recent quarterly monitoring events. Overall, the Cr(VI) concentration contours for first quarter 2007 are similar to the Cr(VI) distribution maps presented in the prior performance monitoring reports (CH2M HILL 2006, 2007b). See Tables B-1 and B-2 for the complete sampling results from April 2006 through April 2007 for all 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 April 2007 sampling. Sampling data since April 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 consistently 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 increasing concentrations since PE-1 pumping commenced. However, since June 2006, concentrations at this well have shown a generally downward trend. The Cr(VI) result from April 30, 2007 sampling of MW-34-100 (632 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). Sampling data from the MW-44 cluster wells shows stable concentrations at these wells since October 2006. Concentrations in well MW-46-175 have been generally stable since April 2006 sampling. The MW-44 and MW-46 well clusters are within the hydraulic capture of IM pumping (Figure 2-6).

Hexavalent chromium concentration trend graphs and hydrographs for selected floodplain monitoring wells are presented in Appendix B, Figures B-1 through B-7. 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. Low 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 April 2006 through April 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 (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 April 2007. Figure 2-1 shows the locations of the monitoring wells sampled for the performance monitoring parameters. Wells were sampled for specific chemical parameters to monitor the effects of IM pumping on groundwater chemistry in the floodplain area. Water samples were analyzed for TDS, chloride, sulfate, nitrate, bromide, calcium, potassium, magnesium, sodium, boron, alkalinity, deuterium, and oxygen-18.

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

have decreased at the MW-20 cluster wells MW-20-70 and MW-20-100 since IM pumping began, presumably due to the strong downward hydraulic gradients created by IM pumping. TDS and associated water quality parameters initially decreased in MW-20-130, but have increased since March 2005.

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 future quarterly and 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 performance monitoring reports. The groundwater contour maps for the upper, middle, and lower depth intervals for February, March, and April 2007 are included in this report as follows:

- April 2007: Figures 2-4 through 2-6 presented in this report
- March 2007: Appendix C, Figures C-2A through C-2C
- February 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 (February through April 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 observed in groundwater elevation maps and cross-sections for the deep interval submitted in the prior 2006-2007 performance monitoring reports (CH2M HILL 2007b).

The hydraulic gradients reported for the first quarter, February through April 2007 evaluation 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 key gradient well pairs in February, March, and April 2007 are summarized in Table 3-1. The mean landward hydraulic gradients were from two to more than three times greater than the target gradient of 0.001 feet/foot for all gradient pairs during each month during the first quarter 2007 reporting period.

The existing gradient well pairs were designed 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. With the initiation of pumping from PE-1 (late January 2006) and new IM monitoring well installations (February and April 2007), the gradient control well pairs were re-evaluated. Pending direction by DTSC, the results for new gradient well pairs will be reported in future IM performance monitoring reports.

Figure 3-4 presents a graphical display of the measured hydraulic gradients and pumping rates and river levels throughout the quarterly reporting period. River levels were moderate to high during February through April 2007, and IM pumping rates were consistently very close to the IM system target goal of 135 gpm, resulting in strong landward gradients for each of the well pairs during first quarter 2007 performance monitoring period. The IM extraction system operated at monthly average pumping rates of 134 to 132 gpm during February and March 2007, respectively, and at an average rate of 104 gpm during April 2007 (includes the one-week planned maintenance shutdown).

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. Current projections show that the highest river levels of the year will occur in April, May, and

June 2007 and that the lowest water levels will occur in November 2007, 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 February, March, and April 2007 performance monitoring indicate that the minimum landward gradient target (0.001 foot/foot) was exceeded throughout the quarterly reporting period. As illustrated in Figure 3-4, the landward gradients during February, March, and April 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 3 months of the first quarter 2007.

A total of 15,778,481 gallons of groundwater was extracted and treated by the IM No. 3 system during the first quarter (February through April) 2007 reporting period. An estimated 213 pounds of chromium were removed and treated by the IM system during this quarterly reporting period. The average pumping rate for the IM extraction system during the first quarter period, including system downtime, was 123.2 gpm.

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

Chromium concentrations at well MW-34-100 increased steadily following its installation in February 2005 (CH2M HILL 2007b); however, the Cr(VI) results for MW-34-100 since July 2006 have shown a steady downward trend (Figure 3-2). The April 30, 2007 Cr(VI) sampling result from this well (632 µg/L) is the lowest concentration measured since August 2005.

Based on the hydraulic and chemical performance monitoring data and evaluation presented in this report, the IM performance standard has been met for the first quarter February through April 2007 reporting period. Performance monitoring 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 April 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Extraction Well	April 2007 Period[a]		Quarterly Period[b]		Project To Date[c]
	Average Pumping Rate[d] (gpm)	Volume Pumped (gal)	Average Pumping Rate[d] (gpm)	Volume Pumped (gal)	Cumulative Volume Pumped (gal)
TW-2S	0	0	0	0	994,438
TW-2D	0	0	0	0	53,015,001
TW-3D	78.0	3,370,364	92.6	11,857,944	68,413,206
PE-1	26.0	1,122,608	30.6	3,920,537	22,270,654
Total	104.0	4,492,972	123.2	15,778,481	144,693,299
				Volume Pumped from the MW-20 Well Cluster	1,527,724
				Total Volume Pumped (gal)	146,221,023
				Total Volume Pumped (ac-ft)	448.8

NOTES:

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

[a] Pumping results during the monthly period are based on readings collected between April 1, 2007 at 12:00 a.m. and April 30, 2007 at 11:59 p.m. (30 days).
[b] Pumping results during the quarterly period are based on readings collected between February 1, 2007 at 12:00 a.m. and April 30, 2007 at 11:59 p.m. (89 days).
[c] Interim Measure groundwater extraction at the Topock site was initiated in March 2004.
[d] The "Average Pumping Rate" is the overall average during the reporting period, including system downtime based on flow meter readings. The extraction well system was completely shutdown April 22 through 28, 2007 for annual maintenance.

TABLE 2-2
Analytical Results for Extraction Wells, November 2006 through April 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Sample Date	Dissolved Total Chromium mg/L	Hexavalent Chromium mg/L	Total Dissolved Solids mg/L
TW-3D	01-Nov-06	3.18	2.49	4920
TW-3D	06-Dec-06	2.09	2.50	5420
TW-3D	10-Jan-07	2.58	2.44	5520
TW-3D	06-Feb-07	2.31	2.40	5780
TW-3D	07-Mar-07	2.50	2.42	6040
PE-1	01-Nov-06	0.0833	0.0925	5010
PE-1	06-Dec-06	0.0858	0.0972	5650
PE-1	10-Jan-07	0.103	0.0889	5320
PE-1	06-Feb-07	0.0895	0.0808	5440
PE-1	07-Mar-07	0.091	0.0847	5500

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.

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)
April 2004	17,400	17,354	-46	456.4	456.2	-0.2
May 2004	17,100	16,788	-312	456.3	456.3	-0.1
June 2004	15,800	16,869	1,069	455.8	456.6	0.7
July 2004	14,000	14,951	951	455.2	455.9	0.7
August 2004	12,100	12,000	-100	454.5	454.9	0.4
September 2004	11,200	10,979	-221	454.2	454.6	0.4
October 2004	8,600	7,538	-1,062	453.2	453.5	0.3
November 2004	9,500	8,075	-1,425	453.6	453.4	-0.2
December 2004	6,200	8,090	1,890	452.4	453.3	0.9
January 2005	8,800	4,900	-3,900	453.4	452.4	-1.0
February 2005	8,000	4,820	-3,180	453.1	452.6	-0.5
March 2005	15,600	7,110	-8,490	455.8	452.9	-2.9
April 2005	16,700	16,306	-394	455.9	456.0	0.1
May 2005	16,700	15,579	-1,121	456.2	456.1	-0.1
June 2005	14,600	15,223	623	455.8	456.1	0.3
July 2005	15,400	15,612	212	456.0	456.0	0.0
August 2005	11,700	11,544	-156	454.6	454.8	0.2
September 2005	12,400	12,335	-65	454.6	NA	NA
October 2005	12,300	11,201	-1,099	454.5	454.3	-0.2
November 2005	10,900	10,216	-684	454.3	454.3	0
December 2005	6,900	6,745	-155	452.8	452.7	-0.1
January 2006	8,400	9,166	766	453.2	453.6	0.4
February 2006	11,100	10,790	-310	454.1	454.1	0.1
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	--	--	456.5	--	--

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) Listed projections for April 2004 through July 2004 are from April 2004, and the remainder were from the beginning of each respective month.

3) 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.

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

5) I-3 elevation for the month of October 2006 limited to average of data from 10/4/2006 through 10/31/2006.

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

TABLE 2-4
Average Hydraulic Gradients for Well Pairs, April 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well Pair[1]	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Dates 2007
Northern Gradient Pair		
MW-31-135 / MW-33-150	0.0022	April 1 through April 30
Central Gradient Pair		
MW-20-130 / MW-34-80	0.0036[3]	April 1 through April 30
Southern Gradient Pair		
MW-20-130 / MW-42-65	0.0037[3]	April 1 through April 30

NOTES:

1. Refer to Figure 1-2 for location of well pairs
2. For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot
3. Data for the central and southern well pairs missing April 7th and 8th.

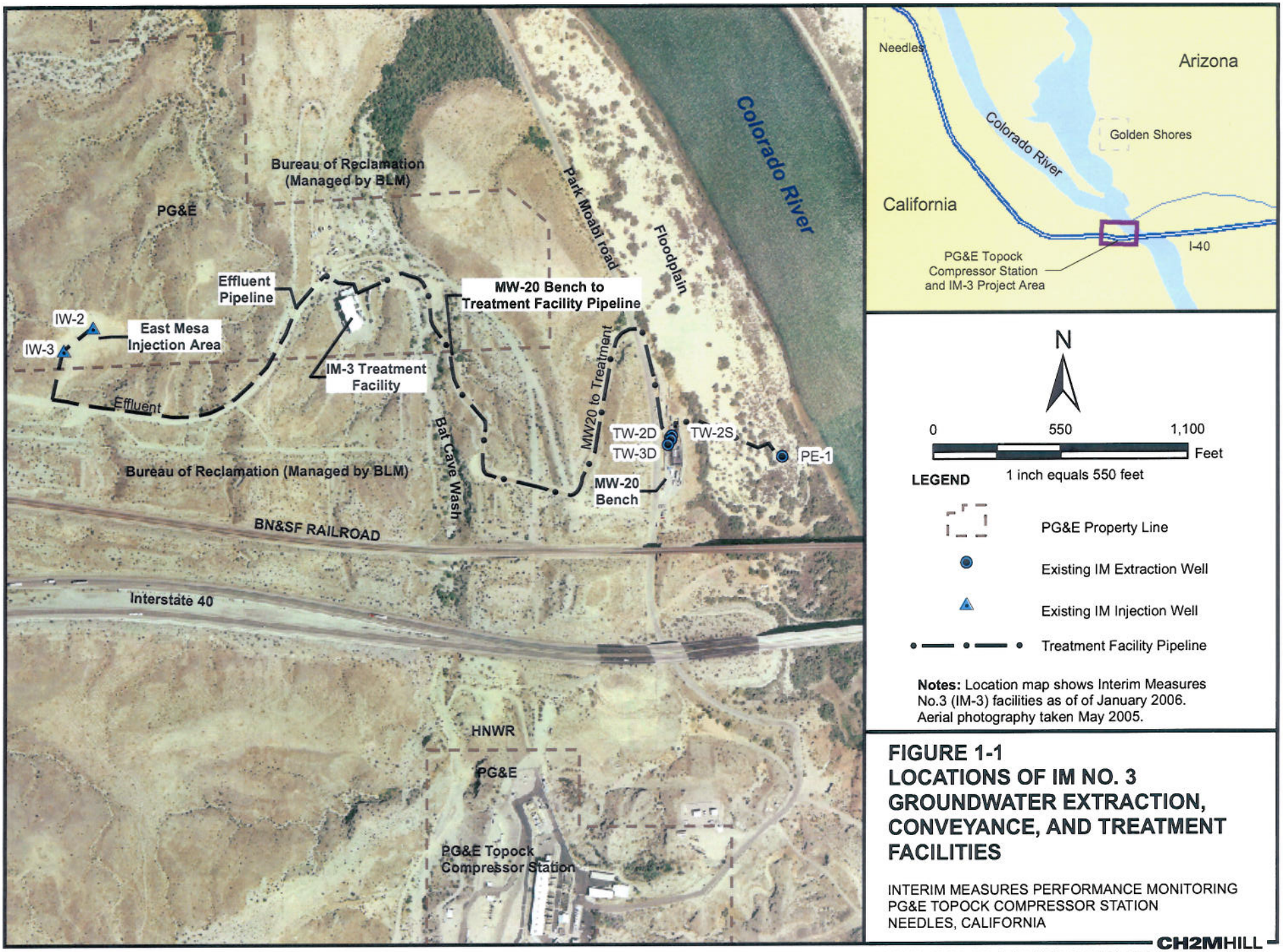
TABLE 3-1
Average Hydraulic Gradients Measured at Well Pairs, February through April 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

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	February	0.0028	February 1 through 28
	March	0.0028	March 1 through 30
	April	0.0022	April 1 through 30
Central Gradient Pair			
MW-20-130 / MW-34-80	February	0.0037	February 1 through 28
	March	0.0040	March 1 through 30
	April	0.0036 [4]	April 1 through 30
Southern Gradient Pair			
MW-20-130 / MW-42-65	February	0.0042	February 1 through 28
	March	0.0045	March 1 through 30
	April	0.0037 [4]	April 1 through 30

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 2006b-c) for discussion of monthly gradients.
4. Data for central and southern well pairs missing April 7th and 8th.

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

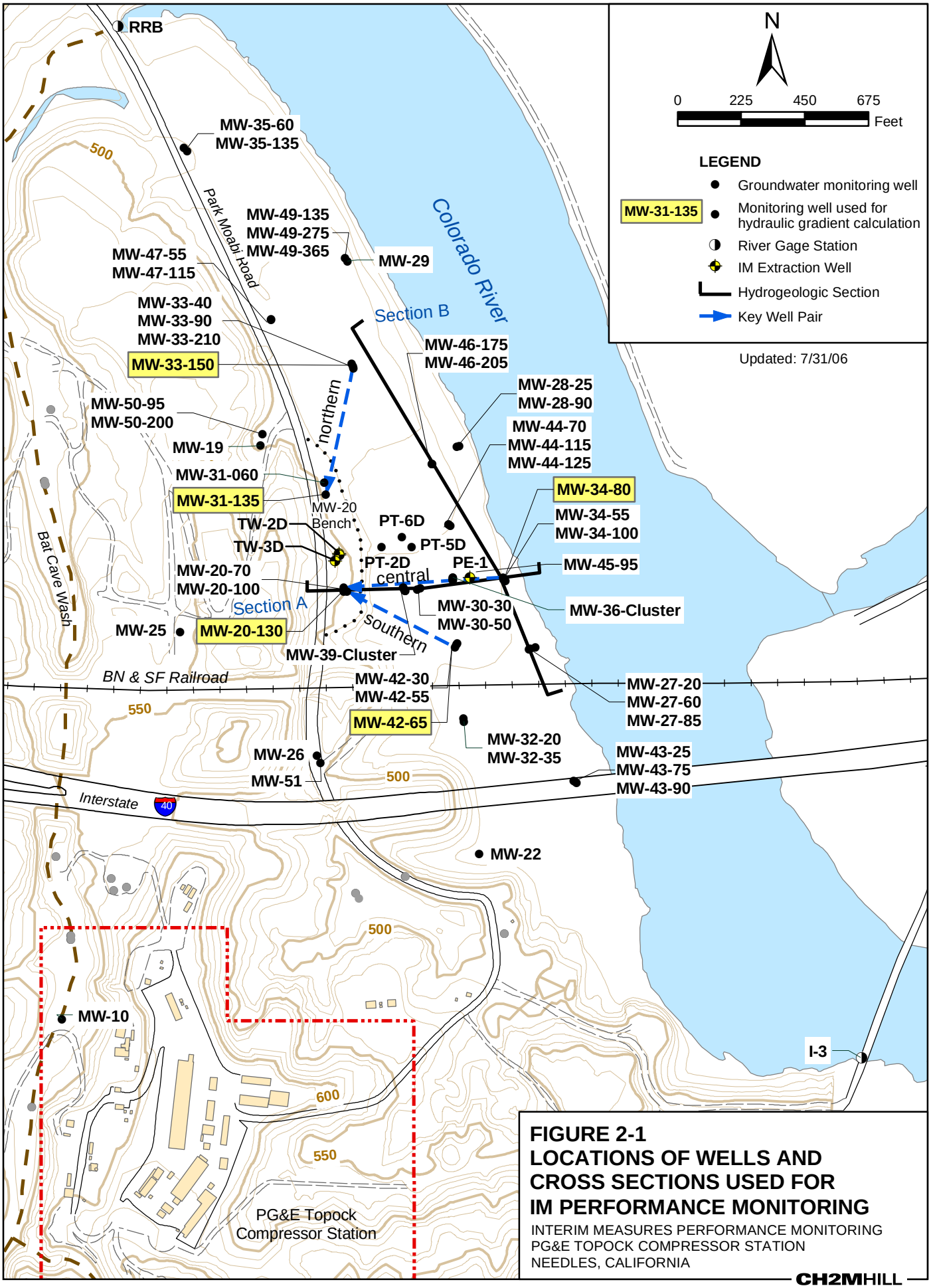


FIGURE 2-1
LOCATIONS OF WELLS AND CROSS SECTIONS USED FOR IM PERFORMANCE MONITORING

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

CH2MHILL

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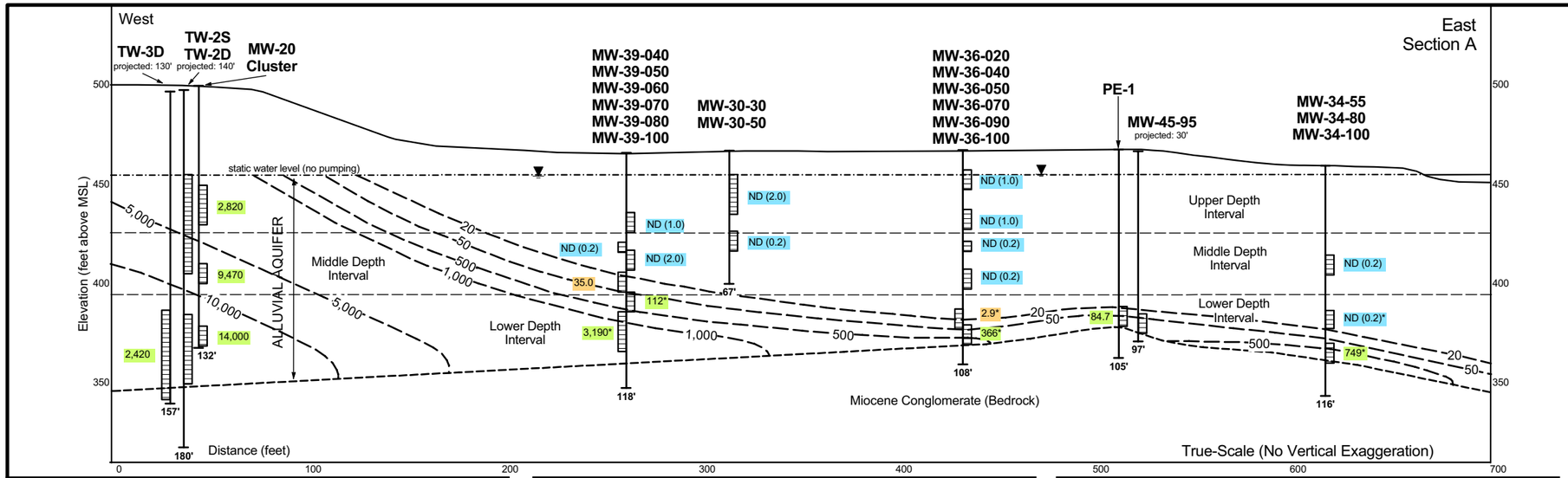
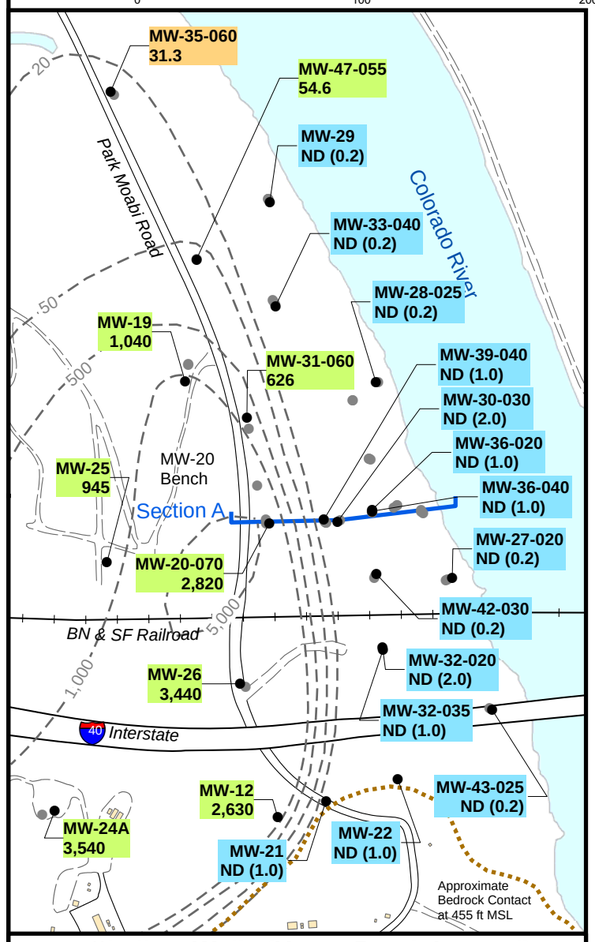
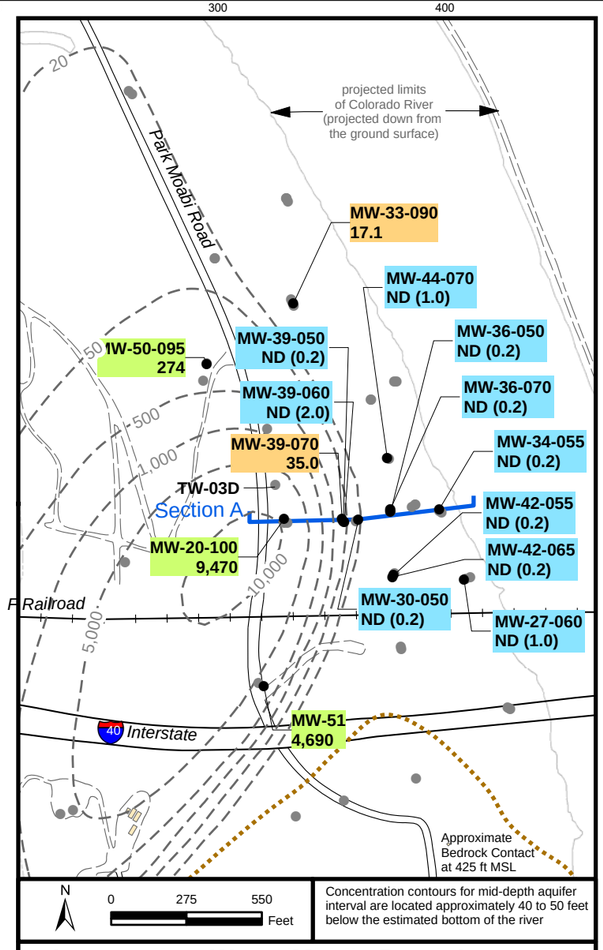
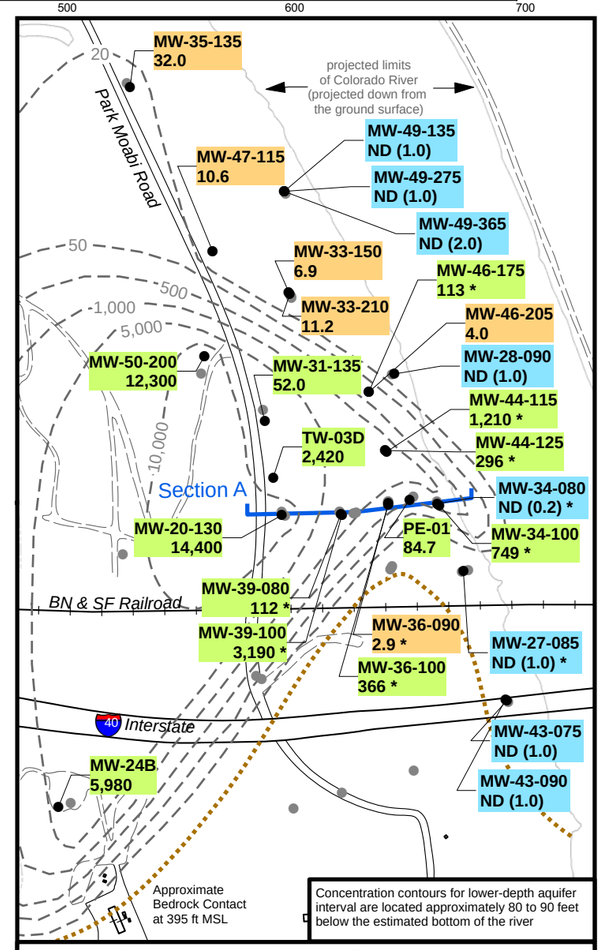




Shallow Wells (Upper Depth Interval)



Intermediate Wells (Middle Depth Interval)



Deep Wells (Lower Depth Interval)

LEGEND

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

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

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

* Indicates samples from April 2007 sampling, all other samples are from March 2007 and October 2006.

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

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, APRIL 2007

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

ND (0.2)
17.1
6.9
11.2

ND (0.2)*
ND (1.0)
113*
4.0

ND (1.0)
1,210*
296*

ND (0.2)
ND (0.2)*
749*

ND (0.2)
ND (1.0)
ND (1.0)*

237'
216'
134'
116'
107'

Approximate geologic contact between alluvial fan and fluvial deposits

20
50
500
1,000

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:

Results noted with * are maximum concentrations from primary and duplicate samples from April 2007 sampling.
Other results are from the March 2007 sampling events.
See Tables B-1 and B-2 for sampling data and other results.

J = Concentration estimated by laboratory or data validation.

water level
well screen
boring depth (feet) 103'

3,810 Hexavalent Chromium concentration in micrograms per liter (ug/L) equivalent to parts per billion (ppb)

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

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
APRIL 2007

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

CH2MHILL

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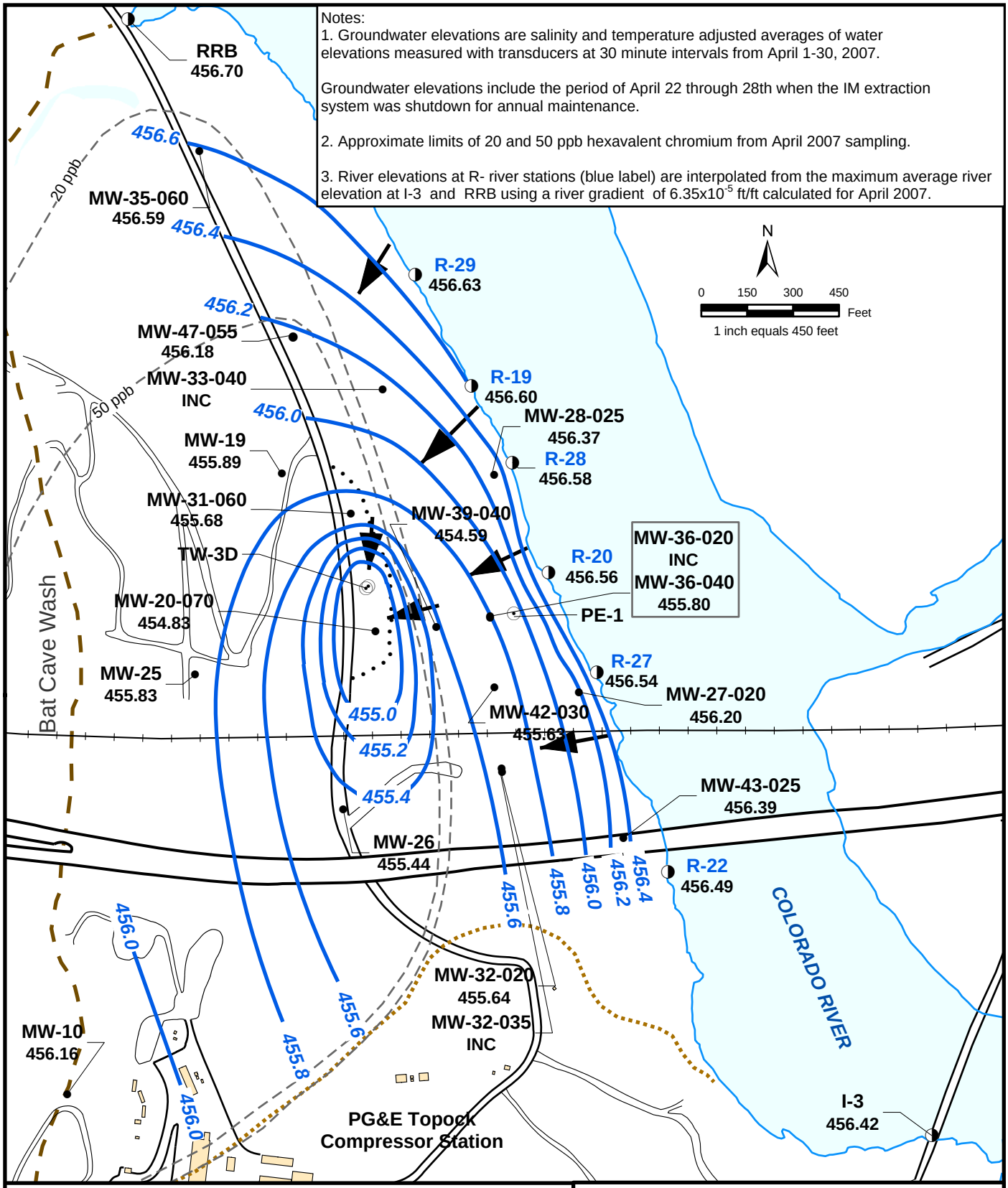

FIGURE 2-4
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, APRIL 2007

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

CH2MHILL

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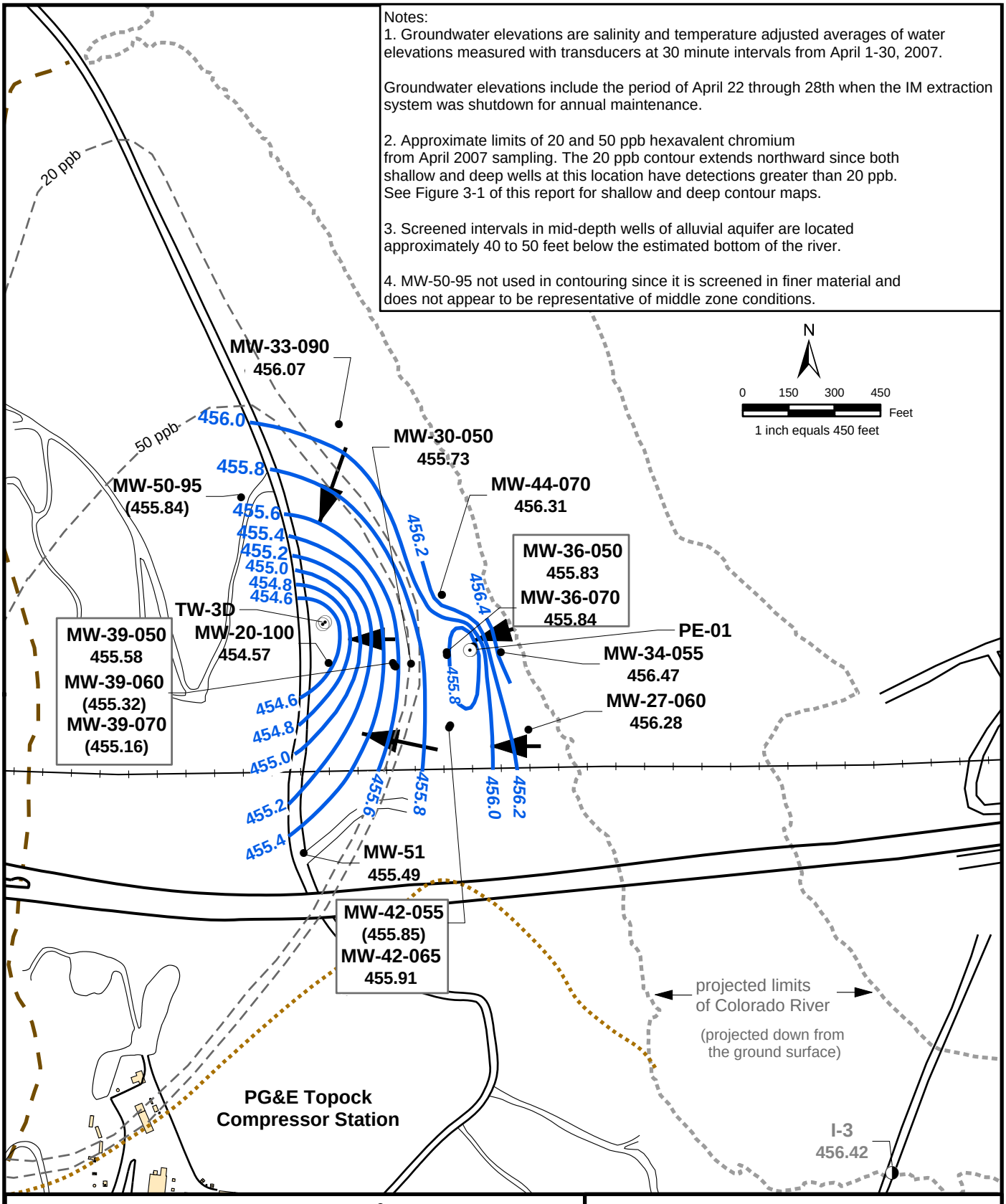

FIGURE 2-5
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS APRIL 2007

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

CH2MHILL

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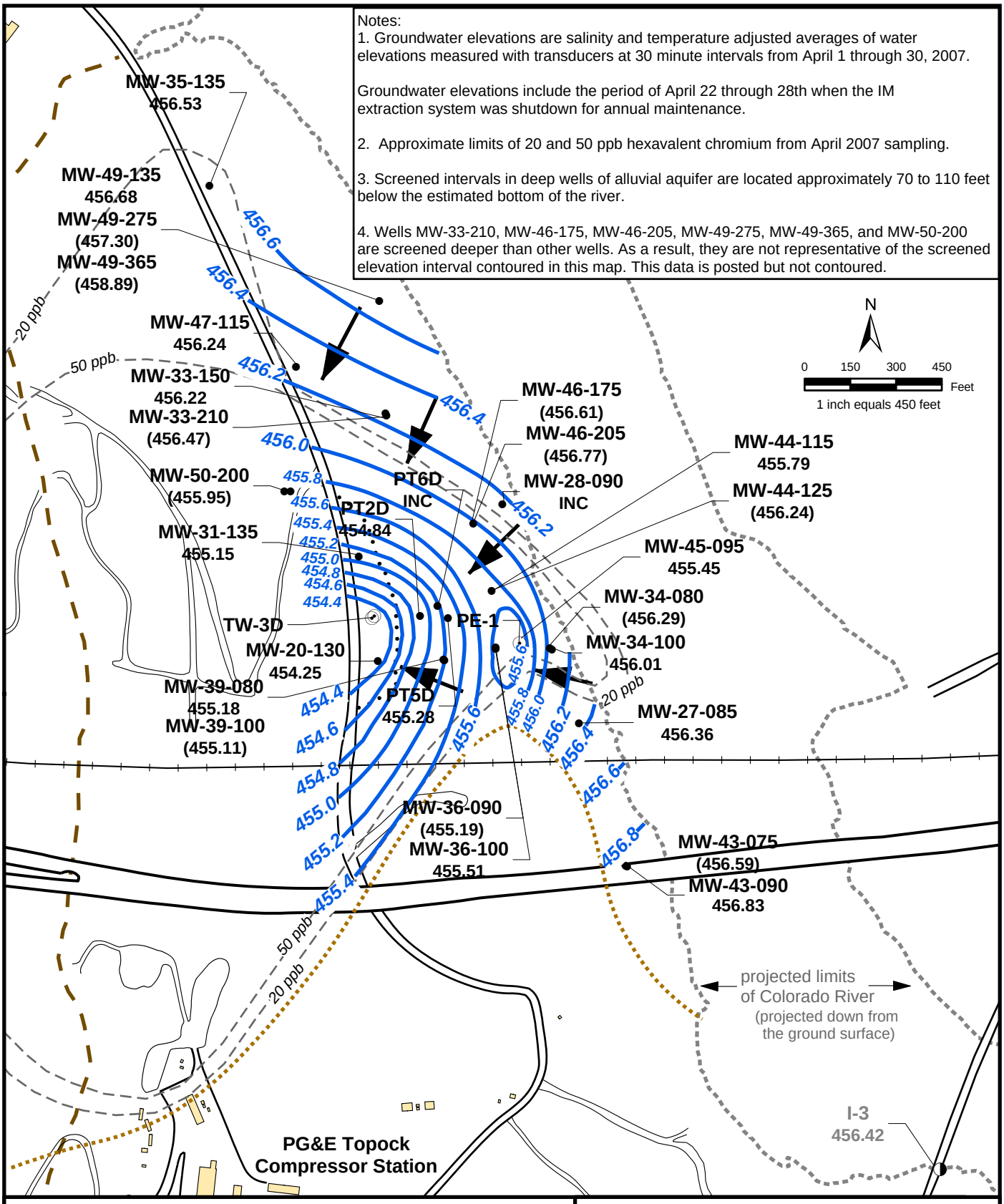

FIGURE 2-6
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS APRIL 2007

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

CH2MHILL

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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
456.56

Elevation (feet above MSL)

550
500
450
400
350
300
250

454.8
454.6
454.4

454.83
454.57
454.25

455.0
455.2
455.4
455.6
20
50

455.59
455.58
455.32
455.16
455.18
455.11

455.73

INC
455.80
455.83
455.84
455.19
455.51

455.8
455.6
455.45

456.4
456.0
456.2

456.46
456.29
456.01

Groundwater Divide

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

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 April 1 through 30, 2007 measured with transducers at 30 minute intervals.
Average groundwater elevations include April 22 through 28th when the IM extraction system was shutdown for annual maintenance.

Groundwater elevations adjusted for salinity and temperature.

Well MW-36-90* excluded from contouring.
INC = Well MW-36-20 incomplete over reporting period.

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
103 boring depth (feet)

20 Inferred hexavalent chromium contour (ppb) April 2007

Monthly average groundwater head (ft AMSL)

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 APRIL 2007

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

CH2MHILL

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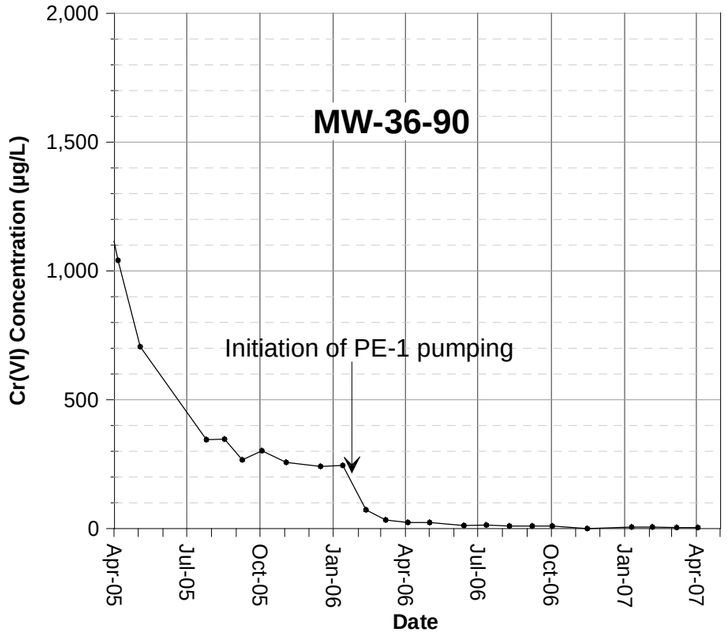

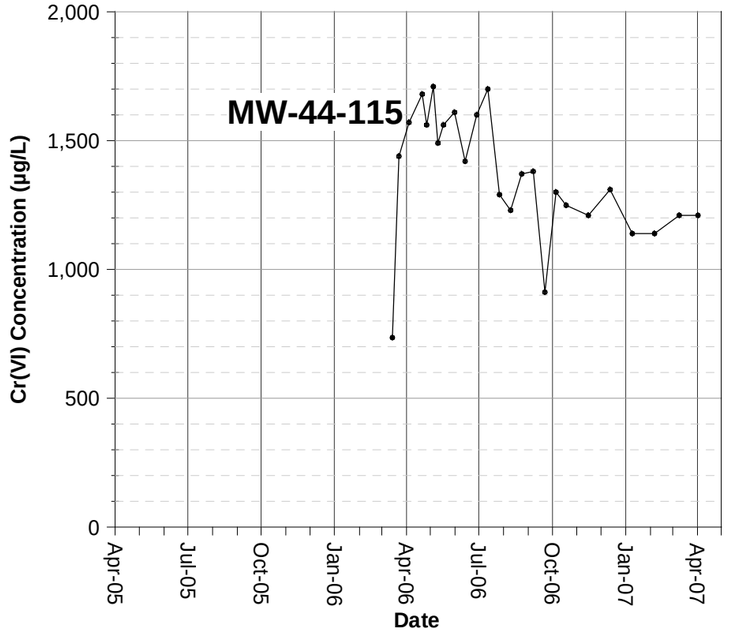

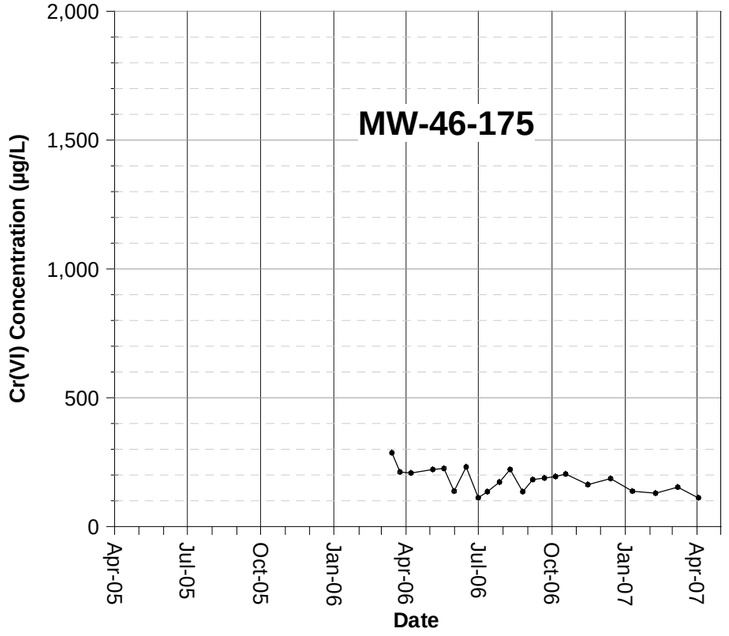

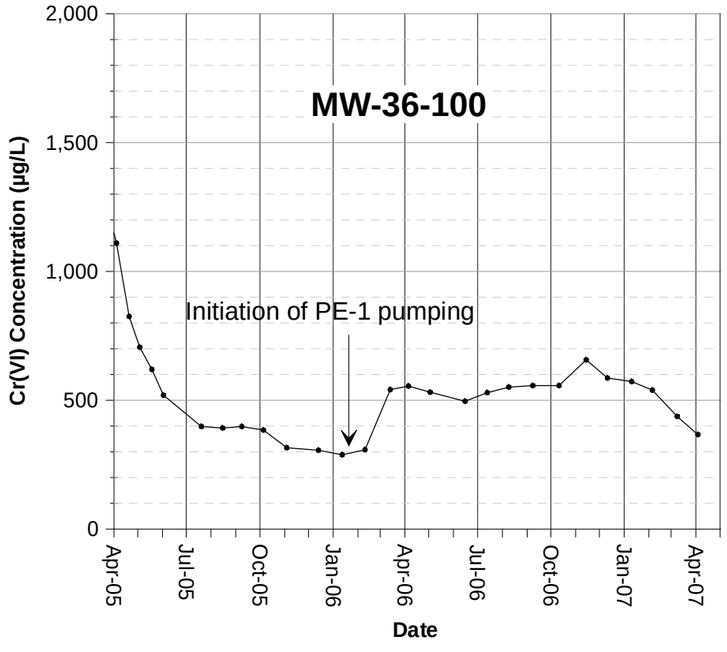

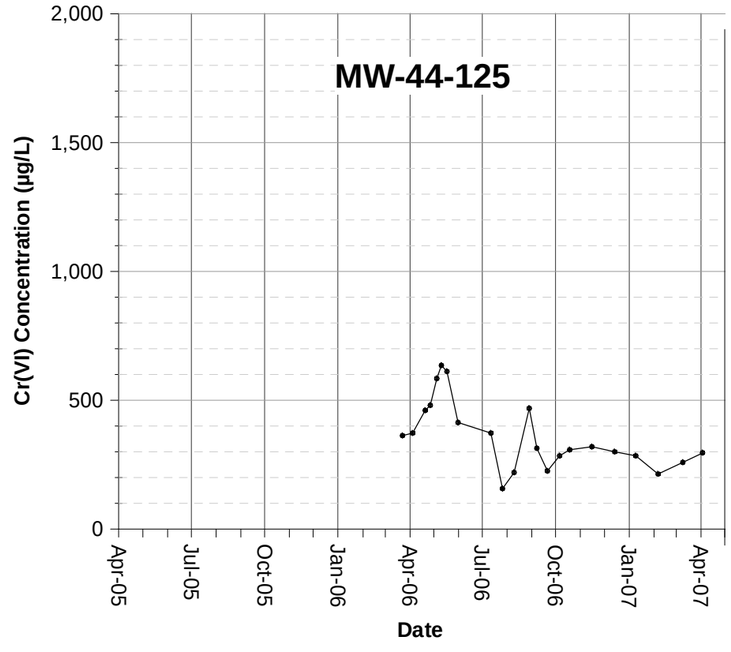

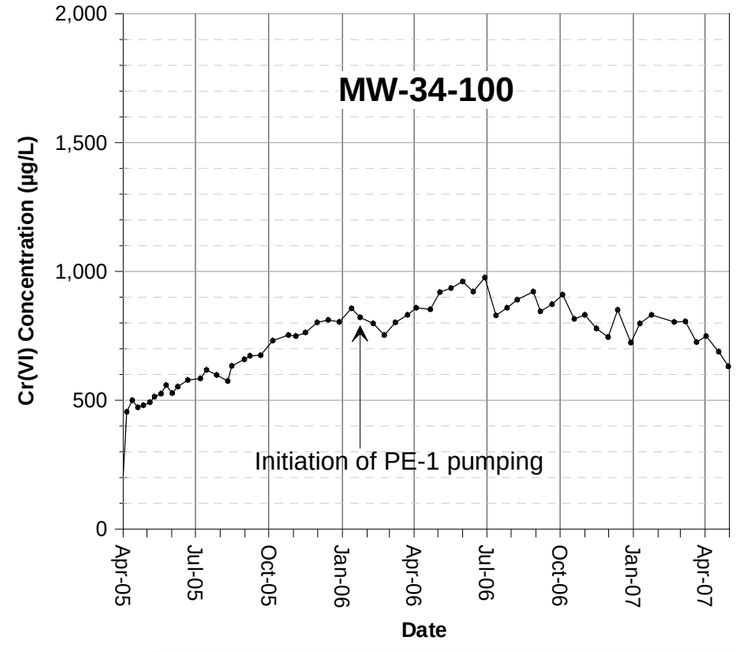

Notes
1. Hexavalent chromium [Cr(VI)] results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
3. MW-36 wells selected to monitor effects of PE-1 pumping on plume 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 APRIL 2005 THROUGH APRIL 2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

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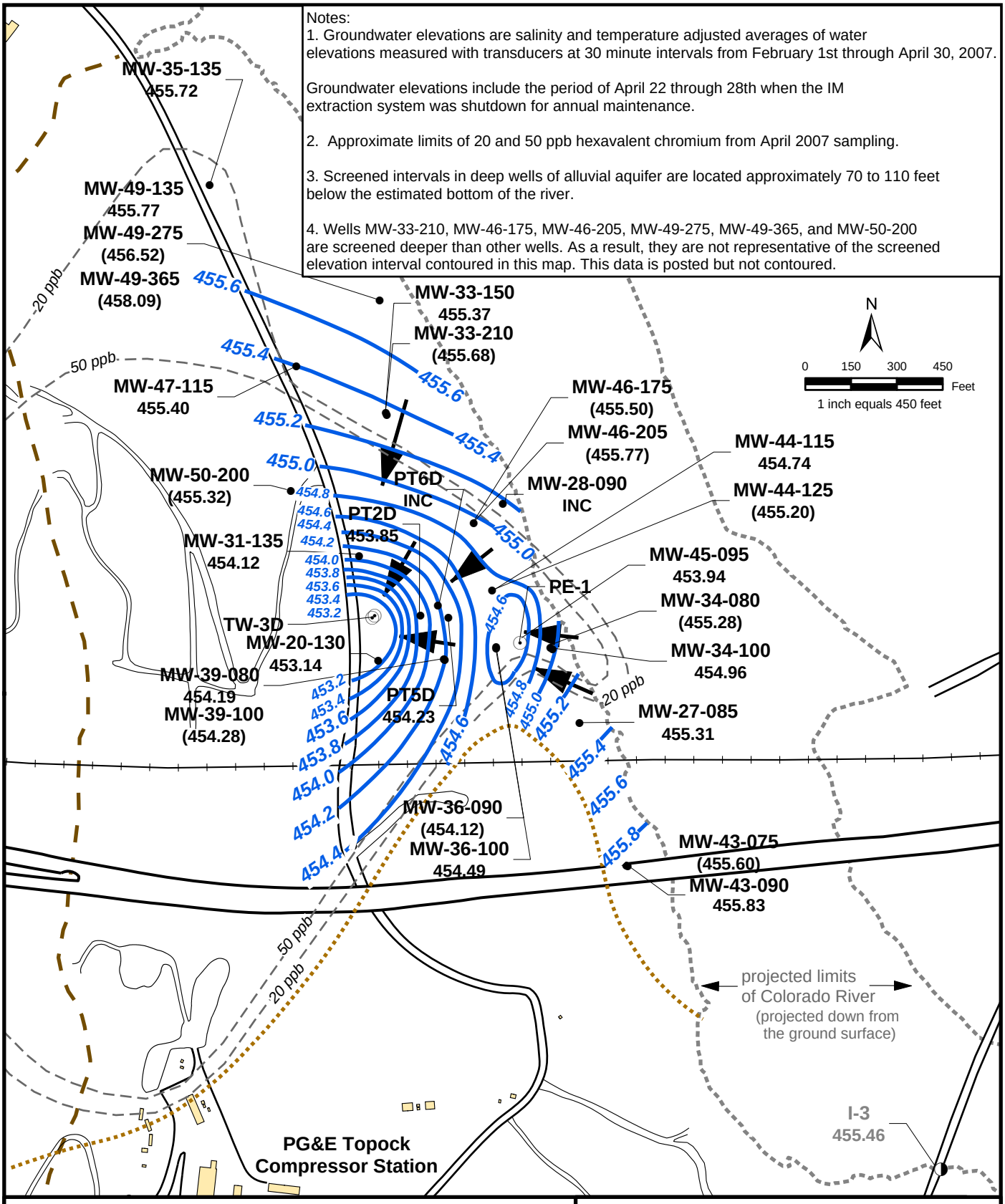

FIGURE 3-2
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS FEBRUARY THROUGH APRIL 2007

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

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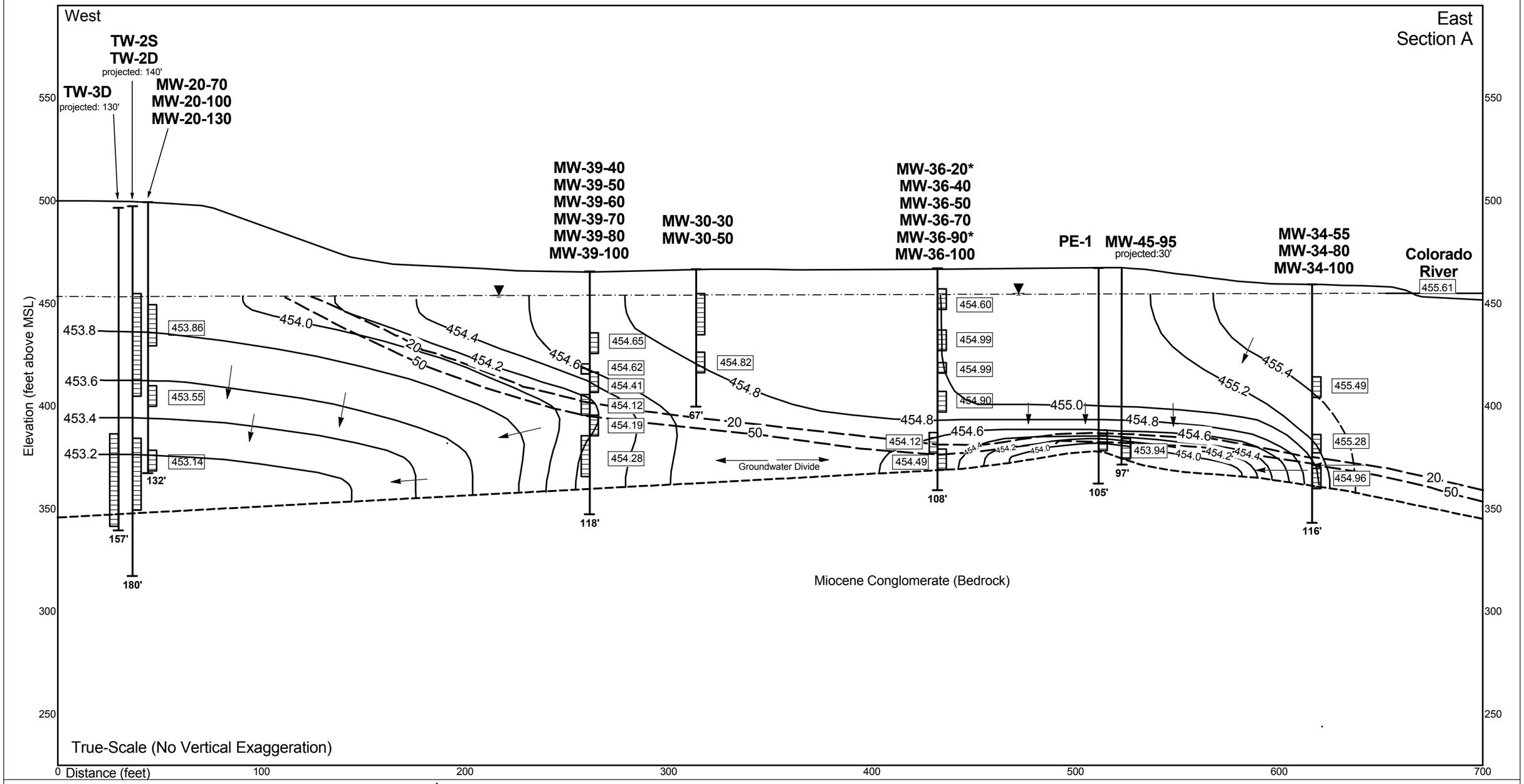

Notes:
Results show average groundwater elevations for February 1 through April 30, 2007 measured with transducers at 30 minute intervals. MW-36-20, MW-36-40, and MW-36-50 have 20, 24, and 13 days of missing data, each respectively, due to transducer malfunction.

Groundwater elevations adjusted for salinity and temperature.
Wells MW-36-20* and MW-36-90* 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) April 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
FEBRUARY THROUGH APRIL 2007

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

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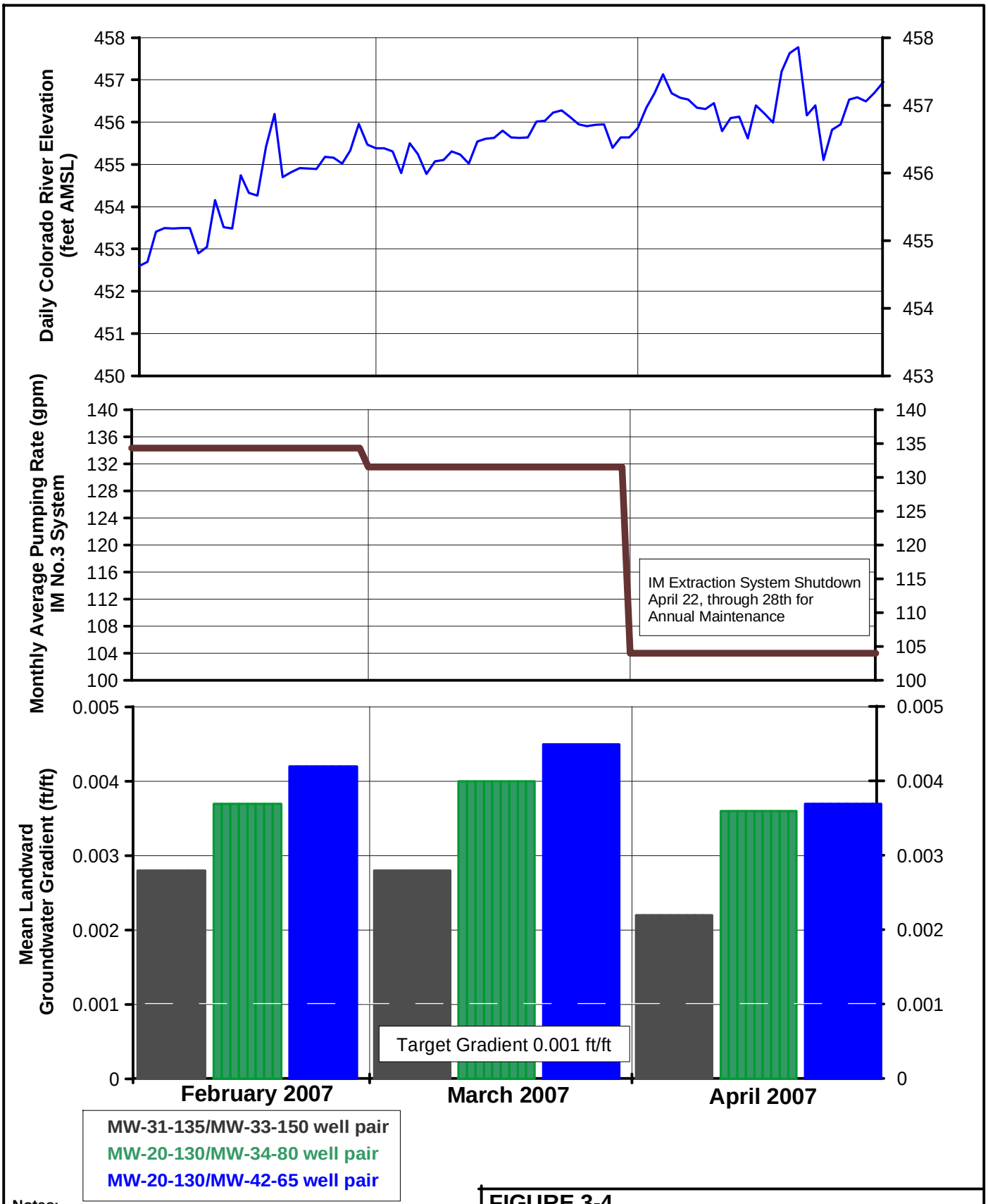

Notes:

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 2-3 and Section 2.4 for discussion of gradient data.

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

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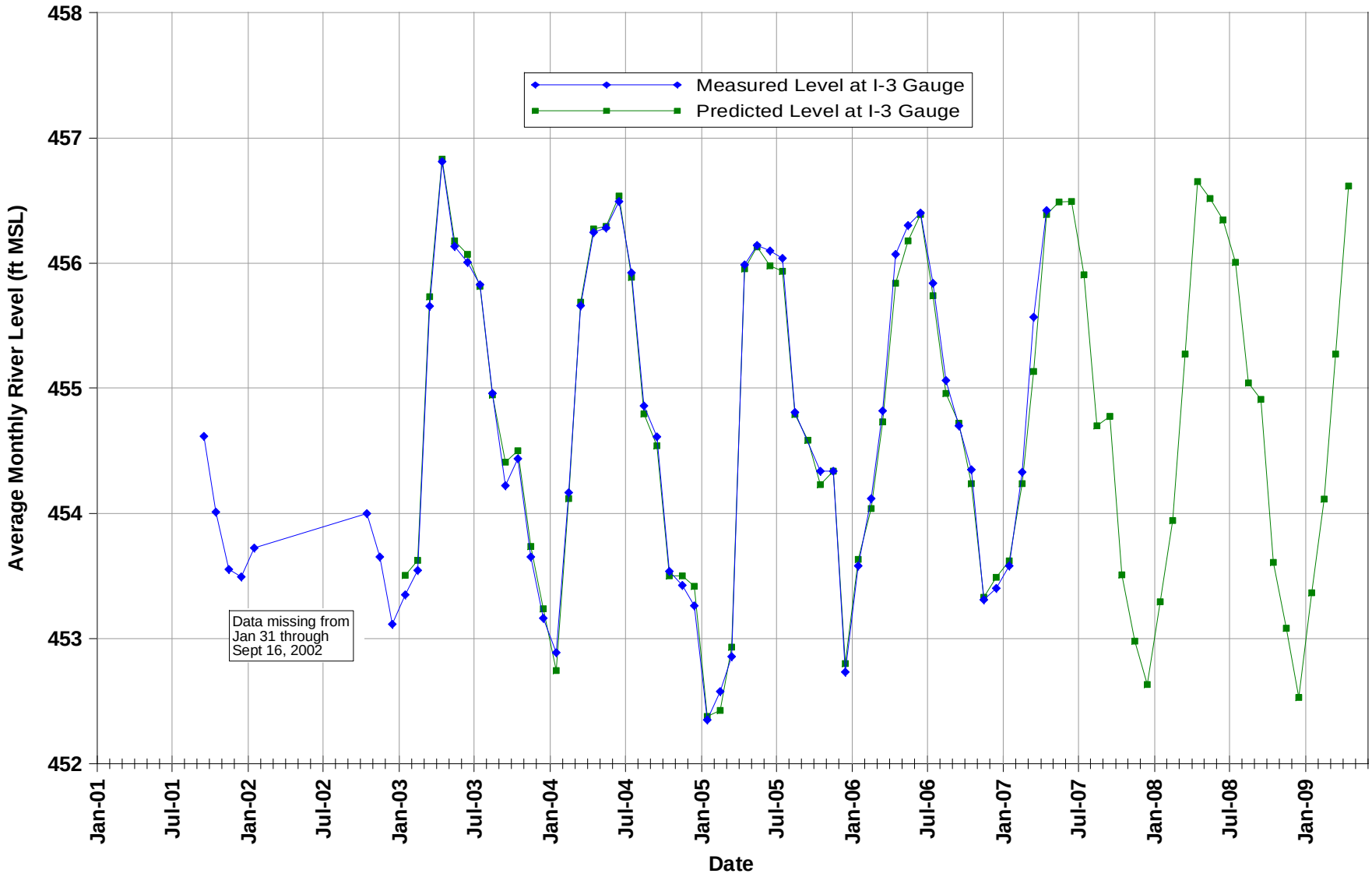

Note:
Projected river level is calculated based on monthly averages of Davis Dam release and stage in Lake Havasu as of May 9, 2007.
Measured data through April 30, 2007.
I-3 data unavailable from September 18 through October 4, 2006

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 April 2007

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

During April 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 78 percent during the April 2007 reporting period.

The IM No. 3 facility also treated approximately 4,450 gallons of water generated from the groundwater monitoring program. Two containers of solids from the IM No. 3 facility were taken offsite during April 2007.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 22 percent downtime during April 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.

- **April 5 and 6, 2007 (unplanned)**: The extraction well system was offline on April 5th from 2:18 am until 4:35 am, 12:14 pm until 12:29 pm, and on April 6th from 2:05 am until 2:32 am. The downtime was needed to replace a ferrous chloride feed pump that failed with an onsite spare and subsequently clean debris from the newly installed pump. Extraction system downtime was 2 hours 59 minutes.
- **April 11, 2007 (unplanned)**: The extraction well system was temporarily offline from 3:46 pm until 3:49 pm Power failure, switched to generator. Extraction system downtime was 3 minutes.
- **April 12, 2007 (unplanned)**: The extraction well system was temporarily offline from 7:21 am until 7:23 am. Switched from generator to Needles Power. Extraction system downtime was 2 minutes.
- **April 16, 2007 (unplanned)**: The extraction well system was temporarily offline from 7:00 am until 7:10 am Power surge caused a plant shutdown, but then incoming power dropped back into operational range, so did not switch to generator. Extraction system downtime was 10 minutes.
- **April 18, 2007 (unplanned)**: The extraction well system was temporarily offline from 11:28 am until 11:37 am Needles power exceeding upper operating limit, switched to generator power. Extraction system downtime was 8 minutes.
- **April 21, 2007 (unplanned)**: The extraction well system was temporarily offline from 11:00 am until 11:02 am Needles power back in operating range so switched from generator to Needles. Extraction system downtime was 2 minutes.
- **April 22, 2007 through April 28, 2007 (planned)**: The extraction well system was completely shut down at 11:03 am on April 22, 2007 to begin a planned facility outage for annual maintenance. Work activities included pipe and tank visual inspections and cleaning, equipment maintenance, and general repairs.

The extraction well system was re-started on April 28, 2007 at 11:10 pm during the facility re-start. A treated water sample was collected April 28, 2007 (from the SC-702 sampling location located on the influent to the Final Effluent tank) during the re-start and tested at an offsite laboratory for confirmation that the treated water was within effluent limits before discharging to the injection wells. Extraction System Downtime was 156 hours, 7 minutes.

Appendix B
Chromium Sampling Results for Monitoring Wells in Floodplain Area

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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	01-May-06	ND (0.2)	ND (1.0)	---	2.5	1,510	455.4	454.7
	03-Oct-06	ND (0.2)	ND (1.0)	-176	0.5	1,240	455.0	M
MW-28-025	05-May-06	ND (0.2)	ND (1.0)	-126	0.8	1,260	456.3	455.8
	11-Oct-06	ND (0.2)	ND (1.0)	-111	1.5	1,860	454.4	453.7
MW-29	13-Apr-06	ND (0.2)	ND (1.0)	-142	4.2	4,220	455.7	455.2
	05-May-06	ND (0.2)	ND (1.0)	-128	1.3	4,430	456.0	455.4
	13-Oct-06	ND (0.2)	ND (1.0)	-56	5.3	4,770	454.9	455.0
MW-30-030	02-May-06	ND (2.0)	ND (1.0)	-104	2.4	54,600	455.4	455.7
	10-Oct-06	ND (2.0)	ND (1.0)	-129	1.4	56,500	454.3	453.6
MW-32-020	04-May-06	ND (1.0)	ND (1.0)	-120	0.4	25,500	455.2	454.9
	02-Oct-06	ND (5.0)	ND (1.0)	-122	0.9	59,800	454.3	M
	11-Dec-06	ND (2.0)	ND (1.0)	-110	1.8	61,300	453.6	455.4
	06-Mar-07	ND (2.0)	ND (1.0)	-84	0.1	39,700	454.5	454.7
MW-32-035	04-May-06	ND (1.0)	ND (1.0)	-171	0.3	16,500	455.5	455.1
	02-Oct-06	ND (1.0)	ND (1.0)	-162	0.7	20,000	454.4	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
MW-33-040	04-May-06	ND (0.2)	ND (1.0) LF	12	5.3	4,580	455.5	454.8
	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
MW-36-020	01-May-06	ND (1.0)	ND (1.0)	-180	5.3	20,100	455.5	456.0
	02-Oct-06	ND (1.0)	ND (1.0)	-177	1.8	24,000	454.6	M
MW-36-040	01-May-06	ND (1.0)	ND (1.0)	-179	5.1	13,500	455.4	455.0
	05-Oct-06	ND (1.0)	ND (1.0)	-194	1.4	16,000	454.2	455.0
MW-39-040	02-May-06	ND (1.0)	ND (1.0)	-188	0.1	8,150	455.6	456.4
	05-Oct-06	ND (0.2)	ND (1.0)	-198	1.4	12,500	454.0	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
MW-42-030	02-May-06	ND (1.0)	ND (1.0)	-160	2.3	18,500	455.2	455.2
	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	04-May-06	ND (0.2)	ND (1.0)	-176	0.4	1,280	456.2	455.4
	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-Depth Wells								
MW-27-060	01-May-06	ND (1.0)	ND (1.0)	-140	1.0	12,100	455.7	455.1
	03-Oct-06	ND (1.0)	ND (1.0)	-122	0.8	14,300	455.0	M
MW-30-050	02-May-06	ND (1.0)	ND (1.0)	-102	2.8	14,300	455.6	456.1
	11-Oct-06	ND (0.2)	ND (1.0)	-113	0.8	8,280	454.5	454.6

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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-Depth Wells								
MW-30-050	11-Oct-06 FD	ND (0.2)	ND (1.0)	FD	FD	FD	FD	FD
MW-33-090	03-May-06	16.1	16.4	-44	0.4	10,400	455.5	454.7
	03-May-06 FD	19.3	15.3	FD	FD	FD	FD	FD
	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
MW-34-055	03-May-06	ND (0.2)	ND (1.0)	-117	0.3	7,580	456.3	456.0
	04-Oct-06	ND (0.2)	ND (1.0)	-178	2.2	3,080	455.0	453.9
MW-36-050	01-May-06	ND (0.2)	ND (1.0)	-162	3.6	6,810	454.8	454.7
	05-Oct-06	ND (0.2)	ND (1.0)	-165	1.4	4,200	454.9	455.1
MW-36-070	06-Apr-06	ND (1.0)	ND (1.0)	---	1.8	7,740	455.5	456.0
	01-May-06	ND (1.0)	ND (1.0)	-130	4.6	8,180	455.7	455.4
	13-Jun-06	ND (0.2) J	ND (1.0)	---	---	7,840	456.1	455.9
	11-Jul-06	ND (1.0)	ND (1.0)	-108	0.6	7,320	455.4	454.8
	09-Aug-06	ND (0.2)	ND (1.0)	-149	0.7	6,920	455.3	455.4
	07-Sep-06	ND (0.2)	ND (1.0)	-105	1.7	5,930	455.1	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
MW-39-050	02-May-06	ND (1.0)	ND (1.0)	-45	0.2	9,380	455.4	455.3
	05-Oct-06	ND (0.2)	ND (1.0)	-77	1.4	11,200	454.2	454.2
MW-39-060	02-May-06	1.10	1.40	-39	0.2	12,000	455.3	454.8
	05-Oct-06	ND (1.0)	ND (1.0)	-54	1.2	11,300	454.2	454.5
	05-Oct-06 FD	ND (2.0)	ND (1.0)	FD	FD	FD	FD	FD
MW-39-070	06-Apr-06	223	204	88	2.1	12,300	454.8	456.3
	02-May-06	137	123	31	0.2	11,200	455.0	455.7
	14-Jun-06	107 J	94.6	197	0.0	10,300	455.9	457.0
	12-Jul-06	77.0 J	66.7	74	0.9	9,570	455.1	456.4
	10-Aug-06	89.6	86.2	67	0.6	---	454.7	456.0
	07-Sep-06	155	153	21	1.7	9,760	455.0	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
MW-42-055	02-May-06	ND (1.0)	ND (1.0)	-138	2.2	21,400	456.1	455.0
	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	453.6	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
MW-42-065	02-May-06	ND (1.0)	ND (1.0)	-76	2.2	25,400	455.3	454.6
	03-Oct-06	ND (1.0)	ND (1.0)	-50	0.7	20,400	454.5	M

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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-Depth Wells								
MW-42-065	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
MW-44-070	04-Apr-06	ND (1.0)	ND (1.0)	-96	1.6	9,200	455.3	455.3
	04-May-06	ND (1.0)	ND (1.0)	-156	4.5	10,000	455.6	455.3
	13-Jun-06	ND (1.0)	ND (1.0)	-131	4.3	12,200	456.3	456.1
	13-Jun-06 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	15-Jun-06	ND (1.0)	ND (1.0)	-118	5.4	14,900	456.4	456.8
	04-Oct-06	ND (1.0)	ND (1.0)	-181	2.3	8,910	454.0	453.8
	14-Dec-06	ND (1.0)	ND (1.0)	-129	1.7	6,730	453.7	453.6
	09-Mar-07	ND (1.0)	ND (1.0)	-144	0.0	8,700	454.8	455.1
Deep Wells								
MW-27-085	03-Apr-06	ND (1.0)	ND (1.0)	-102	2.5	18,200	454.5	454.3
	01-May-06	ND (1.0)	ND (1.0)	-104	0.9	18,300	455.1	454.7
	14-Jun-06	ND (1.0)	ND (1.0)	-98	3.3	22,400	456.4	456.3
	12-Jul-06	ND (2.0)	ND (1.0)	-71	2.2	21,400	456.2	456.8
	08-Aug-06	ND (1.0)	ND (1.0)	-33	2.7	22,900	454.8	456.2
	06-Sep-06	ND (1.0)	ND (1.0)	-87	2.4	23,200	454.7	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	454.9	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	453.5	453.5
	07-Mar-07	ND (0.2)	ND (1.0)	-80	0.2	---	454.7	454.5
	03-Apr-07	ND (1.0)	ND (1.0)	-97	2.2	23,100	455.7	455.7
MW-28-090	06-Apr-06	ND (1.0)	ND (1.0)	---	2.1	8,160	455.5	455.4
	05-May-06	ND (1.0)	ND (1.0)	-150	0.8	8,690	455.9	456.2
	15-Jun-06	ND (1.0)	ND (1.0)	-153	3.9	7,980	456.4	456.5
	13-Jul-06	ND (1.0) J	ND (1.0)	-150	1.6	---	456.6	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	454.1	454.1
	13-Oct-06	ND (0.2)	ND (1.0)	-156	1.0	9,700	454.9	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
MW-33-150	06-Apr-06	4.50	3.00	39	2.1	18,300	455.5	455.2
	03-May-06	6.60	5.50	-23	1.0	17,100	455.4	454.5
	16-Jun-06	5.50	5.40	38	2.8	21,300	456.6	457.1
	13-Jul-06	7.40 J	6.70	-14	1.1	22,400	456.2	456.5
	11-Aug-06	9.30	8.10	-19	1.8	20,200	456.0	456.4
	08-Sep-06	7.40	4.10	28	1.8	17,900	454.8	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

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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-33-210	13-Apr-06	4.20	ND (4.2)	21	6.8	18,100	455.7	454.7
	05-May-06	10.0	8.80	34	0.4	20,100	456.4	456.5
	16-Jun-06	9.20	8.30	-27	2.9	23,600	456.7	456.9
	13-Jul-06	10.0 J	7.50	36	2.2	27,100	456.5	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	455.2	454.4
	06-Oct-06	10.2	10.0	28	0.9	24,000	455.3	454.2
	11-Dec-06	11.1	8.00	157	1.2	27,600	454.9	455.9
	05-Mar-07	11.2	11.0	-2	0.3	57,300	455.7	455.0
MW-34-080	03-Apr-06	ND (1.0)	ND (1.0)	-38	2.4	13,500	454.4	454.0
	03-May-06	ND (1.0)	ND (1.0)	-68	0.2	13,800	456.3	455.3
	14-Jun-06	ND (1.0)	ND (1.0)	-99	2.7	15,600	456.9	456.8
	12-Jul-06	ND (1.0)	ND (1.0)	-75	1.6	14,800	456.1	456.3
	08-Aug-06	ND (1.0)	ND (1.0)	-33	0.6	16,200	455.5	455.4
	06-Sep-06	ND (1.0)	ND (1.0)	-84	0.9	16,000	454.8	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
MW-34-100	03-Apr-06	858	910	42	2.8	16,800	454.1	454.1
	21-Apr-06	852	873	---	---	---	---	455.8
	03-May-06	900	946	-10	0.3	18,200	455.2	454.8
	03-May-06 FD	920	946	FD	FD	FD	FD	FD
	17-May-06	935	1180	44	3.1	23,800	455.2	455.2
	17-May-06 FD	930	1190	FD	FD	FD	FD	FD
	31-May-06	960	929	104	3.1	16,100	456.6	456.3
	14-Jun-06	922	839	-2	3.2	20,800	456.5	456.6
	14-Jun-06 FD	921	864	FD	FD	FD	FD	FD
	28-Jun-06	976	1130	132	5.0	21,800	456.2	456.6
	12-Jul-06	823 J	851	27	1.5	19,300	455.9	456.6
	12-Jul-06 FD	828 J	864	FD	FD	FD	FD	FD
	26-Jul-06	859	955	36	2.2	---	456.2	456.7
	08-Aug-06	889	982	64	0.5	20,600	455.5	455.9
	28-Aug-06	922	945	69	1.3	28,900	453.6	453.6
	06-Sep-06	844	963	117	1.9	22,500	454.8	454.9
	06-Sep-06 FD	797	907	FD	FD	FD	FD	FD
	20-Sep-06	872	984	181	1.5	19,600	454.3	M
	04-Oct-06	910	889	0	2.0	20,700	454.6	453.9
	18-Oct-06	815	920	52	0.8	21,700	454.0	453.9
	01-Nov-06	832	752	33	1.6	20,200	454.0	453.5
	16-Nov-06	777	801	146	1.4	20,500	453.0	453.0

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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	30-Nov-06	744	712	115	0.9	21,900	452.5	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	453.3	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	453.1	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	454.4	454.6
	21-Mar-07	724	642	67	0.0	20,000	454.9	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	456.0	456.4
	30-Apr-07	626	500	---	---	---	---	456.0
	30-Apr-07 FD	632	572	FD	FD	FD	FD	FD
MW-36-090	04-Apr-06	23.5	15.7	5	2.4	12,700	455.4	455.3
	01-May-06	22.8	18.3	24	4.4	11,400	454.3	454.6
	13-Jun-06	10.9	9.00	---	---	10,300	455.7	456.4
	11-Jul-06	12.2	11.1	-34	0.8	14,000	454.4	455.3
	09-Aug-06	9.00	8.20	-96	0.8	9,190	454.9	455.9
	07-Sep-06	8.80	7.70	-55	1.7	8,400	454.9	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	453.6	454.5
	03-Apr-07	2.90	3.20	-17	2.2	6,970	454.8	455.5
MW-36-100	05-Apr-06	554	492	24	0.1	15,300	453.7	455.3
	02-May-06	532	517	23	2.7	21,900	454.4	454.8
	15-Jun-06	496 J	465	7	3.6	18,200	455.4	456.2
	13-Jul-06	528	497	37	1.0	19,600	455.7	457.5
	09-Aug-06	551	474	67	1.6	14,600	455.1	456.3
	08-Sep-06	556	561	-10	2.6	16,200	453.4	454.0
	11-Oct-06	556	629	17	0.9	16,500	453.7	453.8
	14-Nov-06	657	764	13	1.0	17,900	452.5	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

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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-39-080	06-Apr-06	1200	1120	86	2.0	15,800	454.8	456.2
	02-May-06	1410	1450	61	0.2	14,900	454.9	455.0
	14-Jun-06	1000 J	934	184	0.0	15,100	455.9	456.8
	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	454.2	454.3
	15-Nov-06	339	422	52	0.9	17,600	452.6	453.5
	14-Dec-06	326	272	44	1.7	17,300	453.8	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	452.0	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
MW-39-100	05-Apr-06	4470	4050	73	0.9	18,300	454.2	454.9
	05-Apr-06 FD	4460	4330	FD	FD	FD	FD	FD
	02-May-06	3680	3480	67	3.5	---	454.4	454.7
	14-Jun-06	3270	3250	79	3.4	23,100	455.8	455.7
	13-Jul-06	3790	3470	80	1.5	26,200	455.5	457.4
	10-Aug-06	3230	3440	141	1.6	23,000	454.9	456.0
	10-Aug-06 FD	3170	3410	FD	FD	FD	FD	FD
	08-Sep-06	3290	3780	46	2.8	20,700	453.6	453.9
	11-Oct-06	3370	3500	87	1.2	23,100	454.4	454.4
	15-Nov-06	2850	3190	96	2.5	23,000	452.9	453.2
	15-Nov-06 FD	2960	3060	FD	FD	FD	FD	FD
	12-Dec-06	3820	3350	95	0.4	24,200	453.4	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
MW-43-075	03-Apr-06	ND (1.0)	ND (1.0)	-148	2.3	15,000	454.9	454.2
	04-May-06	ND (1.0)	ND (1.0)	-167	0.3	15,400	456.6	456.1
	02-Oct-06	ND (1.0)	ND (1.0)	-128	1.2	17,900	454.2	M
	12-Dec-06	ND (1.0)	ND (1.0)	-109	1.2	17,400	454.6	454.7
	06-Mar-07	ND (1.0)	ND (1.0)	-151	0.0	---	455.4	454.9
MW-43-090	03-Apr-06	ND (1.0)	ND (1.0)	-97	2.3	21,100	455.2	454.3
	04-May-06	ND (1.0)	ND (1.0)	-124	0.4	22,400	456.6	455.9
	02-Oct-06	ND (1.0)	ND (1.0)	-108	0.4	23,600	455.2	M
	12-Dec-06	ND (1.0)	ND (1.0)	-85	0.5	25,200	454.8	454.7
	06-Mar-07	ND (1.0)	ND (1.0)	-97	0.0	37,300	455.7	455.0
MW-44-115	04-Apr-06	1550	1620	37	1.8	15,800	455.4	455.3
	04-Apr-06 FD	1570	1570	FD	FD	FD	FD	FD
	20-Apr-06	1680	1650	-38	0.4	11,400	455.0	455.4
	20-Apr-06 FD	1680	1610	FD	FD	FD	FD	FD

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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-44-115	26-Apr-06	1560	1580	-27	2.5	15,800	456.1	455.8
	04-May-06	1710	1870	-21	4.9	17,300	454.9	454.8
	10-May-06	1490	1550	7	2.2	22,700	454.9	454.7
	17-May-06	1560	1880	-10	1.9	19,600	455.5	456.1
	31-May-06	1610	1580	-11	0.2	13,100	455.0	455.5
	31-May-06 FD	1610	1600	FD	FD	FD	FD	FD
	13-Jun-06	1420	1350	-26	3.3	17,700	455.6	455.9
	28-Jun-06	1600	1830	-37	4.0	16,800	455.6	456.5
	12-Jul-06	1700 J	1430	14	1.2	17,300	455.2	455.9
	26-Jul-06	1290	1530	-31	0.6	---	455.4	455.9
	09-Aug-06	1230	1460 LF	63	2.9	17,700	455.0	455.3
	23-Aug-06	1370	1440	93	0.6	16,800	454.6	455.0
	07-Sep-06	1380	1340	139	1.7	15,600	454.7	455.5
	21-Sep-06	911	1180	57	2.7	14,600	454.4	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	453.7	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
MW-44-125	04-Apr-06	372	374	10	1.9	15,600	455.9	455.5
	20-Apr-06	461	504	-138	0.0	11,400	455.3	455.9
	26-Apr-06	480	485	-147	2.5	16,200	456.4	456.0
	26-Apr-06 FD	479	493	FD	FD	FD	FD	FD
	04-May-06	584	592	-144	4.4	17,200	455.7	455.4
	10-May-06	634 J	667	-96	2.2	23,000	455.5	454.9
	17-May-06	612	740	-103	1.7	19,700	455.9	456.1
	31-May-06	413	398	-95	0.4	13,600	455.6	455.6
	28-Jun-06	---	---	-186	4.3	13,000	455.9	456.5
	11-Jul-06	373	395	-16	0.7	12,100	455.0	455.1
	11-Jul-06 FD	365	335	FD	FD	FD	FD	FD
	26-Jul-06	155	177	-140	1.9	---	455.7	455.9
	26-Jul-06 FD	157	180	FD	FD	FD	FD	FD
	09-Aug-06	218	227 LF	-93	0.6	16,800	455.4	455.7
	28-Aug-06	468	486	-188	1.1	17,700	454.4	454.2
	28-Aug-06 FD	462	540	FD	FD	FD	FD	FD
	07-Sep-06	314	297	-39	4.1	14,600	454.6	455.2
	07-Sep-06 FD	311	275	FD	FD	FD	FD	FD
	20-Sep-06	224	262	-130	0.4	16,700	453.8	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

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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	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	453.5	453.7
	13-Dec-06	300	321	-67	0.8	14,200	454.0	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	453.2	453.5
	09-Mar-07	258	287	-70	0.0	19,100	454.9	455.1
	03-Apr-07	296	272	-118	2.1	15,700	456.2	455.8
MW-45-095a	13-Jul-06	197	202	45	1.4	22,200	454.4	456.1
MW-46-175	07-Apr-06	208 J	186	-116	2.1	18,500	455.8	455.9
	04-May-06	222	237	-27	4.8	20,800	455.2	454.7
	18-May-06	227	268	-17	2.6	20,500	455.4	454.8
	31-May-06	139 J	169	37	1.2	15,900	455.7	455.3
	15-Jun-06	233	211	-16	3.2	19,900	456.5	456.9
	30-Jun-06	112	160	56	6.2	21,800	456.0	456.0
	30-Jun-06 FD	111	164	FD	FD	FD	FD	FD
	12-Jul-06	135 J	85.8	38	1.5	19,500	456.0	455.6
	27-Jul-06	174	206	16	0.7	---	456.2	456.6
	09-Aug-06	210	186	65	0.7	21,900	455.3	454.8
	09-Aug-06 FD	223	214	FD	FD	FD	FD	FD
	25-Aug-06	137	136	-24	1.1	19,800	455.2	454.9
	07-Sep-06	183	170	90	2.2	26,400	454.8	454.7
	21-Sep-06	190	244	43	2.3	18,300	455.4	M
	05-Oct-06	194	192	0	2.8	22,200	454.9	453.9
	05-Oct-06 FD	195	187	FD	FD	FD	FD	FD
	18-Oct-06	204	253	15	0.9	21,900	454.8	454.0
	15-Nov-06	163	147	-118	1.1	17,100	453.9	453.1
	13-Dec-06	187	174	-33	0.3	17,700	454.2	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	453.3	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
MW-46-205	07-Apr-06	ND (1.0) J	ND (1.0)	-200	1.9	22,400	460.2	456.2
	04-May-06	ND (1.0)	ND (1.0)	-177	4.6	25,900	455.5	454.8
	15-Jun-06	ND (1.0)	1.80	-147	2.9	24,100	456.8	457.2
	13-Jul-06	ND (1.0)	3.50	-152	1.0	24,900	456.4	457.4
	10-Aug-06	ND (1.0)	ND (1.0)	-88	1.3	22,900	455.9	455.4
	07-Sep-06	2.00	2.30	-37	1.6	26,000	455.2	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	454.5	454.0
	08-Mar-07	4.00	5.40	159	0.0	18,100	455.2	454.8
MW-49-135	25-Apr-06	ND (1.0) J	ND (1.0)	-167	2.4	18,800	455.8	455.2

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, April 2006 through April 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-49-135	18-May-06	ND (1.0)	ND (1.0)	-178	2.3	17,100	456.6	455.8
	12-Oct-06	ND (1.0)	ND (1.0)	-200	1.9	21,200	455.3	453.9
	15-Dec-06	ND (1.0)	ND (1.0)	-157	0.3	27,700	454.5	453.3
	09-Mar-07	ND (1.0)	ND (1.0)	-173	0.3	30,500	455.3	455.5
MW-49-275	25-Apr-06	ND (1.0)	ND (1.0)	-143	3.3	29,400	455.4	454.9
	18-May-06	ND (1.0)	ND (1.0)	-214	2.2	26,700	456.4	455.1
	12-Oct-06	ND (1.0)	ND (1.0)	-252	1.8	31,100	455.9	453.5
	15-Dec-06	ND (1.0)	ND (1.0)	-213	1.7	30,000	454.9	453.4
	09-Mar-07	ND (1.0)	ND (1.0)	-228	0.2	37,700	455.9	455.2
MW-49-365	26-Apr-06	ND (2.0)	ND (1.0)	-244	2.2	37,600	458.0	455.1
	16-May-06	ND (2.0)	ND (1.0)	-192	1.8	44,900	458.3	455.5
	12-Oct-06	ND (2.0)	ND (1.0)	-275	1.4	47,700	457.3	453.0
	15-Dec-06	ND (2.0)	1.10	-172	1.7	44,400	456.2	453.2
	09-Mar-07	ND (2.0)	ND (1.0)	-237	0.0	42,800	457.5	455.4

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

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.

Refer to table footnotes for data qualifier explanation.

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, April 2006 through April 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	18-Apr-06	1210	1300	91.0	7.28	3460
	01-May-06	1250	1280	---	---	3840
	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
MW-19	02-May-06	1130	1120	38.0	3.30	2450
	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
MW-20-070	05-May-06	4100	4440	97.0	7.21	3050
	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
MW-21	02-May-06	ND (1.0)	ND (1.0)	-77	---	11500
	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
	30-Apr-07	---	---	187	3.20	12300
MW-22	03-May-06	ND (1.0) J	ND (1.0)	-88	4.14	34200
	13-Oct-06	ND (1.0)	ND (1.0)	-105	0.97	42200
	08-Mar-07	ND (1.0)	ND (1.0)	-99	0.25	51300
MW-24A	03-Oct-06	4300	4260	101	2.87	3910
	14-Dec-06	3310	4250	76.0	0.33	---
	06-Mar-07	3540	3600	142	0.99	3230
MW-25	03-May-06	1390	1310	98.0	7.72	2110
	03-May-06 FD	1280	1310	FD	FD	FD
	03-Oct-06	1140	1150	81.0	6.88	1720
	06-Mar-07	945	951	120	6.84	1350
MW-26	01-May-06	3210	3110	---	---	3290
	03-Oct-06	3590	3850	104	---	4140
	12-Mar-07	3440	3540	90.0	4.84	3590
MW-31-060	01-May-06	952	959	---	---	2740
	05-Oct-06	773	849	82.0	7.77	3440
	12-Mar-07	626	638	93.0	5.29	2650
MW-35-060	01-May-06	25.7	26.4	-37	---	6770
	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	16-May-06	24.0	27.3	22.0	2.89	4430
	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

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, April 2006 through April 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-02S	03-May-06	2400	2600	80.0	6.75	3150
	04-Oct-06	1920	2130	224	6.70	3470
Middle-Depth Wells						
MW-20-100	05-May-06	10400	12100	98.0	5.20	3760
	03-Oct-06	9520	10300	106	3.46	4340
	13-Dec-06	9610	9220 J	188	2.19	5200
	13-Dec-06 FD	9400	11500 J	FD	FD	FD
	14-Mar-07	9470	9270	153	3.01	2820
MW-50-095	09-May-06	199	194	30.0	3.00	5480
	24-May-06	218	221	50.0	3.42	---
	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
MW-51	12-May-06	4370	4630	92.0	2.51	12100
	30-May-06	4130	4530	17.0	1.53	10600
	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	---
Deep Wells						
MW-20-130	05-May-06	12000	13700	97.0	2.21	12400
	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
MW-24B	03-Oct-06	6120	5830	85.0	2.72	18700
	14-Dec-06	5520	5060	4.00	0.51	---
	05-Mar-07	5980	6100	10.0	1.40	16400
MW-31-135	09-May-06	154	146 LF	82.0	2.75	15900
	05-Oct-06	85.7	81.7	65.0	2.91	13600
	08-Mar-07	51.0	55.2	142	0.60	8730
	08-Mar-07 FD	52.0	54.2	FD	FD	FD
MW-35-135	02-May-06	21.0	20.7	0.00	2.70	13000
	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
MW-47-115	16-May-06	1.40	5.10	-67	1.93	18400
	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	---
MW-50-200	09-May-06	7750	7360	-11	1.91	20200
	24-May-06	5810	5910	60.0	4.11	37000
	10-Oct-06	9660	11800	93.0	2.99	28100
	12-Dec-06	10100	9250	123	3.17	20600

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, April 2006 through April 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

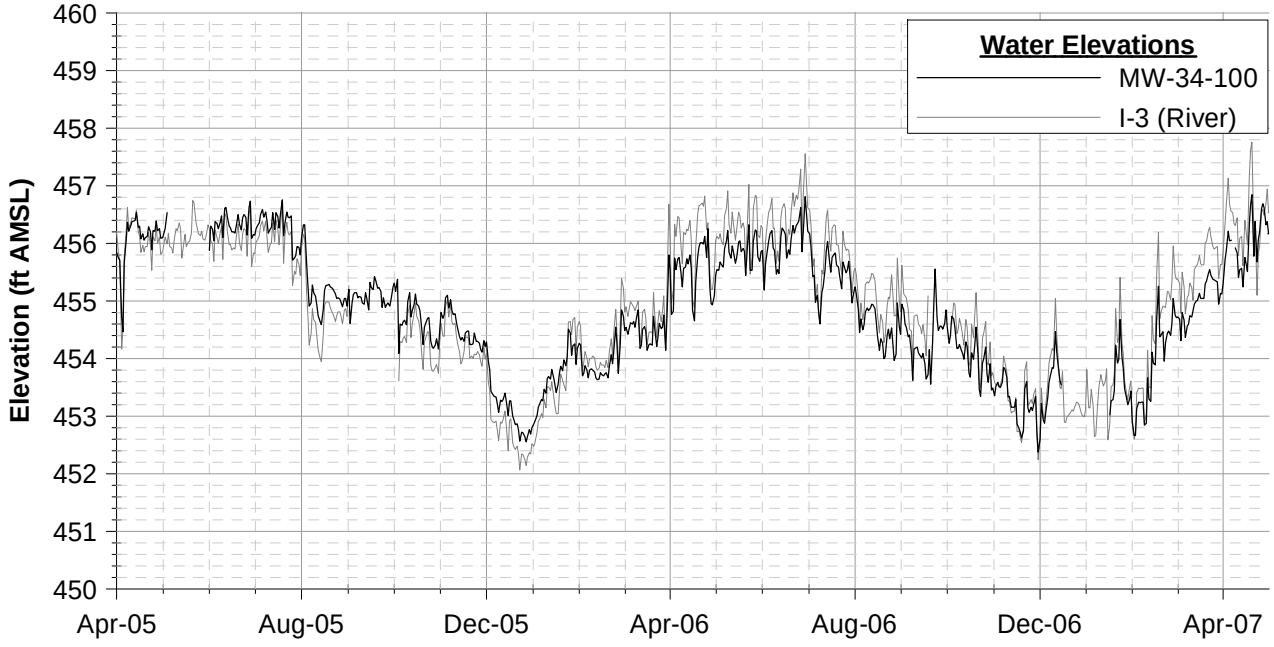
Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
MW-50-200	07-Mar-07	12300	14600	114	3.22	25600
	30-Apr-07	---	---	65.0	4.75	23700
TW-02D	03-May-06	1120	1120	82.0	6.10	8490
	04-Oct-06	872	910	162	4.91	11900
TW-04	18-May-06	1.00	6.40	-97	0.56	15600
	05-Jun-06	ND (1.0)	4.10	-131	0.00	18300
	09-Oct-06	28.5	26.6	12.0	1.11	24700
	07-Mar-07	35.2	31.1	37.0	0.28	25800
	07-Mar-07 FD	35.5	36.9	FD	FD	FD
TW-05	10-May-06	1.10 J	1.30	-161	0.60	15100
	01-Jun-06	ND (1.0) J	ND (1.0)	17.0	1.51	10600
	09-Oct-06	3.60	3.20	60.0	1.12	15800

NOTES:

Analytical results are validated.
ND = not detected at listed reporting limit (RL)
FD = field duplicate
LF = lab filtered
(---) = data not collected, available, or field instrumentation malfunctioned
µg/L= micrograms per liter
mg/L = milligrams per liter
mV = oxidation-reduction potential (ORP)
µS/cm = microSiemens per centimeter

PMP = Interim Measure Performance Monitoring Program

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



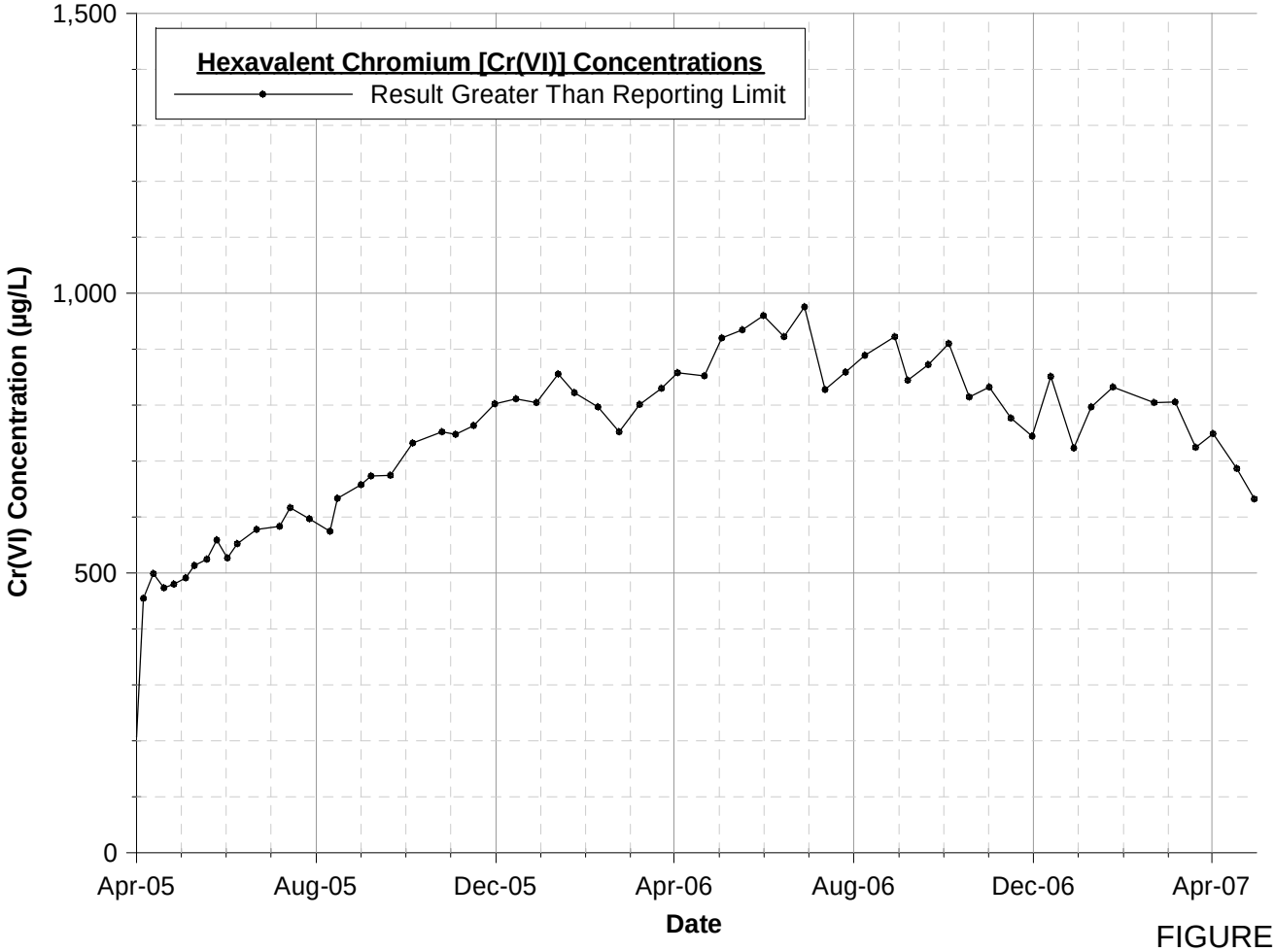


FIGURE B-1
MW-34-100 CR(VI) CONCENTRATION & HYDROGRAPH - 4/1/2005 - 4/30/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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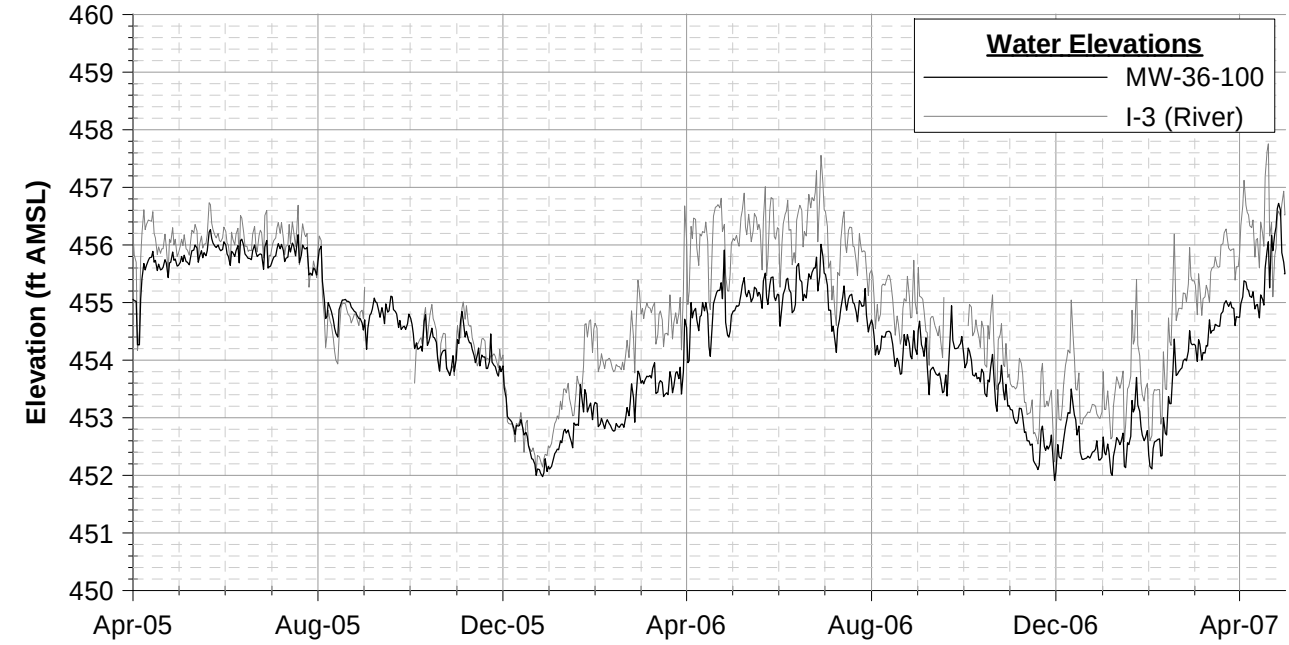

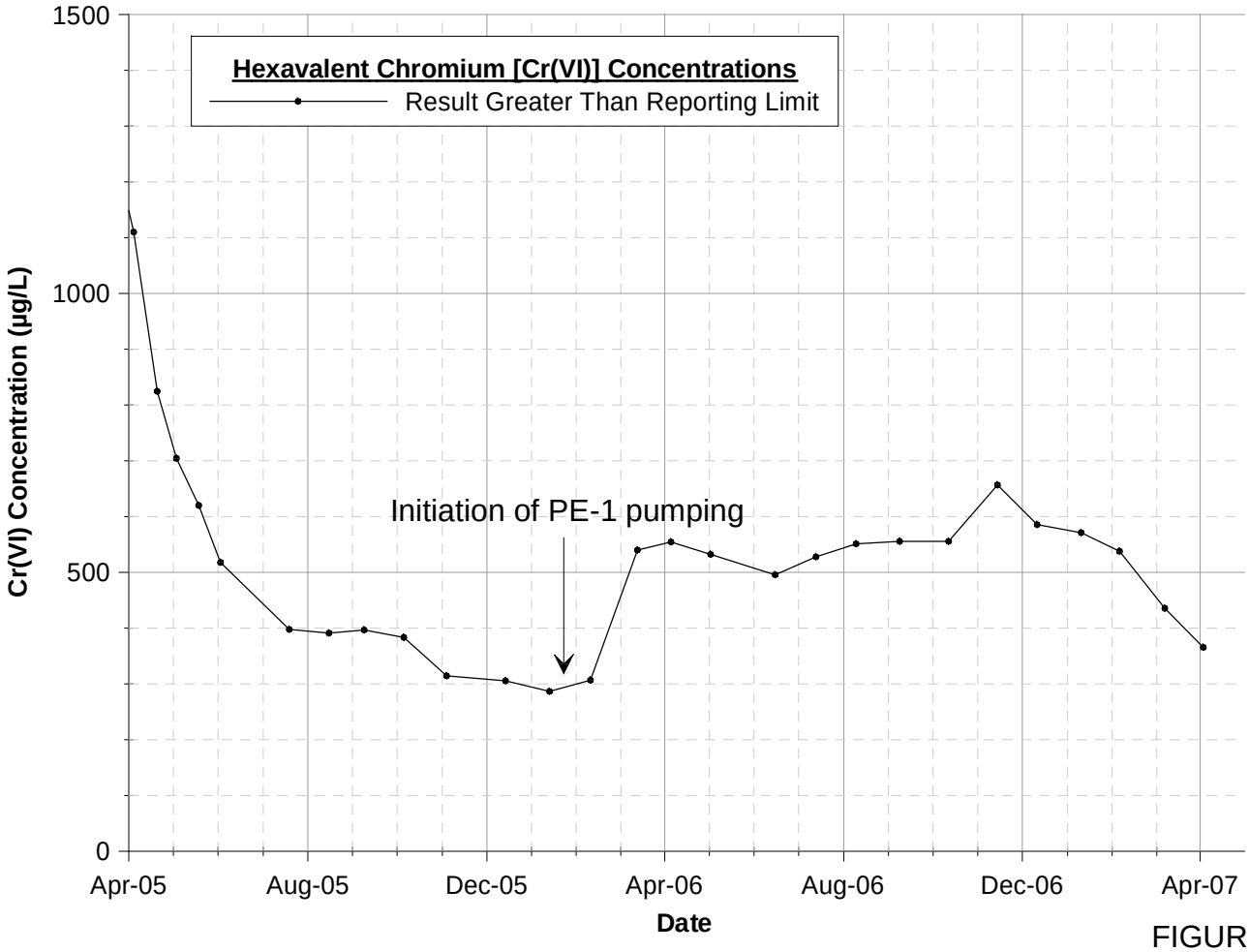

FIGURE B-2
MW-36-100 CR(VI) CONCENTRATION & HYDROGRAPH - 4/1/2005 - 4/2/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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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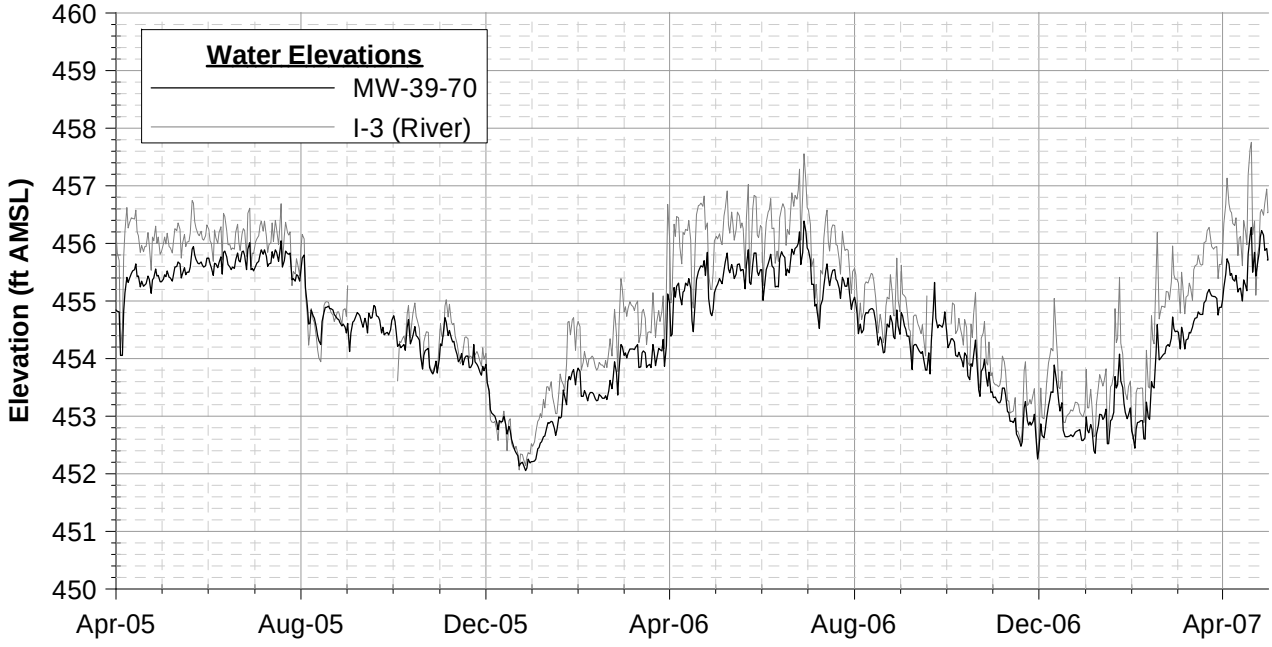

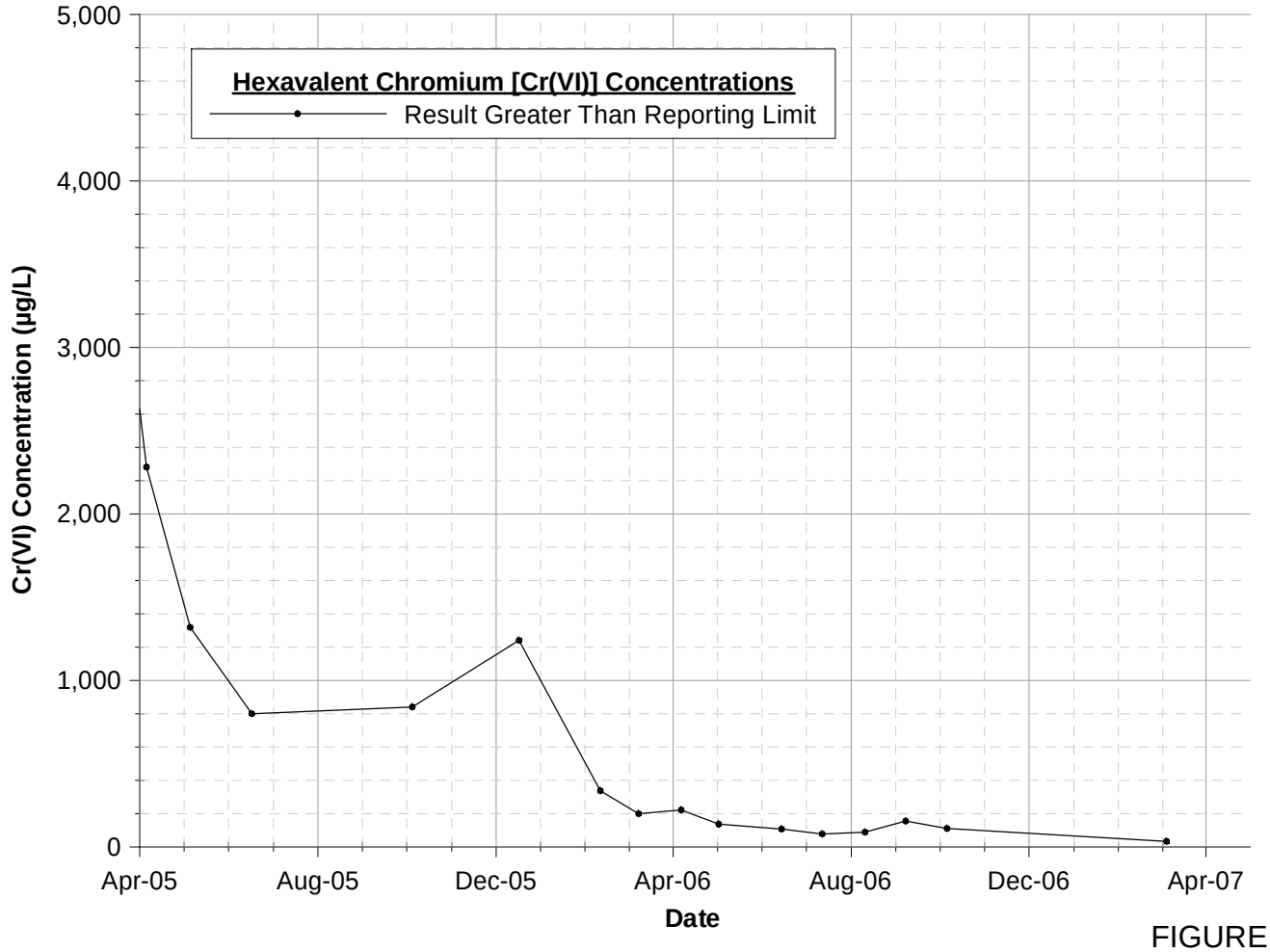

FIGURE B-3
MW-39-70 CR(VI) CONCENTRATION & HYDROGRAPH - 5/1/2005 - 3/5/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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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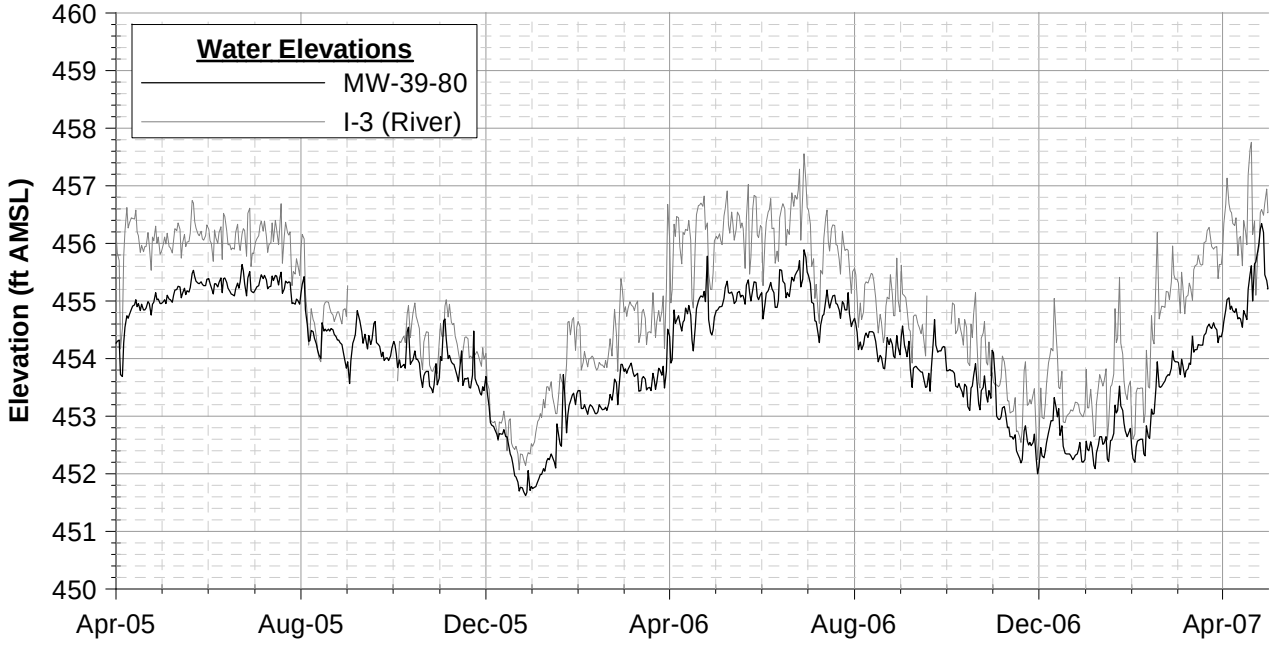

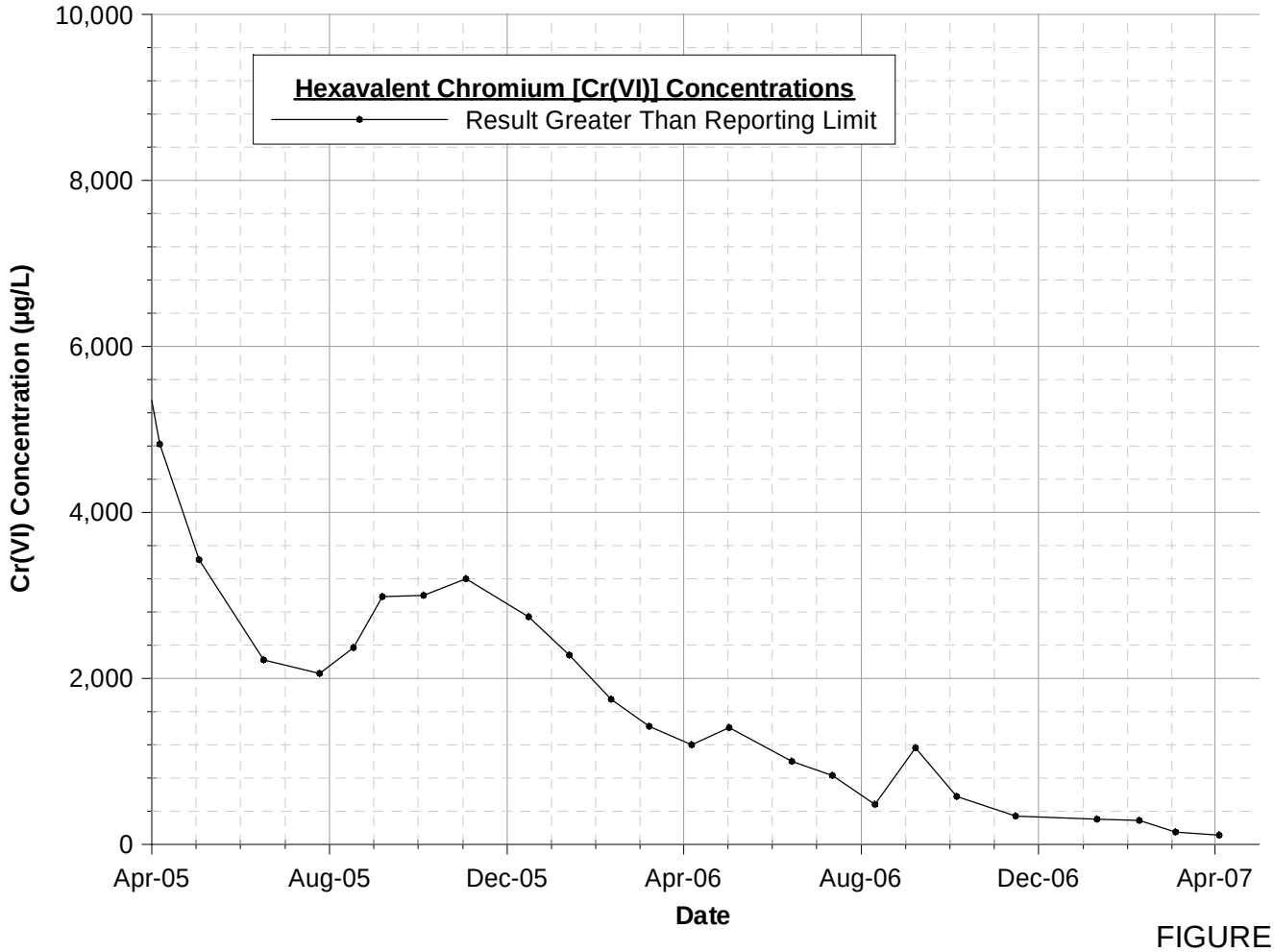

FIGURE B-4
MW-39-80 CR(VI) CONCENTRATION & HYDROGRAPH - 4/1/2005 - 4/4/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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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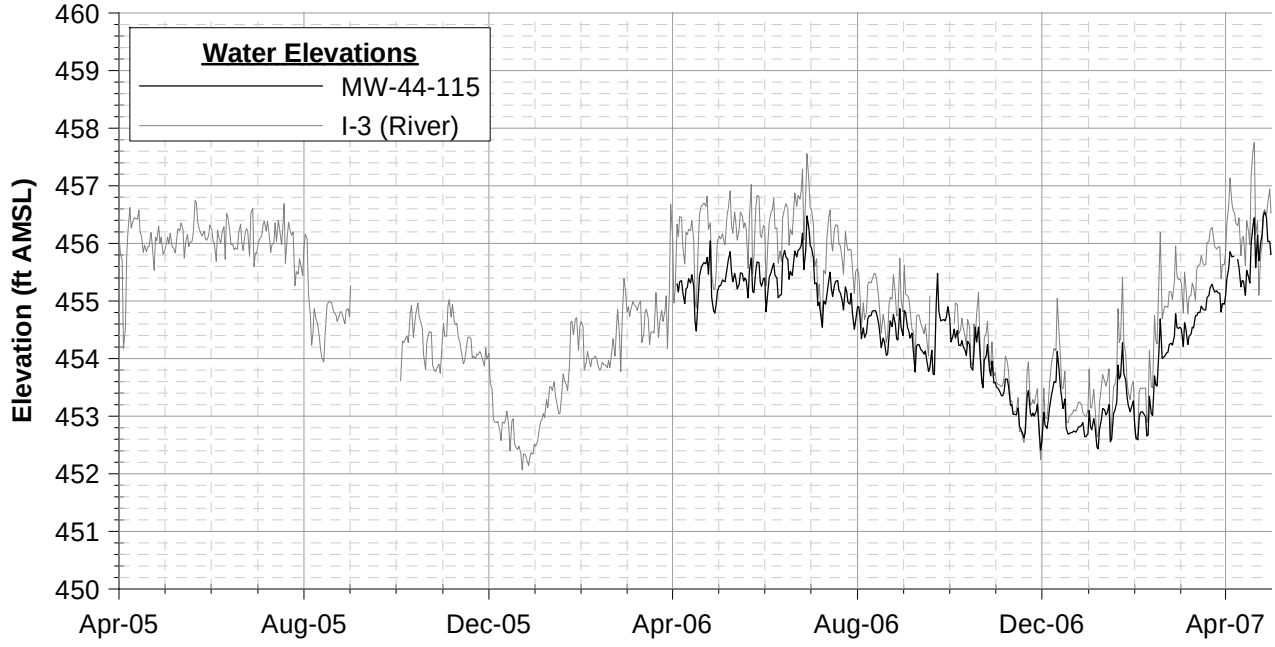

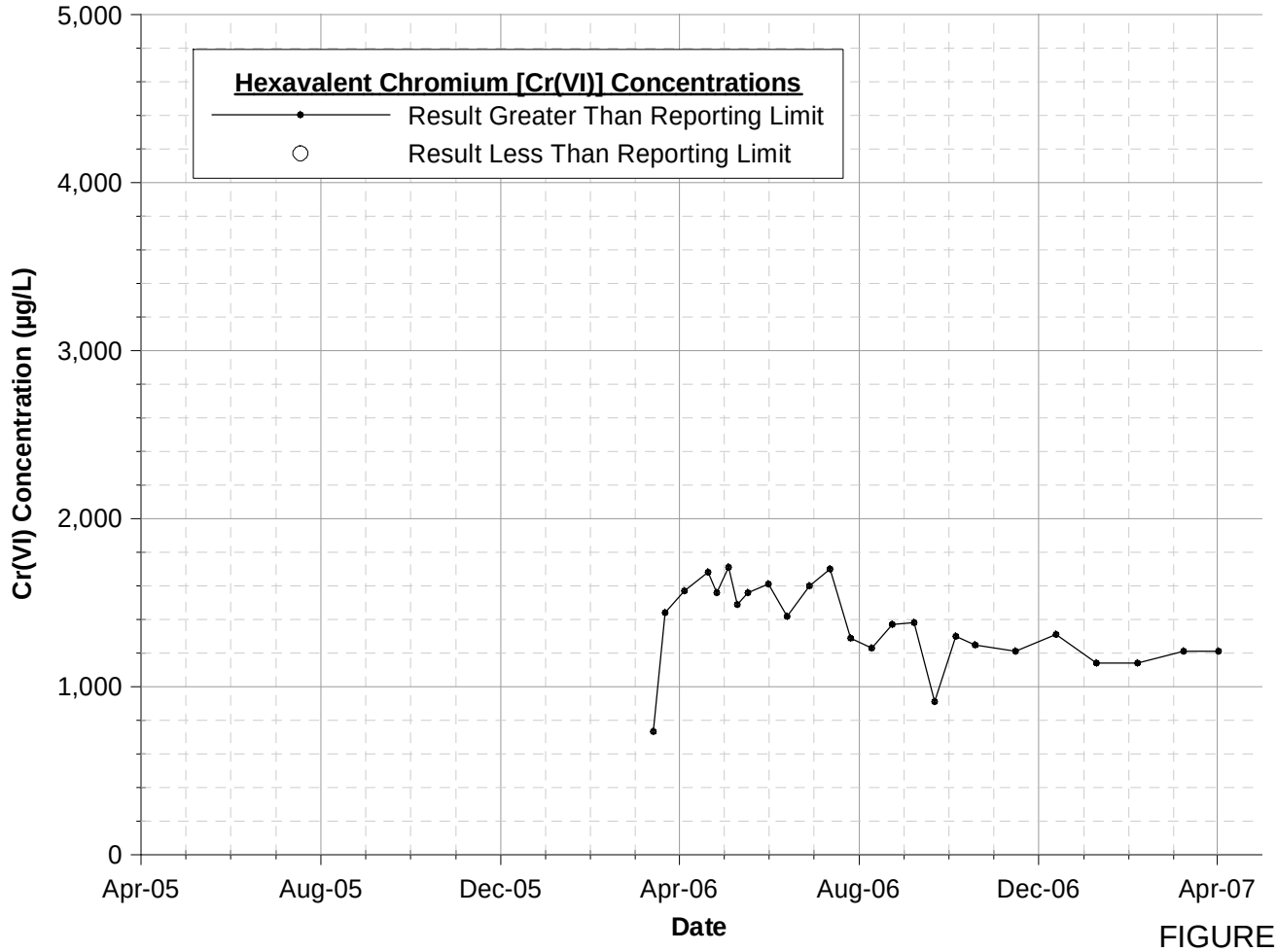

FIGURE B-5
MW-44-115 CR(VI) CONCENTRATION & HYDROGRAPH - 4/1/2005 - 4/2/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. 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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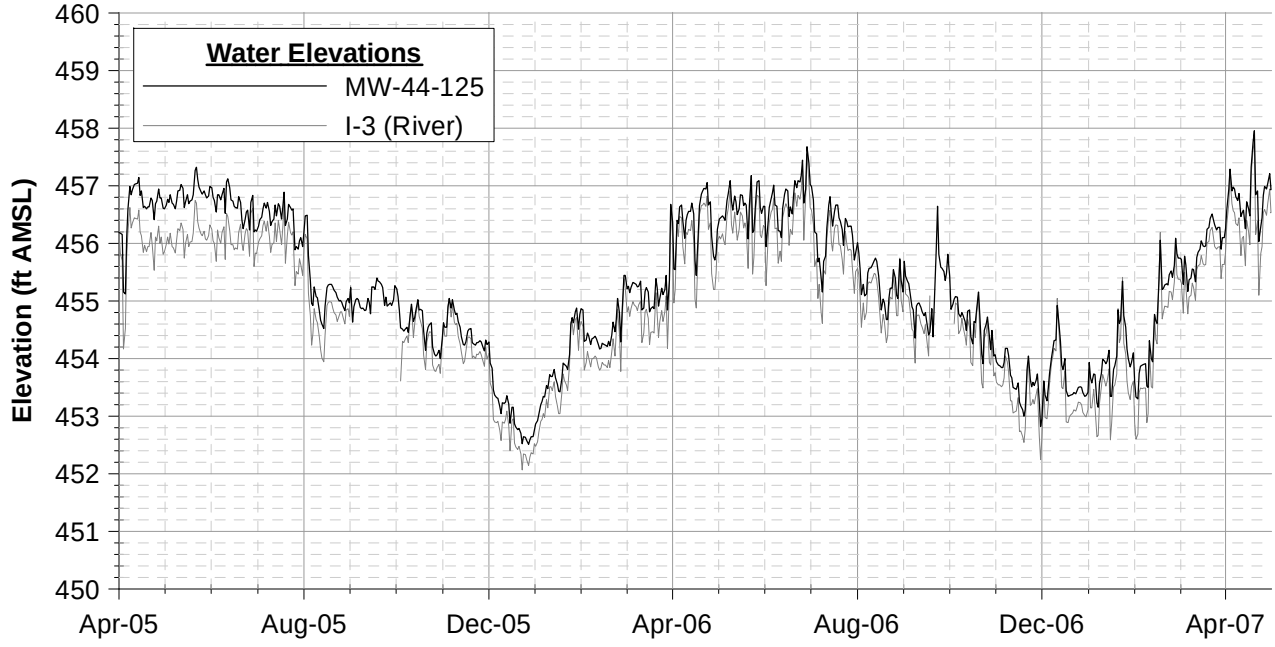

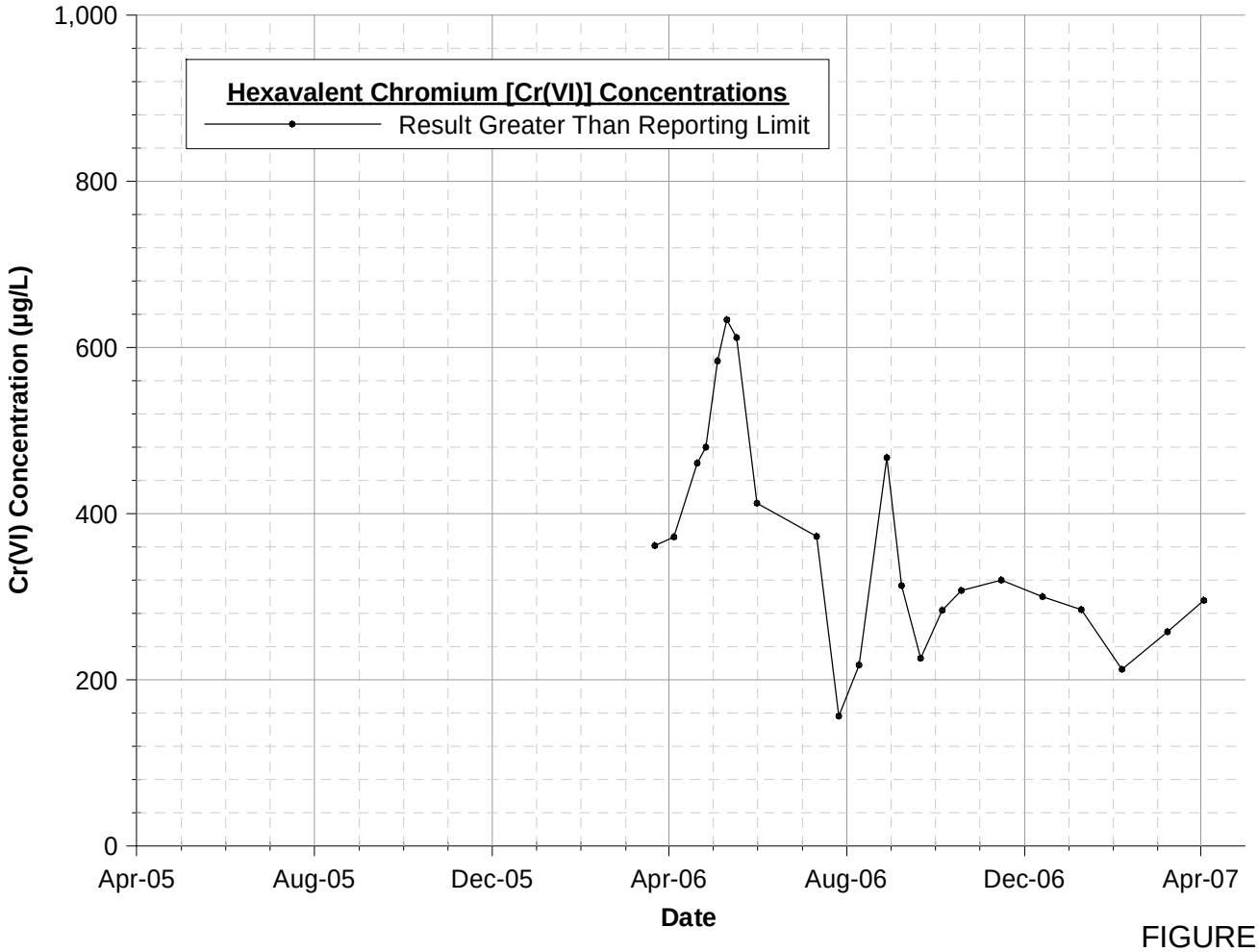

FIGURE B-6
MW-44-125 CR(VI) CONCENTRATION & HYDROGRAPH - 4/1/2005 - 4/3/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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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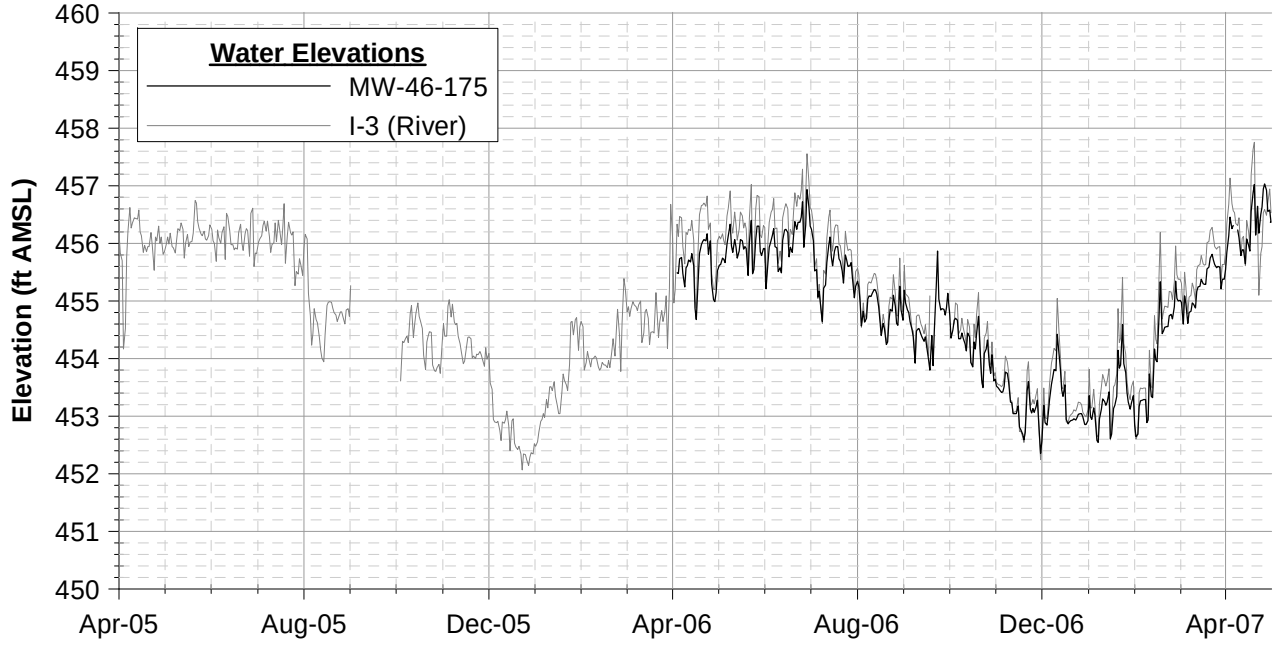

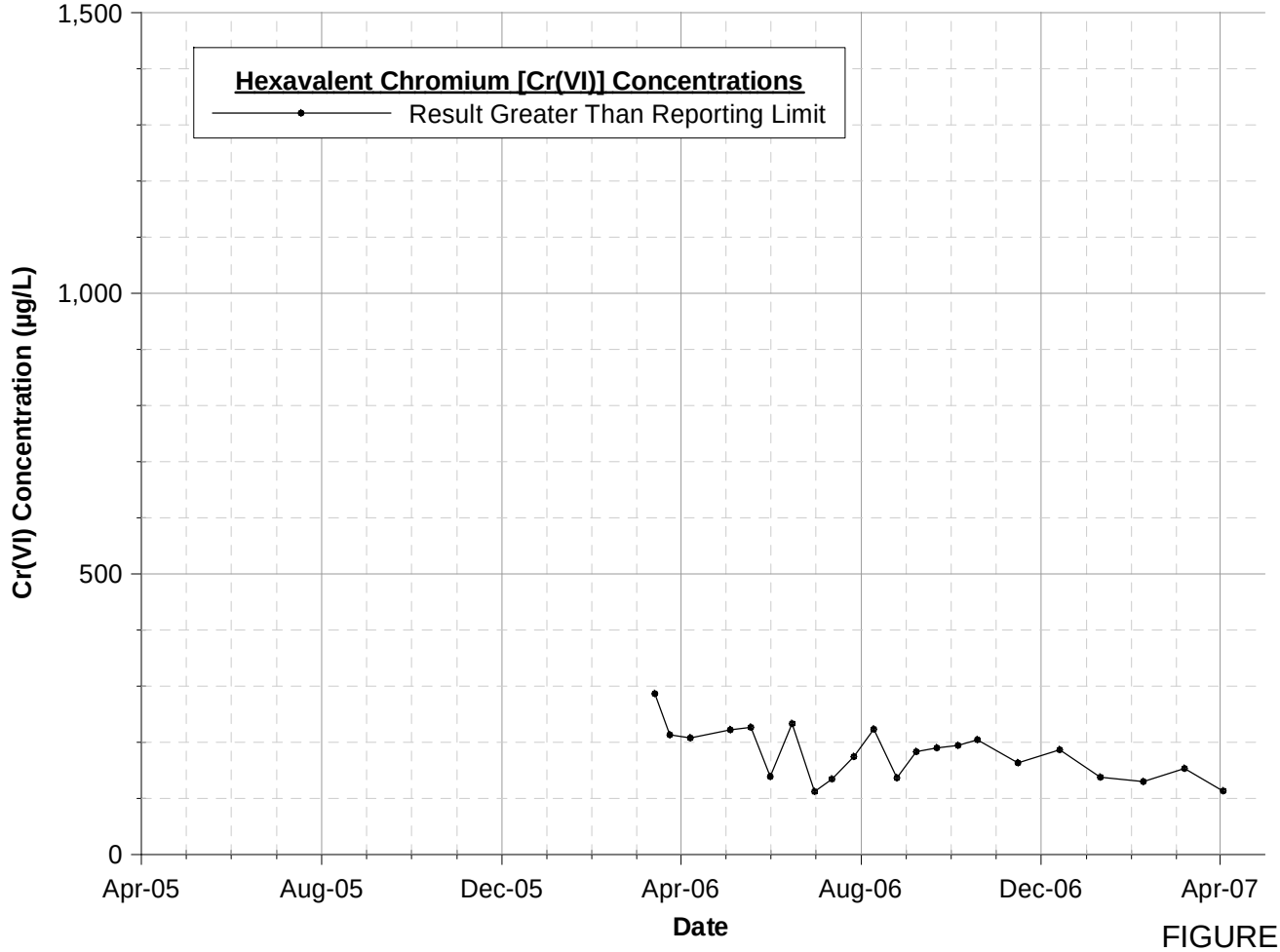

FIGURE B-7
MW-46-175 CR(VI) CONCENTRATION & HYDROGRAPH - 4/1/2005 - 4/3/2007
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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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Appendix C
Hydrographs and Hydraulic Gradient Maps for Reporting Period

TABLE C-1
Average, Minimum, and Maximum Groundwater Elevations, May 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	# of Days reporting data	Aquifer Depth
I-3	456.42	455.06	457.61	30	River Station
MW-10	456.16	456.10	456.22	30	Shallow
MW-19	455.89	455.80	455.98	30	Shallow
MW-20-070	454.83	454.71	454.98	30	Shallow
MW-20-100	454.57	454.31	454.90	30	Mid-Depth
MW-20-130	454.25	453.91	454.72	30	Deep
MW-25	455.83	455.80	455.87	30	Shallow
MW-26	455.44	455.39	455.50	30	Shallow
MW-27-020	456.20	455.81	456.61	30	Shallow
MW-27-060	456.28	455.52	456.99	30	Mid-Depth
MW-27-085	456.36	455.61	457.04	28	Deep
MW-28-025	456.37	455.78	456.93	30	Shallow
MW-28-090	456.39	455.57	457.17	14	Deep
MW-30-050	455.73	455.11	456.33	30	Mid-Depth
MW-31-060	455.68	455.53	455.84	30	Shallow
MW-31-135	455.15	454.83	455.51	30	Deep
MW-32-020	455.64	455.49	455.79	30	Shallow
MW-32-035	456.04	455.67	456.43	14	Shallow
MW-33-040	456.32	455.98	456.65	16	Shallow
MW-33-090	456.07	455.59	456.52	30	Mid-Depth
MW-33-150	456.22	455.74	456.67	30	Deep
MW-33-210	456.47	456.06	456.86	30	Deep
MW-34-055	456.46	455.54	457.31	30	Mid-Depth
MW-34-080	456.29	455.41	457.09	28	Deep
MW-34-100	456.01	455.19	456.77	28	Deep
MW-35-060	456.59	456.22	456.97	30	Shallow
MW-35-135	456.53	456.29	456.76	30	Deep
MW-36-020	455.71	455.15	456.22	10	Shallow
MW-36-040	455.80	455.11	456.43	30	Shallow
MW-36-050	455.83	455.10	456.50	30	Mid-Depth
MW-36-070	455.84	455.09	456.54	30	Mid-Depth
MW-36-090	455.19	454.13	455.85	30	Deep
MW-36-100	455.51	454.88	456.15	30	Deep
MW-39-040	455.59	454.99	456.16	30	Shallow
MW-39-050	455.58	455.00	456.14	30	Mid-Depth
MW-39-060	455.32	454.76	455.87	30	Mid-Depth
MW-39-070	455.16	454.68	455.66	30	Mid-Depth

TABLE C-1
Average, Minimum, and Maximum Groundwater Elevations, May 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	# of Days reporting data	Aquifer Depth
MW-39-080	455.18	454.70	455.69	30	Deep
MW-39-100	455.11	454.63	455.61	30	Deep
MW-42-030	455.63	455.17	456.07	30	Shallow
MW-42-055	455.85	455.36	456.31	30	Mid-Depth
MW-42-065	455.91	455.43	456.36	28	Mid-Depth
MW-43-025	456.39	455.67	457.10	29	Shallow
MW-43-075	456.59	455.79	457.36	30	Deep
MW-43-090	456.83	456.03	457.61	30	Deep
MW-44-070	456.31	455.62	456.95	28	Mid-Depth
MW-44-115	455.79	455.13	456.42	28	Deep
MW-44-125	456.24	455.44	456.99	28	Deep
MW-45-095	455.45	454.60	456.44	28	Deep
MW-46-175	456.61	456.04	457.15	28	Deep
MW-46-205	456.77	456.30	457.21	28	Deep
MW-47-055	456.18	455.98	456.39	30	Shallow
MW-47-115	456.24	456.00	456.49	30	Deep
MW-49-135	456.68	456.12	457.20	30	Deep
MW-49-275	457.30	456.96	457.61	30	Deep
MW-49-365	458.89	458.60	459.17	30	Deep
MW-50-095	455.84	455.71	455.99	30	Mid-Depth
MW-50-200	455.95	454.58	456.22	30	Deep
MW-51	455.49	455.43	455.54	30	Mid-Depth
PT2D	454.84	454.32	455.39	30	Deep
PT5D	455.28	454.72	455.84	30	Deep
PT6D	455.37	454.84	455.87	20	Deep
RRB	456.70	455.26	457.91	30	River Station

INC= Data incomplete over reporting period

TABLE C-2
Average, Minimum, and Maximum Groundwater Elevations, February through May 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	# of Days reporting data	Aquifer Depth
I-3	455.46	454.55	456.32	89	River Station
MW-10	455.62	455.56	455.69	89	Shallow
MW-19	455.06	454.98	455.14	89	Shallow
MW-20-070	453.86	453.76	453.97	89	Shallow
MW-20-100	453.55	453.38	453.77	89	Mid-Depth
MW-20-130	453.14	452.92	453.47	89	Deep
MW-25	455.45	455.41	455.49	60	Shallow
MW-26	455.03	454.69	455.09	62	Shallow
MW-27-020	455.26	454.97	455.53	83	Shallow
MW-27-060	455.76	455.20	456.30	63	Mid-Depth
MW-27-085	455.31	454.81	455.78	87	Deep
MW-28-025	455.40	454.98	455.80	89	Shallow
MW-28-090	454.85	454.32	455.39	45	Deep
MW-30-050	454.82	454.40	455.23	89	Mid-Depth
MW-31-060	454.79	454.67	454.91	89	Shallow
MW-31-135	454.12	453.92	454.38	89	Deep
MW-32-020	454.75	454.64	454.85	89	Shallow
MW-32-035	454.66	454.41	454.91	37	Shallow
MW-33-040	456.07	455.79	456.35	33	Shallow
MW-33-090	455.23	454.91	455.54	89	Mid-Depth
MW-33-150	455.37	455.05	455.69	89	Deep
MW-33-210	455.68	455.41	455.95	89	Deep
MW-34-055	455.49	454.86	456.09	81	Mid-Depth
MW-34-080	455.28	454.69	455.93	87	Deep
MW-34-100	454.96	454.35	455.50	87	Deep
MW-35-060	455.69	455.44	455.94	89	Shallow
MW-35-135	455.72	455.31	455.90	89	Deep
MW-36-020	454.60	454.26	454.92	69	Shallow
MW-36-040	454.98	454.52	455.43	74	Shallow
MW-36-050	455.00	454.48	455.48	76	Mid-Depth
MW-36-070	454.90	454.41	455.38	89	Mid-Depth
MW-36-090	454.12	453.56	454.58	89	Deep
MW-36-100	454.49	454.07	454.94	89	Deep
MW-39-040	454.65	454.25	455.04	89	Shallow
MW-39-050	454.62	454.23	455.01	89	Mid-Depth
MW-39-060	454.41	454.04	454.79	89	Mid-Depth
MW-39-070	454.12	453.81	454.47	89	Mid-Depth

TABLE C-2
Average, Minimum, and Maximum Groundwater Elevations, February through May 2007
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	# of Days reporting data	Aquifer Depth
MW-39-080	454.19	453.88	454.54	89	Deep
MW-39-100	454.28	453.96	454.62	89	Deep
MW-42-030	454.69	454.37	454.99	89	Shallow
MW-42-055	454.87	454.40	455.20	89	Mid-Depth
MW-42-065	454.95	454.40	455.27	87	Mid-Depth
MW-43-025	455.37	454.88	455.85	88	Shallow
MW-43-075	455.60	455.07	456.13	89	Deep
MW-43-090	455.83	455.29	456.36	89	Deep
MW-44-070	455.19	454.68	455.68	87	Mid-Depth
MW-44-115	454.74	454.30	455.19	87	Deep
MW-44-125	455.20	454.60	455.69	87	Deep
MW-45-095	453.94	453.39	454.65	87	Deep
MW-46-175	455.50	455.12	455.87	87	Deep
MW-46-205	455.77	455.46	456.08	87	Deep
MW-47-055	455.32	455.18	455.46	89	Shallow
MW-47-115	455.40	455.24	455.58	89	Deep
MW-49-135	455.77	455.40	456.14	89	Deep
MW-49-275	456.52	456.31	456.75	89	Deep
MW-49-365	458.09	457.89	458.29	89	Deep
MW-50-095	455.03	454.93	455.14	89	Mid-Depth
MW-50-200	455.32	454.79	455.50	89	Deep
MW-51	454.68	454.30	454.75	89	Mid-Depth
PT2D	453.85	453.51	454.24	89	Deep
PT5D	454.23	453.86	454.62	89	Deep
PT6D	454.23	453.85	454.60	34	Deep
RRB	455.75	454.82	456.62	89	River Station

INC= Data incomplete over reporting period

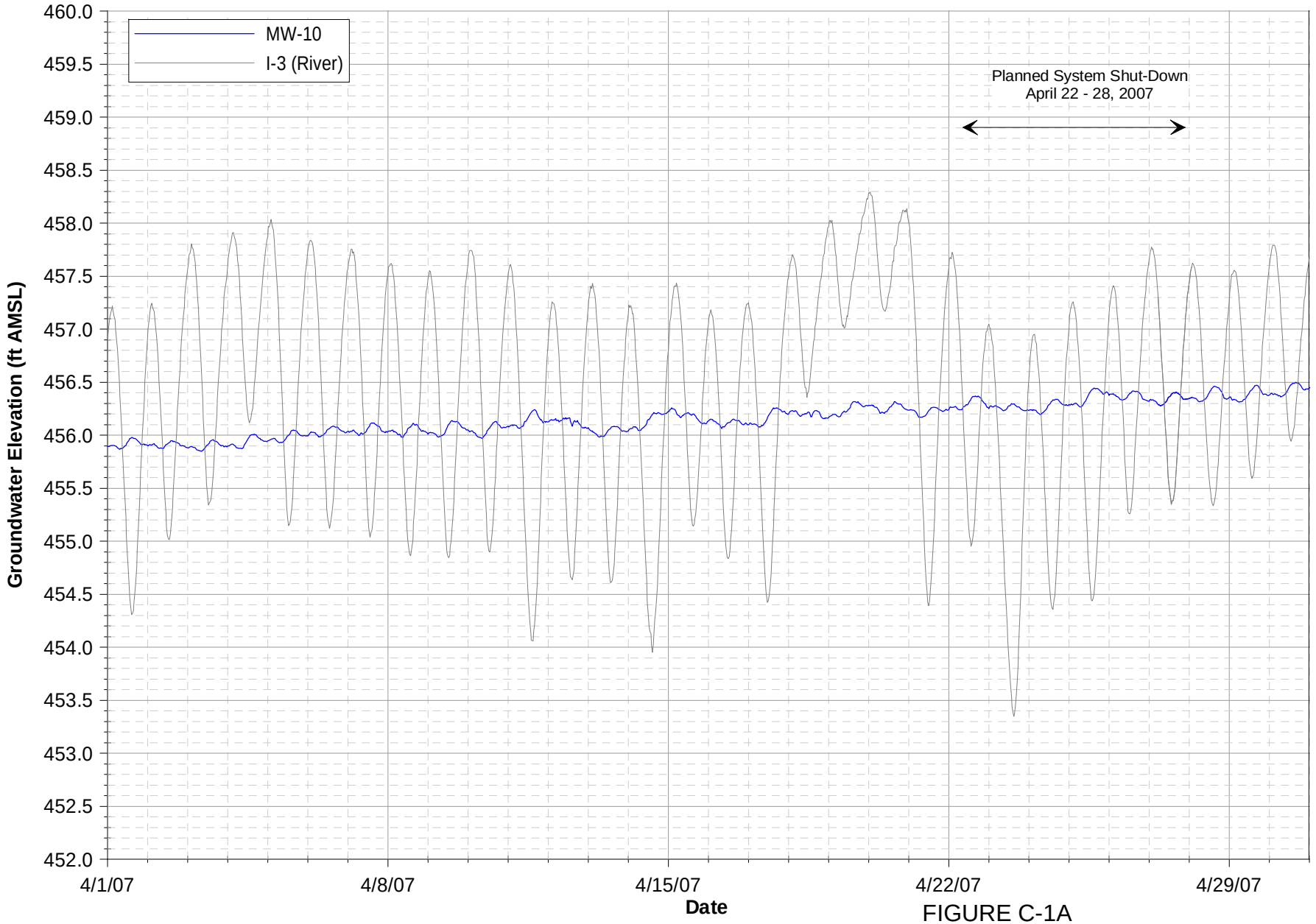
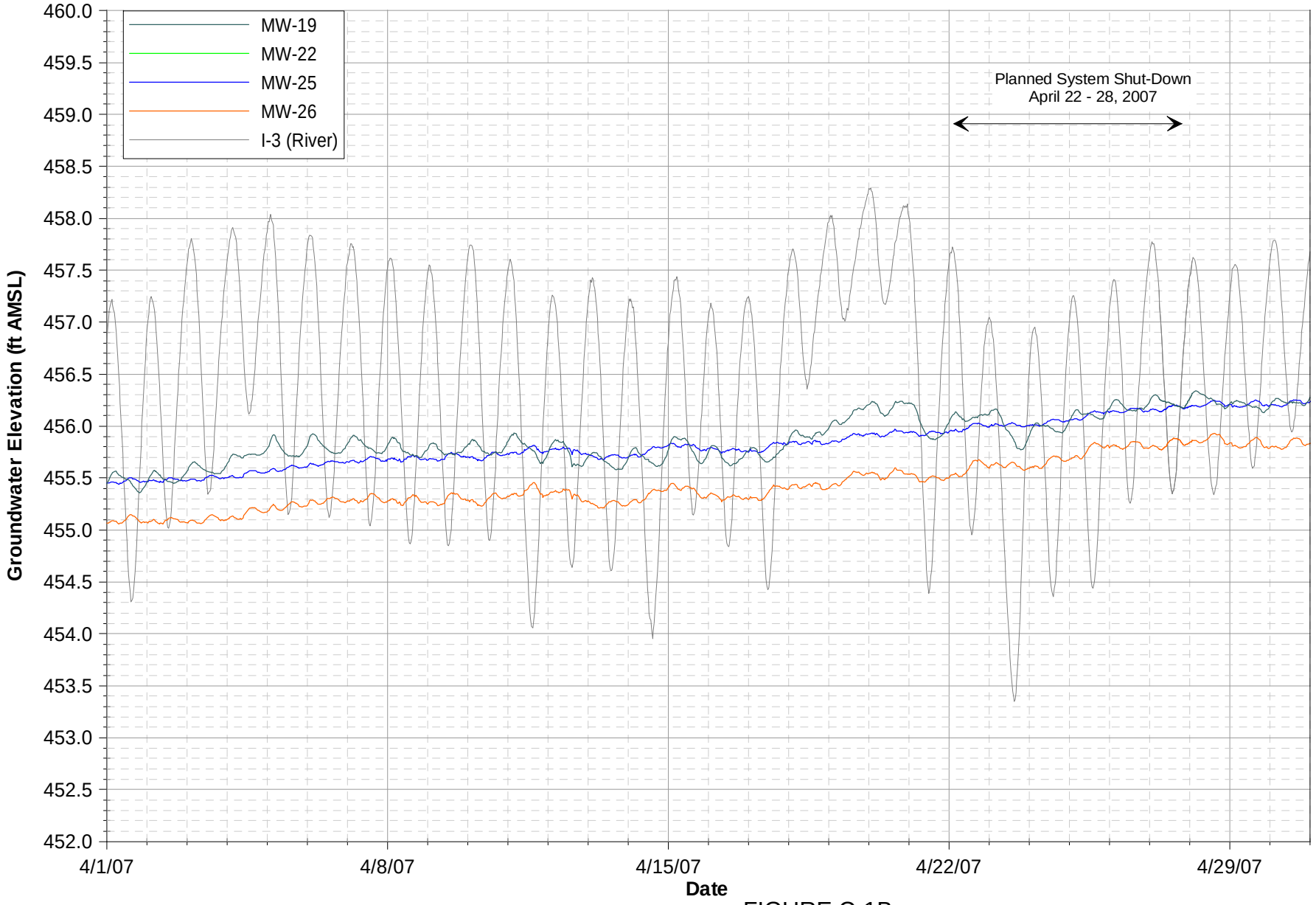


FIGURE C-1A
MW-10 HYDROGRAPH
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.
Planned system shut-down between April 22-28, 2007.

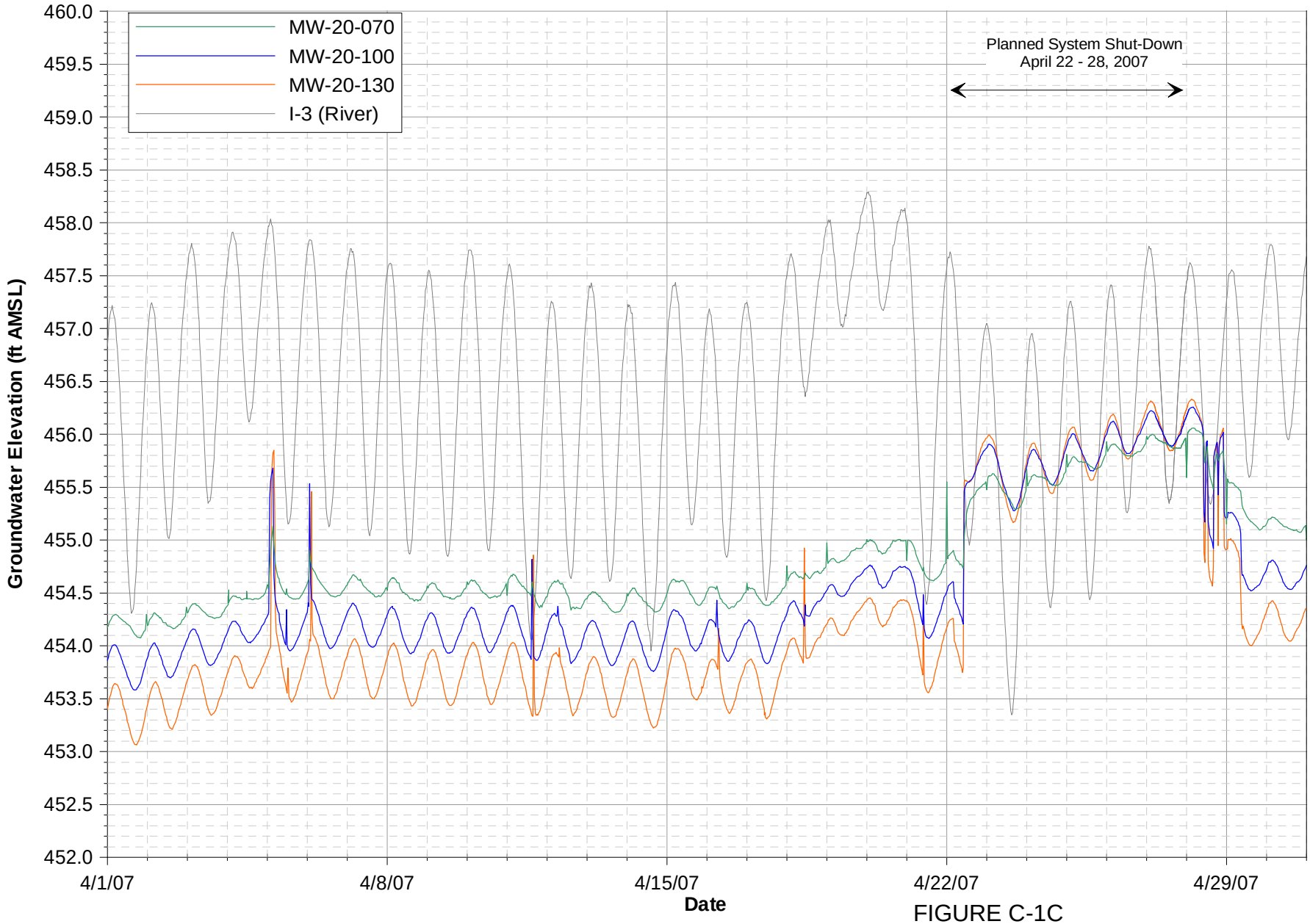
CH2MHILL



Notes:
Data subject to review.
MW-22 data unavailable after September 19, 2006.
Planned system shut-down between April 22-28, 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

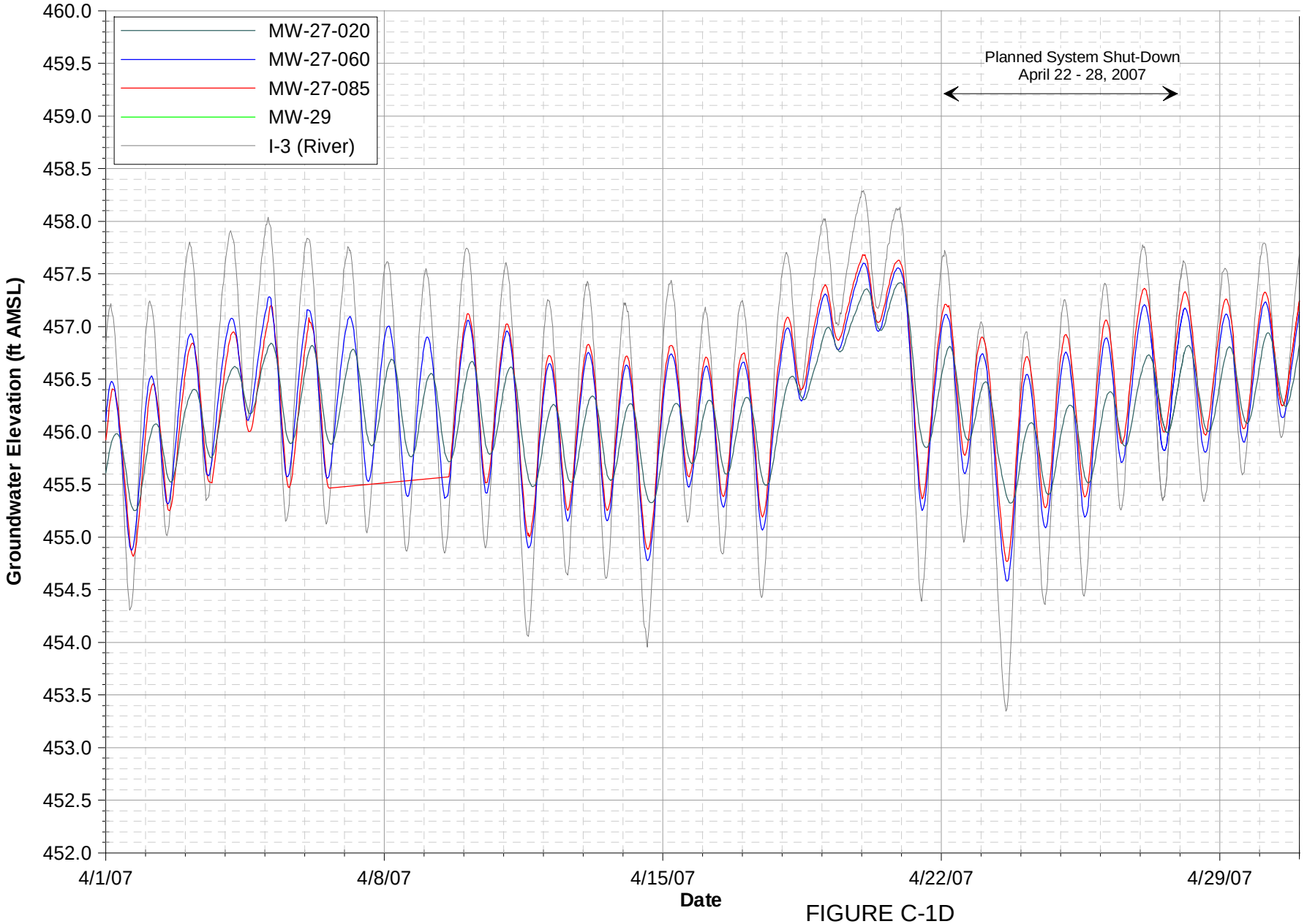
CH2MHILL



Notes:
Data subject to review.
Planned system shut-down between April 22-28, 2007.

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.
MW-27-85 data unavailable between April 6 - 10, 2007.
Planned system shut-down between April 22 - 28, 2007.

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

CH2MHILL

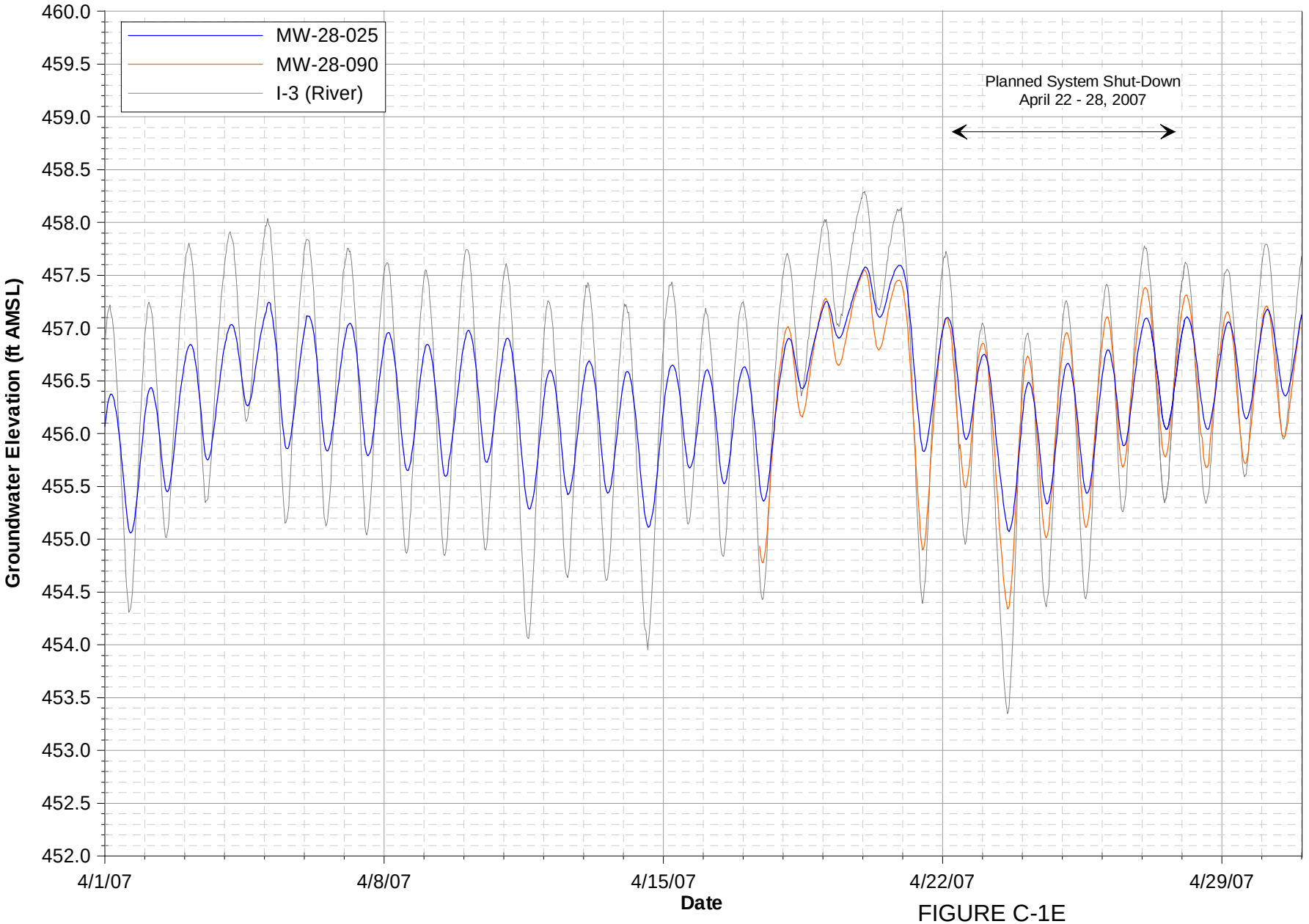


FIGURE C-1E
MW-28 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review
MW-28-090 data unavailable prior to April 17, 2007.
Planned system shut-down between April 22-28, 2007.

CH2MHILL

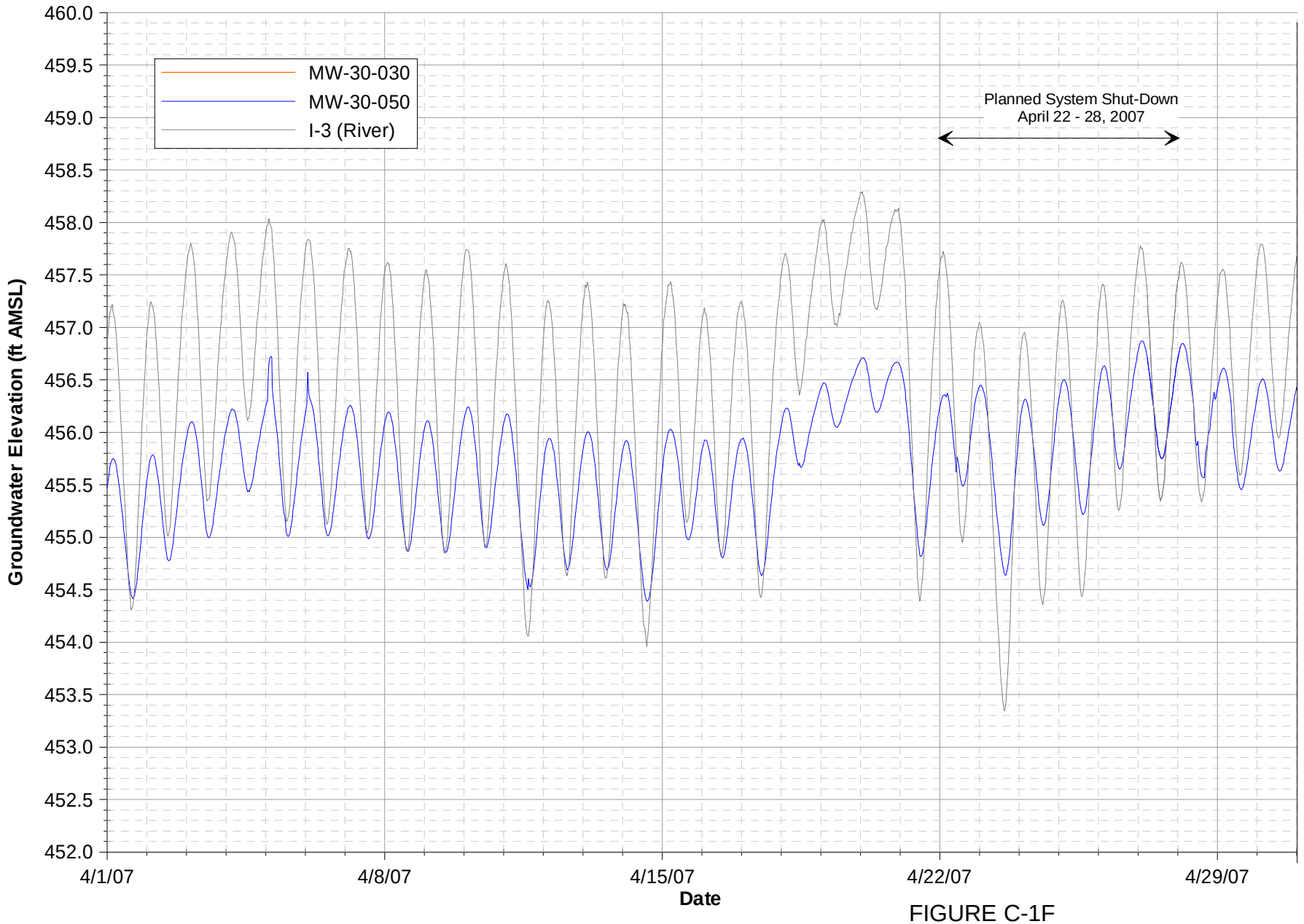


FIGURE C-1F
MW-30 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
MW-30-30 data unavailable after October 31, 2006.
Planned system shut-down between April 22-28, 2007.

CH2MHILL

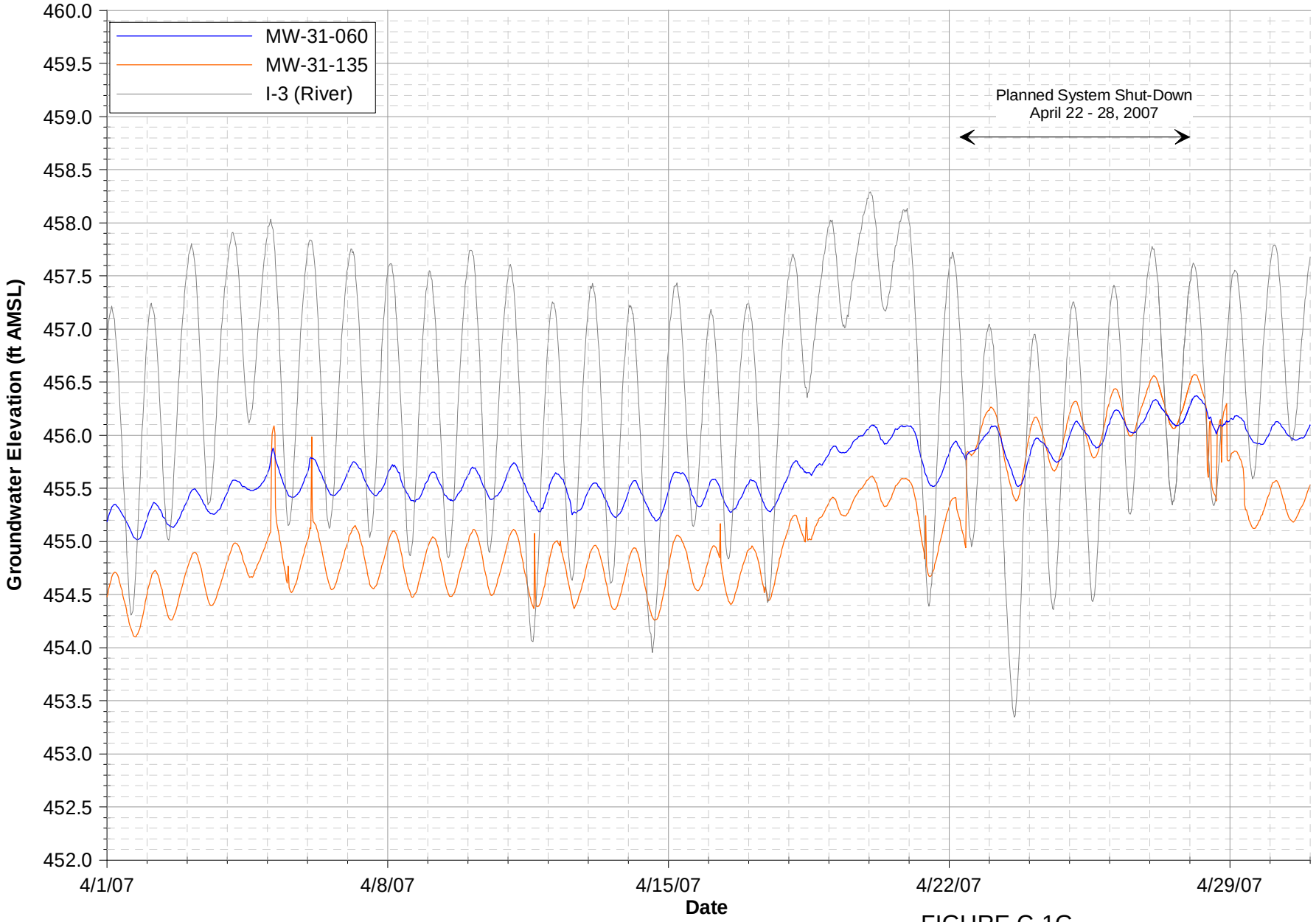
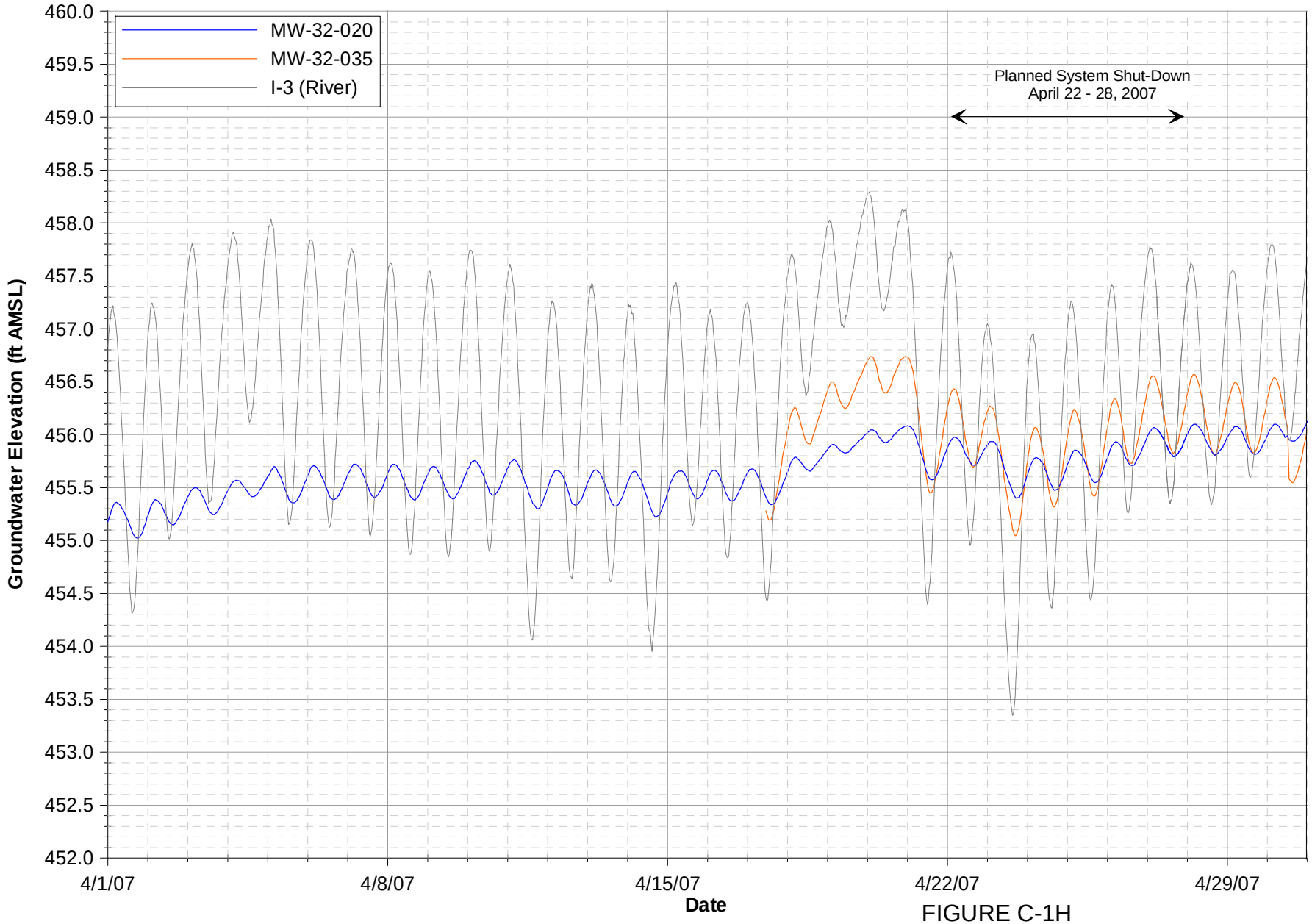


FIGURE C-1G
MW-31 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 22-28, 2007.

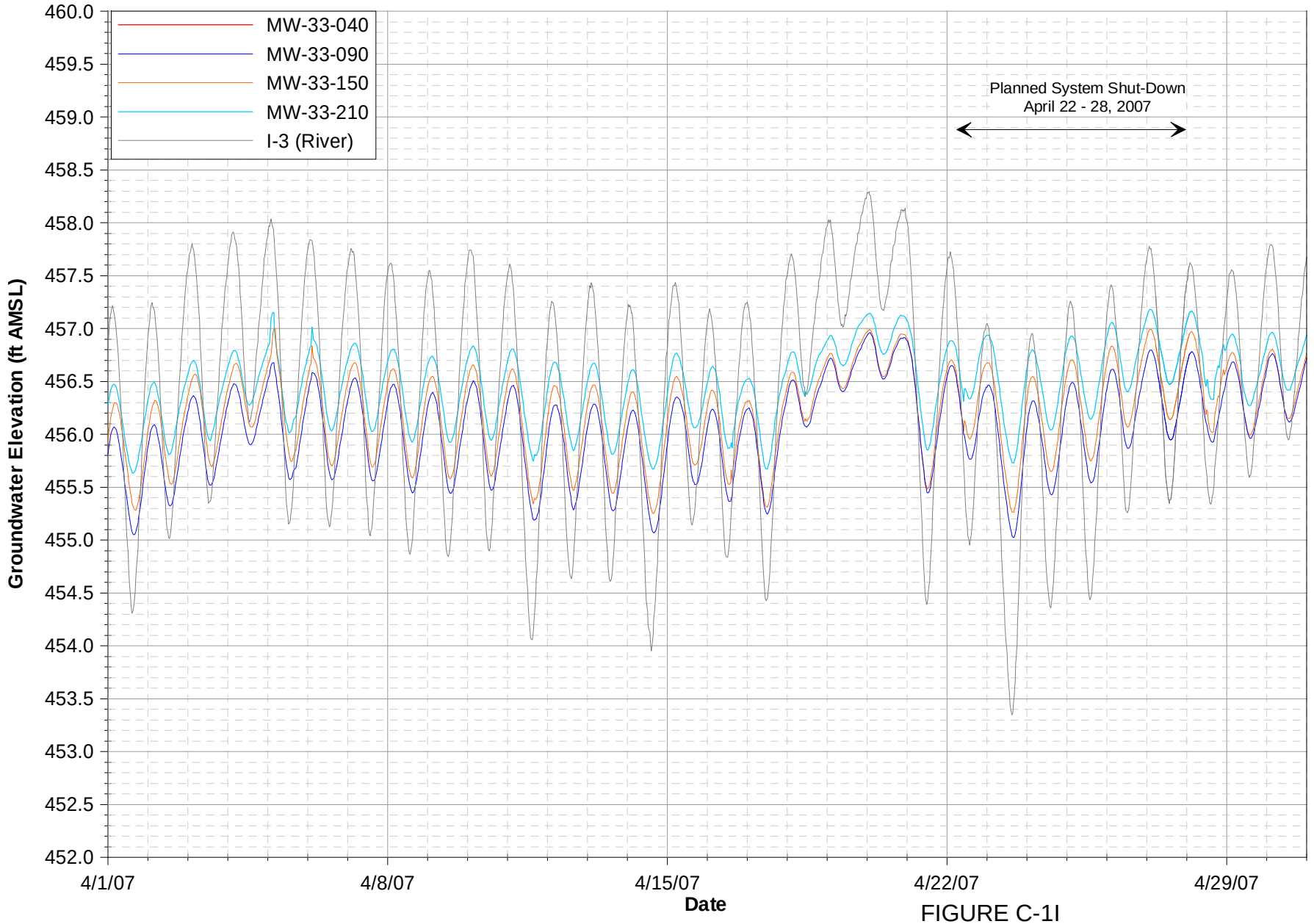
CH2MHILL



Notes:
Data subject to review.
MW-32-035 data unavailable prior to April 17, 2007.
Planned system shut-down between April 22-28, 2007.

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

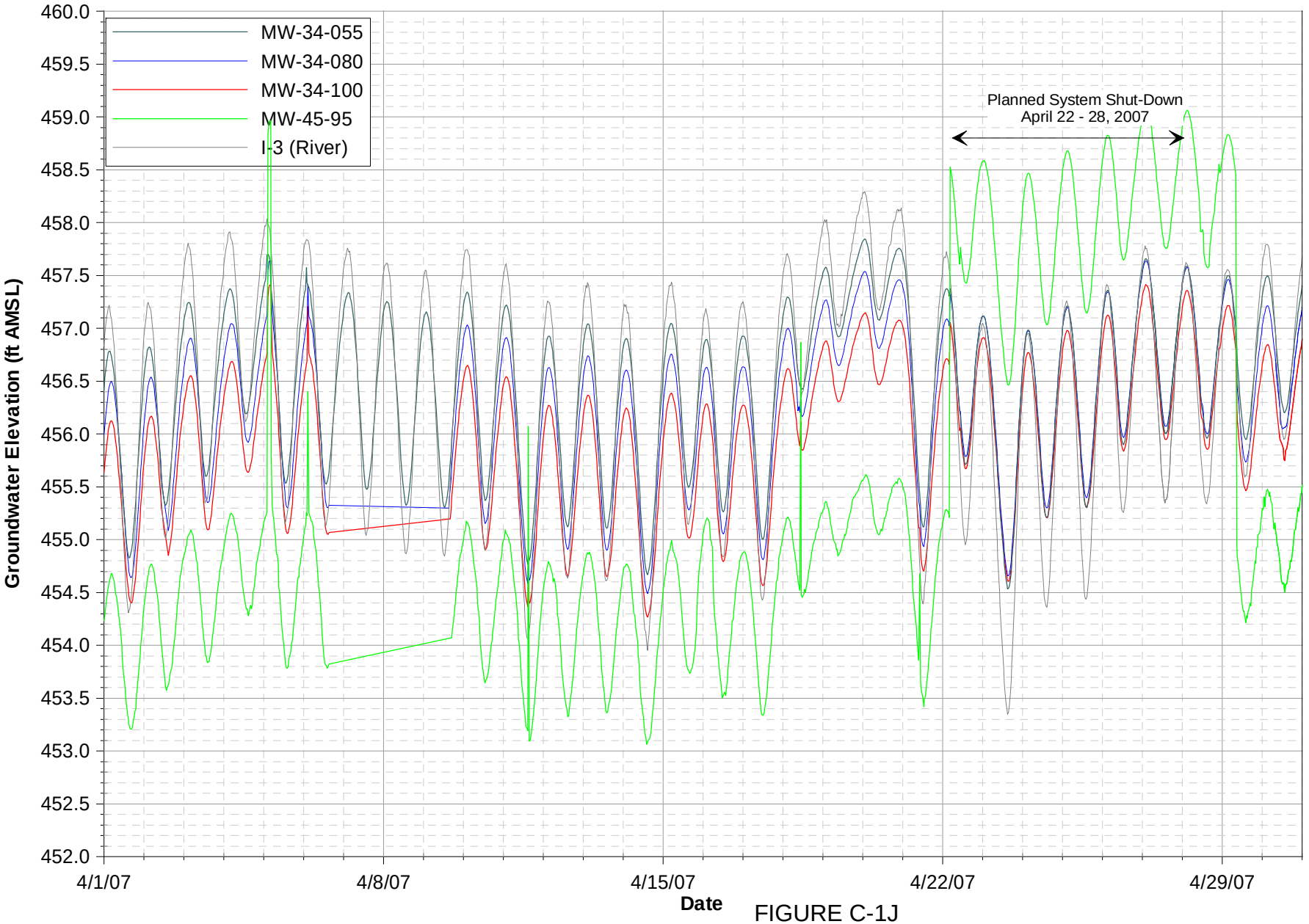
CH2MHILL



Notes:
Data subject to review.
MW-33-40 data unavailable prior to April 16, 2007.
Planned system shut-down between April 22-28, 2007.

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

CH2MHILL



Notes:
Data subject to review.
Planned system shut-down between April 22 - 28, 2007.
Data unavailable for wells MW-34-80, MW-34-100, and MW-45-95 between April 6 - 10, 2007.

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

CH2MHILL

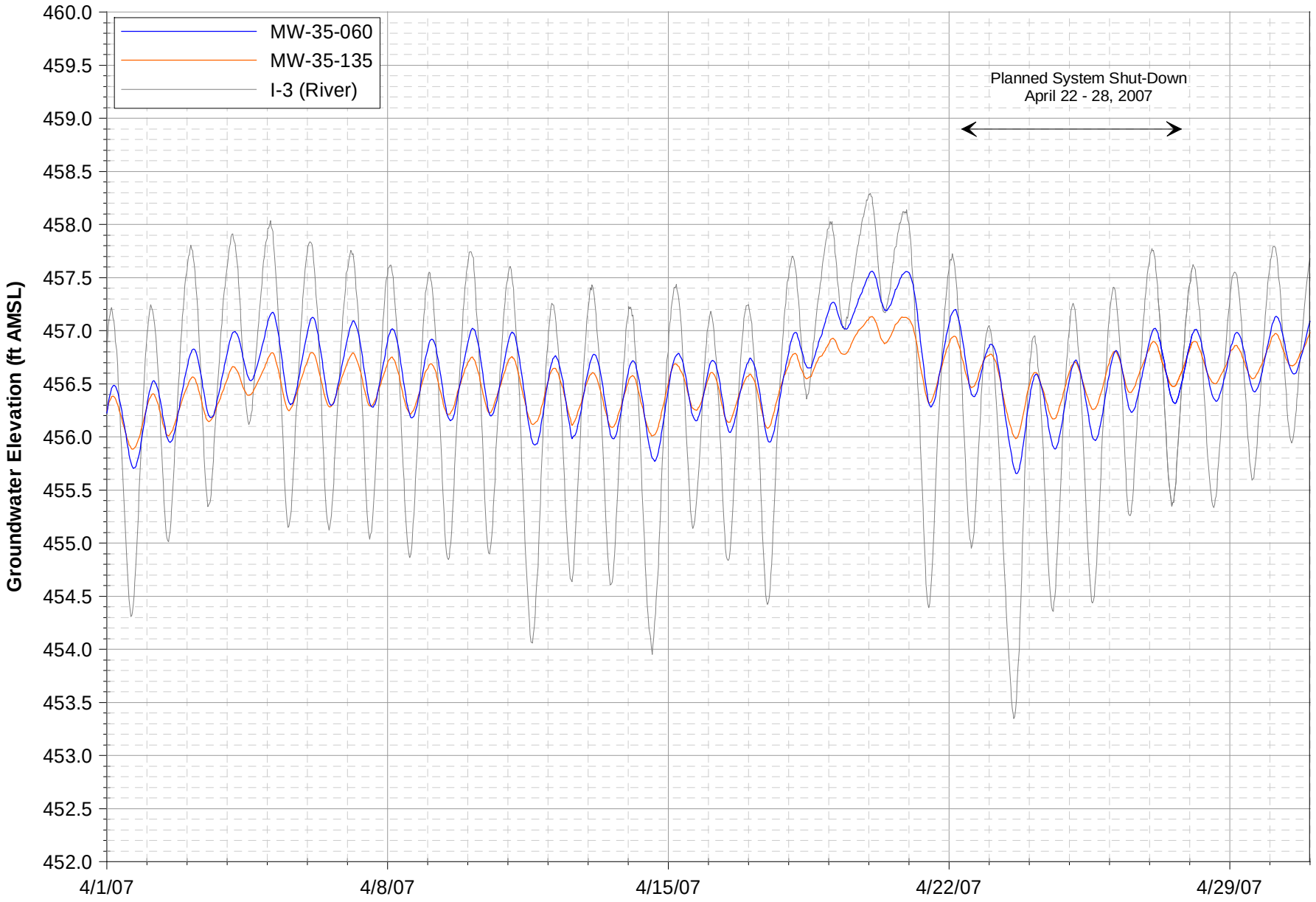


FIGURE C-1K
MW-35 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 22-28, 2007.

CH2MHILL

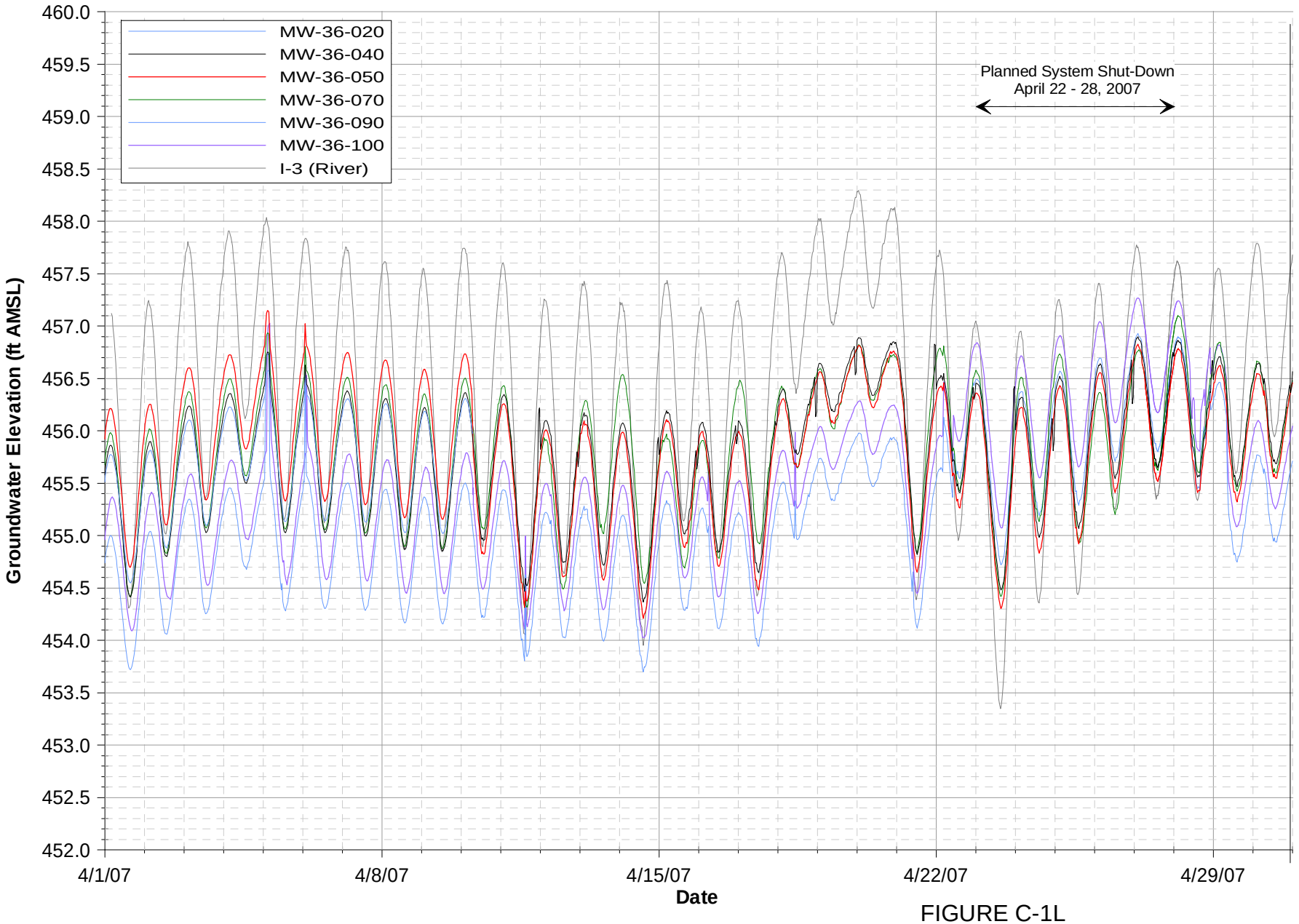


FIGURE C-1L
MW-36 CLUSTER
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review
Planned system shut-down between April 22 - 28, 2007.

CH2MHILL

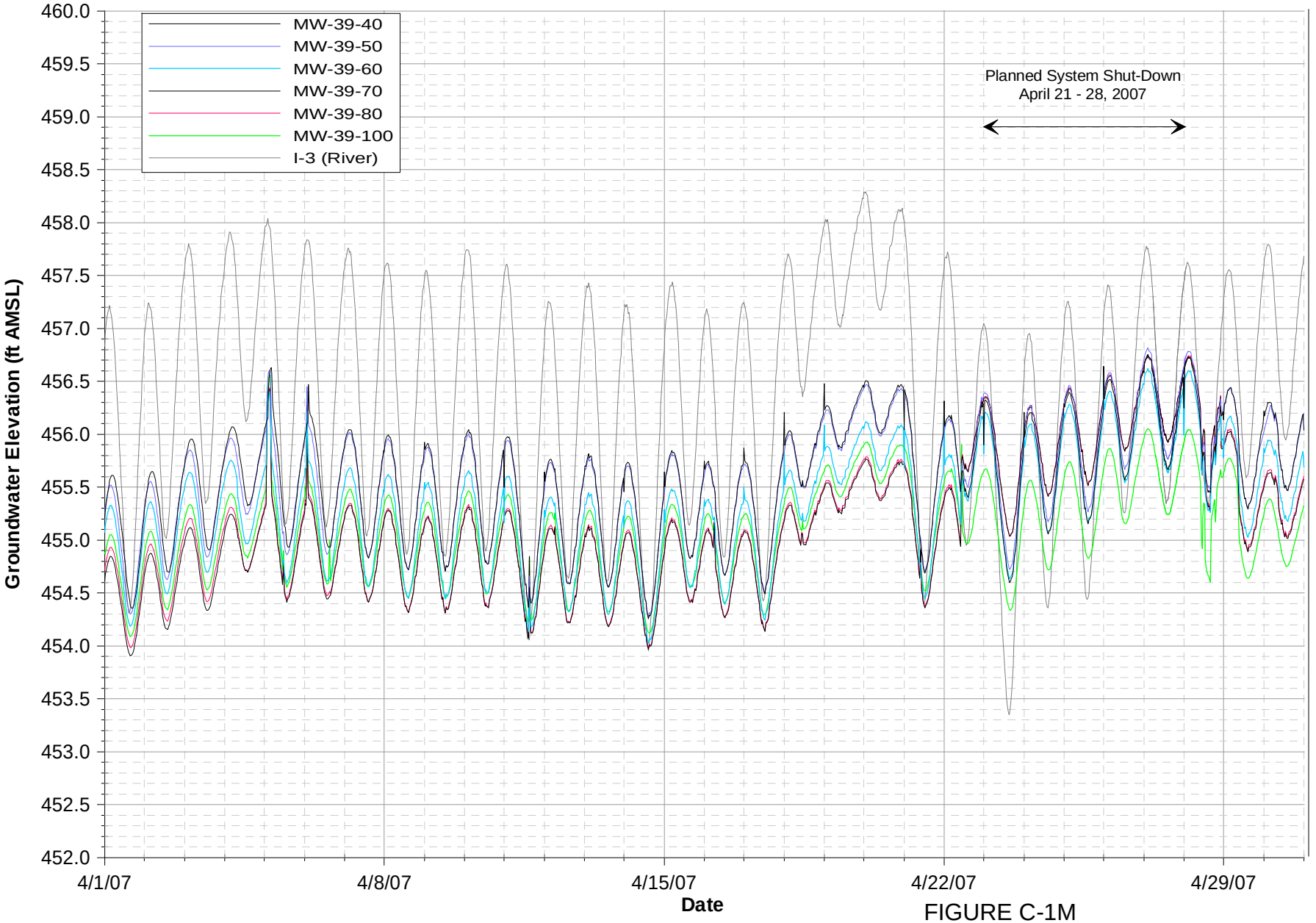


FIGURE C-1M
MW-39 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 21-28, 2007.

CH2MHILL

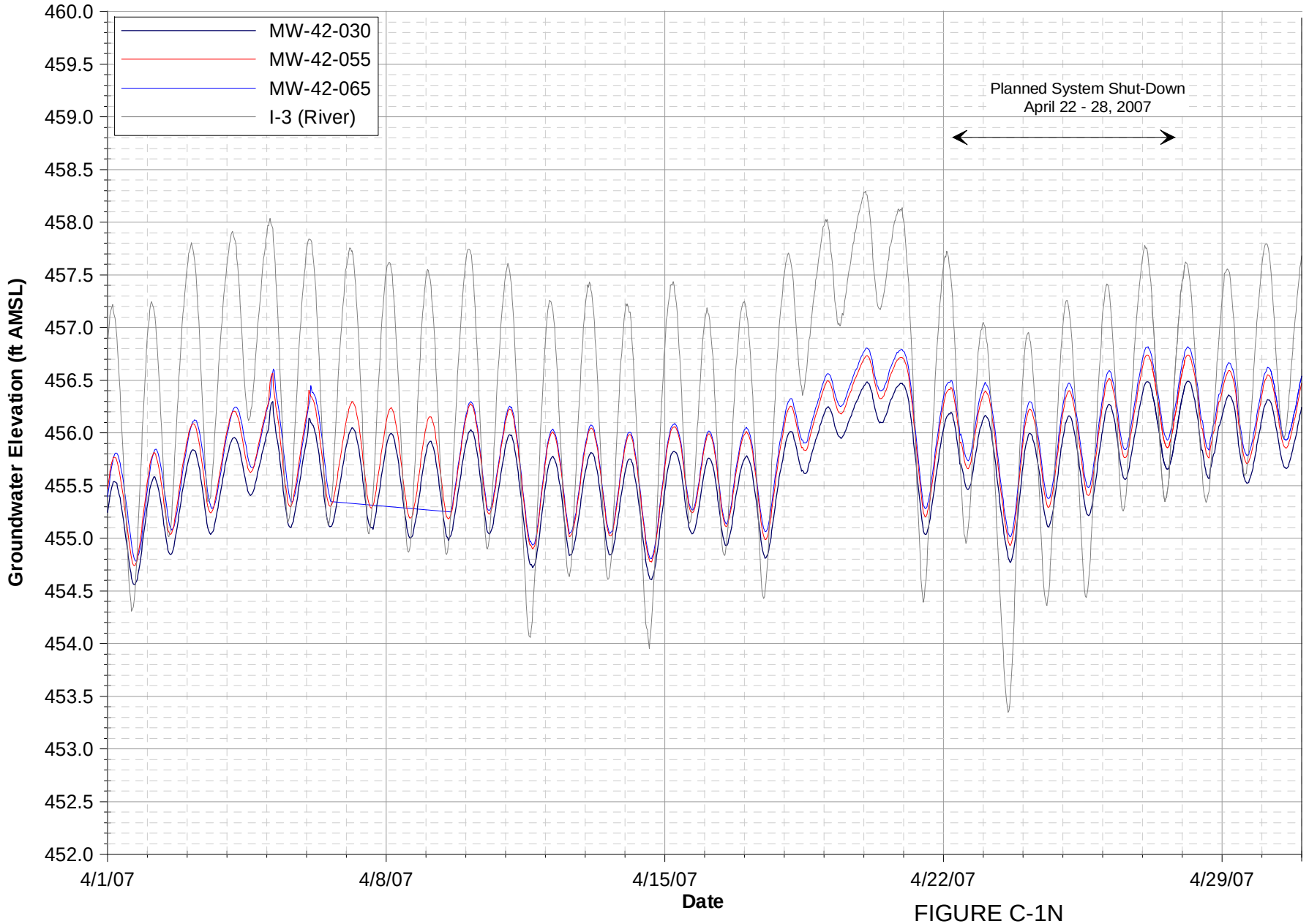


FIGURE C-1N
MW-42 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 22 - 28, 2007.
MW-42-65 data unavailable between April 6 - 10, 2007.

CH2MHILL

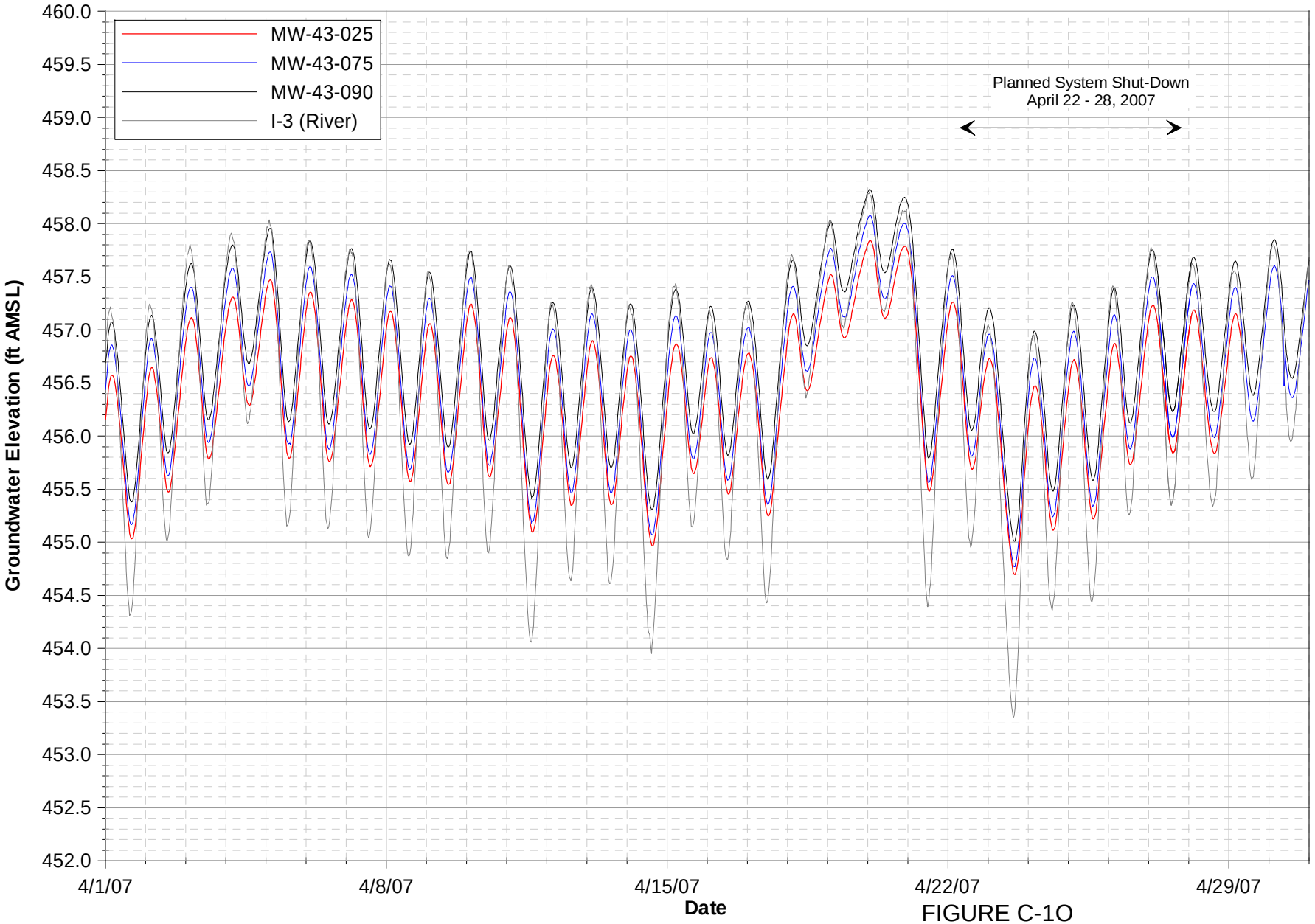


FIGURE C-1O
MW-43 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 22-28, 2007.
MW-43-25 data unavailable after April 29, 2007.

CH2MHILL

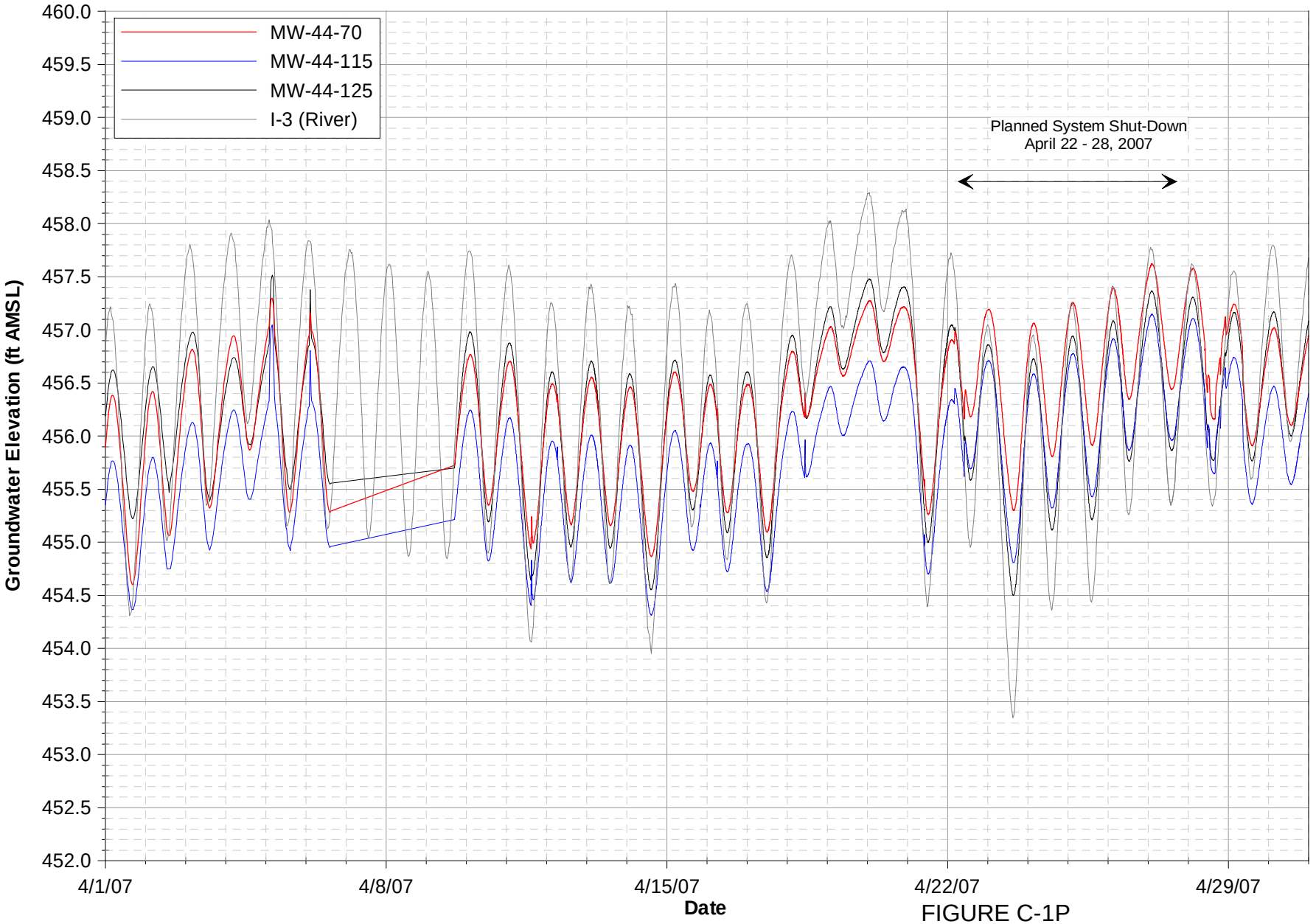


FIGURE C-1P
MW-44 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 22 - 28, 2007.
Data unavailable for wells between April 6 - 10, 2007.

CH2MHILL

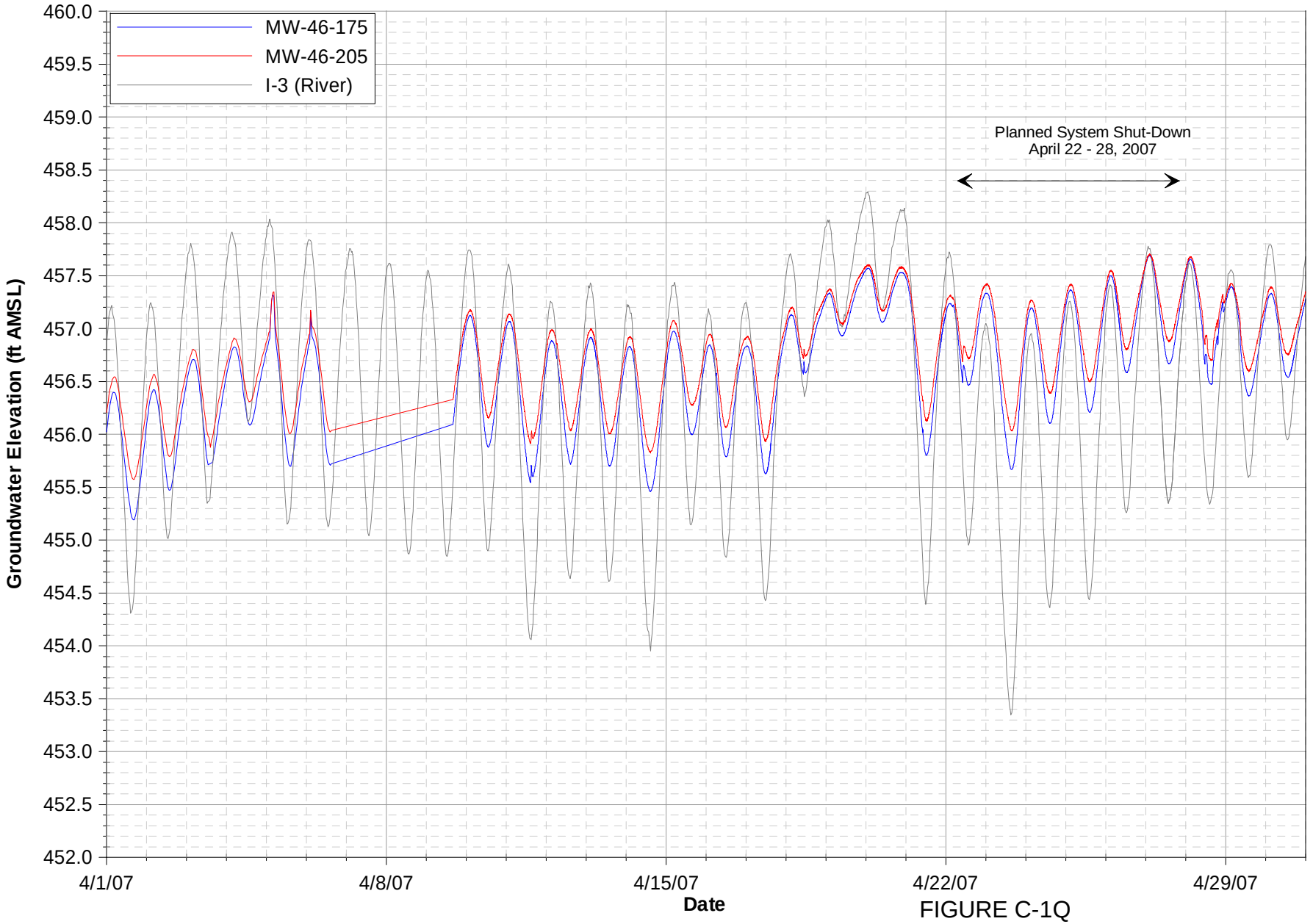


FIGURE C-1Q
MW-46 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Data unavailable for wells between April 6 - 10,2007.
Planned system shut-down between April 22-28, 2007.

CH2MHILL

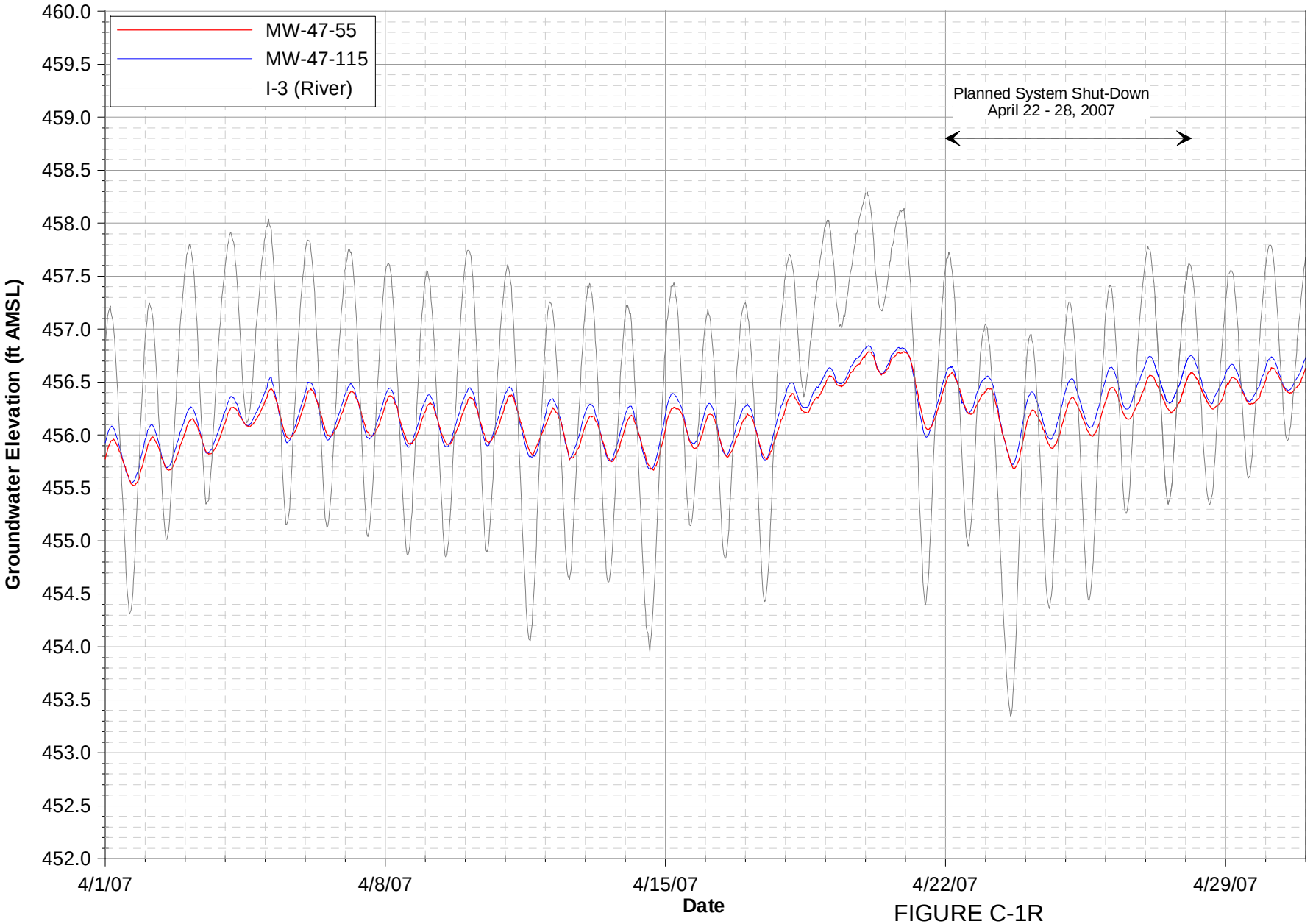
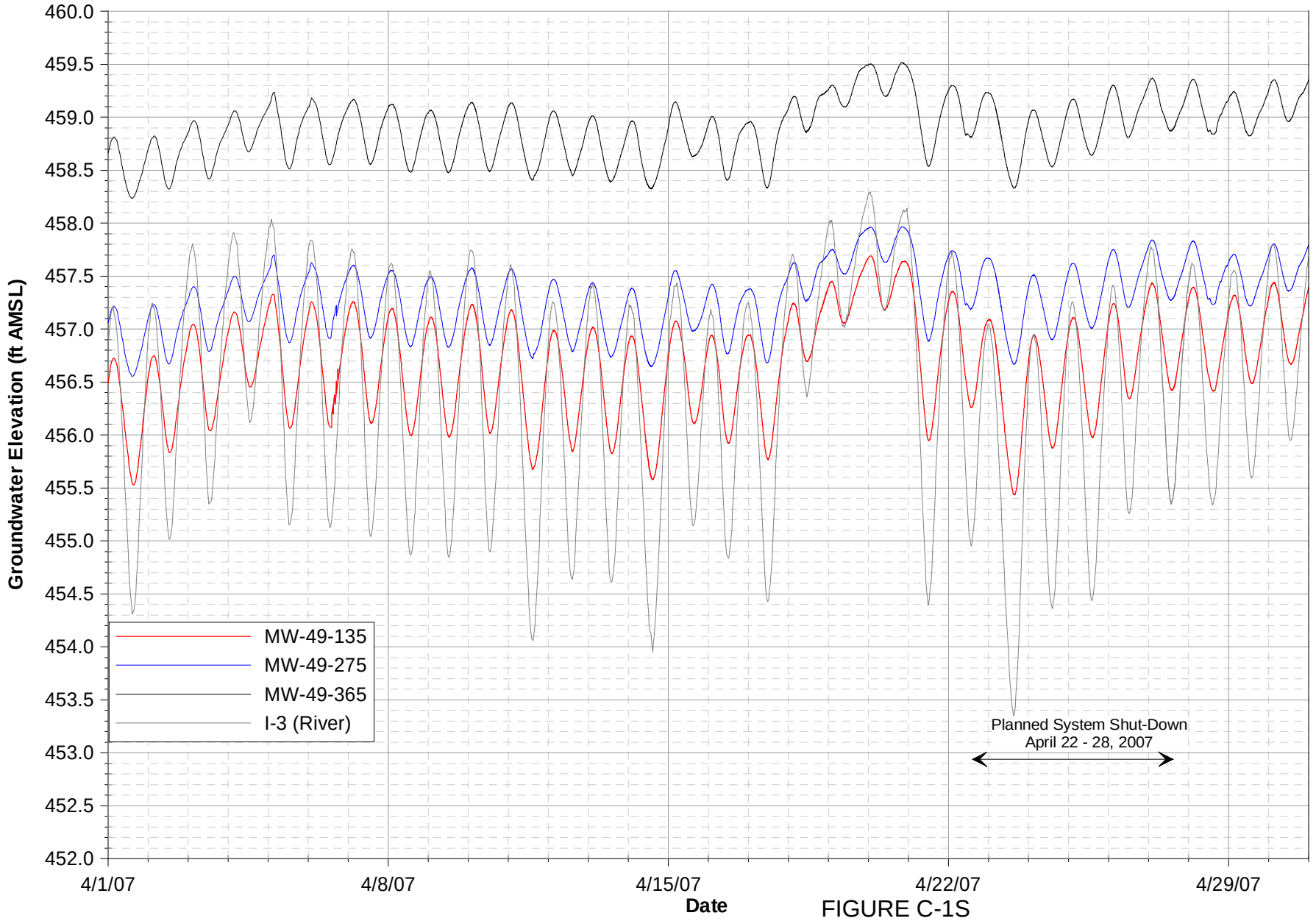


FIGURE C-1R
MW-47 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
Planned system shut-down between April 22-28, 2007.

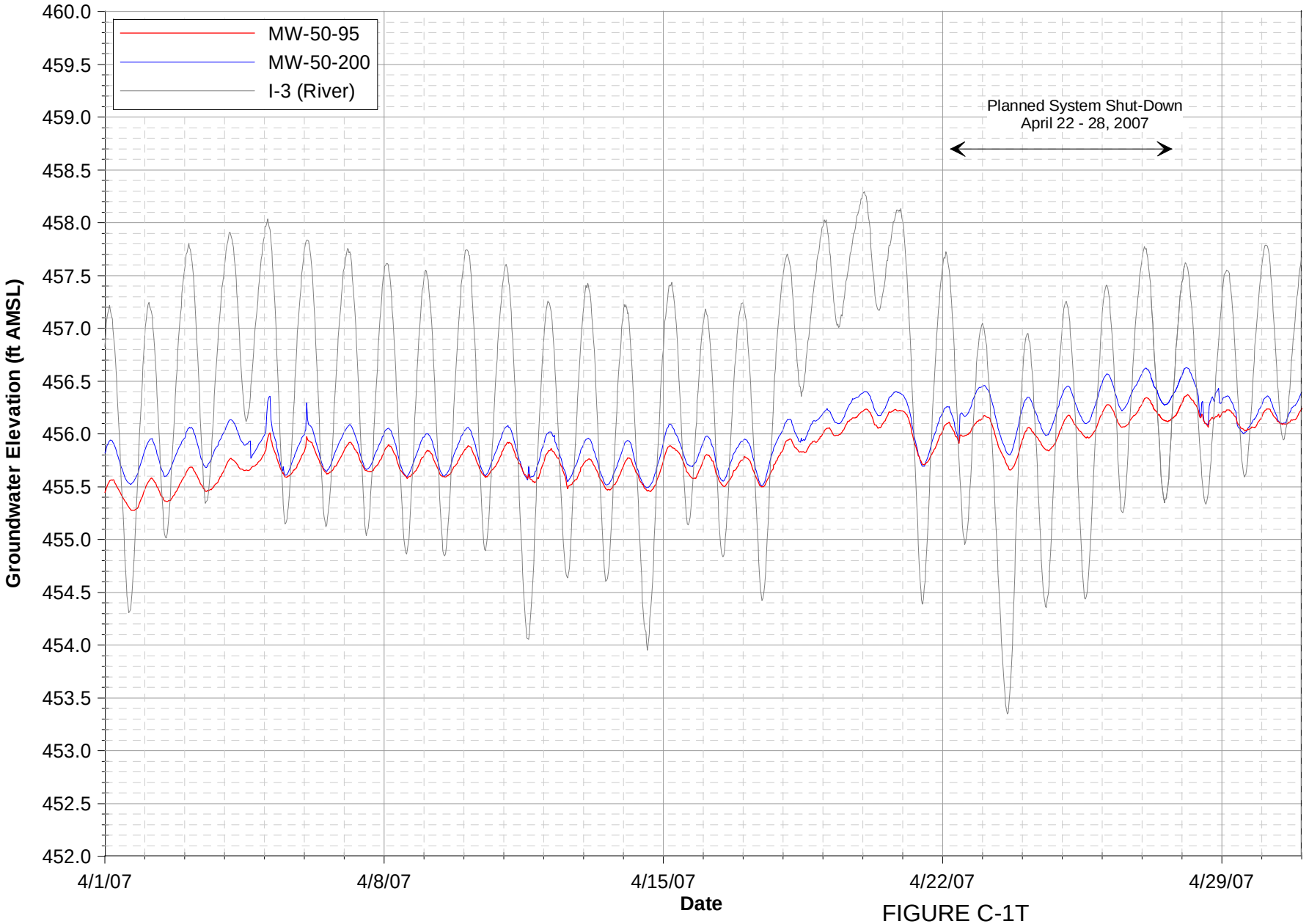
CH2MHILL



Notes:
Data subject to review.
IM3 shut-down between April 22 through April 29, 2007.

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

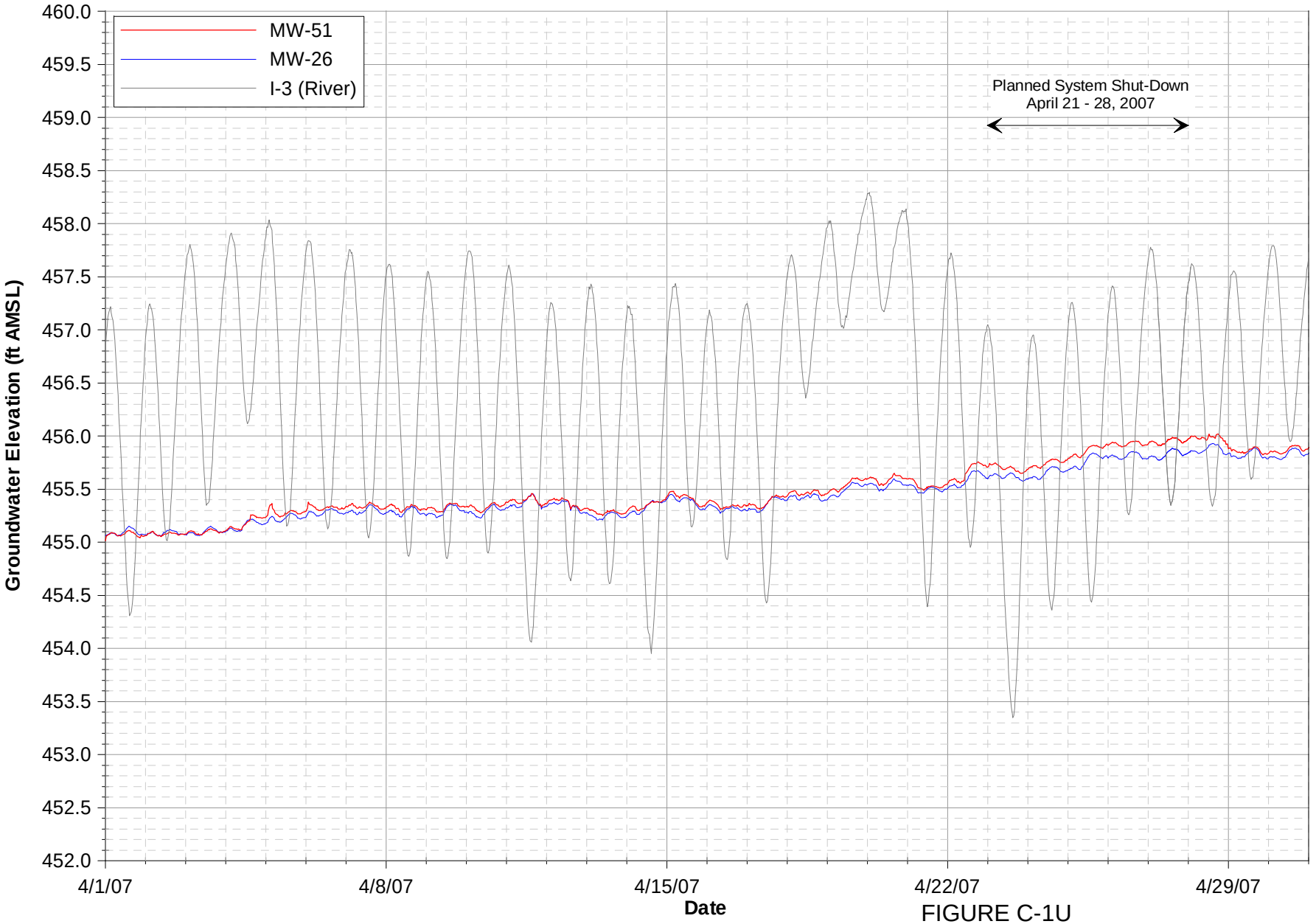
CH2MHILL



Notes:
Data subject to review.
Planned system shut-down between April 22-28, 2007.

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

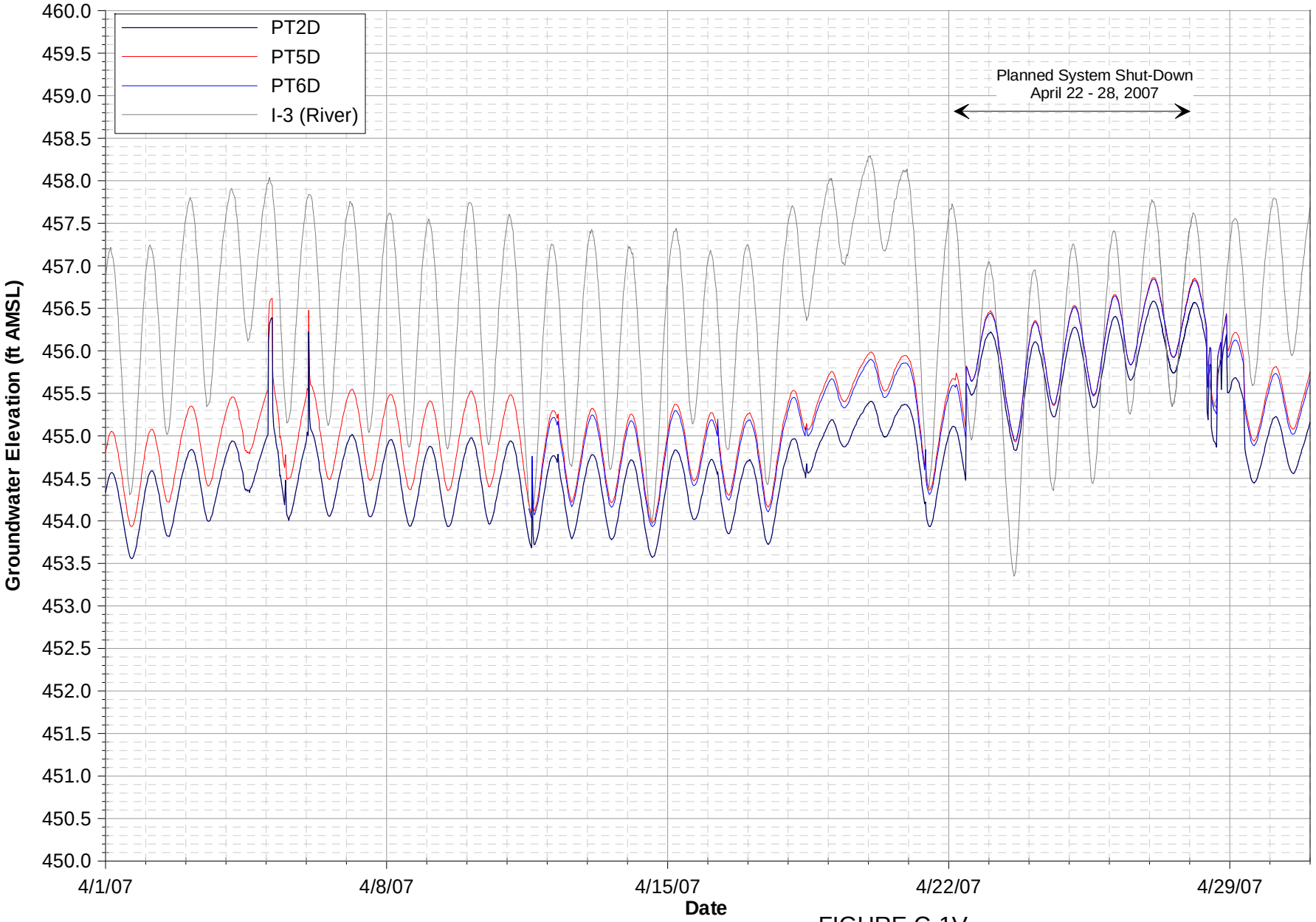
CH2MHILL



Notes:
Data subject to review.
Planned system shut-down between April 21-28, 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.
PT6D data unavailable prior to April 11, 2007.
Planned system shut-down between April 22-28, 2007.

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

CH2MHILL

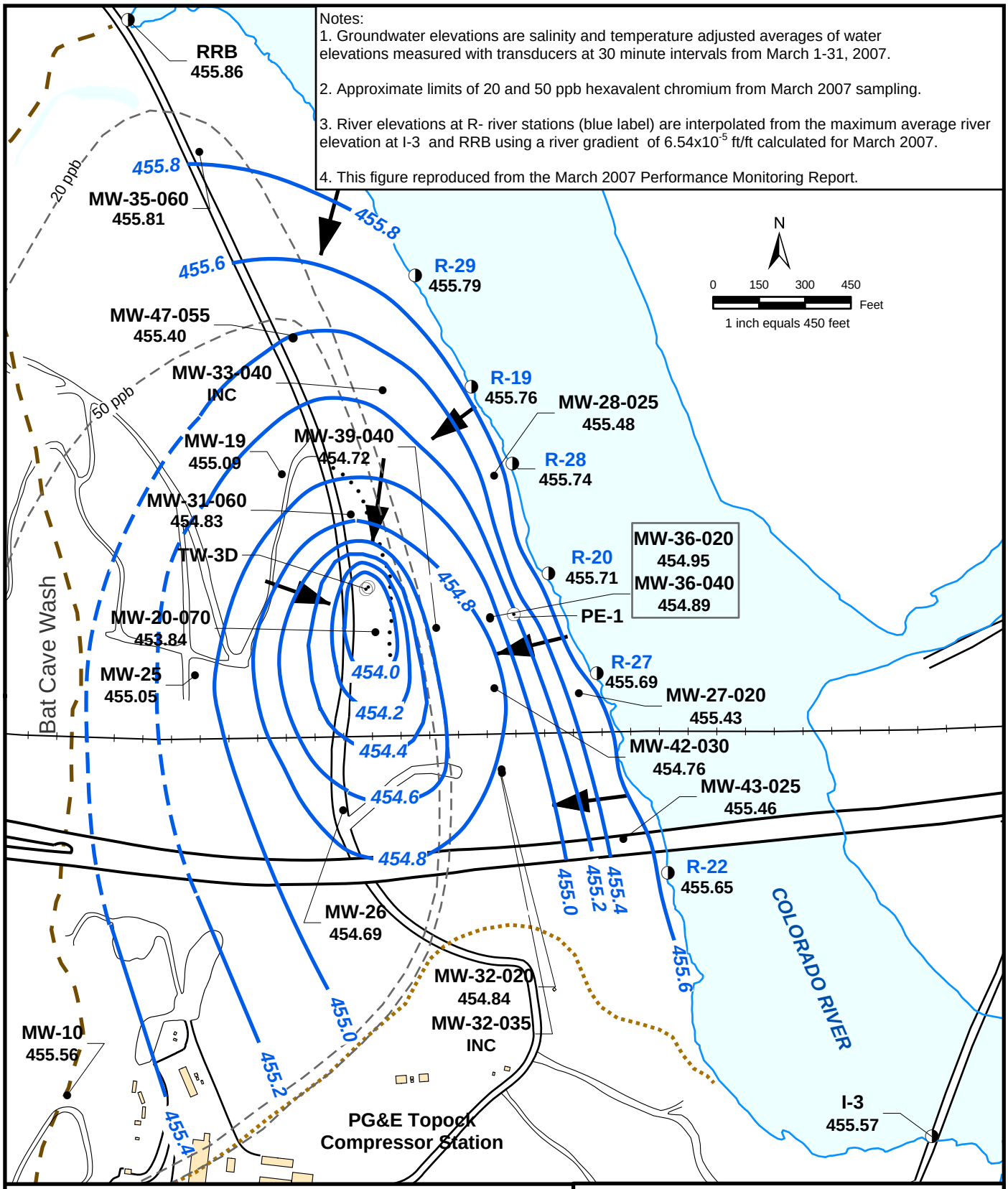


FIGURE C-2A
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, MARCH 2007

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

CH2MHILL

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MapFiles\2007\GW\IM_Average_groundwater_UA_Mar07.mxd

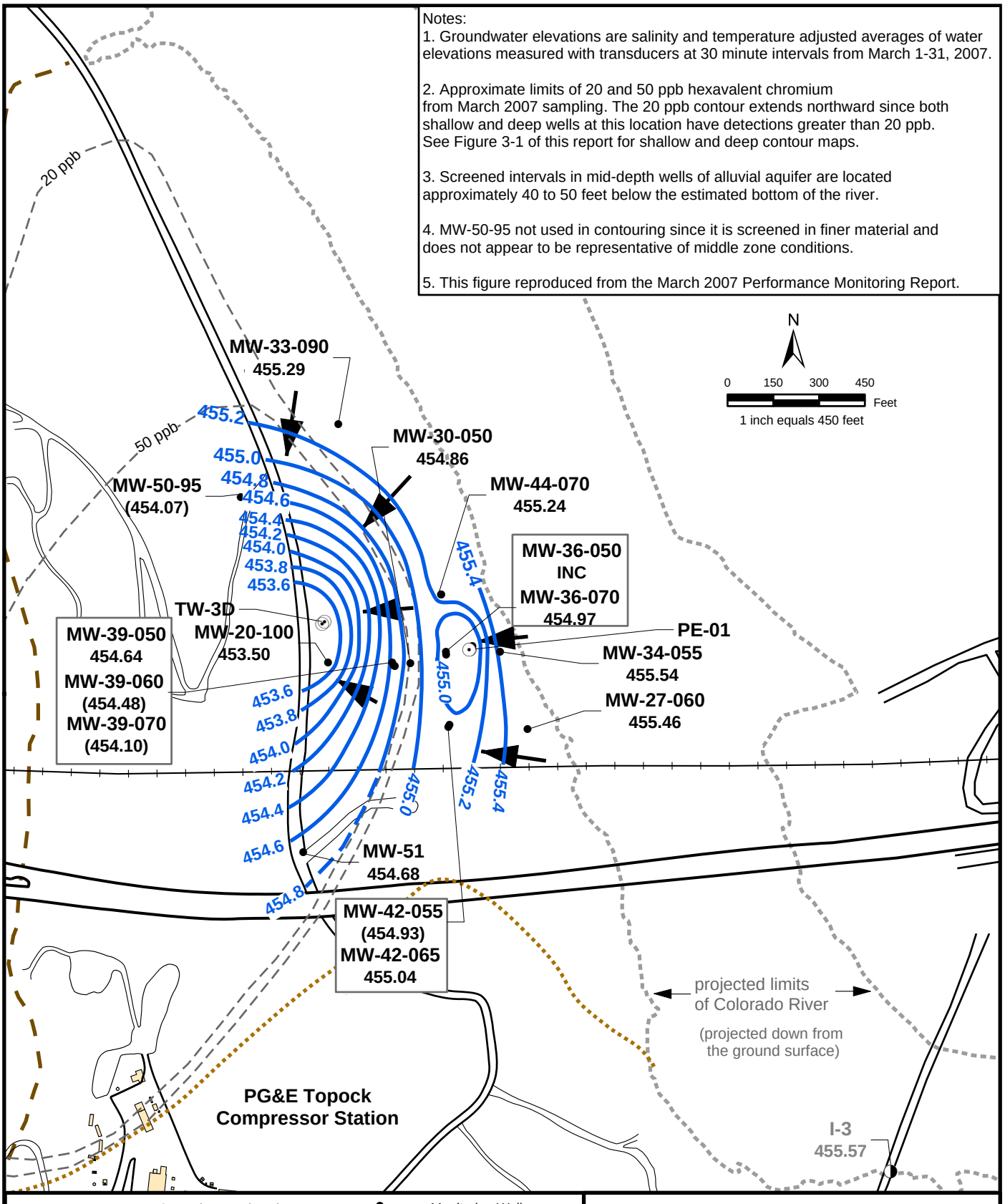


FIGURE C-2B
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS MARCH 2007

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_MA_March07.MXD

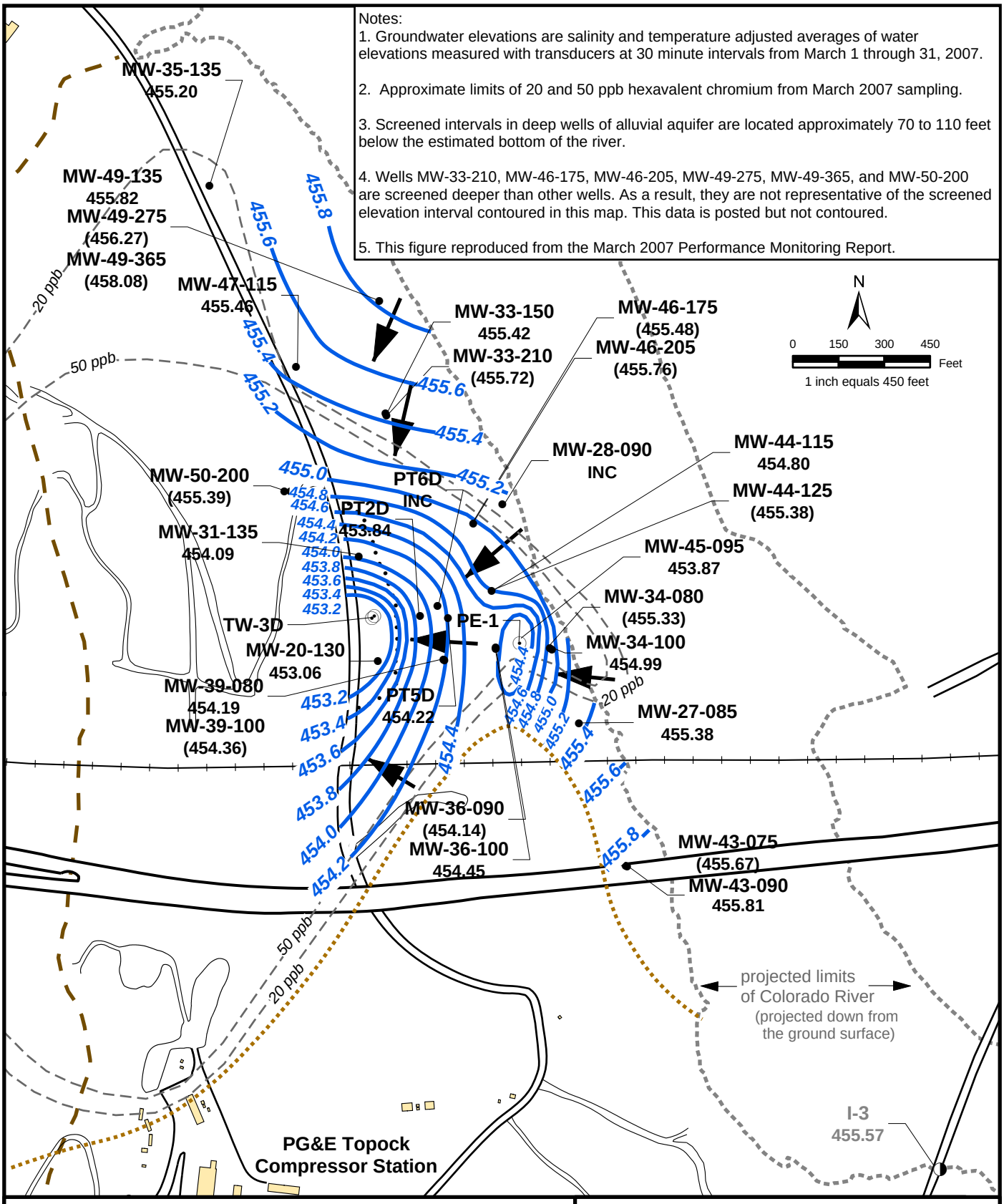


FIGURE C-2C
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MARCH 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MapFiles\2007\GW\GW\IM_Average_groundwater_LA_Mar_07.mxd

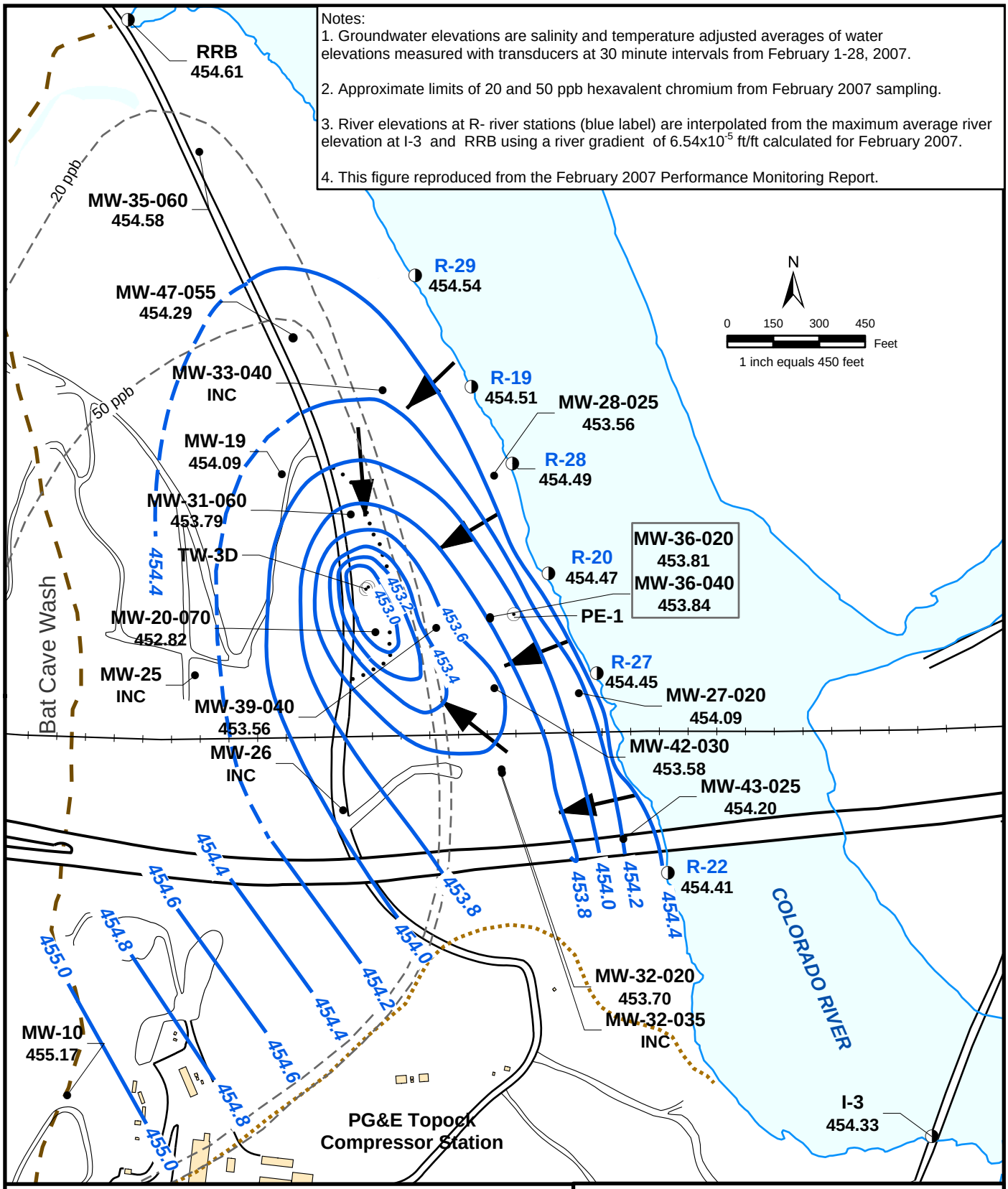


FIGURE C-2D
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, FEBRUARY 2007

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

CH2MHILL

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MapFiles\2007\GW\IM_Average_groundwater_UA_Feb07.mxd

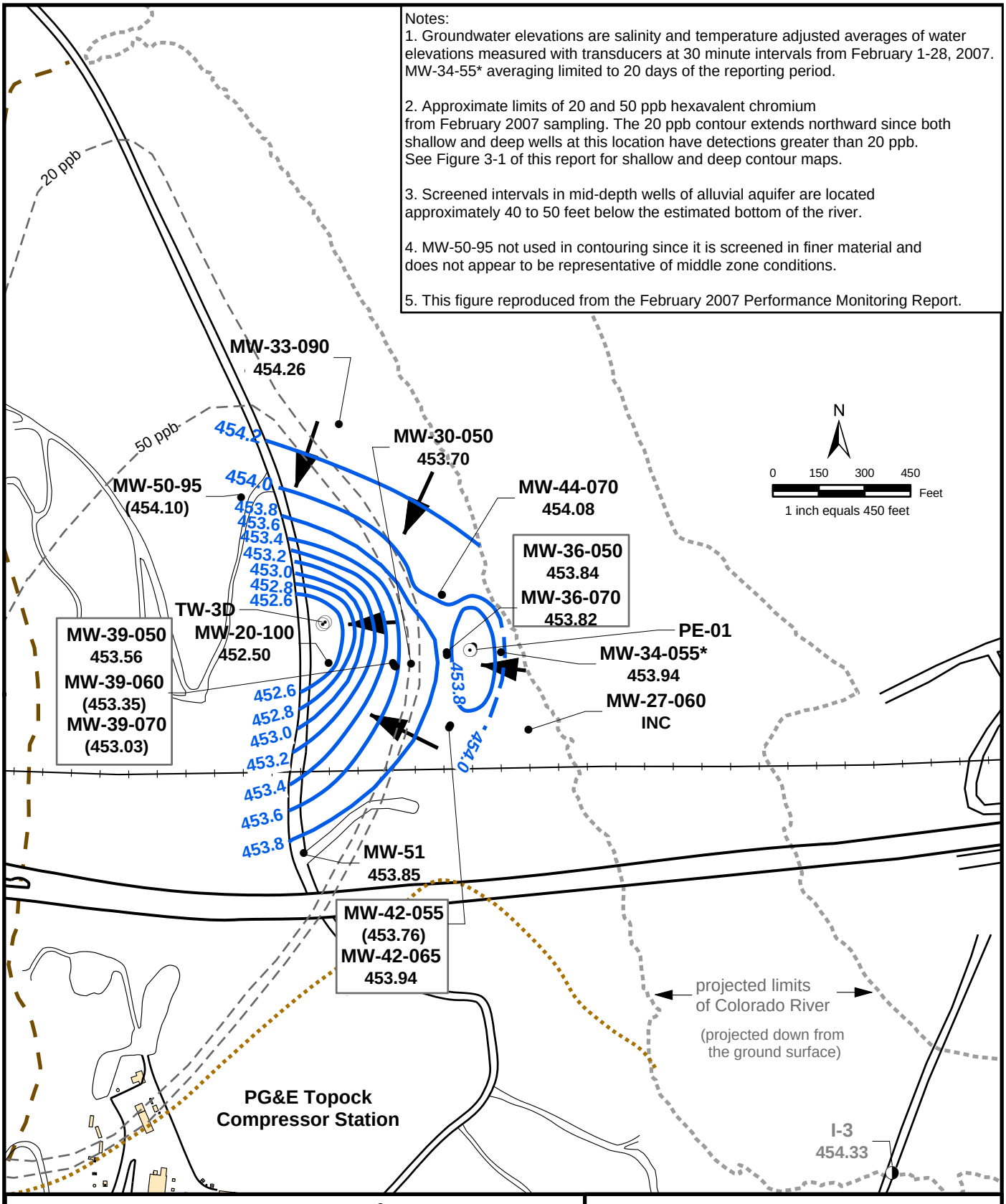


FIGURE C-2E
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS FEBRUARY 2007

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2007\GW\IM_AVERAGE_GROUNDWATER_MA_Feb07.MXD

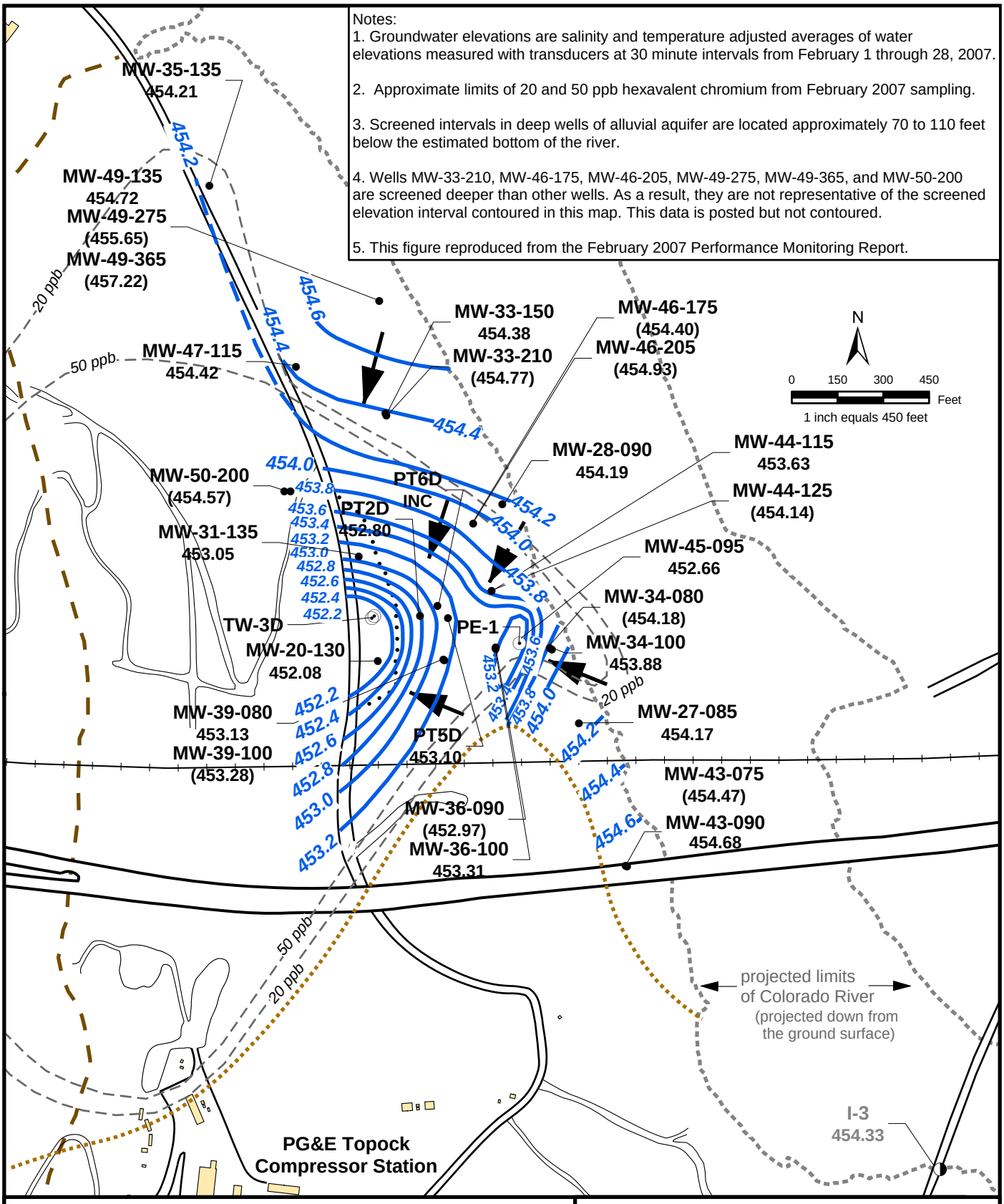


FIGURE C-2F
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS FEBRUARY 2007

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MapFiles\2007\GW\GW\IM_Average_groundwater_LA_Feb_07.mxd

Appendix D
Chemical Performance Monitoring Analytical Results

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through April 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
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
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
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through April 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	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
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
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through April 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-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
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2005 through April 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-32-20	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
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
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
	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

TABLE D-1
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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-34-80	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
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
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
	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

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.