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May 30, 2006

Norman Shopay
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Geology and Corrective Action Branch
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Subject: First Quarter 2006 Performance Monitoring Report
Interim Measures Performance Monitoring Program
PG&E Topock Compressor Station, Needles, California

Dear Mr. Shopay:

Enclosed is the *Performance Monitoring Report for April 2006 and Quarterly Performance Evaluation, February through April 2006* for PG&E's Interim Measures (IM) performance monitoring program for the Topock project. This report presents the April 2006 performance monitoring results for the IM hydraulic containment system and summarizes the operations and performance evaluation for the first quarter 2006 (February through April) 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,

Paul Butler for Yvonne Meeks

Enclosure
cc: Kate Burger/DTSC

Performance Monitoring Report for April 2006 and Quarterly Performance Evaluation, February through April 2006

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

Prepared for

California Department of Toxic Substances Control

on behalf of

Pacific Gas and Electric Company

May 30, 2006

CH2MHILL
155 Grand Ave. Ste. 1000
Oakland, CA 94612

Performance Monitoring Report for April 2006
and
Quarterly Performance Evaluation, February through April 2006

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PG&E Topock Compressor Station
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May 30, 2006

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

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

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Acronyms and Abbreviations

µg/L	micrograms per liter (essentially the same as parts per billion [ppb])
cfs	cubic feet per second
Cr(T)	total chromium
Cr(VI)	hexavalent chromium
DTSC	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

1.0 Introduction

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

In a letter dated February 14, 2005, the California Department of Toxic 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 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 for the period from February 1 through April 30, 2006. The next monthly report for the May 2006 reporting period will be submitted on June 15, 2006. The next quarterly performance monitoring report will be submitted on August 30, 2006.

1.1 Report Organization

In support of the IM performance evaluation, the quarterly report presents documentation for:

- Monthly performance monitoring results for April 2006 and status of the extraction and treatment system (Section 2.0).
- Evaluation of quarterly performance data including the extraction system, chromium distribution and trends in the floodplain area, hydraulic gradients and river levels during the period of February through April 2006 (Section 3.0).
- Conclusions (Section 4.0).

2.0 Performance Monitoring Report for April 2006

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 2006 are defined as:

- **Floodplain Wells** (monitoring wells on the Colorado River floodplain): MW-22, MW-27 cluster (3), MW-28 cluster (2), MW-29, MW-30 cluster (2), MW-32 cluster (2), MW-33 cluster (4), MW-34 cluster (3), MW-36 cluster (6), MW-39 cluster (6), MW-42 cluster (3), MW-43 cluster (3), MW-44 cluster (3), MW-45, and MW-46 cluster (2).
- **Intermediate Wells** (monitoring wells located immediately north, west, and southwest of the floodplain): MW-12, MW-19, MW-20 cluster (3), MW-21, MW-26, MW-31 cluster (2), MW-35 cluster (2), and MW-47 cluster (2).
- **Interior Wells** (monitoring wells located upgradient of IM pumping): MW-10 and MW-25.

Additional new wells at locations MW-48, MW-49, MW-50, and MW-51 (Figure 2-1) were installed in April-May 2006 but were not completed and/or equipped for performance monitoring during the first quarter reporting period.

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 PE-1 was completed in January 2006. Testing and commissioning of PE-1 began on January 25, with full-time operation of the well beginning on January 26, 2006.

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 groundwater extraction system for the period April 1 through 30, 2006 are shown in Table 2-1. During the reporting period, extraction wells TW-3D and PE-1 operated at a combined target pump rate of 135 gallons per minute (gpm), excluding periods of planned and unplanned downtime.

The April 2006 monthly average pumping rate was 128.7 gpm. A total of 5,559,267 gallons of groundwater was extracted and treated by the IM No. 3 treatment plant during April 2006. The operational run time for the IM extraction system was greater than 96 percent during this reporting period. An operations log for the extraction system during April 2006, including downtime, is included in Appendix A. The IM No. 3 treatment facility also treated approximately 17,075 gallons of water generated from monitoring well development and groundwater monitoring activities during April 2006.

The concentrate (i.e., brine) from the reverse osmosis system was shipped offsite under manifest as a Resource Conservation and Recovery Act non-hazardous waste and transported to United States Filter Corporation in Los Angeles, California for treatment and disposal. Two containers of solids (approximately 14 cubic yards each) from the IM No. 3 facility were disposed at the Chemical Waste Management at the Kettleman Hills facility during April 2006.

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

Table 2-2 summarizes the analytical results 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. Future monitoring of the extraction well(s) water quality will be completed at the frequency required by the Waste Discharge Requirements issued for the IM No. 3 treatment facility.

2.3 Chromium Sampling Results

The groundwater monitoring wells in the floodplain area are currently sampled for hexavalent chromium [Cr(VI)], total chromium [Cr(T)], and field water quality parameters under quarterly, monthly, biweekly, and weekly schedules, in accordance with the approved groundwater monitoring plan and DTSC directives. On July 20, 2005, DTSC approved a modified sampling schedule for groundwater monitoring in the floodplain that specified monthly sampling of 12 selected monitoring wells, biweekly sampling of one well (MW-34-100), and quarterly sampling of the other monitoring wells in the PMP area. Under DTSC direction, this frequency was modified on January 26, 2006 to include monthly sampling of MW-36-70 and MW-39-70 (previously quarterly).

Eight of the new recently installed IM monitoring wells (locations MW-44, MW-45, MW-46, and MW-47) were sampled for chromium during April 2006, and are the results are presented in this performance monitoring report. The remaining new IM monitoring wells (locations MW-48, MW-49, MW-50, and MW-51) were sampled in May 2006 and the results will be presented with the other wells in the performance monitoring network in the next monthly monitoring report. In accordance with DTSC directives (issued January 6, March

17, April 13 and 25, 2006), the new monitoring wells at the MW-44 and MW-46 locations have been sampled for chromium on monthly, biweekly, and weekly schedules following initial well sampling. The sampling frequency for groundwater wells in the PMP area (including the new IM monitoring wells shown on Figure 2-1) will be evaluated and confirmed with DTSC in June 2006, pending review of the initial and recent sampling results.

Figure 2-2 presents a plan view map of the April 2006 Cr(VI) results for wells in the upper, middle, and lower depth intervals of the Alluvial Aquifer. Figure 2-2 also shows the approximate locations of the 20 μg/L and 50 μg/L Cr(VI) contour lines in groundwater within each depth interval. The California drinking water standard for Cr(T) is 50 μg/L.

The Cr(VI) sampling results from the April 2006 monthly sampling event are shown on Figure 2-3, a vertical cross-section extending east-west across the floodplain. Figure 2-4 presents the April 2006 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). The hydrogeologic cross sections presented on Figures 2-3 and 2-4 have been updated with the results from the new monitoring wells recently installed (MW-44 cluster, MW-45, and MW-46 cluster). For ongoing IM performance evaluation, Cr(VI) concentration trend graphs and hydrographs for key floodplain monitoring wells are presented on Figures B-1 (well MW-33-90), B-2 (MW-34-100), and B-3 (MW-36-100) in Appendix B.

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 November 2005 through April 2006. Table B-2 presents the groundwater sampling data for the other wells monitored in the PMP area during the reporting period. The sampling results for the eight new IM monitoring wells sampled in March-April 2006 are included in the Appendix B tables.

2.4 Hydraulic Gradient Results

During the reporting period, water levels were recorded at intervals of 30 minutes with pressure transducers in 54 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 April 30, 2006) and are summarized in Appendix C, Table C-1. Reported groundwater elevations (or hydraulic heads) are adjusted for salinity and temperature differences between wells (i.e., adjusted to a common freshwater equivalent), as described in the Performance Monitoring Plan. Groundwater elevation hydrographs (for April 2006) for all wells with transducers are included in Appendix C. The Colorado River elevation (I-3 gage station) during April 2006 is also shown on the hydrographs.

The April 2006 groundwater gradient maps for the upper, middle, and lower depth intervals in the floodplain wells are shown on Figures 2-5, 2-6, and 2-7, respectively. The groundwater elevations for all depth intervals of the Alluvial Aquifer indicate strong

landward hydraulic gradients along the floodplain. To the west of the pumping area, the hydraulic gradient in the upper depth interval is easterly and consistent with the regional gradient outside of the floodplain area. The landward gradients measured during April 2006 were steeper than previous months due to high extraction rates (monthly average 129 gpm) and high river levels during the reporting period. The average monthly groundwater elevations are also presented and contoured in cross-section on Figure 2-8 (location of cross-section shown on Figure 2-1).

Table 2-3 summarizes the estimated and actual Davis Dam releases and river elevations since April 2004. The actual Davis Dam April 2006 release (18,300 cubic feet per second [cfs]) was greater than the United States Bureau of Reclamation (USBR) projected release for the October reporting period (16,600 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.

With the initiation of pumping from PE-1 (late January 2006) and new IM monitoring well installations (February and March 2006), the gradient well pairs used for performance monitoring will be re-evaluated with DTSC in the upcoming months. Since new gradient well pairs have not yet been selected, the hydraulic gradients for the current reporting period have been calculated using the initially-defined gradient wells pairs (see Figure 2-1).

Gradients between the northern well pair (MW-31-135/MW-33-150) central well pair (MW-20-130/MW-34-80) and southern well pair (MW-20-130/MW-42-65) were measured in April 2006. As shown in Table 2-4, the average gradients in these well pairs were landward at magnitudes that were three to more than four times greater than the target value of 0.0010 feet/foot (0.0031, 0.0039, and 0.0043, respectively). These landward gradients were greater than the average gradients measured in February and March 2006.

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 status report will be a monthly performance monitoring report. It will cover the May 2006 reporting period be submitted by June 15, 2006.

Per DTSC direction, PG&E will continue to operate both TW-3D and PE-1 at a target combined pumping rate of 135 gpm during May 2006, 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. R7-2004-0103. Brine generated as a byproduct of the treatment process will continue to be transported offsite.

PG&E will balance the pumping rates between 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 TW-3D, PG&E will request authorization from DTSC to increase the pumping rate at TW-3D and decrease the rate at PE-1. Well TW-2D will serve as a backup extraction well to TW-3D and PE-1.

Current USBR projections show that the average Davis Dam release for May 2006 (15,500 cfs) will be slightly less than in April 2006 (18,300 cfs). Based on May 8, 2006 USBR projections, it is anticipated that the Colorado River level at the I-3 gage location in May 2006 will decrease slightly (less than 0.1 foot) compared to levels in April 2006. Future adjustments in pumping rates from the IM extraction system will be proposed based on expected river levels, observed groundwater gradients, potential system modifications, and other relevant factors.

3.0 Quarterly Performance Evaluation for February through April 2006

3.1 Extraction System Operations

Between February and April (first quarter) 2006, a total of 16,902,462 gallons of groundwater was extracted. The average extraction rate for the IM system during the quarter was 131.9 gpm. A summary of quarterly average extraction rates and volumes by extraction well is provided in Table 2-1.

3.2 Cr(VI) Distribution and Trends in Floodplain Area

Figure 3-1 presents the average Cr(VI) results in plan view from February through April 2006 for floodplain wells in the upper, middle, and lower depth intervals of the Alluvial Aquifer. Average groundwater Cr(VI) concentration contours of 50 µg/L and 20 µg/L are depicted along with the number of sampling events that occurred at each well. Based on the average Cr(VI) concentrations observed during the February-April 2006 quarterly period and sampling from new monitoring wells at MW-44, MW-46, and MW-47, the inferred plume limit contours north and northeast of the MW-20 bench have changed from the previous quarterly period.

Figure 3-2 presents the east-west floodplain cross-section A posted with average Cr(VI) concentrations for the February-April 2006 quarterly period. The approximate Cr(VI) contours (based on quarterly average concentrations) are shown along with the number of sampling events that occurred at each well. Figure 3-3 presents the quarterly average Cr(VI) concentrations for February-April 2006 sampling in the north-south oriented cross-section B on the floodplain. The locations of the cross-sections are shown on Figure 2-1. With the incorporation of sampling results from new wells at MW-44, and MW-46, the Cr(VI) contours depicted in the cross-sections for the quarterly average concentrations are similar to the April 2006 Cr(VI) results cross-section displays (Figures 2-3 and 2-4).

Hexavalent chromium concentration trend graphs and hydrographs for floodplain wells with consistent Cr(VI) concentrations above the analytical reporting limit are presented in Figures B-1 through B-14. Four of the monitoring wells with consistent Cr(VI) detections (MW-36-90, MW-39-60, MW-39-70, and MW-39-80) showed declining Cr(VI) concentrations during sampling in first quarter 2006 relative to the prior 2005 results. This is presumably a result of IM pumping. Results for MW-34-100 show a brief decrease, after the initiation of PE-1 pumping, followed by an increase in Cr(VI) concentrations (Figure B-2). During the current quarter and past year of sampling, MW-34-100 is the only well within the capture zone of the IM pumping that has shown an increasing trend in concentration. It is important to note that landward gradients have been present at this location throughout this time. Declining or stable concentration trends continue to be observed at the MW-33, MW-36, and MW-39 well clusters. However, the Cr(VI) concentrations at MW-36-100 in March and April

2006 have increased slightly compared to the sampling results prior to the initiation of PE-1 pumping.

For the new wells sampled through April 26, 2006, Cr(VI) has been detected above 20 µg/L in only the deep wells MW-44-115, MW-44-125, MW-45-95, and MW-46-175. Concentration graphs for the MW-44 and MW-46 wells with two months' of data are included in Appendix B on Figures B-12, B-13, and B-14. Although the March-April data are limited for assessing trends, initial data suggest that the April Cr(VI) concentrations appear to be relatively stable at MW-44-115 and MW-46-175, while increasing at MW-44-125. As shown on the April 2006 gradient map (Figure 2-7), strong landward gradients are present in the lower depth interval at MW-44 and MW-46.

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 November 2005 through April 2006 are presented in Tables B-1 and B-2 (Appendix B). Table B-1 also presents the groundwater elevations collected during the same period. 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.

Table D-1 (Appendix D) presents the results of the general chemistry and stable isotope analyses for select monitoring wells in the IM performance monitoring area and river locations during sampling events from March 2004 through April 2006. Figure 2-1 shows the locations of the monitoring wells sampled for the performance monitoring parameters. Wells are sampled for specific chemical parameters in order to monitor the performance and 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.

Fourteen floodplain wells sampled for chemical performance monitoring parameters over the period of March 2004 through April 2006. Table D-1 also presents the general chemistry data for the Colorado River water samples (locations R-27, R-28). While groundwater concentrations in most parameters have remained consistent and stable in the majority of these wells (nitrate, bromide, boron), the two-year monitoring data indicate some measurable changes in water quality during IM extraction. Well MW-30-50 has continued to be non-detect for nitrate [and Cr(VI)] since September 2004 (Table D-1), apparently the result of more reducing water from the shallow portion of the aquifer being pulled down to this well depth.

Concentrations of TDS, chloride, sulfate, calcium, sodium and other general chemistry parameters have decreased in the wells at the MW-20 cluster, MW-28-25, and MW-31-60 over the monitoring period (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). Chemical performance monitoring data

at shallow floodplain wells MW-32-20 and MW-32-35 show overall pronounced increasing concentrations in these same parameters, reflecting an influx of more saline groundwater at these locations over the monitoring period. Little change in general chemistry concentrations are observed in shallow depth interior wells MW-25 or MW-26. Further assessment of the performance monitoring wells will continue to be conducted as additional monitoring data are collected.

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 2006 are included in this report as follows:

- April 2006: Figures 2-5 through 2-7 presented at the end of this report
- March 2006: Appendix C, Figures C-2A through C-2C
- February 2006: Appendix C, Figures C-2D through C-2F

A review of the groundwater level contours on these figures shows that all floodplain monitoring wells where Cr(VI) was detected at greater than 20 µg/L are within the capture zone of the IM extraction system during each month of this reporting period, February through April 2006. 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.

Average quarterly groundwater elevations (February through April 2006, inclusive) for the deep wells are presented and contoured in plan view on Figure 3-4. The average quarterly groundwater elevations are also presented and contoured in floodplain cross-section A (Figure 3-5). The landward hydraulic gradients for the deep monitoring wells shown on Figure 3-4 are consistent with the strong landward gradients observed in groundwater elevation maps for the deep interval submitted in the monthly performance monitoring reports.

With the initiation of pumping from PE-1 (late January 2006) and new IM monitoring well installations (February and March 2006), gradient well pairs will be re-evaluated in the upcoming months. As noted in Section 2.4, since new gradient well pairs have not yet been selected, the hydraulic gradients to be reported for the first quarter (February-April) 2006 evaluation period use the initially-defined gradient wells pairs:

- 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 between key gradient well pairs in February, March, and April 2006 are summarized in Table 3-1. The mean landward hydraulic gradients were between two and four times greater than the target gradient of 0.001 feet/foot for all

gradient pairs during all periods monitored during this quarterly reporting period. Measured gradients in the central well pair are now affected by PE-1 pumping, and thus underestimating the true gradient present. Figure 3-6 presents a graphical display of the measured hydraulic gradients and pumping rates and river levels throughout the quarterly monitoring period. River levels were increasing and IM pumping rates were steady throughout the first quarter 2006 period, resulting in increasing measured landward gradients for each of the well pairs during February, March, and April performance monitoring.

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 early spring (April and May) and smallest monthly releases in winter (December and January). Superimposed on this annual cycle, 24-hour releases often fluctuate on a diurnal cycle. 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 is less than the magnitude of the monthly average river stage fluctuations over a typical year.

Figure 3-7 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 May and June 2006, and that the lowest water levels will occur in December 2006. Because water demand is based on climatic factors, there is more uncertainty in these projections at longer times in the future.

4.0 Conclusions

The groundwater elevation and hydraulic gradient data for February, March, and April 2006 performance monitoring indicate that the minimum landward gradient target of 0.001 feet/foot was met during the quarterly reporting period. As summarized in Table 3-1, the landward gradients during February, March, and April 2006 were two to greater than four times the required minimum magnitude in all well pairs. The IM pumping was sufficient to meet the minimum gradient targets during each of the three months of the first quarter 2006.

The existing gradient well pairs are adequate to define the capture of the plume, with extraction from pumping well TW-3D. Although none of the designated well pairs is aligned directly with the hydraulic gradient, the slight misalignments could only cause an underestimate of the true gradient. With the initiation of pumping from PE-1 (late January 2006) and new IM monitoring well installations (February and March 2006) these gradient well pairs will be re-evaluated in upcoming months.

A total of 16,902,462 gallons of groundwater was extracted and treated from the IM system during the February through April (first quarter) 2006 reporting period. The average pumping rate for the IM extraction system during the quarterly reporting period was 131.9 gpm.

Hexavalent chromium continues to be detected in the deep floodplain monitoring well MW-34-100. The Cr(VI) concentrations in this well have shown a generally increasing trend since it was installed in February 2005 (Figure B-2). This increasing trend is in contrast to nearly all other floodplain wells, which show decreasing or stable trends. It should be noted that landward gradients have been present at MW-34-100 since it was installed. The increasing trend in chromium concentration at this well is therefore not an indication of chromium migration to the east. The hydraulic monitoring data and gradients measured this quarter indicate that the current IM pumping is inducing landward groundwater flow in the aquifer interval that is monitored at MW-34-100. Pumping from PE-1, which started on January 26, 2006, has further increased landward gradients near MW-34-100.

Overall, the Cr(VI) concentrations in the floodplain are stable or decreasing. For the current quarter, Cr(VI) concentrations at wells in the MW-33 cluster, MW-36-90, and the MW-39 cluster (MW-39-60, 70, 80) were stable to declining relative to the previous quarter. MW-39-50 concentrations remained non-detect this quarter as was observed the past three quarters. Concentrations of Cr(VI) have increased slightly at MW-36-100 since the onset of PE-1 pumping. The exception to these trends is well MW-34-100, in which concentrations are increasing. It is anticipated that, with continued pumping from TW-3D and PE-1 (started in January 2006), Cr(VI) concentrations in well MW-34-100 will ultimately show the same declining trends observed in the MW-39 and MW-36 well clusters.

Hexavalent chromium has been detected above 20 µg/L in four of the eight new IM monitoring wells that were sampled through April 26, 2006. Although the March-April data is limited for assessing trends, the initial data suggest that the April Cr(VI) concentrations

appear to be relatively stable at MW-44-115 and MW-46-175, and increasing at MW-44-125. Strong landward gradients are present in the lower depth interval at the MW-44 and MW-46 locations. The remaining new IM monitoring wells (locations MW-48, MW-49, MW-50, and MW-51) were sampled in May 2006 and the results will be presented with the other wells in the performance monitoring network in the next monthly monitoring report.

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) 2006 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.

5.0 References

CH2M HILL. 2005a. *Performance Monitoring Plan for Interim Measures in the Floodplain Area.* April 15.

_____. 2005b. *Sampling and Analysis Field Procedures Manual, PG&E Topock Program.* March 31.

Department of Toxic Substances Control (DTSC). Letter. "Criteria for Evaluating Performance Requirements of Interim Measure to Hydraulic Control of Chromium Plume in Floodplain." February 14.

Tables

Figures

Appendix A
Extraction System Operations Log for April 2006

Appendix B
Chromium Sampling Results for Monitoring Wells in Floodplain Area

Appendix C
Hydrographs and Hydraulic Gradient Maps for Reporting Period

Appendix D
Chemical Performance Monitoring Analytical Results

Tables

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

Extraction Well	April 2006 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	52,875,356
TW-3D	95.0	4,103,740	97.0	12,426,731	17,724,659
PE-1	33.7	1,455,527	34.9	4,475,731	4,817,611
Total	128.7	5,559,267	131.9	16,902,462	76,412,064
				Volume Pumped from the MW-20 Well Cluster	1,527,724
				Total Volume Pumped (gal)	77,939,788
				Total Volume Pumped (ac-ft)	239.2

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, 2006 at 12:00 a.m. and April 30, 2006 at 11:59 p.m. (30 days).
[b] Pumping results during the quarterly period are based on readings collected between February 1, 2006 at 12:00 a.m. and April 30, 2006 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.

TABLE 2-2
Analytical Results for Extraction Wells, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Sample Date	Dissolved Total Chromium mg/L	Hexavalent Chromium mg/L	Total Dissolved Solids mg/L
TW-2D	02-Nov-05	3.63 UF	3.75	5950
TW-2D	07-Dec-05	3.67 UF	3.60	5840
TW-2D	18-Jan-06	1.98	2.18	6930
TW-2D	15-Mar-06	1.36	1.36	5220 J
TW-2S	15-Mar-06	2.87	2.72	1620 J
TW-3D	18-Jan-06	4.72	4.33	5090
TW-3D	08-Feb-06	2.88	3.25	5490
TW-3D	08-Mar-06	3.21	3.04	5380
TW-3D	06-Apr-06	2.71	2.95	5740
PE-1	08-Feb-06	0.136	0.136	7380
PE-1	08-Mar-06	0.125	0.136	6830
PE-1	06-Apr-06	0.117	0.133	6680

Notes:

mg/L = concentration in milligrams per liter (mg/L)
UF = unfiltered
J = concentration or reporting limit estimated by laboratory or data validation.
(---) = data not collected.

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

The TW-2D analytical results from August through December 2005 were obtained from a sample point (SC-100B) on the influent conveyance system at the IM3 treatment system. These samples were unfiltered and represent total recoverable chromium.

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

Month	Davis Dam Release			Colorado River Elevation at I-3		
	Projected (cfs)	Actual (cfs)	Difference (cfs)	Predicted (ft AMSL)	Actual (ft AMSL)	Difference (feet)
April 2004	17,400	17,354	-46	456.4	456.2	-0.2
May 2004	17,100	16,788	-312	456.3	456.3	0.0
June 2004	15,800	16,869	1,069	455.8	456.6	0.8
July 2004	14,000	14,951	951	455.2	455.9	0.7
August 2004	12,100	12,000	-100	454.5	454.9	0.4
September 2004	11,200	10,979	-221	454.2	454.6	0.4
October 2004	8,600	7,538	-1,062	453.2	453.5	0.3
November 2004	9,500	8,075	-1,425	453.6	453.4	-0.2
December 2004	6,200	8,090	1,890	452.4	453.3	0.9
January 2005	8,800	4,900	-3,900	453.4	452.4	-1.0
February 2005	8,000	4,820	-3,180	453.1	452.6	-0.5
March 2005	15,600	7,110	-8,490	455.8	452.9	-2.9
April 2005	16,700	16,306	-394	455.9	456.0	0.1
May 2005	16,700	15,579	-1,121	456.2	456.1	-0.1
June 2005	14,600	15,223	623	455.8	456.1	0.3
July 2005	15,400	15,612	212	456.0	456.0	0.0
August 2005	11,700	11,544	-156	454.6	454.8	0.2
September 2005	12,400	12,335	-65	454.6	NA	NA
October 2005	12,300	11,201	-1,099	454.5	454.3	-0.2
November 2005	10,900	10,216	-684	454.3	454.3	0
December 2005	6,900	6,745	-155	452.8	452.7	-0.1
January 2006	8,400	9,166	766	453.2	453.6	0.4
February 2006	11,100	10,790	-310	454.1	454.1	0.0
March 2006	13,000	12,429	-571	454.7	454.8	0.1
April 2006	16,600	18,300	1700	456.0	456.1	0.1
May 2006	15,500	----	----	456.0	----	----

NOTES:

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

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

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

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

TABLE 2-4
Average Hydraulic Gradients Measured at Well Pairs, April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well Pair[1]	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Dates 2006
Northern Gradient Pair		
MW-31-135 / MW-33-150	0.0031	April 1-30
Central Gradient Pair		
MW-20-130 / MW-34-80	0.0039	April 1-30
Southern Gradient Pair		
MW-20-130 / MW-42-65	0.0043	April 1-30

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

TABLE 3-1

Average Hydraulic Gradients Measured at Well Pairs, February through April 2006

Interim Measures Performance Monitoring

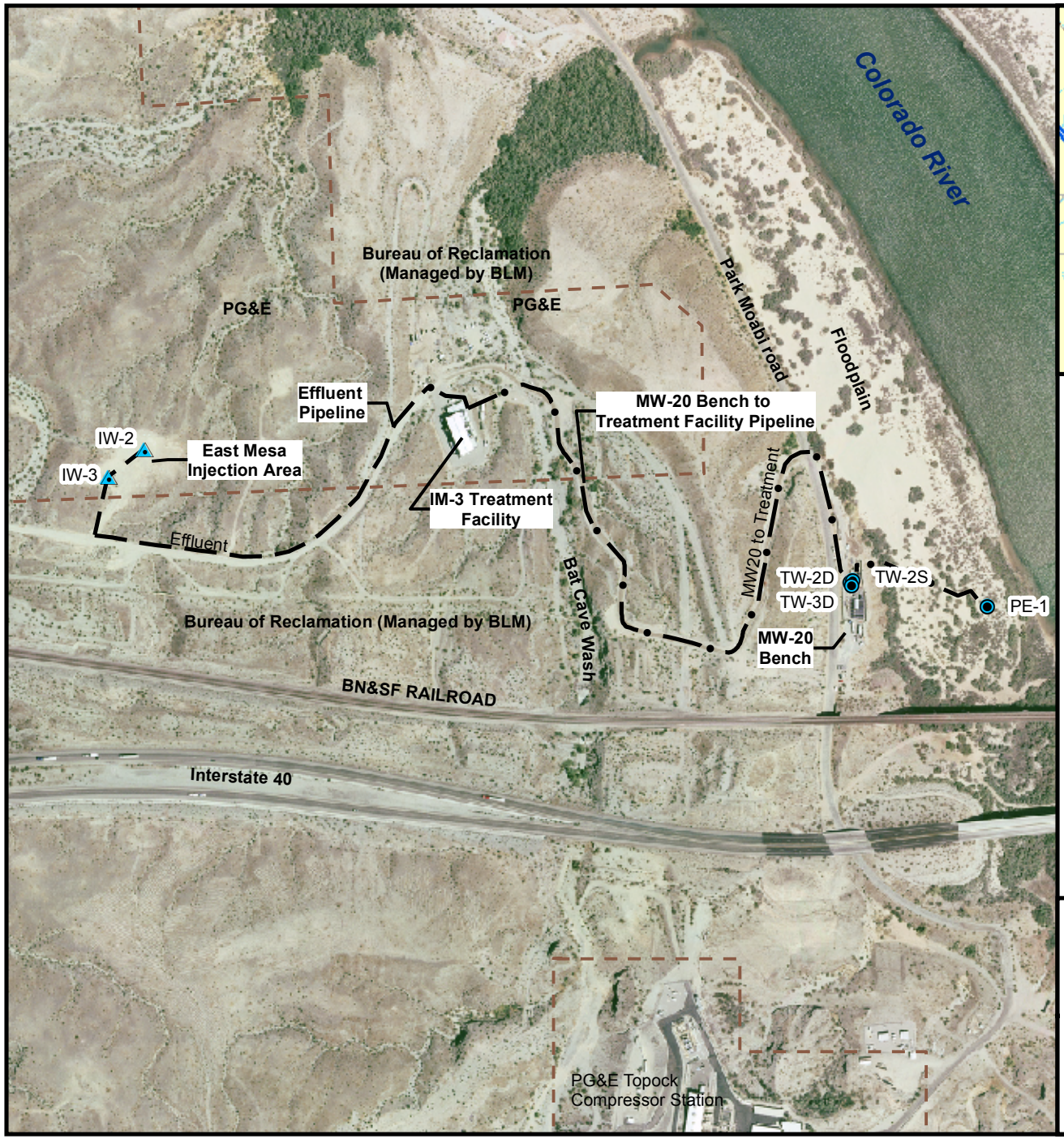
PG&E Topock Compressor Station

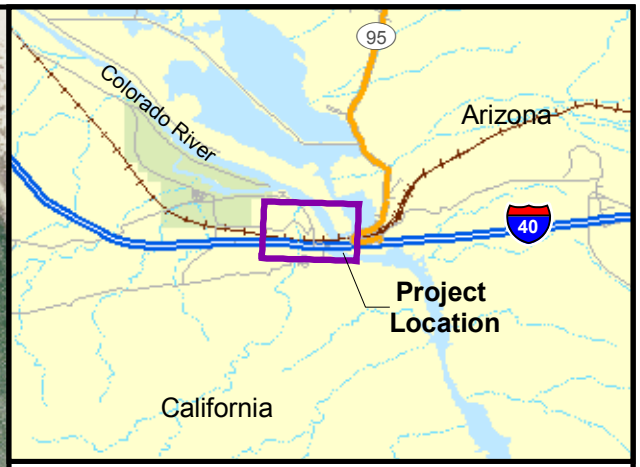
Well Pair[1]	Reporting Period	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Interval 2006
Northern Gradient Pair			
MW-31-135 / MW-33-150	February	0.0024	February 1-28
	March	0.0026	March 1-31
	April	0.0031	April 1-30
Central Gradient Pair			
MW-20-130 / MW-34-80	February	0.0033	February 1-28
	March	0.0036	March 1-31
	April	0.0039	April 1-30
Southern Gradient Pair			
MW-20-130 / MW-42-65	February	0.0037	February 1-28
	March	0.0039	March 1-31
	April	0.0043	April 1-30

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

Figures





N

0 550 1,100 Feet

1 inch equals 550 feet

LEGEND

- PG&E Property Line
- Existing IM Extraction Well
- Existing IM Injection Well
- Treatment Facility Pipeline

Notes: Location map shows Interim Measure No.3 (IM-3) wells as of November 2005. 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

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\IM3_MARCH06_LOCS_IM3_FACILITIES8X11.MXD IM3_MARCH06_LOCS_IM3_FACILITIES8X11.PDF 3/6/2006 09:50:10

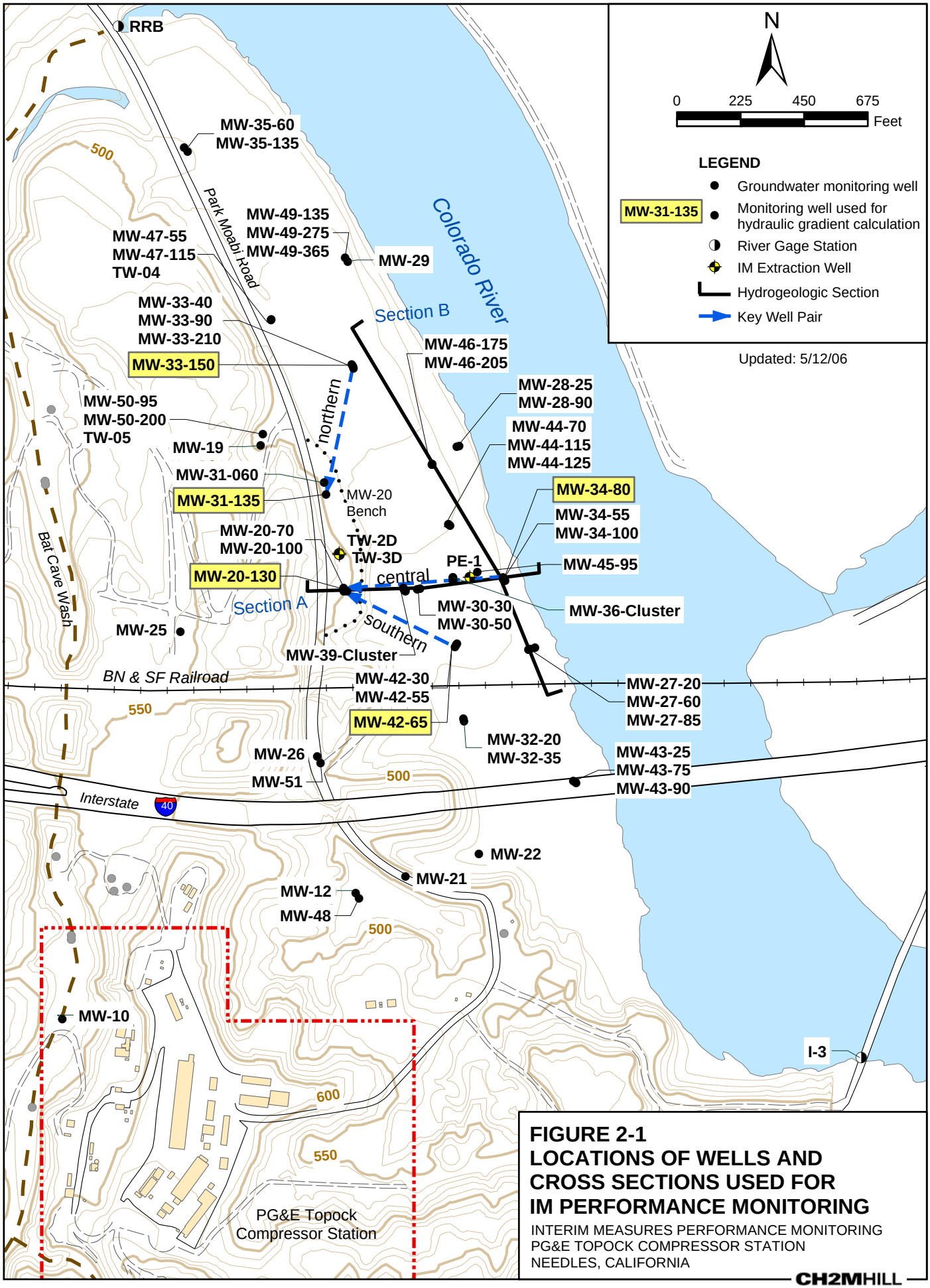


FIGURE 2-1
LOCATIONS OF WELLS AND CROSS SECTIONS USED FOR IM PERFORMANCE MONITORING

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

CH2MHILL

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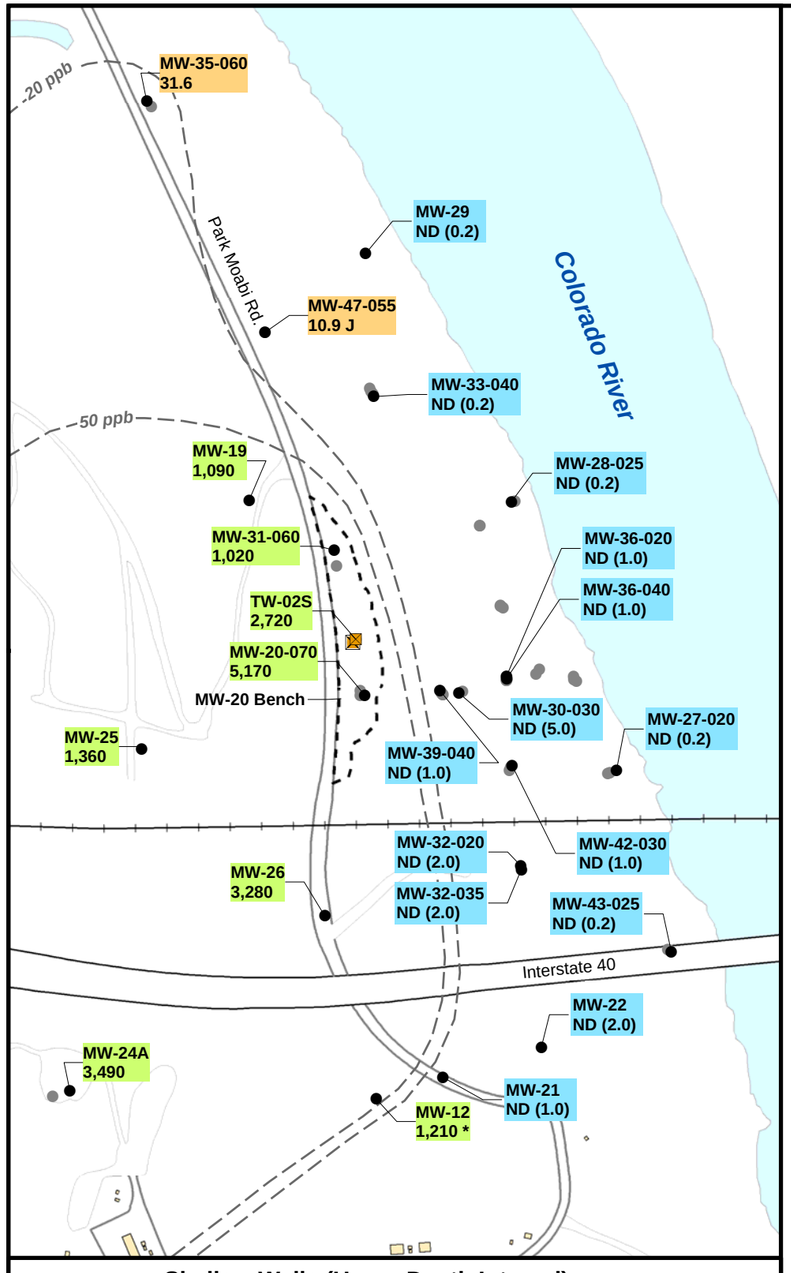
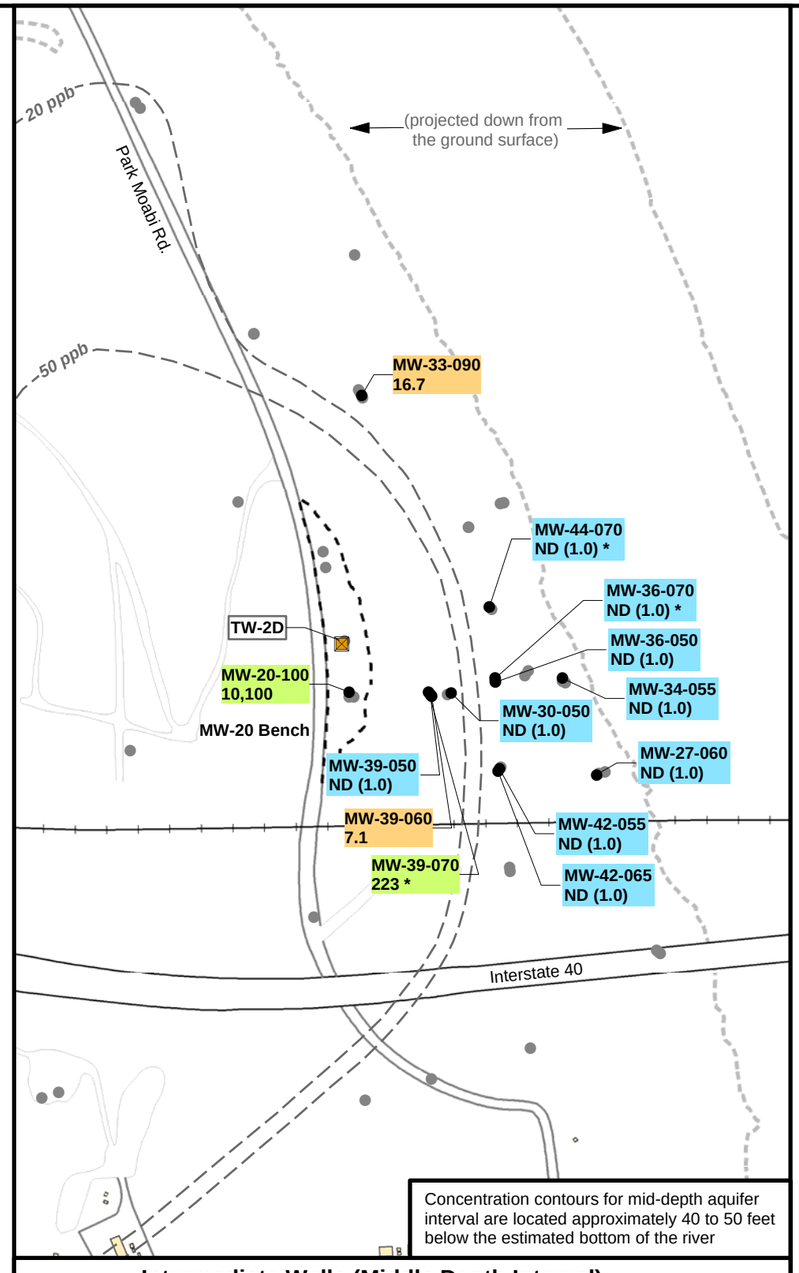
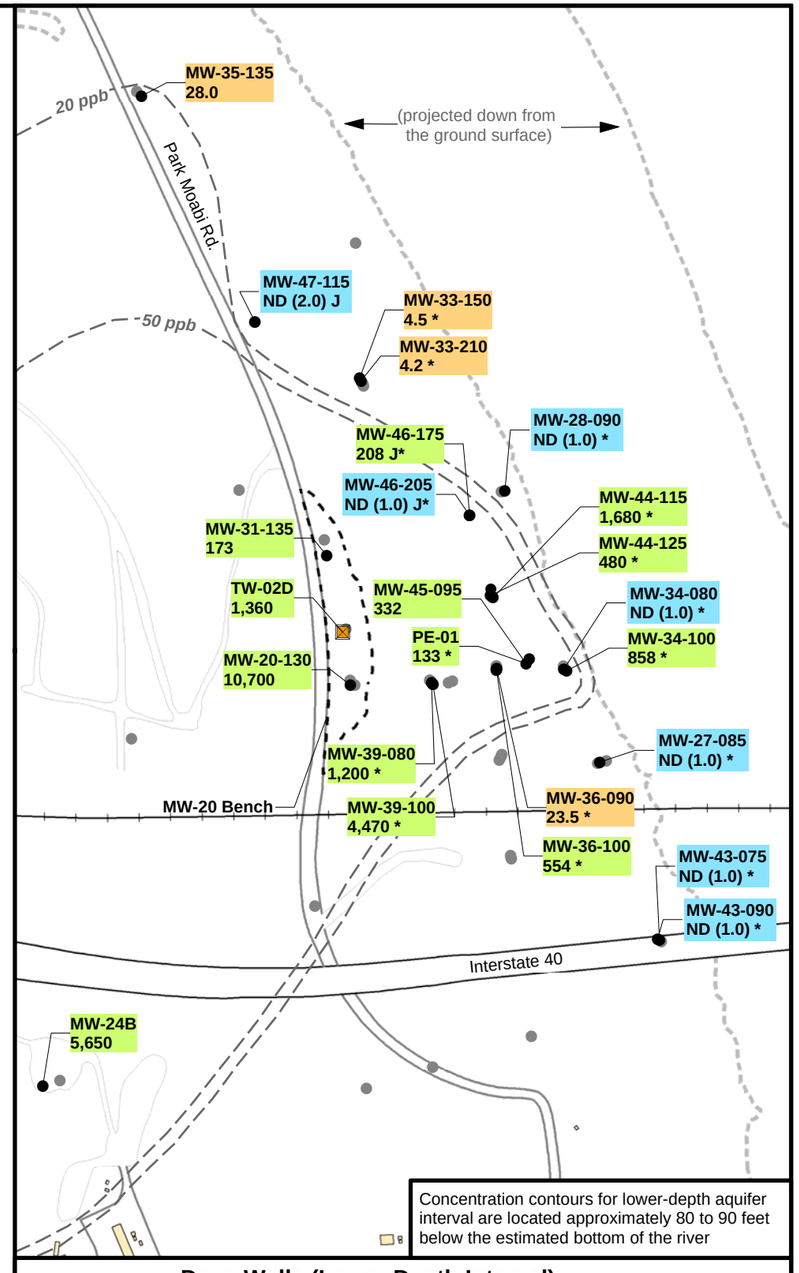


Shallow Wells (Upper Depth Interval)



Concentration contours for mid-depth aquifer interval are located approximately 40 to 50 feet below the estimated bottom of the river

Intermediate Wells (Middle Depth Interval)



Concentration contours for lower-depth aquifer interval are located approximately 80 to 90 feet below the estimated bottom of the river

Deep Wells (Lower Depth Interval)

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

Notes:
All results marked * are from April 2006 sampling events. All other results are from March 2006 sampling events. MW-29 data from December 2005 sampling event.

See Tables B-1 and B-2 for data and dates of sampling.

Data posted is the maximum measured concentration of all sampling events and duplicates measured over the reporting period.

Hexavalent Chromium Concentrations in Groundwater April 2006 Sampling Event

Concentrations in micrograms per liter (µg/L) equivalent to parts per billon (ppb)
ND = not detected at listed reporting limit.
J = Analyte is present but the reported value may not be accurate or precise (estimated)

N

0 400 800 Feet

1 inch equals 400 feet

FIGURE 2-2
CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, APRIL 2006

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

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West

East
Section A

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

TW-3D
projected: 130'

MW-20 Cluster

MW-39 Cluster

MW-30-30
MW-30-50

MW-36 Cluster

PE-1

MW-45-95
projected: 30'

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

Colorado River

Elevation (feet above MSL)

550
500
450
400
350
300
250

water table (avg 454' MSL)

ALLUVIAL AQUIFER

Upper Depth Interval

Middle Depth Interval

Lower Depth Interval

Approximate geologic contact between alluvial fan (west) and fluvial deposits (east)

5,170
10,100
10,700
132'
157'
180'

ND (1.0)
ND (1.0)
7.1
223 *
1,200 *
4,470 *
118'

ND (5.0)
ND (1.0)
67'

ND (1.0)
ND (1.0)
ND (1.0)
ND (1.0) *
23.5 *
554 *
108'

133 *
332
97'
105'

ND (1.0)
ND (1.0) *
858 *
116'

5,000
10,000
500
1,000
20
50

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

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

water level
well screen
boring depth (feet)
3,420
103'

50
Inferred Hexavalent Chromium concentration contour

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

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

42 Less than 50 ppb

3,810 Greater than 50 ppb

Notes:
All results marked * are maximum measured concentrations from April 2006 sampling events.
All other results are from March 2006 sampling events.
See Table B-1 for sampling data.

FIGURE 2-3
CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION A
APRIL 2006

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

CH2MHILL

G:\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GINT\INPUT\GINT_WORK_FILE_TYPES\GDW\X-SECTIONS\PMR\2Q06QUARTERLY\FIGURE_2-3_X-SEC-A-05-23-06.GDW;

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)

Upper Depth Interval
Middle Depth Interval
Lower Depth Interval

ALLUVIAL AQUIFER

Oldest Alluvium

Fluvial Deposits

Approximate geologic contact between alluvial fan and fluvial deposits

ND (0.2)
16.7
4.5 *
4.2 *
237'

ND (0.2)
ND (1.0) *
148'
208 J*
ND (1.0) J*
216'

ND (1.0) *
1,680 *
480 *
134'

ND (1.0)
ND (1.0) *
858 *
116'

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

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:
Cross section updated March 2006 with MW-44 and MW-46 drilling data.

Results marked * are maximum measured concentrations from April 2006 sampling events. All other results are from March 2006 sampling events.
J = Analyte is present but the reported value may not be accurate or precise (estimated).
See Table B-1 for sampling data.

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

-— — 50 -— —
Inferred Hexavalent Chromium concentration contour

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

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

FIGURE 2-4
CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B
APRIL 2006

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

CH2MHILL

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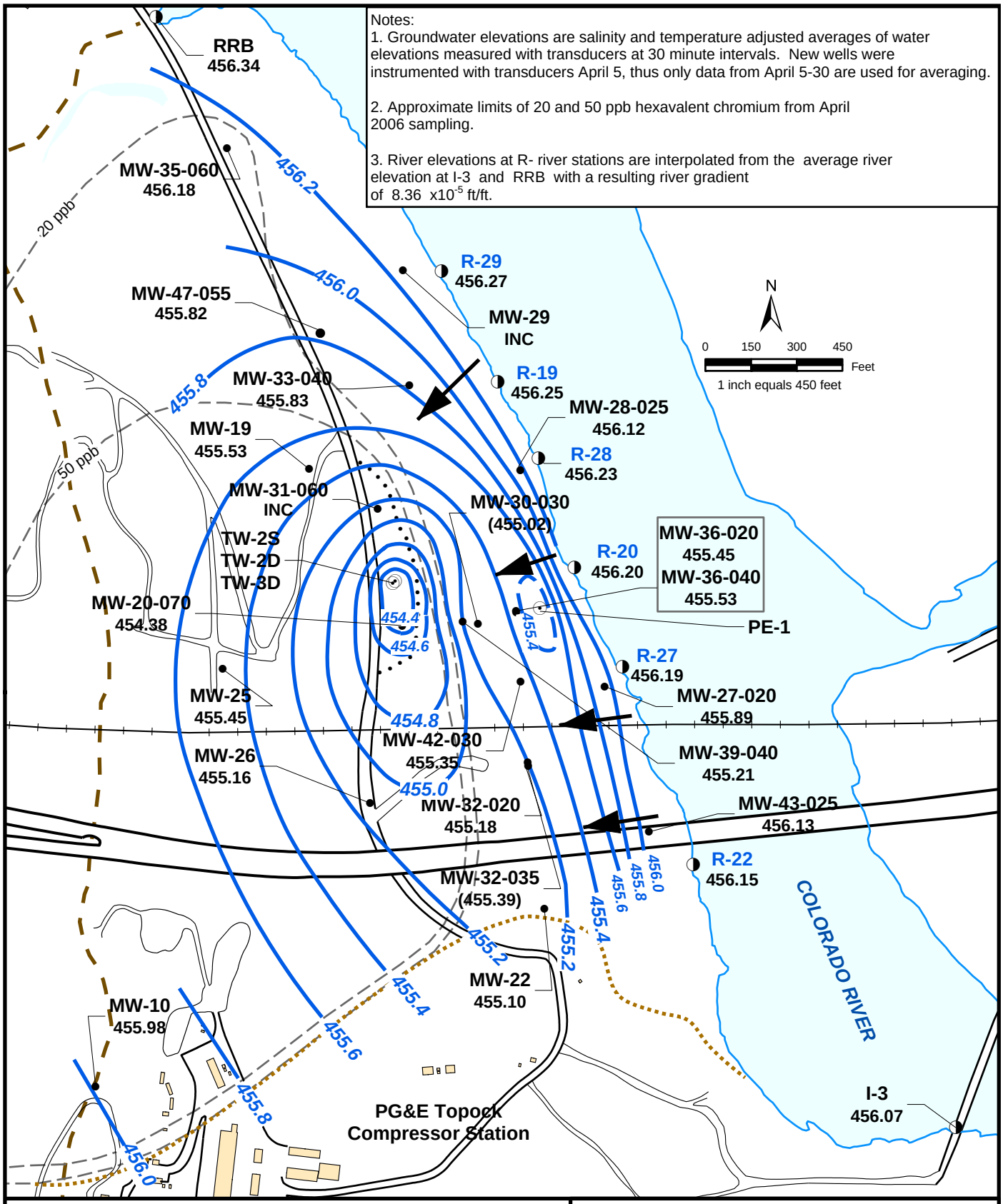

FIGURE 2-5
AVERAGE GROUNDWATER SHALLOW WELLS AND RIVER APRIL, 2006

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

CH2MHILL

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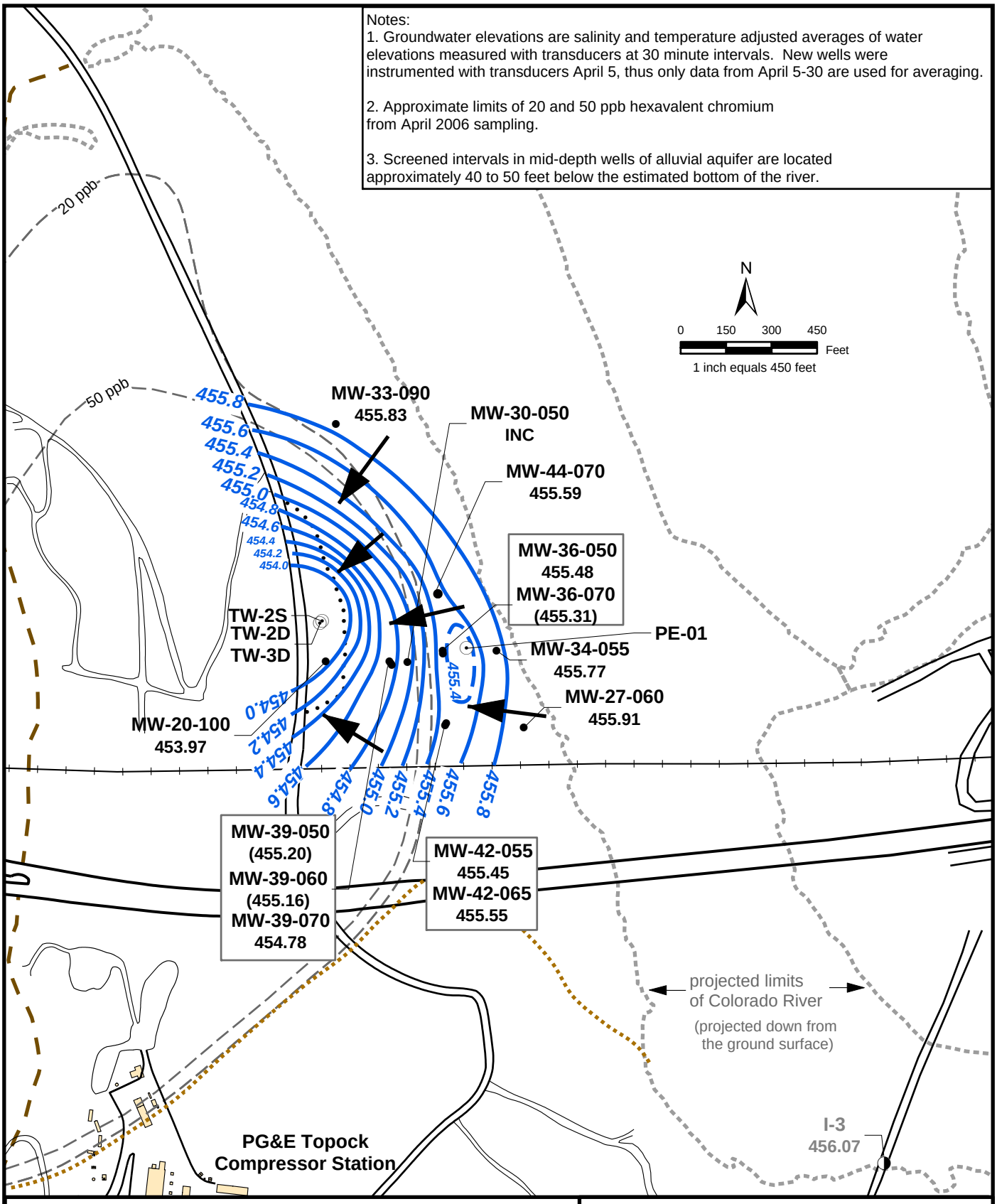

FIGURE 2-6
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS APRIL 2006

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

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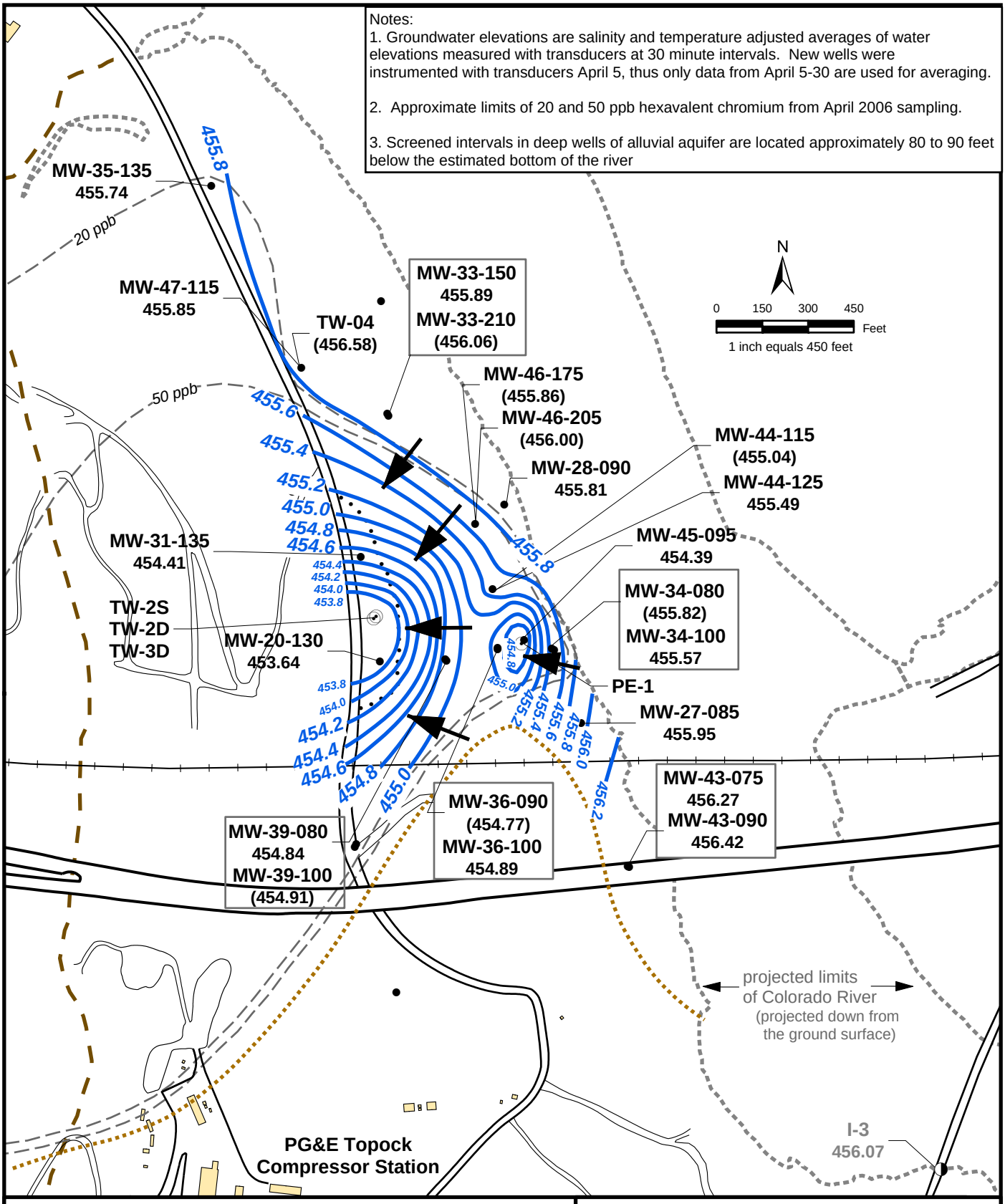

FIGURE 2-7
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS APRIL 2006

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

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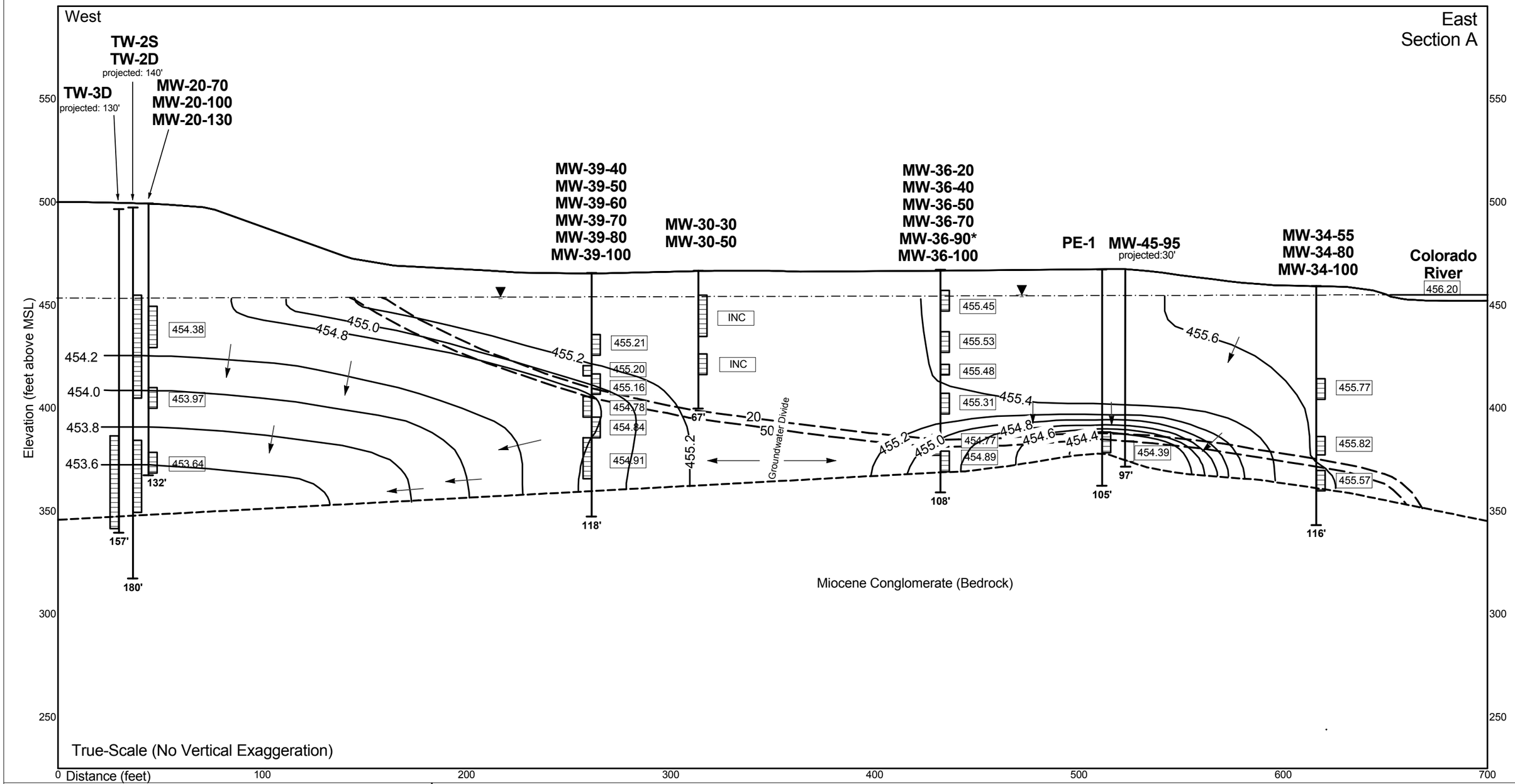
BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\GW\IM_Average_groundwater_LA_April5-30_06.mxd



Notes:
Results show average groundwater elevations for April 5-30, 2006 measured with transducers at 30 minute intervals.
Groundwater elevations adjusted for salinity and temperature.

INC = Data unavailable or incomplete at time of reporting.
Well MW-36-90* excluded from contouring.

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

Legend:

MW-30-50
Inferred water table
well screen
453.66
103 boring depth (feet)

20
Inferred hexavalent chromium contour (ppb) April, 2006

Average groundwater head (ft MSL)

453.5
Groundwater head contour

453.5
Inferred groundwater head contour

Interpreted groundwater flow direction

FIGURE 2-8
AVERAGE GROUNDWATER ELEVATIONS
FLOODPLAIN CROSS-SECTION A
APRIL 2006

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

CH2MHILL

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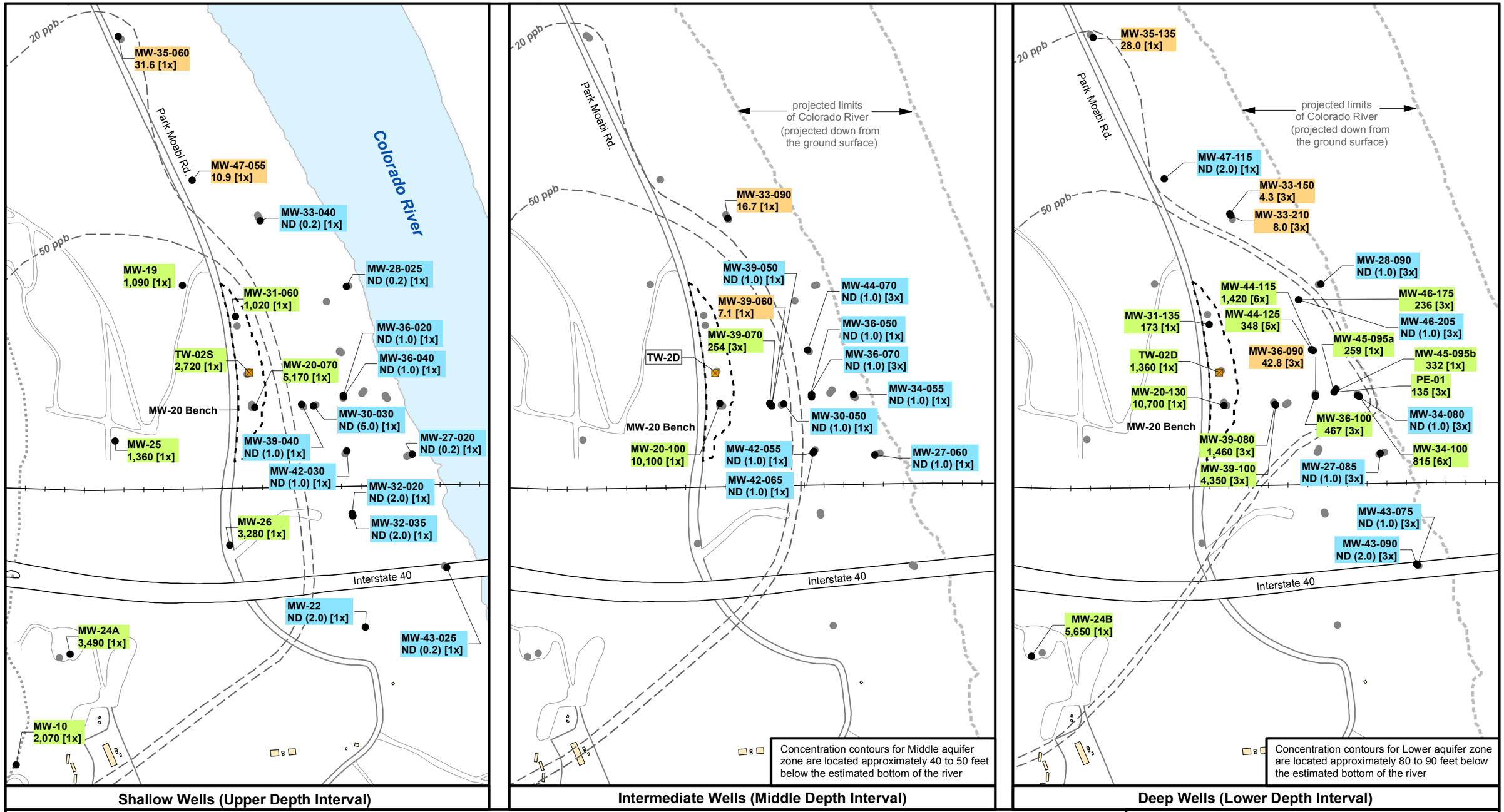

Shallow Wells (Upper Depth Interval)

Intermediate Wells (Middle Depth Interval)

Deep Wells (Lower Depth Interval)

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

MW-12 626 [1x] Brackets [1x] indicate number of sampling events during the quarterly reporting period

Average Hexavalent Chromium [Cr (VI)] Concentrations
February - April 2006 Sampling Events

Concentrations in micrograms per liter (µg/L)
equivalent to parts per billon (ppb)
ND = not detected at listed reporting limit.

N

0 400 800 Feet

1 inch equals 400 feet

FIGURE 3-1
AVERAGE CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER
FEBRUARY - APRIL 2006
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 Cluster

MW-39 Cluster

MW-30-30
MW-30-50

MW-36 Cluster

PE-1

MW-45-95
projected: 30'

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

Colorado River

Elevation (feet above MSL)

550
500
450
400
350
300
250

water table (avg 454' MSL)

ALLUVIAL AQUIFER

Upper Depth Interval

Middle Depth Interval

Lower Depth Interval

Approximate geologic contact between alluvial fan (west) and fluvial deposits (east)

5,170 [1x]
10,100 [1x]
10,700 [1x]
132'
157'
180'

ND (1.0) [1x]
ND (1.0) [1x]
7.1 [1x]
254 [3x]
1,460 [3x]
4,350 [3x]
118'

ND (5.0) [1x]
ND (1.0) [1x]
67'

ND (1.0) [1x]
ND (1.0) [1x]
ND (1.0) [1x]
ND (10) [3x]
42.8 [3x]
467 [3x]
108'

135 [3x]
332 [1x]
97'
105'

ND (1.0) [1x]
ND (1.0) [3x]
815 [6x]
116'

5,000
500
50
20

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

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

water level
well screen
boring depth (feet) 103'

10.1 [7x]

Quarterly Average Cr(VI) concentration in micrograms per liter (ug/L), equivalent to parts per billion (ppb). Brackets indicate number of sampling events during the quarterly reporting period.

Note: Results plotted are averages from maximum samples for monitoring events during the reporting period; see Tables B-1 and B-2 for complete results

50 Inferred Cr(VI) Contour

Hexavalent Chromium [Cr(VI)] Concentrations, Averaged for February-April 2006 Sampling Events

ND(5)	Not detected at listed reporting limit (ppb)
10.1	Less than 50 ppb
1,257	Greater than 50 ppb

FIGURE 3-2
AVERAGE CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION A
FEBRUARY-APRIL 2006

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

CH2MHILL

G:\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GINT\INPUT\GINT_WORK_FILE_TYPES\GDW\X-SECTIONS\PMR\2Q06QUARTERLY\FIGURE_3-2_X-SEC-A-05-23-06.GDW;

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) [1x]
16.7 [1x]
4.3 [3x]
8.0 [3x]
237'

ND (0.2) [1x]
ND (1.0) [3x]
148'
236 [3x]
ND (1.0) [3x]
216'

ND (1.0) [3x]
1,420 [6x]
348 [5x]
134'

ND (1.0) [1x]
ND (1.0) [3x]
815 [6x]
116'

ND (0.2) [1x]
ND (1.0) [1x]
ND (1.0) [3x]
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)

water level

well screen

boring depth (feet)

10.1 [7x]

Quarterly Average Cr(VI) concentration in micrograms per liter (ug/L), equivalent to parts per billion (ppb). Brackets indicate number of sampling events during the quarterly reporting period.

50 Inferred Cr(VI) Contour

Hexavalent Chromium [Cr(VI)] Concentrations, Averaged for February-April 2006 Sampling Events

ND(5)	Not detected at listed reporting limit (ppb)
10.1	Less than 50 ppb
1,257	Greater than 50 ppb

Note: Results plotted are averages from maximum samples for monitoring events during the reporting period; see Tables B-1 and B-2 for complete results

FIGURE 3-3
AVERAGE CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B
FEBRUARY-APRIL 2006

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

CH2MHILL

G:\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GINT\INPUT\GINT_WORK_FILE_TYPES\GDW\X-SECTIONS\PMR\2Q06QUARTERLY\FIGURE_3-3_X-SEC-B-05-23-06.GDW;

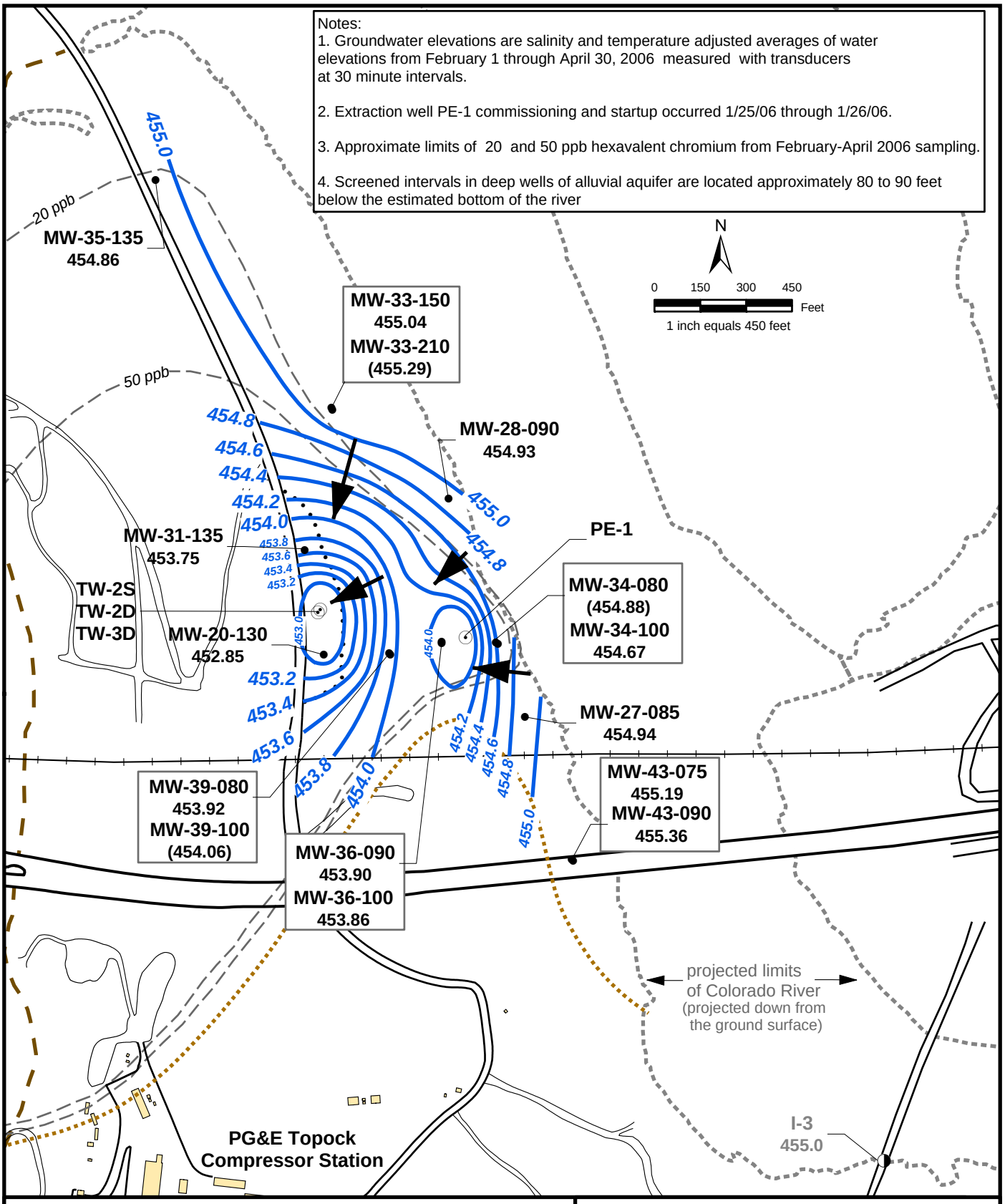

FIGURE 3-4
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS FEBRUARY-APRIL 2006

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\GW\IM_Average_groundwater_LA_Feb-April_06.mxd

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
455.13

Elevation (feet above MSL)

550
500
450
400
350
300
250

453.60
453.21
452.85
454.26
454.25
454.07
453.79
453.92
454.06
454.32
454.47
454.57
454.54
454.53
454.60
453.90
453.86
454.79
454.88
454.67

453.6
453.4
453.2
453.0
452.8
454.0
453.8
454.2
454.4
454.8
455.0
454.6
453.8
454.25
454.0

20
50
Groundwater Divide

INC

157'
180'
132'
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 February through April, 2006 measured with transducers at 30 minute intervals.
Groundwater elevations adjusted for salinity and temperature.

Wells MW-30-30* and MW-36-90* excluded from contouring.
INC =MW-45-095 tranducer installed April 2006.

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

Legend:

MW-30-50
Inferred water table
well screen
453.66
103 boring depth (feet)

20
Inferred hexavalent chromium contour (ppb) February-April, 2006

Average groundwater head (ft MSL)

453.5
Groundwater head contour

453.5
Inferred groundwater head contour

Interpreted groundwater flow direction

FIGURE 3-5
AVERAGE GROUNDWATER ELEVATIONS, FLOODPLAIN CROSS-SECTION A
FEBRUARY THROUGH APRIL 2006

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

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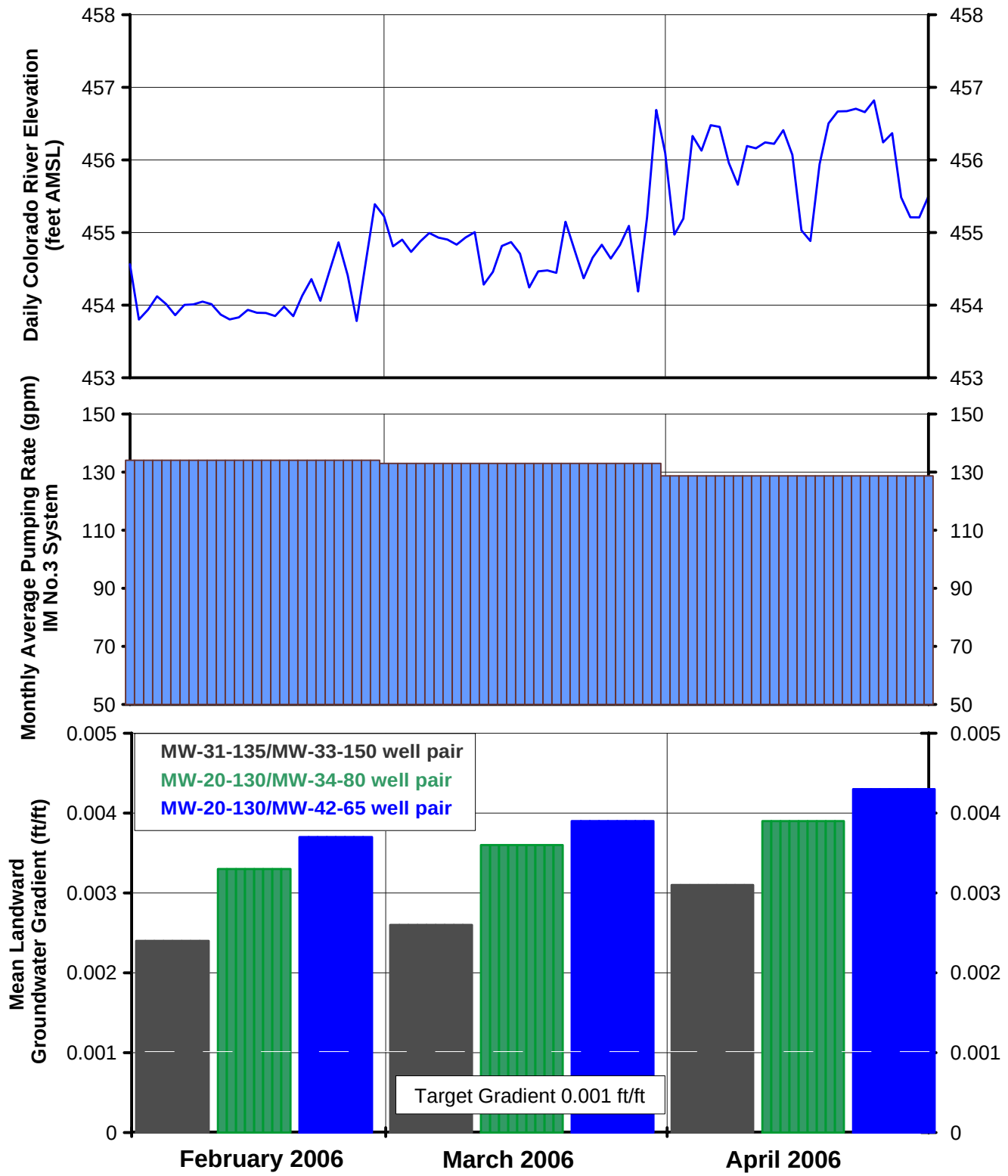

Notes:
1) For IM pumping, the target landward gradient for well pairs is 0.001 feet/foot.
2) Refer to Table 2-1 and Section 2.1 for discussion of pumping data.
3) Pumping rate plotted is the the combined rate of extraction wells in operation each month.
4) Refer to Tables 2-4 and 3-1 and sections 2.4 and 3.4 for discussion of gradient data.

FIGURE 3-6
MEASURED HYDRAULIC GRADIENTS, RIVER ELEVATION, AND PUMPING RATE FEBRUARY 2006 THROUGH APRIL 2006
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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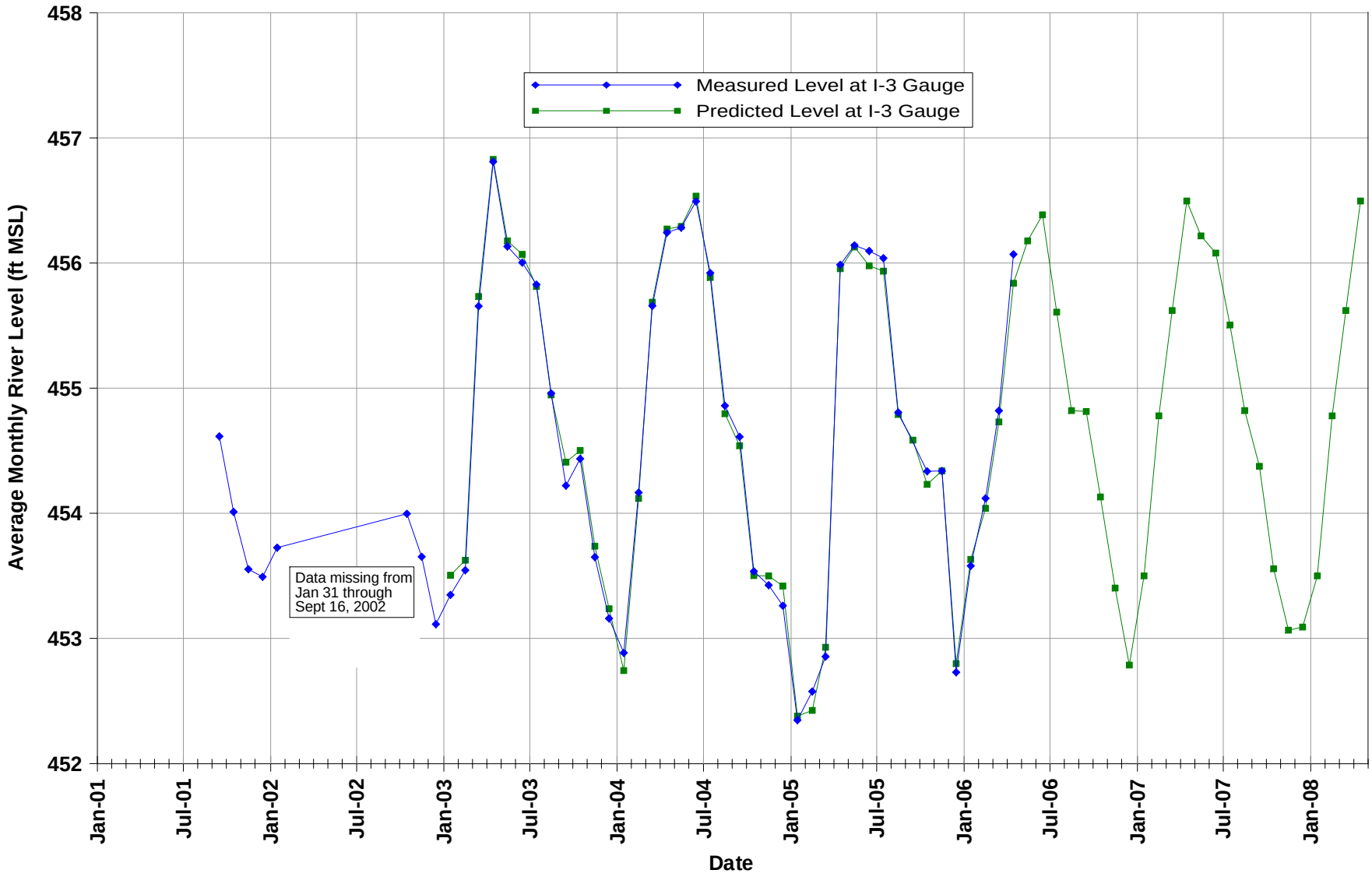

FIGURE 3-7
PAST AND PREDICTED FUTURE RIVER LEVELS AT TOPOCK COMPRESSOR STATION
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note:
Projected river level is calculated based on monthly averages of Davis Dam release and stage in Lake Havasu as of May 5, 2006.
Measured data through April 30, 2006.

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Appendix A
Extraction System Operations Log for April 2006

Appendix A
Extraction System Operations Log for April 2006
PG&E Topock Interim Measures Performance Monitoring Program

During April 2006, extraction wells TW-3D and PE-1 operated at a target pump rate of at 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime. The operational run time for the IM groundwater extraction system (combined or individual pumping from TW-3D and PE-1) was approximately 96 percent during the April reporting period.

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

- **April 4, 2006 (planned)**: The IM No. 3 extraction well system was shut down from 10:24 a.m. until 4:50 p.m. to complete non-intrusive testing of the high-pressure piping on the reverse osmosis unit. Extraction system downtime was 6 hours, 26 minutes.
- **April 5, 2006 (unplanned)**: The IM No. 3 extraction well system was shut down from 1:50 p.m. until 3:44 p.m. due to a power failure at the site. Extraction system downtime was 1 hour, 54 minutes.
- **April 6, 2006 (unplanned)**: The IM No. 3 extraction well system was shut down from 1:02 p.m. until 1:12 p.m. to switch from generator power back to Needles power. Extraction system downtime was 10 minutes.
- **April 12, 2006 (unplanned)**: The IM No. 3 extraction well system was shut down from 3:22 p.m. until 5:58 p.m. due to a pump motor failure on the reverse osmosis unit. Extraction system downtime was 2 hours, 36 minutes.
- **April 14, 2006 (unplanned)**: The IM No. 3 extraction well system was shut down from 3:41 p.m. until 3:56 p.m. and from 6:27 p.m. to 6:37 p.m. due to a power failure at the site. Extraction system downtime on April 14 was 25 minutes.
- **April 19, 2006 (unplanned)**: The IM No. 3 extraction well system was shut down from 11:42 a.m. until 11:51 a.m. during a change out of microfilter modules. Extraction system downtime was 9 minutes.
- **April 26, 2006 (planned)**: The IM No. 3 extraction well system was shut down from 2:11 a.m. until 6:20 p.m. to complete general facility maintenance. Extraction system downtime was 16 hours, 9 minutes.

Appendix B
Chromium Sampling Results for Monitoring Wells in Floodplain Area

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Shallow Wells								
MW-27-020	14-Dec-05	ND (0.2)	ND (1.0)	-171	2.2	1,120	453.2	452.5
	06-Mar-06	ND (0.2)	ND (1.0)	-153	0.4	910	455.0	455.1
MW-28-025	16-Dec-05	ND (0.2)	ND (1.0)	-69	2.5	1,390	453.3	453.1
	09-Mar-06	ND (0.2)	ND (1.0)	-54	3.5	1,140	455.2	455.2
MW-29	12-Dec-05	ND (0.2)	ND (1.0)	-40	5.5	4,280	454.0	453.1
MW-30-030	15-Dec-05	ND (5.0)	ND (1.0)	-100	3.0	38,900	453.6	452.2
	13-Mar-06	ND (5.0)	ND (1.0)	-99	1.1	55,600	454.1	454.2
MW-32-020	16-Dec-05	ND (2.0)	ND (1.0)	-107	2.7	33,900	453.3	452.7
	10-Mar-06	ND (2.0)	ND (1.0)	-125	0.4	---	454.4	455.1
MW-32-035	16-Dec-05	ND (1.0)	ND (1.0)	-141	2.4	11,200	453.1	452.7
	10-Mar-06	ND (2.0)	ND (1.0)	-161	0.1	9,570	454.7	454.9
MW-33-040	12-Dec-05	ND (1.0)	1.70	45	4.8	14,500	453.6	452.7
	09-Mar-06	ND (0.2)	ND (1.0) LF	---	---	---	454.8	455.2
MW-36-020	15-Dec-05	ND (2.0)	ND (1.0)	-112	2.4	---	452.7	452.3
	07-Mar-06	ND (1.0)	ND (1.0)	-148	2.5	18,900	---	455.2
MW-36-040	15-Dec-05	ND (1.0)	ND (1.0)	-190	2.7	15,400	452.7	452.5
	07-Mar-06	ND (1.0)	ND (1.0)	-166	3.3	17,000	454.4	454.6
MW-39-040	16-Dec-05	ND (0.2)	ND (1.0)	-177	2.1	5,680	452.7	453.1
	07-Mar-06	ND (1.0)	ND (1.0)	-162	3.0	8,450	454.1	454.3
MW-42-030	15-Dec-05	ND (1.0)	ND (1.0)	-129	2.4	14,500	452.6	452.3
	07-Mar-06	ND (1.0)	ND (1.0)	-154	0.4	11,400	454.3	454.5
MW-43-025	16-Dec-05	ND (0.2)	ND (1.0)	-184	2.5	1,420	453.0	452.7
	10-Mar-06	ND (0.2)	ND (1.0)	-153	0.3	1,350	455.3	455.4
Middle-Depth Wells								
MW-27-060	15-Dec-05	ND (1.0)	ND (1.0)	-134	2.9	10,000	452.8	452.4
	07-Mar-06	ND (1.0)	ND (1.0)	-118	2.5	13,700	454.8	454.9
MW-30-050	16-Dec-05	ND (1.0)	ND (1.0)	-263	2.5	8,840	453.1	453.0
	09-Mar-06	ND (1.0)	ND (1.0)	-81	2.4	8,800	454.2	454.2
MW-33-090	13-Dec-05	16.4	21.8 J	-43	2.3	9,310	453.7	452.9
	13-Dec-05 FD	16.5	14.0 J	FD	FD	FD	FD	FD
	08-Mar-06	16.7	14.3	-42	0.3	10,200	454.9	455.0
MW-34-055	14-Dec-05	ND (1.0)	ND (1.0)	-124	2.1	6,610	453.2	452.7
	08-Mar-06	ND (1.0)	ND (1.0)	-106	---	8,460	454.4	454.4
MW-36-050	15-Dec-05	ND (1.0)	ND (1.0)	-136	2.8	13,700	452.6	452.5
	07-Mar-06	ND (1.0)	ND (1.0)	-110	2.7	8,400	454.5	454.8
	07-Mar-06 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
MW-36-070	15-Dec-05	ND (1.0)	ND (1.0)	-108	2.3	9,310	452.7	452.3
	10-Feb-06	ND (10)	ND (1.0)	-91	2.7	12,600	453.5	453.7
	07-Mar-06	ND (1.0)	ND (1.0)	-67	2.5	9,720	454.6	455.0
	06-Apr-06	ND (1.0)	ND (1.0)	---	1.8	7,740	455.5	456.0

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Middle-Depth Wells								
MW-39-050	12-Jan-06	ND (10)	ND (1.0)	-9	2.8	18,300	453.0	453.9
	08-Mar-06	ND (1.0)	ND (1.0)	71	2.3	16,000	454.3	455.0
MW-39-060	16-Dec-05	20.4	20.4	-40	2.3	11,200	452.7	453.2
	08-Mar-06	7.10	2.70	12	2.1	20,600	453.8	454.3
	08-Mar-06 FD	6.90	2.40	FD	FD	FD	FD	FD
MW-39-070	16-Dec-05	1240	1080	22	2.2	10,000	452.4	453.0
	10-Feb-06	338	340	48	2.8	15,500	452.9	454.0
	08-Mar-06	200	169	201	2.8	16,300	453.5	454.5
	06-Apr-06	223	204	88	2.1	12,300	454.8	456.3
MW-42-055	15-Dec-05	ND (1.0)	ND (1.0)	-143	2.4	11,100	452.8	452.3
	07-Mar-06	ND (1.0)	ND (1.0)	-122	0.3	16,500	454.3	454.4
MW-42-065	15-Dec-05	ND (1.0)	ND (1.0)	-78	2.5	13,200	452.9	452.3
	07-Mar-06	ND (1.0)	ND (1.0)	-58	0.4	20,100	454.4	454.3
MW-44-070	09-Mar-06	ND (1.0)	ND (1.0)	-393	2.4	6,970	453.2	454.0
	23-Mar-06	ND (1.0) J	ND (1.0)	-166	2.4	7,600	454.1	454.1
	04-Apr-06	ND (1.0)	ND (1.0)	-96	1.6	9,200	455.3	455.3
Deep Wells								
MW-27-085	03-Nov-05	ND (2.0) J	ND (1.0)	-150	1.1	23,100	454.5	454.2
	15-Dec-05	1.20 J	6.60	-124	2.8	14,300	452.9	452.5
	12-Jan-06	ND (1.0)	ND (1.0)	-91	2.8	22,600	453.4	453.3
	08-Feb-06	ND (1.0)	ND (1.0)	-82	2.6	21,100	453.9	453.7
	06-Mar-06	ND (1.0)	ND (1.0)	-92	0.2	15,800	454.8	454.8
	03-Apr-06	ND (1.0)	ND (1.0)	-102	2.5	18,200	454.5	454.3
MW-28-090	02-Nov-05	ND (1.0)	ND (1.0)	-183	1.4	9,720	454.0	453.7
	16-Dec-05	ND (1.0)	ND (1.0)	-176	2.5	8,430	453.3	453.2
	10-Jan-06	ND (1.0)	ND (1.0)	-140	3.3	11,000	453.6	453.8
	09-Feb-06	ND (0.2) J	ND (1.0)	-156	2.8	8,830	453.8	453.8
	06-Mar-06	ND (1.0)	ND (1.0)	-151	0.3	6,830	454.4	454.4
	06-Apr-06	ND (1.0)	ND (1.0)	---	2.1	8,160	455.5	455.4
MW-33-150	02-Nov-05	5.50	4.70	-81	1.4	20,800	454.4	453.7
	12-Dec-05	6.60	5.70	21	3.9	19,200	453.7	452.8
	10-Jan-06	6.40	5.00	27	3.7	21,800	453.7	453.6
	07-Feb-06	4.30 J	6.40	-61	2.7	20,400	455.2	453.9
	08-Mar-06	4.20	3.20	-55	0.3	20,400	454.9	455.2
	06-Apr-06	4.50	3.00	39	2.1	18,300	455.5	455.2
MW-33-210	02-Nov-05	6.50	5.40	-73	1.4	24,900	454.7	453.8
	12-Dec-05	6.90	5.60	40	3.6	21,900	454.1	452.9
	10-Jan-06	7.60	5.20	13	3.2	24,200	454.0	453.3
	07-Feb-06	9.00	7.20	-14	2.7	22,800	454.6	454.0
	06-Mar-06	10.7	6.50	-37	0.2	16,600	455.1	454.5
	13-Apr-06	4.20	ND (4.2)	21	6.8	18,100	455.7	454.7
MW-34-080	03-Nov-05	ND (1.0)	ND (1.0)	-117	1.1	16,300	454.9	454.4

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-34-080	14-Dec-05	ND (1.0)	ND (1.0)	-88	2.3	10,400	453.6	453.2
	11-Jan-06	ND (1.0)	ND (1.0)	-38	3.1	18,100	453.6	453.3
	08-Feb-06	ND (1.0)	ND (1.0)	-22	2.6	16,400	454.1	454.2
	09-Mar-06	ND (1.0)	ND (1.0)	-12	2.2	15,100	454.8	454.8
	03-Apr-06	ND (1.0)	ND (1.0)	-38	2.4	13,500	454.4	454.0
MW-34-100	03-Nov-05	748 J	897	-49	1.1	19,900	454.8	454.3
	16-Nov-05	759	762	-2	4.6	16,100	---	M
	16-Nov-05 FD	763	725	FD	FD	FD	FD	FD
	30-Nov-05	791	797	-55	2.6	19,900	454.3	453.8
	30-Nov-05 FD	802	721	FD	FD	FD	FD	FD
	14-Dec-05	808	751	-26	2.3	12,400	453.3	452.6
	14-Dec-05 FD	811	791	FD	FD	FD	FD	FD
	28-Dec-05	804	824	-28	2.4	19,300	452.7	452.3
	12-Jan-06	837	771	104	3.2	21,000	454.0	454.0
	12-Jan-06 FD	856	764	FD	FD	FD	FD	FD
	23-Jan-06	822	716	136	2.6	23,300	454.0	453.8
	08-Feb-06	797	706	65	2.5	20,100	453.8	453.8
	08-Feb-06 FD	785	708	FD	FD	FD	FD	FD
	22-Feb-06	752	831	225	3.0	21,900	---	453.6
	22-Feb-06 FD	748	846	FD	FD	FD	FD	FD
	08-Mar-06	800	857	-8	---	18,600	454.2	454.3
	08-Mar-06 FD	801	773	FD	FD	FD	FD	FD
	23-Mar-06	830	851	113	2.2	18,400	454.1	454.4
	23-Mar-06 FD	828	855	FD	FD	FD	FD	FD
	03-Apr-06	858	910	42	2.8	16,800	454.1	454.1
	21-Apr-06	852	873	---	---	---	---	455.8
MW-36-090	02-Nov-05	256	247	69	1.4	19,300	453.8	453.9
	15-Dec-05	240	219	34	2.5	18,000	452.5	452.4
	12-Jan-06	245	223	13	2.8	19,500	452.8	453.4
	10-Feb-06	71.8	71.4	37	3.4	16,100	453.0	453.8
	07-Mar-06	33.0	27.5	42	3.1	14,700	453.7	454.4
	04-Apr-06	23.5	15.7	5	2.4	12,700	455.4	455.3
MW-36-100	03-Nov-05	315	368	-19	1.3	21,100	454.6	454.0
	13-Dec-05	306	333	5	2.2	16,500	453.0	452.8
	12-Jan-06	287	288	28	2.9	21,600	452.8	453.3
	09-Feb-06	307	288	18	2.6	19,700	452.9	453.6
	13-Mar-06	540	531	-16	0.2	17,400	453.1	453.7
	05-Apr-06	554	492	24	0.1	15,300	453.7	455.3
MW-39-080	02-Nov-05	3200	3020	148	1.4	17,600	453.7	454.2
	15-Dec-05	2740	2570	78	2.2	15,400	452.5	452.2
	12-Jan-06	2280	2060	58	2.9	18,200	452.4	453.7
	10-Feb-06	1750	1610	66	2.6	18,900	453.0	454.0
	08-Mar-06	1420	1400	154	2.2	20,900	453.7	454.6
	06-Apr-06	1200	1120	86	2.0	15,800	454.8	456.2

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-39-100	02-Nov-05	3580	3480	168	1.7	23,000	453.9	454.4
	02-Nov-05 FD	3650	3410	FD	FD	FD	FD	FD
	13-Dec-05	3640	3440	139	3.0	20,100	452.9	452.8
	12-Jan-06	4720	4280	121	3.6	22,900	452.6	453.7
	09-Feb-06	4500	4310	120	2.9	21,700	453.1	453.5
	13-Mar-06	4070	4640	51	0.7	20,400	452.9	453.9
	05-Apr-06	4470	4050	73	0.9	18,300	454.2	454.9
	05-Apr-06 FD	4460	4330	FD	FD	FD	FD	FD
MW-43-075	03-Nov-05	ND (2.0)	ND (1.0)	-168	1.4	16,700	454.3	453.9
	16-Dec-05	ND (1.0)	ND (1.0)	-179	2.4	15,900	453.1	452.7
	11-Jan-06	ND (1.0)	ND (1.0)	-134	3.2	18,400	453.7	453.7
	10-Feb-06	ND (1.0)	ND (1.0)	-154	3.0	18,500	454.4	454.3
	10-Mar-06	ND (1.0)	ND (1.0)	-149	0.1	14,400	455.4	455.4
	03-Apr-06	ND (1.0)	ND (1.0)	-148	2.3	15,000	454.9	454.2
MW-43-090	03-Nov-05	ND (2.0)	ND (1.0)	-127	1.1	27,700	454.3	453.8
	16-Dec-05	ND (1.0)	ND (1.0)	-127	2.5	22,300	453.2	452.7
	11-Jan-06	ND (1.0)	ND (1.0)	-89	3.3	26,500	454.1	453.8
	10-Feb-06	ND (1.0)	ND (1.0)	-112	2.8	25,900	453.9	454.2
	10-Mar-06	ND (2.0)	ND (1.0)	-116	0.0	21,100	455.5	455.1
	03-Apr-06	ND (1.0)	ND (1.0)	-97	2.3	21,100	455.2	454.3
MW-44-115	14-Mar-06	735 J	730	-11	1.5	16,500	---	454.2
	22-Mar-06	1440	1970	-74	3.0	---	453.2	453.8
	04-Apr-06	1550	1620	37	1.8	15,800	455.2	455.3
	04-Apr-06 FD	1570	1570	FD	FD	FD	FD	FD
	20-Apr-06	1680	1650	-38	0.4	11,400	454.8	455.4
	20-Apr-06 FD	1680	1610	FD	FD	FD	FD	FD
	26-Apr-06	1560	1580	-27	2.5	15,800	455.9	455.8
MW-44-125	09-Mar-06	66.6	67.5	-419	2.6	13,500	453.3	454.1
	22-Mar-06	362	430	-280	1.5	15,000	454.2	453.7
	04-Apr-06	372	374	10	1.9	15,600	456.1	455.5
	20-Apr-06	461	504	-138	0.0	11,400	455.6	455.9
	26-Apr-06	480	485	-147	2.5	16,200	456.6	456.0
	26-Apr-06 FD	479	493	FD	FD	FD	FD	FD
MW-45-095a	24-Mar-06	259	216	-20	2.3	16,100	453.3	454.6
MW-45-095b	24-Mar-06	332	327	-12	2.1	16,700	---	454.5
MW-46-175	14-Mar-06	287	279	-44	2.2	19,500	455.2	454.5
	24-Mar-06	213	173	-93	1.9	19,900	456.4	454.7
	07-Apr-06	208 J	186	-116	2.1	18,500	455.8	455.9
MW-46-205	14-Mar-06	ND (1.0)	ND (1.0)	-117	2.3	22,600	455.1	454.9
	24-Mar-06	ND (1.0)	ND (1.0)	-202	1.7	24,000	456.5	454.4
	07-Apr-06	ND (1.0) J	ND (1.0)	-200	1.9	22,400	460.2	456.2

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

NOTES:

ND = not detected at listed reporting limit (RL)
FD = field duplicate
J = concentration or RL estimated by laboratory or data validation
T = data from the downhole transducers to fill groundwater elevation data gaps at some locations
MSL = mean sea level
(---) = data not collected, available, rejected, or field instrumentation malfunctioned
µg/L= micrograms per liter
mV = oxidation-reduction potential (ORP)
µS/cm = microSiemens per centimeter
M = I-3 Transducer damaged

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

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

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

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
Shallow Wells						
MW-12	13-Dec-05	626	602	97.0	6.99	3260
	18-Apr-06	1210	1300	91.0	7.28	3460
MW-19	12-Dec-05	1240	1270	153	7.68	2140
	09-Mar-06	1090	1080	227	7.43	3850
MW-20-070	15-Dec-05	4640	4310	149	7.97	3210
	10-Mar-06	5170	4510	228	7.32	5830
MW-21	14-Dec-05	ND (1.0)	ND (1.0)	-90	5.35	12100
	09-Mar-06	---	---	---	4.20	15100
MW-22	16-Dec-05	ND (2.0)	ND (1.0)	-90	2.31	31200
	15-Mar-06	ND (2.0)	ND (1.0)	---	8.54	34800
MW-24A	06-Mar-06	3490	3980	239	5.17	3140
MW-25	14-Dec-05	1460	1370	156	7.97	1220
	14-Dec-05 FD	1450	1350	FD	FD	FD
	09-Mar-06	1360	1430	210	7.40	2750
MW-26	12-Dec-05	3220	3160	161	9.93	3440
	08-Mar-06	3280	3020	170	9.16	3840
MW-31-060	13-Dec-05	1300	1250	119	6.75	2870
	15-Mar-06	1020	1010	217	7.01	2750
	15-Mar-06 FD	1000	1010	FD	FD	FD
MW-35-060	14-Dec-05	32.5	32.5	95.0	3.97	5800
	14-Dec-05 FD	33.3	28.6	FD	FD	FD
	14-Mar-06	31.6	24.3	42.0	2.92	---
MW-47-055	23-Mar-06	10.9 J	7.90	-94	2.98	5800
TW-02S	15-Mar-06	2720	2870	-38	7.53	3200
Middle-Depth Wells						
MW-20-100	15-Dec-05	9460	9010	140	3.03	3980
	10-Mar-06	10100	10200	198	3.77	4360
Deep Wells						
MW-20-130	16-Dec-05	10500	9340	123	3.32	11700
	10-Mar-06	10700	10600	213	3.49	14500
MW-24B	07-Mar-06	5650	5970	199	2.59	17200
MW-31-135	14-Dec-05	221	198	124	4.13	7980
	15-Mar-06	173	186	33.0	3.05	13400
MW-35-135	14-Dec-05	25.7	22.8	38.0	3.17	8480
	10-Mar-06	28.0	24.0	103	2.44	12400
	10-Mar-06 FD	26.5	25.7	FD	FD	FD
MW-47-115	23-Mar-06	ND (2.0) J	ND (1.0)	-161	2.32	15600
PE-01	13-Dec-05	ND (1.0)	ND (1.0) LF	-148	2.19	12400
TW-02D	15-Mar-06	1360	1360	5.00	5.20	8470

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, November 2005 through April 2006
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

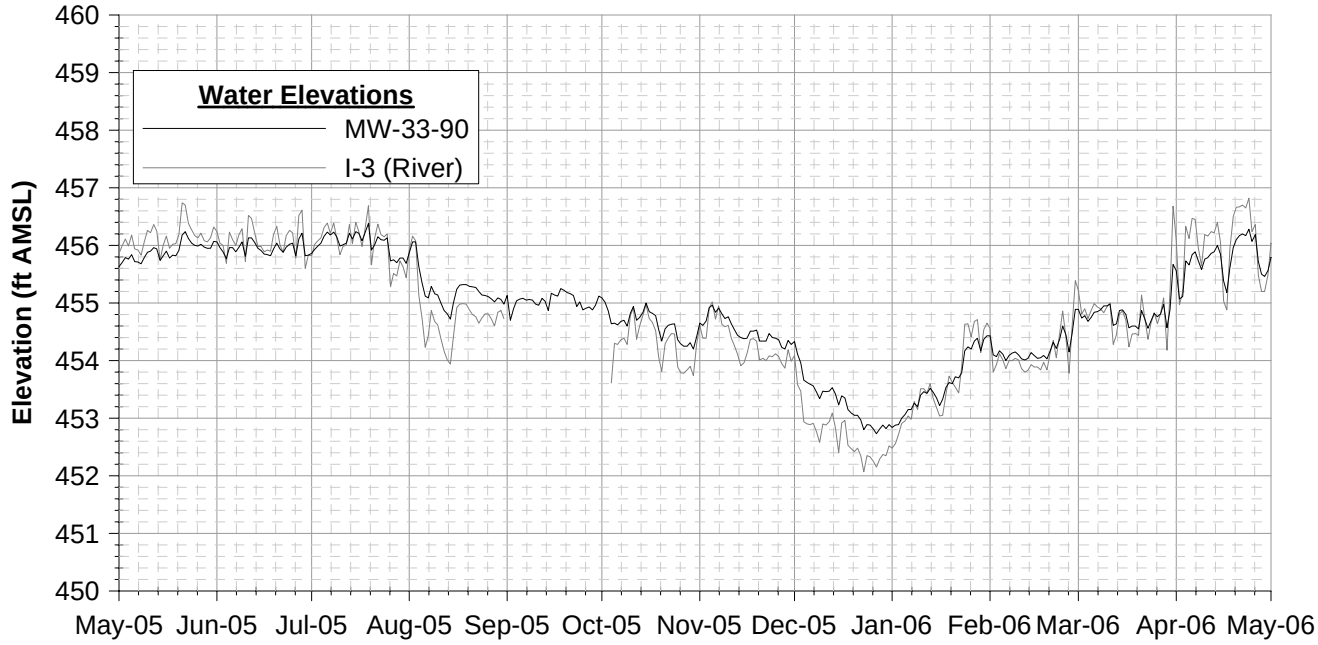
NOTES:

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

PMP = Interim Measure Performance Monitoring Program

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

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



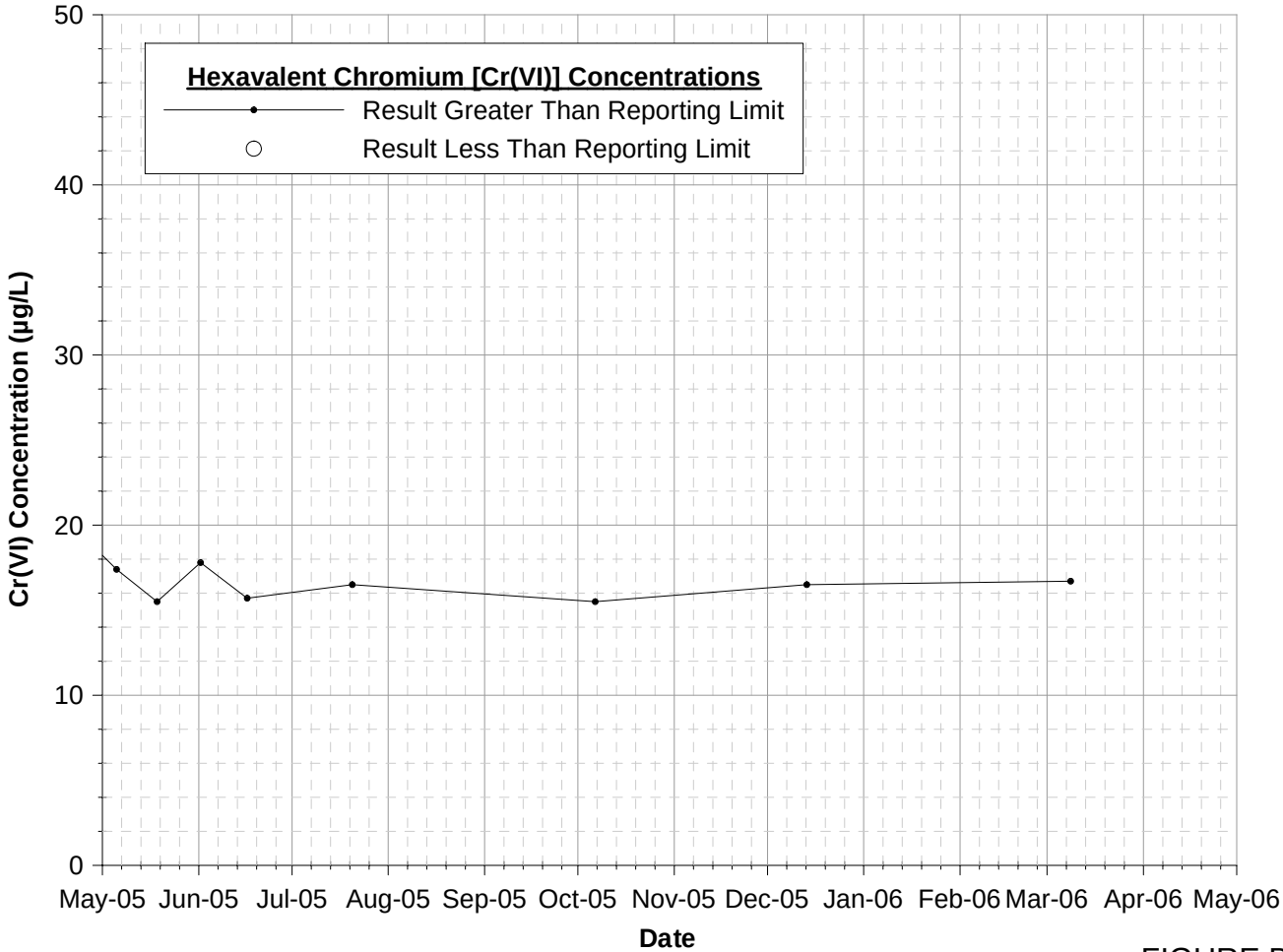


FIGURE B-1
MW-33-90 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 3/8/2006
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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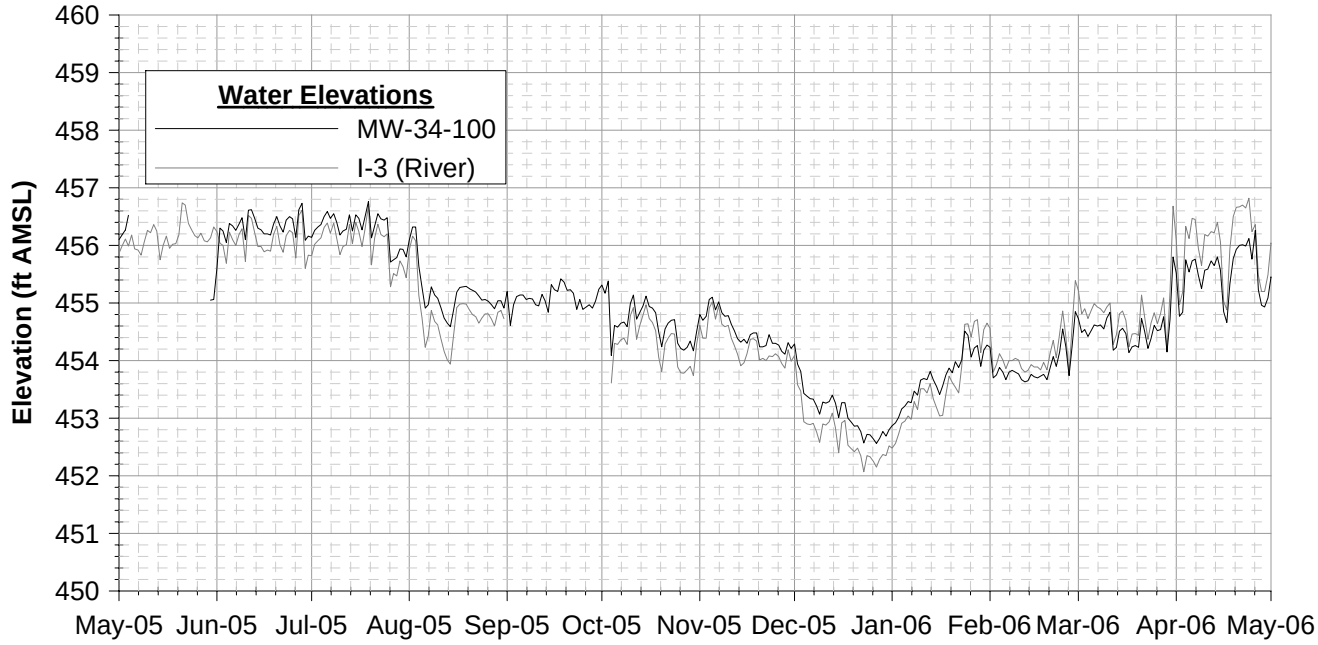

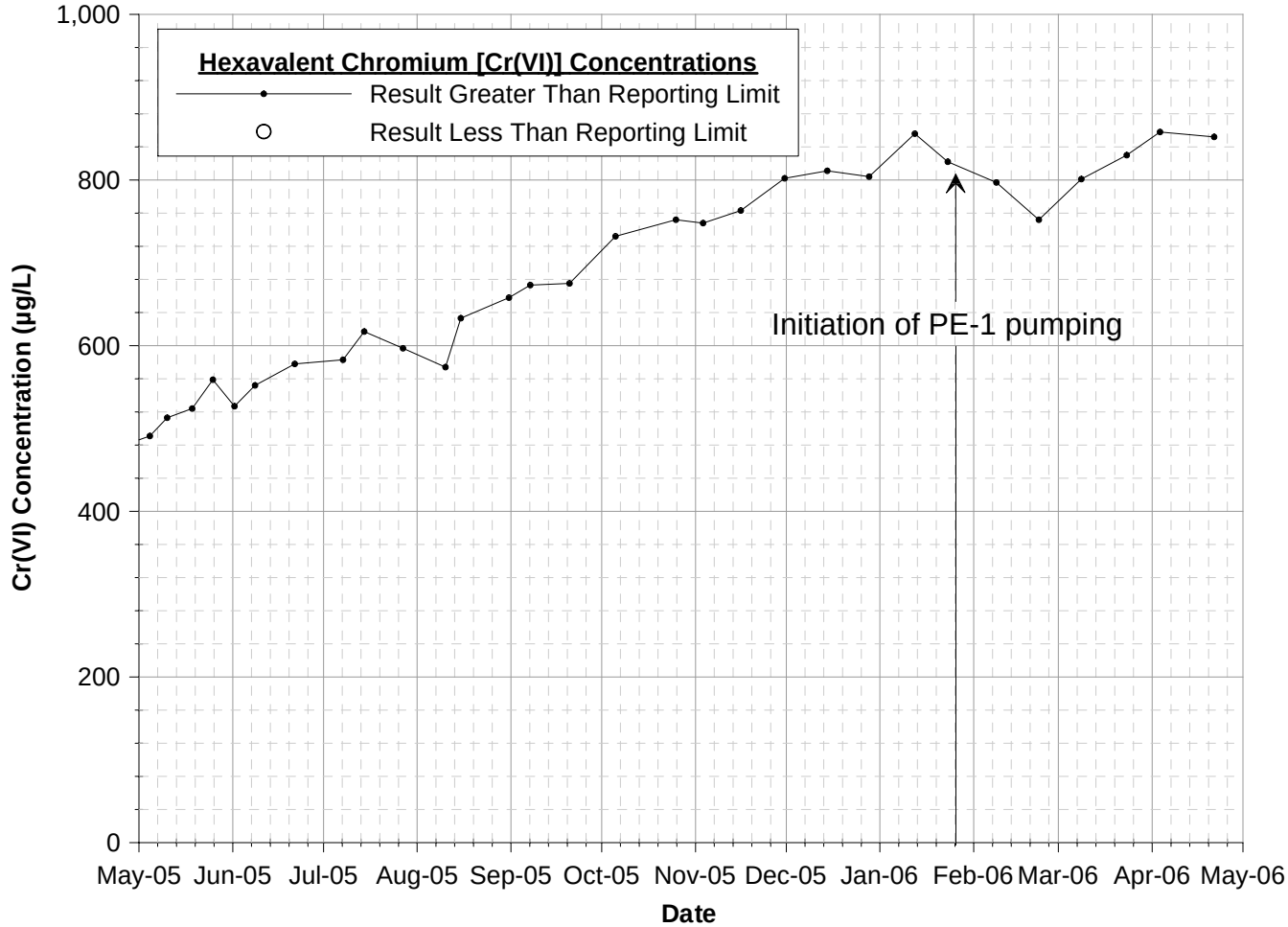

FIGURE B-2
MW-34-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/21/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. No groundwater elevation data available during May 2005 due to transducer malfunction.
3. Data subject to review.
4. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
5. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.

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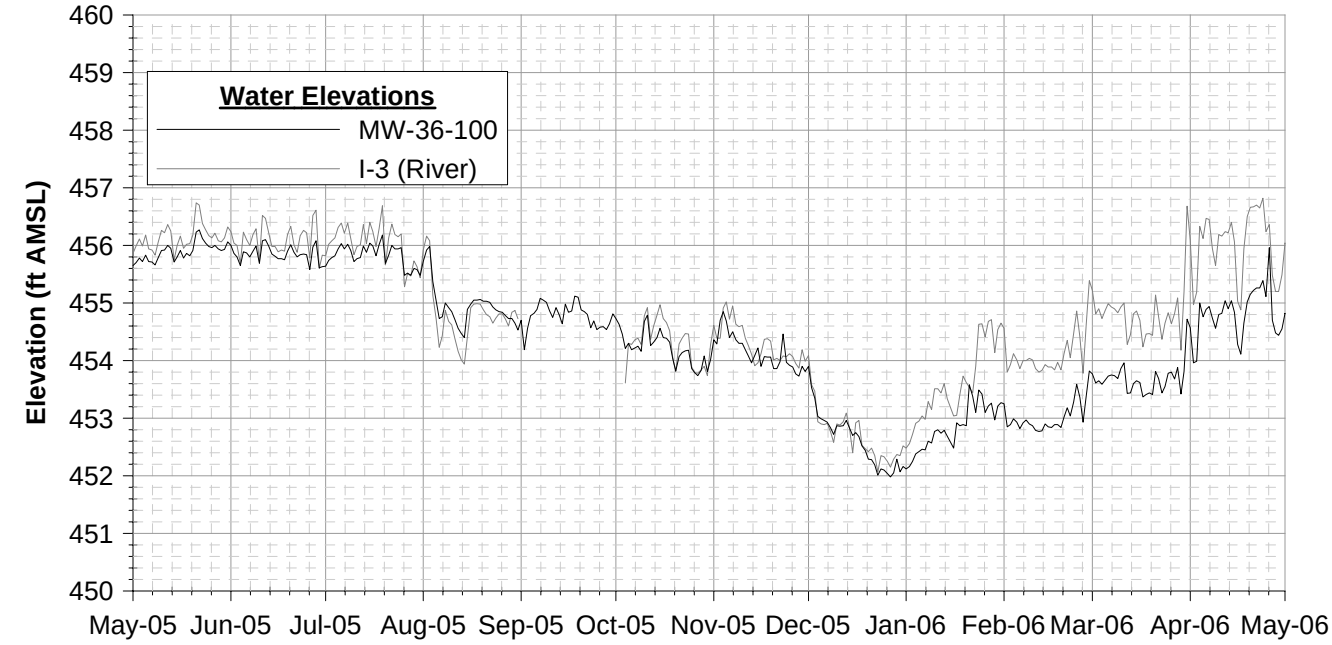

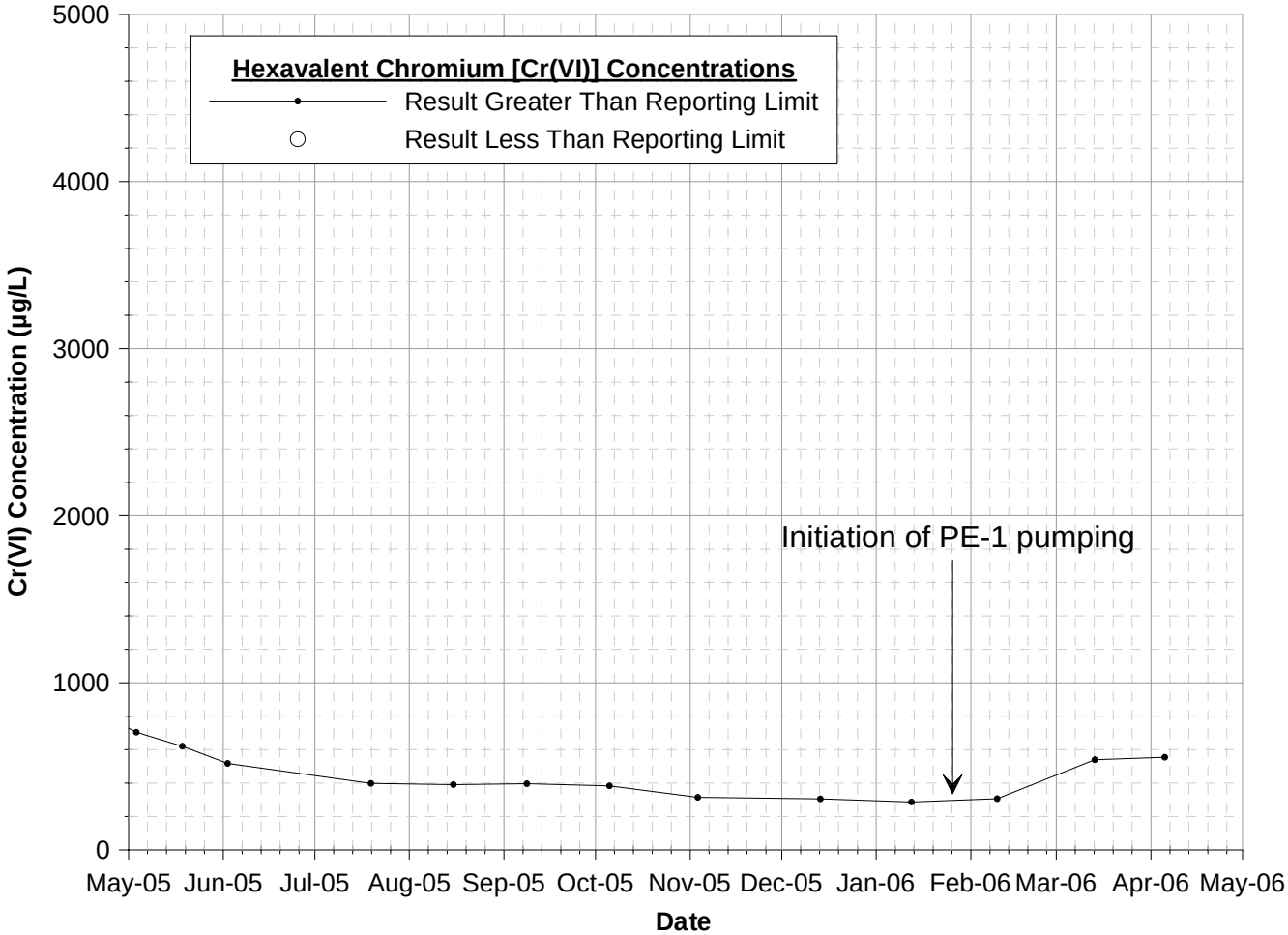

FIGURE B-3
MW-36-100 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 4/5/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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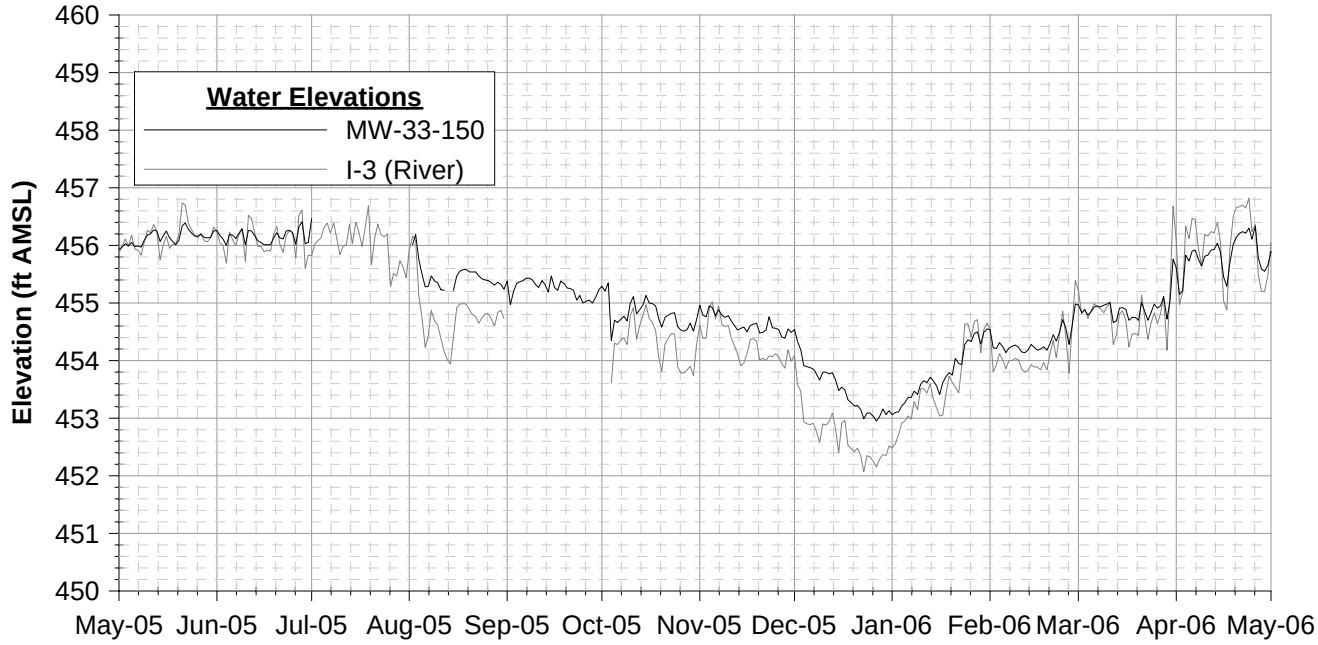

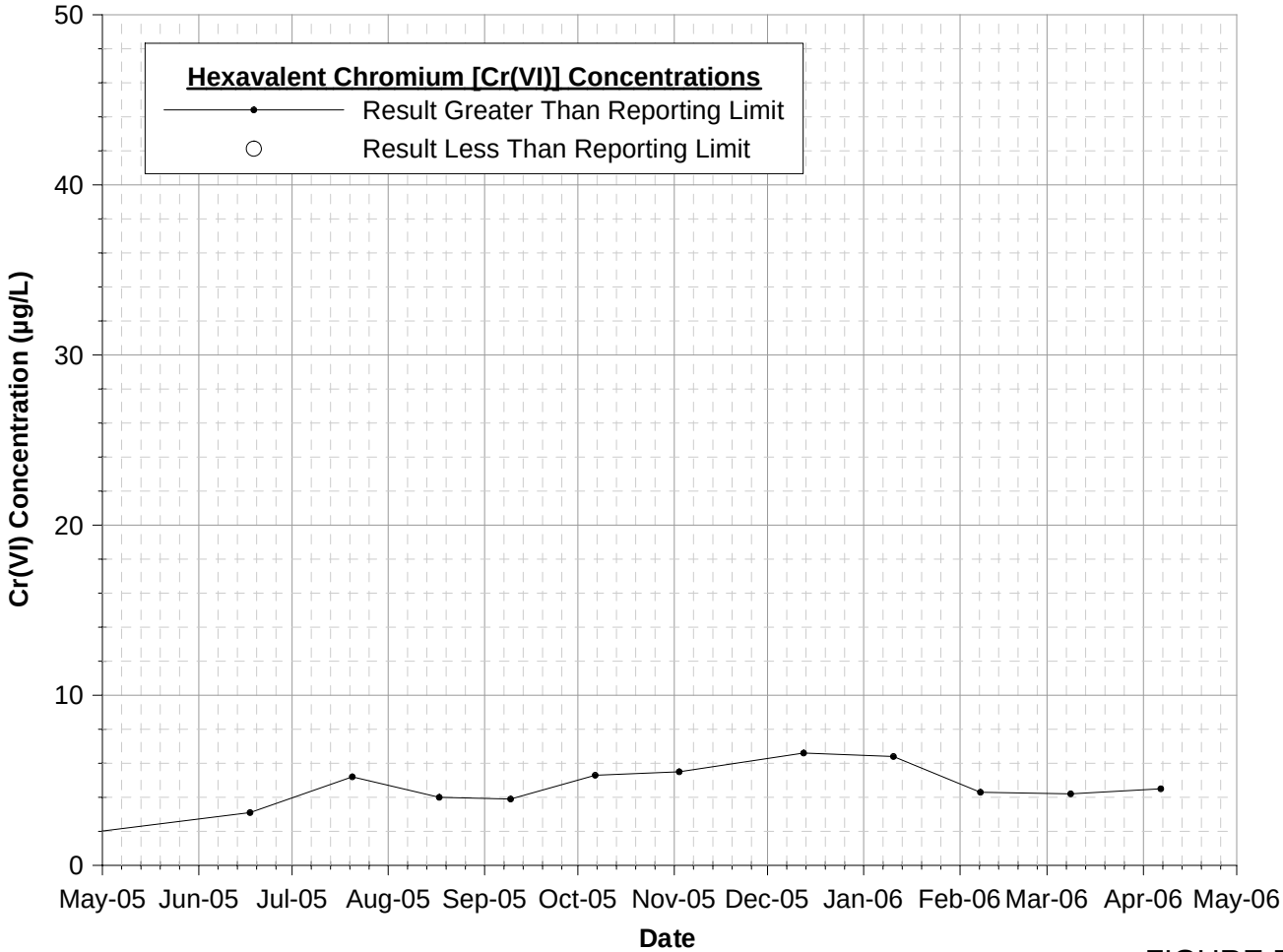

FIGURE B-4
MW-33-150 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/6/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
4. MW-33-150 transducer data not available during July 2005 due to transducer failure.
5. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.

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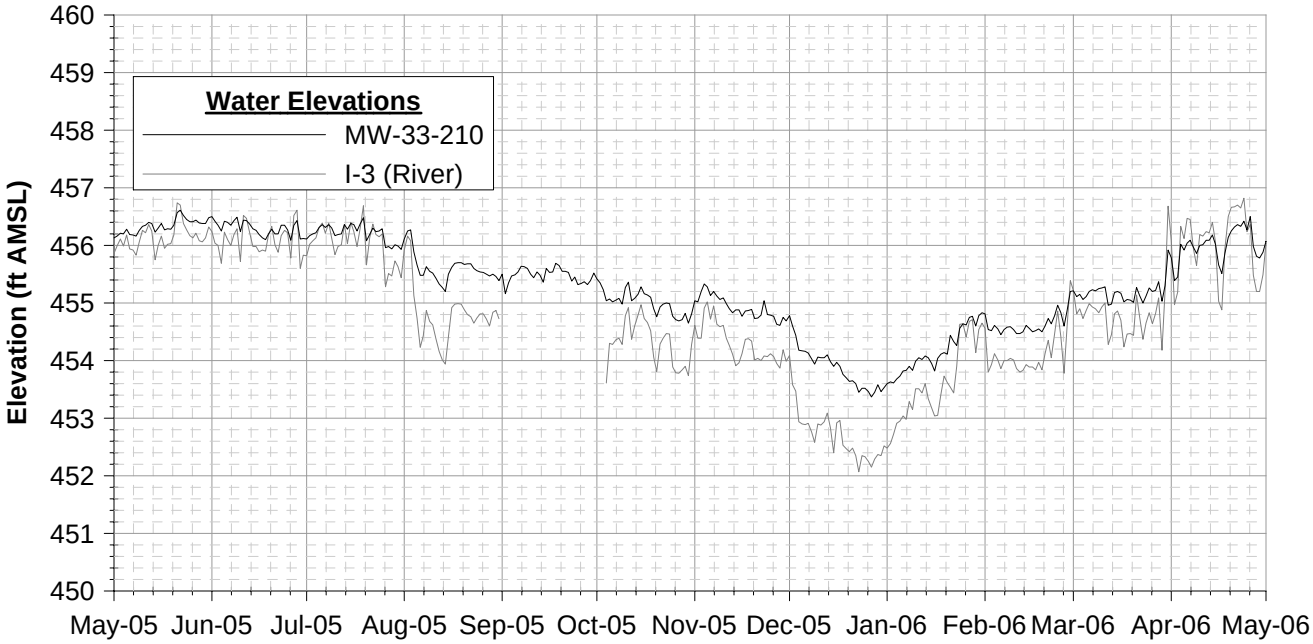

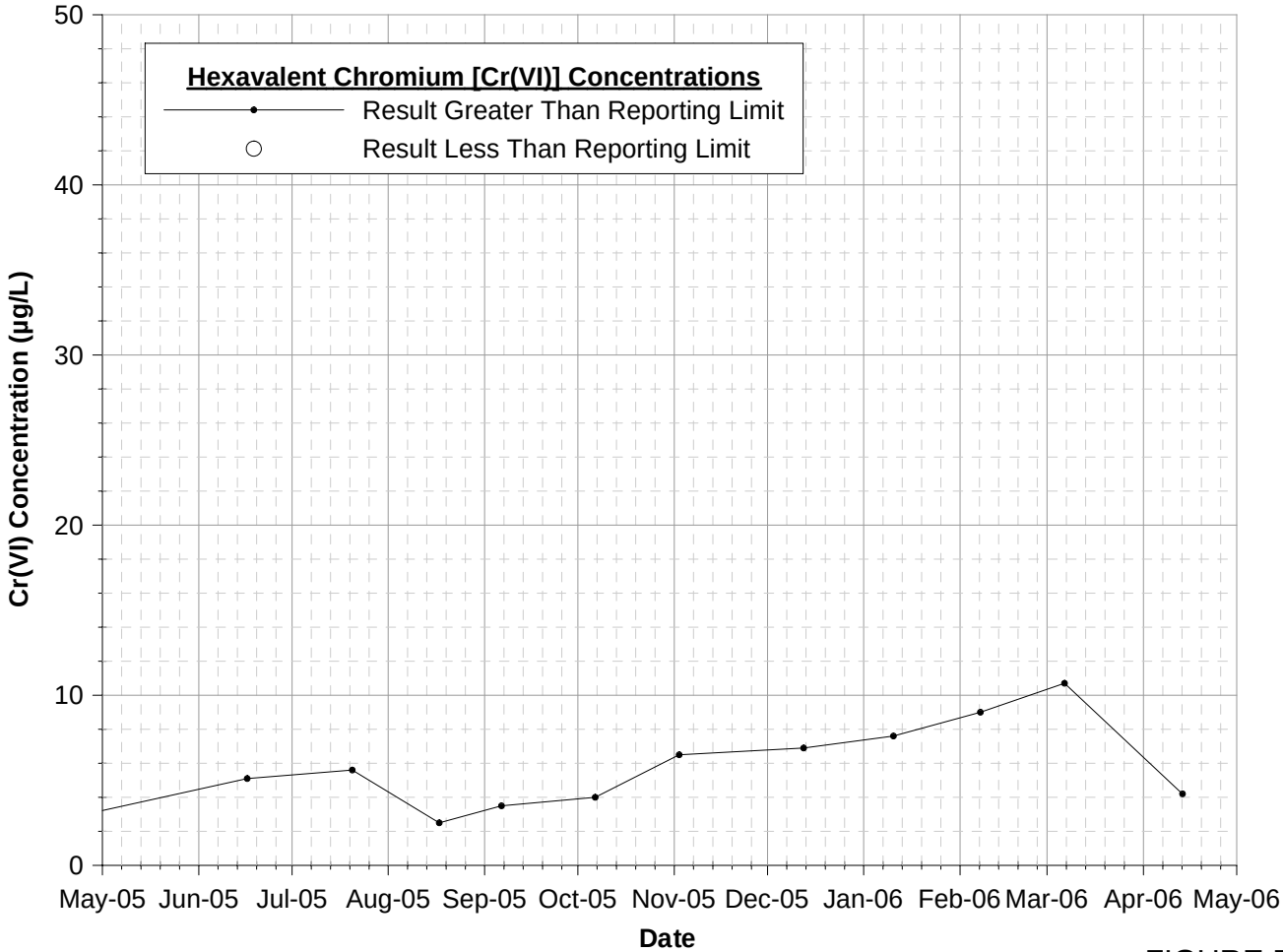

FIGURE B-5
MW-33-210 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/13/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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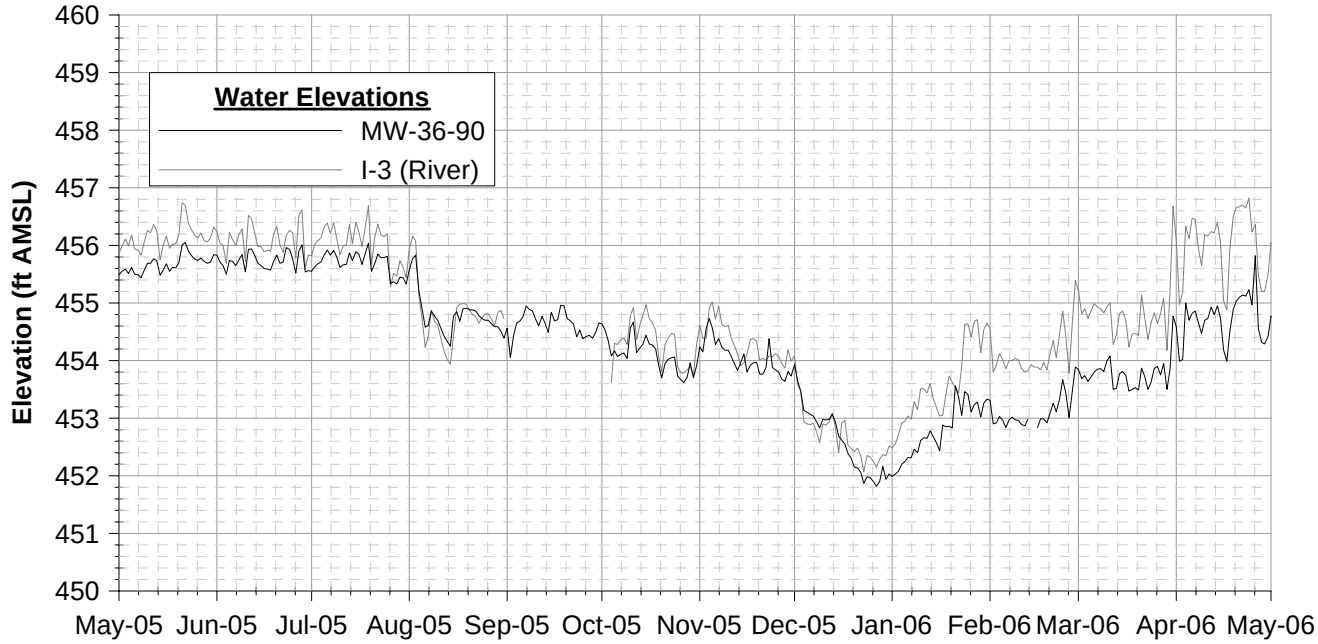

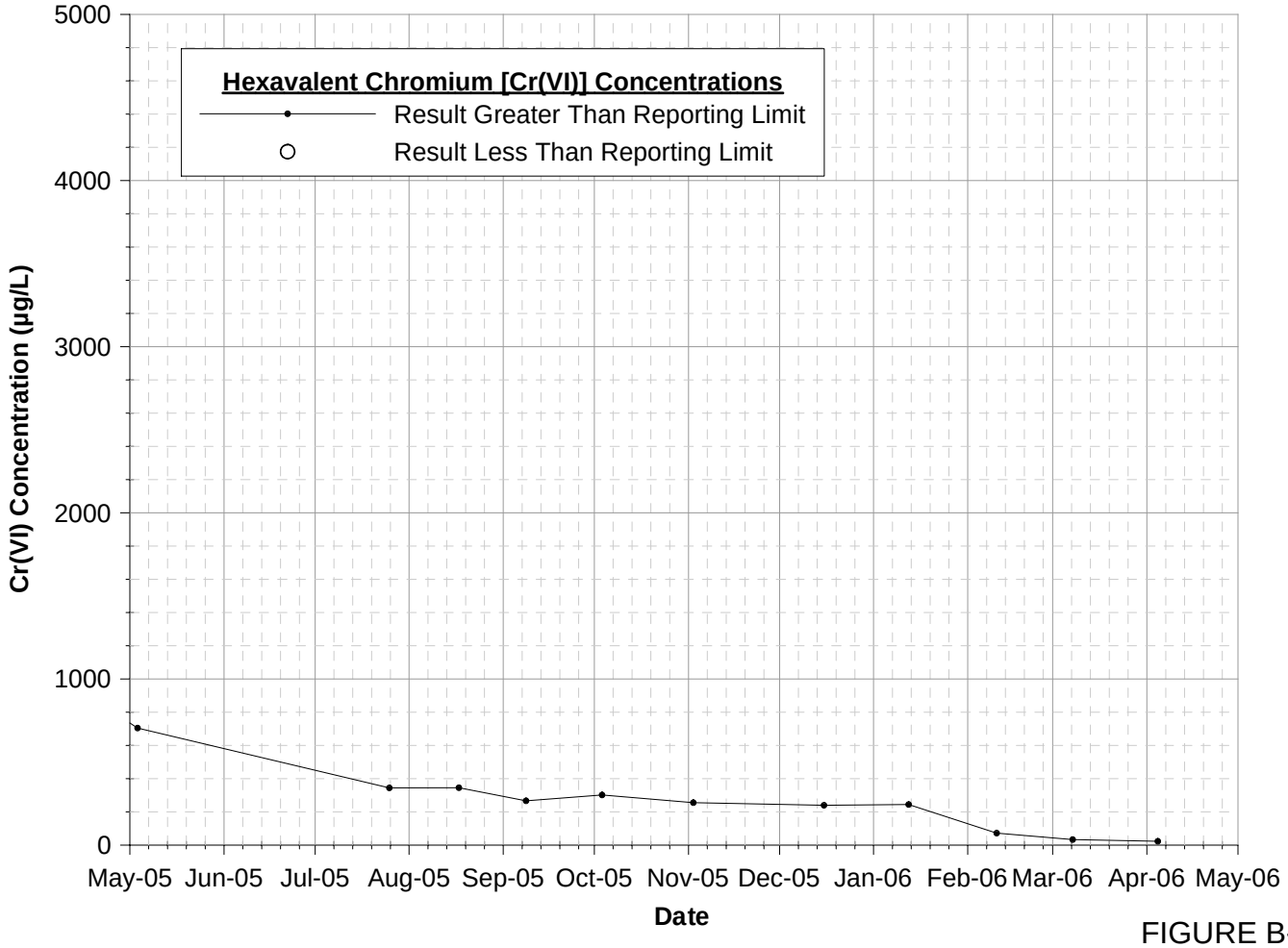

FIGURE B-6
MW-36-90 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 4/4/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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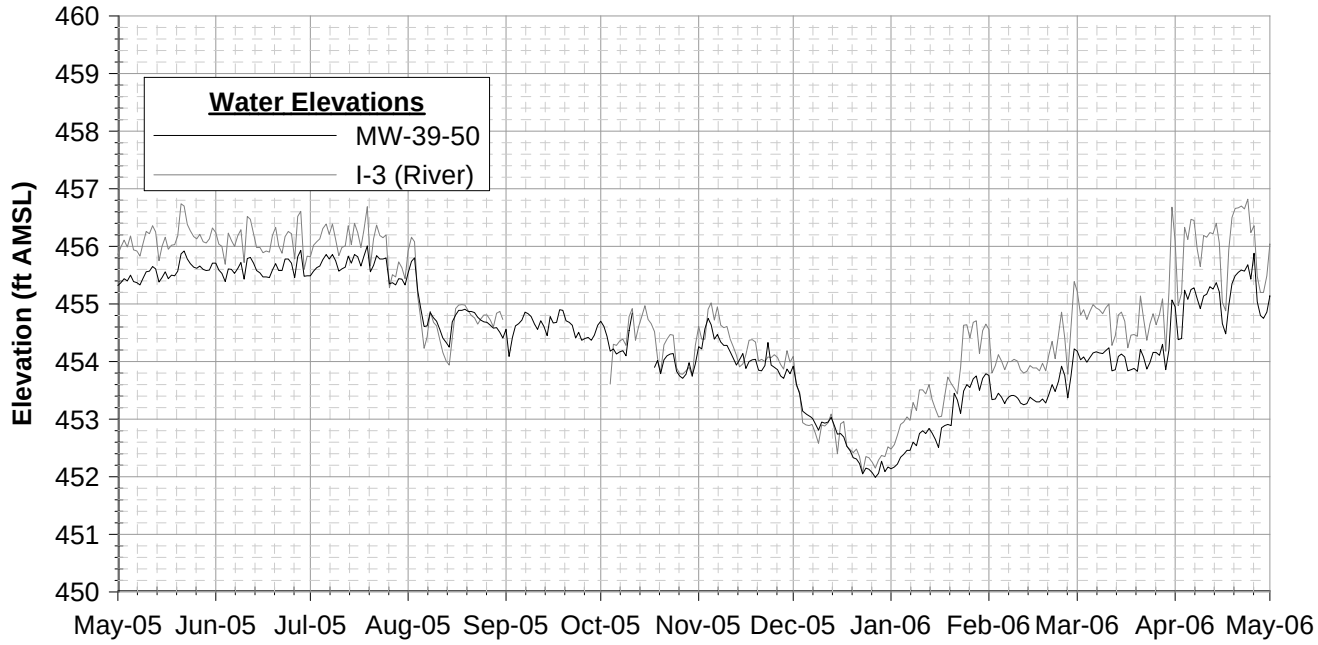

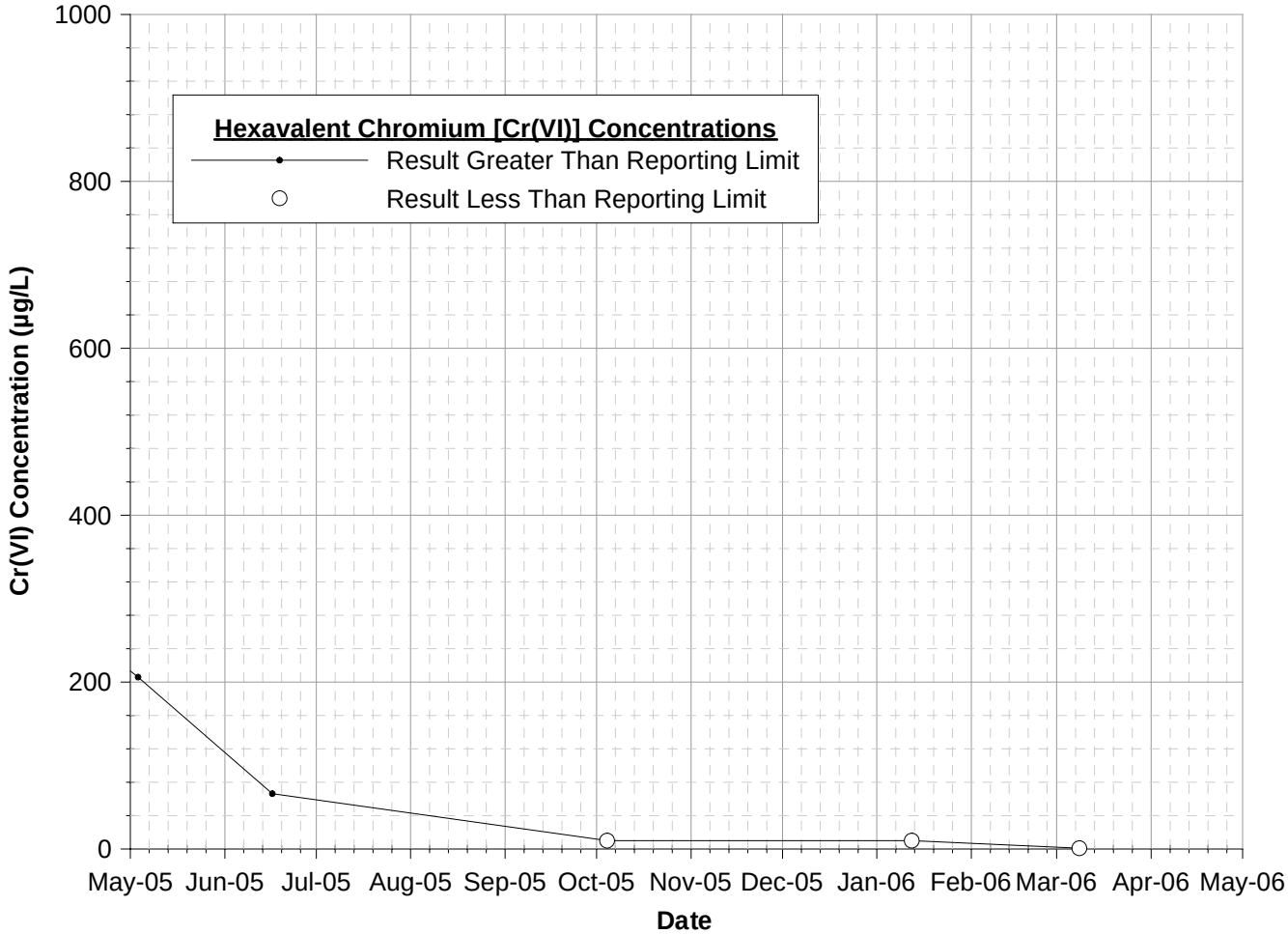

FIGURE B-7
MW-39-50 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 3/8/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
4. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.
5. MW-39-50 transducer data not available during mid-October 2005 due to transducer failure.

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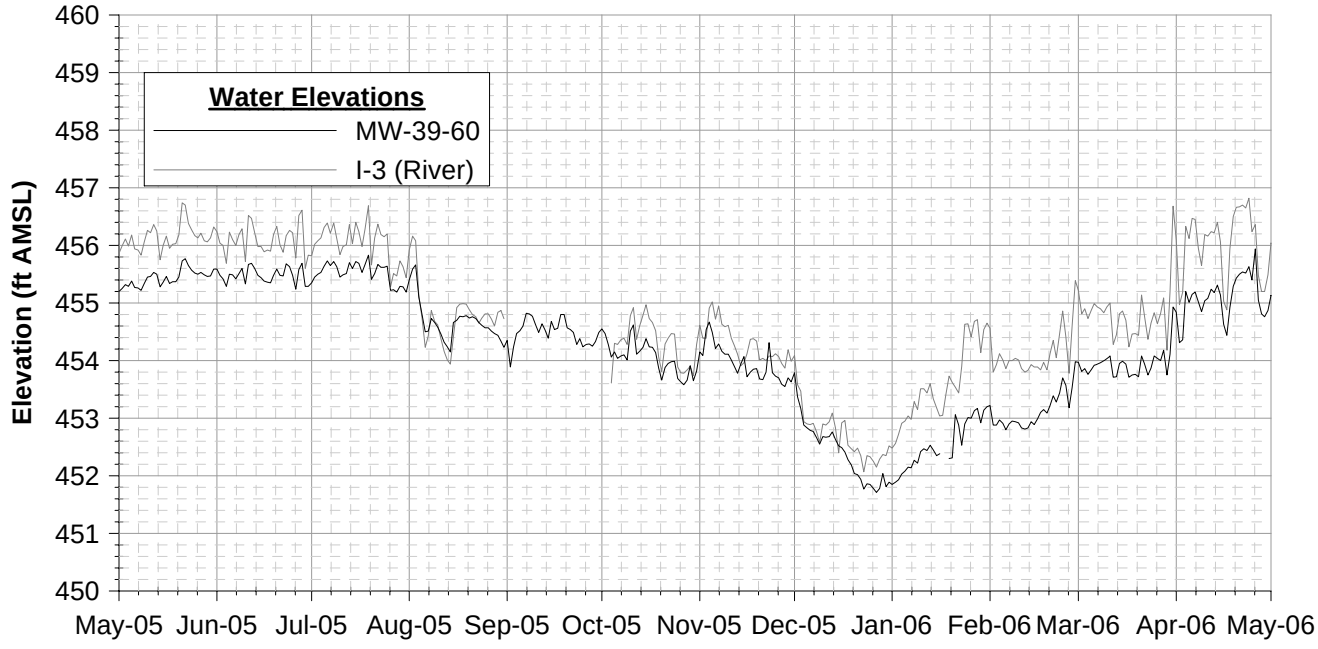

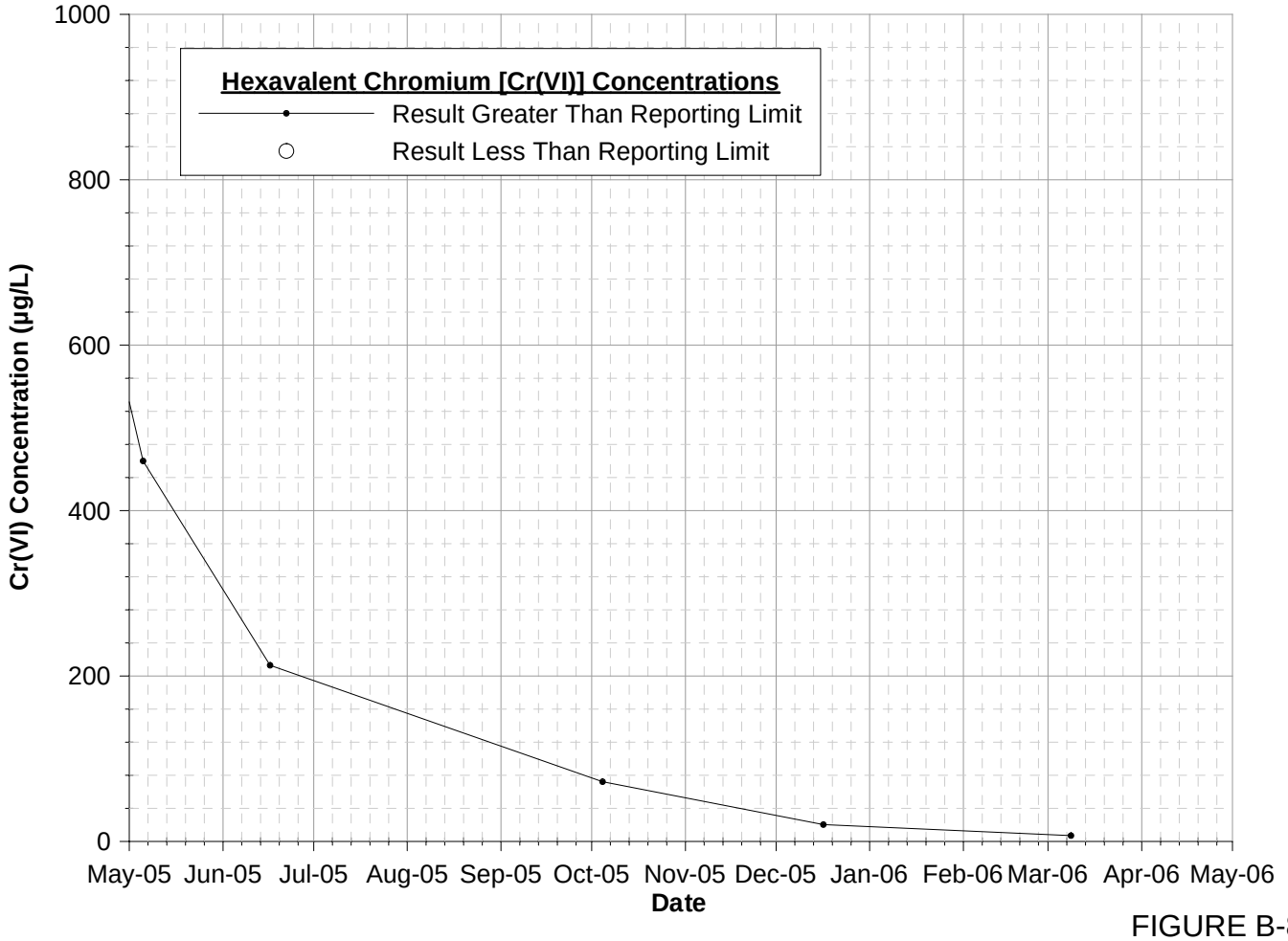

FIGURE B-8
MW-39-60 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 3/8/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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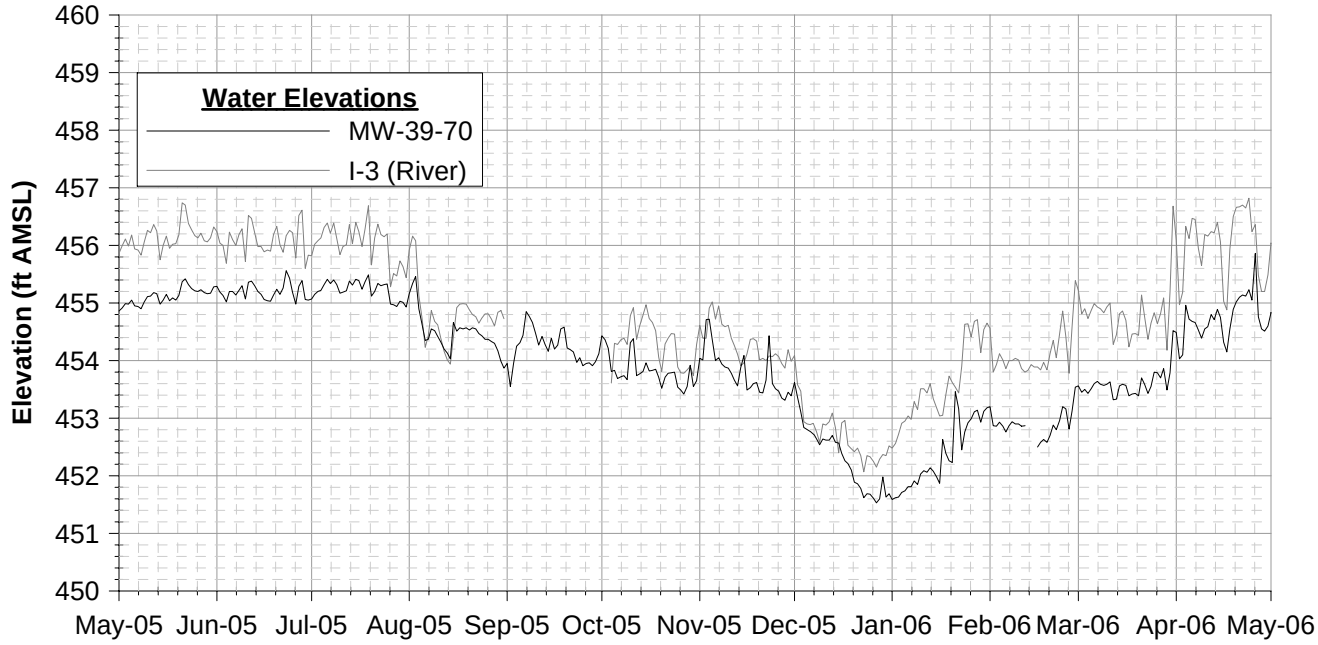

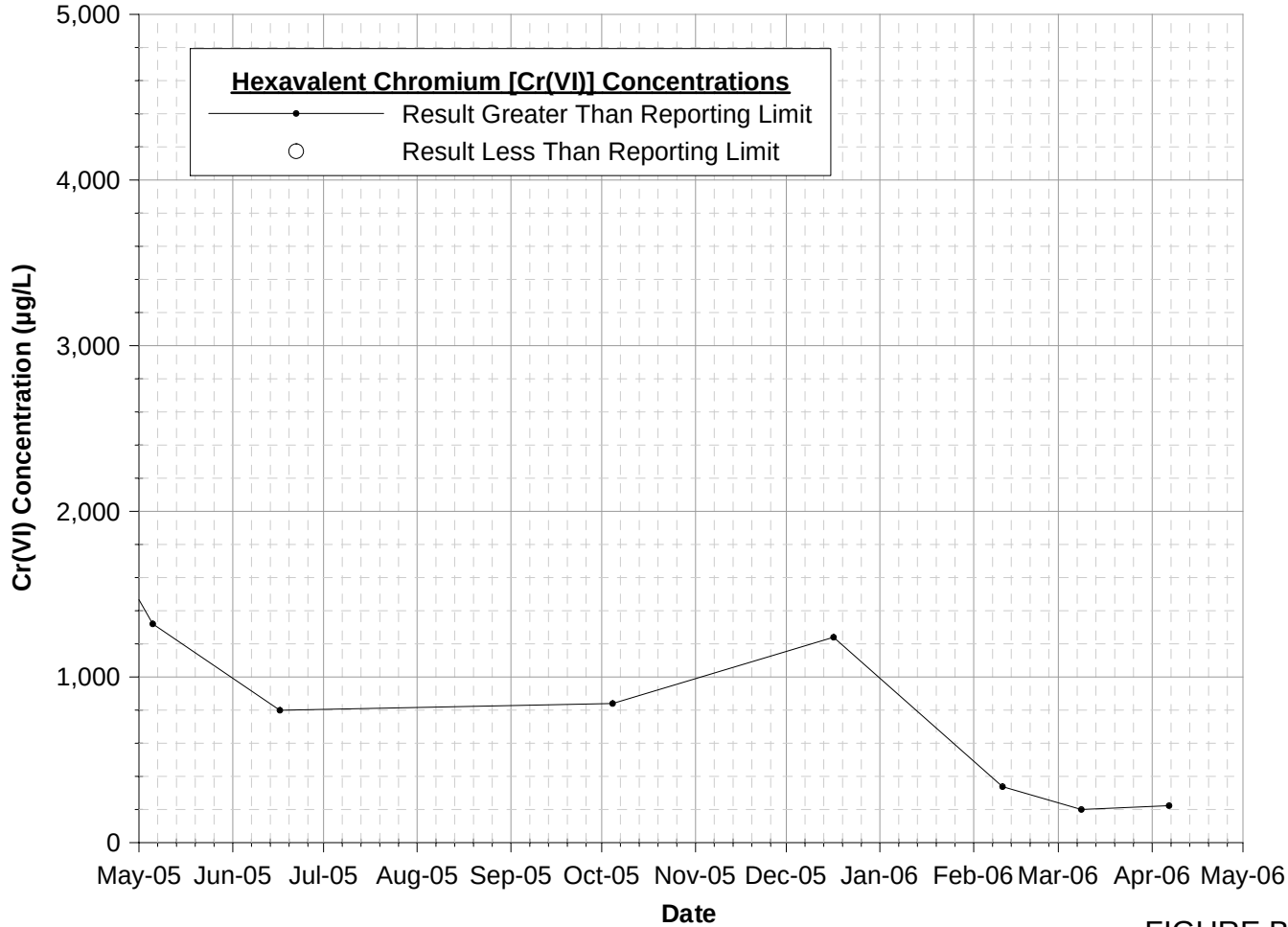

FIGURE B-9
MW-39-70 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/6/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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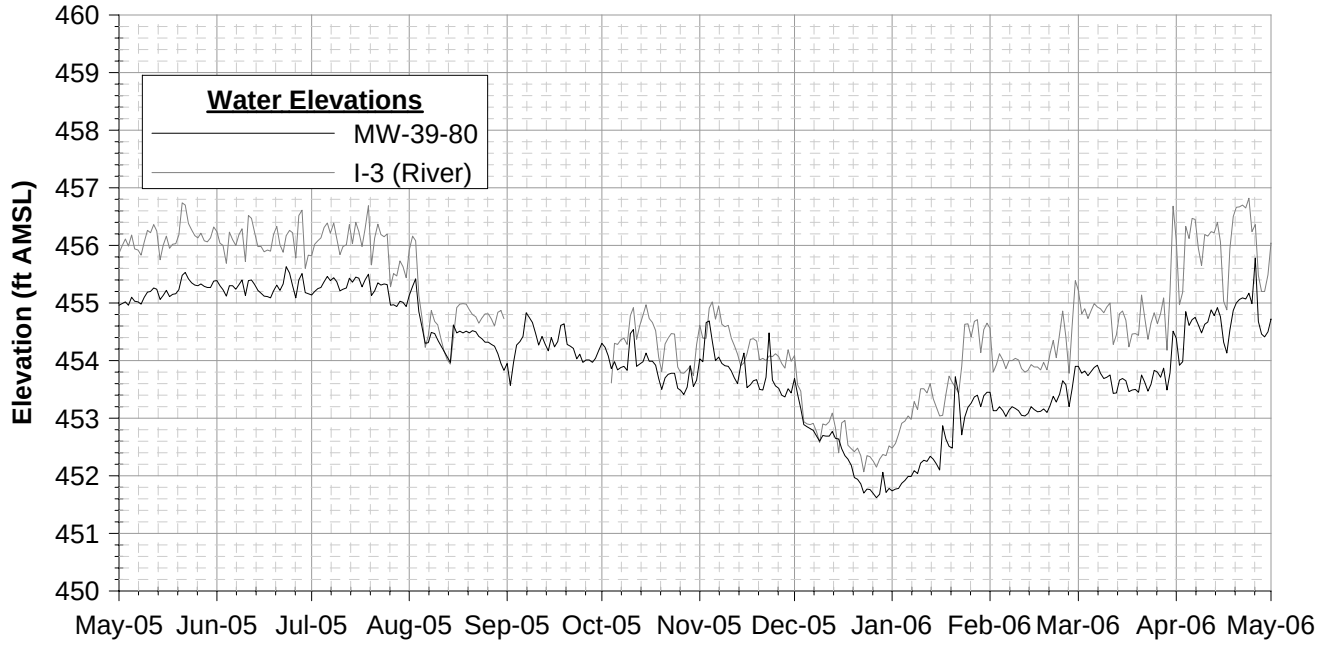

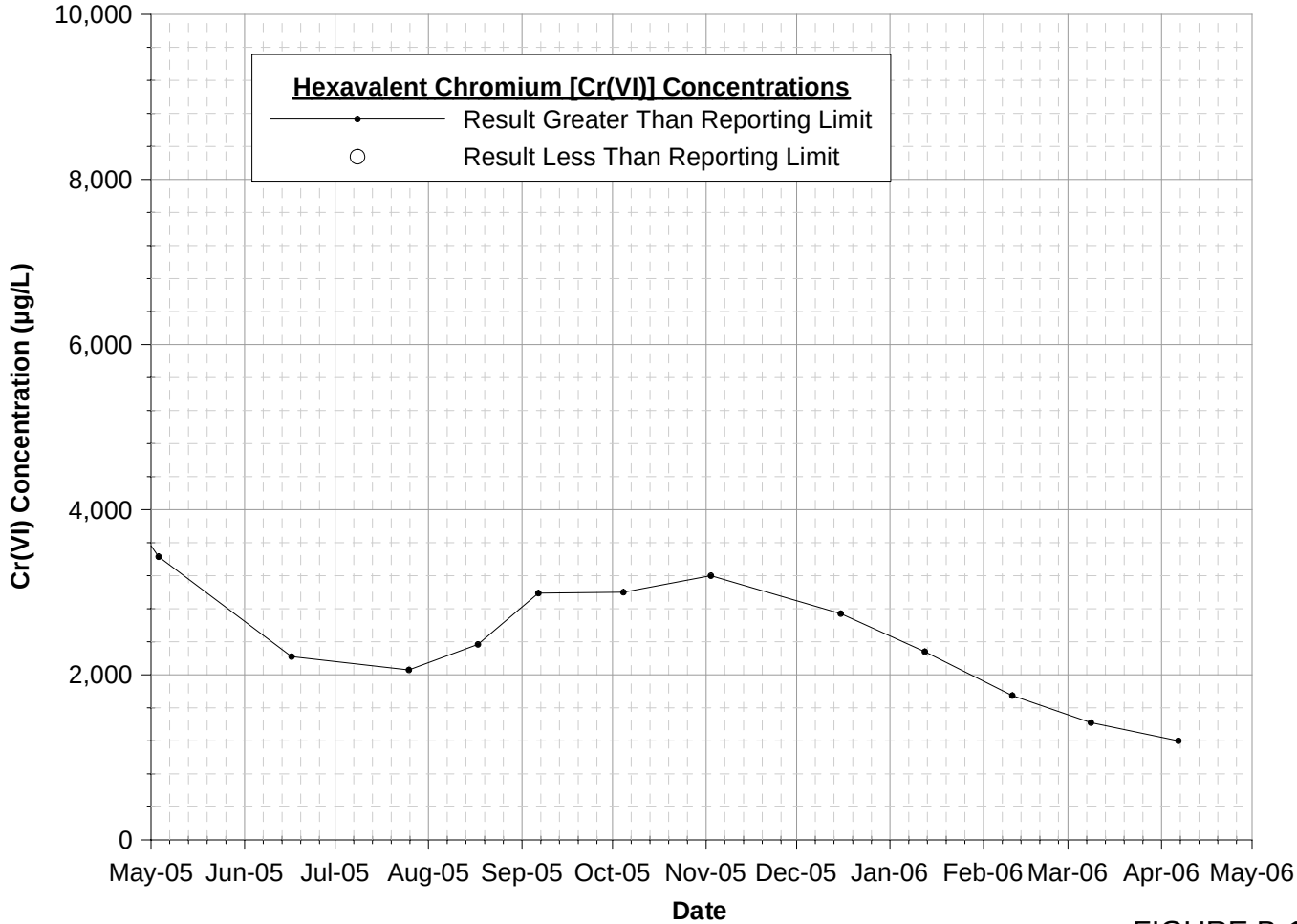

FIGURE B-10
MW-39-80 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 4/6/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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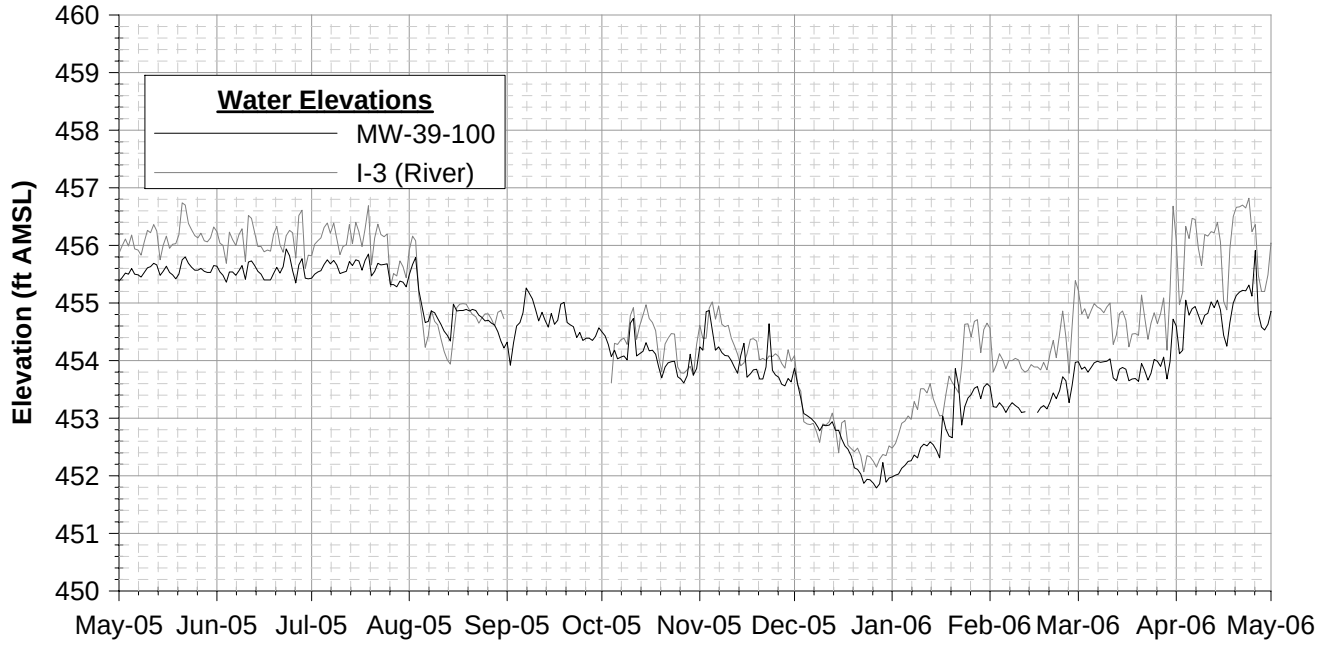

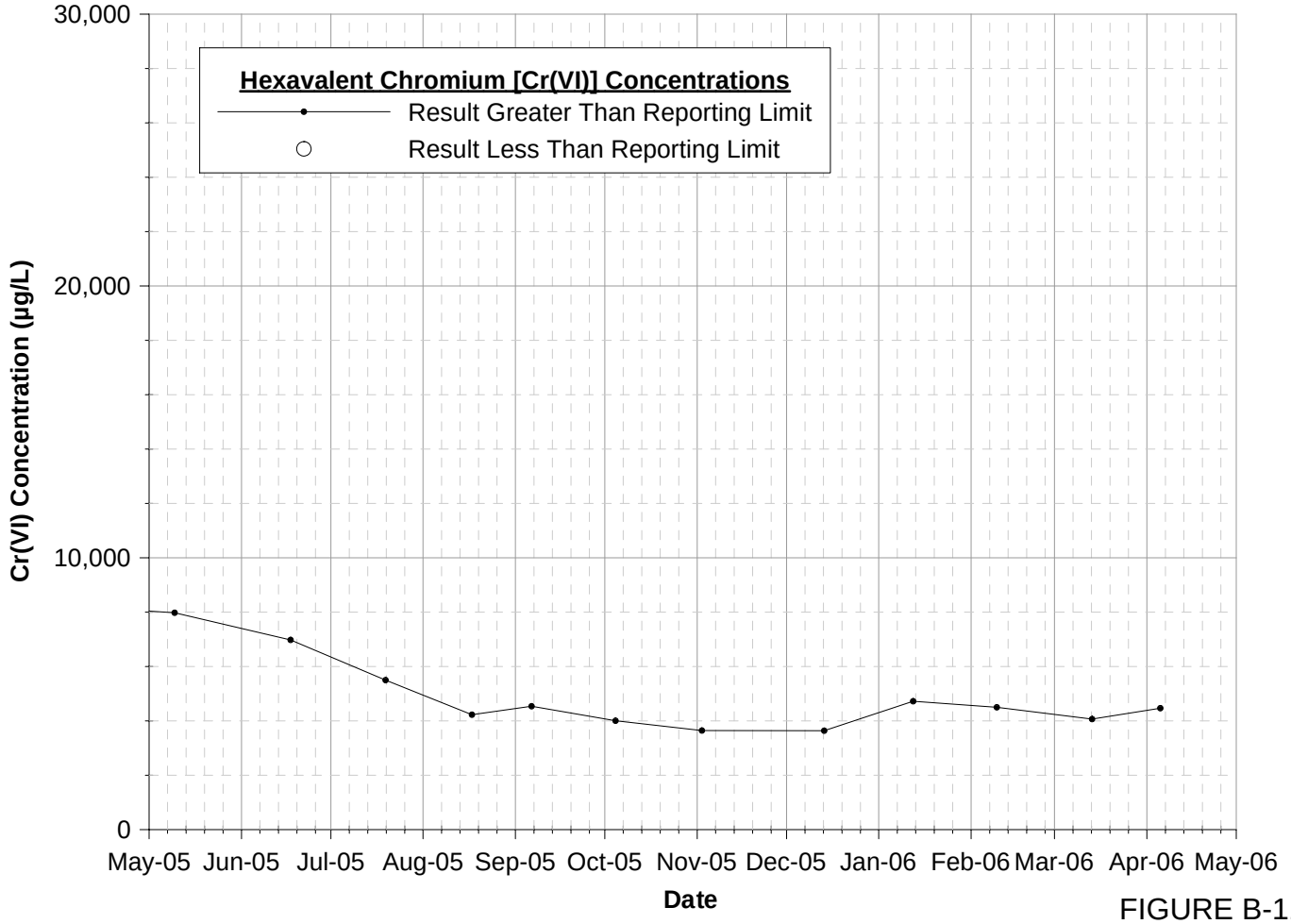

FIGURE B-11
MW-39-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/5/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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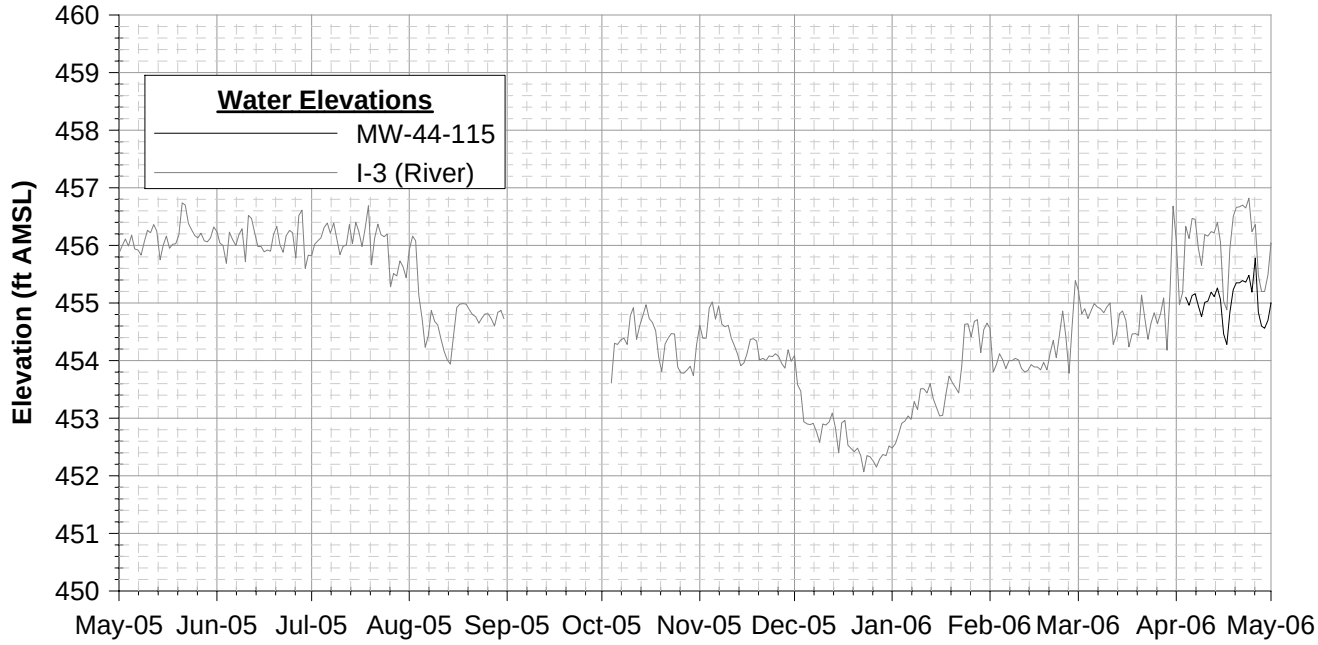

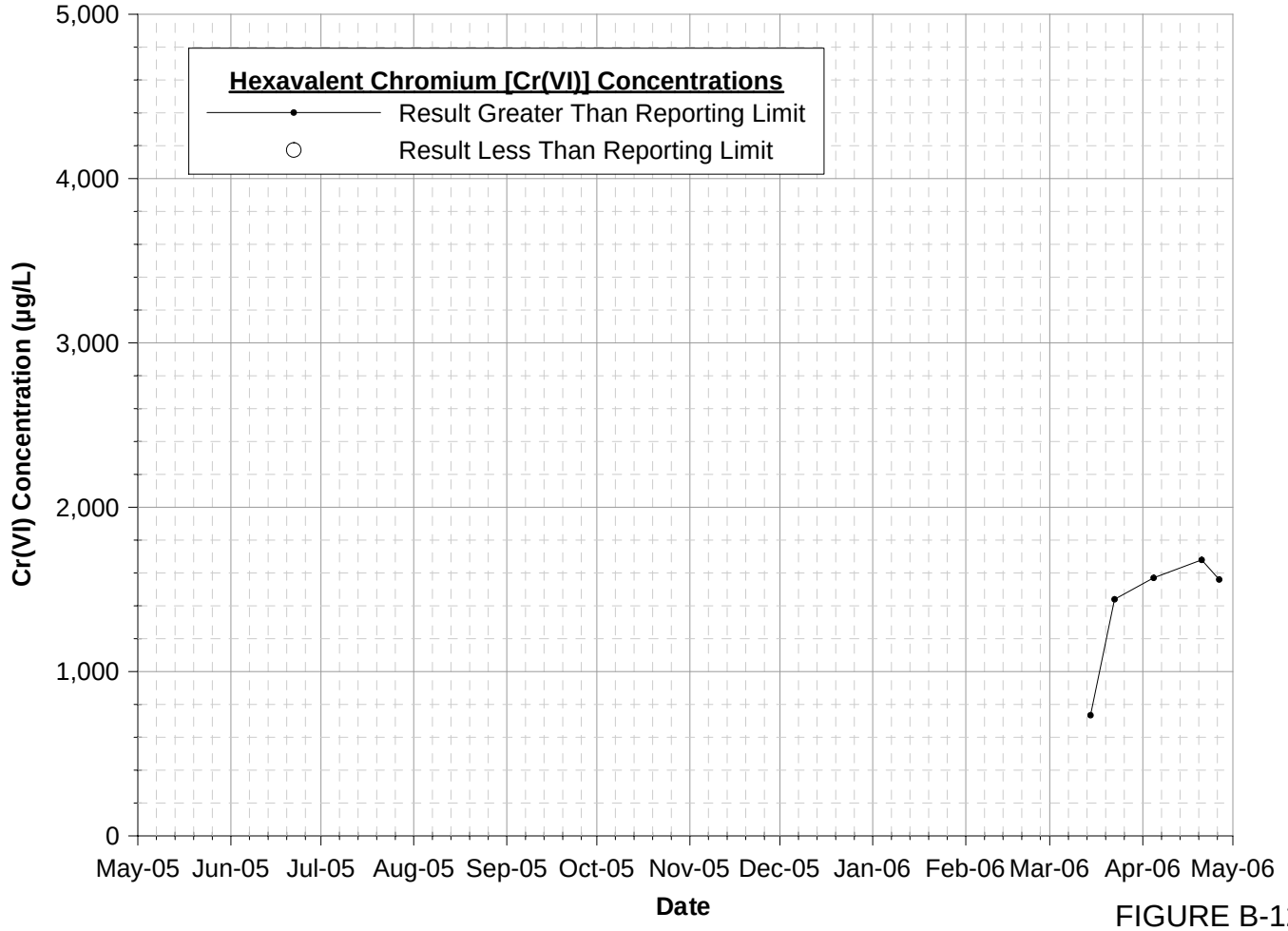

FIGURE B-12
MW-44-115 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 4/26/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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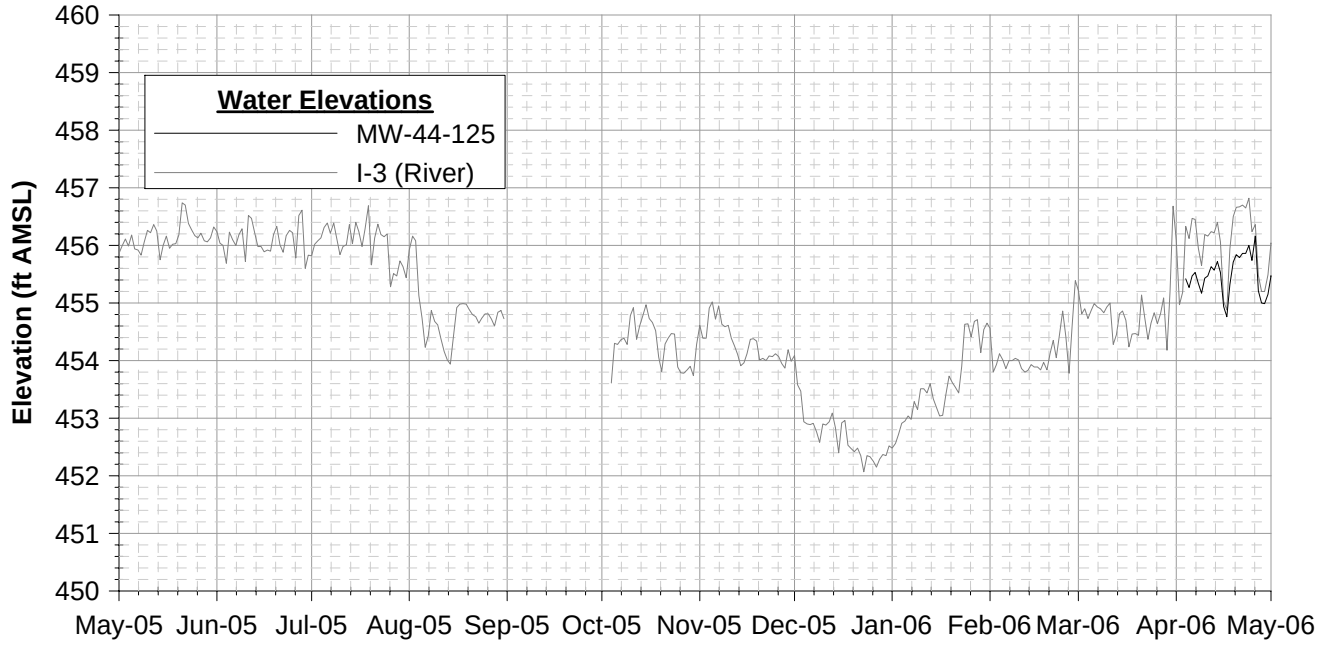

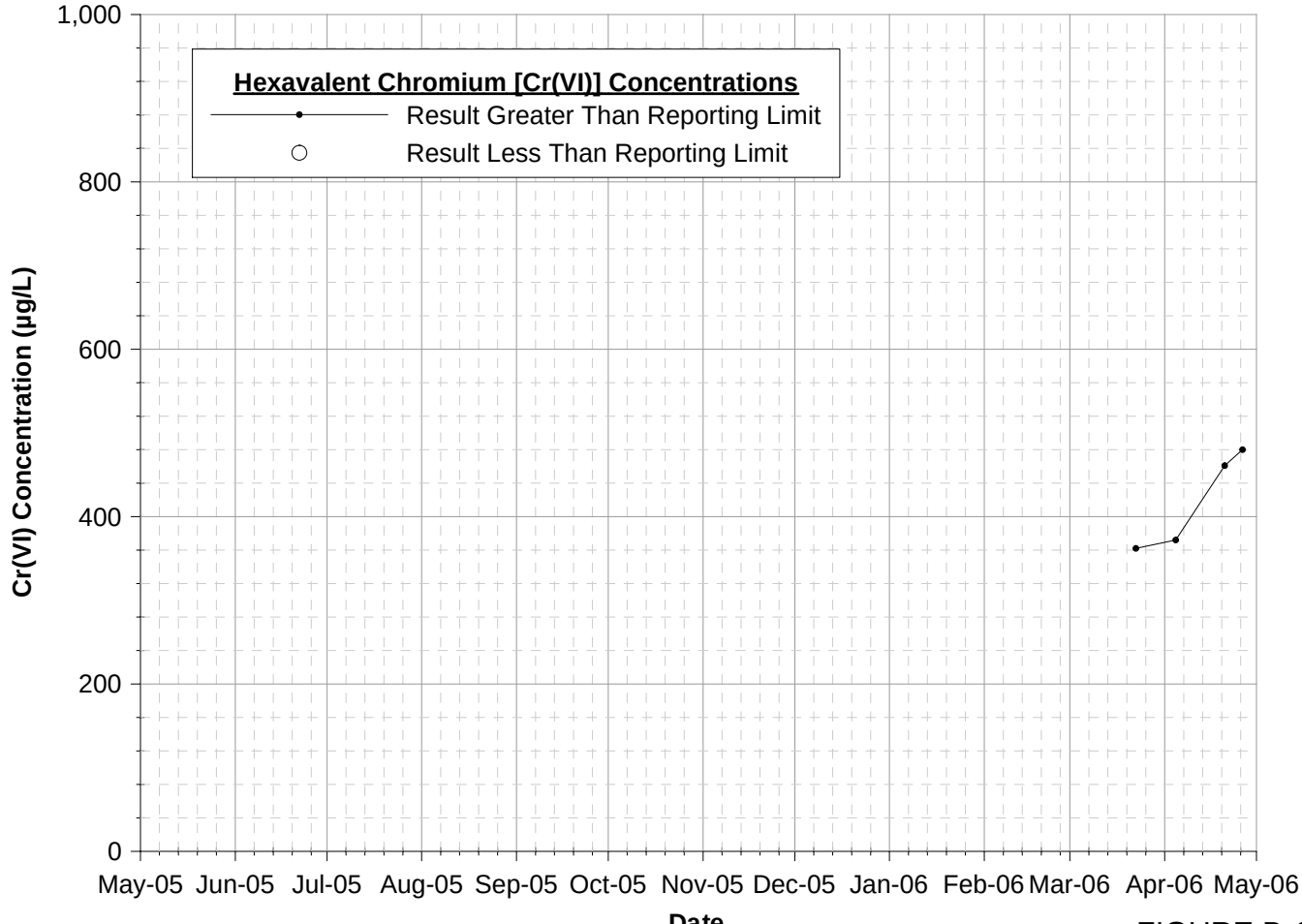

FIGURE B-13
MW-44-125 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/26/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes
1. Chromium results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Data subject to review.
3. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
4. I-3 data unavailable 9/1/05 through 10/4/05 due to river damage.
5. Initial sampling results from 3/9/06 are not plotted because the well was not fully developed at this time.

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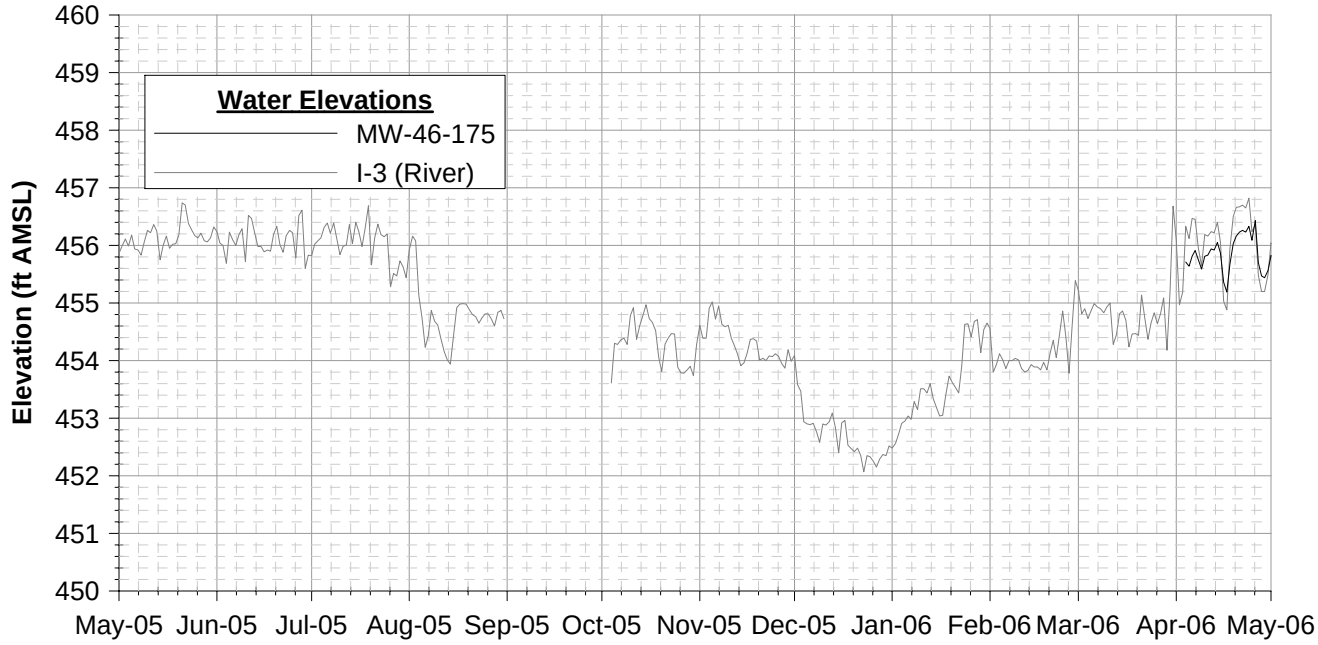

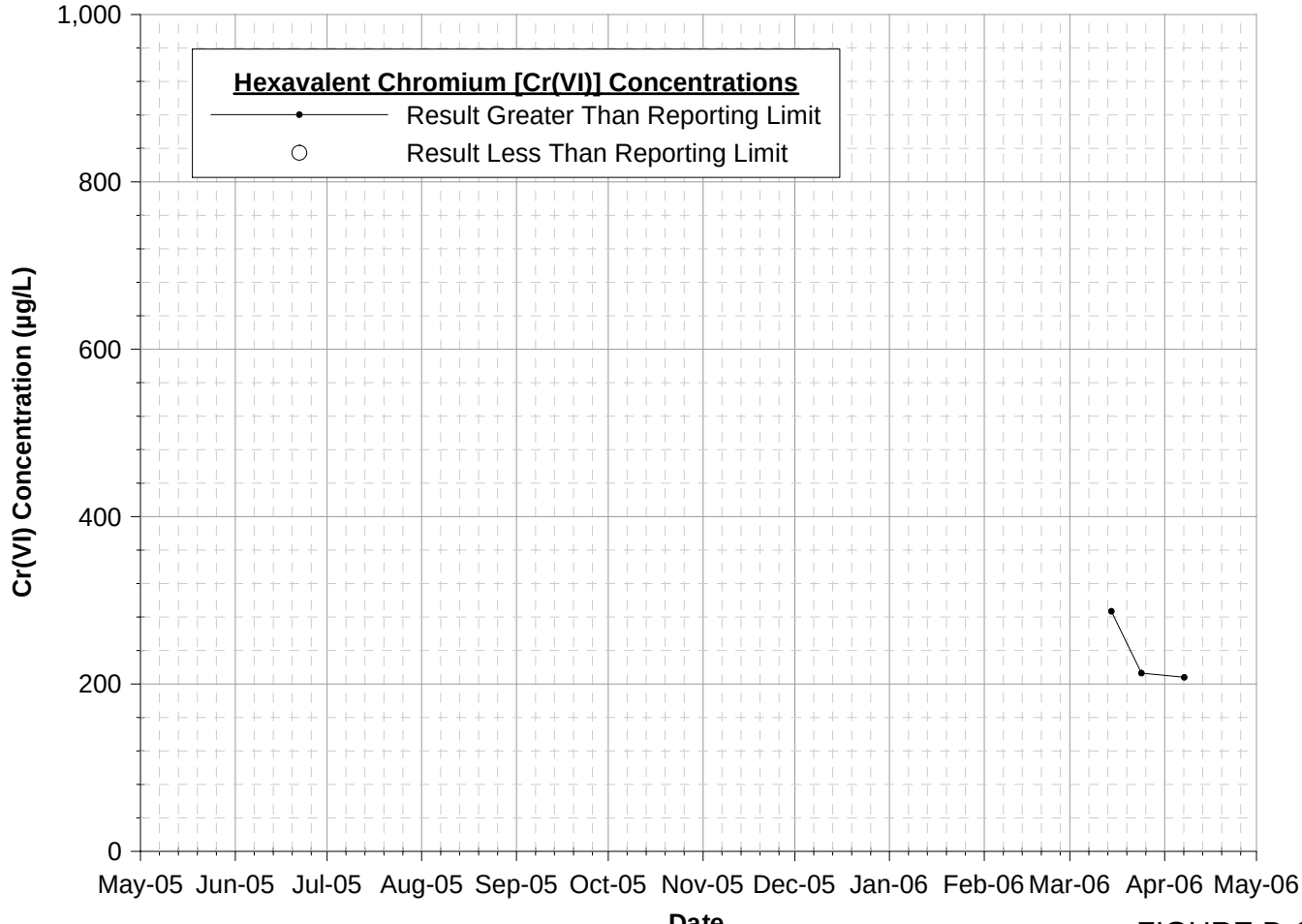

FIGURE B-14
MW-46-175 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 4/7/06
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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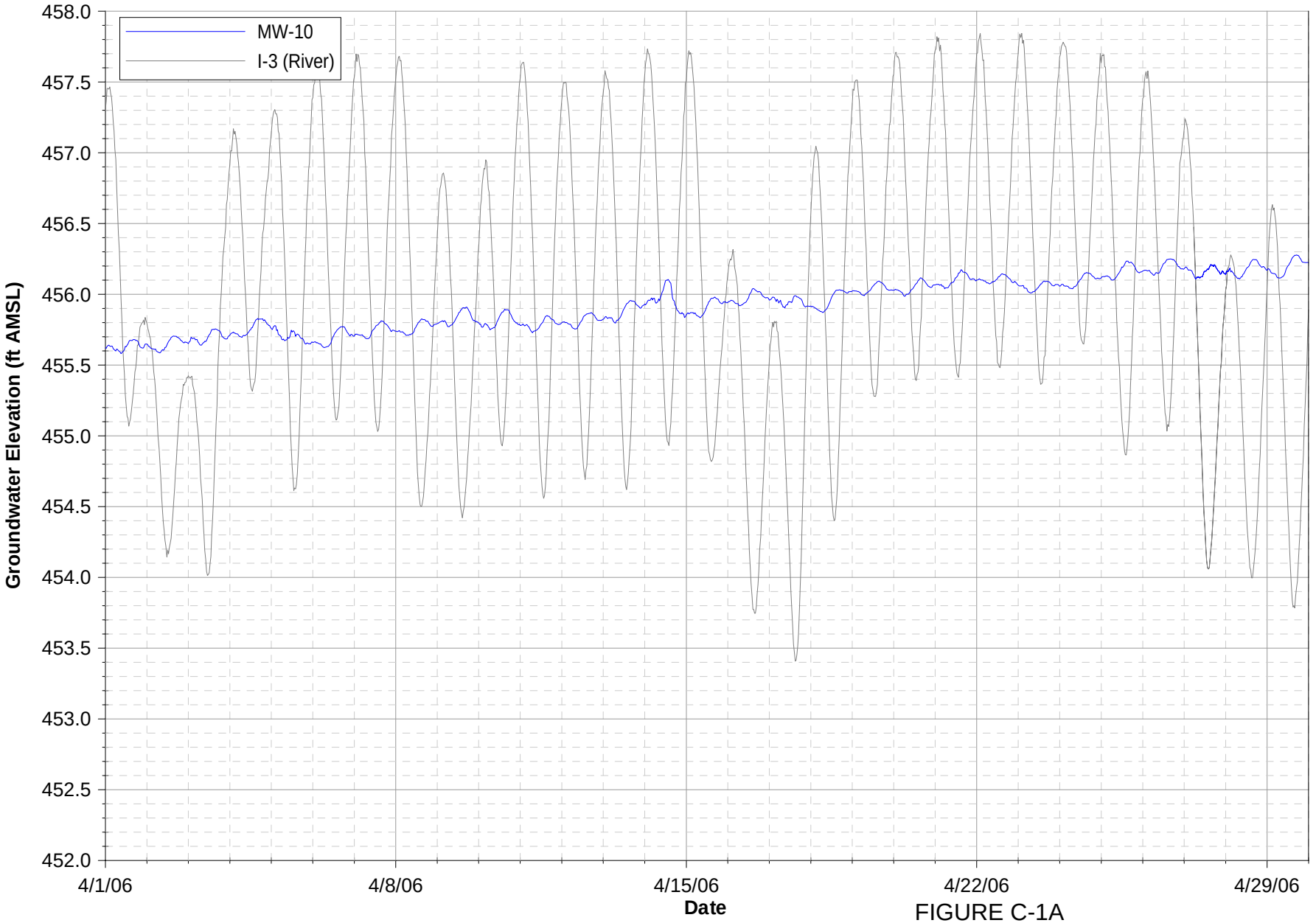
Appendix C
Hydrographs and Hydraulic Gradient Maps for Reporting Period

TABLE C-1

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

Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	Aquifer Depth
I-3	456.07	454.70	457.36	River Station
RRB	456.34	454.87	457.47	River Station
MW-10	455.98	455.91	456.04	Upper
MW-19	455.53	455.44	455.62	Upper
MW-20-070	454.38	454.26	454.52	Upper
MW-20-100	453.97	453.74	454.26	Middle
MW-20-130	453.64	453.32	454.07	Lower
MW-22	455.1	455.03	455.19	Upper
MW-25	455.45	455.41	455.49	Upper
MW-26	455.16	455.10	455.22	Upper
MW-27-020	455.89	455.51	456.26	Upper
MW-27-060	455.91	455.15	456.64	Middle
MW-27-085	455.95	455.20	456.68	Lower
MW-28-025	456.12	455.50	456.73	Upper
MW-28-090	455.81	454.91	456.67	Lower
MW-30-030	455.09	454.81	455.23	Upper
MW-30-050	INC	INC	INC	Middle
MW-31--060	INC	INC	INC	Upper
MW-31-135	454.41	454.11	454.75	Lower
MW-32-020	455.18	455.03	455.33	Upper
MW-32-035	455.39	455.00	455.78	Upper
MW-33-040	455.83	455.44	456.23	Upper
MW-33-090	455.83	455.35	456.30	Middle
MW-33-150	455.89	455.41	456.36	Lower
MW-33-210	456.06	455.65	456.46	Lower
MW-34-055	455.77	454.84	456.65	Middle
MW-34-080	455.82	454.94	456.67	Lower
MW-34-100	455.57	454.74	456.35	Lower
MW-35-060	456.18	455.80	456.58	Upper
MW-35-135	455.74	455.51	455.99	Lower
MW-36-020	455.45	454.88	455.99	Upper
MW-36-040	455.53	454.84	456.20	Upper
MW-36-050	455.48	454.76	456.17	Middle
MW-36-070	455.31	454.56	456.02	Middle
MW-36-090	454.77	454.14	455.37	Lower
MW-36-100	454.89	454.25	455.50	Lower
MW-39-040	455.21	454.62	455.79	Upper
MW-39-050	455.2	454.63	455.77	Middle
MW-39-060	455.16	454.61	455.68	Middle
MW-39-070	454.78	454.31	455.24	Middle
MW-39-080	454.84	454.37	455.30	Lower
MW-39-100	454.91	454.42	455.38	Lower
MW-42-030	455.35	454.89	455.80	Upper
MW-42-055	455.45	454.97	455.93	Middle
MW-42-065	455.55	455.07	456.02	Middle
MW-43-025	456.13	455.39	456.88	Upper
MW-43-075	456.27	455.46	457.08	Lower
MW-43-090	456.42	455.61	457.24	Lower
MW-44-070	455.59	454.74	456.39	Middle
MW-44-115	455.04	454.37	455.69	Upper
MW-44-125	455.49	454.81	456.12	Upper
MW-45-095a	454.39	453.52	455.39	Upper
MW-46-175	455.86	455.29	456.42	Upper
MW-46-205	456	455.54	456.46	Upper
MW-47-055	455.82	455.62	456.03	Lower
MW-47-115	455.85	455.60	456.11	Upper
TW-04	456.58	456.31	456.85	Upper

INC= Data incomplete over reporting perioc



Note: Data subject to review.

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

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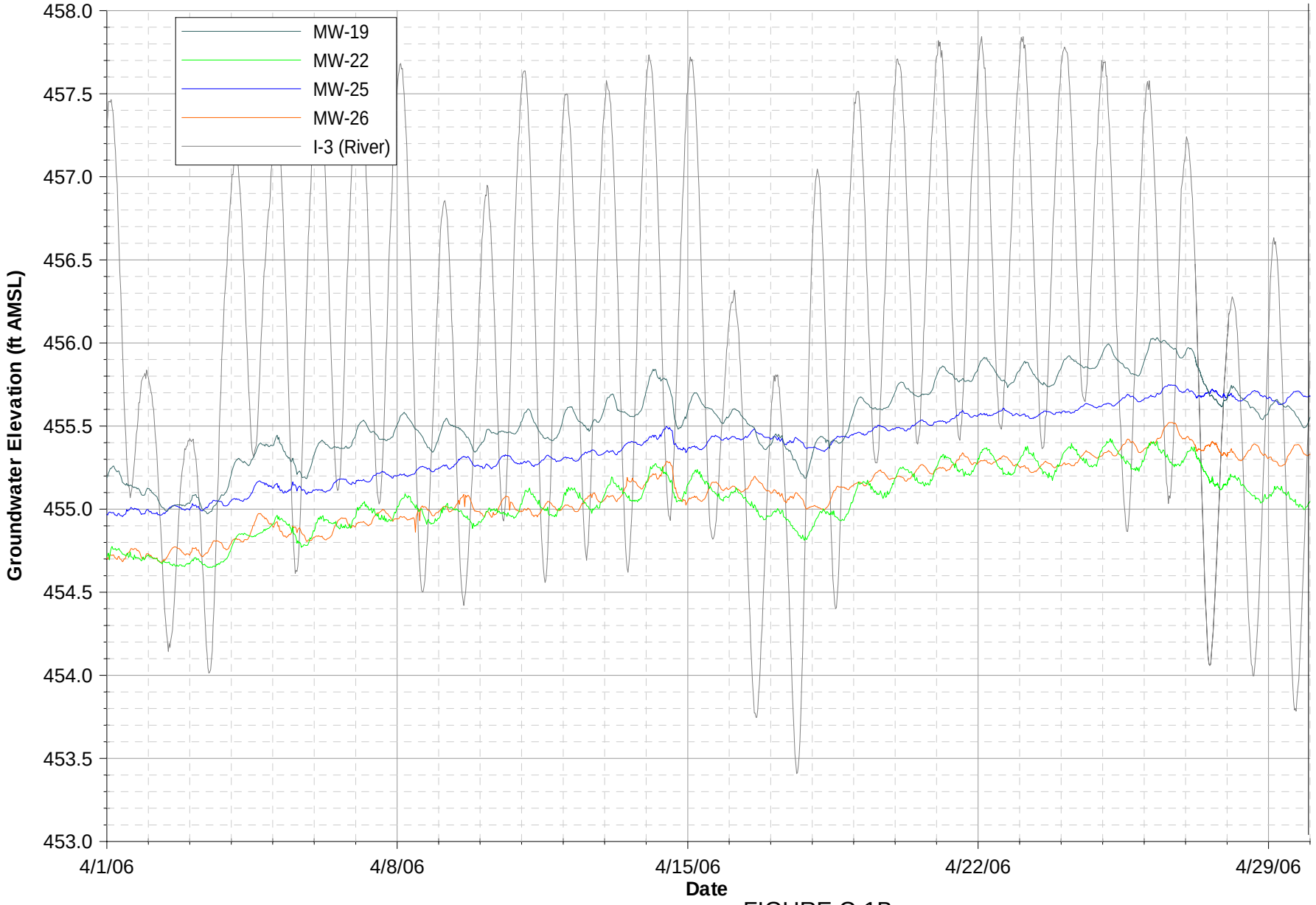
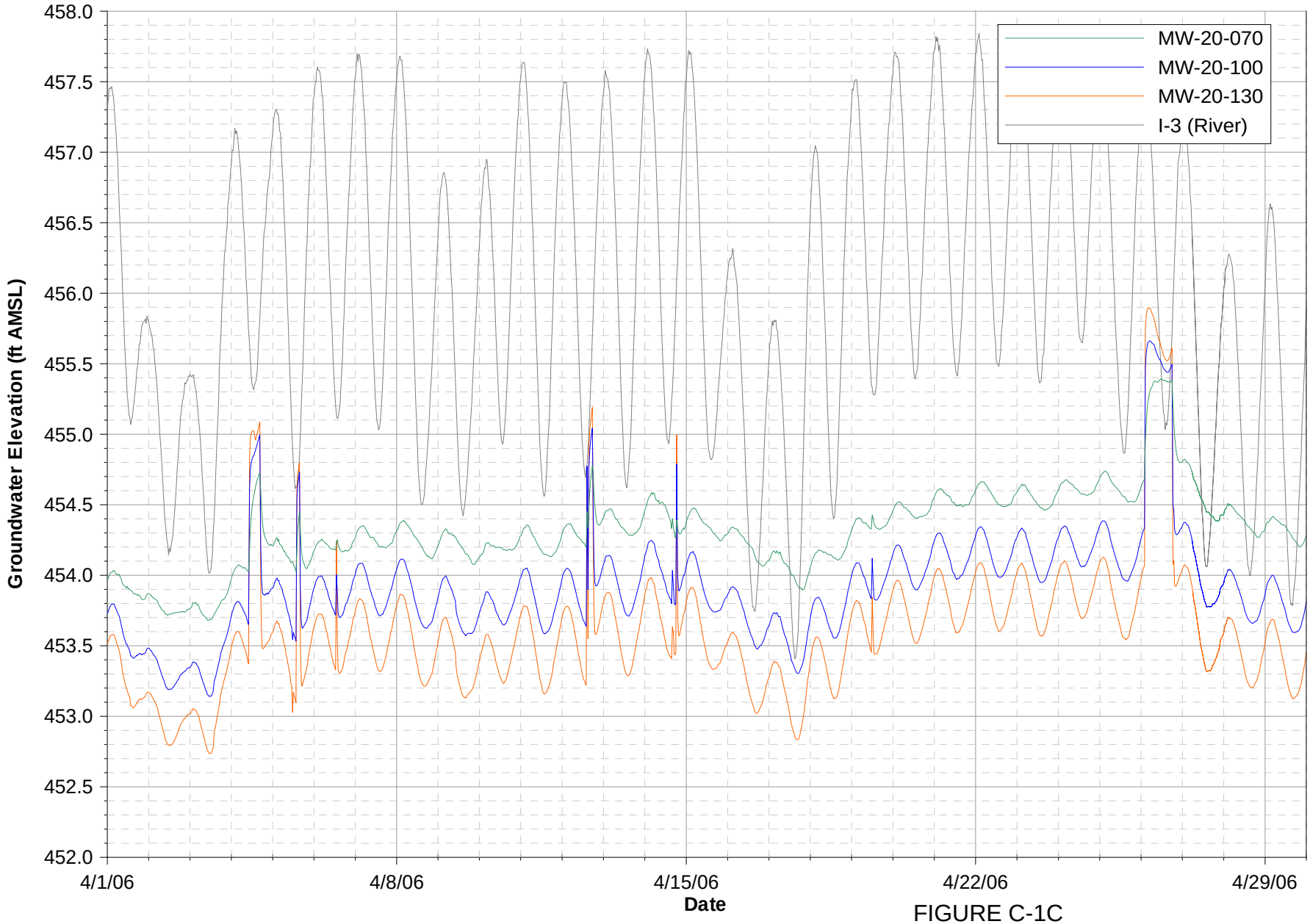


FIGURE C-1B
MW-19, MW-22, MW-25, AND MW-26 HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

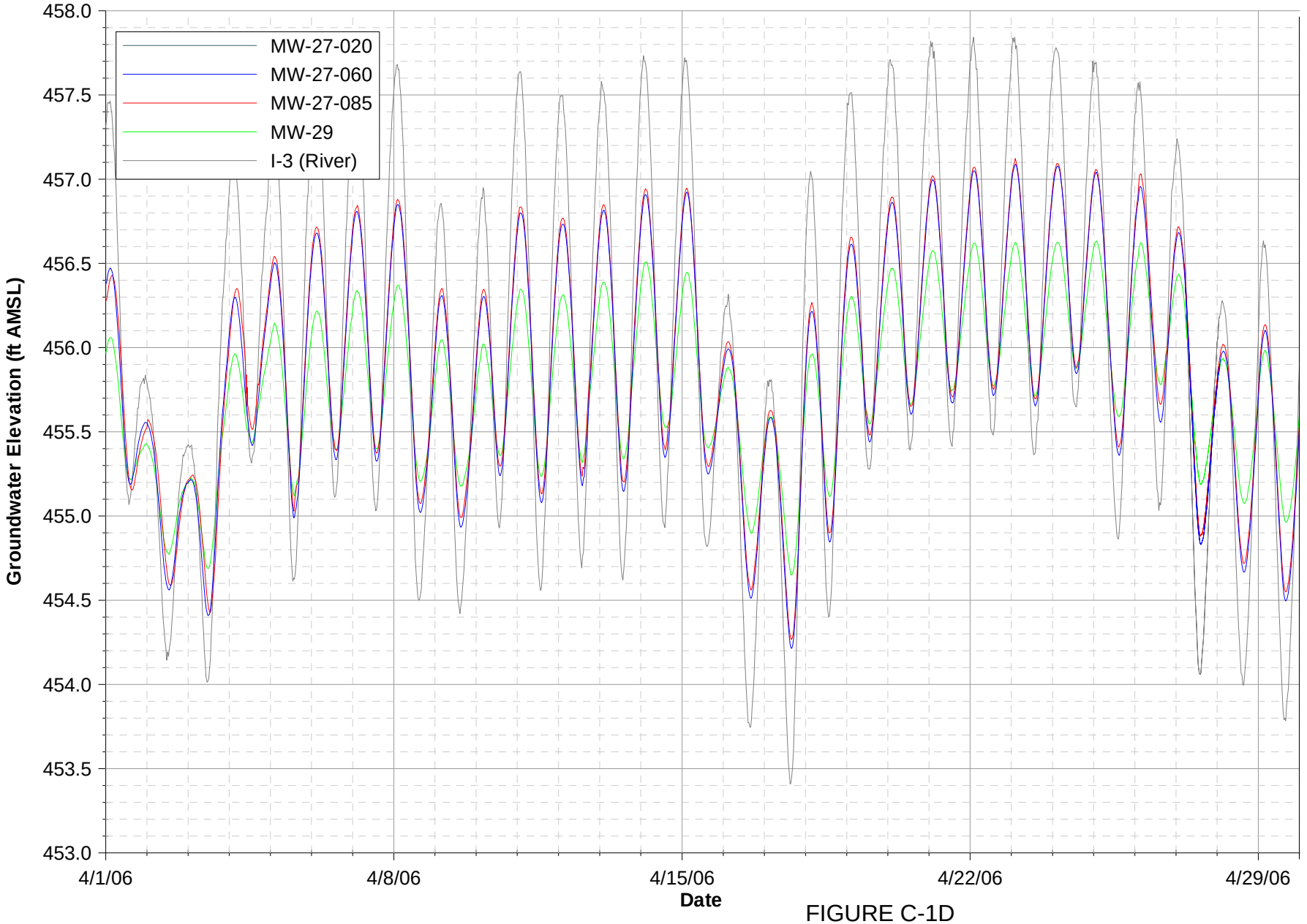
CH2MHILL



Note: Data subject to review.

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

CH2MHILL



Note: Data subject to review.

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

CH2MHILL

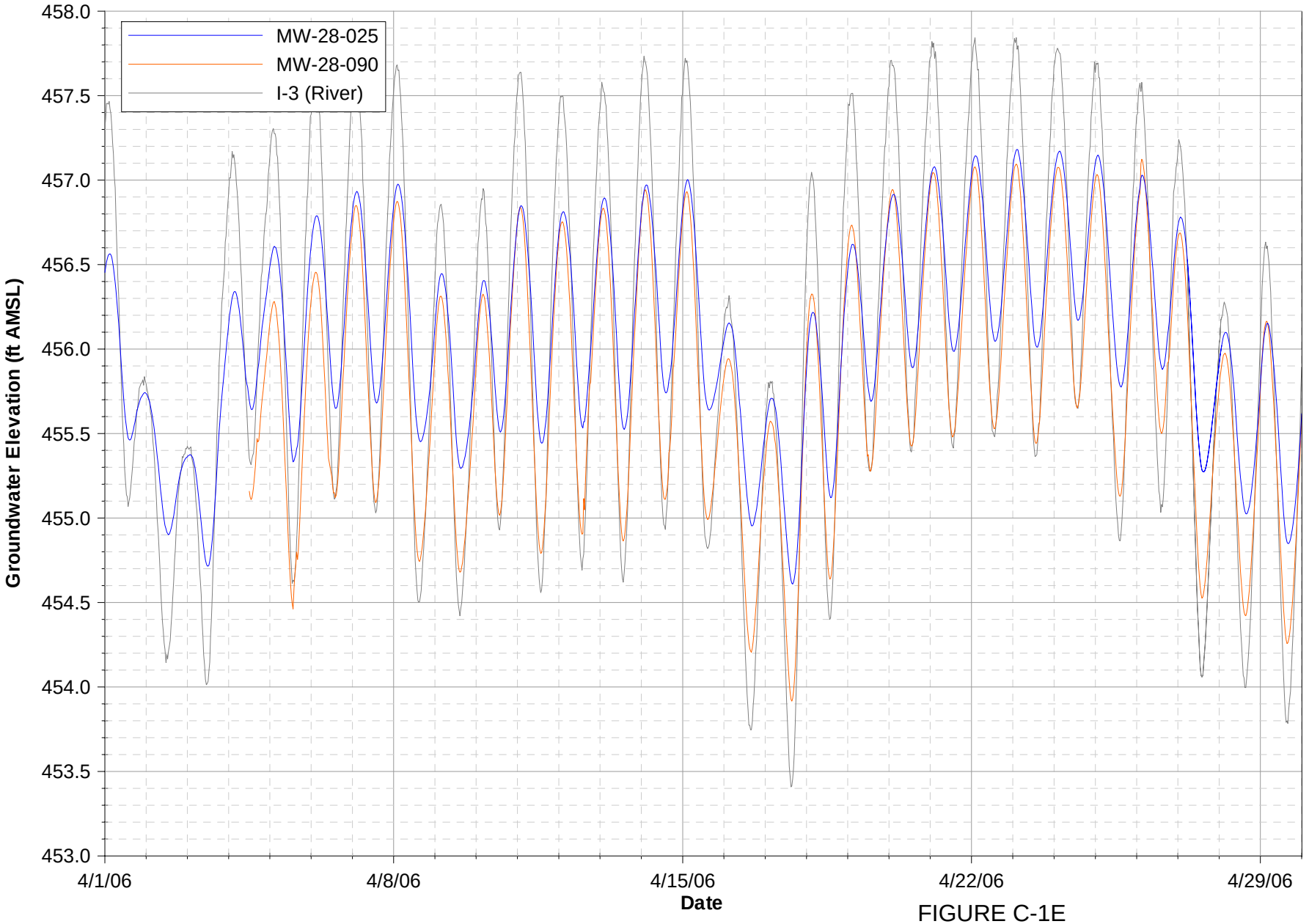
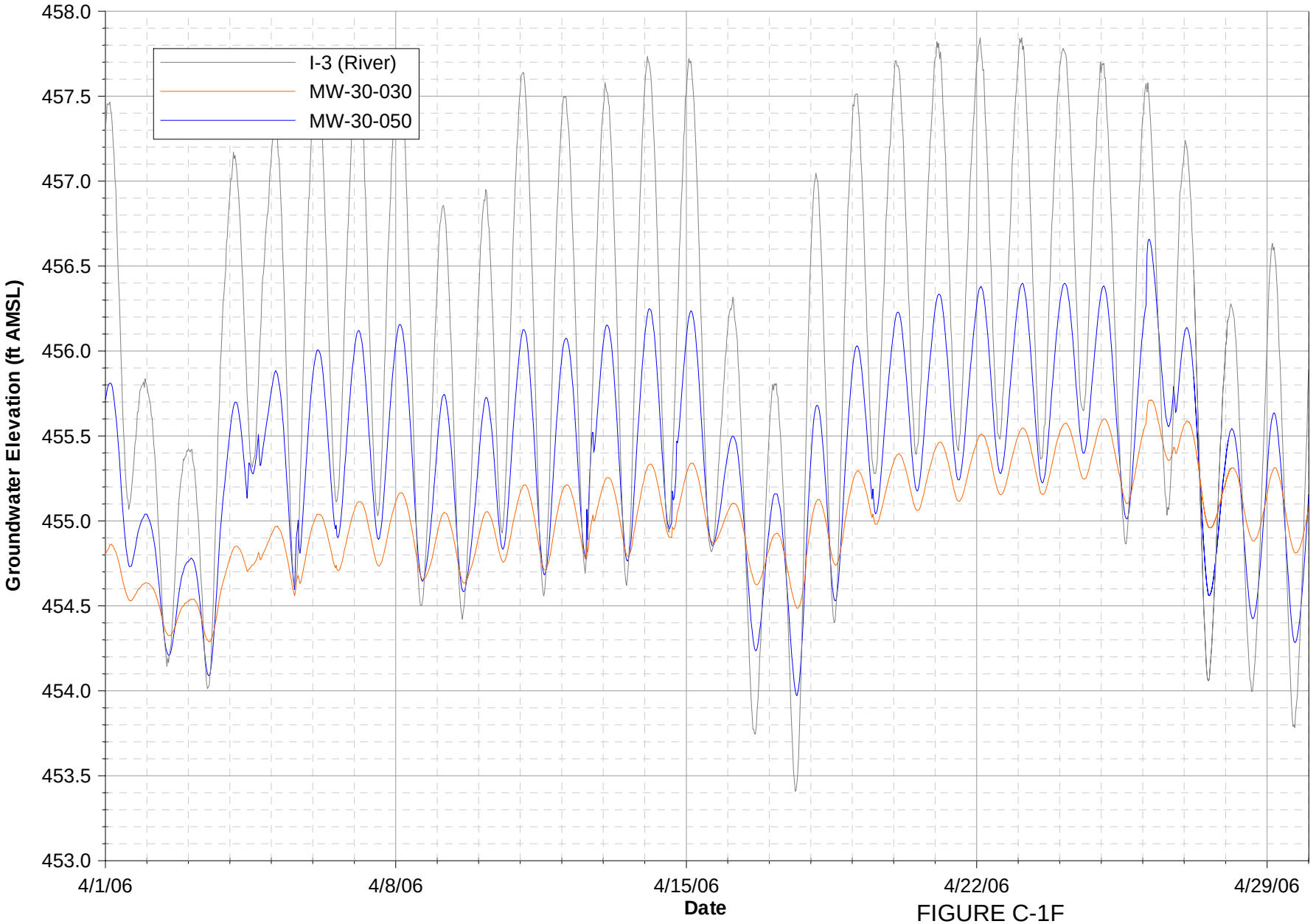


FIGURE C-1E
MW-28 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.
MW-28-90 data unvavailable 4/1/06 to 4/4/06.

CH2MHILL



Note: Data subject to review.

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

CH2MHILL

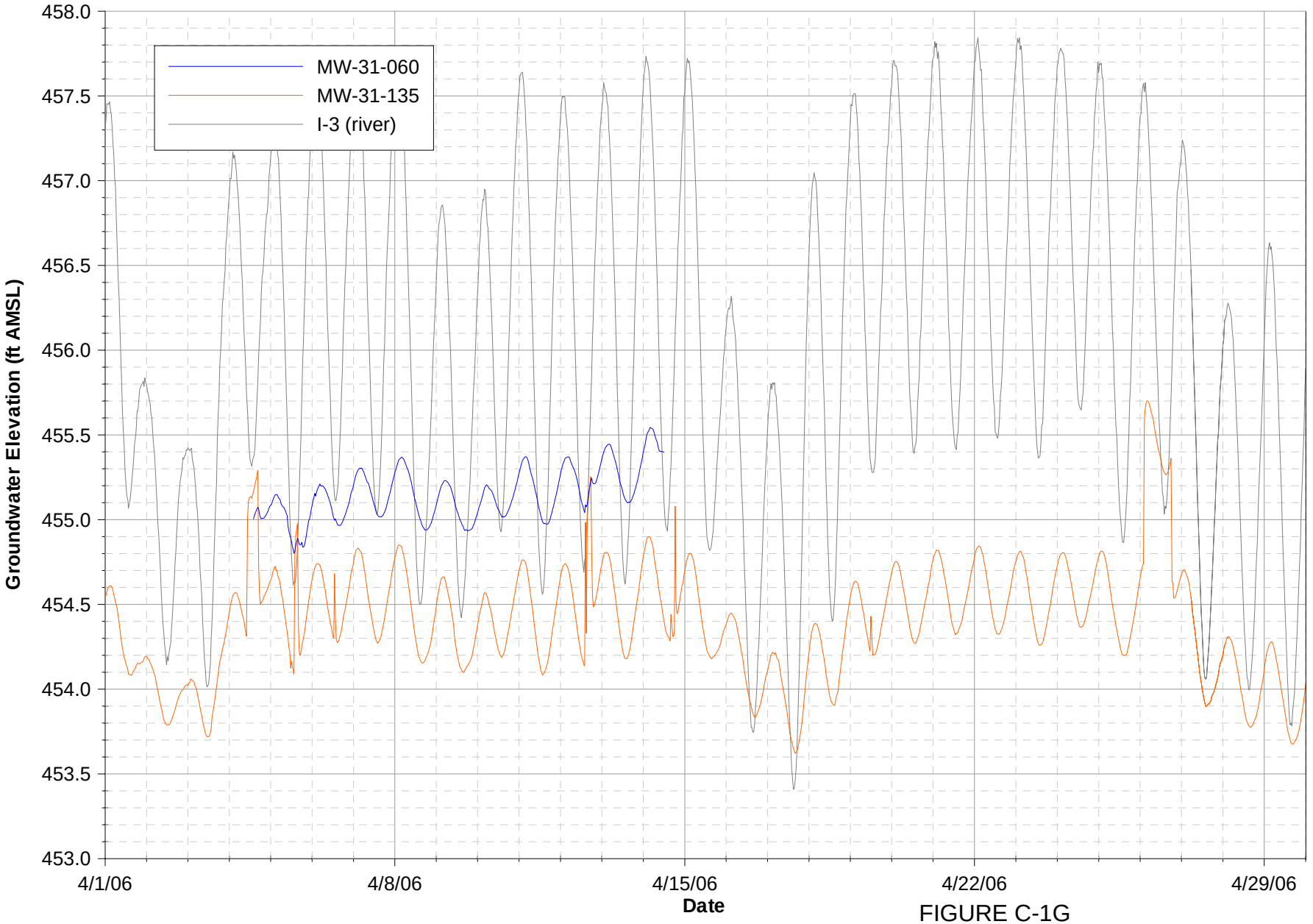


FIGURE C-1G
MW-31 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.
MW-31-60 transducer data unvailable April 1-4 and 14-30 due to transducer failure.

CH2MHILL

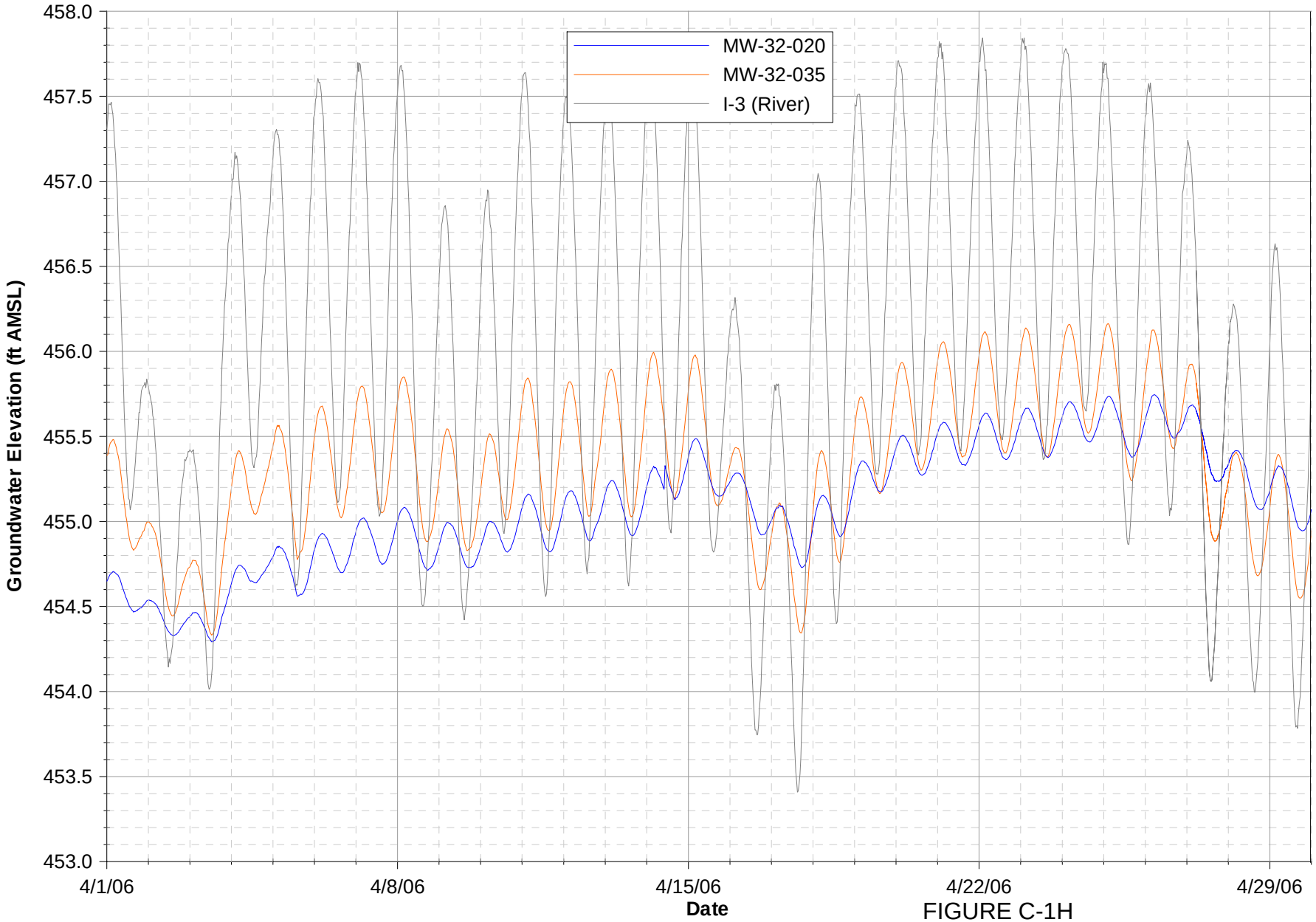
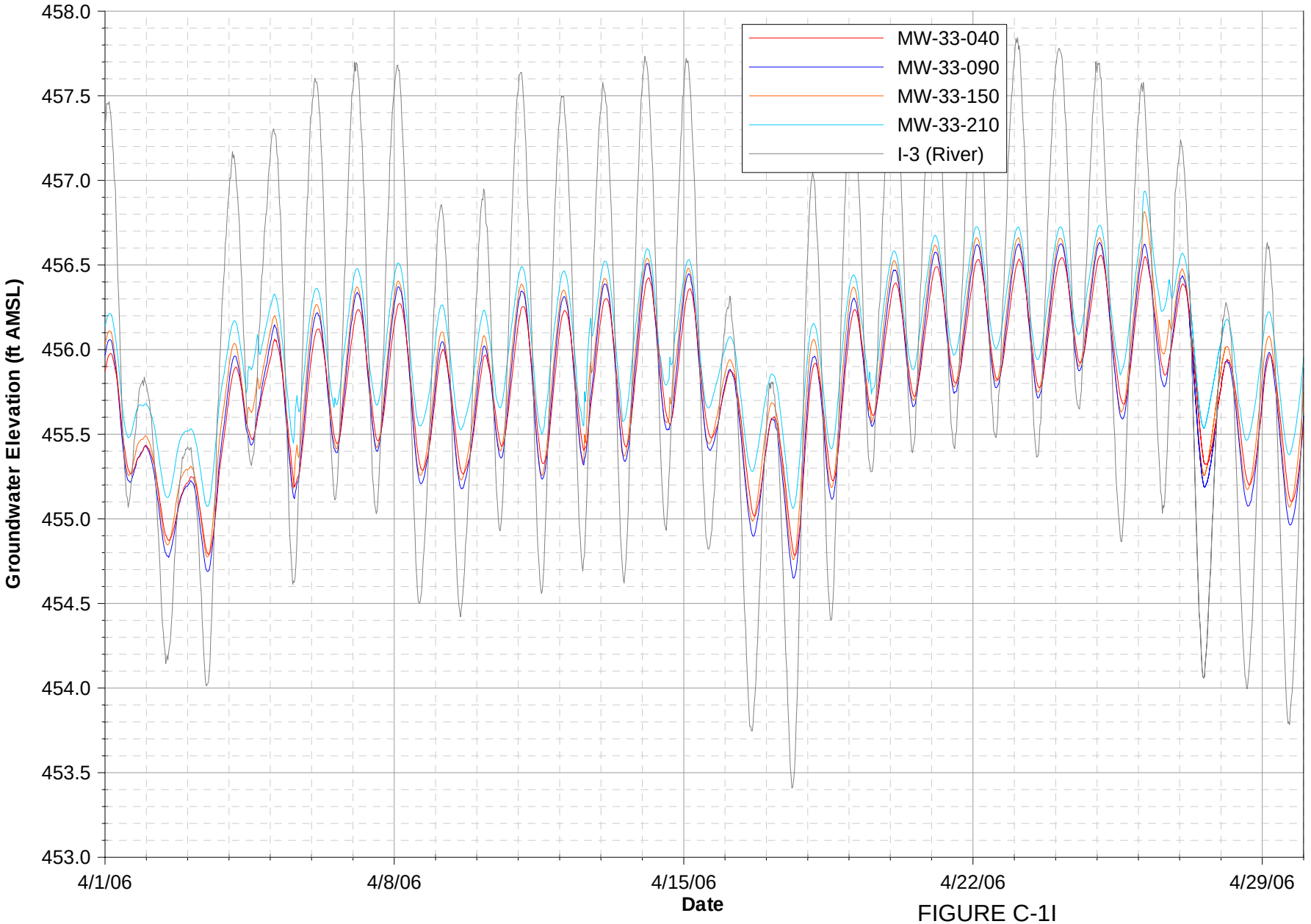


FIGURE C-1H
MW-32 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL



Note: Data subject to review.

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

CH2MHILL

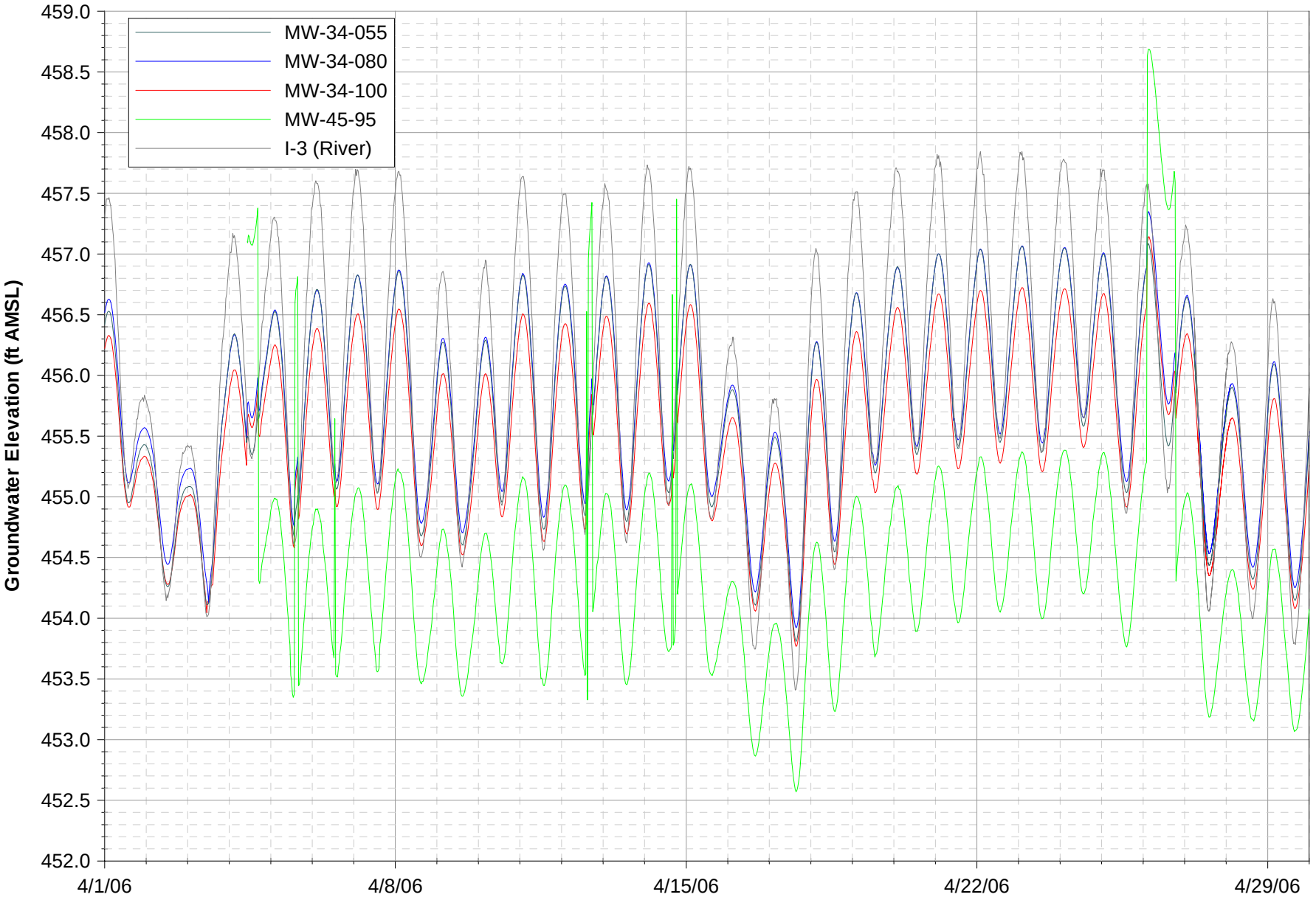


FIGURE C-1J
MW-34 CLUSTER AND MW-45-95 HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

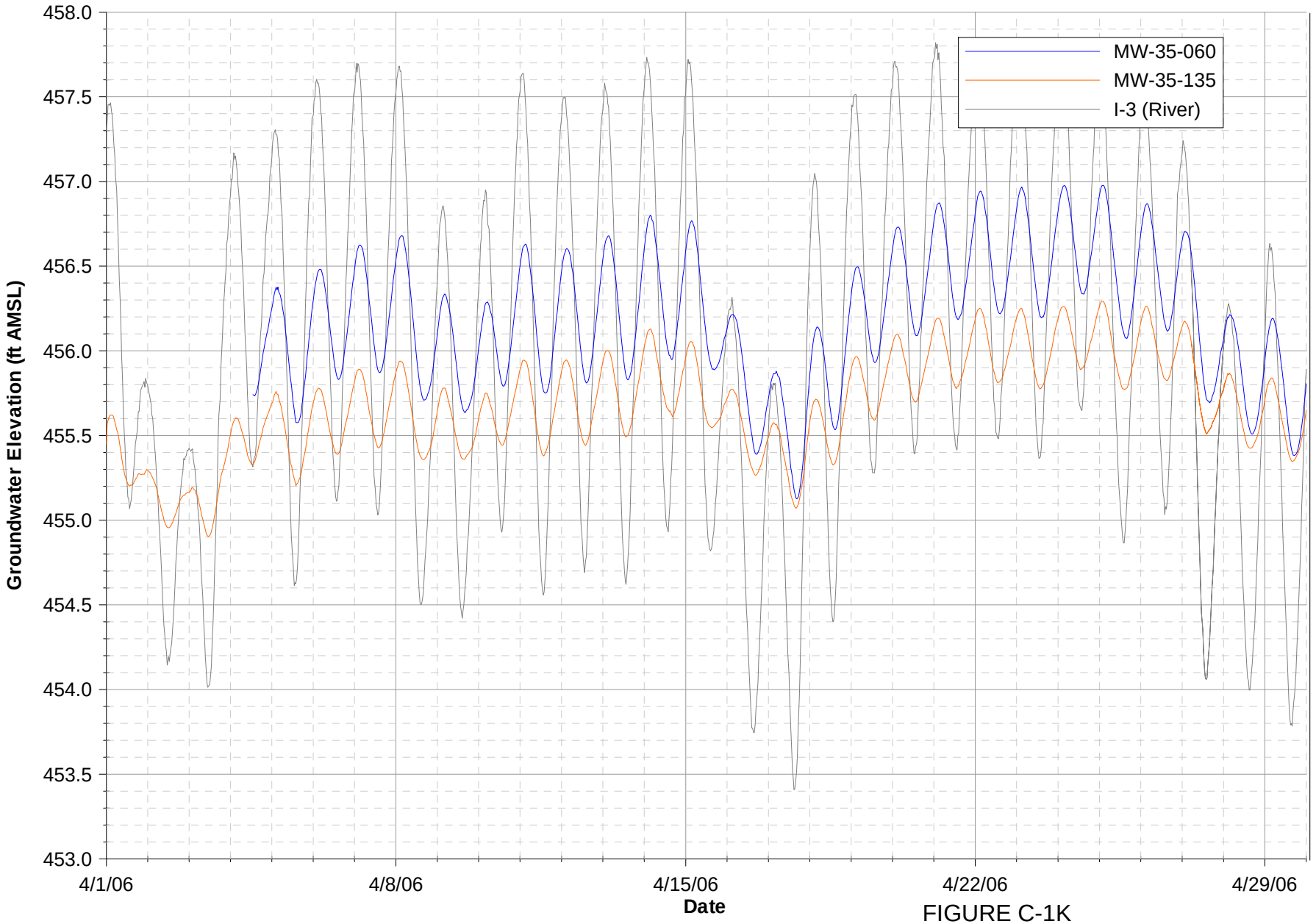


FIGURE C-1K
MW-35 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.
MW-35-60 data unavailable 4/1/06 through 4/4/06.

CH2MHILL

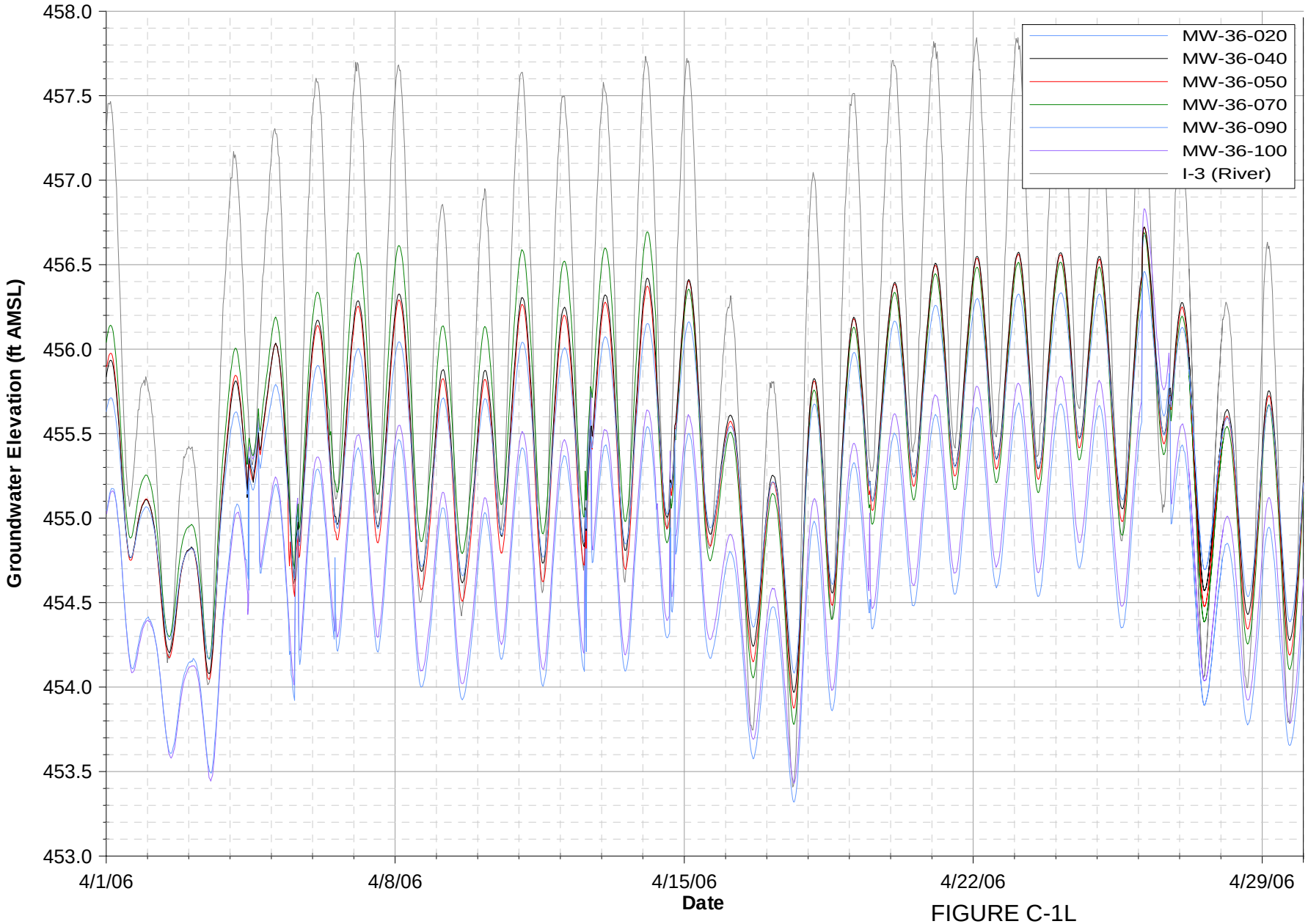
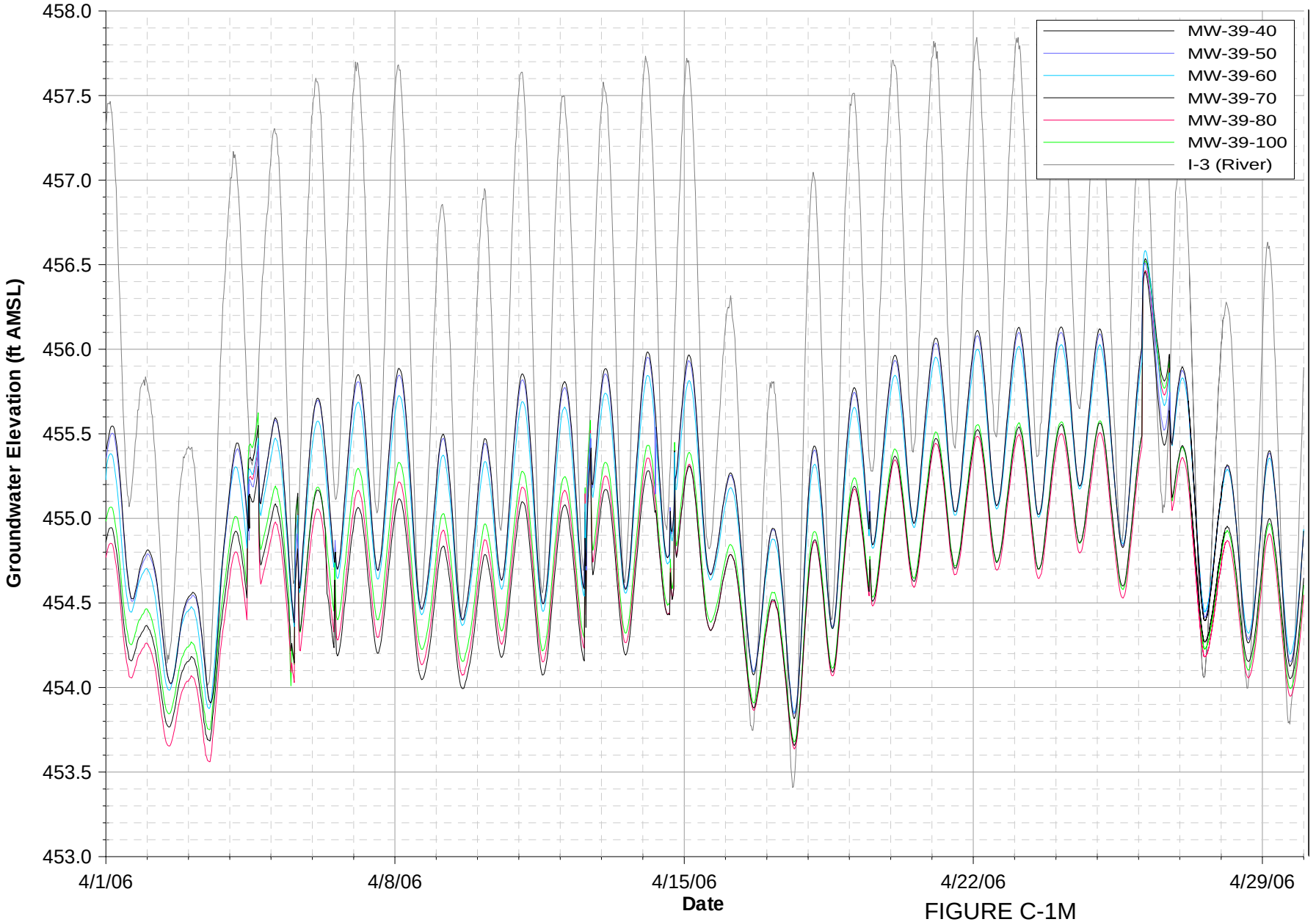


FIGURE C-1L
MW-36 CLUSTER
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

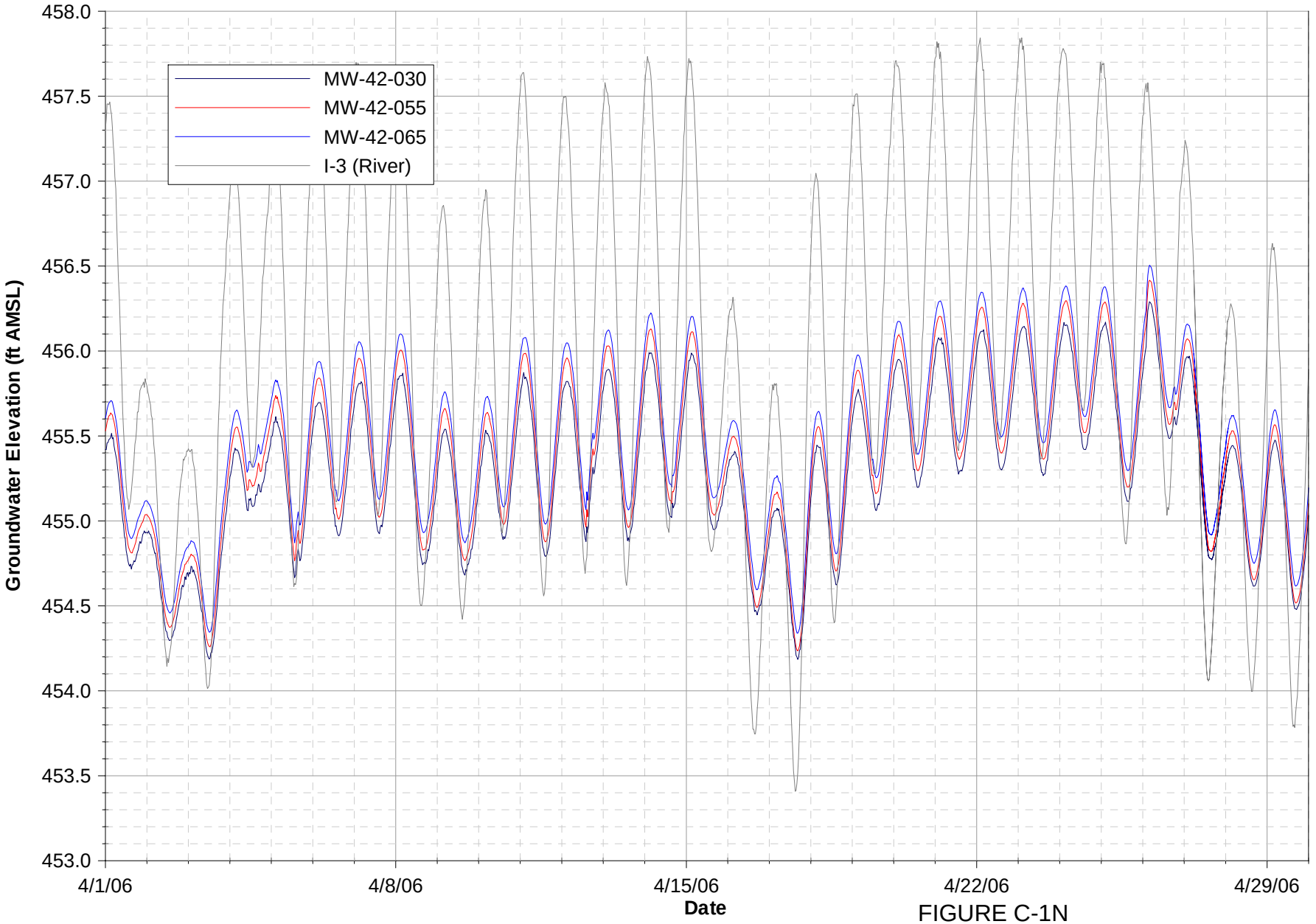
CH2MHILL



Note: Data subject to review.

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

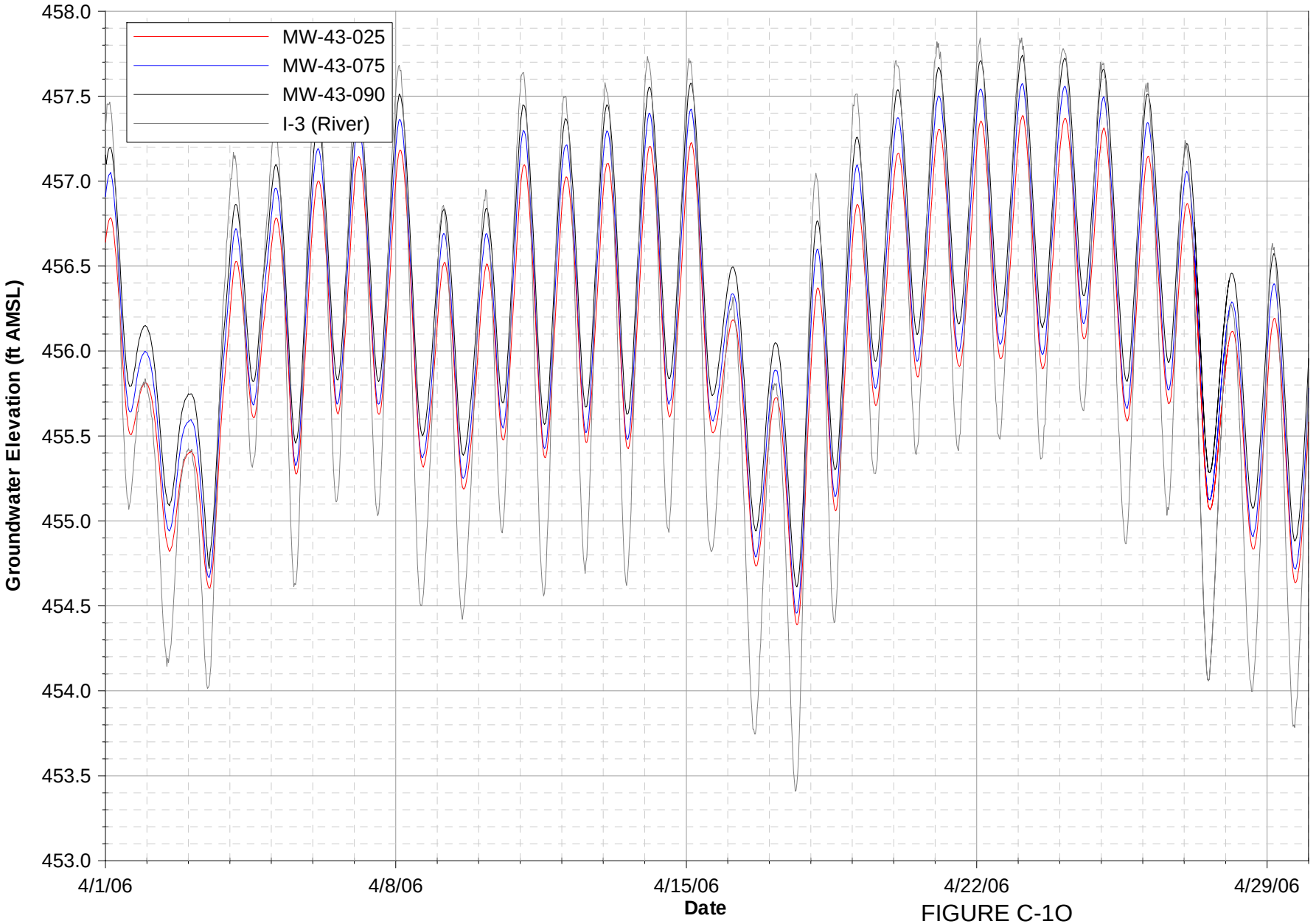
CH2MHILL



Note: Data subject to review.

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

CH2MHILL



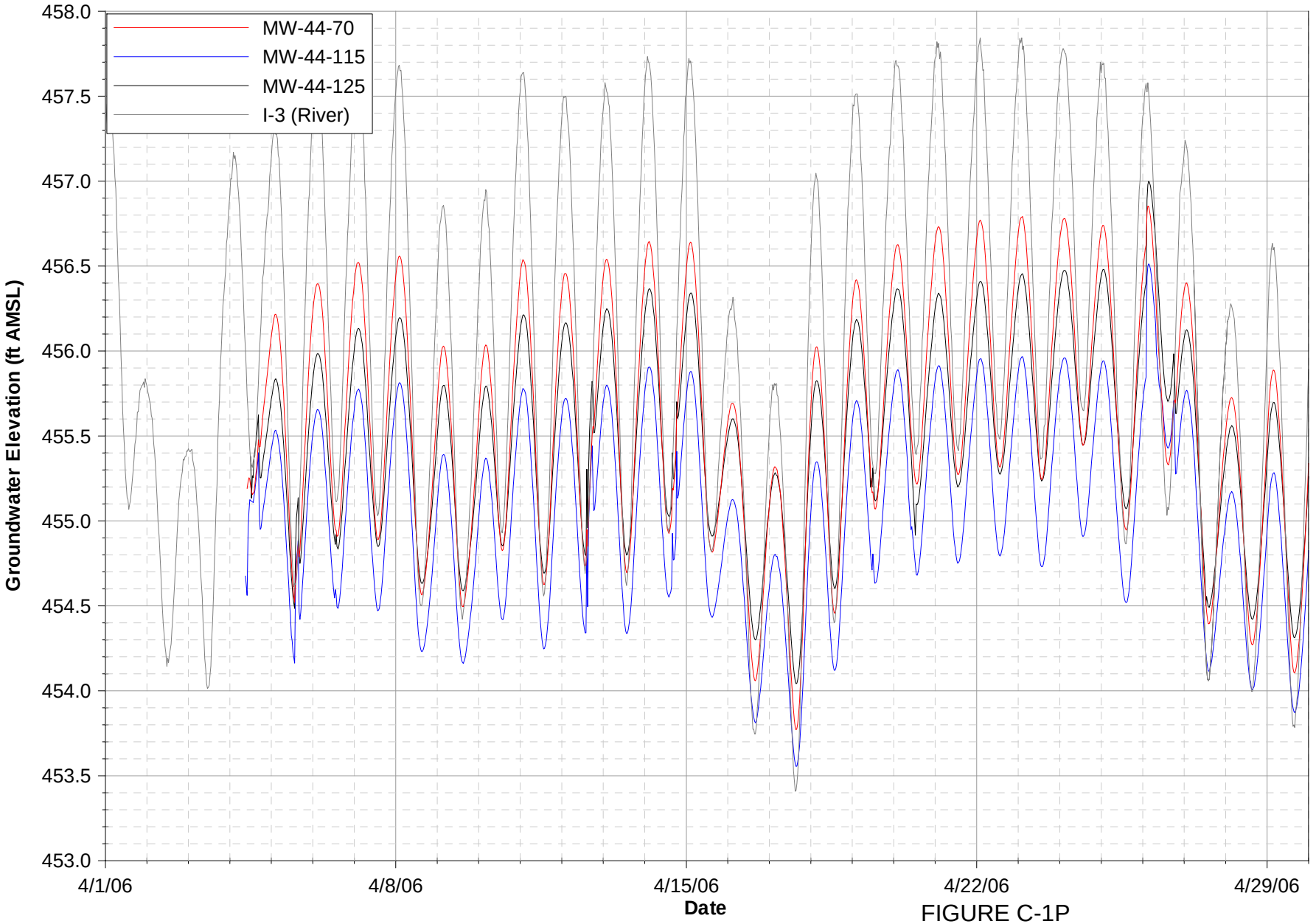
Note: Data subject to review.

FIGURE C-1O

MW-43 CLUSTER HYDROGRAPHS

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

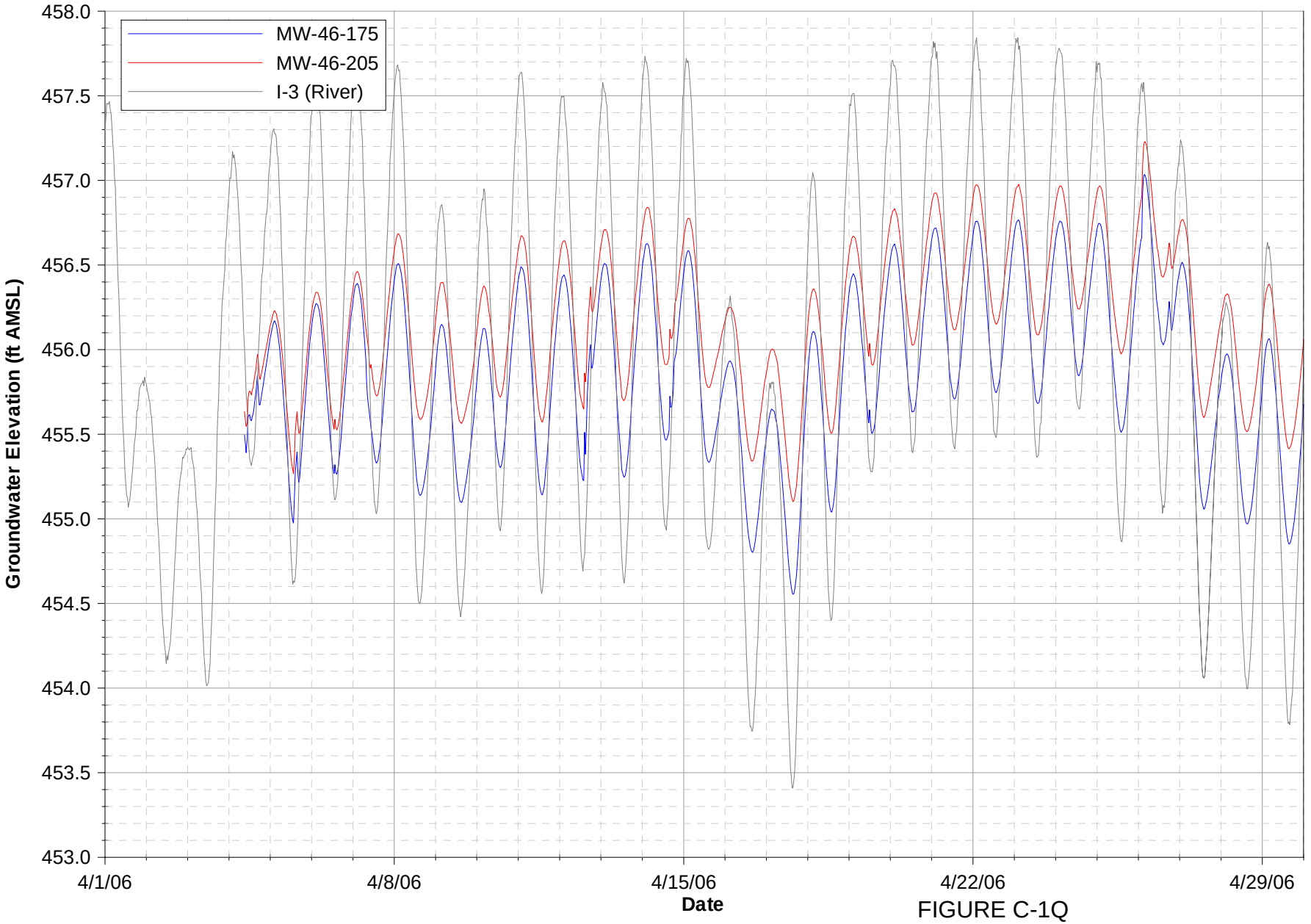
CH2MHILL



Note: Data subject to review.
Transducers installed in new MW-44 cluster wells on 4/4/06.

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

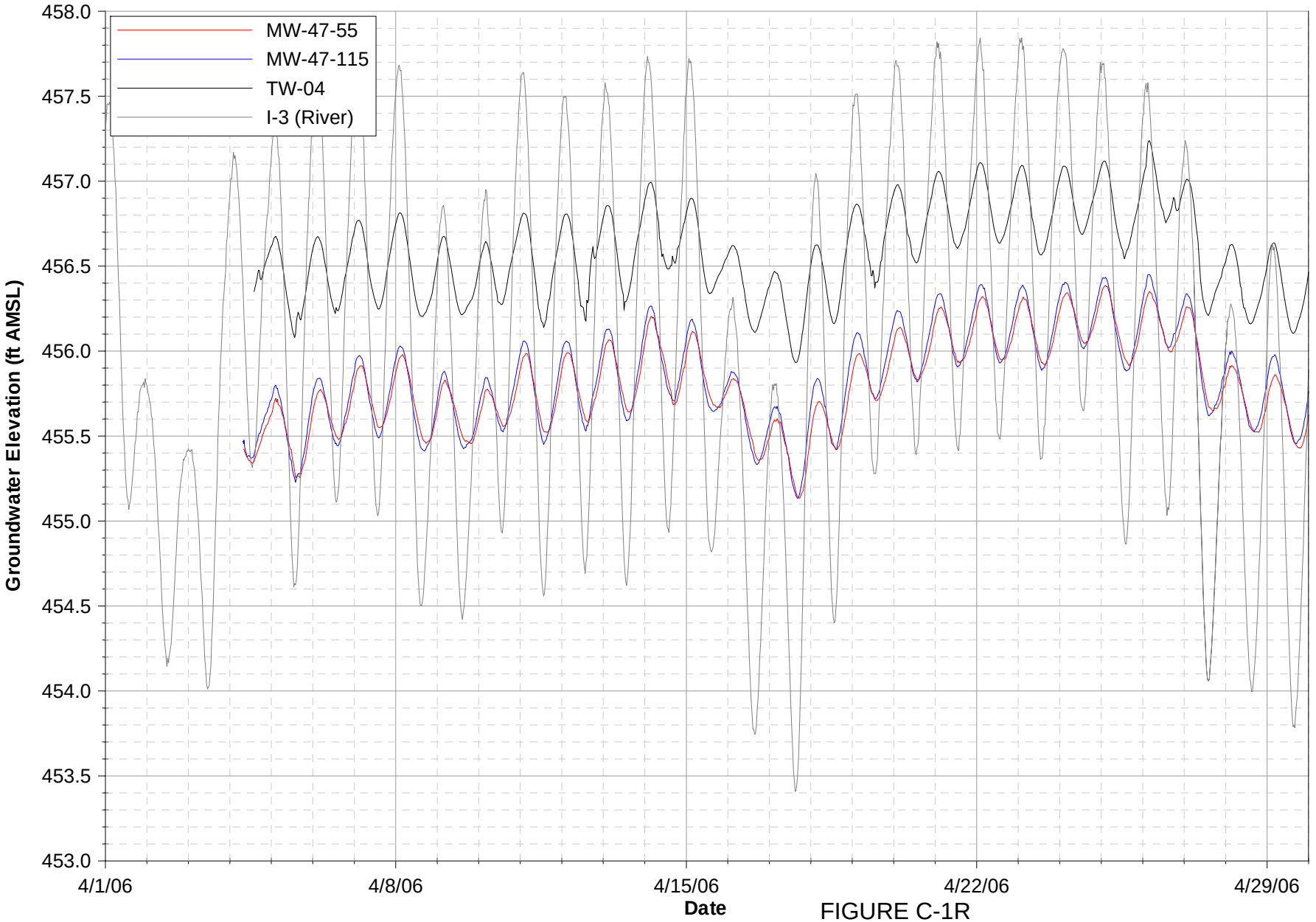
CH2MHILL



Note: Data subject to review.
Transducers installed in new MW-46 cluster wells on 4/4/06.

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

CH2MHILL



Note: Data subject to review.
Transducers installed in new MW-47 cluster wells and TW-04 on 4/4/06.

FIGURE C-1R
MW-47 CLUSTER AND TW-04 HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

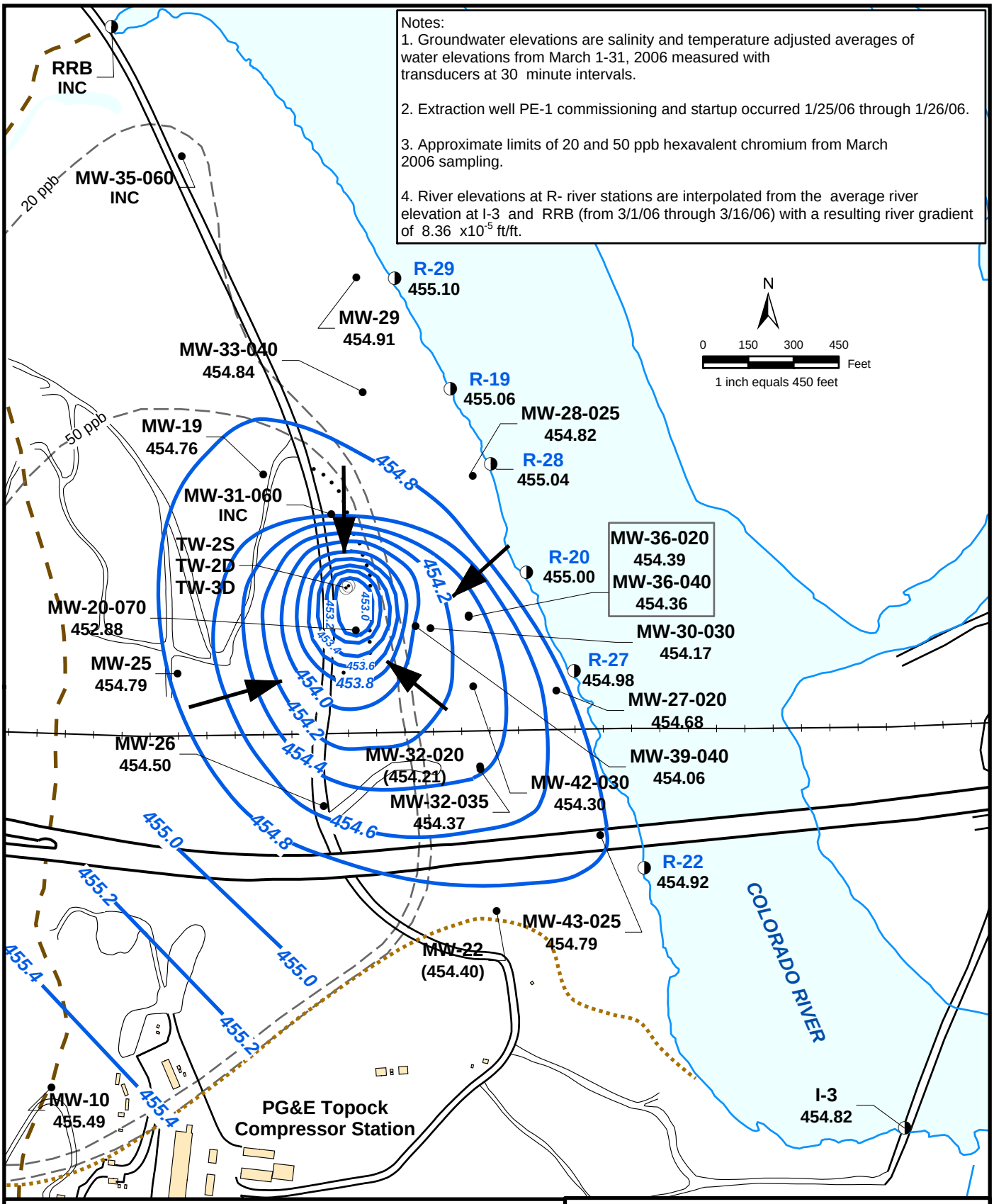


FIGURE C-2A
AVERAGE GROUNDWATER SHALLOW WELLS AND RIVER MARCH 2006

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

CH2MHILL

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\GW\IM_AVERAGE_GROUNDWATER_UA_Mar_06.MXD

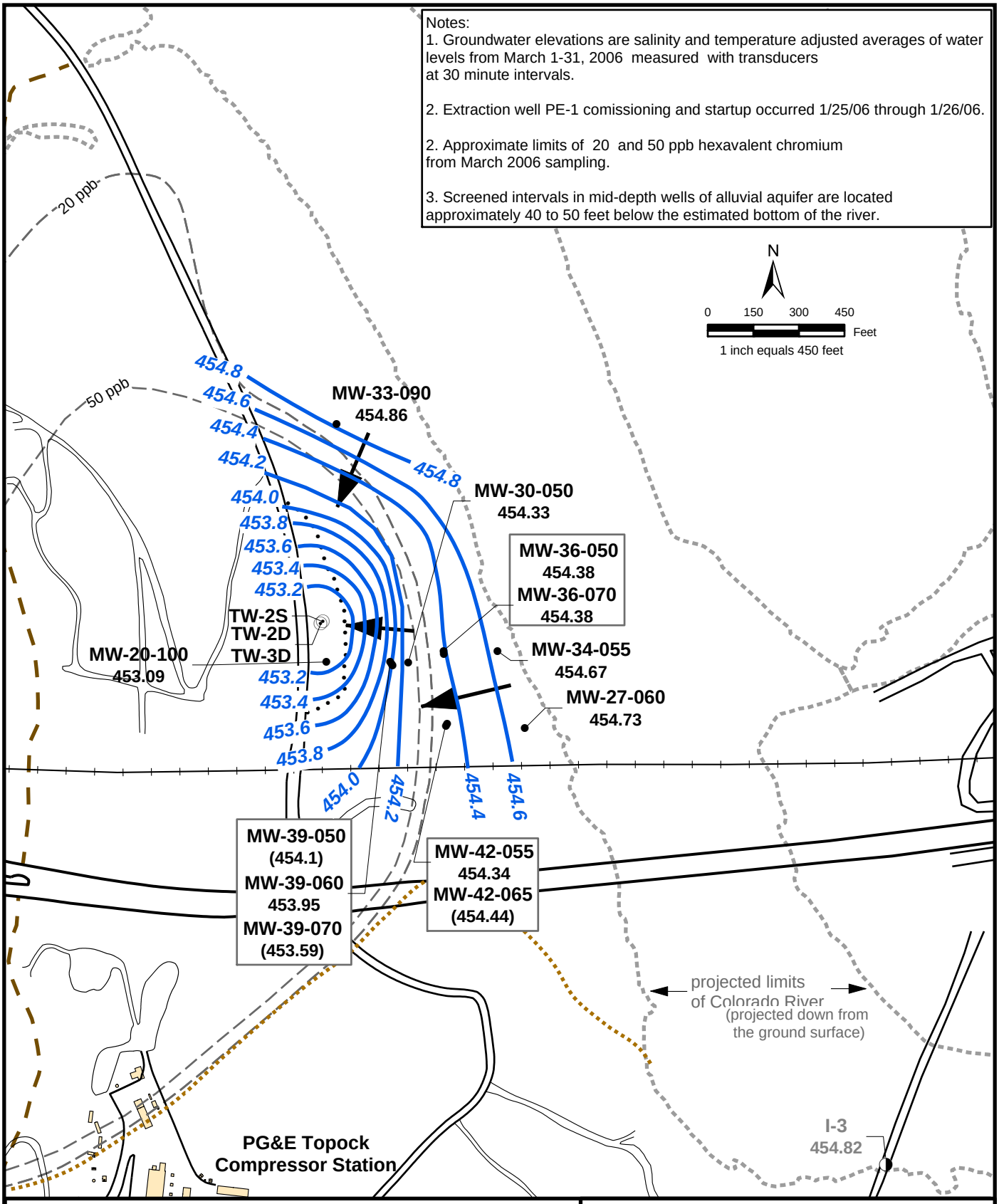


FIGURE C-2B
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS MARCH 2006

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\GW\IM_AVERAGE_GROUNDWATER_MA_Mar06.MXD

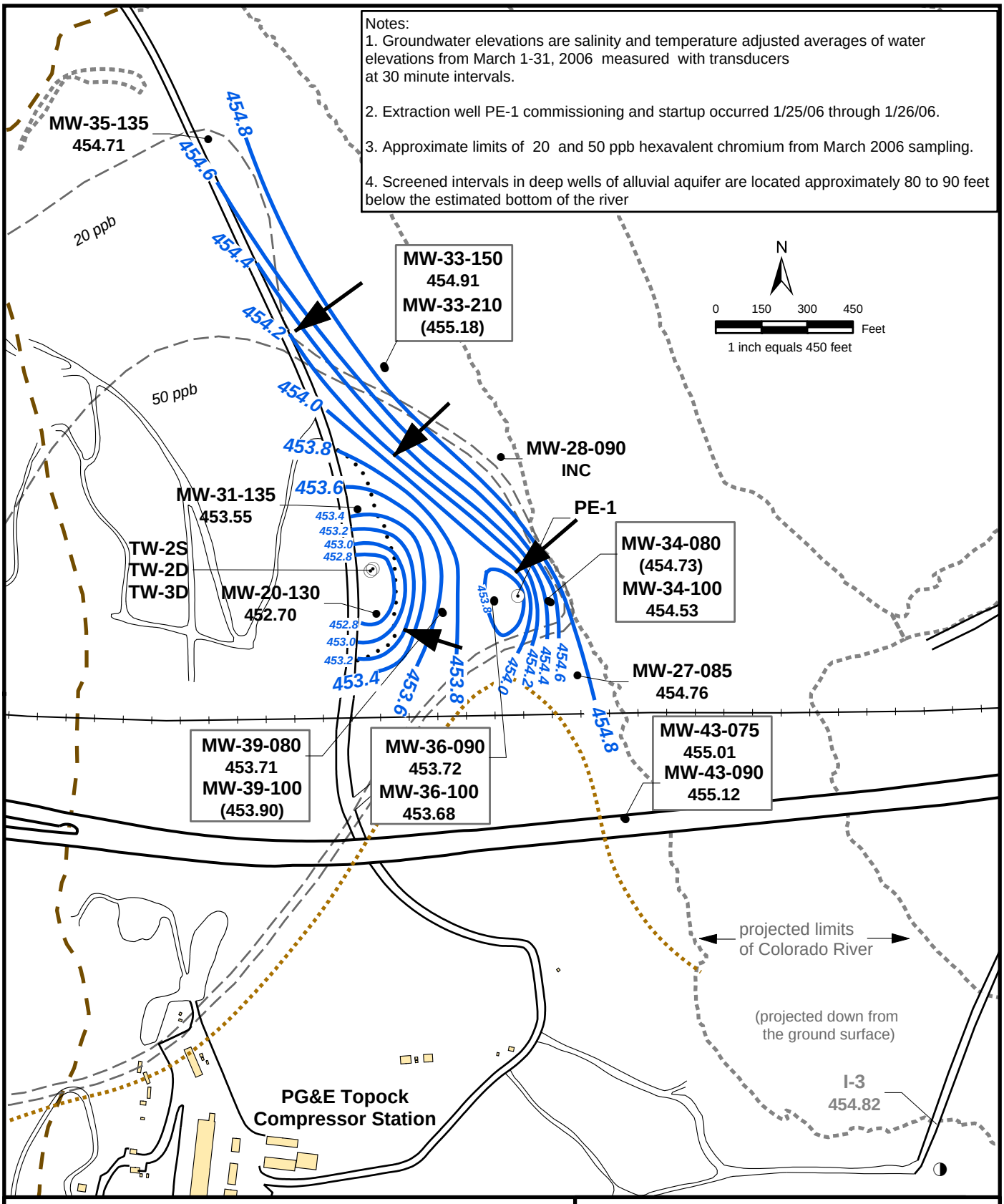


FIGURE C-2C
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MARCH 2006

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\GW\IM_AVERAGE_GROUNDWATER_LA_MARCH_06.MXD
IM_AVERAGE_GROUNDWATER_LA_MARCH_06.PDF 4/27/2006 13:01:15

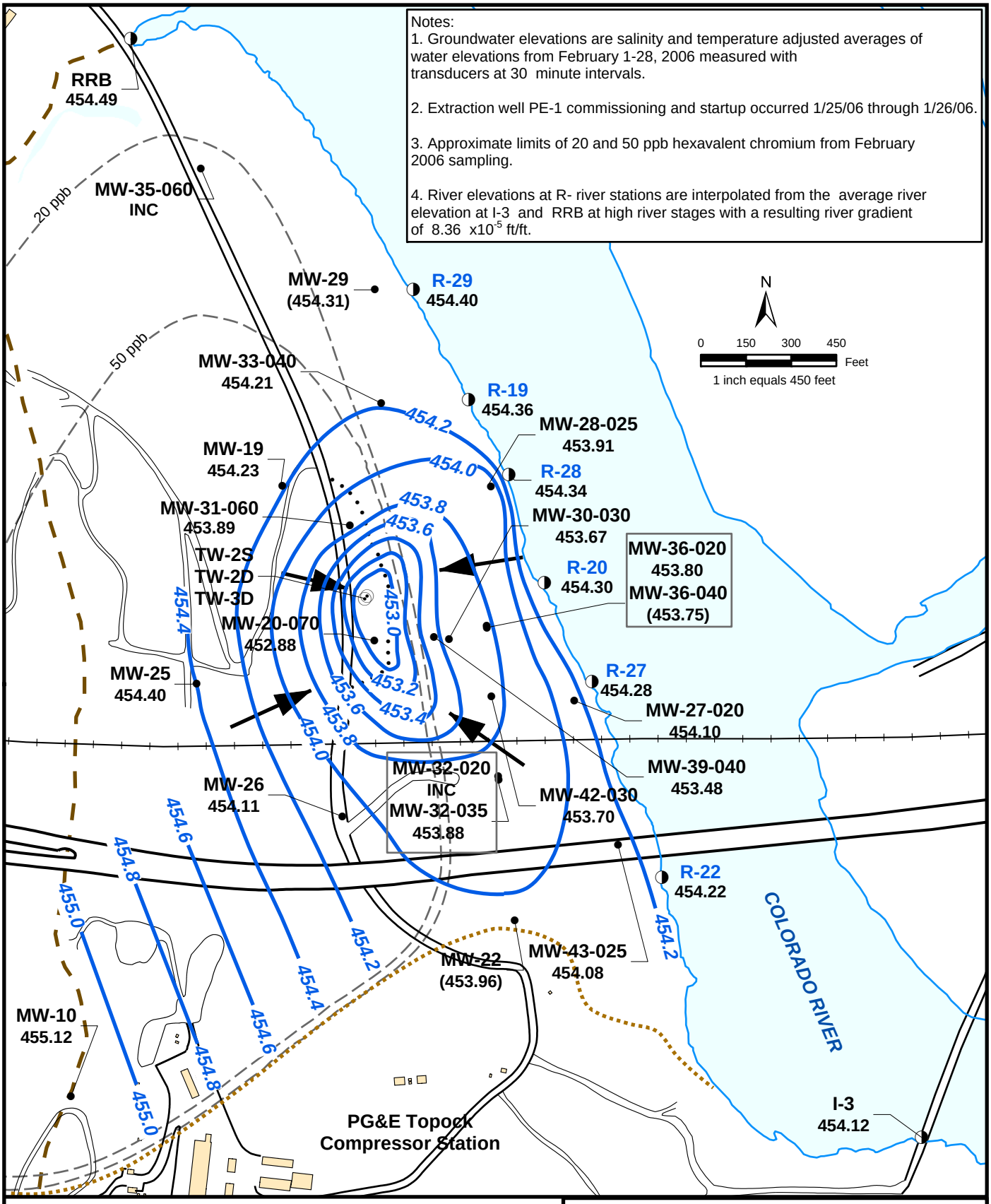


FIGURE C-2D
AVERAGE GROUNDWATER SHALLOW WELLS AND RIVER FEBRUARY 2006

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

CH2MHILL

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_Feb_06.MXD

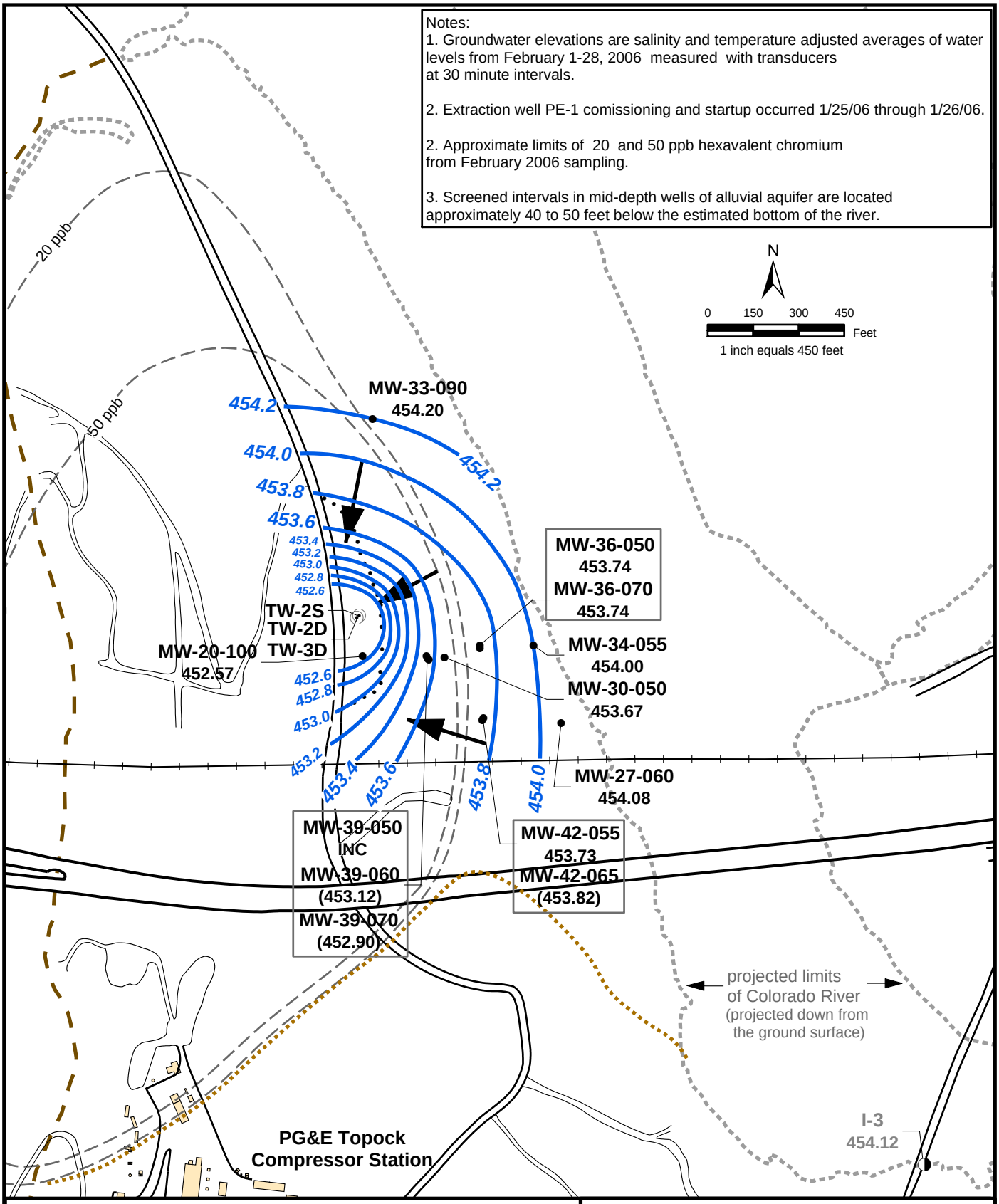


FIGURE C-2E
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS FEBRUARY 2006

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_MA_Feb06.MXD

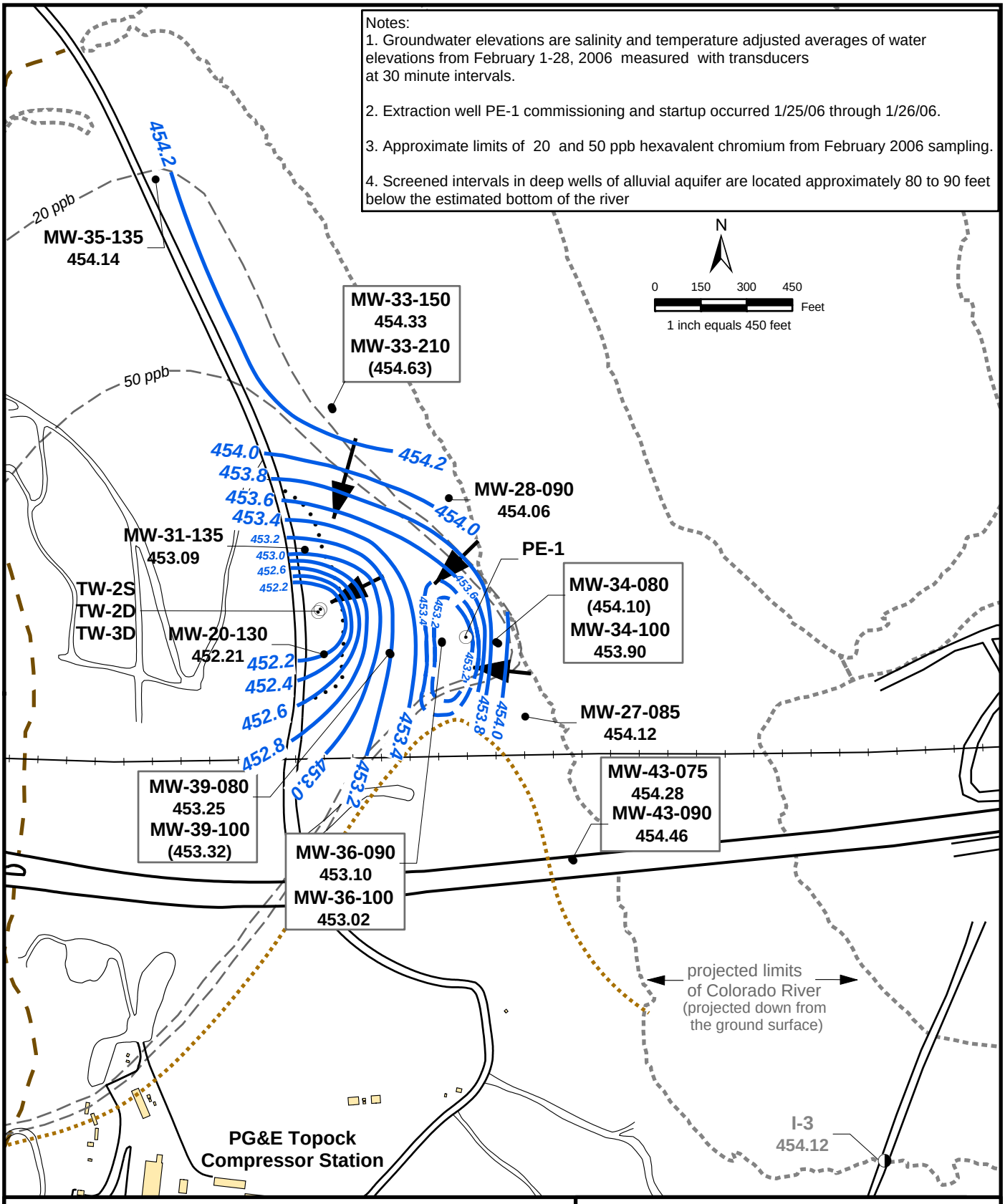


FIGURE C-2F
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS FEBRUARY 2006

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

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\GW\IM_Average_groundwater_LA_February_06.mxd

Appendix D
Chemical Performance Monitoring Analytical Results

TABLE D-1
Chemical Performance Monitoring Results, March 2004 through April 2006
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	03-Mar-04	2300	-6.5	-39.0	890	440	9.7	0.6	230	52	11	480	0.3	75
	03-Mar-04 FD	2300	-6.5	-53.0	890	440	9.7	0.6	220	51	11	460	0.3	72
	11-May-04	2100	-5.5	-53.0	800	450	10	ND (0.5)	210	48	9.7	490	0.4	76
	24-Sep-04	2200	-6.5	-57.0	824	402	9.7	ND (1)	180	58.5	12	430	0.2	74
	16-Dec-04	2080	-7.3	-60.0	753	374	9.68	0.604	177 J	52.5	9.05	410	0.497	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
MW-20-100	03-Mar-04	3400	-4.2	-38.0	1300	740	9.6	0.7	170	20	11	1100	1	82
	11-May-04	3600	-2.7	-37.0	1300	700	9.6	0.5	150	18	10	1100	1	81
	24-Sep-04	3000	-4.8	-44.0	1180	621	8.85	ND (1)	140	23	13	860	0.8	100
	16-Dec-04	2840	-5	-47.0	1050	562	8.5	0.654	152	23.4	16.6	772	0.971	90
	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
MW-20-130	03-Mar-04	11000	-6.6	-60.0	6200	960	6.2	ND (2.5)	400	19	35	3500	1.7	45
	11-May-04	8300	-5	-49.0	3300	1000	9.8	ND (0.5)	280	14	26	2500	1.7	62
	24-Sep-04	7800	-4.4	-45.0	7240	2280	9.8	ND (4)	240	15	33	2400	1.9	66
	27-Jan-05	7350	-5.7	-48.0	3790	1140	10.4	3.16	313	16.1	43.5	2260	2.03	66
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2004 through April 2006
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-25	03-Mar-04	970	-7.7	-56.0	300	220	4.2	ND (0.5)	92	18	7.8	230	0.4	140
	14-May-04	1000	-8.9	-59.0	310	210	4.2	ND (0.5)	89	19	8	230	0.4	130
	09-Jun-04	---	---	---	---	---	---	---	108	17.1	---	---	0.376	---
	22-Sep-04	1000	-7.6	-58.0	296	196	3.93	0.42	81	16.6	7.4	230	ND (0.2)	140
	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
MW-26	03-Mar-04	1900	-6.7	-54.0	770	400	4.6	ND (0.5)	170	40	12	470	0.5	110
	14-May-04	9300 R	-8.4	-60.0	850	480	5.1	ND (0.5)	190	50	14	490	0.6	110
	22-Sep-04	2300	-6.7	-59.0	821	472	5.65	ND (1)	170	46	13	390	0.4	98
	16-Dec-04	2130	-8.6	-64.0	835	388	5	0.578	176	45.7	17.8	466	0.662	100
	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
MW-27-20	03-Mar-04	640	-11.7	-100.0	74	200	ND (0.4)	ND (0.5)	79	26	4	84	ND (0.2)	180
	12-May-04	570	-11.3	-98.0	72	200	ND (0.4)	ND (0.5)	77	25	3.7	87	ND (0.2)	170
	21-Sep-04	670	-12.3	-92.0	77.2	212	ND (0.2)	ND (0.2)	76	26	5	82	ND (0.2)	160
	15-Dec-04	692	-11.9	-101.0	87.2	236	ND (0.5)	ND (0.5)	91.5	32.6	4.61	88.4	ND (0.2)	169
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2004 through April 2006
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	04-Mar-04	1000	-11.3	-95.0	220	290	ND (0.4)	ND (0.5)	120	33	3.8	210	0.2	260
	11-May-04	800	-11.3	-95.0	110	270	ND (0.4)	ND (0.5)	110	29	3.9	120	ND (0.2)	240
	07-Jun-04	890	-12.5	-100.0	150	220	ND (0.4)	---	---	---	---	---	---	---
	20-Sep-04	850 J	-11.7	-89.0	99.1	286	ND (0.4)	ND (0.2)	110	30	4.6	120	ND (0.2)	210
	14-Dec-04	810	-12	-99.0	110	310	ND (0.5)	ND (0.5)	122	35.7	4.78	103	ND (0.2) J	202
	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
MW-30-30	04-Mar-04	36000	-9	-76.0	19000	4100	ND (4)	5.2	1000	1000	50	9600	3.6	570
	12-May-04	30000	-7.8	-71.0	14000	3000	ND (4)	ND (50)	1300	800	47	8300	2.8	610
	23-Sep-04	42000	-9.5	-73.0	22000	4500	ND (200)	ND (100)	900	890	76	11000	4.1	570
	15-Dec-04	45500	-9.5	-79.0	19900	4730	ND (5)	8.14	1300	1400	118	6110	7.84	458
	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
MW-30-50	05-Mar-04	6100	-6.4	-58.0	3000	750	1.2	ND (5)	280	120	16	1600	0.9	280
	05-Mar-04 FD	5900	-6.6	-56.0	2900	730	1.2	ND (5)	290	120	15	1600	0.9	280
	14-May-04	6300	-7.7	-54.0	2700	800	3.5	ND (5)	270	100	15	1700	1.2	180
	14-May-04 FD	6500	-7.5	-54.0	2600	800	3.5	ND (5)	270	110	16	1700	1.1	180
	23-Sep-04	6600	-7.3	-58.0	3330	742	1.58	ND (10)	290	100	18	1800	0.9	240
	23-Sep-04 FD	6800	-6.7	-58.0	3220	694	1.64	ND (10)	310	110	19	1900	0.9	240
	15-Dec-04	6750	-7.9	-63.0	3040	716	ND (0.5)	1.14	378	117	36.5	1720	1.39	249
	15-Dec-04 FD	6690	-7.8	-64.0	2920	725	ND (0.5)	1.13	372	114	37.8	1700	1.43	249
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2004 through April 2006
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-31-60	03-Mar-04	1700	-8.1	-60.0	750	280	6.2	ND (0.5)	160	22	7.9	420	0.4	72
	14-May-04	1900	-9	-59.0	750	260	5.5	ND (0.5)	150	22	7.5	420	0.4	74
	22-Sep-04	1700	-8	-61.0	691	236	5.45	0.46	130	19	7.9	430	ND (0.2)	79
	16-Dec-04	1640	-8.7	-64.0	691	246	5.36	ND (0.5)	118	18.5	9.67	421	0.44	80
	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
MW-32-20	04-Mar-04	6200	-8	-64.0	2900	540	ND (0.4)	ND (5)	520	180	13	1500	1.1	570
	12-May-04	5000	-7.1	-70.0	2100	130	ND (0.4)	ND (5)	510	180	16	1100	0.8	600
	20-Sep-04	21000 J	-7.3	-63.0	10200	3800	ND (0.4)	ND (100)	1100	420	45	4900	3	920
	14-Dec-04	16100	-8.2	-66.0	8890	1990	ND (5)	ND (5)	1140	400	46.8	3500	4.22 J	784
	09-Mar-05	12500	-7.2	-65.0	6930	1660	ND (0.5)	3.51	838	302	36.9	4000	2.76	123
	17-Jun-05	10200	-9	-67.0	4810	690	ND (0.5)	ND (2.5)	566	231	23.3	2620	1.75	676
	04-Oct-05	28800	-7.8	-65.0	14200	2420	ND (5)	6.19	1380 J	613 J	91.1 J	5400 J	4.75 J	733
	16-Dec-05	24600	-7.8	-61.0	12200	2140	ND (1)	3.48	1470	552	90.4	4950	4.16	861
	10-Mar-06	20900	-8.3	-65.5	10600	1970	ND (0.5)	ND (0.5)	1350	530	56.1	6440	3.54	432
MW-32-35	04-Mar-04	4200	-8	-65.0	1900	470	ND (0.4)	ND (5)	340	99	13	1100	1	310
	12-May-04	4500	-6.9	-64.0	1900	460	ND (0.4)	ND (5)	330	94	12	1100	0.9	320
	21-Sep-04	4500	-8.7	-63.0	2150	422	ND (0.2)	ND (10)	320	89	14	990	0.9	310
	15-Dec-04	4120	-8.5	-67.0	1760	524	ND (0.5)	0.89	351	96.3	24.7 J	954	1.28	276
	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
MW-34-55	04-Mar-04	6700	-9.6	-77.0	3200	850	ND (0.4)	ND (5)	360	97	13	2000	1.2	270
	13-May-04	5700	-10.3	-77.0	2700	770	ND (0.4)	ND (5)	310	77	15	1900	1	270

TABLE D-1
Chemical Performance Monitoring Results, March 2004 through April 2006
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-34-55	08-Jun-04	---	---	---	---	---	---	---	246	68.3	---	---	1.18	---
	22-Sep-04	5800	-11	-82.0	2700	732	ND (0.2)	ND (10)	260	85.2	17	1800	0.9	250
	15-Dec-04	5860	-10.9	-83.0	2390	743	ND (0.5)	0.743	288	69.9	33	1540	1.34	234
	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
MW-34-80	05-Mar-04	8800	-8.9	-75.0	4700	1000	ND (0.4)	ND (5)	280	24	25	2600	1.7	180
	13-May-04	8800	-10.2	-77.0	3900	1000	ND (4)	ND (5)	390	54	27	2800	1.4	270
	13-May-04 FD	9100	-10.2	-76.0	4000	1000	ND (4)	ND (5)	390	53	27	2700	1.5	280
	08-Jun-04	---	---	---	---	---	---	---	396	56.6	---	---	1.72	---
	23-Sep-04	8900	-9.9	-79.0	4050	997	ND (10)	ND (10)	410	76	32	2800	1.4	290
	23-Sep-04 FD	9900	-9.6	-78.0	4170	998	ND (10)	ND (10)	410	84.3	35	2800	1.5	290
	13-Dec-04	---	---	---	---	---	---	---	455	55	40.4	2220	1.63	---
	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
Surface Water Stations														
R-27	03-Mar-04	630	-11.4	-86.0	87	250	ND (0.4)	ND (0.5)	77	28	4.4	94	ND (0.2)	140
	12-May-04	590	-11.4	-96.0	84	240	ND (0.4)	ND (0.5)	74	27	4.8	96	ND (0.2)	140
	22-Sep-04	680	-12.1	-98.0	88.4	237	0.38	ND (0.2)	77	29	4.8	99	ND (0.2)	130
	13-Dec-04	632	-11.4	-95.0	84.4	235	ND (0.5) R	ND (0.5)	79.6	31.4	4.95	86.5	ND (0.2) J	125
	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

TABLE D-1
Chemical Performance Monitoring Results, March 2004 through April 2006
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
Surface Water Stations														
R-27	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
R-28	03-Mar-04	670	-11.3	-90.0	87	250	0.5	ND (0.5)	78	28	4.4	93	ND (0.2)	140
	12-May-04	580	-11.5	-98.0	84	240	ND (0.4)	ND (0.5)	72	26	4.2	92	ND (0.2)	140
	22-Sep-04	680	-12.1	-99.0	104	240	0.38	ND (0.2)	79	30	4.9	99	ND (0.2)	130
	13-Dec-04	652	-11.1	-95.0	84.8	236	ND (0.5) R	ND (0.5)	79.9	31.5	4.93	86	ND (0.2) J	133
	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

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 inaccessibility.