Pacific Gas and Electric Company®

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August 30, 2005

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Subject: Second Quarter 2005 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 July 2005 and Quarterly Performance Evaluation, May through July 2005* for PG&E's Interim Measures (IM) performance monitoring program for the Topock project. This monitoring report presents the July 2005 performance monitoring results for the IM hydraulic containment system and summarizes the operations and performance evaluation for the second quarter 2005 (May through July) 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 Bettler
for Yvonne Meeks

Enclosure
cc: CWG Members

Performance Monitoring Report for July 2005 and Quarterly Performance Evaluation, May through July 2005

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

Prepared for

California Department of Toxic Substances Control

on behalf of

Pacific Gas and Electric Company

August 30, 2005

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

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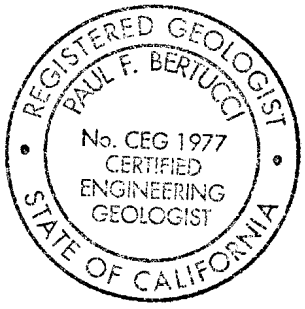
Project Hydrogeologist



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Acronyms and Abbreviations

BLM	Bureau of Land Management
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
µg/L	micrograms per liter (similar to parts per billion [ppb])
TDS	total dissolved solids
USBR	United States Bureau of Reclamation
WDR	Waste Discharge Requirements

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. Between March 2004, when IM activities were initiated, and mid-July 2005, groundwater extraction and management activities were performed under IM No. 2. On July 17, 2005, the IM No. 3 treatment plant was brought into service to provide continuous treatment of extracted groundwater. Currently, the IM No. 3 facilities include a groundwater extraction system (two operational wells), 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 extraction, conveyance, treatment, and injection facilities as of July 2005.

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, 2005 (herein referred to as the Performance Monitoring Plan). The site monitoring, data evaluation, reporting, and response actions required under the February 2005 DTSC directive are collectively referred to as the IM Performance Monitoring Program (PMP) for the floodplain area.

This 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 May 1 through July 31, 2005. The next monthly report for the August 2005 period will be submitted on September 15, 2005. The next quarterly performance report will be submitted on November 30, 2005.

1.1 Report Organization

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

- Monthly performance monitoring results for July 2005 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 May through July 2005 (Section 3.0).
- Conclusions (Section 4.0).

2.0 Performance Monitoring Report for July 2005

2.1 Introduction

Figure 2-1 shows the locations of wells used for the IM extraction, performance monitoring, and hydraulic gradient calculation. The wells are defined as:

- **Floodplain Wells**: 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), and MW-43 cluster (3).
- **Intermediate Wells**: MW-12, MW-19, MW-20 cluster (3), MW-21, MW-26, MW-31 cluster (2), MW-35 cluster (2), TW-2S, TW-2D.
- **Interior Wells**: MW-10, MW-25.

The two currently operational extraction wells, TW-2S and TW-2D, are located on the MW-20 bench (Figure 1-1). In March 2005, an additional extraction well, designated PE-1, was installed on the floodplain approximately 450 feet east of extraction well TW-2D. On July 29, 2005, PG&E submitted the *Final Design Plan – Conveyance Piping and Power Supply for Extraction Well PE-1* to DTSC. Construction of the conveyance piping and connection of PE-1 to the IM extraction system will be completed following approval by DTSC and the Bureau of Land Management (BLM) of the final design plan.

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

During this reporting period, the IM No. 3 groundwater treatment and injection systems were commissioned. Groundwater that was extracted during this reporting period prior to July 17, 2005 was treated at the IM No. 2 batch treatment plant. At approximately 1:00 a.m. on July 17, 2005, extracted groundwater was directed to the IM No. 3 treatment plant. The

IM No. 2 batch treatment plant is planned to be decommissioned as outlined in a decommissioning work plan submitted to BLM on August 8, 2005.

Pumping data for the period July 1 through July 31, 2005 are shown in Table 2-1. An average pumping rate of approximately 68.5 gallons per minute (gpm) from well TW-2D was maintained throughout July 2005. A total of 3,100,806 gallons of groundwater were extracted and treated during July 2005, of which approximately 1,509,817 gallons were treated by the IM No. 3 treatment plant. Between March 2004 and July 17, 2005, the IM No. 2 facility managed over 35 million gallons of extracted groundwater.

Fluctuations from the target pump rate during July 2005 were typically associated with power outages on the lines from the City of Needles during a period of frequent thunderstorm activity. Shut-down periods were noted on July 18, 24, 26, and 29, 2005. A back-up rental generator was mobilized to the site on August 5, 2005 to provide power during future outages.

The batch-treated water from IM No. 2 and treated water and concentrate from the reverse osmosis system from IM No. 3 was manifested as a Resource Conservation and Recovery Act non-hazardous waste and transported to United States Filter Corporation in Los Angeles, California for additional treatment and disposal. Solids accumulated in the clarifier were disposed as a hazardous waste at the Waste Management, Kettleman Hills Facility. Onsite underground injection of the treated water from IM No. 3 began on July 31, 2005, after completing a 3-day startup test required by Waste Discharge Requirements (WDR) Order No. R7-2004-0103 issued by the Colorado River Basin Regional Water Quality Control Board.

TABLE 2-1
Pumping Rate and Extracted Volume for IM System through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Extraction Well	July 2005 Period[a]		Quarterly Period[b]		Project To Date[c]
	Average Pumping Rate[3] (gpm)	Volume Pumped (gal)	Average Pumping Rate[d] (gpm)	Volume Pumped (gal)	Cumulative Volume Pumped (gal)
TW-2S	0	0	57.1	108,000	594,358
TW-2D	68.5	3,100,312	67.4	8,878,274	34,461,584
MW-20 wells	0	0	0	0	1,527,724
Total	68.5	3,100,806	67.6	8,986,274	36,583,666
				Total Volume Pumped (ac-ft)	112.3

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

[a] Pumping results during the monthly period are based on readings collected between June 30, 2005 at 1:10 pm and July 31, 2005 at 11:59 pm (31.5 days).
[b] Pumping results during the quarterly period are based on readings collected between April 30, 2005 at 2:40 pm and July 31, 2005 at 11:59 pm (92.4 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 totalizer readings. TW-2S pumping rate is based only on time that TW-2S was being used between June 23 and June 25 2005 when the pump in TW-2D failed.

A spill of clarifier sludge occurred on Sunday, April 10, 2005 during transfer of the sludge from the clarifier to a phase separator. The transfer operation was stopped after the operator observed the spillage onto an underlying drip pad and the ground surface in the vicinity of the phase separator. Cleanup activities were completed in July 2005 after establishing a cleanup concentration for total chromium in soil. The final report documenting the spill and subsequent cleanup activities was submitted to the DTSC and BLM on August 5, 2005.

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

Table 2-2 summarizes the analytical results of groundwater samples collected from extraction well TW-2D during the reporting period. Future monitoring of the extraction well(s) water quality will be completed at the frequency required by the WDRs issued for the IM No. 3 treatment facility.

2.3 Chromium Sampling Results

The groundwater monitoring wells in the floodplain area are sampled for hexavalent chromium [Cr(VI)], total chromium [Cr(T)], and field water quality parameters under monthly, biweekly, and weekly schedules, in accordance with the approved groundwater monitoring plan and DTSC directives. Table A-1 (Appendix A) 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 during July 2005 and the previous months. Table A-2 presents the groundwater sampling data for the other wells monitored in the PMP area during the reporting period.

Figure 2-2 presents a plan view of the July 2005 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 July 2005 sampling events are shown on Figure 2-3, a vertical cross-section extending east-west across the floodplain. Figure 2-4 presents the July 2005 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). For the July monthly performance evaluation, Cr(VI) concentration trend graphs and hydrographs for key floodplain monitoring wells are presented in Appendix A, Figures A-1 (well MW-33-90), A-2 (MW-34-100), and A-3 (MW-36-100).

2.4 Hydraulic Gradient Results

During the reporting period, water levels were recorded at intervals of 30 minutes with pressure transducers in 48 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.

Hydraulic data for July 2005 are summarized and groundwater elevations contoured by depth interval of the Alluvial Aquifer on the following figures:

- Figure 2-5 – Shallow Wells in the Alluvial Aquifer and River Elevations
- Figure 2-6 – Mid-depth Wells in the Alluvial Aquifer
- Figure 2-7 – Deep Wells in the Alluvial Aquifer

The average and the minimum and maximum daily average groundwater and river elevations have been calculated from the pressure transducer data for the July reporting period (July 1 to July 31, 2005) and are summarized in Appendix B, Table B-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 July 2005) for all wells with transducers are included in Appendix B. The Colorado River elevation (I-3 gage station) during July 2005 is also shown on the hydrographs.

The July 2005 groundwater gradient maps for the upper, middle, and lower depth intervals 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 July 2005 were steeper than usual due to a combination of the continued high spring-summer river levels and the continuation of an approximately 70 gpm TW-2D extraction rate. 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 July 2005 release (16,132 cubic feet per second [cfs]) was slightly greater than the United States Bureau of Reclamation (USBR) projected release for the July reporting period (15,400 cfs). The projected Colorado River elevation at I-3 (monthly average) is calculated using a multiple regression method that considers both Davis Dam release and Lake Havasu level.

Gradients were measured between the central well pair (MW-20-130/MW-34-80) and southern well pair (MW-20-130/MW-42-65) during July 2005. As shown in Table 2-4, the average gradients in these well pairs were landward at magnitudes that were three times greater than the target value of 0.0010 feet/foot (0.0033, 0.0032, respectively). These gradients were similar to the average gradients measured in May and June.

During July 2005, two separate pressure sensors failures in the transducers installed at MW-33-150 precluded the calculation of a full-month average gradient for the northern well pair MW-31-135/MW-33-150. However, the monthly gradient between well MW-31-135 and the deeper well at the MW-33 cluster (MW-33-210) was measured at 0.0021 feet/foot during July. This is considered representative but probably somewhat larger than the average gradient between MW-31-135 and MW-33-150. Using the available transducer data collected July 1 and July 19-20, the measured gradient for the MW-31-135/MW-33-150 well pair was 0.0021 and 0.0014, respectively (Table 2-4). To prevent future lapses in data collection, field personnel will perform an additional inspection of gradient well pairs at the conclusion of

the download events to confirm that transducers are functioning properly. Continuous data collection at MW-33-150 was confirmed during the August 2, 2005 download event.

2.5 Status of Operations and Monitoring

Reporting of IM extraction and monitoring activities will continue as described in the Performance Monitoring Plan. The next monthly performance monitoring report for the August 2005 reporting period will be submitted on September 15, 2005.

Continuous pumping from extraction well TW-2D will continue in August 2005. Extracted groundwater will be treated at the IM No. 3 treatment plant. Short-term adjustments to the extraction rate are planned for August 2005 as part of the IM No. 3 treatment plant performance testing, including testing the plant at the maximum design flow rate of 135 gpm using a combination of TW-2D and TW-2S. With the exception of the short-term adjustments for plant performance testing, the current groundwater extraction rate of 70 gpm will be maintained throughout August. Treated groundwater will be discharged into the injection wells in accordance with WDR Order No. R7-2004-0103. Brine generated as a byproduct of the treatment process will continue to be transported offsite to U.S. Filter Corporation in Los Angeles for treatment and disposal.

Current USBR projections show that the Davis Dam release in August 2005 (11,700 cfs) will be slightly less than in July 2005 (16,132 cfs). After the completion of IM No. 3 treatment plant performance testing (currently targeted as September 15), the groundwater extraction rate will be increased to the maximum sustainable pumping rate from TW-2D in accordance with the DTSC letter of August 5, 2005. Future adjustments in pump rates from TW-2D will be proposed based on expected river levels, observed groundwater gradients, potential system modifications, and other relevant factors.

3.0 Quarterly Performance Evaluation for May Through July 2005

3.1 Extraction System Operations

Pumping data for the period of May 1, 2005 through July 31, 2005 are shown in Table 2-1 (see Section 2.2). A DTSC-approved shutdown of well TW-2D occurred on June 22, 2005 to install a new pump in TW-2D for pumping water to the IM No. 3 treatment plant. The new pump failed—probably due to a power spike during a thunderstorm—after running for approximately 10 hours. As a result, TW-2S was operated at its maximum pump rate (57.1 gpm) until the pump in TW-2D was replaced on June 25.

Between May and July (second quarter) 2005, a total of 8,986,274 gallons of groundwater was extracted. The average extraction rate for the IM system during the quarter, including system downtime, was 67.6 gpm. The average monthly pumping rates for the primary extraction well TW-2D were 67.9 gpm (May), 65.1 gpm (June), and 68.5 gpm (July) during this reporting period.

3.2 Cr(VI) Distribution and Trends in Floodplain Area

Figure 3-1 presents the average Cr(VI) results from May through July 2005 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.

Figure 3-2 presents the floodplain cross-section A with average Cr(VI) concentrations from May through July 2005. Average groundwater Cr(VI) concentration contours are shown along with the number of sampling events that occurred at each well. As shown on Figure 3-2, the quarterly average Cr(VI) concentrations for the wells at the MW-39 and MW-36 clusters have declined relative to the concentrations measured during the prior February through April sampling (see Table A-1). The average Cr(VI) concentrations detected at well MW-34-100 during May through July sampling have increased relative to the previous quarter sampling.

Figure 3-3 presents average Cr(VI) concentrations from May through July 2005 sampling on the additional floodplain, north-south oriented cross-section B. Average groundwater Cr(VI) concentration contours are shown along with the number of sampling events that occurred at each well. During the current quarterly reporting period, Cr(VI) was detected at concentrations ranging from 3.1 to 5.6 μg/L in two new sentry wells MW-33-150 and MW-33-210 (Table A-1). Concentrations in MW-33-150 during previous sampling in February and March had been less than analytical reporting limit. Cr(VI) was first detected above analytical reporting limits in MW-33-210 in March, but less than analytical reporting

limits in February 2005. Cr(VI) has been consistently detected at concentrations ranging between 15 and 20 µg/L in MW-33-90, a shallower well at this same location.

Hexavalent chromium concentration trend graphs and hydrographs for floodplain wells with consistent Cr(VI) concentrations above the analytical reporting limit are presented in Figures A-1 through A-10. Eight out of 10 groundwater wells with consistent Cr(VI) detections (MW-33-90, MW-36-90, MW-36-100, MW-39-50, MW-39-60, MW-39-70, MW-39-80, and MW-39-100) showed declining Cr(VI) concentrations during the quarterly period May through July 2005.

3.3 Other Water Quality Data for Floodplain Wells

A field parameter meter and flow-through cell were used to measure water quality parameters that include temperature, pH, oxidation-reduction potential, dissolved oxygen, and specific conductance during well purging and groundwater sampling (*Sampling and Analysis Field Procedures Manual, PG&E Topock Program*, March 31, 2005). The field water quality data measured during July 2005 and prior five months are included in Tables A-1 and A-2. Table A-1 also presents the groundwater elevations collected during the same time 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 standard.

Table C-1 presents the results of the general chemistry and stable isotope analyses for select groundwater wells in the IM performance monitoring area and river locations during sampling events from March 2004 through July 2005. The wells were 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 total dissolved solids (TDS), chloride, sulfate, nitrate, bromide, calcium, potassium, magnesium, sodium, boron, alkalinity, deuterium, and oxygen 18. Figure 2-1 shows the locations of the groundwater wells sampled for the performance monitoring parameters.

The majority of the 14 floodplain wells sampled for chemical performance monitoring parameters exhibit minor variations in concentrations over the period of March 2004 through July 2005. However, the concentrations of TDS, chloride, sulfate, and calcium in wells MW-20-100 and MW-20-130 have shown decreases compared to initial concentrations measured in March 2004 (Table C-1). Floodplain wells MW-32-35 and MW-27-20 have shown increasing TDS, chloride, sulfate, and general mineral concentrations. Well MW-30-50 has shown increasing sodium chloride concentrations and decreasing nitrate concentrations during the monitoring period. Nitrate concentrations are increasing in well MW-20-130 and decreasing in well MW-31-60 (Table C-1). Further assessment of the performance monitoring wells will 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 May, June, and July 2005 are also provided in this report as follows:

- May 2005: Appendix B, Figures B-2D through B-2F
- June 2005: Appendix B, Figures B-2A through B-2C
- July 2005: Figures 2-5 through 2-7 in Section 2.0 of this report

A review of the groundwater level contours on these figures shows that all floodplain wells with detectable chromium were within the capture zone of the pumping well(s) during each month of this reporting period, May through July 2005. 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-2D/2S extraction wells.

Average quarterly groundwater elevations (May through July, 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 on Figure 3-5 (location of cross-section shown on Figure 2-1). The landward hydraulic gradients observed in the deep monitoring wells (Figure 3-5) during the quarterly reporting period are consistent with the groundwater elevation maps for the deep aquifer interval submitted in the monthly performance monitoring reports.

Hydraulic gradients are calculated each month between the following well/gradient 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 hydraulic gradients between key monitoring wells in May, June, and July 2005 are summarized in Table 3-1 and Figure 3-6. The mean landward hydraulic gradients were greater than 0.001 feet/foot for all gradient pairs during all periods monitored in this quarterly reporting period. Figure 3-6 also shows the pumping rate and river level throughout the quarterly period. River levels were higher than typical summer season levels and relatively steady throughout the reporting period, resulting in similarly high well pair gradients each month. Mean gradients were not determined for the northern gradient pair in July because of two transducer failures in well MW-33-150.

3.5 Projected River Levels during the Next Quarter

Colorado River stage near the Topock Compressor Station, measured at the I-3 location, 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. 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 May, June, and July performance monitoring indicate that the minimum landward gradient target of 0.001 feet/foot was met during the second quarter 2005 reporting period. Although a complete transducer dataset was not available for July for one of the wells in the northern gradient pair (MW-33-150), the groundwater elevation maps and hydraulic data from a deeper well at this location indicate that the average minimum gradient was met for the northern well pair during July. As presented in Table 3-1, the landward gradients during May, June, and July were one and a half to three times the required minimum magnitude in all well pairs. The IM pumping was sufficient to meet the minimum gradient targets during each of the three months of the second quarter 2005.

The existing gradient well pairs are considered to be adequate to define the capture of the plume so long as the only pumping wells are TW-2D and TW-2S. 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. If pumping is initiated from the PE-1 location, the central well pair would no longer be appropriate for measuring hydraulic gradient because PE-1 is located between the two wells in this pair (MW-34 and MW-20 well clusters).

A total of 8,986,274 gallons of groundwater was extracted and treated from the IM system during the May through July (second quarter) 2005 reporting period. The average pumping rate for the IM extraction system, including downtime, during the quarterly reporting period was 67.6 gpm.

Hexavalent chromium continues to be detected in the deep floodplain monitoring well MW-34-100. The chromium concentrations in this well have shown a generally increasing trend since it was installed in February 2005 (Table A-1, Figure A-2). This trend is in contrast to nearly all other floodplain wells which show decreasing or stable trends. The duration of monitoring at MW-34-100 has been relatively brief compared to other wells. 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 toward the river. 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. The aquifer materials in the screened interval of MW-34-100 contain a higher fraction of fine silt and clay than the materials in other nearby wells MW-34-80 and MW-36-100. Groundwater moves slower in zones of finer-grained aquifer material. This may result in chromium concentrations in MW-34-100 being slower to respond to pumping than wells in other, more permeable zones of the aquifer.

As noted in Section 3.2 and shown in Figures A-1 through A-10, eight out of 10 groundwater wells with consistent Cr(VI) detections (MW-33-90, MW-36-90, MW-36-100, MW-39-50, MW-39-60, MW-39-70, MW-39-80, and MW-39-100) showed declining Cr(VI) concentrations during the quarterly period May through July 2005. Overall, the chromium concentrations

in the floodplain appear to be decreasing. The exceptions to this trend are wells MW-34-100, MW-33-150, and MW-33-210. Water level measurements confirm that gradients are landward at both all three of these well locations. It is presently not clear why concentrations appear to be increasing at these wells. It is anticipated that with continued pumping, these wells will begin to show the same declining concentration trends as other wells in the floodplain.

Based on the hydraulic and chemical performance monitoring data and evaluation presented in this report, the IM performance standard has been met for the May through July 2005 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.

Tables

TABLE 2-2
Analytical Results for Extraction Wells, February 2005 through July 2005
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-02D	09-Feb-05	5.91 ^	5.87	5450
TW-02D	23-Feb-05	5.68 ^ [1]	6.09	5330
TW-02D	02-Mar-05	5.44 ^ [1]	---	5880 J
TW-02D	09-Mar-05	5.54 ^ [1]	5.82 J	4560 J
TW-02D	06-Apr-05	5.70 ^ [1]	5.44	6140
TW-02D	19-Apr-05	5.77 ^ [1]	5.47	6580
TW-02D	05-May-05	5.49 ^	---	6470
TW-02D	15-Jun-05	4.86	4.57	6420

Notes:

[1] Samples field filtered. All other dissolved total chromium is lab filtered.
^ Groundwater samples from IM extraction wells are analyzed by certified laboratory for operational monitoring purpose. Analytical data is reviewed for quality control but does not undergo full data validation; results flagged ^.

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

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	-0.1
June 2004	15,800	16,869	1,069	455.8	456.6	0.7
July 2004	14,000	14,951	951	455.2	455.9	0.7
August 2004	12,100	12,000	-100	454.5	454.9	0.4
September 2004	11,200	10,979	-221	454.2	454.6	0.4
October 2004	8,600	7,538	-1,062	453.2	453.5	0.3
November 2004	9,500	8,075	-1,425	453.6	453.4	-0.2
December 2004	6,200	8,090	1,890	452.4	453.3	0.9
January 2005	8,800	4,900	-3,900	453.4	452.4	-1.0
February 2005	8,000	4,820	-3,180	453.1	452.6	-0.5
March 2005	15,600	7,110	-8,490	455.8	452.9	-2.9
April 2005	16,700	16,306	-394	455.9	456.0	0.1
May 2005	16,700	15,579	-1,121	456.2	456.1	-0.1
June 2005	14,600	15,223	623	455.8	456.1	0.3
July 2005	15,400	16,132	732	456.0	456.0	0.0
August 2005	11,700	--	--	454.6	--	--

NOTES:

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, July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well Pair[1]	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Period 2005
Northern Gradient Pair		
MW-31-135 / MW-33-150	0.0021	July-1 (12:00 AM through 5:35 AM)
	0.0014[3]	July-19 through July-20
Central Gradient Pair		
MW-20-130 / MW-34-80	0.0033	July-1 through July-31
Southern Gradient Pair		
MW-20-130 / MW-42-65	0.0033	July-1 through July-31

NOTES:

1. Refer to Figure 2-1 for location of well pairs
2. For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot
3. MW-33-150 transducer data unavailable from July 1 at 5:35 AM through July 31 due to two separate transducer failures. Value shown is average gradient between MW-33-150 and MW-31-135 using five manual water level data points at MW-33-150 and transducer data from MW-31-135 from July 19 through July 20.
4. To verify the full-month average gradient at the northern well pair, the average gradient was also calculated using transducer data from MW-31-135 and MW-33-210 (the deeper well in the MW-33 cluster). The average gradient between MW-31-135 and MW-33-210 from July-1 through July-31 was 0.0021 feet/foot.

TABLE 3-1
Average Hydraulic Gradients Measured at Well Pairs, May through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well Pair[1]	Reporting Period	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Period 2005
Northern Gradient Pair			
MW-31-135 / MW-33-150	May	0.0020	May-1 through May-31
	June	0.0016	June-1 through June-30
	July	0.0021	July-1 (12:00 AM through 5:35 AM)
	July	0.0014[3]	July-19 to July-20
Central Gradient Pair			
MW-20-130 / MW-34-80	May	0.0033	May-1 through May-27
	June	0.0032	June-2 through June-30
	July	0.0033	July-1 through July-31
Southern Gradient Pair			
MW-20-130 / MW-42-65	May	0.0034	May-1 through May-27
	June	0.0032[4]	June-15 through June-30
	July	0.0033	July-1 through July-31

NOTES:

1. Refer to Figure 2-1 for location of well pairs

2. For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot

3. MW-33-150 transducer data unavailable from July 1 at 5:35 AM through July 31 due to two separate transducer failures. Value shown is average gradient between MW-33-150 and MW-31-135 using five manual water level data points at MW-33-150 and transducer data from MW-31-135 from July 19 through July 20.

4. MW-42-65 data unavailable from June 1 through June 15 due to transducer malfunction.

5. To verify the July full-month average gradient at the northern well pair, the average gradient was also calculated using transducer data from MW-31-135 and MW-33-210 (the deeper well in the MW-33 cluster). The average gradient between MW-31-135 and MW-33-210 from July 1 through July 31 was 0.0021 feet/foot.

Figures

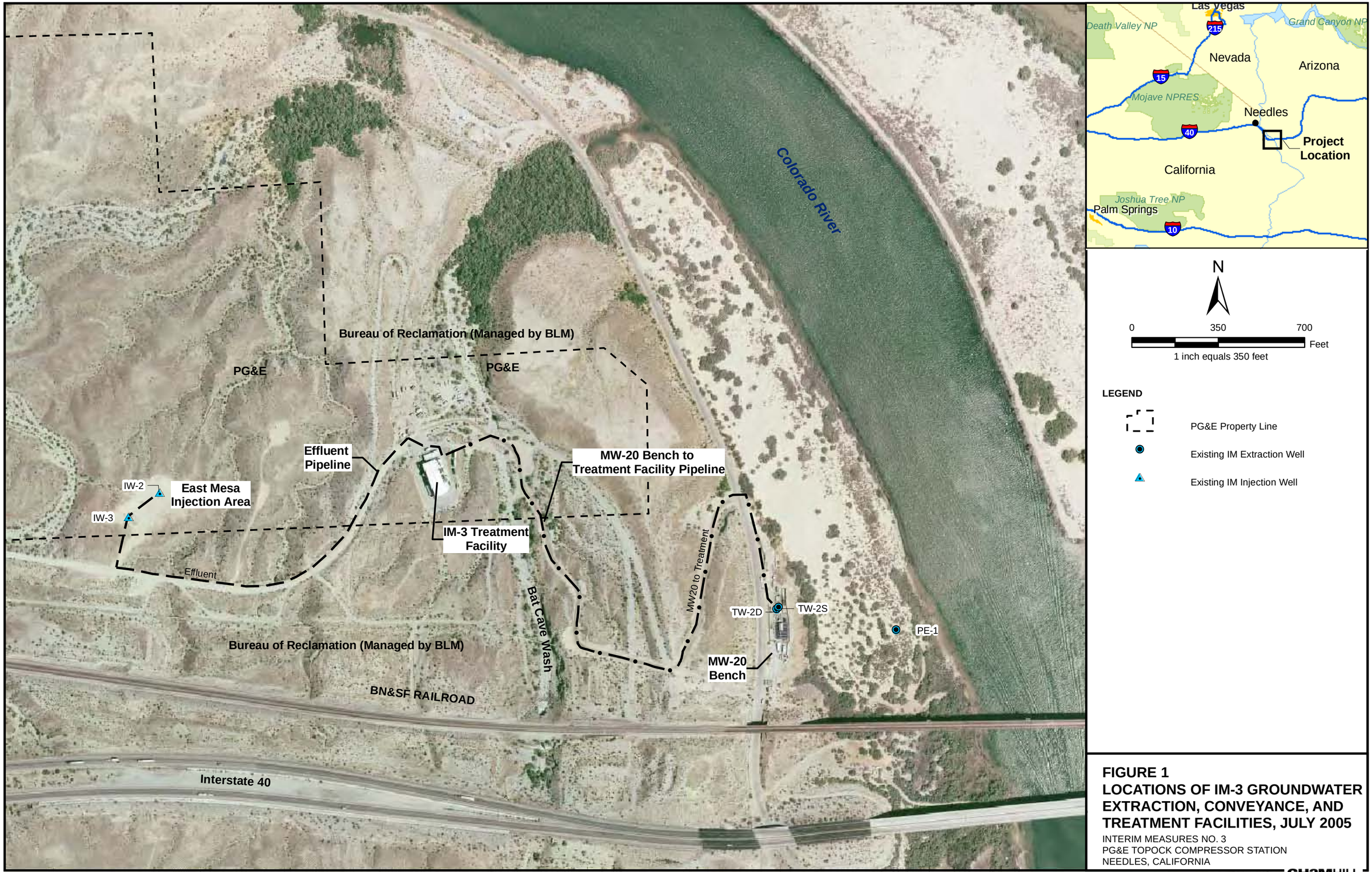


FIGURE 1
LOCATIONS OF IM-3 GROUNDWATER EXTRACTION, CONVEYANCE, AND TREATMENT FACILITIES, JULY 2005
INTERIM MEASURES NO. 3
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

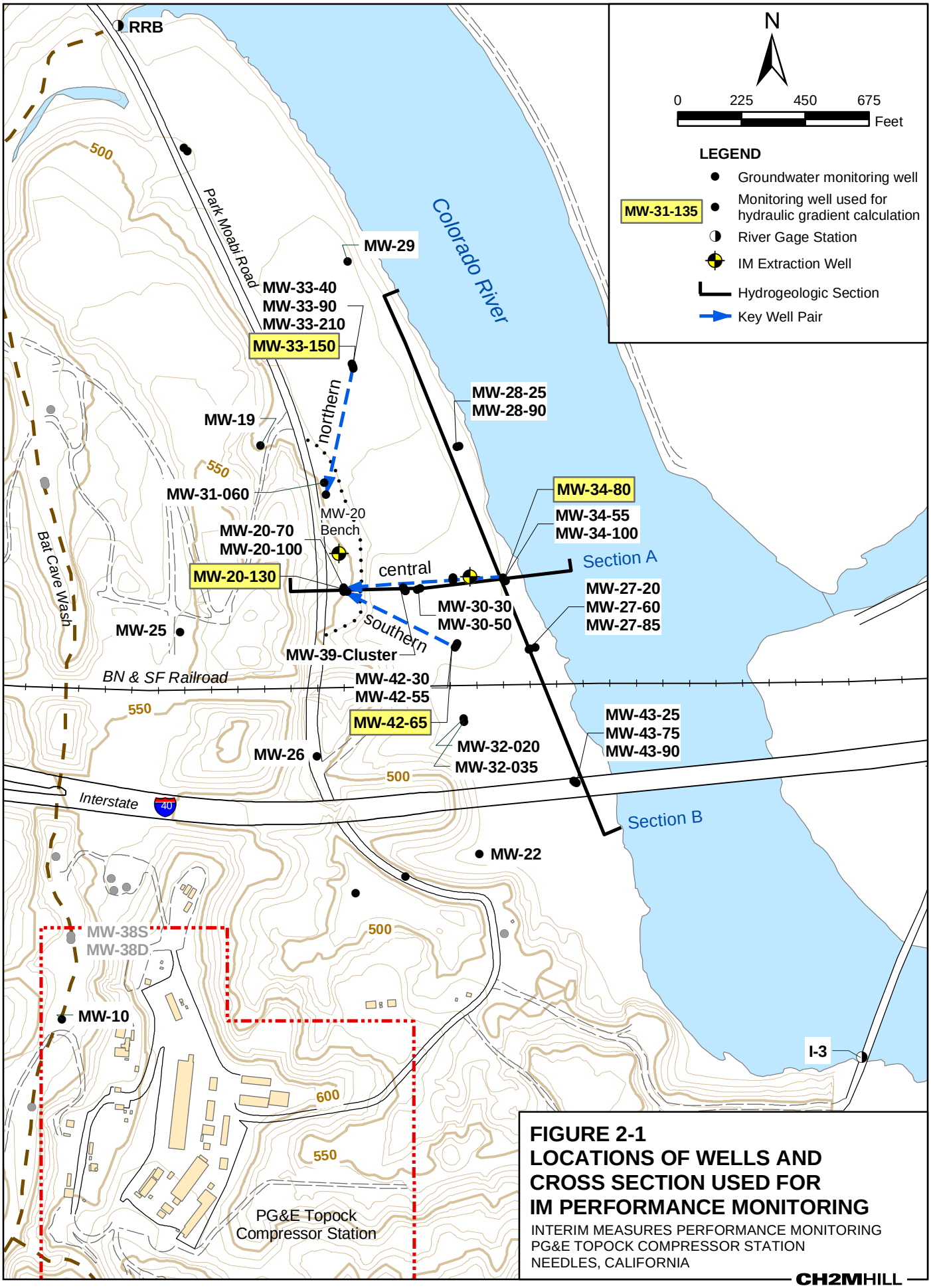
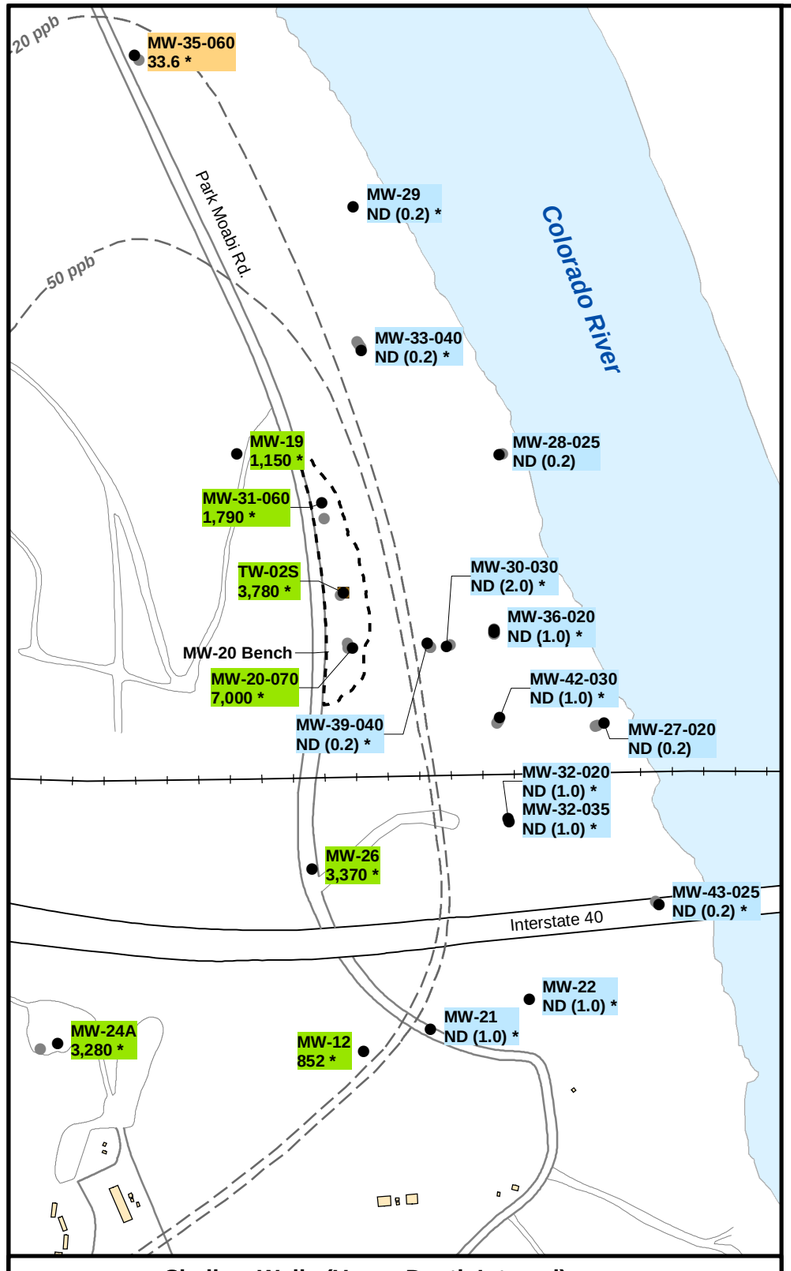


FIGURE 2-1
LOCATIONS OF WELLS AND CROSS SECTION USED FOR IM PERFORMANCE MONITORING

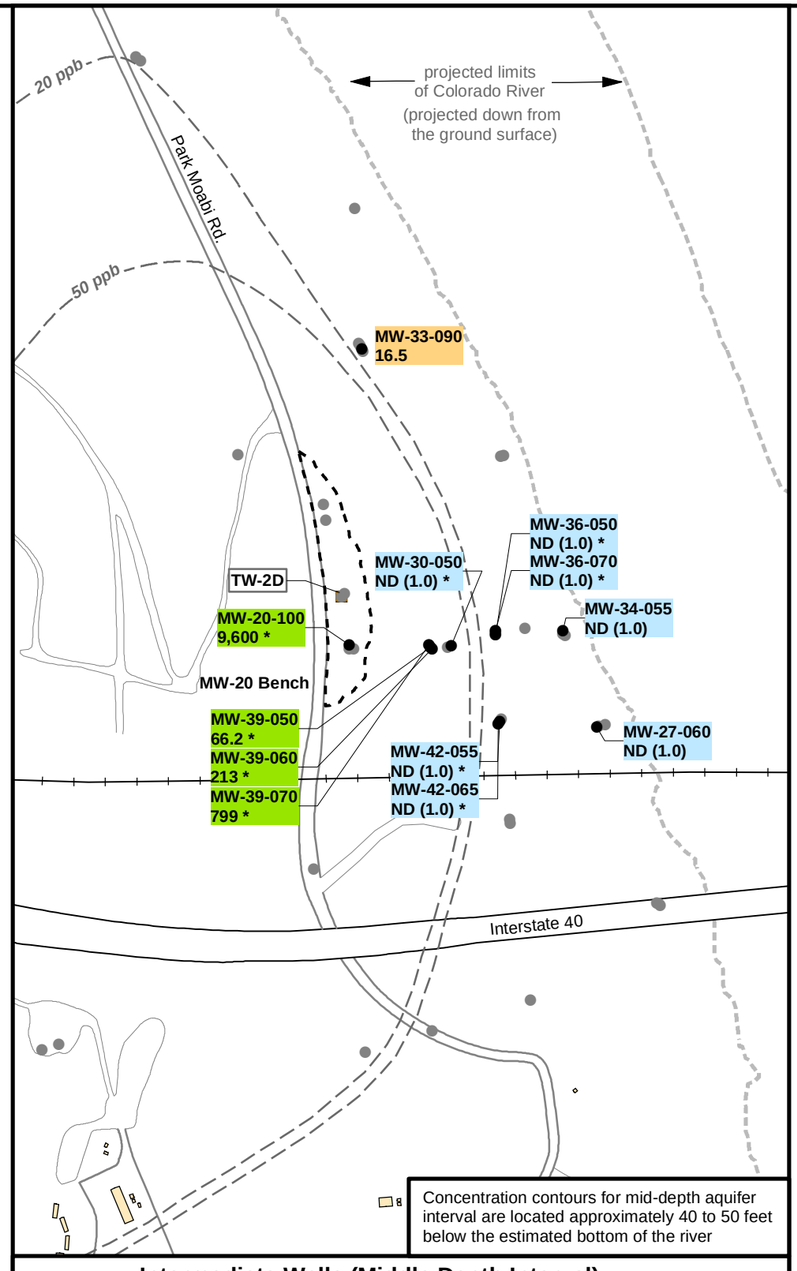
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\PMP_WELLS_SECTIONS_8X11.MXD
PMP_WELLS_SECTIONS_8X11.PDF 8/18/2005 17:20:37

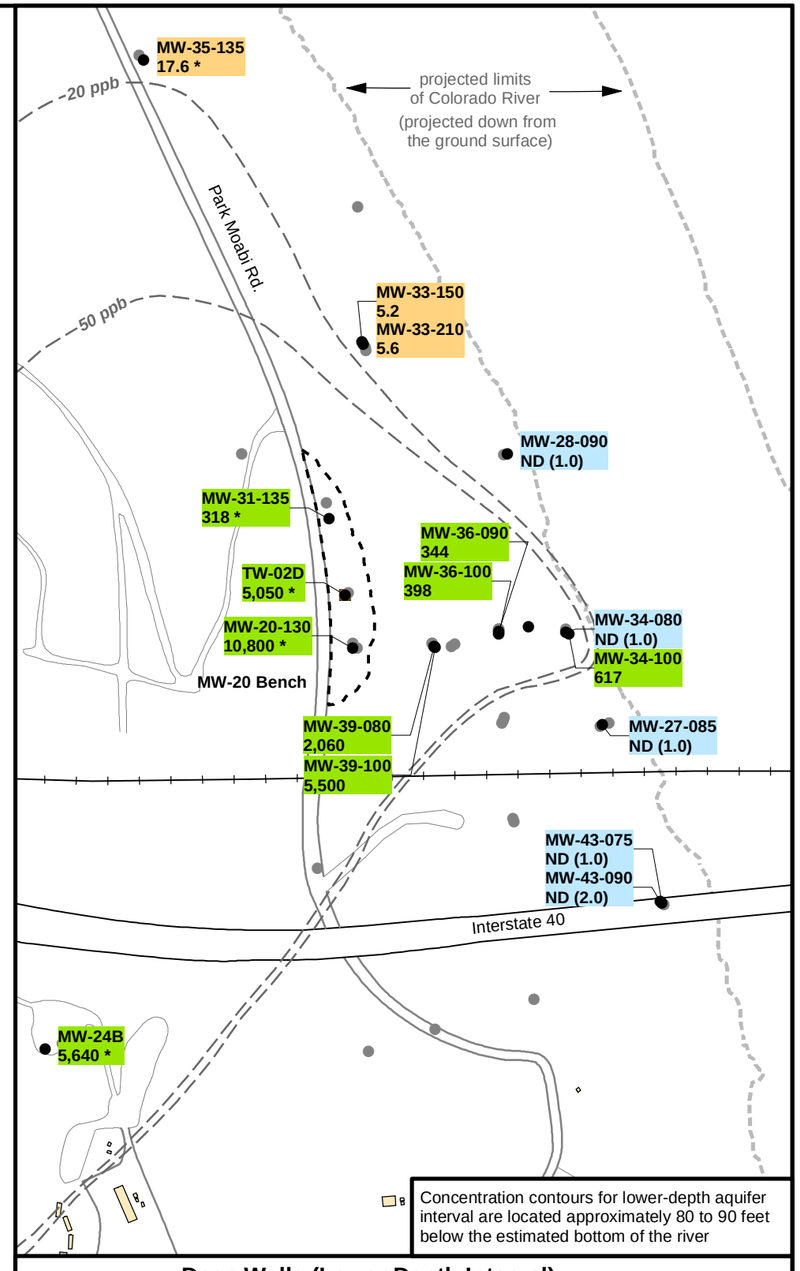


Shallow Wells (Upper Depth Interval)



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

See Figure 2-3 for depth intervals for Alluvial Aquifer

Notes:
Results marked * are from March, April, May & June 2005 sampling events.

See tables A-1 and A-2 for sampling data for reporting period.

J = concentration estimated from data validation

Hexavalent Chromium Concentrations in Groundwater
July 2005 Monthly Sampling Event

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 2-2
CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, JULY 2005

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

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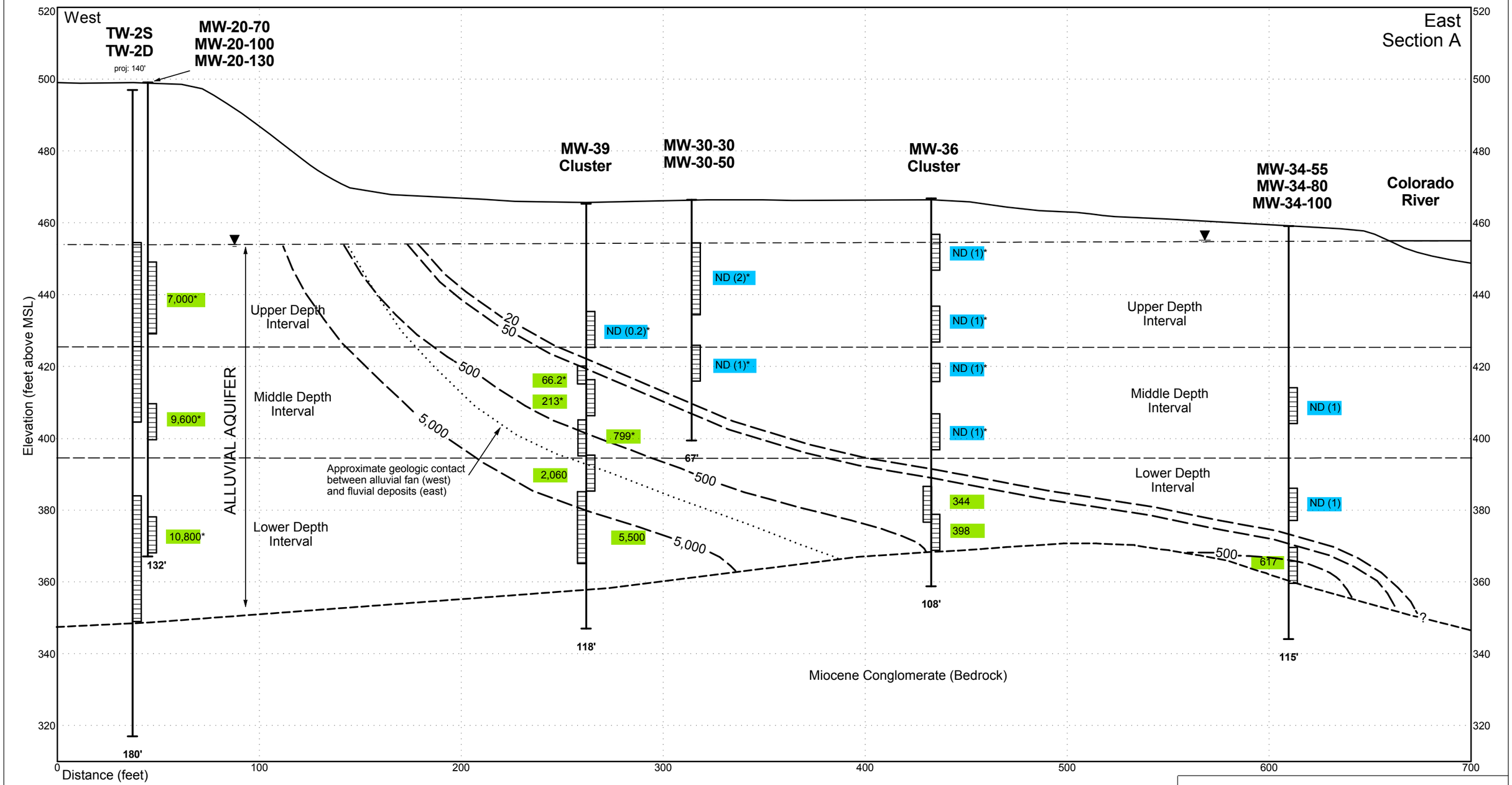

water level

well screen

3,420

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

Notes:
Results listed are from July 2005 sampling events.
Results marked * are from May and June 2005 sampling events;
See Tables A-1 and A-2 for data and dates of sampling.

FIGURE 2-3
CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION A
JULY 2005 MONTHLY EVENT

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

CH2MHILL

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North

South
Section B

MW-33 wells
projected 200' onto line of section

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

Cross-Section Parallel to the Colorado River

BN & SF
Railroad

I-40
Bridge

MW-28-25
MW-28-90
projected: 40'

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

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

MW-43-25
MW-43-75
MW-43-90

water table (average 454' MSL)

Upper Depth Interval

Middle Depth Interval

Lower Depth Interval

ALLUVIAL AQUIFER

Oldest Alluvium (Toa)

Approximate geologic contact between alluvial fan and fluvial deposits

Miocene Conglomerate (Bedrock)

ND (0.2)*
16.5
5.2
5.6
237'

ND (0.2)
ND (1)
148'

ND (1)
ND (1)
20
50
500
617
116'

ND (0.2)
ND (1)
ND (1)
107'

ND (0.2)*
ND (1)
ND (2)
97'

Elevation (feet above MSL)

560 540 520 500 480 460 440 420 400 380 360 340 320 300 280 260 240

-200 0 200 400 600 800 1,000 1,200 1,400 1,600 1,800

Distance (feet)

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

Notes:
Results listed are from July 2005 sampling events.
Results marked * are from March, April, May or June 2005 sampling events;
See Tables A-1 and A-2

FIGURE 2-4
CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B
JULY 2005 MONTHLY SAMPLING EVENT

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

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\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GINT\INPUT\GINT_WORK_FILE_TYPES\GDW\X-SECTIONS\PMR\2Q05QUARTERLY\JULY_DRAFT_SECB.GDW;

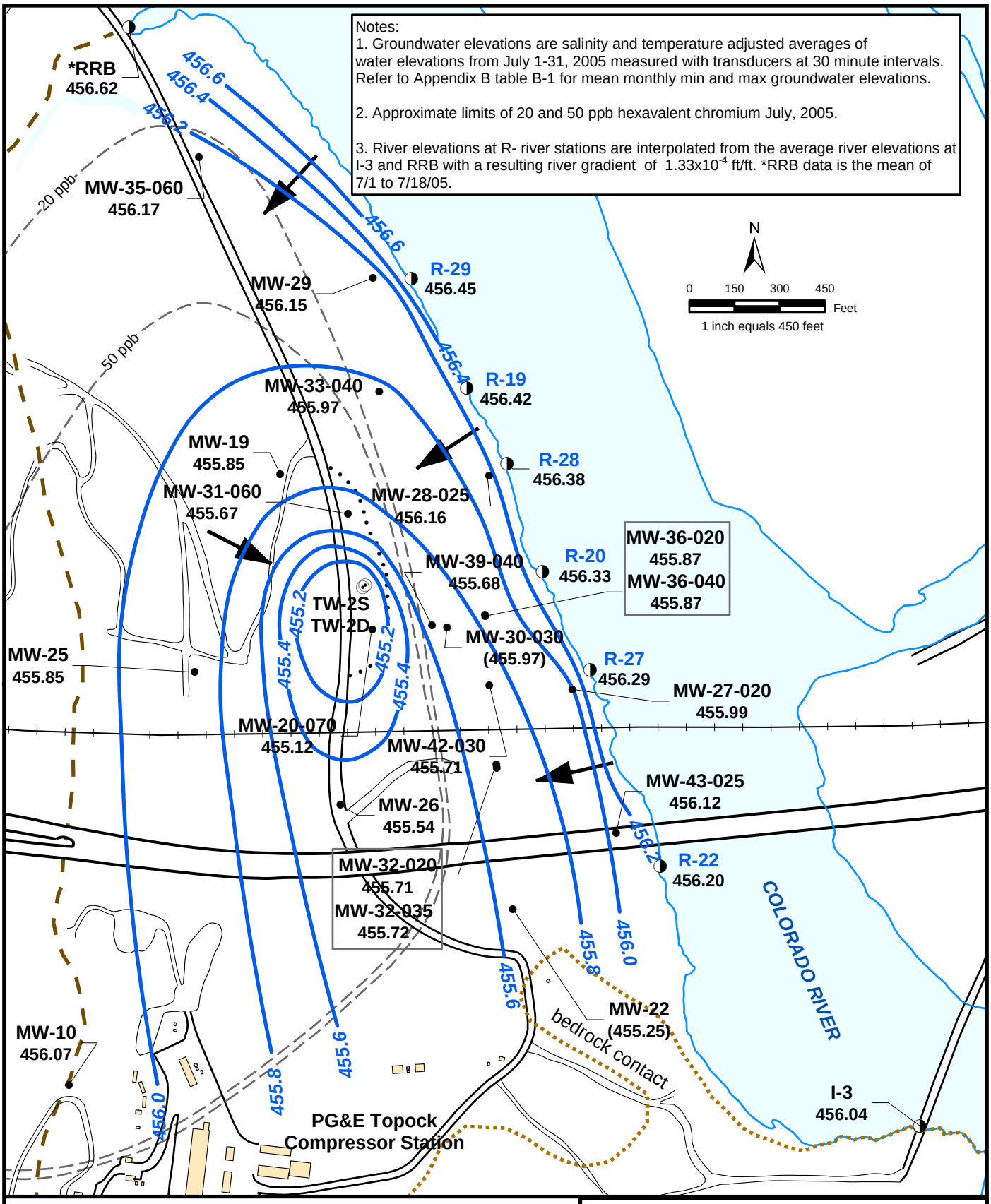

FIGURE 2-5
AVERAGE GROUNDWATER SHALLOW WELLS AND RIVER ELEVATIONS, JULY 2005

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_UA_July1_31_05.MXD

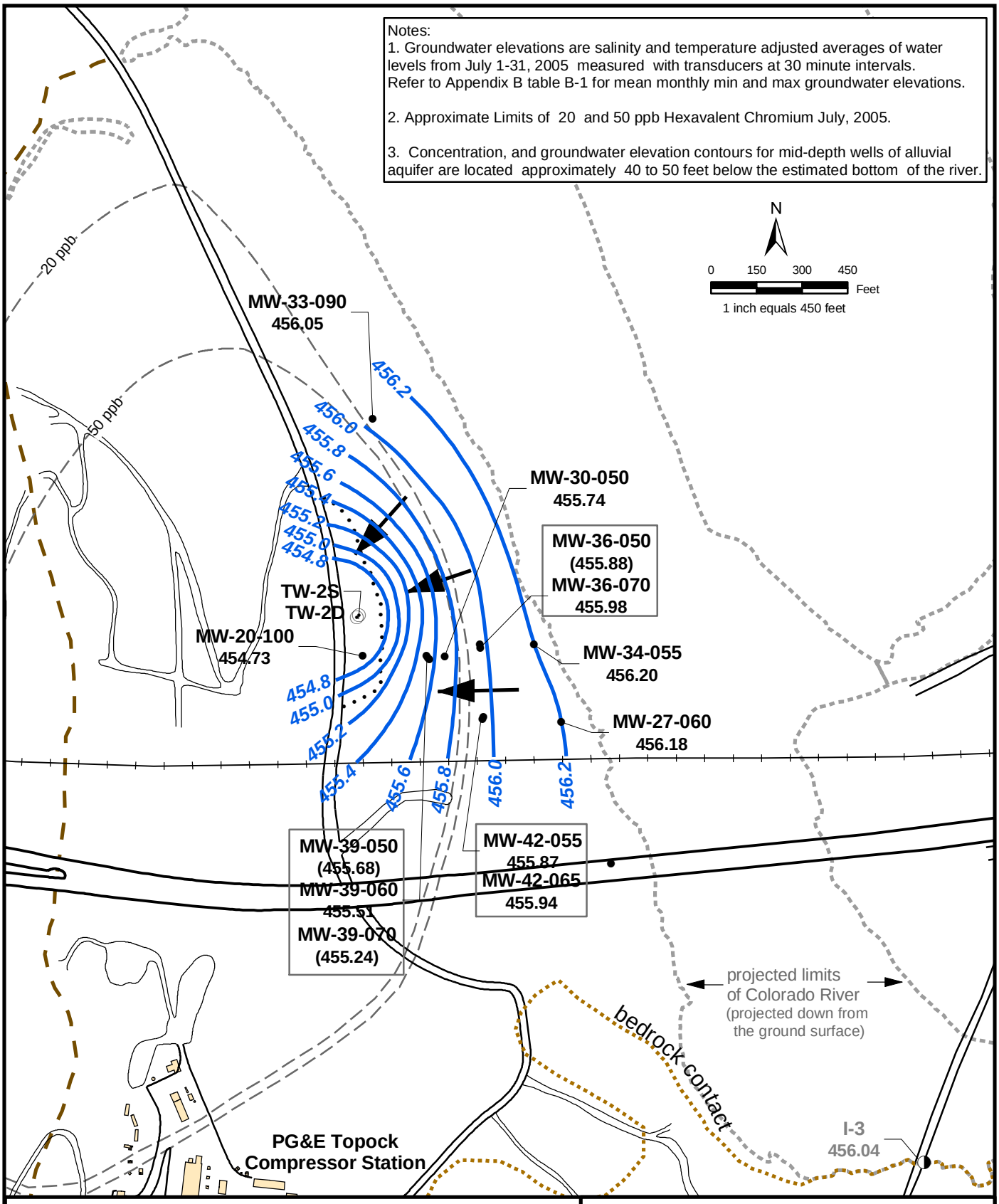

FIGURE 2-6
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS JULY, 2005
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_MA_JULY1_31_05.MXD
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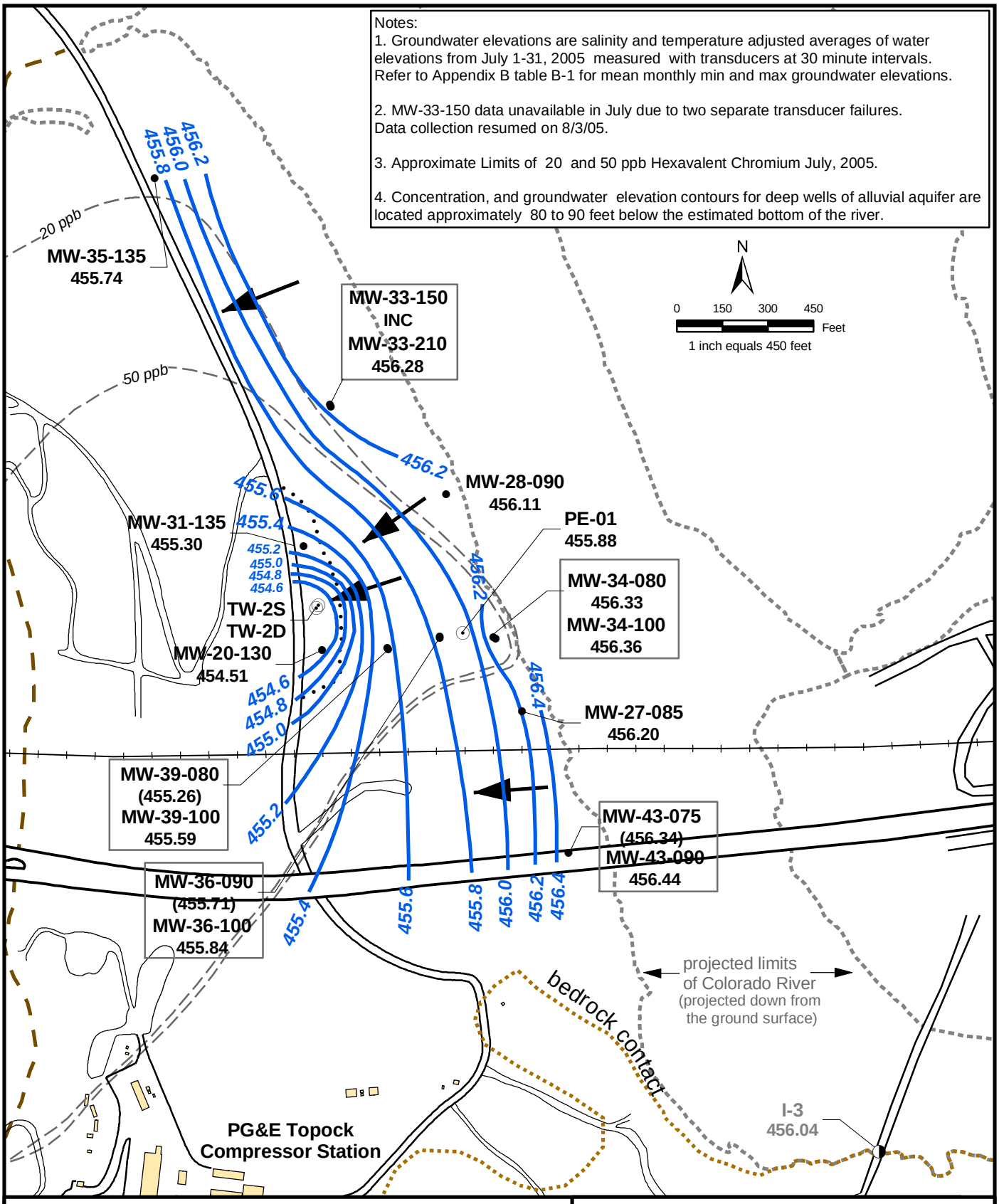

FIGURE 2-7
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS JULY, 2005

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_LA_JULY1_31_05.MXD
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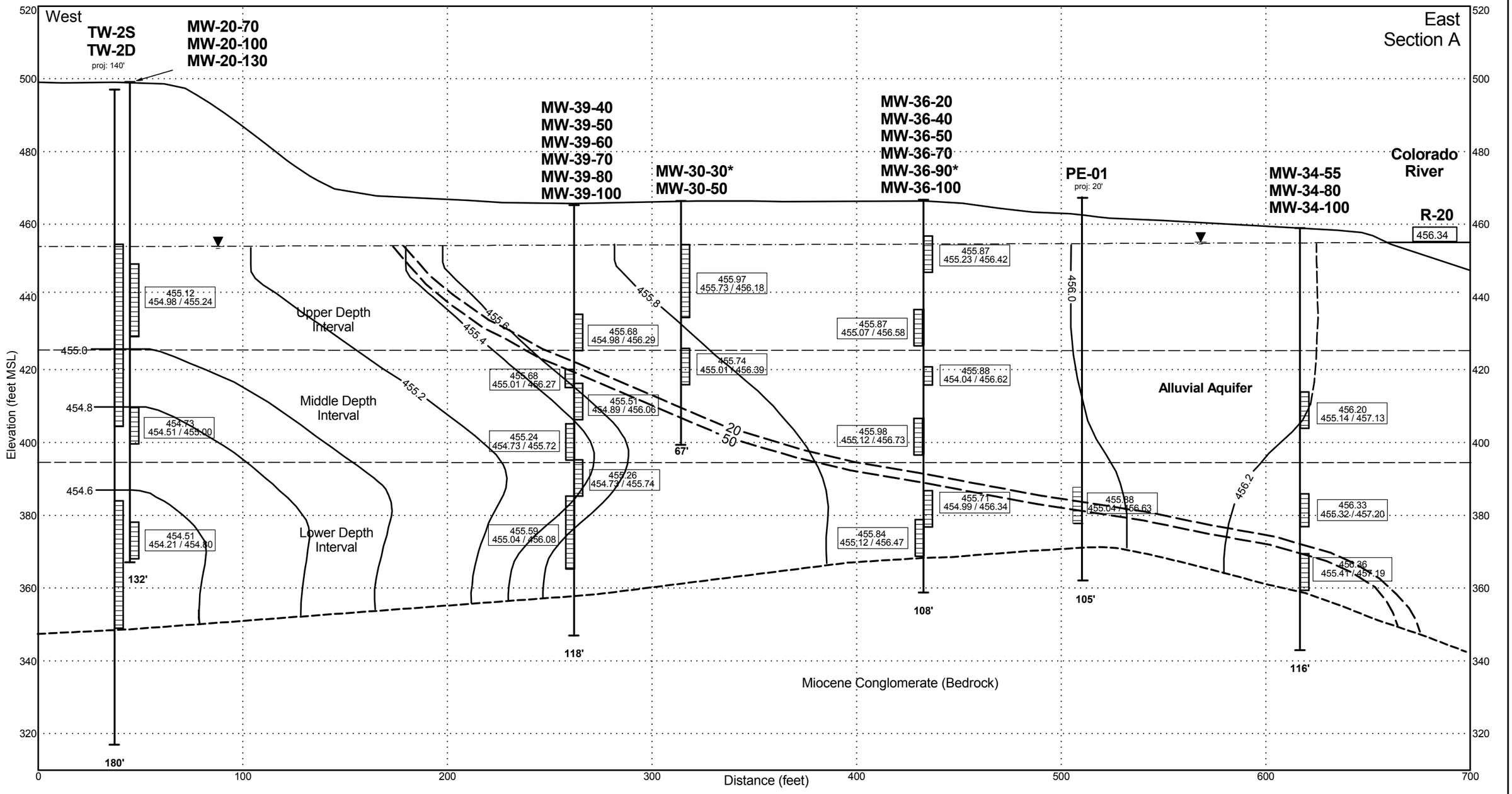


Notes:
Results show average groundwater elevations for July 1-31, 2005 measured with transducers at 30 minute intervals.
Groundwater elevations adjusted for salinity and temperature.

*Wells MW-30-30, and MW-36-090, excluded from contouring.

Average river elevation interpolated between I-3 and RRB using mean river gradients from July 1-18, 2005.
Data subject to review.

Approximate limits of 20 and 50 ppb hexavalent chromium for July, 2005.
See figure 2-2 for further explanation.

Legend:

MW-30-30
water level
well screen
453.66
453.40/453.94
103 boring depth (feet)

Average groundwater elevation (ft MSL)
Average Minimum / Maximum groundwater elevation (ft MSL)

50 — Inferred Hexavalent Chromium concentration contour

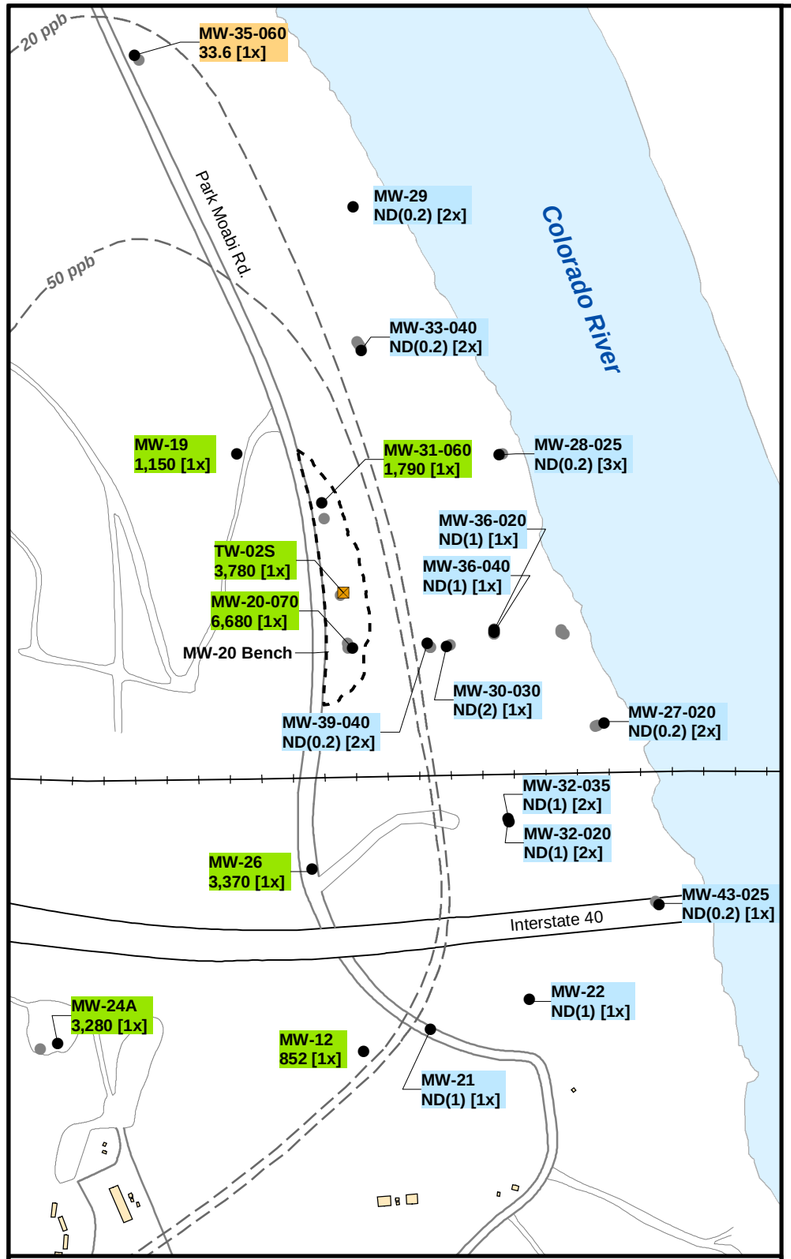
453.5 — Groundwater elevation contour

453.5 — Inferred groundwater elevation contour

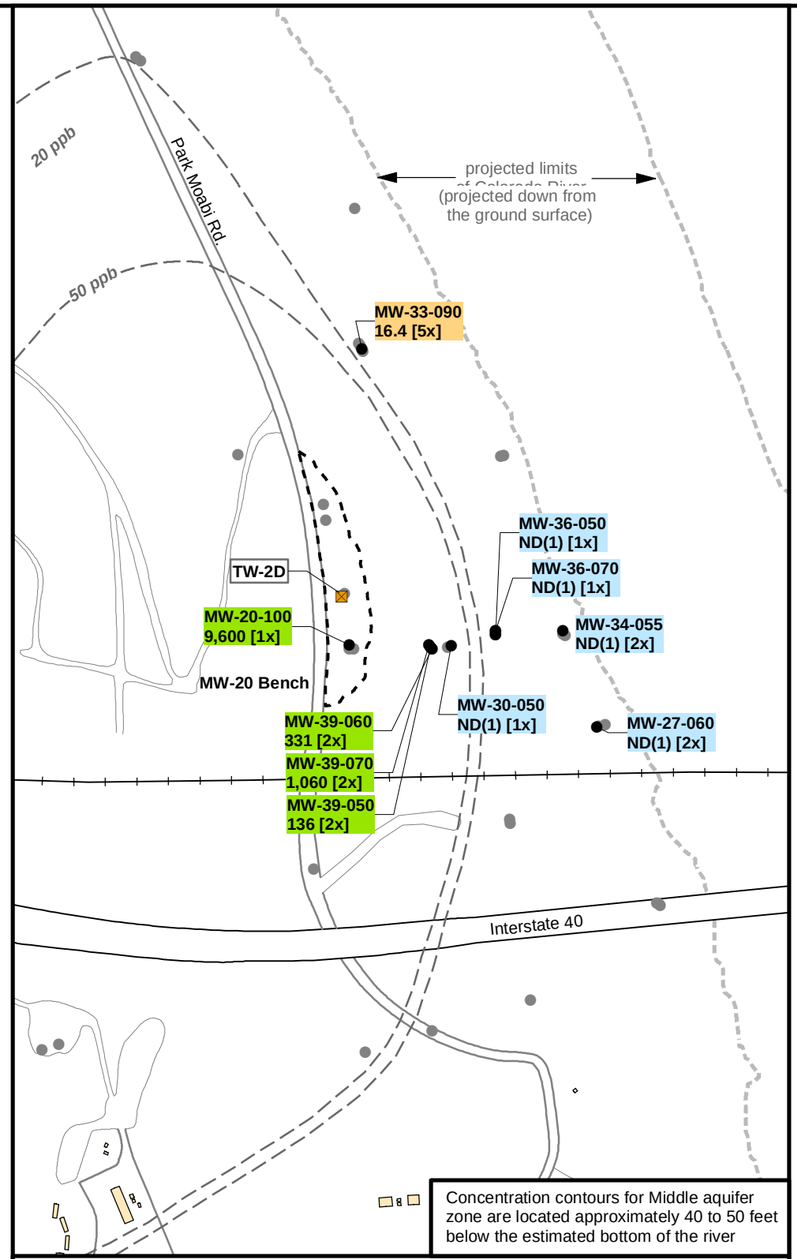
FIGURE 2-8
AVERAGE GROUNDWATER ELEVATIONS
FLOODPLAIN CROSS-SECTION A
JULY, 2005

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

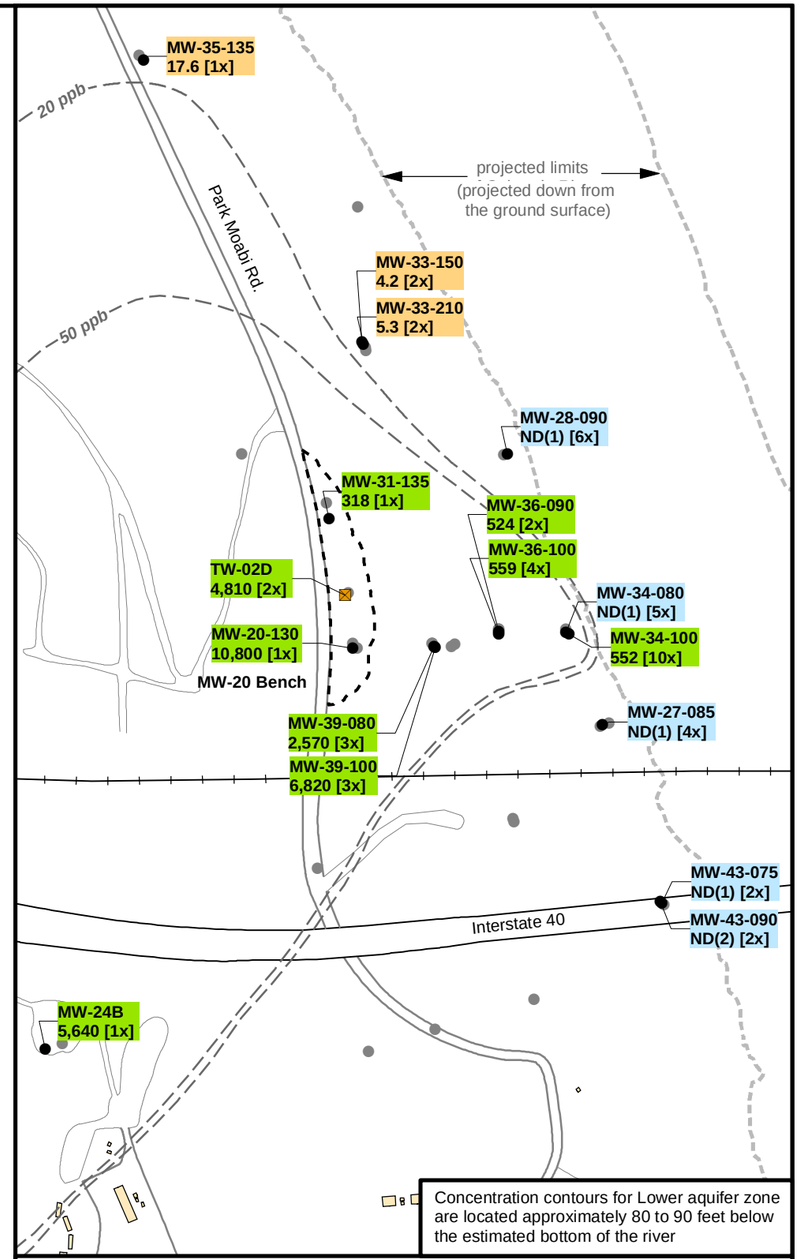
CH2MHILL



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

See Figure 3-2 for depths of Alluvial Aquifer zones

Notes:
Results marked * are from March 2005 sampling events.

Average Hexavalent Chromium [Cr (VI)] Concentrations
May - July 2005 Sampling Events
Concentrations in micrograms per liter (µg/L) equivalent to parts per billion (ppb).
Brackets indicate number of sampling events during the quarterly reporting period.

N

0 400 800 Feet

1 inch equals 400 feet

FIGURE 3-1
AVERAGE CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, MAY - JULY 2005

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

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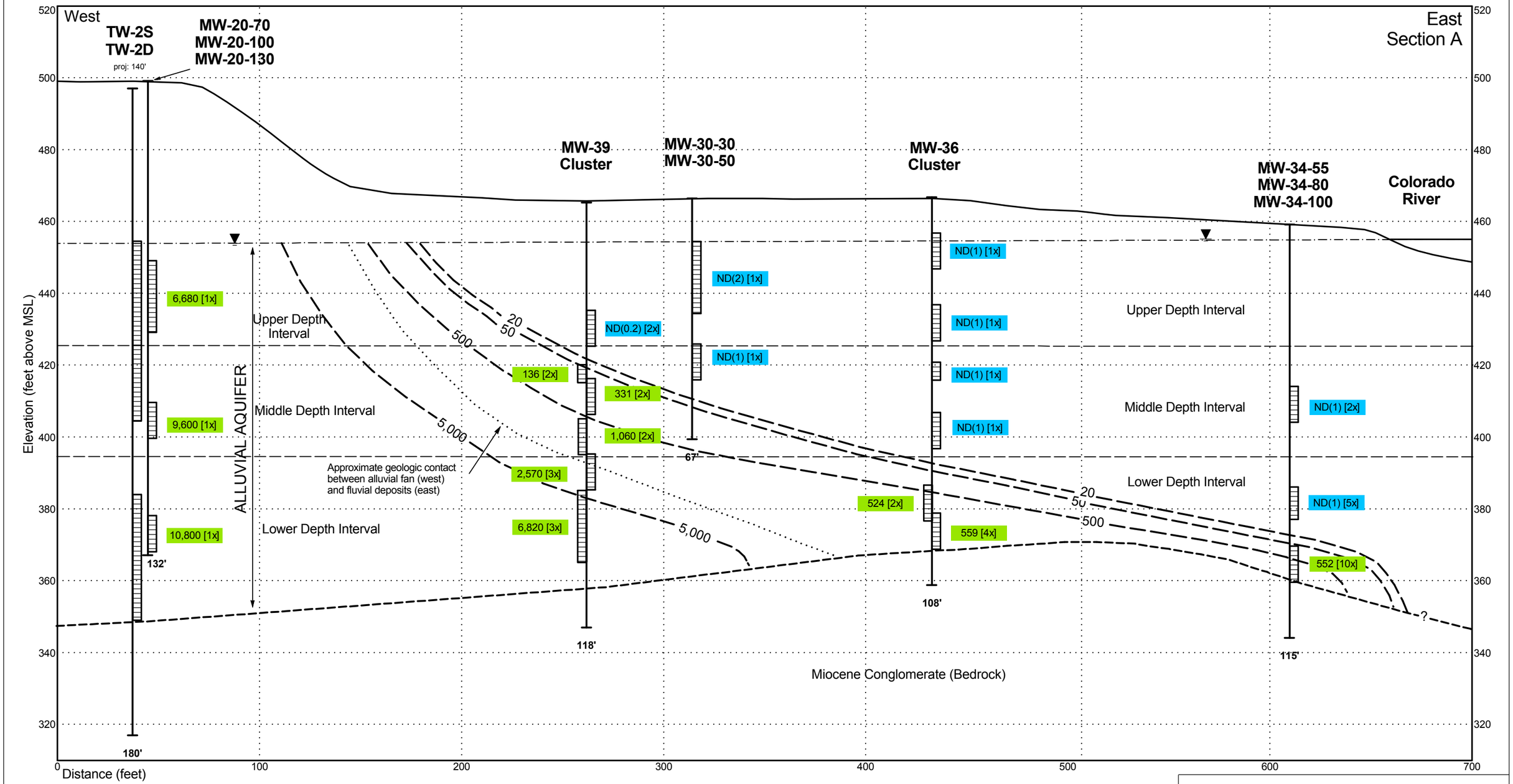

water level

well screen

boring depth (feet)

10.1 [7x]

103

50
Inferred Cr(VI) Contour

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.

Hexavalent Chromium [Cr(VI)] Concentrations, Averaged for May - July 2005 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
MAY-JULY 2005

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

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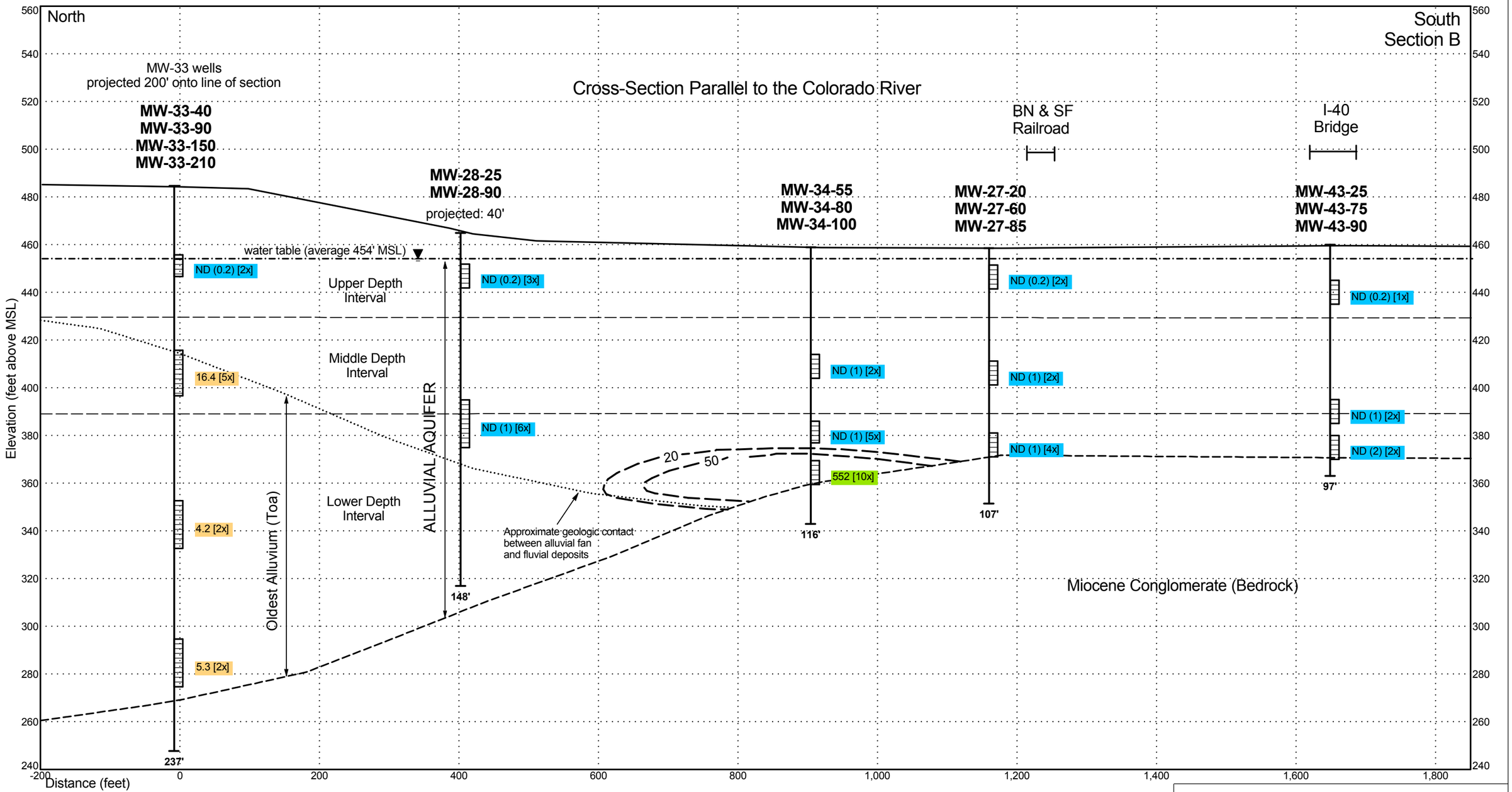

water level

well screen

boring depth (feet)

103

50
Inferred Cr(VI) Contour

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.

Hexavalent Chromium [Cr(VI)] Concentrations, Averaged for May - July 2005 Sampling Events

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

FIGURE 3-3
AVERAGE CR(VI) CONCENTRATIONS
FLOODPLAIN CROSS-SECTION B
MAY - JULY 2005

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\2Q05QUARTERLY\FINALS\FIG_3-3_QTR_SECB.GDW;

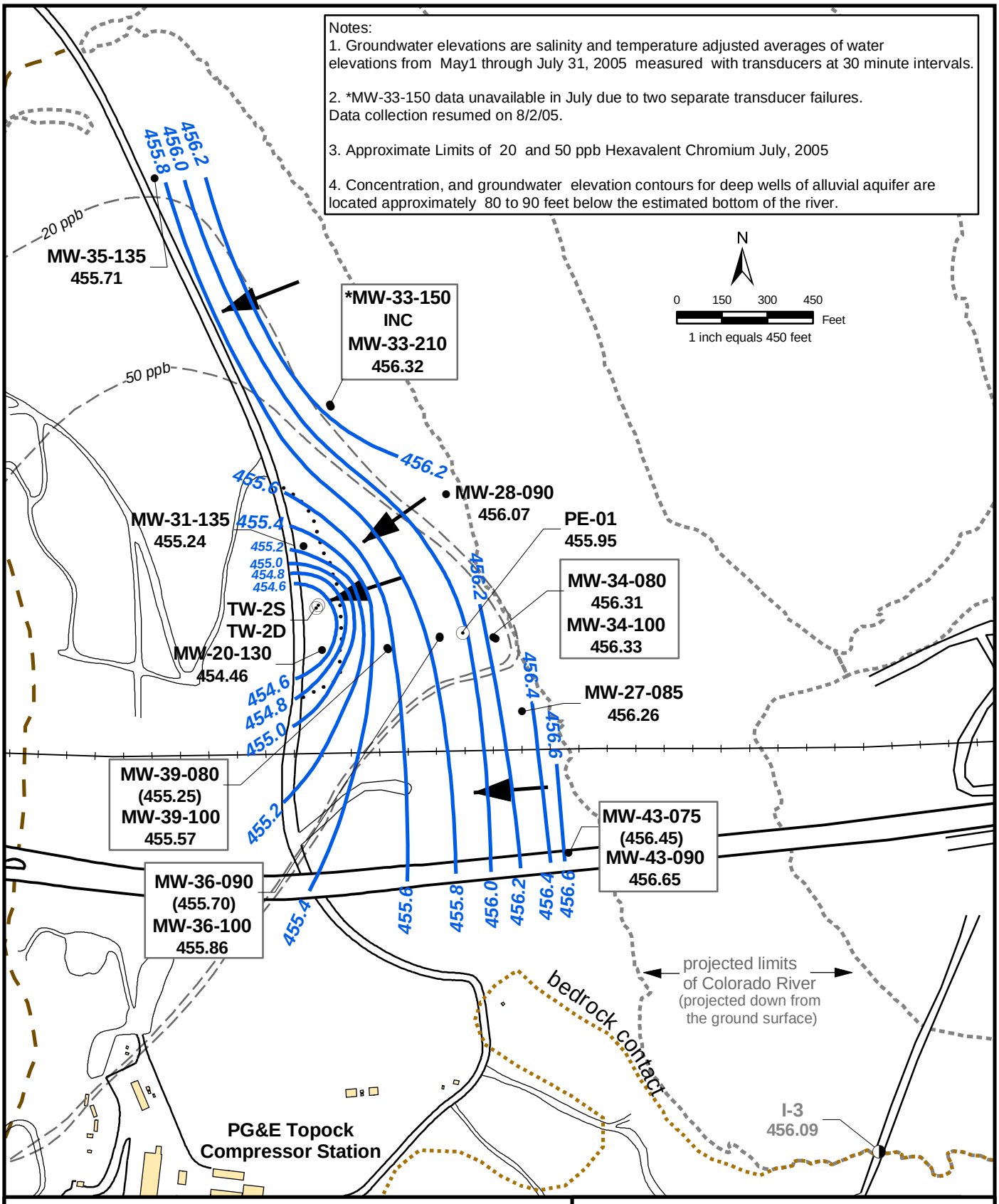

FIGURE 3-4
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MAY THROUGH JULY, 2005

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

CH2MHILL

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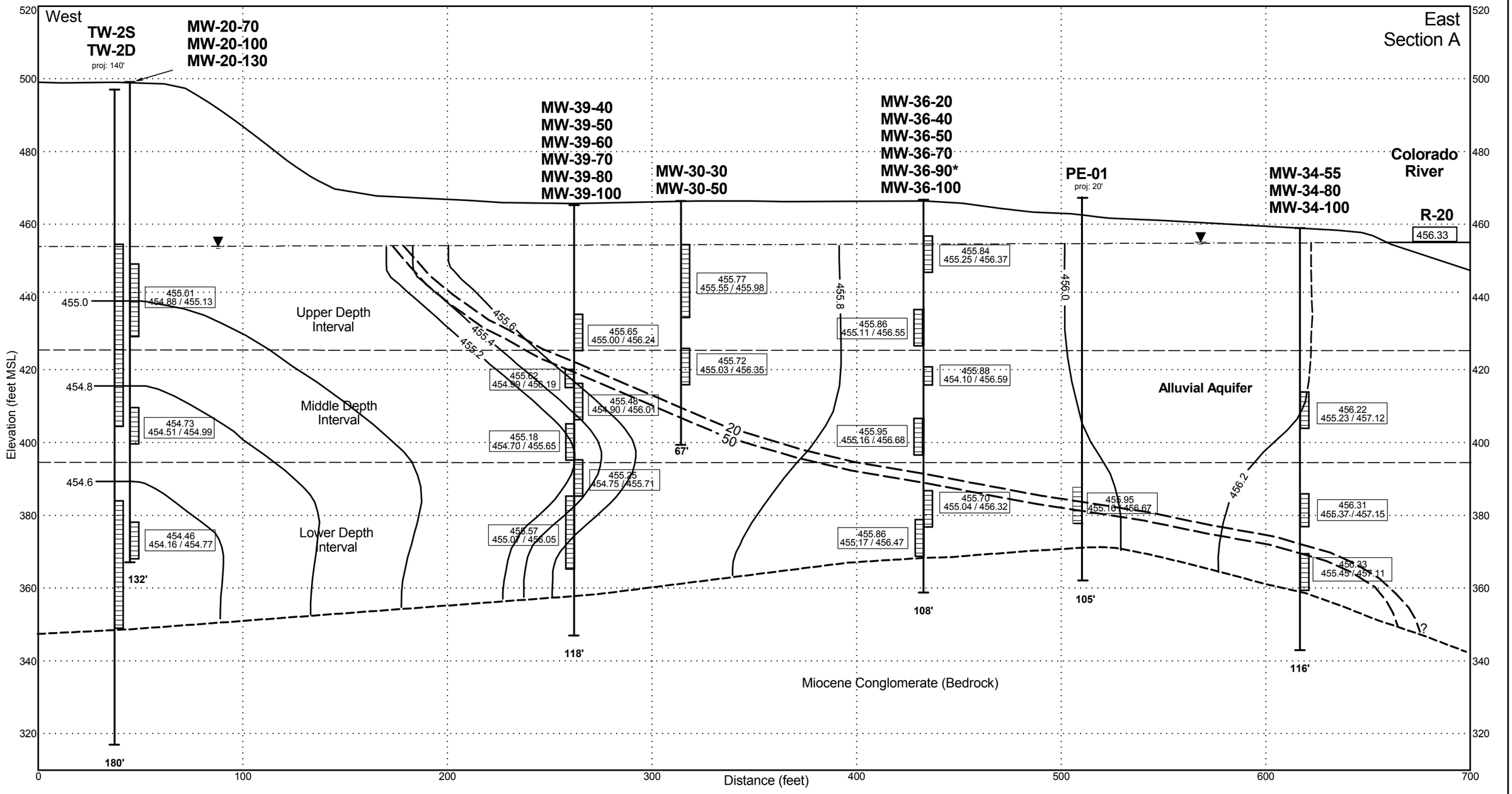
IM_AVERAGE_GROUNDWATER_LA_MAY-JULY_05.PDF



Notes:
Results show average groundwater elevations for May 1 through July 31, 2005 measured with transducers at 30 minute intervals. Groundwater elevations adjusted for salinity and temperature.

*Well MW-36-090, excluded from contouring.

Average river elevation interpolated between I-3 and RRB using mean river gradients from May 1 through July 18, 2005. Data subject to review.

Legend:

MW-30-30
water level
well screen
453.66
453.40/453.94
103 boring depth (feet)

Average groundwater elevation (ft MSL)
Average Minimum / Maximum groundwater elevation (ft MSL)

453.5
Groundwater elevation contour

453.5
Inferred groundwater elevation contour

FIGURE 3-5
AVERAGE GROUNDWATER ELEVATIONS
FLOODPLAIN CROSS-SECTION A
MAY THROUGH JULY, 2005

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

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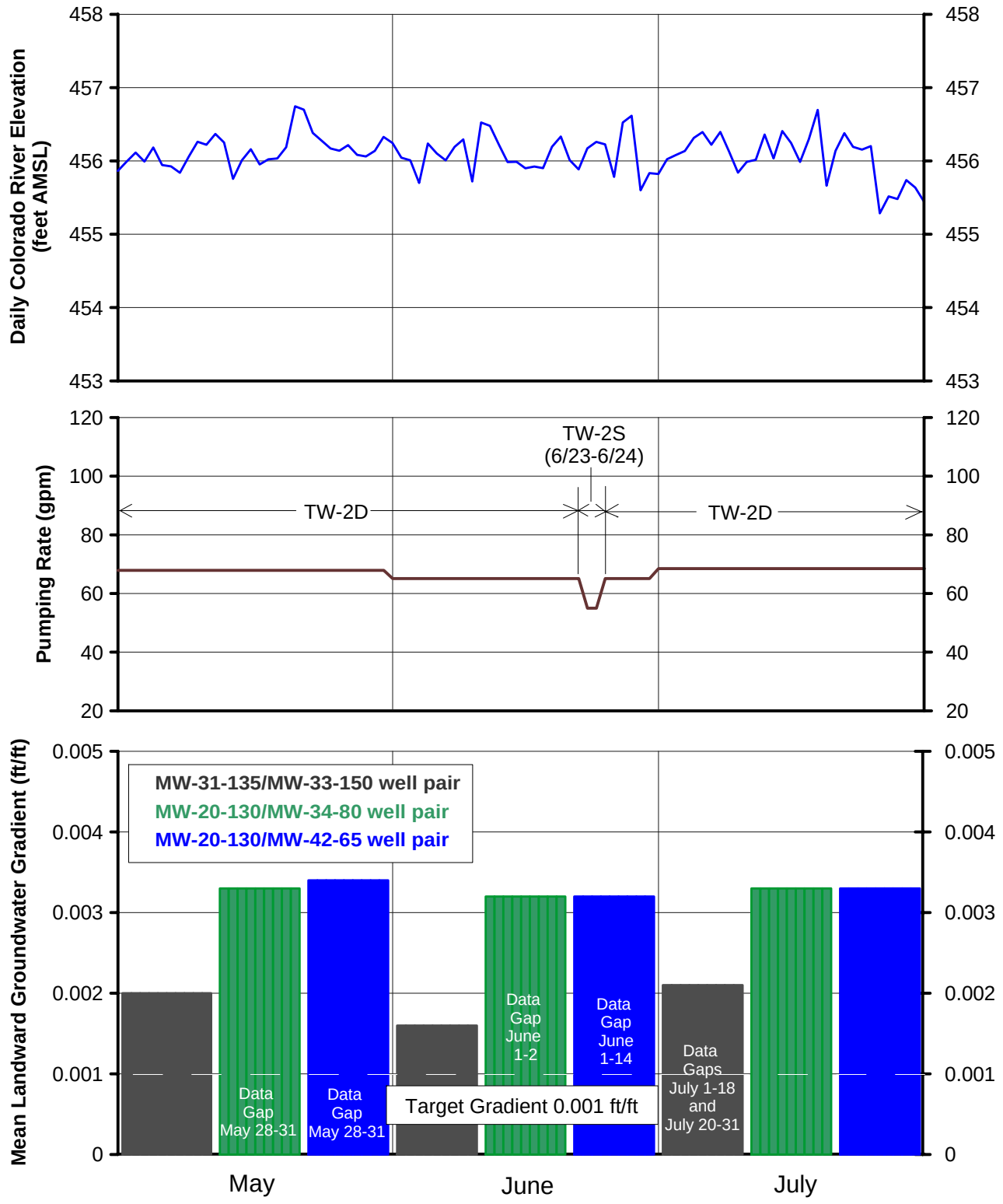

Notes:

1) For IM pumping, the target landward gradient for well pairs is 0.001 feet/foot.
2) Refer to Table 2-1 and Section 3-1 for pumping data.
3) Refer to Table 3-1 and Section 2-4 for discussion of transducer data.
4) Mean gradient at MW-31-135 /MW-33-150 well pair for July is a combination of transducer data and water level data.

FIGURE 3-6
COMPARISON OF RIVER ELEVATION, PUMPING RATE, AND MEASURED HYDRAULIC GRADIENTS, MAY THROUGH JULY 2005
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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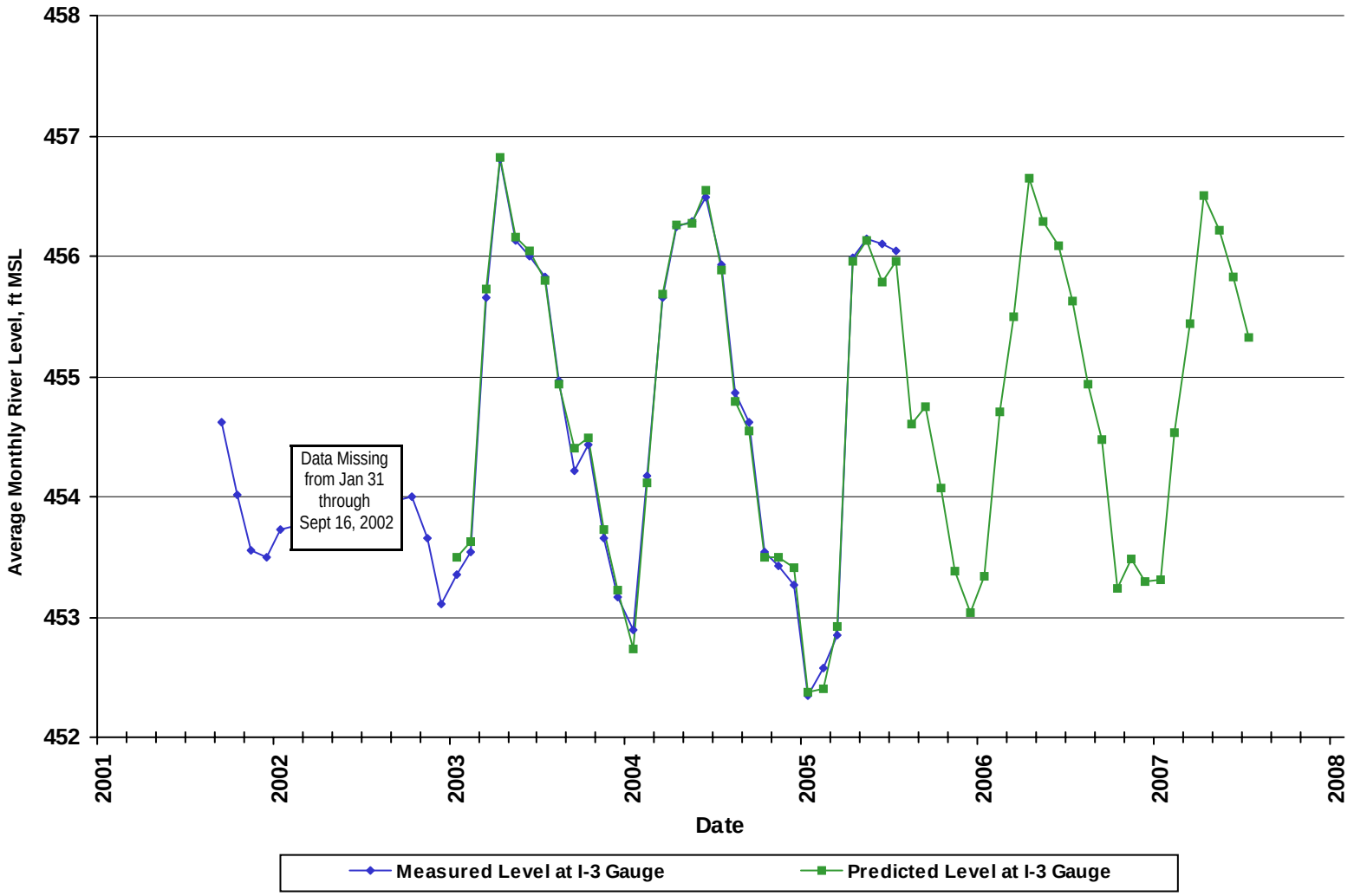
\\zinfandel\proj\PacificGasElectricCo\TopockProgram\Project_PMP\PMP_Reports\Quarterly_Reports\QuarterlyMR2-August30\DraftFigures\Figure3-6



Projected river level is calculated based on monthly averages of Davis Dam release and stage in Lake Havasu.
Data Through July 31, 2005

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

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Appendix A
Chromium Sampling Results for Monitoring Wells in Floodplain Area

TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
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	09-Feb-05	ND (0.2)	ND (1.0)	-198	0.1	3,500	453.0	452.8
	08-Mar-05	ND (0.2)	ND (1.0)	-178	0.0	2,180	451.9	451.3
	04-Apr-05	ND (0.2)	ND (1.0)	-194	0.0	2,580	454.7	453.6
	04-May-05	ND (0.2)	ND (1.0)	-176	0.4	1,280	456.1	455.7
	18-Jul-05	ND (0.2)	ND (1.0) FF	-190	1.1	1,040	456.4	456.3
MW-28-025	08-Feb-05	ND (0.2)	ND (1.0)	---	---	---	---	452.7
	10-Mar-05	ND (0.2)	ND (1.0)	60	5.6	1,400	451.9	451.8
	04-Apr-05	ND (0.2)	ND (1.0)	-108	0.1	1,590	454.9	454.2
	03-May-05	ND (0.2)	ND (1.0)	-59	0.4	1,280	456.4	456.2
	15-Jun-05	ND (0.2)	ND (1.0)	-54	2.7	1,460	456.2	455.8
	13-Jul-05	ND (0.2)	ND (1.0) FF	19	4.9	1,690	456.6	456.4
MW-29	07-Feb-05	ND (1.0)	3.00	-150	0.5	20,100	453.3	452.7
	09-Mar-05	ND (2.0)	ND (1.0)	-127	1.7	32,900	452.8	450.5
	06-Apr-05	ND (1.0)	ND (1.0)	-128	2.0	22,700	454.5	455.4
	05-May-05	ND (0.2)	ND (1.0)	-142	0.1	---	455.9	456.1
	15-Jun-05	ND (0.2)	ND (1.0)	-108	3.1	6,580	456.1	456.0
MW-30-030	09-Feb-05	ND (5.0)	ND (1.0)	-121	0.2	59,700	453.1	452.4
	10-Mar-05	ND (5.0)	ND (1.0)	-84	4.1	65,900	452.7	451.7
	06-Apr-05	ND (2.0)	ND (1.0)	-143	0.3	38,000	454.4	455.1
	09-May-05	ND (2.0)	ND (1.0)	-131	0.3	47,700	455.4	455.2
MW-32-020	07-Feb-05	ND (1.0)	ND (1.0)	-155	0.0	25,900	453.0	452.5
	09-Mar-05	ND (2.0)	ND (1.0)	-161	0.0	29,900	452.3	450.4
	04-Apr-05	ND (1.0)	ND (1.0)	-178	0.0	26,000	453.9	453.7
	09-May-05	ND (1.0)	ND (1.0)	-121	0.2	20,600	455.4	454.9
	17-Jun-05	ND (1.0)	ND (1.0)	-188	2.4	15,500	455.6	455.2
MW-32-035	07-Feb-05	ND (1.0)	ND (1.0)	-175	0.5	10,000	452.9	452.5
	09-Mar-05	ND (1.0)	ND (1.0)	-183	0.1	12,400	451.6	450.4
	04-Apr-05	ND (1.0)	ND (1.0)	-197	0.1	9,800	454.2	453.7
	09-May-05	ND (1.0)	ND (1.0)	-164	0.2	13,600	455.5	455.0
	17-Jun-05	ND (1.0)	ND (1.0)	-202	2.3	12,800	455.7	455.3
MW-33-040	07-Feb-05	ND (1.0)	ND (1.0)	-162	0.6	7,540	453.3	452.6
	09-Mar-05	ND (1.0)	ND (1.0)	-125	3.3	7,050	451.9	450.5
	04-Apr-05	ND (0.2)	ND (1.0)	-160	0.7	9,900	454.4	453.9
	05-May-05	ND (0.2)	ND (1.0)	-90	0.6	5,760	455.8	455.6
	17-Jun-05	ND (0.2)	ND (1.0)	-94	5.4	5,460	456.0	456.0
MW-36-020	07-Feb-05	ND (1.0)	1.40	-62	6.2	31,400	452.9	452.6
	09-Mar-05	ND (2.0)	ND (1.0)	-88	7.6	22,600	451.3	450.6
	05-Apr-05	ND (1.0)	ND (1.0)	-92	5.3	20,000	---	453.8
	03-May-05	ND (1.0)	ND (1.0)	-180	3.5	10,200	456.0	456.2
MW-36-040	07-Feb-05	ND (1.0)	ND (1.0)	-151	6.6	11,300	452.8	452.5
	08-Mar-05	ND (1.0)	ND (1.0)	-194	5.5	9,000	451.7	451.1
	05-Apr-05	ND (1.0)	ND (1.0)	-162	5.3	11,200	---	453.9

Refer to table footnotes for data qualifier explanation.

TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
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-36-040	05-May-05	ND (1.0)	ND (1.0)	-180	2.7	10,300	455.5	455.4
MW-39-040	08-Feb-05	ND (0.2)	ND (1.0)	-160	5.4	7,390	452.7	452.3
	09-Mar-05	ND (1.0)	ND (1.0)	-177	5.0	8,290	451.3	450.5
	05-Apr-05	ND (1.0)	ND (1.0)	-179	5.4	6,200	---	454.3
	05-May-05	ND (0.2)	ND (1.0)	-179	1.8	6,070	455.7	456.1
	16-Jun-05	ND (0.2)	ND (1.0)	-202	2.1	9,600	456.0	455.5
MW-42-030	23-Feb-05	ND (1.0)	ND (1.0)	-175	1.5	12,600	452.4	452.5
	16-Mar-05	ND (1.0)	ND (1.0)	-136	1.2	17,800	451.8	451.6
MW-43-025	07-Mar-05	ND (0.2)	ND (1.0)	-161	6.1	1,690	451.9	451.7
	15-Mar-05	ND (0.2)	ND (1.0)	-177	4.6	1,660	451.8	451.8
	20-Jun-05	ND (0.2)	ND (1.0)	-174	1.9	1,800	456.3	455.8
Middle-Depth Wells								
MW-27-060	23-Feb-05	ND (1.0)	ND (1.0)	-151	1.3	15,200	452.7	452.5
	23-Feb-05 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	01-Mar-05	ND (1.0)	ND (1.0) J	-143	5.1	13,400	452.8	452.5
	08-Mar-05	ND (1.0)	ND (1.0)	-144	1.1	18,000	451.9	451.4
	14-Mar-05	ND (1.0)	ND (1.0)	-158	0.8	20,300	---	451.5
	23-Mar-05	ND (1.0)	ND (1.0)	-124	1.7	12,700	454.2	454.4
	29-Mar-05	ND (1.0)	ND (1.0)	-154	0.3	16,800	454.3	454.1
	05-Apr-05	ND (1.0)	ND (1.0)	-157	0.1	16,700	454.3	453.8
	12-Apr-05	ND (1.0)	ND (1.0)	-146	0.2	13,800	456.6	456.6
	19-Apr-05	ND (1.0)	ND (1.0)	---	---	---	456.3	456.1
	26-Apr-05	ND (1.0)	ND (1.0)	-111	7.0	22,100	456.6	456.1
	04-May-05	ND (1.0)	ND (1.0)	-114	0.4	14,400	456.2	455.9
	18-Jul-05	ND (1.0)	1.80 FF	-125	2.6	13,500	456.8	456.6
MW-30-050	09-Feb-05	ND (10)	1.60 J	-155	0.0	13,300	452.7	452.4
	09-Feb-05 FD	ND (1.0)	11.2 J	FD	FD	FD	FD	FD
	10-Mar-05	ND (1.0)	ND (1.0)	-230	4.7	9,000	451.7	451.6
	06-Apr-05	18.5	15.5	-252	0.5	14,000	454.8	455.2
	06-Apr-05 FD	17.1 J	13.0	FD	FD	FD	FD	FD
	09-May-05	ND (1.0)	ND (1.0)	-100	0.3	14,200	455.4	455.4
	09-May-05 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
MW-33-090	07-Feb-05	20.2	14.9	-75	0.5	9,320	453.2	452.6
	22-Feb-05	19.0	18.3	10	5.2	8,930	452.6	452.1
	09-Mar-05	18.6	18.2	-101	0.7	---	451.8	450.5
	22-Mar-05	18.9	19.2	-92	4.7	14,600	453.7	454.2
	04-Apr-05	21.3	17.2	-98	0.3	13,300	454.4	453.9
	19-Apr-05	20.3	17.9	---	4.0	8,830	455.5	455.1
	19-Apr-05 FD	20.0	18.2	FD	FD	FD	FD	FD
	05-May-05	17.4	16.8	-244	0.3	8,250	455.7	455.3
	18-May-05	15.5	16.3	-141	1.6	---	455.8	454.9
	01-Jun-05	17.8	14.0	-53	0.4	12,000	456.3	456.1

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TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
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-33-090	01-Jun-05 FD	16.0	12.7	FD	FD	FD	FD	FD
	16-Jun-05	15.0	14.2	-209	2.1	9,500	455.9	455.2
	16-Jun-05 FD	15.7 J	13.4	FD	FD	FD	FD	FD
	20-Jul-05	16.1	17.3 FF	-23	0.6	8,440	456.5	456.0
	20-Jul-05 FD	16.5	17.3 FF	FD	FD	FD	FD	FD
MW-34-055	09-Feb-05	ND (1.0)	ND (1.0)	-112	0.0	12,600	453.0	452.6
	10-Mar-05	ND (1.0)	ND (1.0)	-191	5.1	9,000	451.7	451.4
	05-Apr-05	ND (1.0)	ND (1.0)	-110	0.7	12,400	454.1	453.8
	05-May-05	ND (1.0)	ND (1.0)	-99	0.1	8,860	455.5	455.0
	15-Jul-05	ND (1.0)	ND (1.3) FF	-77	3.6	9,180	457.1	456.9
MW-36-050	07-Feb-05	ND (1.0)	ND (1.0)	-131	5.6	11,000	452.8	452.5
	08-Mar-05	ND (1.0)	ND (1.0)	-168	5.5	8,800	451.7	451.1
	05-Apr-05	ND (1.0)	ND (1.0)	-129	5.6	9,320	---	453.9
	05-May-05	ND (1.0)	ND (1.0)	-137	2.1	9,330	455.5	455.2
MW-36-070	07-Feb-05	ND (0.21)	1.20	-60	7.2	18,500	453.0	452.7
	08-Mar-05	ND (1.0)	ND (1.0)	-115	5.2	11,300	451.7	451.2
	05-Apr-05	ND (1.0)	ND (1.0)	-48	5.6	9,990	---	453.8
	03-May-05	ND (1.0)	ND (1.0)	-103	0.0	12,300	455.9	455.8
MW-39-050	08-Feb-05	819	800	76	5.3	14,500	452.7	452.5
	09-Mar-05	422	372	11	5.0	14,400	451.3	450.5
	06-Apr-05	282 J	237	81	4.4	12,400	454.8	455.6
	03-May-05	206	204	56	0.0	14,300	454.2	455.1
	16-Jun-05	66.2	55.4	-44	2.0	15,200	456.0	454.8
MW-39-060	08-Feb-05	1880	1650	106	5.2	12,900	452.7	452.7
	09-Mar-05	1450	1300	65	4.9	15,200	451.1	450.5
	06-Apr-05	914	1080	84	4.3	12,600	---	455.3
	06-Apr-05 FD	914	907	FD	FD	FD	FD	FD
	05-May-05	450	455	43	2.0	14,600	455.4	455.8
	05-May-05 FD	460	509	FD	FD	FD	FD	FD
	16-Jun-05	213	198	19	1.9	17,600	456.1	454.9
MW-39-070	08-Feb-05	6640	6800	89	5.5	11,400	452.4	452.4
	09-Mar-05	4310	4010 J	71	5.3	13,800	451.0	450.5
	09-Mar-05 FD	4340	5310 J	FD	FD	FD	FD	FD
	05-Apr-05	2280	2080	61	5.8	11,500	---	454.3
	05-May-05	1320	1270	98	1.9	12,500	455.2	456.3
	16-Jun-05	799	576	22	1.8	16,000	456.1	455.2
MW-42-055	23-Feb-05	ND (1.0)	ND (1.0)	-188	0.9	13,600	452.5	452.5
	16-Mar-05	ND (1.0)	ND (1.0)	-191	0.5	17,100	451.9	451.6
MW-42-065	14-Feb-05	ND (1.0)	ND (1.0)	-201	0.3	22,200	453.1	452.0
	24-Feb-05	ND (1.0)	ND (2.8) J	-119	5.0	20,500	452.8	452.6
	16-Mar-05	ND (1.0)	ND (1.0)	-126	0.6	21,400	452.0	451.5

Refer to table footnotes for data qualifier explanation.

TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-27-085	14-Feb-05	ND (1.0)	ND (1.0)	-519	0.1	26,700	453.8	452.5
	16-Feb-05	ND (2.0)	ND (1.0)	-491	5.2	23,400	452.5	451.5
	23-Feb-05	ND (2.0)	ND (1.0)	-235	1.1	17,700	452.9	452.5
	01-Mar-05	ND (1.0)	ND (1.0) J	-155	4.9	18,600	452.9	452.5
	08-Mar-05	ND (2.0)	ND (1.0)	-152	0.2	22,000	452.1	451.3
	14-Mar-05	ND (1.0)	ND (1.0)	-153	0.9	27,000	452.2	451.6
	23-Mar-05	ND (1.0)	ND (1.0)	-145	1.0	16,100	454.3	454.3
	29-Mar-05	ND (1.0)	ND (1.0)	-167	0.5	19,700	454.5	454.1
	05-Apr-05	ND (1.0)	ND (1.0)	-134	2.0	19,700	454.5	453.9
	12-Apr-05	ND (1.0)	ND (1.0)	-134	0.1	16,900	456.6	456.4
	19-Apr-05	ND (1.0)	ND (1.0)	---	---	---	456.5	456.3
	26-Apr-05	ND (1.0)	ND (1.0)	-138	5.7	18,100	456.1	455.8
	04-May-05	ND (1.0)	ND (1.0)	-128	0.4	18,500	456.5	456.2
	19-May-05	ND (1.0)	ND (1.0)	-131	1.0	19,600	456.5	456.2
	02-Jun-05	ND (1.0)	ND (1.0)	-100	0.9	19,500	456.2	455.5
	19-Jul-05	ND (1.0)	3.00 FF	-106	0.9	19,100	457.0	457.3
MW-28-090	08-Feb-05	ND (1.0)	ND (1.0)	-181	0.0	9,430	453.0	452.6
	22-Feb-05	ND (1.0)	ND (1.0)	-54	5.8	9,300	452.3	452.1
	07-Mar-05	ND (1.0)	ND (1.0)	-190	0.1	12,300	451.8	451.6
	22-Mar-05	ND (1.0)	ND (1.0)	-203	0.2	12,200	453.9	454.1
	04-Apr-05	ND (1.0)	ND (1.0)	-172	0.4	12,600	454.4	454.2
	20-Apr-05	ND (1.0)	ND (1.0)	-93	3.9	9,990	456.4	456.5
	03-May-05	ND (1.0)	ND (1.0)	-208	0.4	10,600	456.1	455.6
	19-May-05	ND (1.0)	ND (1.0)	-147	0.8	9,110	456.4	456.5
	02-Jun-05	ND (1.0)	ND (1.0)	-141	1.0	---	456.2	456.0
	15-Jun-05	ND (1.0)	ND (1.0)	-205	2.5	9,410	455.8	455.4
	01-Jul-05	ND (1.0)	ND (1.0)	-174	1.8	12,700	456.4	456.1
	13-Jul-05	ND (1.0)	ND (1.0) FF	-142	4.3	8,850	456.3	456.0
MW-33-150	02-Mar-05	ND (1.0)	ND (1.0)	-120	4.6	15,900	453.4	452.7
	02-Mar-05 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	16-Mar-05	ND (1.0)	ND (1.0)	-175	1.6	21,600	452.9	452.0
	17-Jun-05	3.10 J	6.40	-172	3.0	18,300	456.3	456.0
	20-Jul-05	5.20	5.60 FF	-59	0.7	16,100	456.5	456.6
MW-33-210	24-Feb-05	ND (1.0)	ND (2.1) J	-116	4.9	22,200	453.7	452.6
	16-Mar-05	1.40	ND (1.0)	-103	0.6	25,300	453.0	451.8
	16-Jun-05	5.10 J	1.70 J	-216	2.0	22,400	456.2	454.9
	20-Jul-05	5.60	6.70 FF	-40	0.8	19,200	456.7	456.9
MW-34-080	08-Feb-05	ND (1.0)	ND (1.0)	-162	0.0	15,500	452.9	452.3
	16-Feb-05	ND (2.0)	ND (1.0)	-224	5.1	18,000	452.1	451.5
	22-Feb-05	ND (1.0)	ND (1.0)	-95	5.8	14,100	452.4	452.2
	01-Mar-05	ND (1.0)	ND (1.0) J	-127	5.1	13,300	452.7	452.5
	08-Mar-05	ND (1.0) J	ND (1.0)	-84	0.0	17,600	451.4	451.1
	15-Mar-05	ND (1.0)	ND (1.0)	-121	0.6	15,200	---	451.9

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TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
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	22-Mar-05	ND (1.0)	ND (1.0)	-83	0.2	15,200	453.8	454.3
	29-Mar-05	ND (1.0)	ND (1.0)	-214	0.0	16,800	454.2	454.4
	05-Apr-05	ND (1.0)	ND (1.0)	-207	0.0	17,200	454.2	454.0
	12-Apr-05	ND (1.0)	ND (1.0)	-86	0.1	14,200	455.9	455.6
	19-Apr-05	ND (1.0)	ND (1.0)	4	5.1	13,800	456.1	455.5
	26-Apr-05	ND (1.0)	ND (1.0)	-94	3.5	13,700	455.7	455.0
	04-May-05	ND (1.0)	ND (1.0)	-241	0.3	15,900	455.9	455.0
	18-May-05	ND (1.0)	ND (1.0)	-138	1.3	16,000	456.3	455.7
	01-Jun-05	ND (1.0)	ND (1.0)	-117	0.4	17,800	456.2	455.4
	30-Jun-05	ND (1.0)	ND (1.0)	-61	1.6	18,300	456.0	454.6
	14-Jul-05	ND (1.0)	2.00 FF	-104	1.2	17,900	456.9	455.9
MW-34-100	14-Feb-05	357	328	-246	0.2	25,000	453.3	452.3
	16-Feb-05	354	294	-159	5.3	20,400	452.4	451.5
	23-Feb-05	417	391	-35	1.4	18,000	452.8	452.5
	01-Mar-05	402	374	-86	5.0	15,700	452.8	452.5
	01-Mar-05 FD	411	332	FD	FD	FD	FD	FD
	08-Mar-05	425 J	490	-60	0.4	19,900	452.0	451.2
	14-Mar-05	426	474	-55	0.7	23,700	452.0	451.2
	23-Mar-05	421	548	-98	0.8	14,600	454.2	454.2
	29-Mar-05	73.9 J	110	-96	0.5	18,100	454.5	454.3
	29-Mar-05 FD	56.7 J	106	FD	FD	FD	FD	FD
	05-Apr-05	452	488	-115	0.3	20,000	454.6	454.3
	05-Apr-05 FD	455	454	FD	FD	FD	FD	FD
	12-Apr-05	482	502	-61	0.2	15,500	456.4	456.0
	12-Apr-05 FD	499	562	FD	FD	FD	FD	FD
	19-Apr-05	473	599	8	6.0	16,200	456.2	455.8
	26-Apr-05	476	573	-45	4.1	21,000	456.1	455.4
	26-Apr-05 FD	480	602	FD	FD	FD	FD	FD
	04-May-05	491	530	-98	0.6	18,700	455.7	454.8
	10-May-05	513	492	21	3.0	15,800	456.8	456.7
	10-May-05 FD	501	552	FD	FD	FD	FD	FD
	18-May-05	524	564	50	3.0	19,000	456.4	456.1
	25-May-05	559	478	-93	1.2	18,700	456.6	456.1
	01-Jun-05	527	609	-59	0.4	20,000	456.0	455.1
	08-Jun-05	552	583	-15	2.3	20,300	456.7	456.3
	21-Jun-05	560	477	-26	1.9	20,500	456.3	455.4
	21-Jun-05 FD	578	480	FD	FD	FD	FD	FD
	07-Jul-05	583	639	-88	3.8	18,800	456.5	455.7
	14-Jul-05	617	701 FF	-26	1.9	20,200	456.9	456.6
	27-Jul-05	597	504 FF	-2	1.1	17,800	456.1	456.5
MW-36-090	07-Feb-05	1720	1610	51	5.4	19,300	452.9	452.5
	09-Mar-05	1480	1380	49	5.1	18,100	451.5	450.5
	05-Apr-05	1040	946	64	5.3	15,100	---	453.8
	03-May-05	705	623	55	0.0	17,600	455.5	455.5

Refer to table footnotes for data qualifier explanation.

TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-36-090	25-Jul-05	344	343 FF	129	1.1	18,400	455.8	455.7
MW-36-100	09-Feb-05	1440	1420	-12	0.0	20,900	452.6	452.5
	22-Feb-05	1430	1230	55	5.2	18,700	452.0	452.1
	22-Feb-05 FD	1390	1250	FD	FD	FD	FD	FD
	09-Mar-05	1380	1200	-20	0.3	22,600	451.1	450.5
	22-Mar-05	1250	1180	-16	0.2	19,900	453.4	454.1
	22-Mar-05 FD	1230	1160	FD	FD	FD	FD	FD
	04-Apr-05	1110	981	-20	0.1	19,600	454.1	453.9
	20-Apr-05	825	844	2	3.1	17,500	455.9	456.4
	03-May-05	705	679	4	0.4	18,700	455.4	455.1
	18-May-05	617	796 J	12	1.5	34,800	455.3	454.7
	18-May-05 FD	620	624 J	FD	FD	FD	FD	FD
	02-Jun-05	518	441	23	2.5	18,800	456.0	455.8
	19-Jul-05	398	635 FF	17	1.0	17,700	456.4	456.6
MW-39-080	08-Feb-05	7750	8220	99	5.8	14,900	452.6	452.6
	08-Feb-05 FD	7890	7750	FD	FD	FD	FD	FD
	09-Mar-05	7460	7240	82	5.0	16,800	451.1	450.5
	06-Apr-05	4820	4570	88	4.7	13,800	---	455.5
	03-May-05	3430	3510	106	0.4	14,900	454.8	455.0
	16-Jun-05	2220	1930	52	2.0	16,800	456.2	454.6
	25-Jul-05	2060	1990 FF	169	1.2	17,400	455.6	456.1
MW-39-100	09-Feb-05	9180	9480	33	2.2	22,000	452.5	452.4
	09-Feb-05 FD	9260	9710	FD	FD	FD	FD	FD
	10-Mar-05	8940	8160	28	5.1	24,500	451.5	451.2
	06-Apr-05	8220	8230	54	1.5	---	454.5	455.0
	09-May-05	7980	8490	159	1.8	20,400	455.5	455.7
	09-May-05 FD	7720	8250	FD	FD	FD	FD	FD
	17-Jun-05	6980	6030	14	2.8	19,200	455.0	455.6
	19-Jul-05	5500	5490 FF	80	1.3	18,400	456.2	457.0
	19-Jul-05 FD	5450	5450 FF	FD	FD	FD	FD	FD
MW-43-075	07-Mar-05	ND (1.0)	ND (1.0)	-150	5.6	15,200	452.2	451.6
	15-Mar-05	ND (1.0)	ND (1.0)	-178	0.5	14,900	452.7	451.7
	20-Jun-05	ND (1.0)	ND (1.0)	-165	1.8	18,100	456.8	456.0
	26-Jul-05	ND (1.0)	ND (1.0) FF	-160	1.1	15,600	456.0	455.5
MW-43-090	07-Mar-05	ND (1.0)	ND (1.0)	-185	0.2	21,500	452.5	451.6
	15-Mar-05	ND (1.0)	ND (1.0)	-153	0.5	22,000	452.3	451.6
	15-Mar-05 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	20-Jun-05	ND (1.0)	ND (1.0)	-140	1.8	26,200	457.3	456.4
	20-Jun-05 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	26-Jul-05	ND (2.0)	ND (1.6) FF	-129	2.1	23,800	456.9	456.0

Refer to table footnotes for data qualifier explanation.

TABLE A-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2005 through July 2005
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, or field instrumentation malfunctioned
µg/L= micrograms per liter
mV = oxidation-reduction potential (ORP)
µS/cm = microSiemens per centimeter

FF = 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 28, 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 A-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2005 through July 2005
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	10-Mar-05	925	883	34.0	7.04	---
	10-Mar-05 FD	925	841	FD	FD	FD
	06-Apr-05	810	871	56.0	6.34	---
	06-Apr-05 FD	810	868	FD	FD	FD
	13-Jun-05	852	835	60.0	6.97	4060
MW-19	07-Mar-05	1080	1010	100	6.67	2200
	14-Jun-05	1150	1140	65.0	6.80	2170
MW-20-070	10-Mar-05	8280	8630	151	8.77	---
	07-Apr-05	8740	9020	92.0	6.63	---
	15-Jun-05	6680	6450	152	6.85	3160
	15-Jun-05 FD	7000	7080	FD	FD	FD
MW-21	08-Mar-05	ND (1.0)	ND (1.0)	-86	6.00	11300
	14-Jun-05	ND (1.0)	ND (1.0)	81.0	6.80	12000
MW-22	10-Mar-05	ND (2.0)	ND (1.0)	-150	4.74	46300
	17-Jun-05	ND (1.0)	ND (1.0)	-57	3.23	33700
MW-24A	07-Mar-05	3390	3180	49.0	3.09	3460
	07-Mar-05 FD	3360	3290	FD	FD	FD
	16-Jun-05	3280	2640	52.0	2.70	3470
MW-26	08-Mar-05	2990	3160	123	10.0	3450
	08-Mar-05 FD	2990	3050	FD	FD	FD
	13-Jun-05	3370	3140	119	9.16	3820
MW-31-060	09-Mar-05	2700	2550	192	6.87	2860
	07-Apr-05	1910	2030	102	5.25	---
	13-Jun-05	1790	1810	122	8.00	3060
MW-35-060	15-Mar-05	33.8	37.5	-18	2.22	6510
	13-Jun-05	33.6	34.1	-8.0	2.47	---
TW-02S	11-Mar-05	4400	4240	90.0	4.83	---
	16-Jun-05	3780	4180	129	7.90	4140
Middle-Depth Wells						
MW-20-100	10-Mar-05	8440	7770	110	0.40	7100
	15-Jun-05	9600	10100	136	3.44	3870
Deep Wells						
MW-20-130	09-Mar-05	8730	8900	126	0.02	12800
	09-Mar-05 FD	8810	8170	FD	FD	FD
	07-Apr-05	8980	8870	99.0	4.89	11000
	15-Jun-05	10800	10300	145	4.66	10600
MW-24B	07-Mar-05	5320	4950	-2.0	1.70	14300
	16-Jun-05	5640	5660	-4.0	2.20	13100
MW-31-135	10-Mar-05	422	403	42.0	1.49	12500
	13-Jun-05	318	344	42.0	4.46	14600
	13-Jun-05 FD	318	338	FD	FD	FD
MW-35-135	15-Mar-05	23.0	21.4	-108	2.11	10800
	13-Jun-05	17.6	17.6	-138	1.75	15000
PE-01	01-Mar-05	---	---	-89	---	9050

TABLE A-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2005 through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

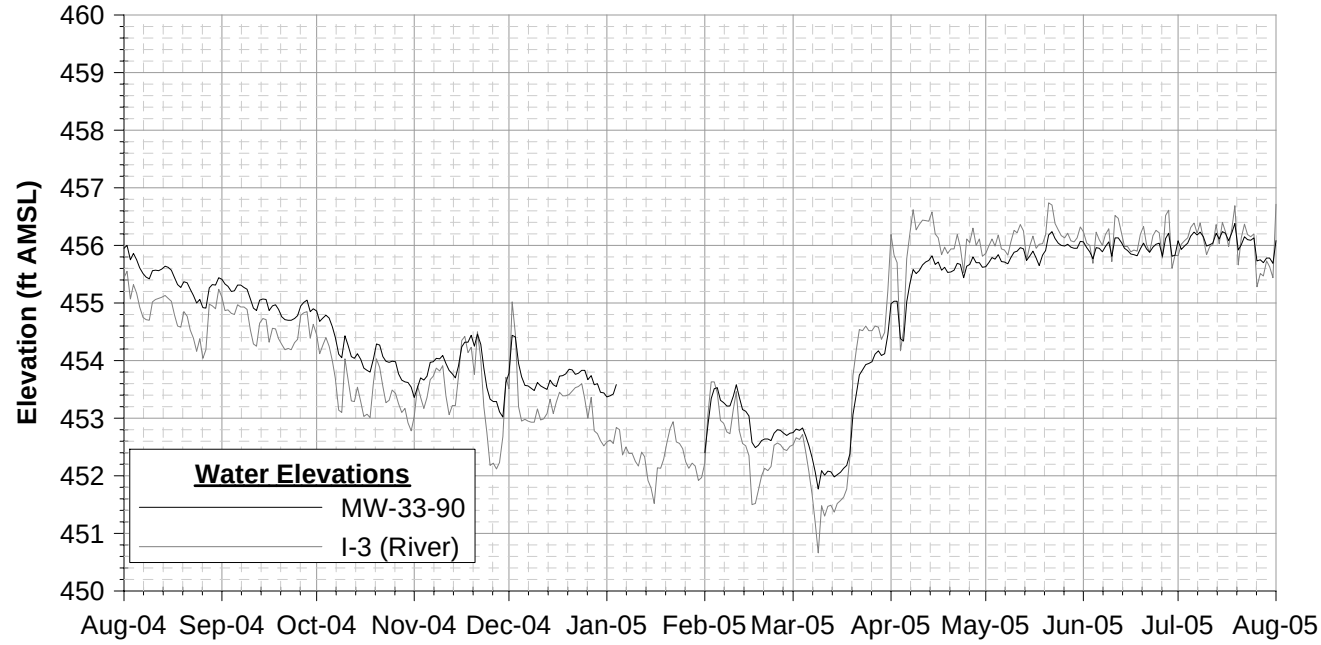
Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
PE-01	05-Mar-05	---	293	---	---	---
	21-Mar-05	ND (1.0)	ND (1.0)	-194	0.19	15200
TW-02D	09-Mar-05	5800	5620	---	---	---
	05-May-05	---	5490	---	---	---
	15-Jun-05	5050	4780	147	4.96	9400

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

FF = 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 28, 2005 letter.



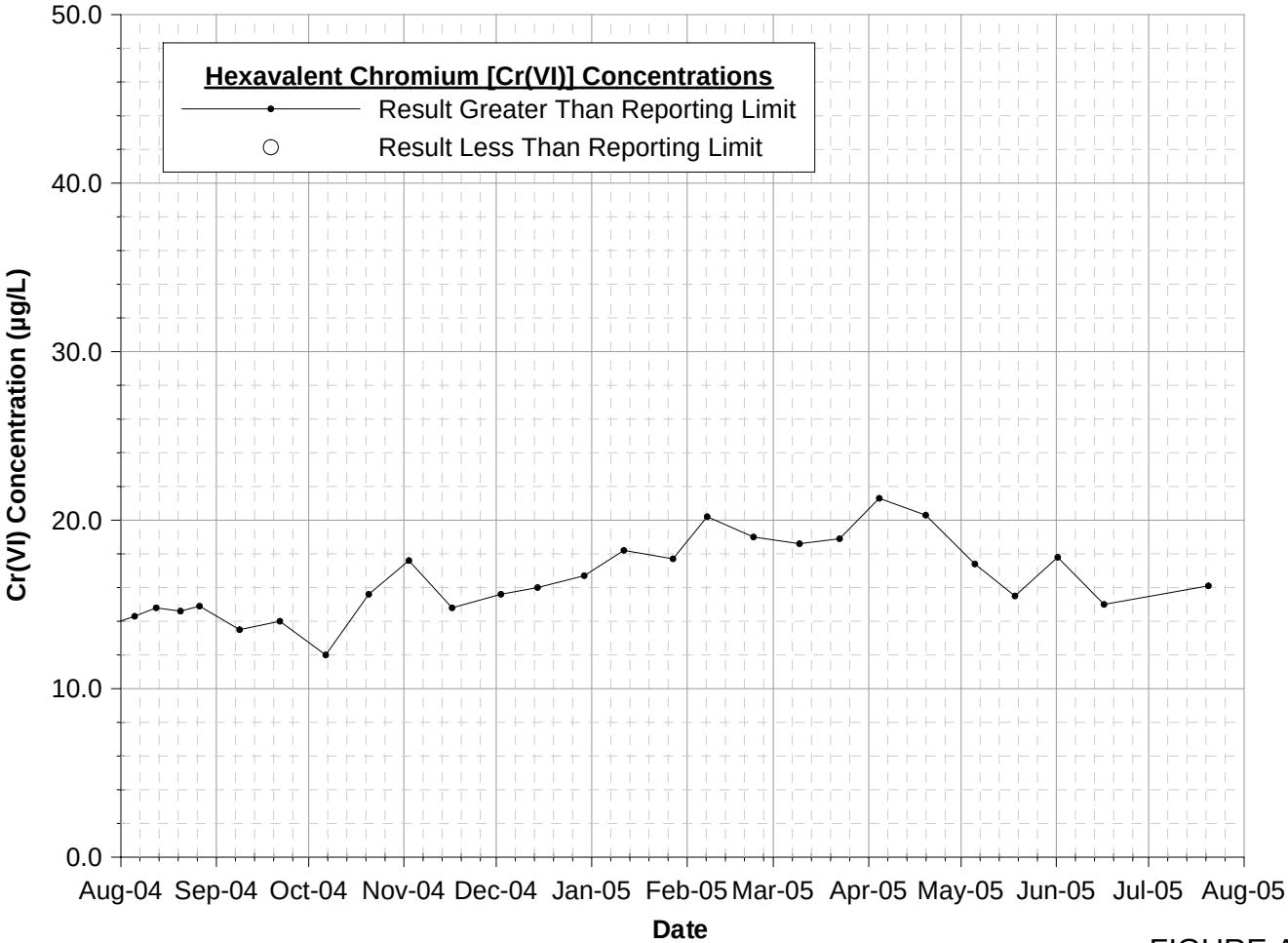


FIGURE A-1
MW-33-90 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 07/20/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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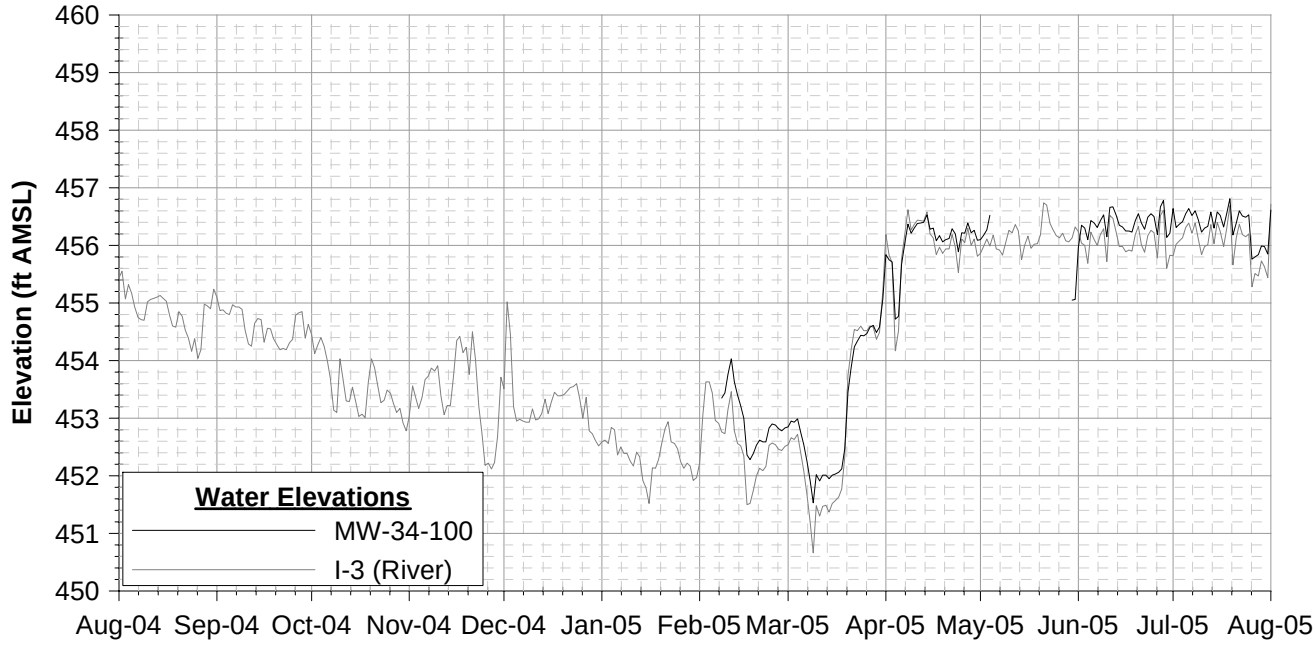

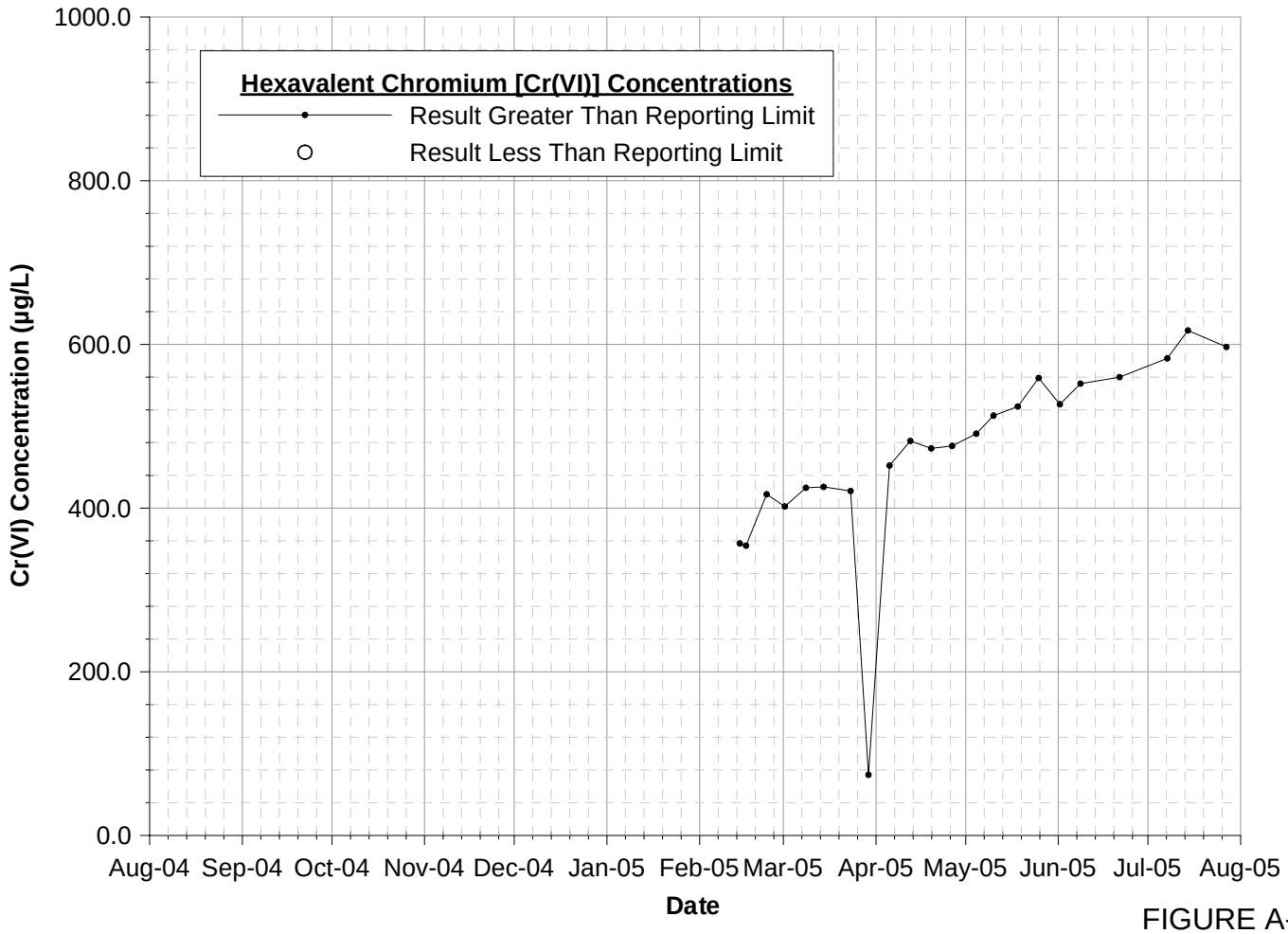

FIGURE A-2
MW-34-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 7/27/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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.

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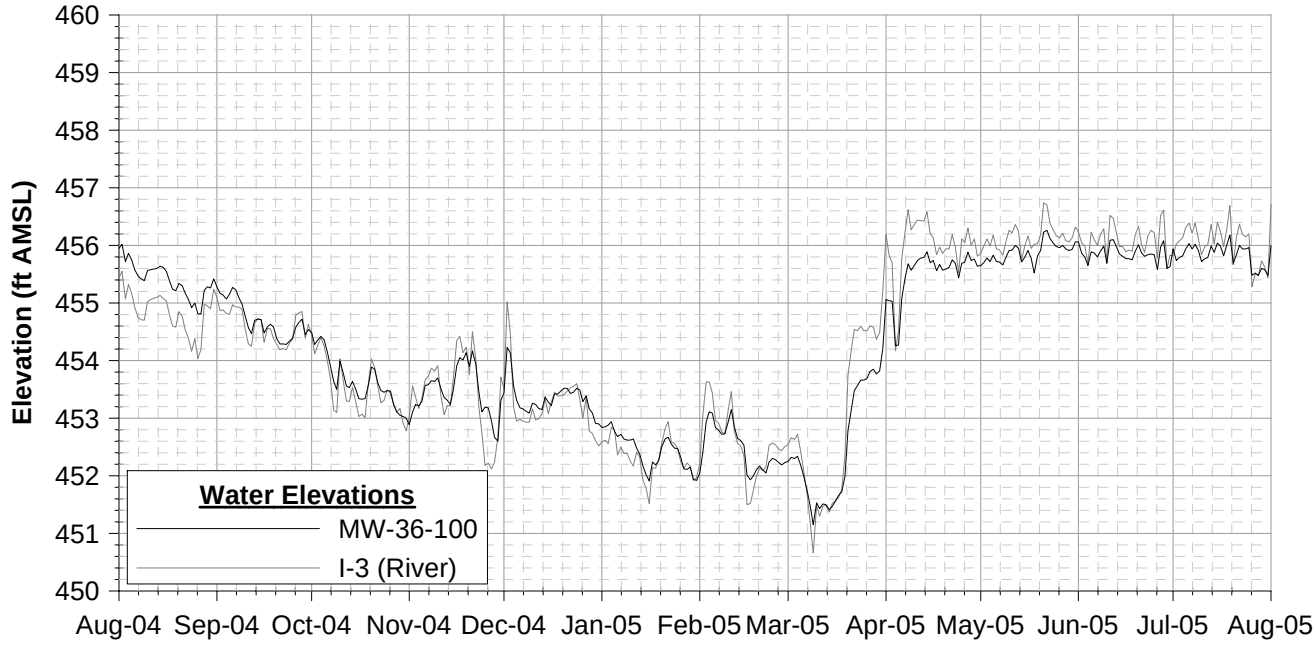

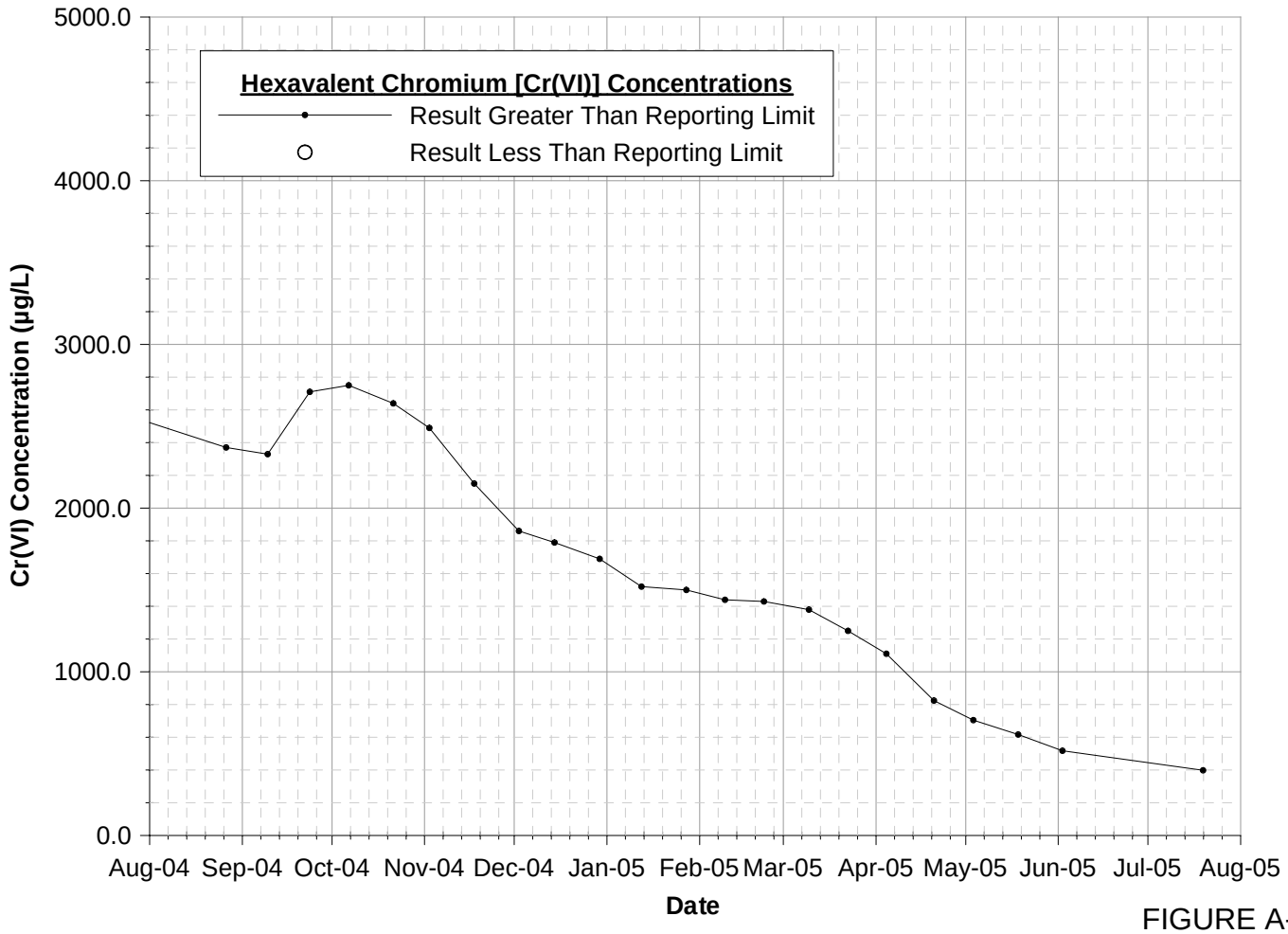

FIGURE A-3
MW-36-100 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 07/19/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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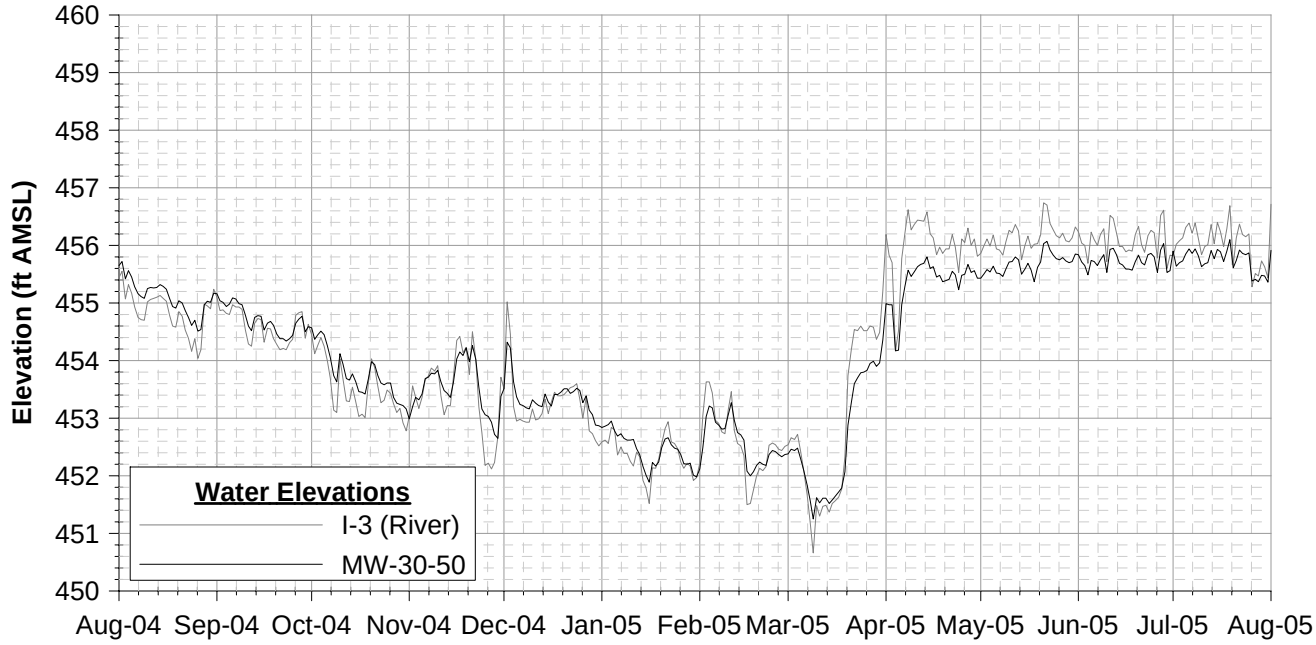

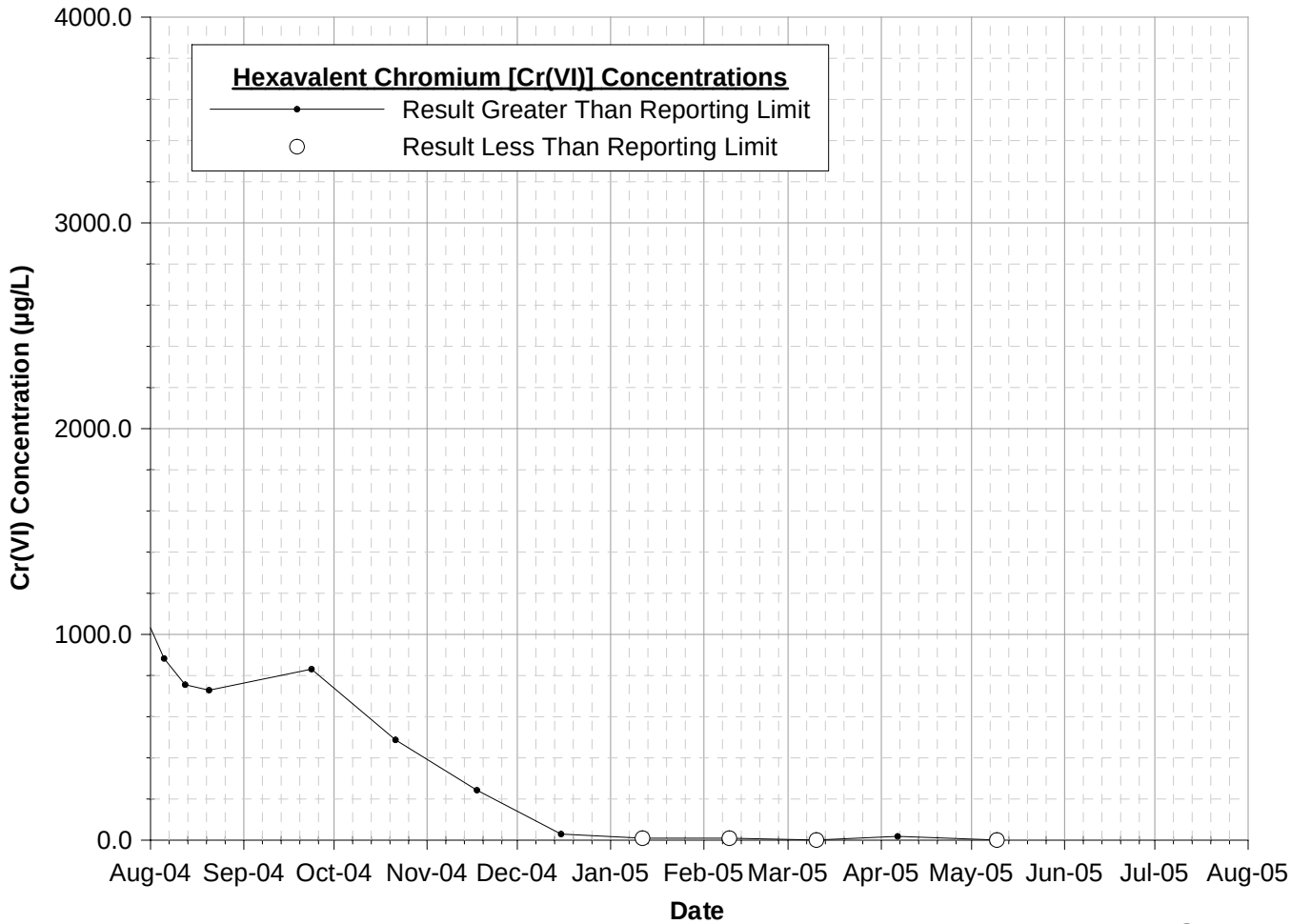

FIGURE A-4
MW-30-50 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 05/09/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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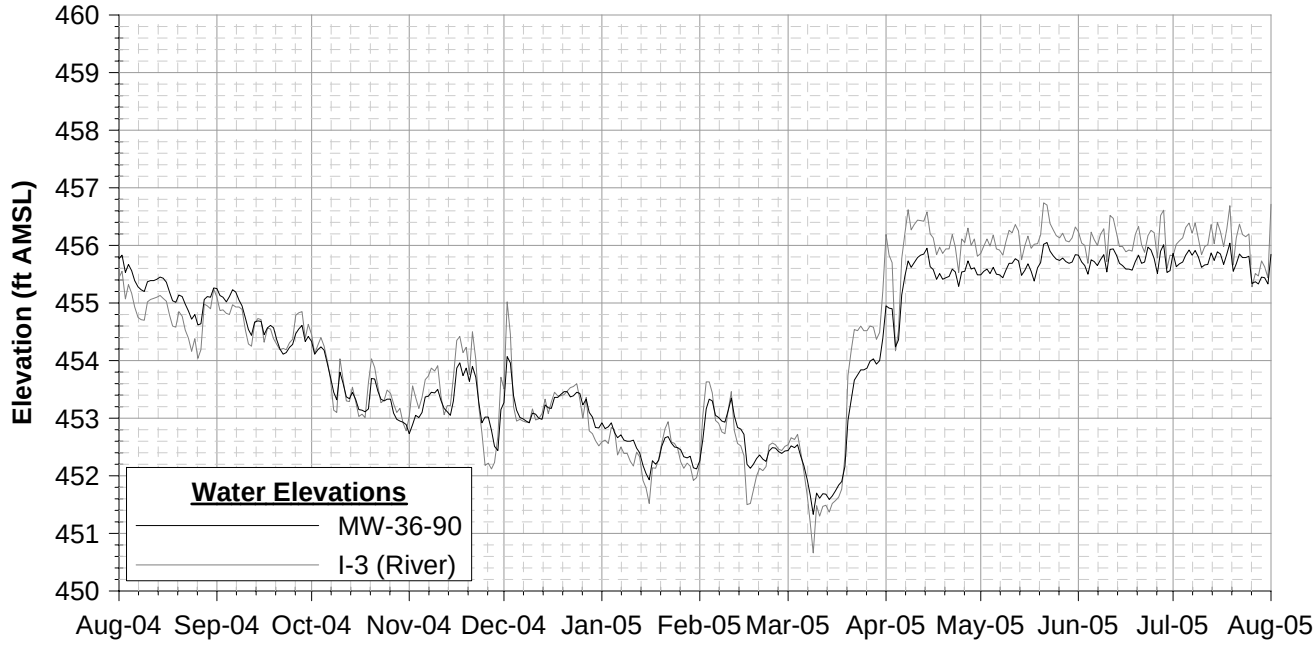

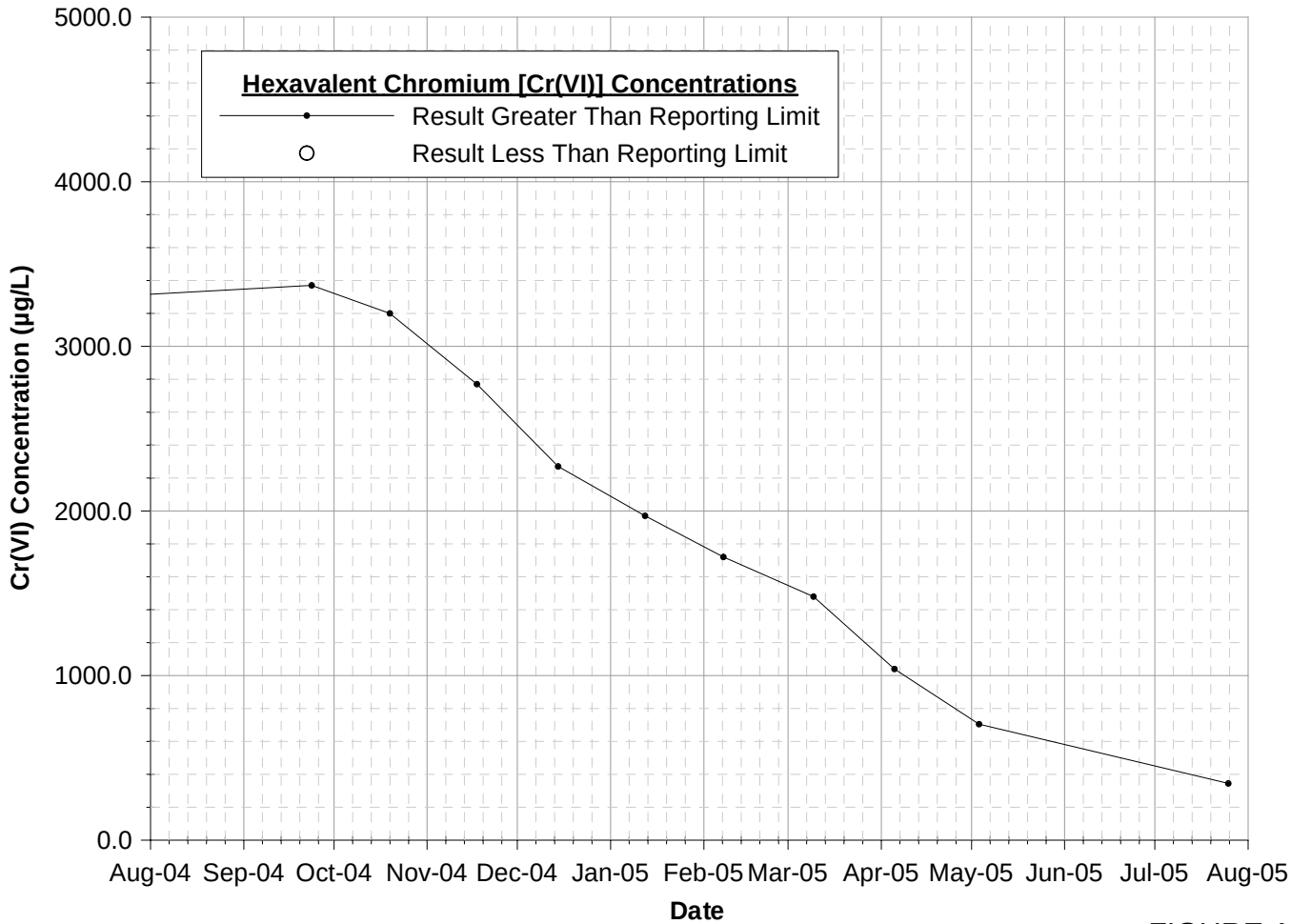

FIGURE A-5
MW-36-90 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 07/25/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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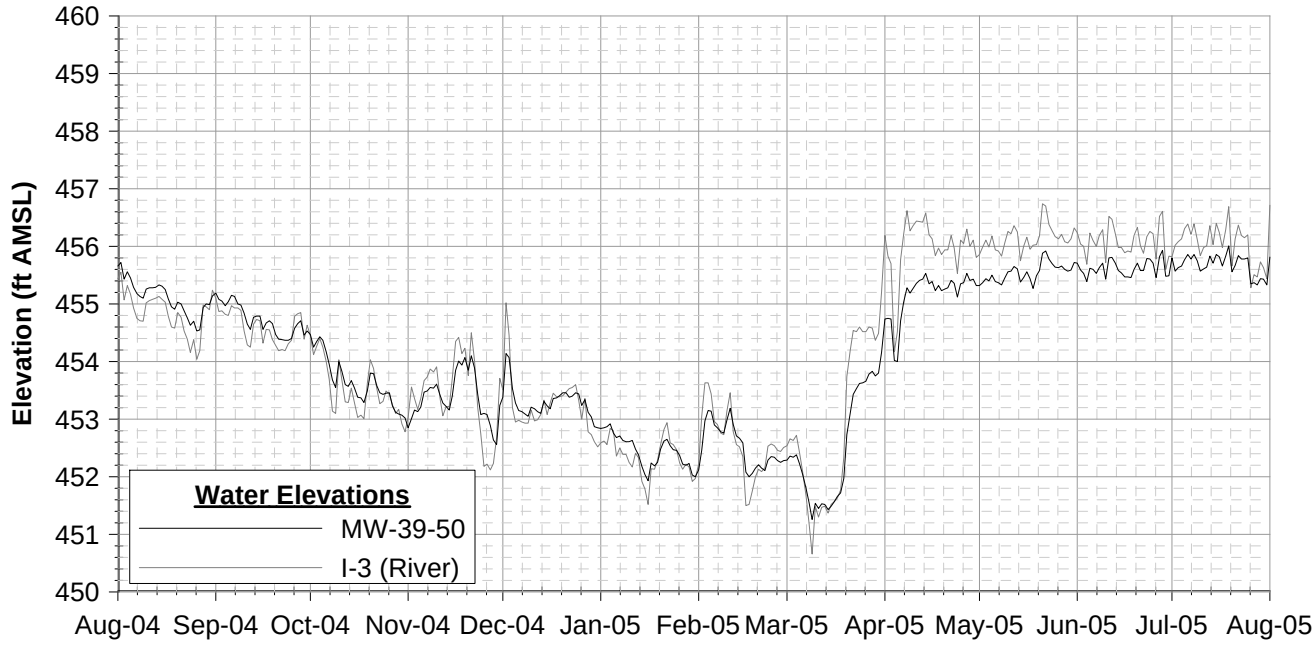

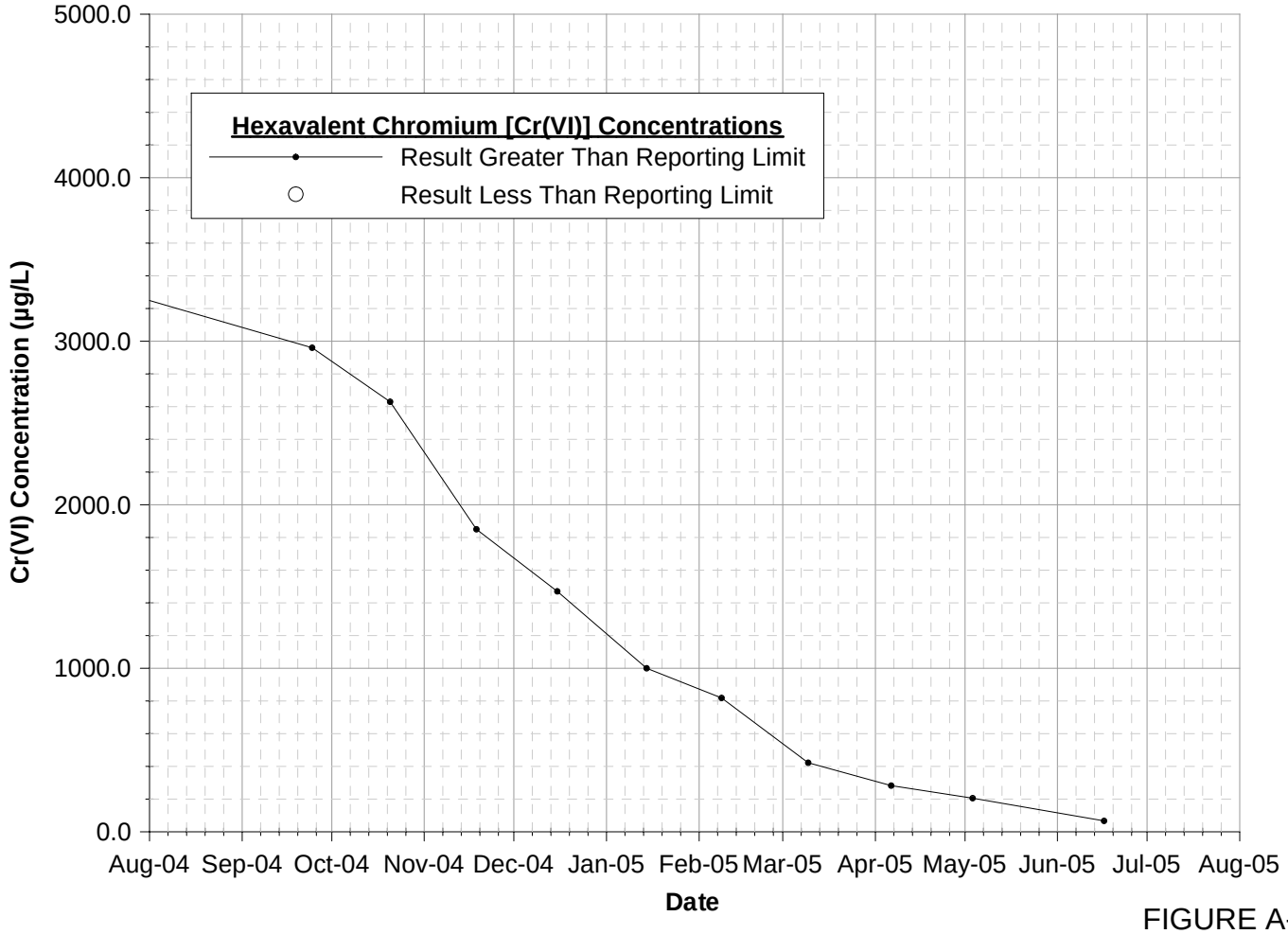

FIGURE A-6
MW-39-50 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 06/16/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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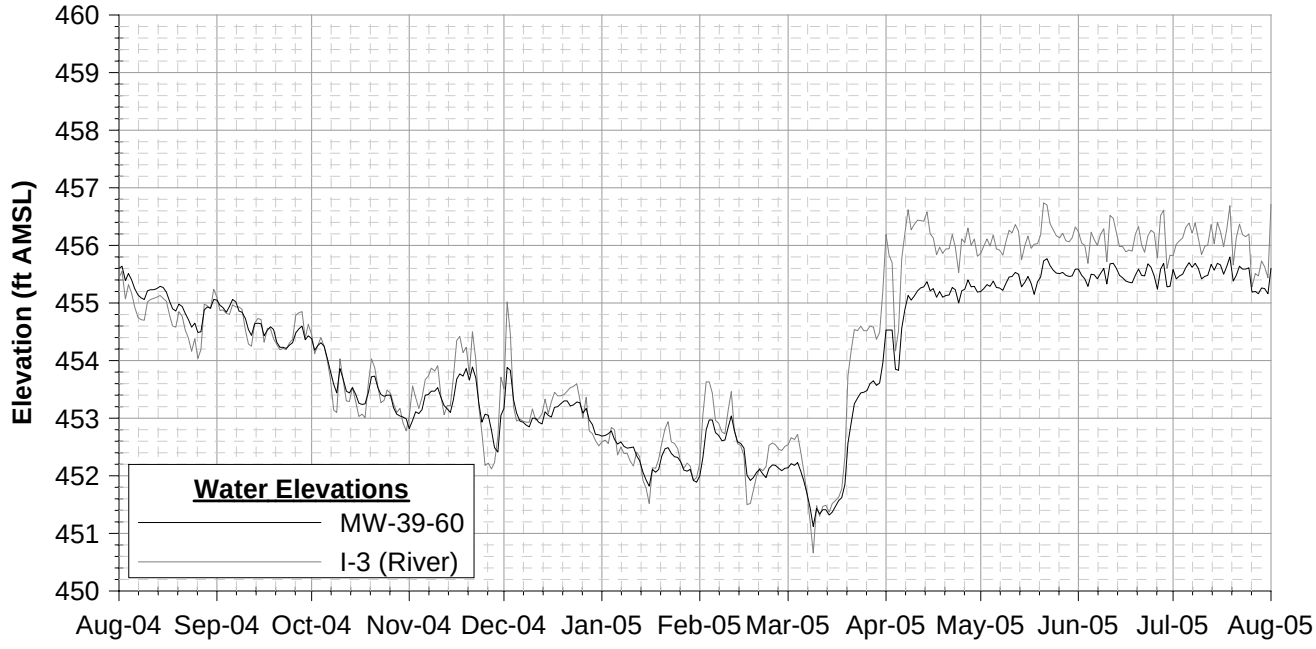

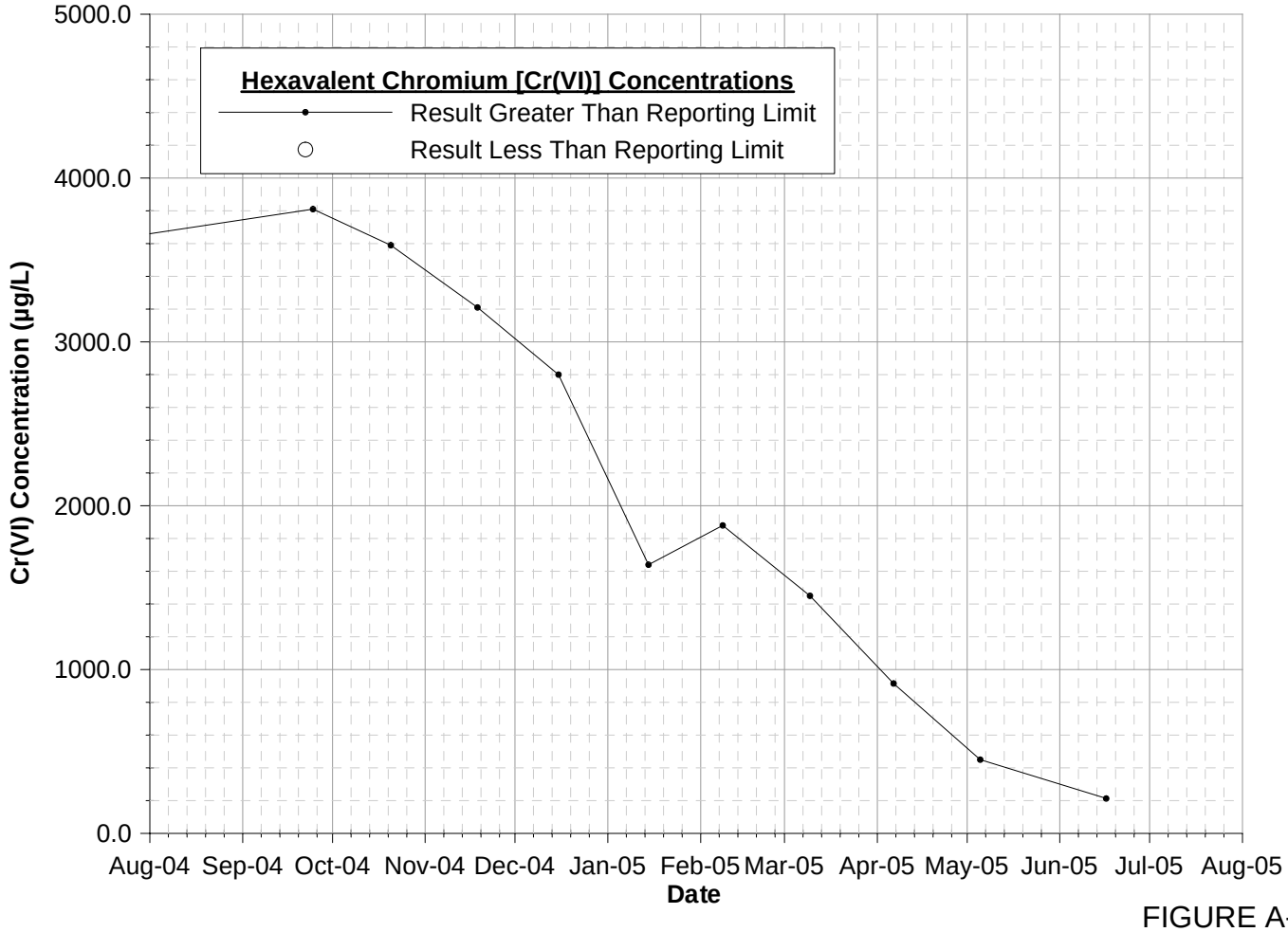

FIGURE A-7
MW-39-60 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 06/15/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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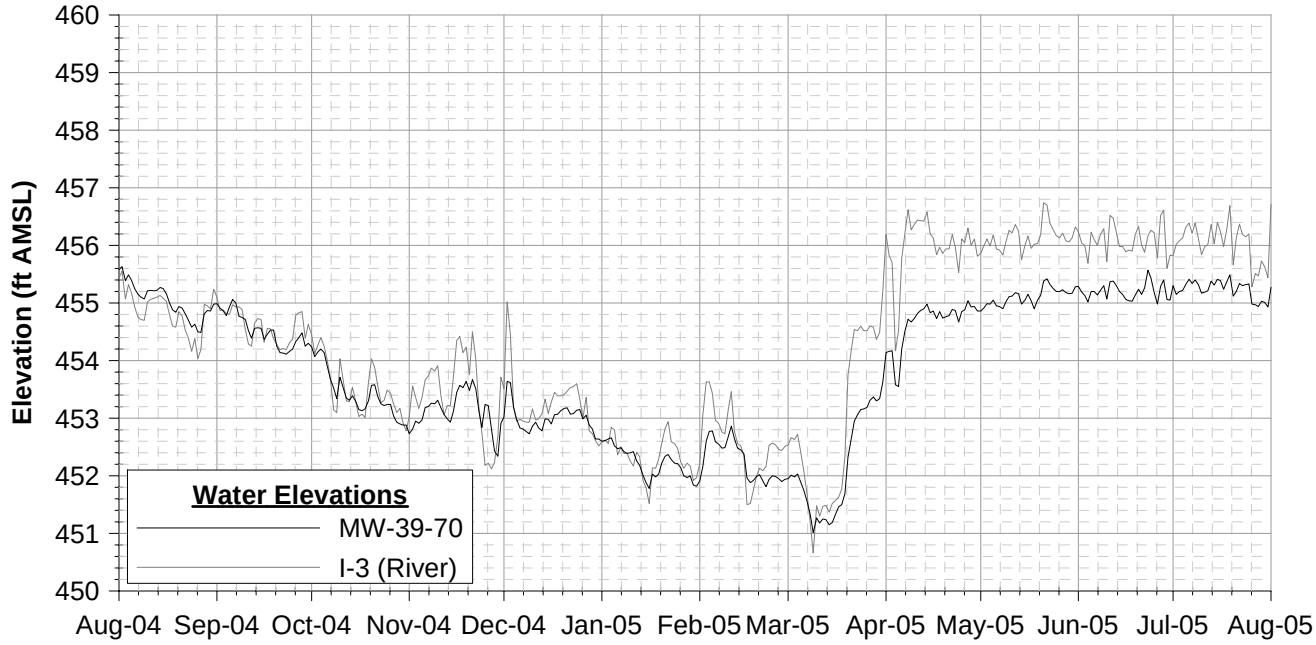

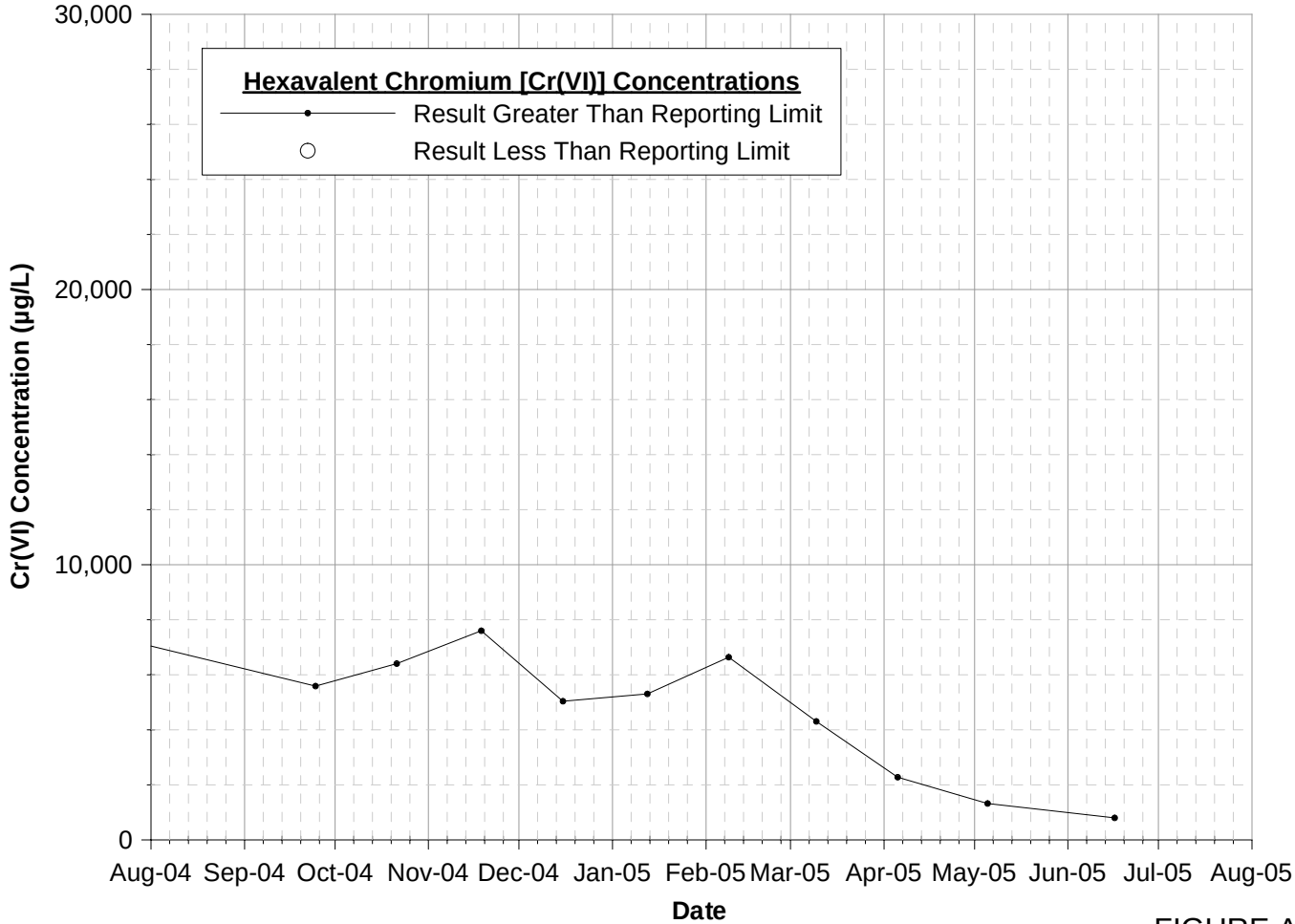

FIGURE A-8
MW-39-70 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 06/15/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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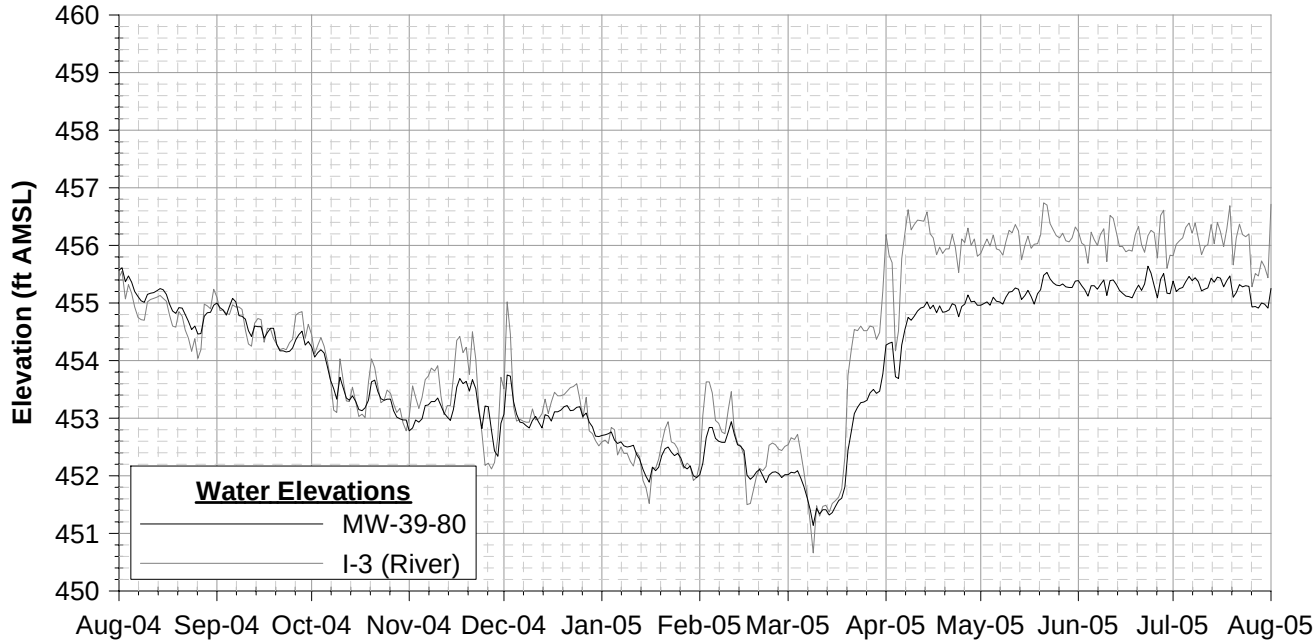

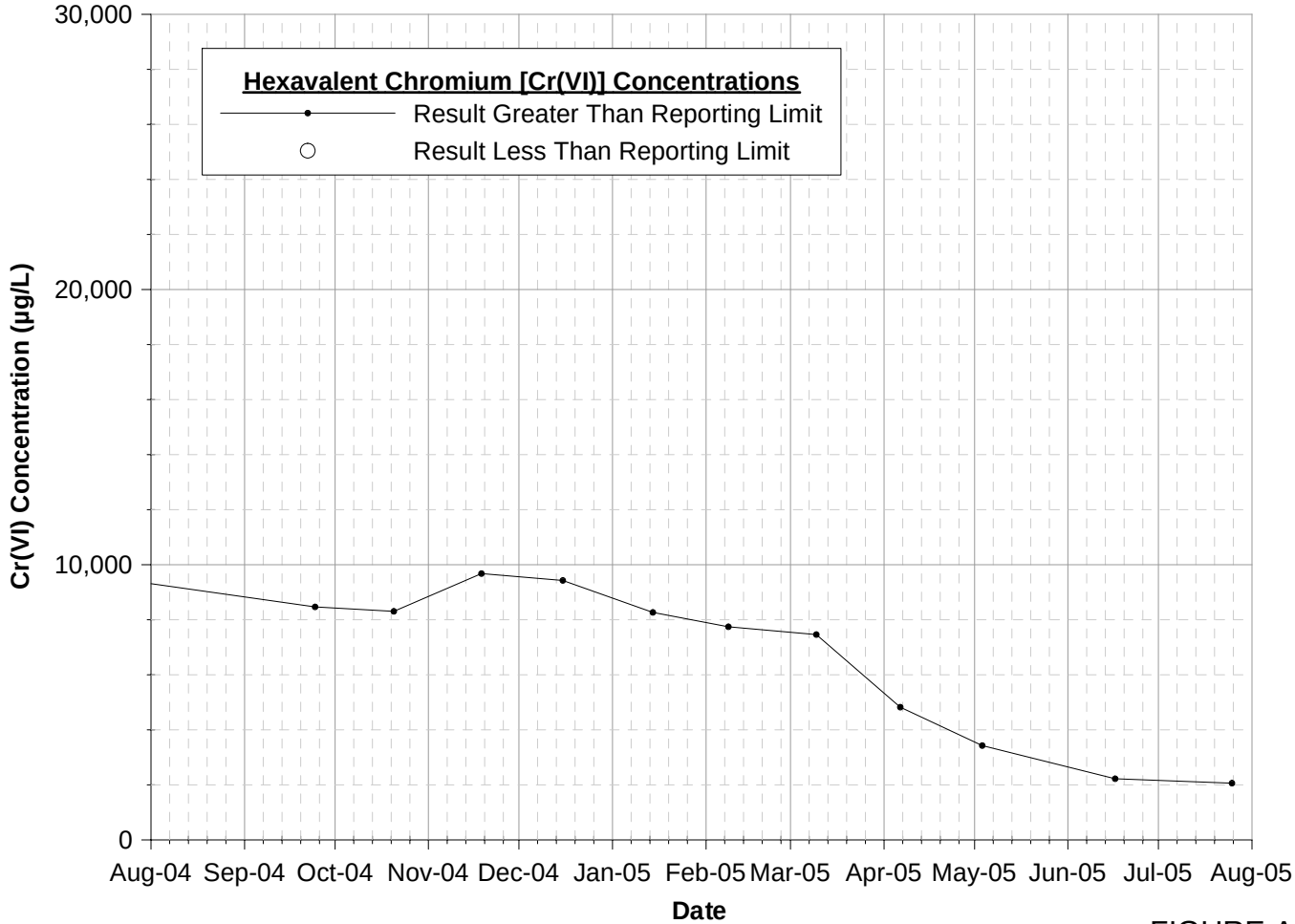

FIGURE A-9
MW-39-80 CR(VI) CONCENTRATION &
HYDROGRAPH - THROUGH 07/25/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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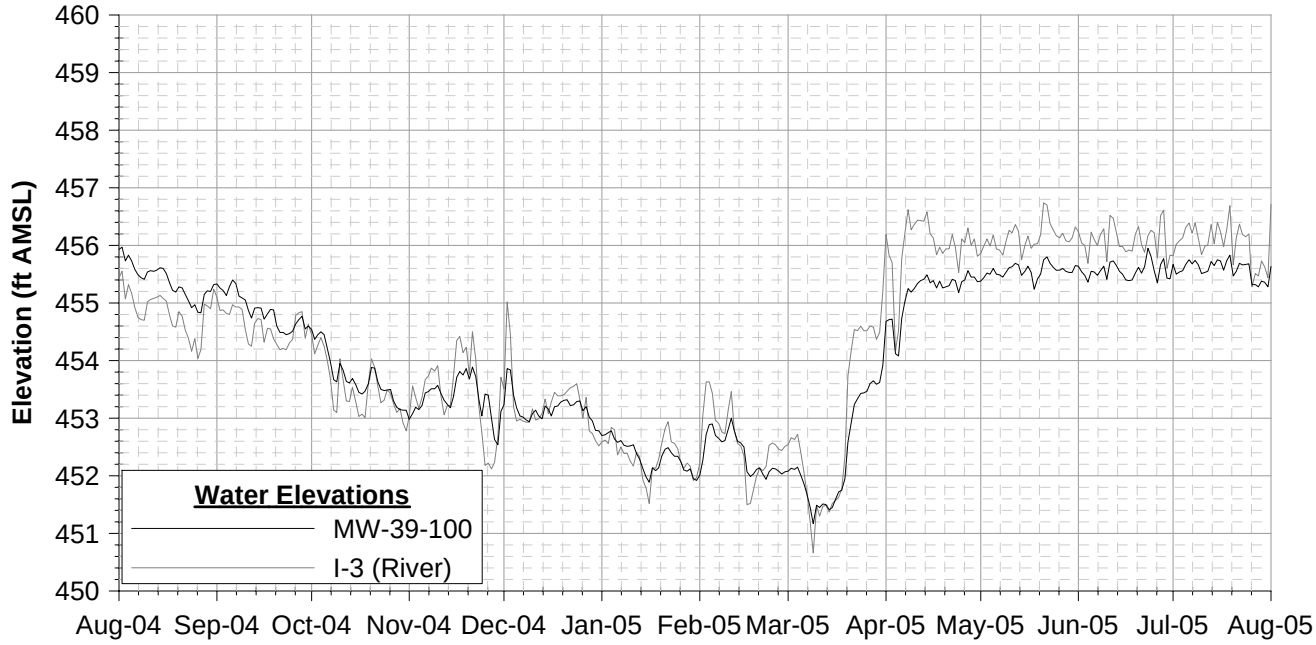

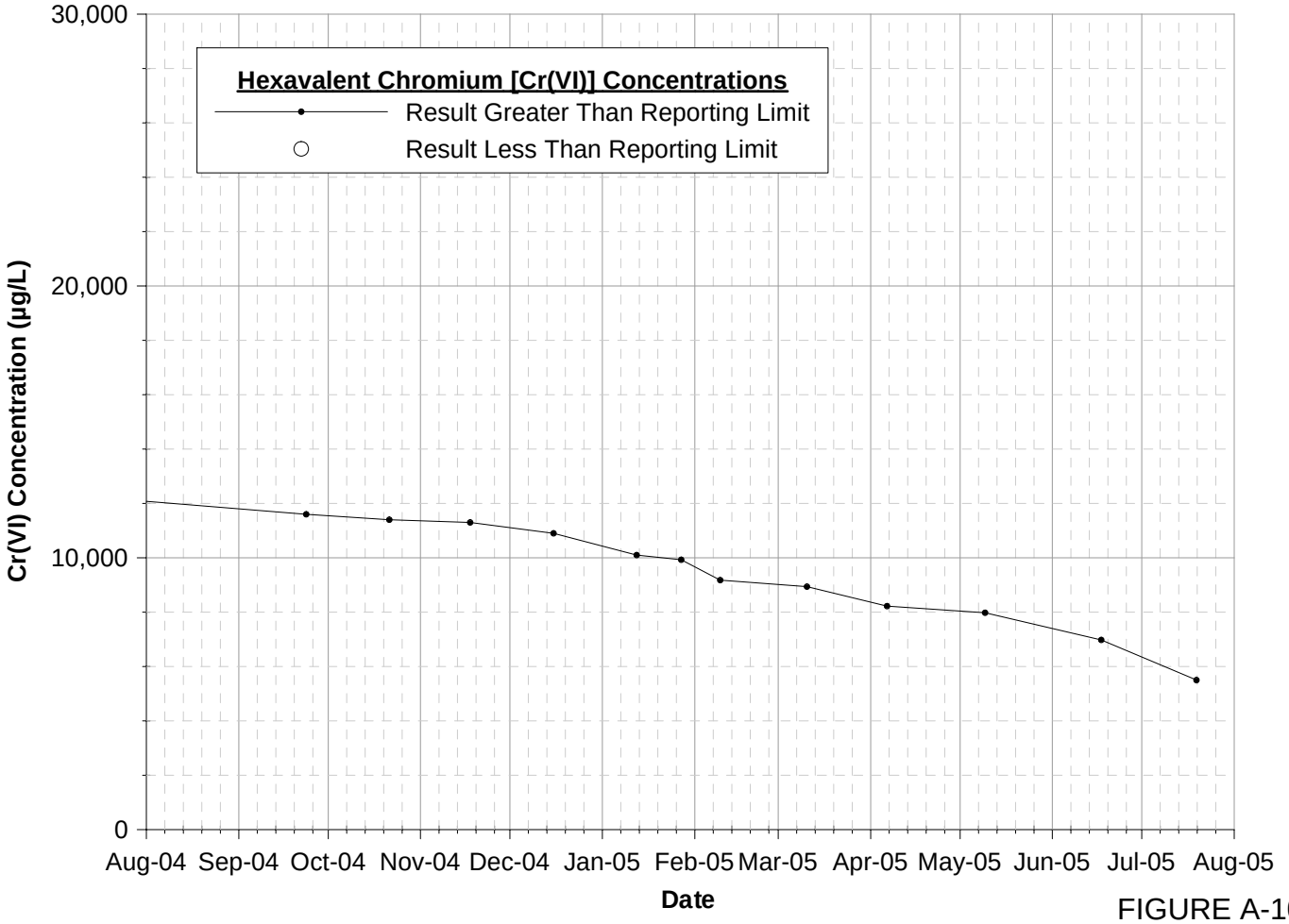

FIGURE A-10
MW-39-100 CR(VI) CONCENTRATION & HYDROGRAPH - THROUGH 07/19/05
INTERIM MEASURES PERFORMANCE MONITORING
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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

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Appendix B
Hydrographs and Hydraulic Gradient Maps for Reporting Period

TABLE B-1
Monthly Average, Minimum and Maximum Groundwater Elevations, July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well	Average (ft AMSL)	Minimum (ft AMSL)	Maximum (ft AMSL)	Aquifer Depth
I-3	456.04	454.51	457.39	River Station
RRB	456.62	455.14	457.70	River Station
MW-10	456.07	456.01	456.14	Upper
MW-19	455.85	455.73	455.93	Upper
MW-20-070	455.12	454.98	455.24	Upper
MW-20-100	454.73	454.51	455.00	Upper
MW-20-130	454.51	454.21	454.80	Upper
MW-22	455.25	455.15	455.35	Upper
MW-25	455.85	455.81	455.89	Upper
MW-26	455.54	455.49	455.61	Upper
MW-27-020	455.99	455.56	456.40	Upper
MW-27-060	456.18	455.31	456.96	Upper
MW-27-085	456.20	455.33	456.97	Upper
MW-28-025	456.16	455.53	456.73	Upper
MW-28-090	456.11	455.07	457.02	Upper
MW-29	456.15	456.09	456.19	Upper
MW-30-030	455.97	455.73	456.18	Upper
MW-30-050	455.74	455.01	456.39	Upper
MW-31-060	455.67	455.48	455.83	Upper
MW-31-135	455.30	454.98	455.63	Upper
MW-32-020	455.71	455.51	455.88	Upper
MW-32-035	455.72	455.25	456.14	Upper
MW-33-040	455.97	455.52	456.38	Middle
MW-33-090	456.05	455.50	456.55	Middle
MW-33-150	INC	INC	INC	Middle
MW-33-210	456.28	455.83	456.70	Middle
MW-34-055	456.20	455.14	457.13	Middle
MW-34-080	456.33	455.32	457.20	Middle
MW-34-100	456.36	455.41	457.19	Middle
MW-35-060	456.17	455.74	456.59	Middle
MW-35-135	455.74	455.48	455.99	Middle
MW-36-020	455.87	455.23	456.42	Middle
MW-36-040	455.87	455.07	456.58	Middle
MW-36-050	455.88	455.04	456.62	Middle
MW-36-070	455.98	455.12	456.73	Lower
MW-36-090	455.71	454.99	456.34	Lower
MW-36-100	455.84	455.12	456.47	Lower
MW-39-040	455.68	454.98	456.29	Lower
MW-39-050	455.68	455.01	456.27	Lower
MW-39-060	455.51	454.89	456.06	Lower
MW-39-070	455.24	454.73	455.72	Lower
MW-39-080	455.26	454.73	455.74	Lower
MW-39-100	455.59	455.04	456.08	Lower
MW-42-030	455.71	455.18	456.19	Lower
MW-42-055	455.87	455.30	456.38	Lower
MW-42-065	455.94	455.36	456.47	Lower
MW-43-025	456.12	455.27	456.92	Lower
MW-43-075	456.34	455.42	457.20	Lower
MW-43-090	456.44	455.52	457.31	Lower
PE-01	455.88	455.04	456.63	Lower

Notes:

INC = Incomplete or not available for reporting period

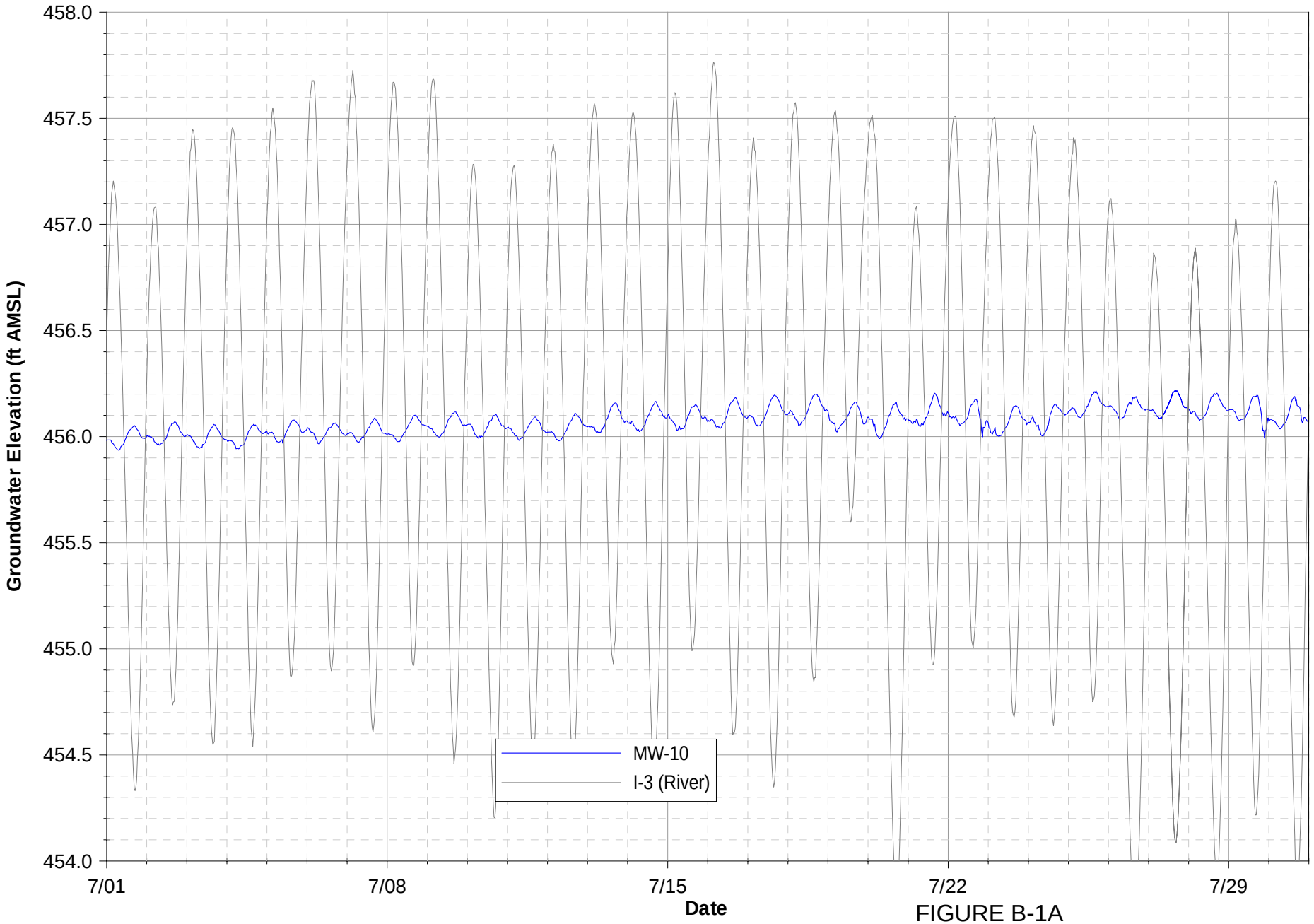


FIGURE B-1A
MW-10 HYDROGRAPH
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

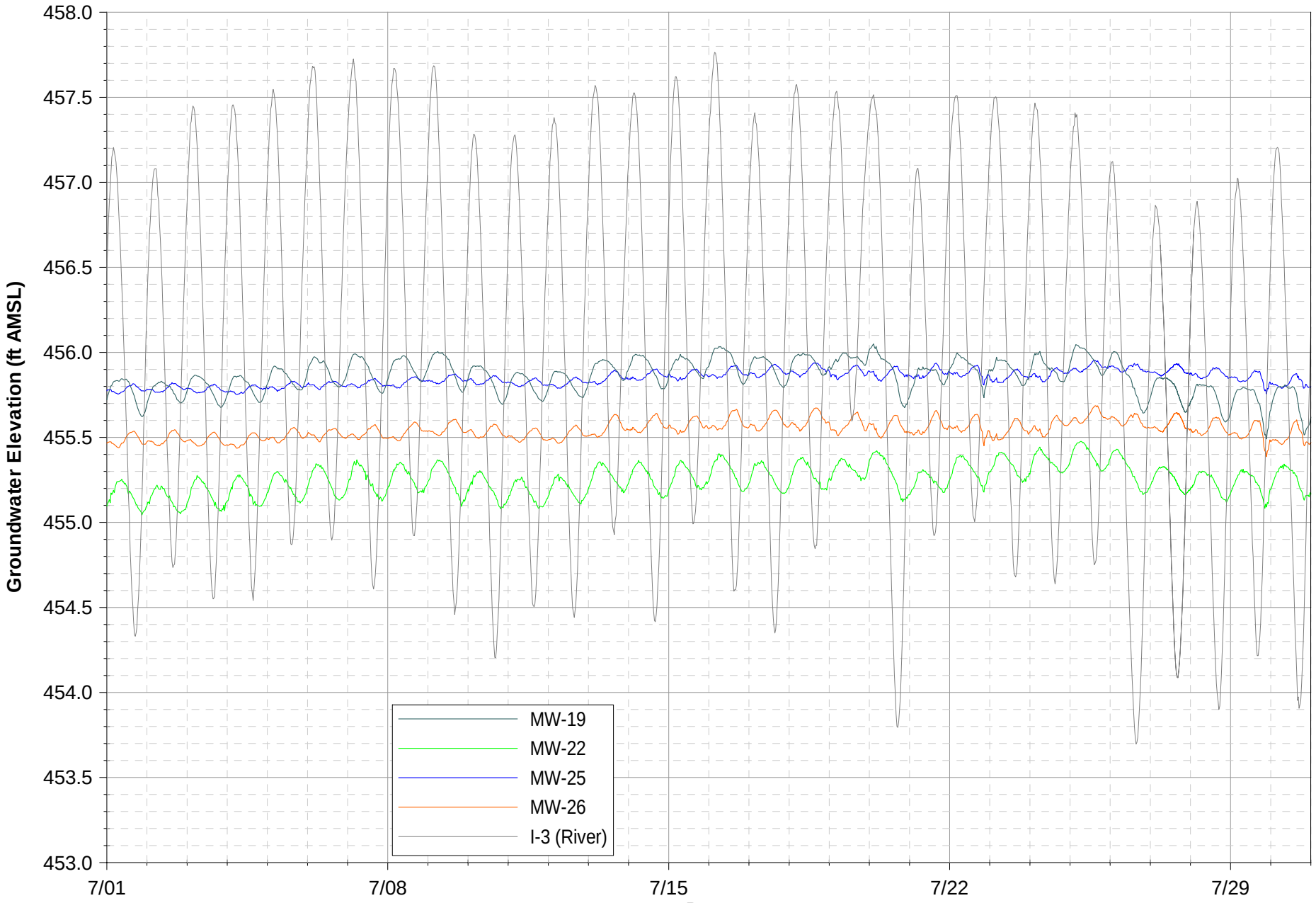


FIGURE B-1B

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

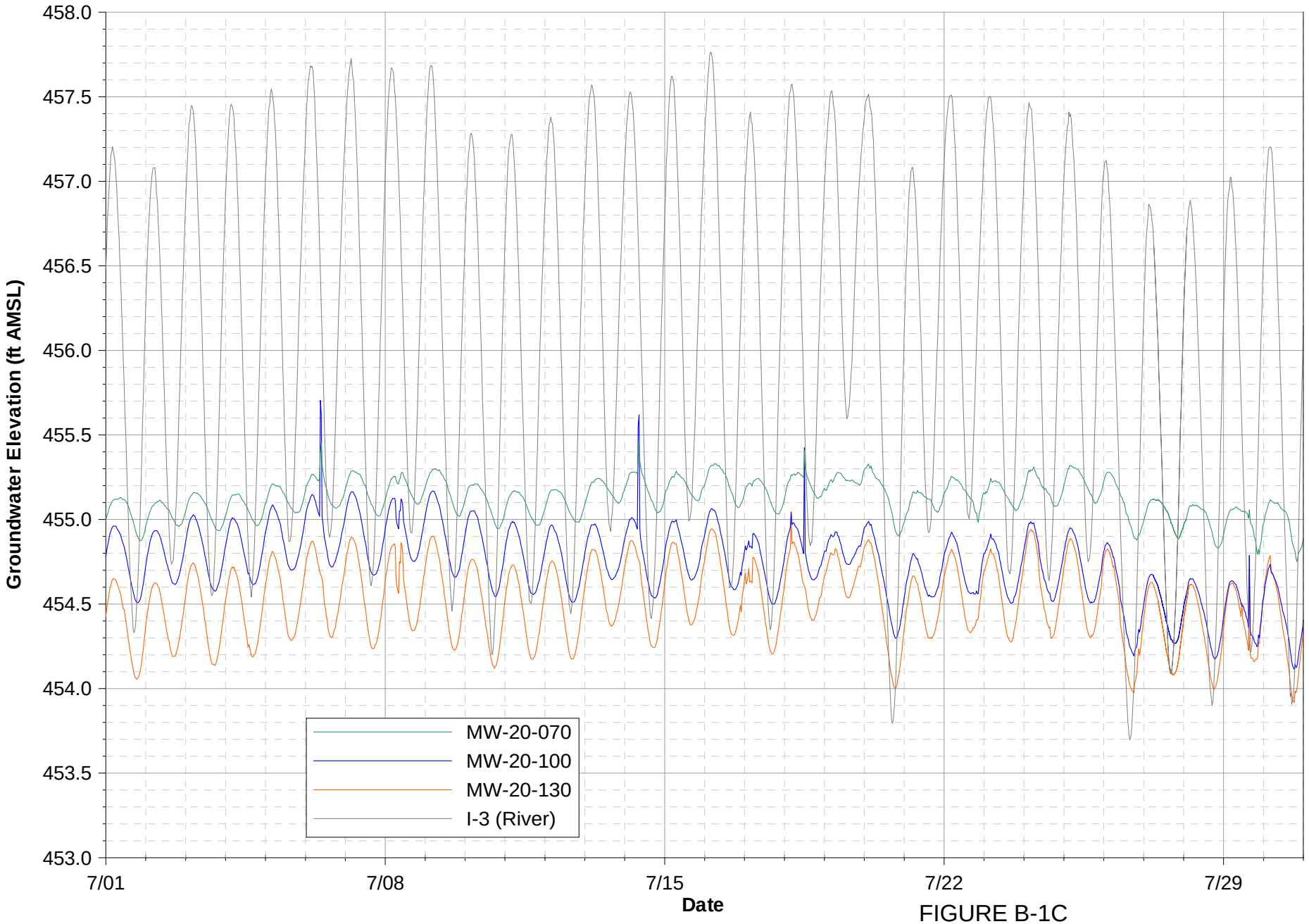
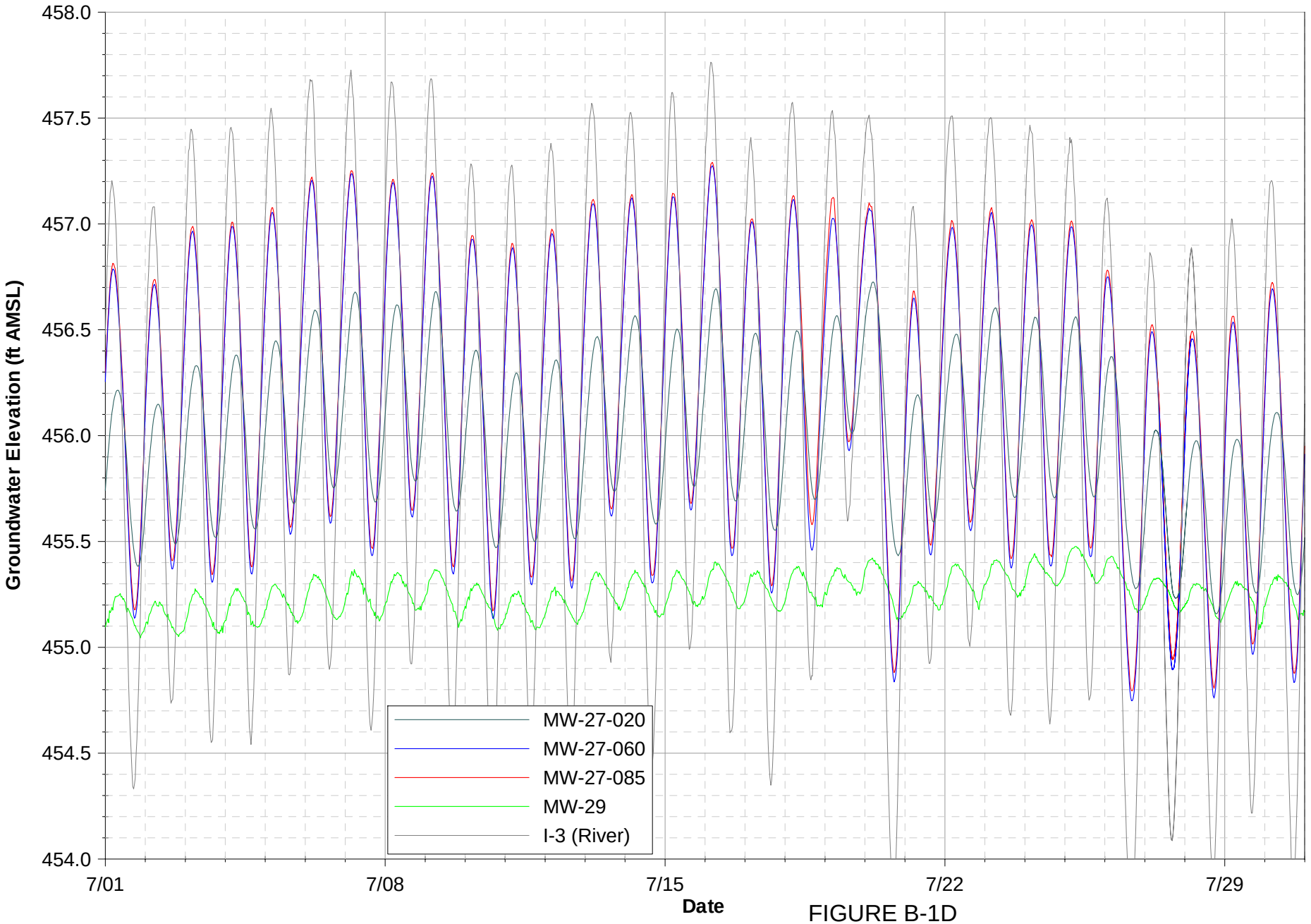


FIGURE B-1C
MW-20 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL



Note: Data subject to review.

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

CH2MHILL

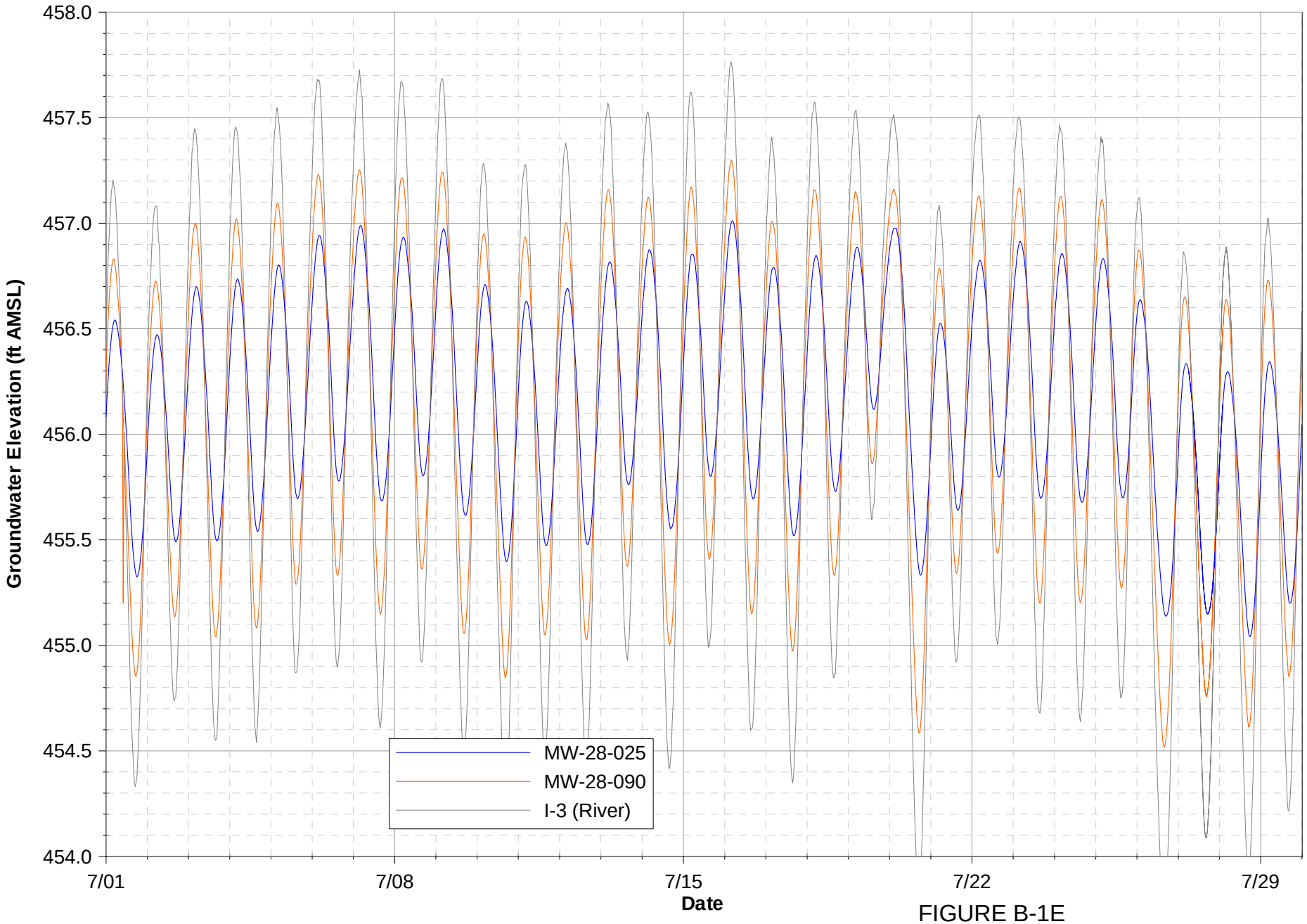


FIGURE B-1E
MW-28 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

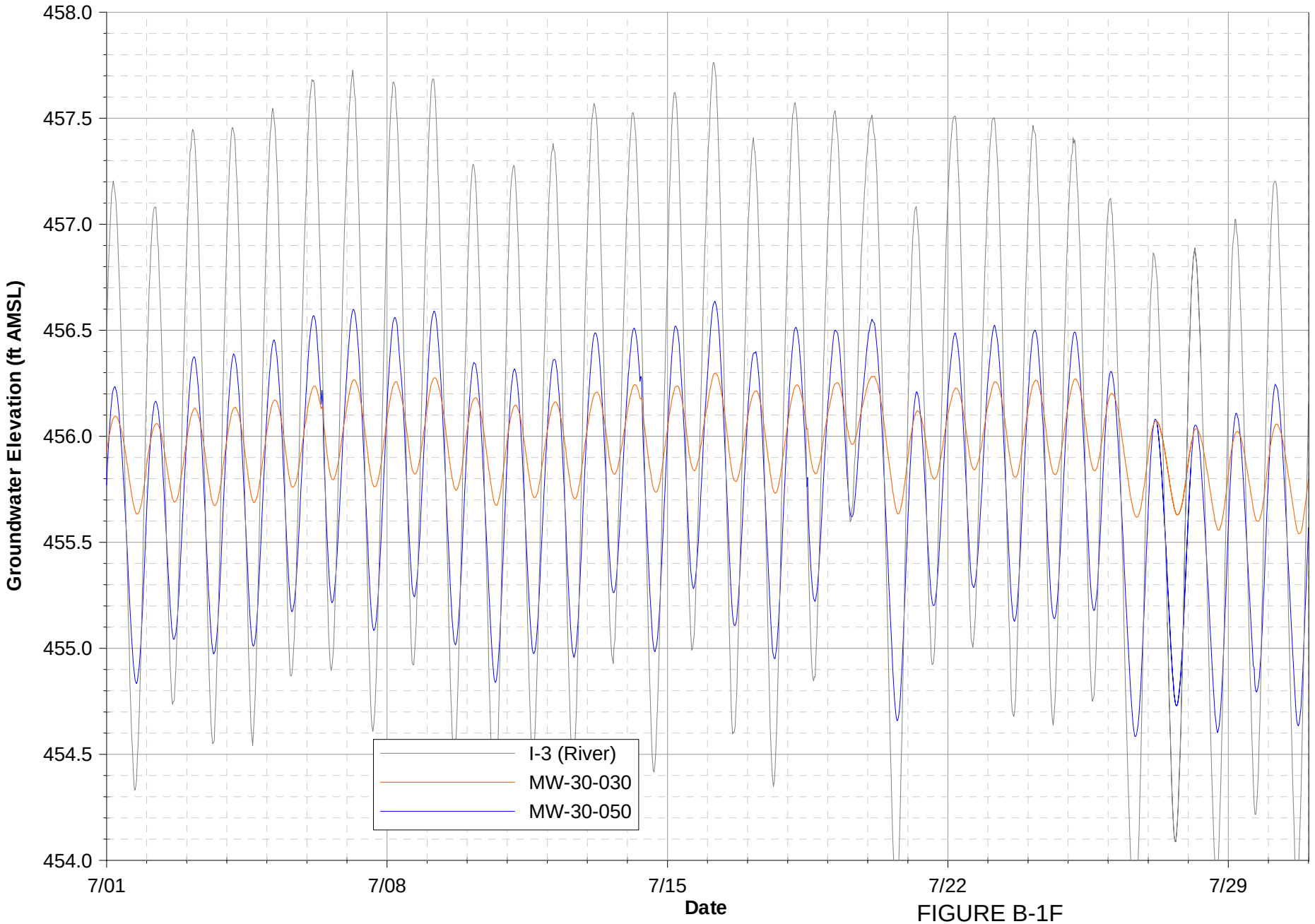


FIGURE B-1F
MW-30 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

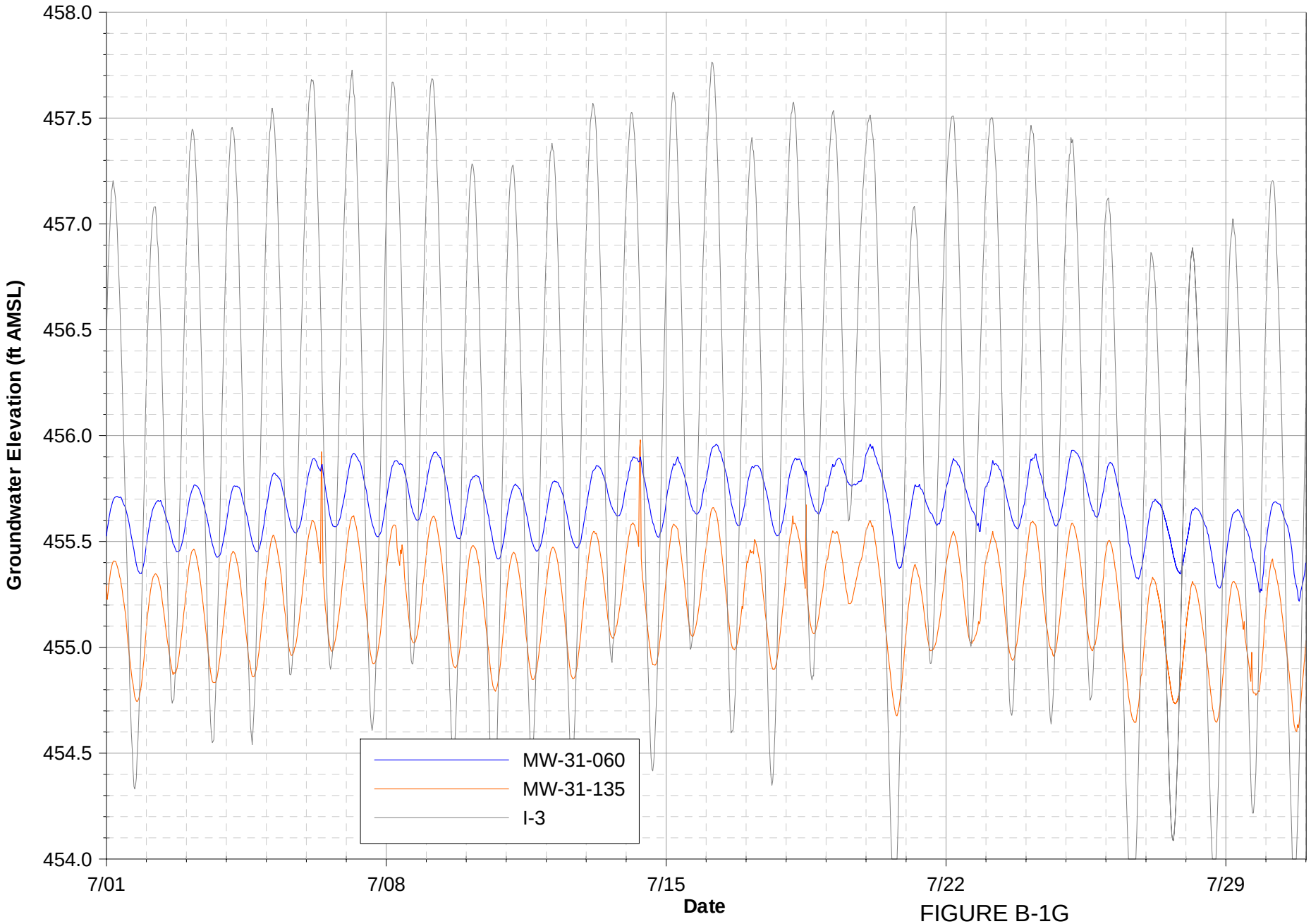


FIGURE B-1G
MW-31 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

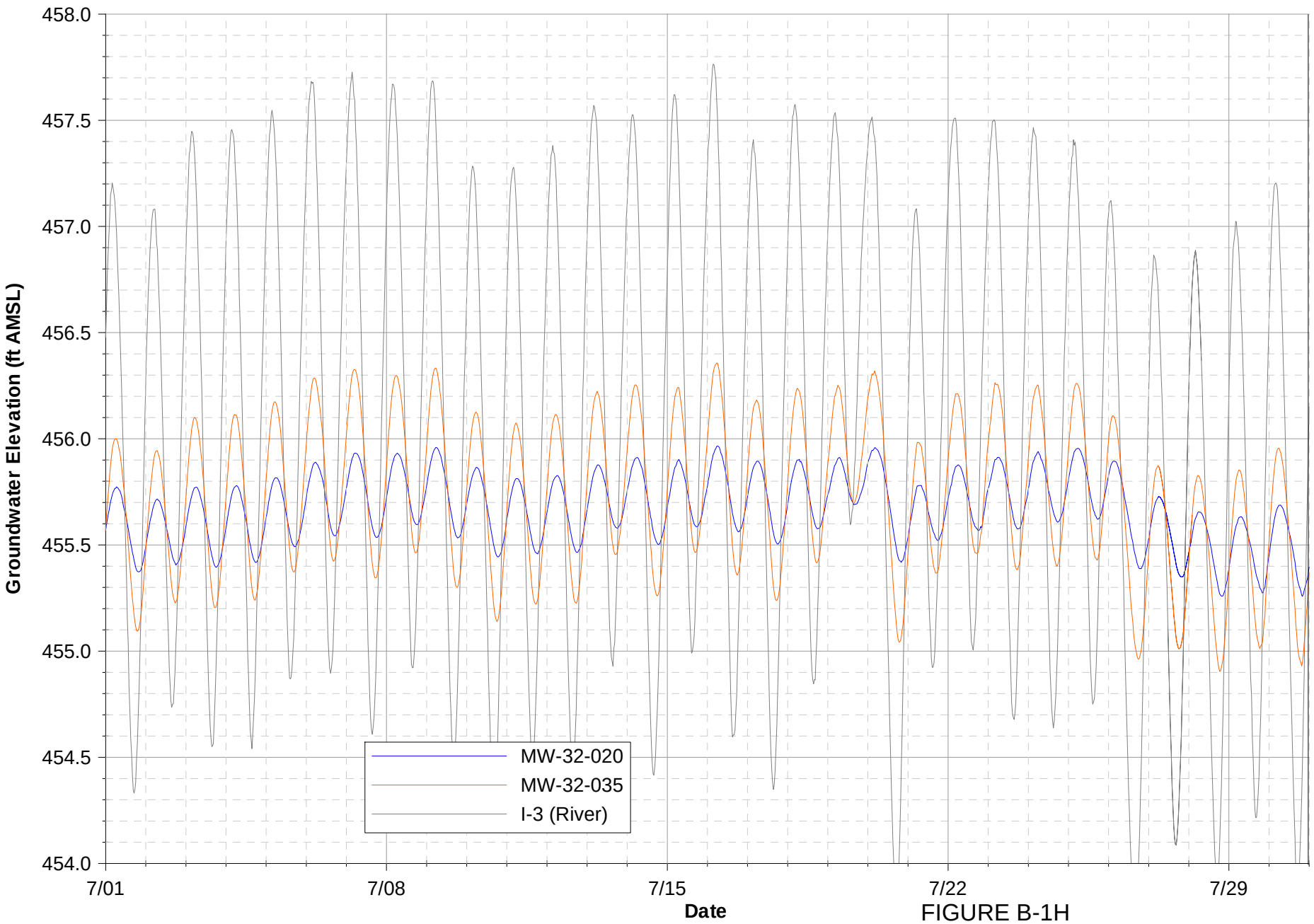


FIGURE B-1H
MW-32 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

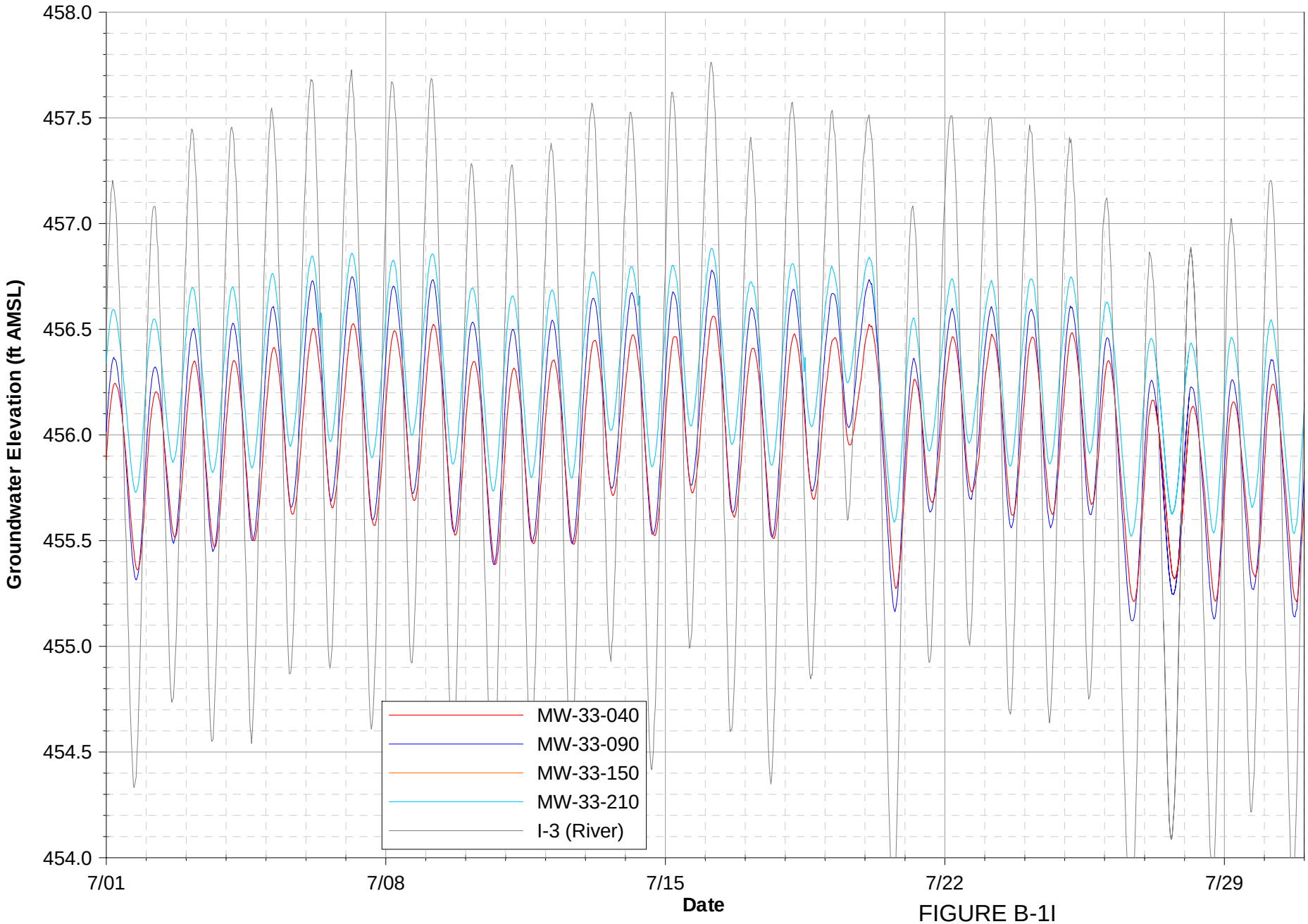


FIGURE B-1I
MW-33 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.
MW-33-150 transducers failed twice during July, no data is available.

CH2MHILL

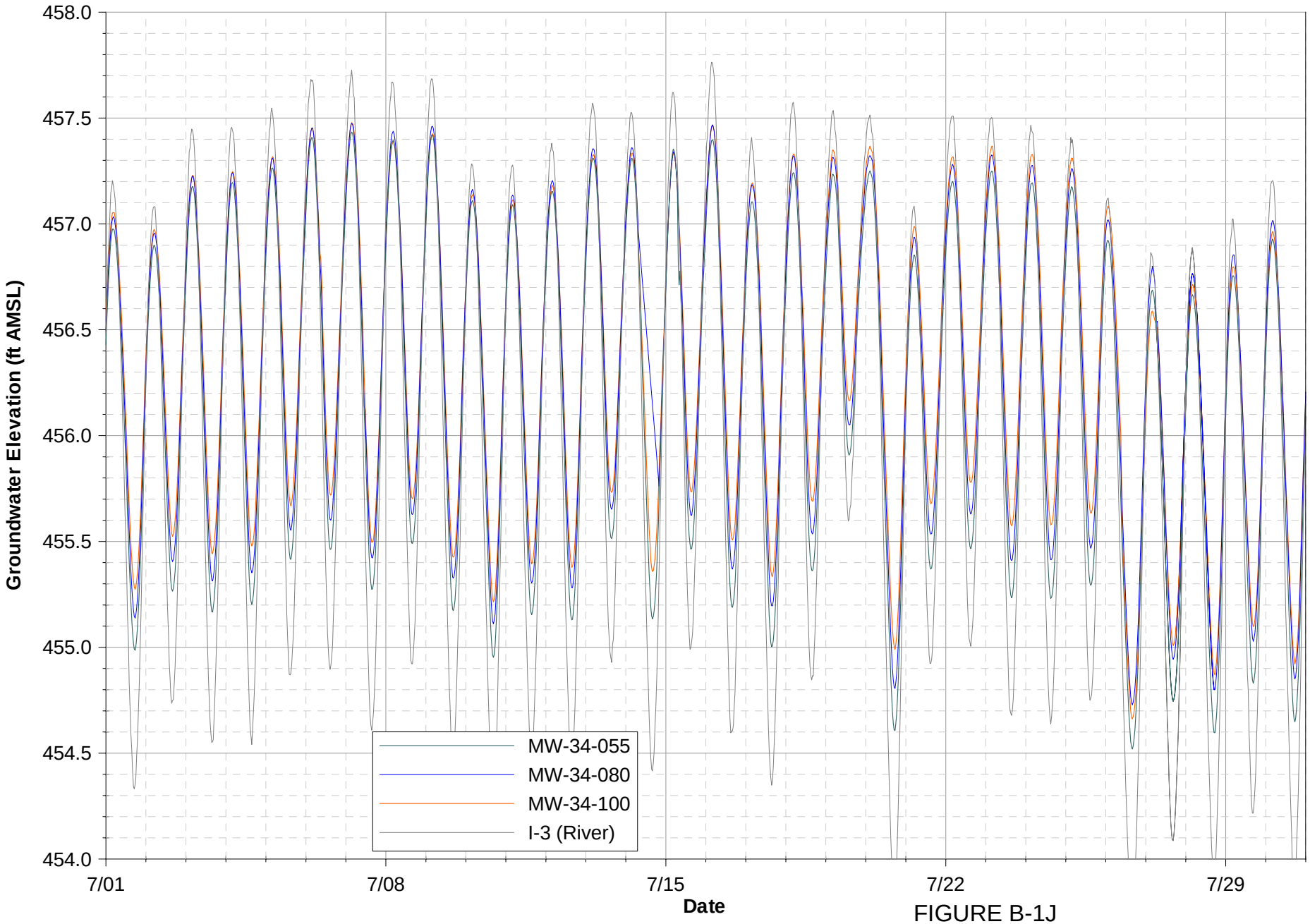


FIGURE B-1J
MW-34 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

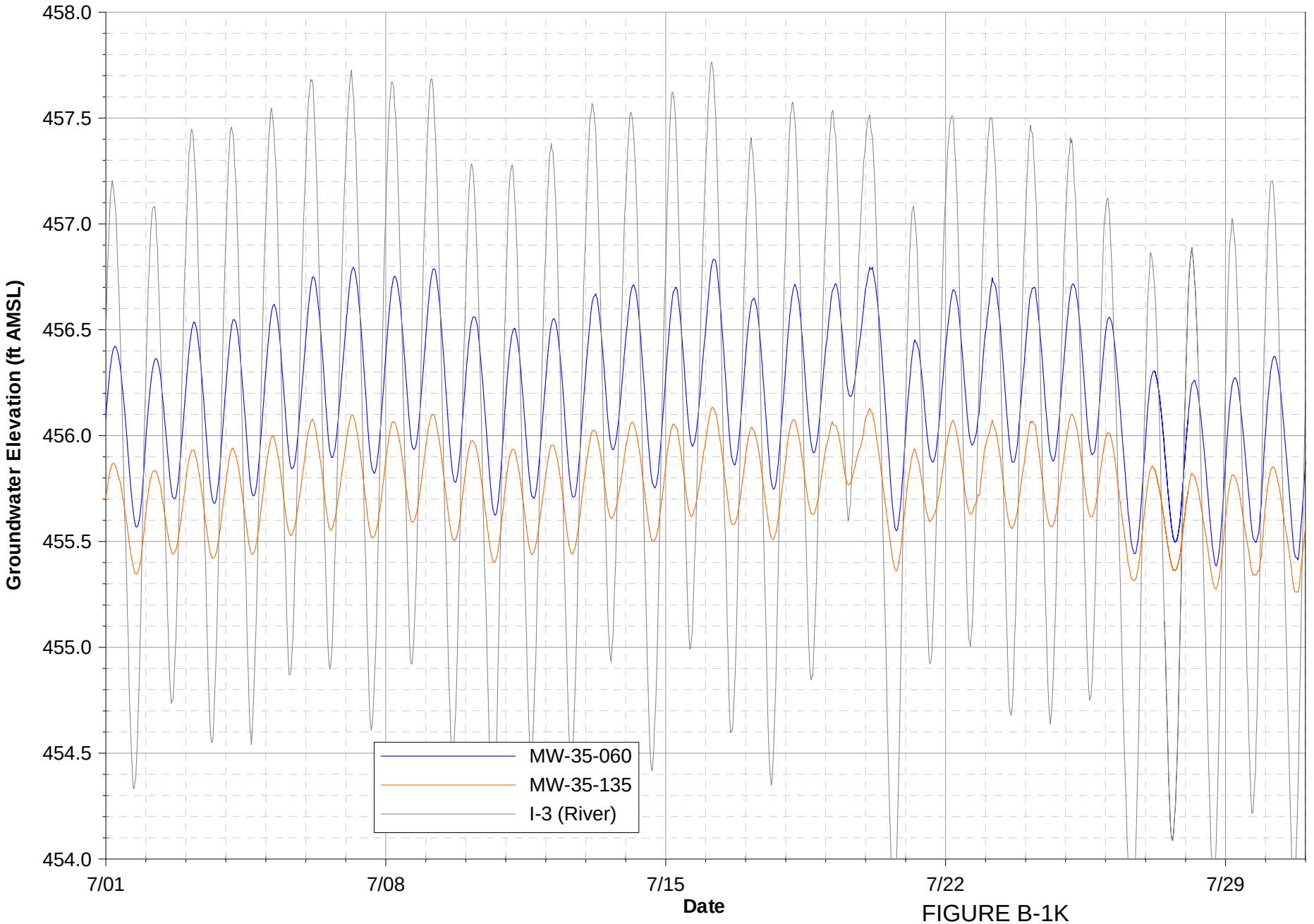


FIGURE B-1K
MW-35 WELL HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

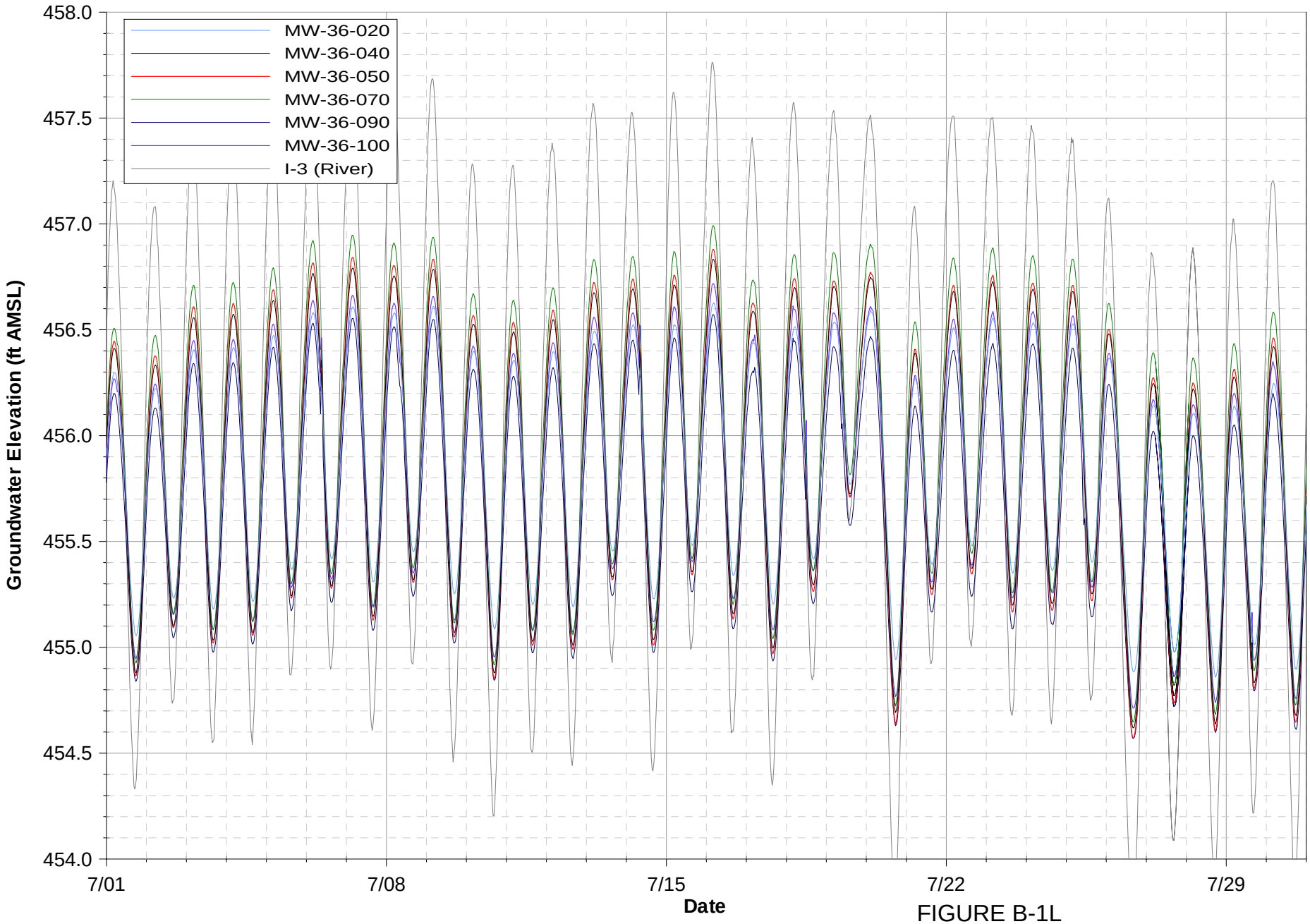


FIGURE B-1L
MW-36 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

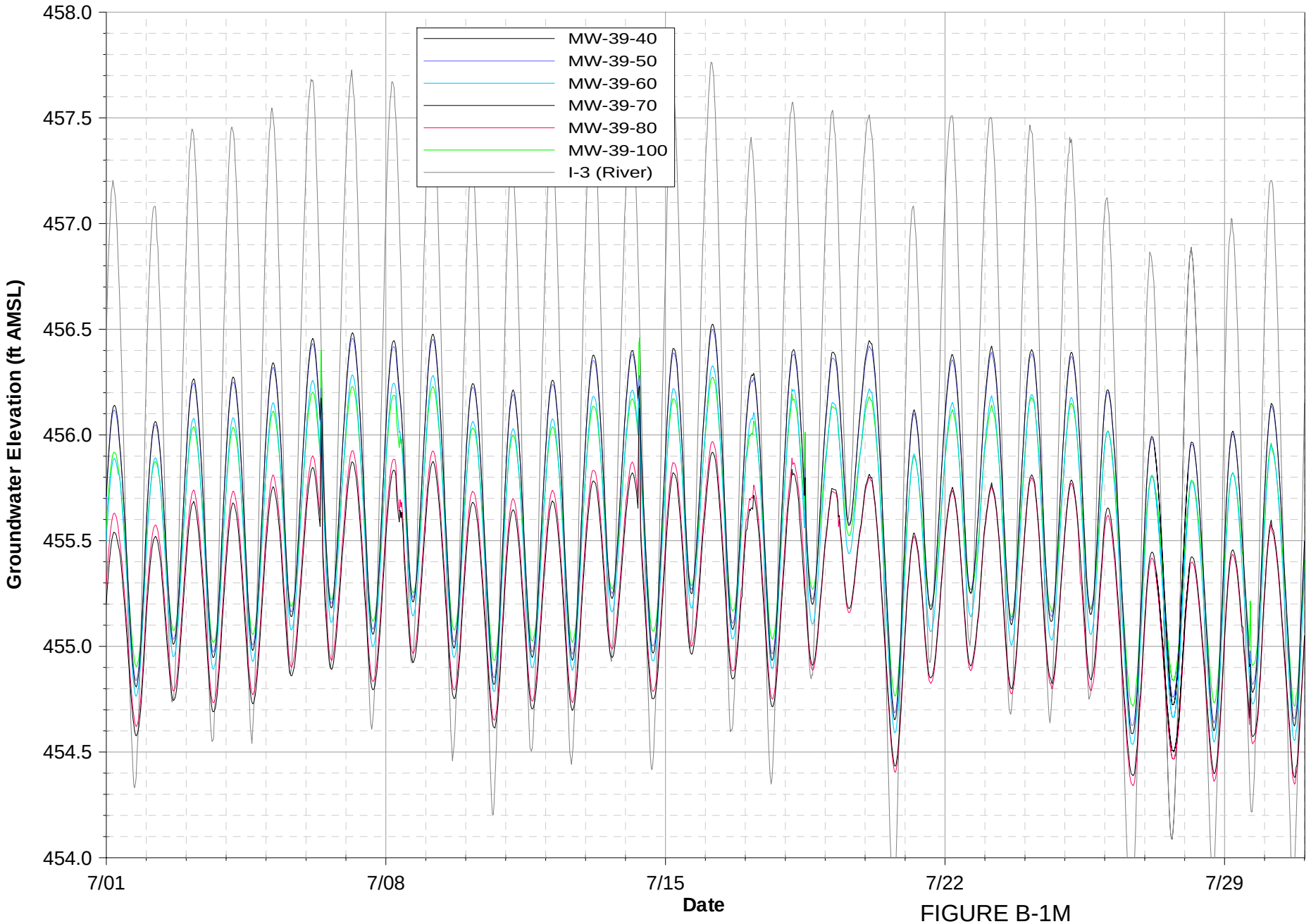
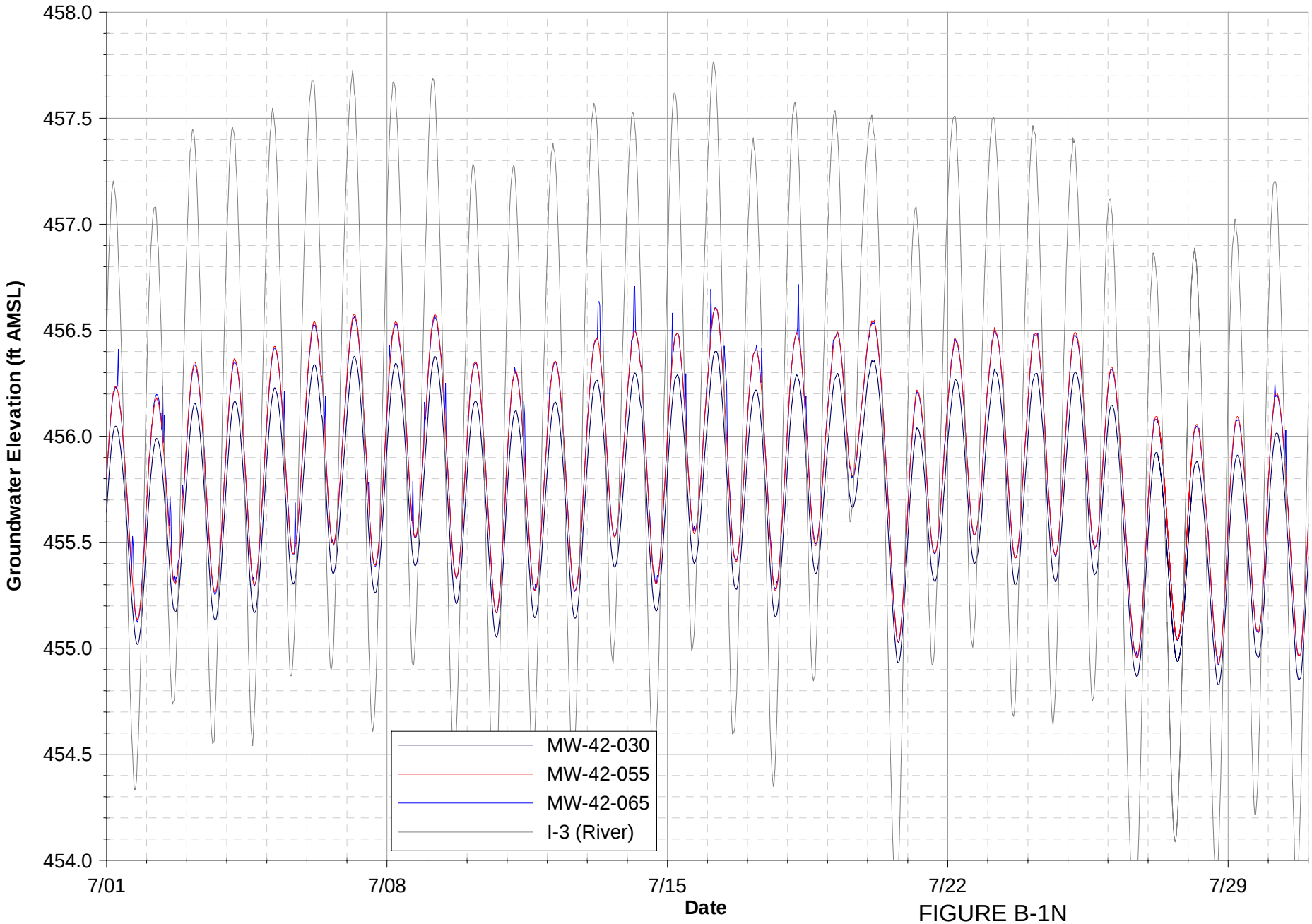


FIGURE B-1M
MW-39 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL



Note: Data subject to review.

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

CH2MHILL

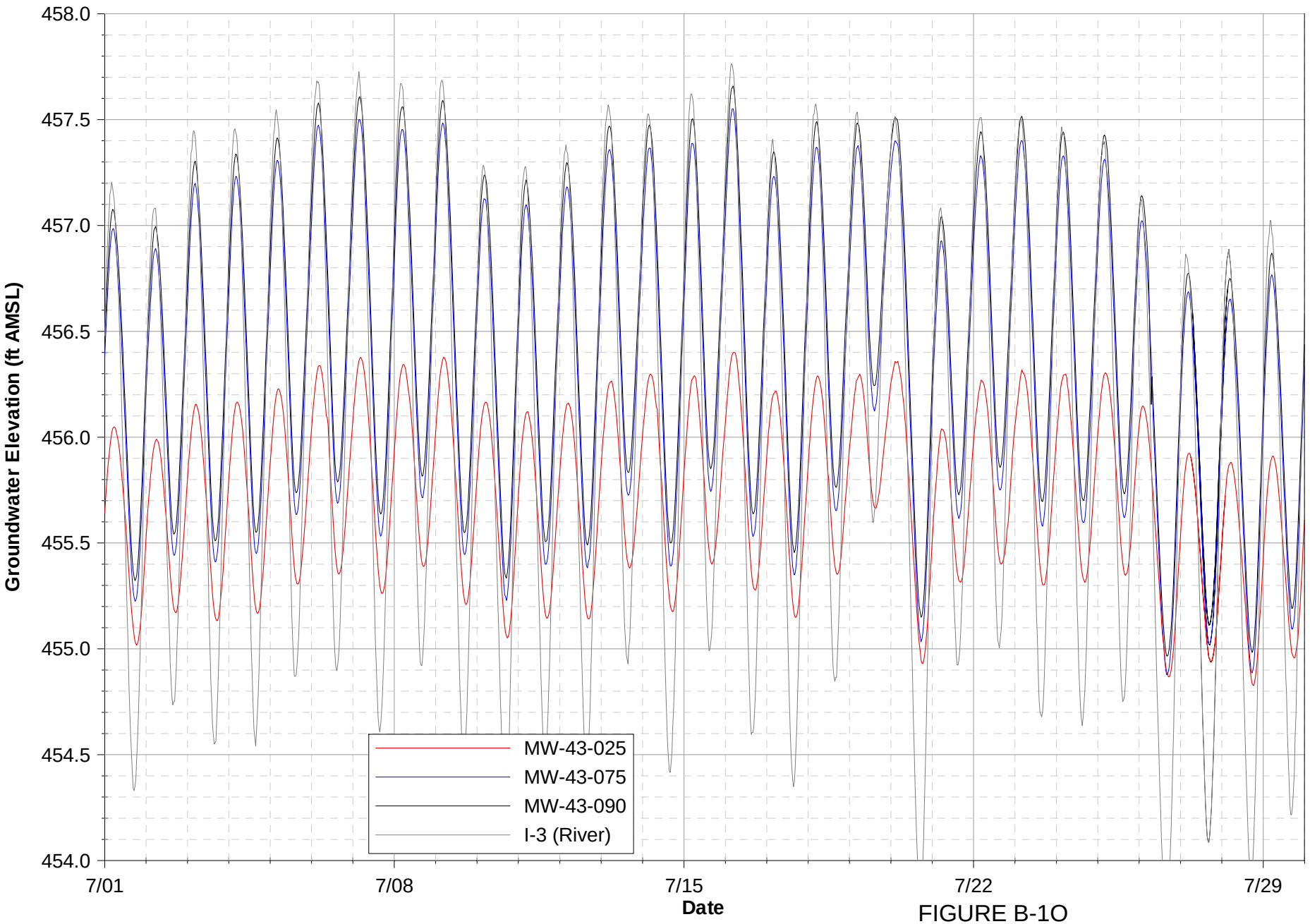


FIGURE B-1O
MW-43 CLUSTER HYDROGRAPHS
INTERIM MEASURES PERFORMANCE MONITORING
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.

CH2MHILL

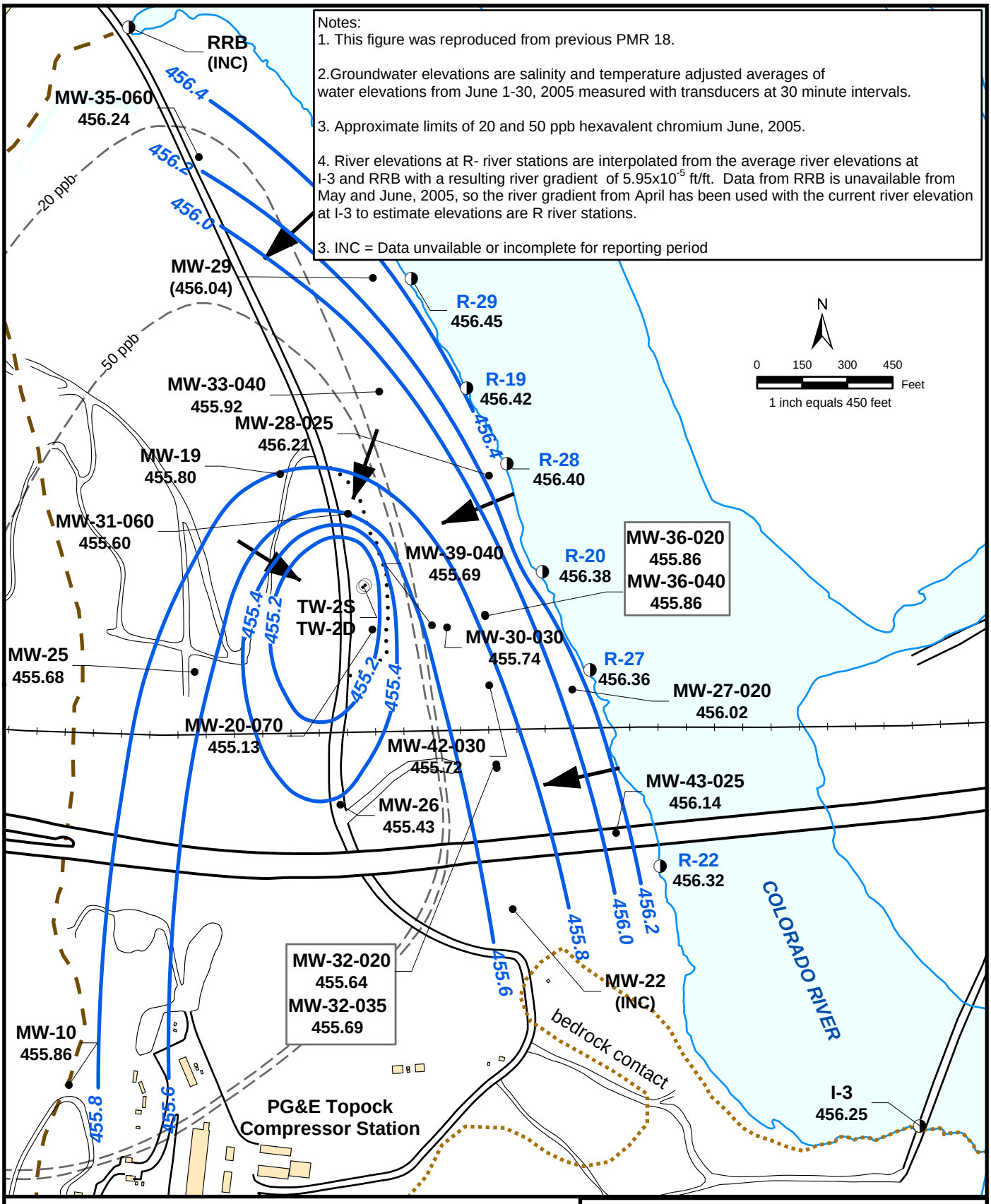


FIGURE B-2A
AVERAGE GROUNDWATER SHALLOW WELLS AND RIVER ELEVATIONS, JUNE 2005

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_UA_June1_30_05.MXD

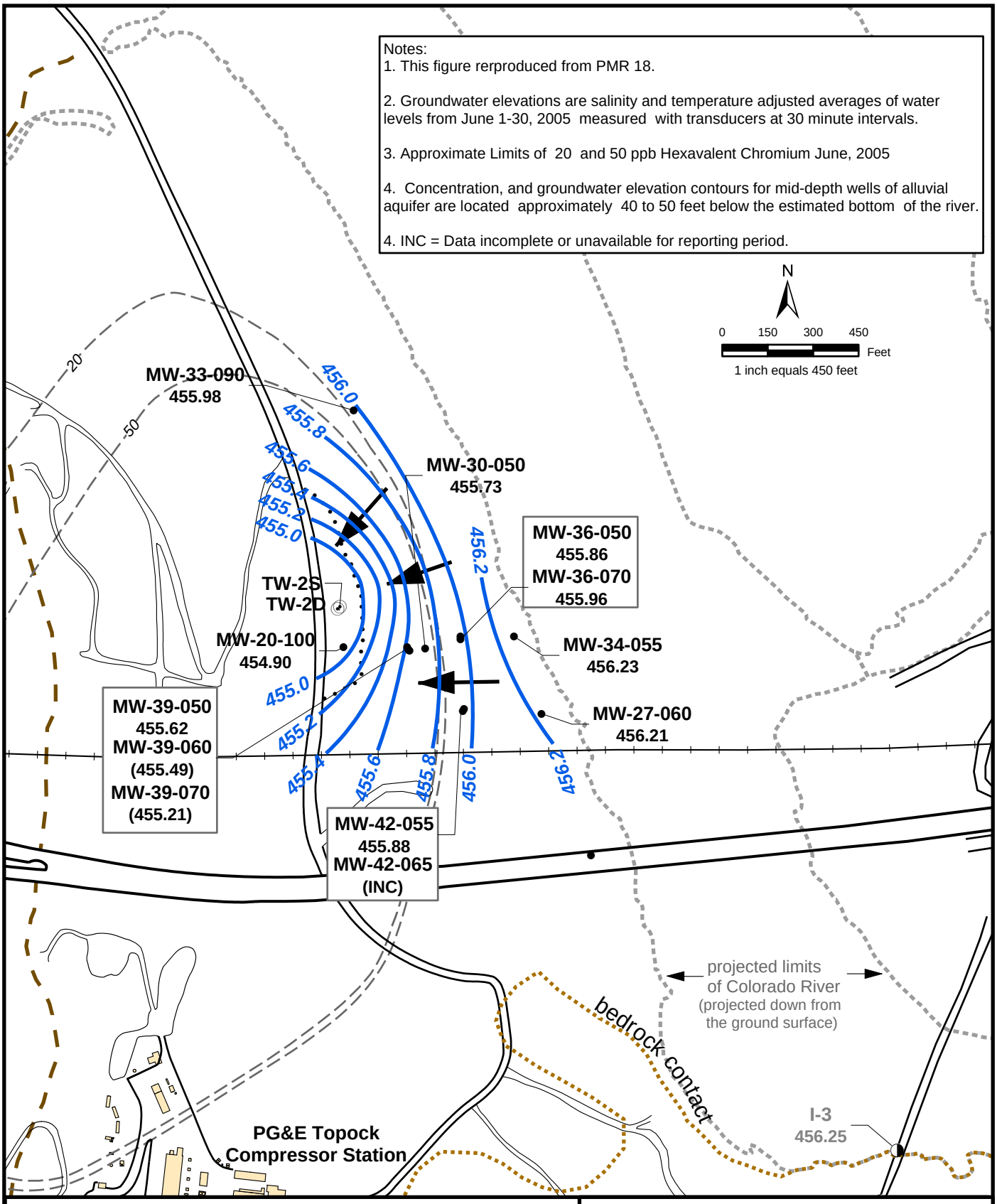


FIGURE B-2B
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS JUNE, 2005

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_JUNE1_30_05.MXD
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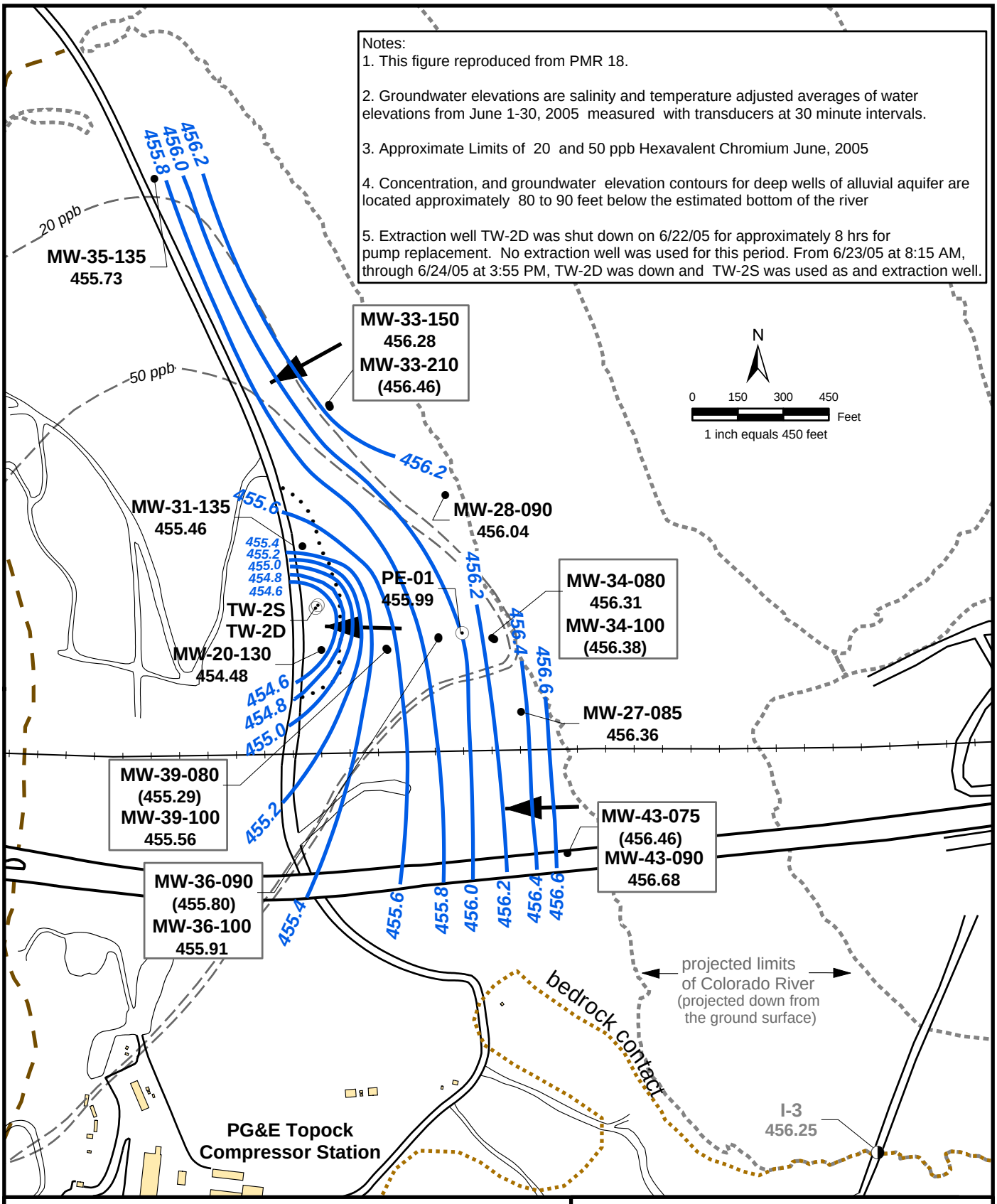

FIGURE B-2C
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS JUNE, 2005

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_LA_JUNE1_30_05.MXD
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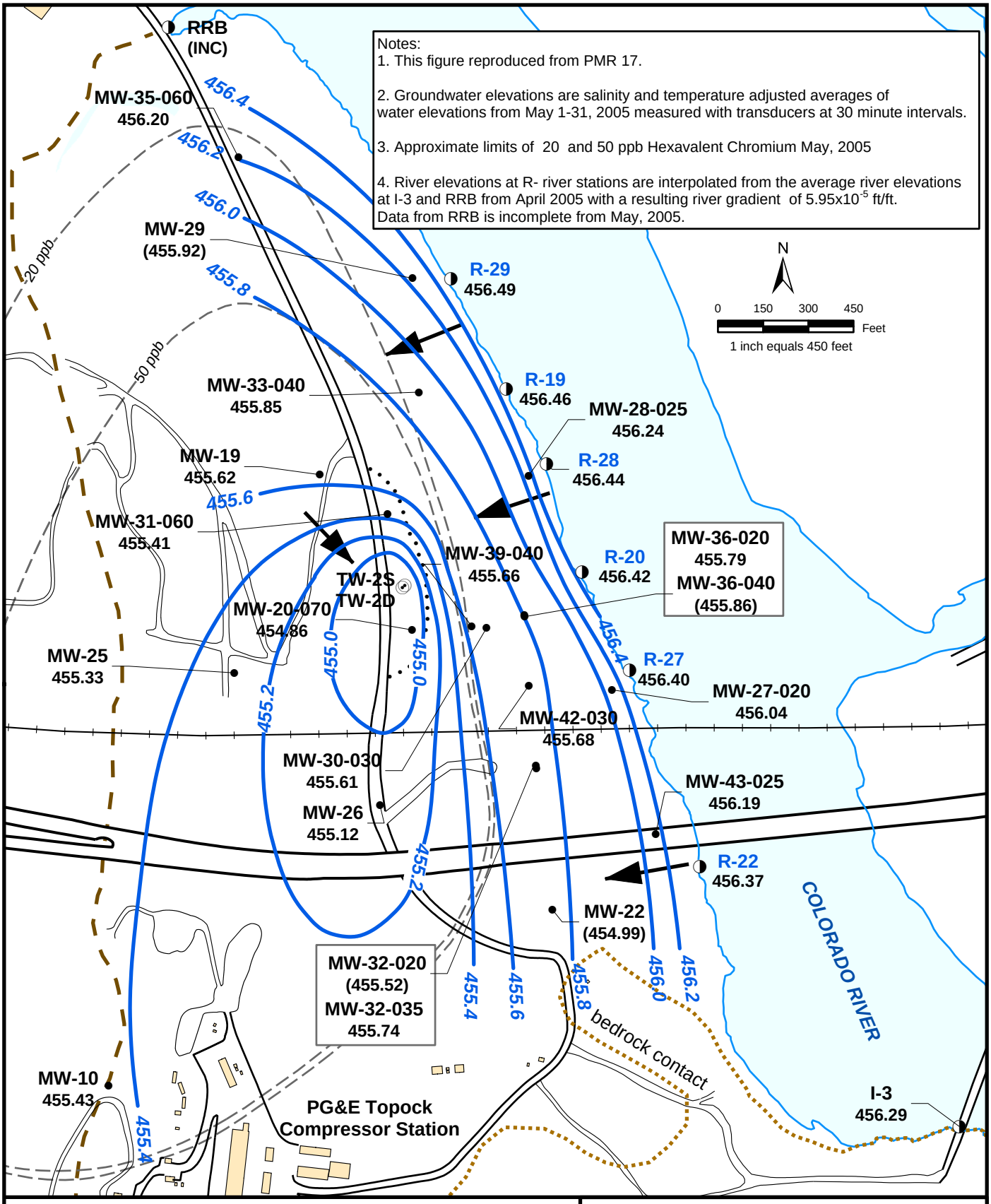

FIGURE B-2D
AVERAGE GROUNDWATER SHALLOW WELLS AND RIVER ELEVATIONS MAY, 2005

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_UA_MAY1_31_05.MXD
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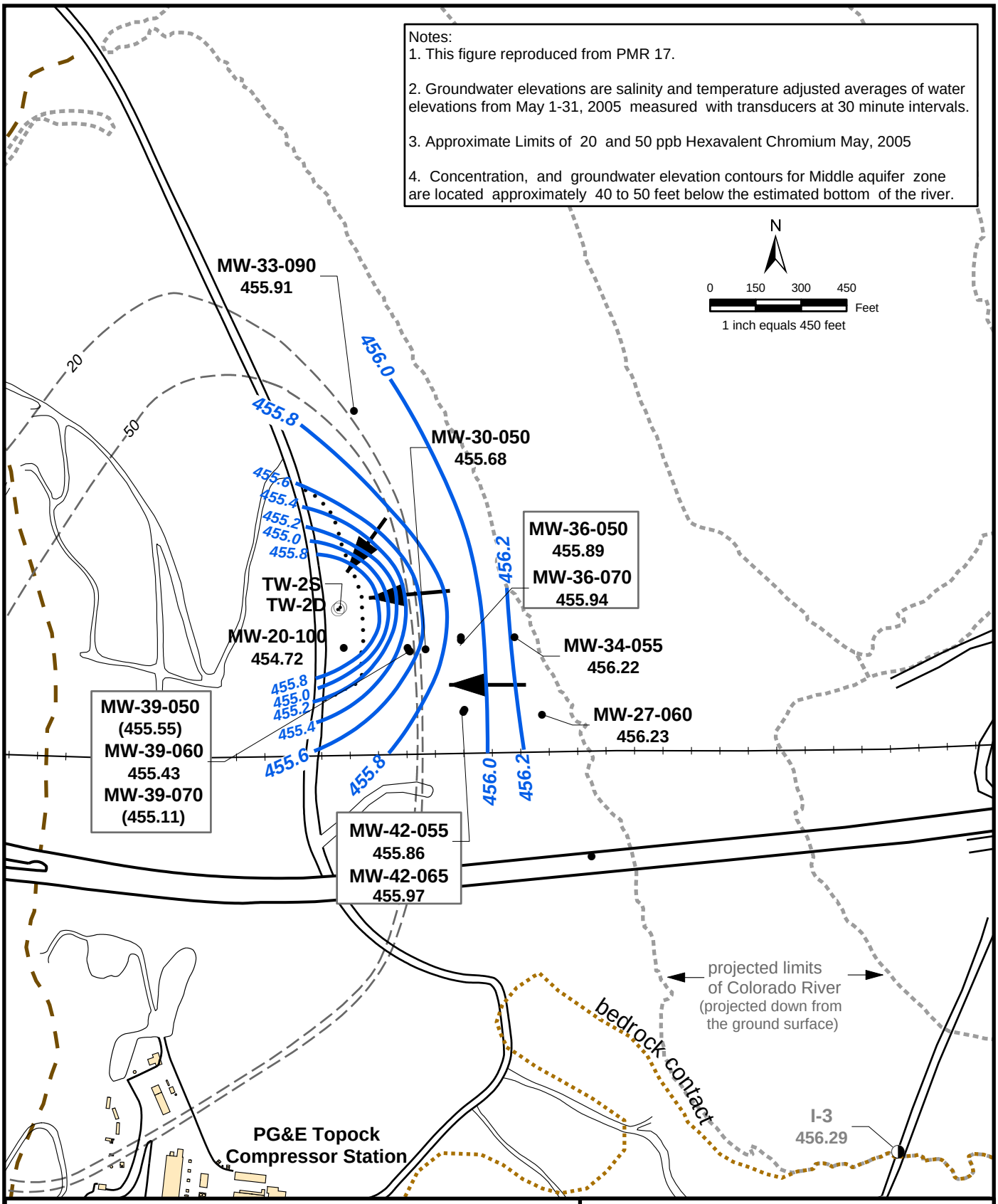

FIGURE B-2E
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS MAY, 2005

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_MAY1_31_05.MXD
IM_AVERAGE_GROUNDWATER_MA_MAY1_31_05.PDF 5/5/2005 13:16:31

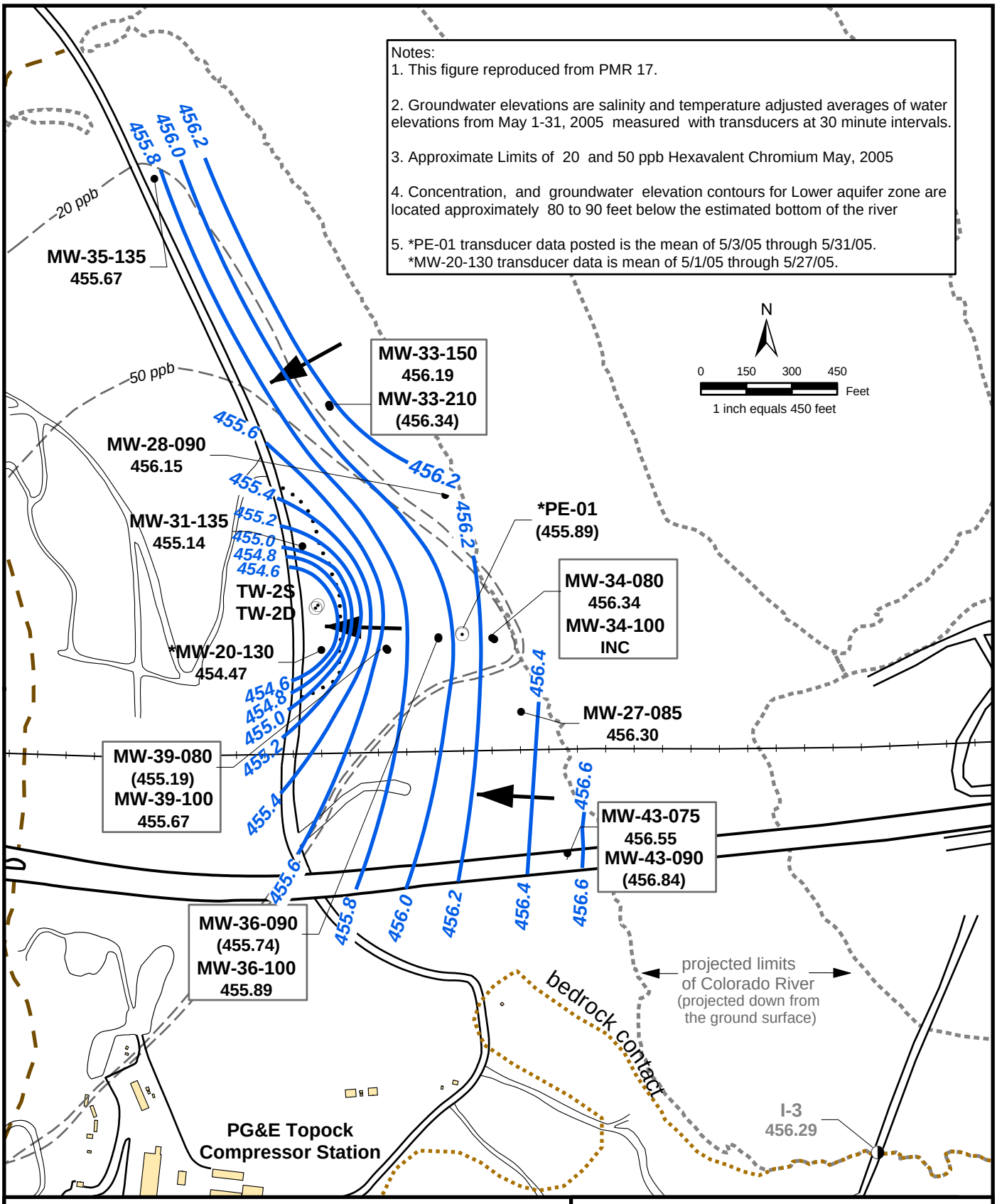

FIGURE B-2F
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MAY, 2005

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

CH2MHILL

SFO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2005\GW\IM_AVERAGE_GROUNDWATER_LA_MAY1_31_05.MXD
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Appendix C
Chemical Performance Monitoring Analytical Results

TABLE C-1
Chemical Performance Monitoring Results, March 2004 through July 2005
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
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
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
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
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

TABLE C-1
Chemical Performance Monitoring Results, March 2004 through July 2005
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-26	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
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
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
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
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

TABLE C-1
Chemical Performance Monitoring Results, March 2004 through July 2005
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-30-50	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
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
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
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
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
	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
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

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Chemical Performance Monitoring Results, March 2004 through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-34-80	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
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
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

TABLE C-1
Chemical Performance Monitoring Results, March 2004 through July 2005
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

NOTES:

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

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

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

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