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March 14, 2008

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

Subject: Fourth Quarter and 2007 Annual Performance Monitoring Evaluation
Interim Measures Performance Monitoring Program
PG&E Topock Compressor Station, Needles, California

Dear Mr. Yue:

Enclosed is the *Performance Monitoring Report for Fourth Quarter 2007 and Annual Performance Evaluation, February 2007 through January 2008* for PG&E's Interim Measures (IM) performance monitoring program for the Topock project. This report presents the Fourth Quarter 2007 (November 2007 through January 2008) performance monitoring results for the IM hydraulic containment system and provides the annual performance evaluation for the 2007 reporting period. The quarterly and annual performance evaluation report is prepared and submitted in conformance with the IM requirements described in Enclosure A of the DTSC's letter dated February 14, 2005.

With this submittal, PG&E respectfully requests DTSC approval of the recommendations presented in Section 7. The recommendations were also made in the 2006 Annual Performance Monitoring Evaluation and/or were discussed with DTSC in 2007, and are further supported by another year of successful performance of the IM. Performance monitoring and reporting have now been ongoing for four years since the initiation of the IM in March 2004. The recommendations presented in this report are intended to optimize the data collection and reporting necessary to demonstrate IM performance given the history of IM performance monitoring to date.

PG&E looks forward to your approval. If you have any questions on the performance monitoring program or annual report, please call me at (805) 234-2257.

Sincerely,

Yvonne Meeks

Enclosure
cc: Chris Guerre/DTSC
Karen Baker/DTSC

Performance Monitoring Report for Fourth Quarter 2007 and Annual Performance Evaluation, February 2007 through January 2008

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

March 14, 2008

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Performance Monitoring Report for Fourth Quarter 2007 and Annual Performance Evaluation, February 2007 through January 2008

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

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March 14, 2008

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

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Acronyms and Abbreviations

µg/L	micrograms per liter (equivalent to parts per billion [ppb])
Cr(T)	total chromium
Cr(VI)	hexavalent chromium
DTSC	Department of Toxic Substances Control
gpm	gallons per minute
IM	Interim Measure
IMCP	Interim Measures Contingency Plan
IM No. 3	Interim Measure Number 3
mg/L	milligrams per liter
ORP	oxidation reduction potential
PG&E	Pacific Gas and Electric Company
PMP	Performance Monitoring Program
TDS	total dissolved solids
USBR	United States Bureau of Reclamation

1.0 Introduction

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

In a letter dated February 14, 2005, the California Department of Toxic of Substances Control (DTSC) established the criteria for evaluating the performance of the IM (DTSC, 2005). As defined by DTSC, the performance standard for this IM is to "establish and maintain a net landward hydraulic gradient, both horizontally and vertically, that ensures that hexavalent chromium (Cr[VI]) concentrations at or greater than 20 micrograms per liter (µg/L) in the floodplain are contained for removal and treatment" (DTSC, 2005). A draft *Performance Monitoring Plan for Interim Measures in the Floodplain Area* (CH2M HILL, 2005a) 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.

The February 2005 DTSC directive also defined the monitoring and reporting requirements for the IM. The reporting requirements for the PMP were modified by DTSC, via e-mail approval, in August 2007 to discontinue submittals of the monthly performance monitoring reports (the quarterly and annual reporting requirements were unchanged). Additional updates and modifications to the PMP were approved by DTSC in a letter dated October 12, 2007 (DTSC, 2007a).

This combined quarterly and annual report has been prepared in compliance with DTSC's requirements and documents the monitoring activities and performance evaluation of the IM hydraulic containment system. The fourth quarterly reporting period covers monitoring activities from November 1, 2007 through January 31, 2008, while the annual reporting period covers monitoring activities from February 1, 2007 through January 31, 2008. In addition, this report provides a review of the existing PMP and recommendations for future PMP modifications to optimize data collection, evaluation, and reporting to assess IM performance.

1.1 IM Performance Monitoring Program

Figure 1-2 shows the locations of wells used for IM extraction, performance monitoring, and hydraulic gradient measurements. The performance monitoring wells that were in service/active as of January 2008 are defined as:

- **Floodplain Wells** (monitoring wells on the Colorado River floodplain): MW-22, MW-27 cluster (three), MW-28 cluster (two), MW-30-50, MW-32 cluster (two), MW-33 cluster (four), MW-34 cluster (three), MW-36 cluster (six), MW-39 cluster (six), MW-42 cluster (three), MW-43 cluster (three), MW-44 cluster (three), MW-45-95, MW-46 cluster (two), and MW-49 cluster (three). Additionally, three pilot test wells installed on the floodplain (PT-2D, PT-5D, and PT-6D) are used to supplement hydraulic monitoring but are not formally part of the PMP.
- **Intermediate Wells** (monitoring wells located immediately north, west, and southwest of the floodplain): MW-19, MW-20 cluster (three), MW-26, MW-31 cluster (two), MW-35 cluster (two), MW-47 cluster (two), MW-50 cluster (two), and MW-51.
- **Interior Wells** (monitoring wells located upgradient of IM pumping): MW-10 and MW-25.

Three extraction wells (TW-2D, TW-3D, and TW-2S) are located on the MW-20 bench (Figure 1-1). In addition, extraction well PE-1 is located on the floodplain approximately 450 feet east of extraction well TW-3D (Figure 1-1). Currently, both extraction wells TW-3D and PE-1 are in full-time operation.

The wells screened in the unconsolidated alluvial fan and fluvial deposits, which comprise the Alluvial Aquifer, have been separated into three depth intervals to present groundwater quality and groundwater level data. The depth intervals of the Alluvial Aquifer in the floodplain area—designated upper, middle, and lower—are based on grouping the monitoring wells screened at common elevations. These divisions do not correspond to any lithostratigraphic layers within the aquifer. The floodplain aquifer is considered to be hydraulically undivided. 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.

1.2 Report Organization

This combined quarterly monitoring and annual performance evaluation report presents:

- The hydraulic and chemical performance monitoring results and extraction system operation data for the fourth quarter reporting period, November 2007 through January 2008 (Section 2.0).
- Operations data for the IM extraction system for the 2007 annual reporting period (Section 3.0).

- Analysis and evaluation of the IM capture zone for the annual reporting period (Section 4.0).
- Evaluation of groundwater quality data trends and geochemistry in the IM extraction area (Section 5.0).
- Conclusions and status of IM operations and performance monitoring (Section 6.0).
- Recommendations for the performance monitoring program (Section 7.0).

2.0 Quarterly Performance Evaluation for November 2007 through January 2008

2.1 Extraction System Operations

From November 1, 2007 to January 31, 2008 (considered fourth quarter 2007), 17,489,873 gallons of groundwater were extracted and treated by the IM No. 3 system. This resulted in removal of an estimated 231 pounds (105 kilograms) of total chromium (Cr[T]) from the aquifer during the fourth quarter 2007 reporting period. Table 2-1 summarizes the pumping information during the reporting period. (All tables are located at the end of the report.) The average pumping rate for the IM system during the quarter, including extraction system downtime, was 132.0 gpm. The average monthly pumping rates were 132.1 gpm (November 2007), 132.6 gpm (December 2007), and 131.4 gpm (January 2008) during the quarterly reporting period.

During the quarter, extraction wells TW-3D and PE-1 provided primary service, operating at a target combined pumping rate of 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime. The operational run time percentage for the IM extraction system was over 98 percent during the reporting period. An operations log for the extraction system for fourth quarter 2007, including downtime, is included in Appendix A.

The concentrate (i.e., saline water) from the reverse osmosis system was shipped offsite with shipping papers as a Resource Conservation and Recovery Act non-hazardous waste and transported to Liquid Environmental Solutions in Phoenix, Arizona for treatment and disposal. Five containers of solids from the IM No. 3 facility were disposed of at the Kettleman Hills Chemical Waste Management facility during fourth quarter 2007. Daily inspections included general facility inspections, flow measurements, and site security monitoring. Daily logs with documentation of inspections are maintained onsite.

Table 2-2 summarizes the chromium and total dissolved solids (TDS) analytical results of groundwater samples collected from extraction wells from January 2008 and previous months. Future monitoring of the extraction well(s) water quality will be completed at the frequency required by the Waste Discharge Requirements issued for the IM No. 3 treatment facility.

2.2 Cr(VI) Distribution and Trends in Floodplain Area

During the fourth quarter reporting period, groundwater monitoring wells in the performance monitoring area were monitored for Cr(VI), Cr(T), and field water quality parameters in November 2007 (monthly event; five PMP wells sampled), December 2007 (quarterly event; 21 PMP wells sampled), and January 2008 (monthly event; five PMP wells sampled). The sampling frequencies for the site groundwater monitoring wells were

updated by DTSC in a letter dated September 28, 2007 (DTSC, 2007b). Refer to PG&E's Topock *Groundwater and Surface Water Monitoring Report, Third Quarter 2007* (CH2M HILL, 2007a) for description of the updated sampling frequencies and the recent groundwater monitoring activities at the site.

The most recent comprehensive chromium sampling in the performance monitoring area was conducted in October 2007 (annual monitoring event; 60 PMP wells sampled). Figure 2-1 shows, in plan view, the October 2007 Cr(VI) sampling results for wells in the upper, middle, and lower depth intervals of the Alluvial Aquifer. Also shown on Figure 2-1 are the Cr(VI) concentration contours, based on October 2007 sampling, for the aquifer depth intervals and floodplain cross-section A (cross-section locations shown on Figure 1-2). Figure 2-2a presents the October 2007 Cr(VI) results on cross-section B, oriented parallel to the Colorado River. The majority of the wells shown on cross-section B were additionally sampled in December 2007 and January 2008, and these fourth quarter 2007 Cr(VI) results are shown on Figure 2-2b.

Table B-1 in Appendix B presents the groundwater sampling results for Cr(VI) and Cr(T) for monitoring wells in the floodplain area from March 2006 through January 2008. Table B-2 presents the chromium sampling data for the other wells monitored in the PMP area from February 2006 through January 2008. Hexavalent chromium concentration trend graphs for floodplain well clusters that include monitoring wells with consistent chromium detections are presented on Figures B-1 through B-6 in Appendix B. Section 5.1 of this report provides an evaluation of the Cr(VI) trends observed during performance monitoring in the floodplain area.

2.3 Other Water Quality Data for Floodplain Wells

Common water quality parameters (temperature, pH, oxidation-reduction potential [ORP], dissolved oxygen, and specific conductance) were measured in the field during well purging and groundwater sampling, as described in the *Topock Program Sampling, Analysis, and Field Procedures Manual, Revision 1, PG&E Topock Compressor Station* (CH2M HILL, 2005b). The field water quality data measured from March 2006 to present are presented in Tables B-1 and B-2 in Appendix B. Table B-1 also presents the groundwater elevations collected during the same period.

Appendix Table C-1 presents a summary of groundwater results for Cr(VI) and selected indicator parameters for wells in the PMP area from March 2006 through January 2008. Table C-2 in Appendix C presents the results of the general chemistry and stable isotope analyses for 14 selected monitoring wells in the performance monitoring area and two surface water (river) sampling locations during monitoring events from March 2004 through January 2008. Water samples were analyzed for TDS, chloride, sulfate, nitrate, bromide, calcium, potassium, magnesium, sodium, boron, alkalinity, deuterium, and oxygen-18. The selected wells were sampled for the general chemistry parameters to monitor the effects of IM pumping on groundwater quality in the floodplain area. Section 5.2 of this report provides an evaluation of the general chemistry groundwater data for the floodplain area.

2.4 Hydraulic Gradients and River Levels During Quarterly Period

During the reporting period, water levels were recorded at intervals of 30 minutes with pressure transducers in 62 wells and two river monitoring stations (I-3 and RRB). The data are typically continuous, with only short interruptions for sampling or maintenance. The locations of the wells monitored are shown on Figure 1-2 and listed in Section 1.1.

Daily average groundwater and river elevations have been calculated from the pressure transducer data for the quarterly reporting period (November 2007 through January 2008) and are summarized in Table D-1 in Appendix D. Reported groundwater elevations (or hydraulic heads) are adjusted for temperature and for salinity differences between wells (i.e., adjusted to a common freshwater equivalent), as described in the Performance Monitoring Plan. Groundwater elevation hydrographs for the PMP transducer wells during the 2007 reporting period are included in Appendix D. The elevation of the Colorado River measured at the I-3 gauge station (Figure 1-2) is also shown on the hydrographs.

Average quarterly groundwater elevations (November 2007 through January 2008, inclusive) for the shallow, mid-depth, and deep wells are presented and contoured in plan view on Figures 2-3 through 2-5. Average groundwater elevations for wells on floodplain cross-section A are presented and contoured in Figure 2-6. Note that several monitoring wells are significantly deeper than other wells in the lower depth interval. Due to vertical gradients present at the Topock site, water levels in deeper wells tend to be higher than water levels in shallower wells. Consequently, some of the wells with screen intervals significantly deeper than most of the lower interval wells exhibit water levels that are not contoured in the plan view on Figure 2-5.

Hydraulic gradients were measured during the fourth quarter reporting period for well pairs selected for performance monitoring with two pumping centers (TW-3D and PE-1). The following well pairs were approved by DTSC on October 12, 2007 (DTSC, 2007a) to better define gradients induced while pumping from two locations:

- MW-31-135 and MW-33-150 (northern gradient pair)
- MW-45-95 and MW-34-100 (central gradient pair)
- MW-45-95 and MW-27-85 (southern gradient pair)

Table 2-3 presents the average monthly hydraulic gradients that were measured between the gradient well pairs in November 2007, December 2007, and January 2008. For the northern (MW-31-135/MW-33-150) and southern (MW-45-95/ MW-27-85) well pairs, gradients were landward at magnitudes from 2.3 to 4.4 times, respectively, the target gradient of 0.001 feet per foot. For the central well pair (MW-45-95/MW-34-100), the measured landward gradients ranged from 0.0101 to 0.0115 feet per foot (more than 10 times the target gradient) during the reporting period.

Figure 2-7 presents graphs of the hydraulic gradients and monthly average pumping rates and river levels for the quarterly period. While river levels were at their lowest stage of the year during the fourth quarter reporting period, strong landward gradients were measured each month.

2.5 Projected River Levels During the Next Quarter

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

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

Figure 2-8 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. These data are summarized in Table 2-4. The future projections shown on this graph are based on USBR long-range projections of Davis Dam releases and Lake Havasu levels. There is more uncertainty in these projections at longer times in the future, since water demand is based on climatic factors.

Current USBR projections (Table 2-4) show that the average Davis Dam release for February 2008 (10,100 cubic feet per second) will be greater than in January 2008 (8,900 cubic feet per second). Based on February 2008 USBR projections, it is anticipated that the Colorado River level at the I-3 gage location in February 2008 will be similar compared to levels in January 2008. Current projections show that the water levels will increase during the next quarterly reporting period, and into the summer months, followed by a decline during the fall (Figure 2-8).

2.6 Quarterly Performance Evaluation

The groundwater elevation and hydraulic gradient data from November and December 2007 and January 2008 performance monitoring indicate that the minimum landward gradient target of 0.001 feet/foot was exceeded each month during the quarterly reporting period. The landward gradients during fourth quarter 2007 were 2.4 to 11 times the required minimum magnitude at the gradient control well pairs. The current gradient well pairs (updated in third quarter 2007) are adequate to define the capture of the plume while pumping from extraction wells TW-3D and PE-1.

A total of 17,489,873 gallons of groundwater was extracted and treated by the IM No. 3 system during the November 2007 through January 2008, fourth quarter reporting period. An estimated 231 pounds (105 kilograms) of chromium were removed and treated by the IM

system during this quarter. The average pumping rate for the IM extraction system during the fourth quarter 2007, including system downtime, was 132.0 gpm.

A review of the groundwater gradient maps for fourth quarter 2007 (Figures 2-3, 2-4, 2-5) shows that all floodplain monitoring wells where Cr(VI**)** was detected at greater than 20 µg/L are within the IM capture zone of the pumping well(s) during the reporting period. That is, the inferred groundwater flow lines from all floodplain wells with Cr(VI) greater than 20 µg/L are oriented towards the TW-3D and PE-1 extraction wells.

Overall, the Cr(VI) concentrations observed in the floodplain monitoring wells are either stable or decreasing. The wells that are monitored in the IM pumping area (e.g., MW-34-100, MW-36-100, MW-39-70, MW-39-80, and MW-39-100) continue to show overall declining Cr(VI) concentrations relative to prior 2007 and 2006 monitoring (see Appendix B graphs). Presentation and evaluation of the Cr(VI) trends observed in the performance monitoring area during the 2007 reporting period are discussed in Section 5.1.

Based on the hydraulic and chemical performance monitoring data and evaluation presented in this report, the IM performance standard has been met for the fourth quarter (November 2007 through January 2008) reporting period. Performance monitoring and evaluation of the IM hydraulic containment system will continue in accordance with the Performance Monitoring Plan and as directed by the DTSC.

3.0 Extraction System Operations for Annual Reporting Period

3.1 Extraction Facilities and Operations

Pumping data for the IM No. 3 groundwater extraction system for the period of February 1, 2007 through January 31, 2008 are presented in Table 3-1. A total of 68,865,195 gallons of groundwater was extracted during February 2007 through January 2008. Approximately 893 pounds (406 kilograms) of Cr(T) were removed from the aquifer by pumping over the 2007 annual reporting period. The total mass of Cr(T) removed by the IM No. 2 and IM No. 3 extraction systems during IM pumping from March 2004 through January 31, 2008 is approximately 4,668 pounds (2,122 kilograms). The average annual pumping rate during the 2007 reporting period was 131.4 gpm while pumping from extraction wells TW-3D and PE-1.

Figure 3-1 summarizes the monthly pumping rates, cumulative volumes extracted, and the percent of time that the extraction system was in operation during the 2007 reporting period. This figure shows that pumping rates were very consistent month to month, which is illustrated by the consistently high percentage of uptime for the IM extraction and treatment facilities throughout the year. The decrease in uptime during April 2007 was due to the planned annual outage to conduct facility maintenance.

Table A-1 in Appendix A presents a chronological summary of the operations, maintenance, and modifications to the IM extraction system during the period February 2007 through January 2008. Extraction wells TW-3D and PE-1 operated throughout the annual reporting period at the target pumping rate of 135 gpm, excluding periods of planned and unplanned downtime. During the annual reporting period, extraction wells TW-2D and TW-2S were only operated for short-term support of the extraction system or field operations and for periodic groundwater sampling.

3.2 Extracted Groundwater Quality and Trends

Extraction well TW-3D was brought into service in late December 2005 and has been operated continuously for the IM. Groundwater extraction at well PE-1 on the floodplain began on January 25, 2006. The locations of the active extraction wells TW-3D and PE-1 are shown on Figure 1-1. Table 3-2 presents the analytical results for Cr(VI), dissolved Cr(T), and TDS for extraction wells TW-3D and PE-1 during the 2007 reporting period.

The Cr(VI) and TDS concentration trends for TW-3D and PE-1 are plotted on Figure 3-2. During the 2007 reporting period, Cr(VI) concentrations in TW-3D have gradually declined from 2,400 µg/L (February 2007) to 1,830 µg/L (January 2008). TDS concentrations in TW-3D for this period have remained relatively stable, averaging about 5,500 milligrams per liter (mg/L).

The Cr(VI) concentrations in the extracted groundwater at well PE-1, located on the floodplain, have ranged from 81 to 48 µg/L during the reporting period (Table 3-2). During the period February 2007 through January 2008, TDS concentrations in PE-1 have declined from 5,440 to 3,790 mg/L. During the second half of 2007, the TDS concentration at PE-1 has remained relatively stable, averaging approximately 4,100 mg/L (Figure 3-2).

4.0 Capture Zone Analysis for Annual Reporting Period

4.1 Monthly Average Gradients

Table 4-1 presents the hydraulic gradients measured between the selected gradient control well pairs during the period February 2007 through January 2008. During the 12-month reporting period, the IM target landward gradient of 0.001 feet/foot was met each month at all gradient control well pairs.

Figure 4-1 summarizes the monthly measured gradients, and the river stage and average pumping rates during 2007 IM operations. During the annual reporting period, the average daily river levels ranged from a high of 457.85 feet above mean sea level (April 2007) to a low of 452.15 feet above mean sea level (December 2007). Strong landward gradients were measured each month, even during the lower river stages in November 2007 through January 2008. While exceeding the performance standard each month, the northern well pair (MW-31-135/MW-33-150) had the lowest measured gradients because it is not aligned along the gradient generated by pumping. The gradient measurements are therefore underestimates of the true gradient.

During the first half of 2007, the landward gradients measured at the original central and southern well pairs ranged from 0.036 to 0.045 feet/foot (Table 4-1). During the second half of 2007, the landward gradients measured at the new central and southern well pairs (monitoring the PE-1 pumping center) ranged from 0.043 to 0.0119 feet/foot (Table 4-1). These consistently strong landward gradients were maintained even during the lower river stages in November 2007 through January 2008.

4.2 Annual Average Gradients

Groundwater contour maps presenting the annual averages of the 2007 measured hydraulic data in the upper, middle, and lower depth aquifer intervals are shown in Figures 4-2 through 4-4. On Figure 4-5, the annual average data are presented in floodplain cross-section A. The October 2007 Cr(VI) contours are also shown on the annual average gradient maps. Table D-2 in Appendix D presents a listing of the annual average, annual average minimum, and maximum groundwater elevations for the wells used for the 2007 performance monitoring evaluation.

The net annual landward gradients illustrated on the aquifer interval maps are strong and comparable to the gradient maps prepared for the fourth quarter monitoring data. A review of the annual average groundwater level contours on these figures shows that all floodplain monitoring wells where Cr(VI) was detected at greater than 20 μg/L were within the capture zone of the IM extraction system.

4.3 Analysis and Evaluation of Capture Zone

Two graphical methods were presented in the 2006 annual performance evaluation report to illustrate the capture zone produced by IM pumping (CH2M HILL, 2007b). The methodology and results of the capture zone evaluations for 2007 are summarized below.

4.3.1 Well Group Gradient Averaging

The temporal variation in magnitude and direction of horizontal hydraulic gradients in the lower depth aquifer interval was assessed using quarterly average water levels and triangulation with linear interpretation for two well groupings (MW-31-135/MW-33-150/MW-34-100 and MW-45-95/MW-34-100/MW-27-85) in the IM performance area. Figure 4-6 shows the two well groupings or "triads" and the calculated average gradients for the second, third and fourth quarter monitoring periods (data not available for the new well pairs in first quarter 2007).

This analysis shows that strong landward gradients were achieved during the 2007 monitoring periods and that there was minimal variation in the direction of the landward gradients during each quarter. These gradients are not the same as those calculated between the gradient control well pairs (Table 4-1) because they are calculated net gradients within each well triad. Stronger landward gradients were calculated using the triad method than those measured for the northern well pair MW-31-135/MW-33-150 (Table 4-1) due to a more optimally-aligned flow direction.

4.3.2 Particle Track Analysis

For the 2006 performance evaluation, particle tracking was conducted to calculate the direction and distance that groundwater would be likely to flow from selected starting points in the floodplain under the dual-well (TW-3D and PE-1) IM pumping system. The methods, input parameters, and data used for this analysis were described in the 2006 annual IM performance evaluation report (CH2M HILL, 2007b) and are summarized below.

Figure 4-7 presents the results of the particle track analysis conducted for the 2006 capture zone evaluation. During 2006 IM operations, TW-3D and PE-1 were pumping at individual annual average rates of 97.5 and 34.3 gpm, respectively. During the 2007 reporting period, TW-3D and PE-1 were pumping at individual annual average rates of 99.4 and 31.6 gpm, respectively. Because the pumping locations and conditions were essentially identical, and the gradients for the lower interval were comparable for the two annual periods, an updated particle track analysis for 2007 was not conducted. For the current capture zone evaluation displayed on Figure 4-7, the particle tracking results from 2006 are shown with the Cr(VI) contours in the lower interval from October 2007 sampling (Figure 2-1).

The particle tracks shown on Figure 4-7 represent the movement of a groundwater molecule from selected deep floodplain wells based on 2-week average gradients during the 2006 reporting period. Tick marks, represented by small brown rectangles along the flowpaths, mark each 10 days of movement. Based on the measured heads and model estimates of hydraulic properties, the model results showed that particles starting at each of the four starting points reached an extraction well within the year. In the case of groundwater in the vicinity of MW-34, the estimated travel time to PE-1 at the 2006 extraction rate was about 1

month. The difference in particle velocity at different locations is a function of differences in gradient and hydraulic conductivity.

The particle starting locations used for this analysis were established near MW-34, MW-27, MW-44, and MW-46. The groundwater levels from a set of 13 wells completed in the lower depth interval of the aquifer were used to calculate average gradients for each 2-week interval throughout the 2006 reporting period. Wells used in this analysis included MW-20-130, MW-27-85, MW-28-90, MW-31-135, MW-33-150, MW-34-100, MW-36-100, MW-39-100, MW 42-65, MW-43-90, MW-45-95, MW-49-135, and TW-2D. A contouring program (Surfer 8 by Golden Software) was used to interpolate the water levels between the wells onto a grid computed by kriging. Grid spacing was 17 feet by 15 feet.

The interpolated water level grids produced by Surfer 8 were used as input to a particle tracking program (FEMPATH-X, which is a part of the MicroFEM modeling package). The program was run in transient mode with 2-week time steps. The hydraulic conductivity distribution that is currently used in Layer 4 (the lower fluvial layer) of the Topock groundwater flow model, combined with the interpolated measured groundwater levels, was used to calculate the rate and direction of particle movement at any location. For this analysis, it was assumed that there was no vertical flow and all particles moved horizontally through the lower depth interval of the aquifer. An effective transport porosity of 0.12 (12 percent) was used in these calculations. This effective transport porosity value was calculated based on breakthrough of low TDS water at the observation wells near the IW-2 injection well.

It should be recognized that the particle tracking analysis makes no use of the groundwater model to simulate gradients. The gradients are based on measured water levels in the wells (2006 monitoring period). The analysis uses the hydraulic conductivity values from the model, which are considered the most accurate estimates of the hydraulic conductivity available but represent an average for hydraulic conductivity for each model node. Localized groundwater travel times may differ from the average travel times due to the presence of relatively small or thin zones of higher or lower hydraulic conductivity that are not represented in the average values assigned to each model node. Additional aquifer testing and subsequent recalibration of model parameters are planned for 2008.

5.0 Evaluation of Groundwater Quality Data

5.1 Cr(VI) Distribution and Trends for 2007 Reporting Period

Figure 2-1 presents the Cr(VI) concentration results in floodplain wells in the upper, middle, and lower depth intervals of the Alluvial Aquifer based on the most recent comprehensive groundwater monitoring event in October 2007. The positions of the 50 µg/L and 20 µg/L Cr(VI) concentration contours have remained consistent overall for the period October 2006 through October 2007 (see prior 2006 annual and 2007 quarterly PMP reports [CH2M HILL, 2007b and 2007c]). However, Cr(VI) concentrations generally have decreased in many wells within the groundwater plume over the same time period. In the mid-depth interval, Cr(VI) concentrations decreased in MW-39-70 from 101 µg/L in December 2006 to 5.5 µg/L in October 2007 (Table B-1). In the lower depth interval, Cr(VI) concentrations in samples from MW-39-80 and MW-39-100 decreased approximately 200 µg/L and 1,200 µg/L, respectively, over the reporting period (Table B-1). Wells showing marked decreases in concentration are generally in the floodplain area where IM pumping is removing chromium groundwater.

Figure 5-1 presents Cr(VI) trend plots, April 2005 through January 2008, for selected wells in the groundwater plume in the floodplain. Concentration graphs for additional floodplain wells are provided in Appendix B. Monitoring wells showing declining Cr(VI) concentrations during the 2007 reporting period include MW-34-100, MW-36-100, MW-39-70, MW-39-80, MW-39-100, MW-44-115, and MW-46-175.

The concentration trend for MW-34-100 (Figure 5-1) has shown both short-term declines and increases in concentrations since PE-1 pumping commenced. However, since June 2006, concentrations at this well have shown a general downward trend. The Cr(VI) result from September 19, 2007 sampling of MW-34-100 (501 µg/L) is the lowest concentration measured at this well since May 2005. Concentrations have slightly increased during fourth quarter sampling (Figure 5-1). Landward gradients have been present at this location since IM pumping began; therefore, the periodic increases in concentration observed at MW-34-100 do not indicate any movement of the plume toward the river.

Monitoring well clusters MW-44 and MW-46 are located within the Cr(VI) plume (approximately 190 feet and 400 feet north of PE-1, respectively). The concentration trend for well MW-44-115 has been overall downward since July 2006 (Figure 5-1). Sampling data from well MW-44-125 show generally stable concentrations since October 2006. Concentrations in well MW-46-175 have been stable during April through December 2007 and are showing a decline in the January 2008 sampling. The MW-44 and MW-46 well clusters are within the hydraulic capture of IM pumping (see Figures 2-5 and 4-4).

The Cr(VI) concentrations at MW-36-100 (deep well near PE-1) have consistently decreased during December 2006 through September 2007. Concentrations have slightly increased in the last sampling in October 2007 (Figure 5-1).

5.2 Groundwater Geochemistry in IM Extraction Area

5.2.1 Redox Evaluation

Figure 5-2 shows the mean concentrations and distributions of Cr(VI), ORP, and nitrate from February 2007 through January 2008. Wells with the strongest reducing conditions (ORP values less than -90 millivolts) are shaded dark blue. In wells where ORP is less than -90 millivolts, both Cr(VI) and nitrate are generally non-detect because they are not geochemically stable under reducing conditions. Shaded contour lines that represent the approximate margin of the zone of strong reducing conditions are shown for each depth interval on Figure 5-2. On the landward side of these lines, reducing conditions are not generally strong enough to preclude the presence of Cr(VI).

Reducing conditions are prevalent throughout the shallow and mid-depth floodplain wells. Most of these wells are screened in fluvial sediments. Wells screened in alluvial deposits generally show non-reducing conditions in most areas of the site. The exception is in a few deep alluvial wells (MW-49 cluster, MW-41D, and OW-3D) that show reducing conditions. Alluvial materials in this aquifer generally contain low amounts of organic carbon and are considerably older than the fluvial deposits. Fluvial deposits typically contain more organic carbon at the time of deposition than alluvial deposits, and the shallow fluvial wells in the floodplain have measurable dissolved organic carbon. Organic carbon supports the growth of soil microbes that consume oxygen and produce the reducing conditions. Over geologic time scales (tens and hundreds of thousands of years), organic carbon that is present at deposition can be gradually depleted until not enough remains to support a reducing environment. Microbial communities in geologically-recent floodplain deposits thrive off the still-present organic carbon and act to catalyze the reduction of Cr(VI) to trivalent chromium, which is insoluble and consequently removed from groundwater. Older (deeper) fluvial deposits with depleted organic carbon provide less support for the microbial communities, and deeper groundwater in those areas is less reducing as a result. The very deepest and oldest groundwater may lose oxygen and become more reducing as dissolved oxygen slowly reacts with iron and other minerals in the aquifer over long periods of time. As mentioned above, reducing conditions are observed in several deep alluvial wells and in wells completed in bedrock at the site.

As shown on Figure 5-2, most shallow-depth wells screened in fluvial sediments throughout the floodplain have an average ORP less than -90 millivolts and are non-detect for nitrate and Cr(VI). One exception to the typical pattern of redox parameters in shallow floodplain wells is noted in well MW-33-40. This well has displayed positive ORP values over the last two years, yet both nitrate and Cr(VI) have been below detection limit. Redox equilibrium is not always observed in natural environments and this well may indicate this disequilibrium.

All mid-depth wells east of the MW-39 cluster had an average ORP of close to or less than -90 millivolts and non-detect concentrations of Cr(VI). The limits of reducing conditions are further east in deep wells on the floodplain than the shallow and mid-depth wells. Wells east of the deep MW-36 cluster wells that have detectable Cr(VI) are MW-34-100, MW-44-115, MW-44-125 MW-46-175, and MW-46-205, and all have ORP values greater than -90 millivolts (i.e., less negative values or positive values).

TDS is variable within each depth interval. The two natural sources of salts in floodplain wells appear to be shallow sediments where salts have been concentrated through evapotranspiration and deep fluvial materials containing older groundwater that has picked up salts from contact with the aquifer materials over long periods of time. Salts exuded from salt cedar trees may also contribute high salinity in shallow floodplain groundwater near salt cedar thickets.

Figure 5-3 shows the average Cr(VI) concentrations and geochemical indicator parameters, including TDS, along the west-to-east floodplain cross-section A. As illustrated on Figure 5-2, the sampling locations with ORP less than -90 millivolts are non-detect for Cr(VI) and nitrate. Note also that TDS concentrations are highest in the shallow groundwater near MW-30-30, and also higher in the deepest screened intervals in the other wells in this cross-section. Historic aerial photographs show a shallow, landlocked pool present on the sandbar near the location of the MW-30 cluster, which could have resulted in a localized concentration of salts through evaporation.

Groundwater quality data for performance monitoring wells from February 2005 through January 2008 are presented in Appendix C. Table C-1 shows groundwater indicator parameters and selected general chemistry results for wells near IM pumping. Table C-2 presents chemical performance monitoring results. Figure C-2 presents time-series plots of Cr(VI) and ORP in wells along floodplain cross-section A. These figures illustrate further the influence of IM pumping on nearby floodplain wells, with Cr(VI) values decreasing in several wells since the start of extraction. Specific conductance may be influenced by infiltration of river water (which would tend to decrease the value) or by the downward movement of more saline groundwater (causing an increase). Gradients induced by pumping and changes in river levels are likely related factors.

5.2.2 General Chemistry Evaluation

There were 14 floodplain wells sampled for chemical performance monitoring parameters over the period of March 2004 through December 2007. While some parameters are steady in the majority of these wells (alkalinity, nitrate, boron), there are a few key trends. Wells MW-20-100 and MW-20-130 have both recently increased in nitrate concentrations after remaining steady for the first two and a half years of pumping. Many general chemical parameters decreased in MW-20-70, MW-20-130, MW-25, MW-26, MW-30-30, MW-34-55 and MW-34-80 over the annual reporting period, including TDS, chloride, sulfate, and sodium (Table C-2). This is probably the result of the onset of downward hydraulic gradients by IM pumping, blending shallower groundwater having lower concentrations of these analytes with deeper water, which normally has high concentrations of these analytes. Downward hydraulic gradients near mid-depth wells MW-30-50 and MW-34-55 increased with the onset of pumping from PE-1 in 2006. Shallow depth wells exhibit both increases and decreases in some of these same parameters over the reporting period, but in these cases, it is interpreted as natural variation because some values were similar to those measured in previous years. Little change was evident in the river samples R-27 and R-28.

5.2.3 Stable Isotope Evaluation

Analysis of stable isotope data provides some insight to the source water for certain site wells but does not appear to provide a reliable method for distinguishing wells that may be affected by the discharge of cooling water from some other wells that are clearly not so affected.

Figure 5-4 shows the results of stable isotopes of oxygen and deuterium in floodplain wells grouped into three categories (river, non-industrial, and industrial signatures) using data collected during the annual reporting period. This same plot is provided with wells within each category identified in Figure C-1 (Appendix C). The points that plot to the upper right in this plot are considered heavier in isotopic signature (i.e., enriched in heavy isotopes), while the points that plot to the lower left are considered lighter in isotopic signature. In this plot, it is apparent that the lighter signatures are dominated by river samples (with some wells showing similar signature), whereas the heaviest signatures are found in selected floodplain wells. This heavy isotope signature can be interpreted as the result of concentration during industrial use as cooling water, although not all of the heavy signatures are associated with elevated Cr(VI) concentrations. Those heavy signature waters with low or non-detectable Cr(VI) concentrations (e.g., MW-42 cluster and MW-39-40) may represent areas where the Cr(VI) in plume water has been removed by reducing conditions in the shallow and medium depths of the floodplain.

There is significant overlap in isotopic signature between native groundwater ("Non-Industrial Signature" group on Figure 5-4) and the "Industrial Signature" group. This overlap makes it problematic to use stable isotope data alone for separation of the wells into distinct groups. Non-plume wells with heavy isotope signatures in this overlapping area included MW-17 and the Tayloe well (the latter located about 6 miles upgradient of the site), wells clearly not in the flowpath of industrial water sources. In addition, it is noted that fluvial wells containing elevated Cr(VI) but with a lighter isotopic signature (e.g., MW-45-95, MW-34-100) may represent a dilution of plume source water with river water.

The degree of overlap between industrial and non-industrial water groups has grown considerably in the past year. This is likely due to continued and increased IM extraction rates. The strong landward gradients in the floodplain area cause more active mixing of plume water, river water, and non-industrial groundwater. The effects of IM pumping on the isotopic signature of floodplain wells have been plotted on Figure 5-5 by using a simple two-end member system of river water (represented by R-27 and R-28 samples) and industrial signature water (represented by the MW-20 wells). It is evident that isotopic signature in most industrial signature wells has become more similar to river water since IM pumping began. This is a result of the continuous landward gradient created by IM pumping and the resultant mixing of industrial water with river-influenced groundwater. For example, well MW-30-50 increased in river signature by approximately 60 percent between 2004 and 2006, and has become non-detect for both Cr(VI) and nitrate since IM pumping began (CH2M HILL, 2006a). The deep zone well MW-34-80 increased in river signature by over 20 percent between 2004 and 2007. These changes are likely due to lateral and downward movement of shallow floodplain water which has an isotopic signature similar to river water.

6.0 Conclusions and Status of IM Operations

6.1 2007 Performance Evaluation

In July 2005, the IM No. 3 treatment facilities were commissioned, and the current IM hydraulic containment system was established. As of March 2008, the IM has operated full-time for four years (approximately 16 months for IM No. 2 and 32 months for IM No. 3) and has been successful in meeting the IM objectives and performance criteria. This section summarizes the conclusions of IM operations and performance monitoring for the 2007 reporting period.

6.1.1 Attainment of Performance Standard

Throughout 2007, the IM extraction system (combined wells TW-3D and PE-1) operated at the target pumping rate of 135 gpm excluding periods of planned and unplanned downtime. The operational run time percentage for the extraction system was over 94 percent during the 2007 reporting period. The average pumping rate for the IM extraction system, including downtime, during the annual period was 131.4 gpm. The results and conclusions of the 2007 performance evaluation include the following:

- A total of 68,865,195 gallons of groundwater was extracted and treated at the IM No. 3 system during the annual reporting period. The IM system removed approximately 893 pounds (406 kilograms) of chromium from the aquifer during the reporting period.
- The IM pumping rate was sufficient to maintain the minimum landward gradient throughout the 2007 annual reporting period. Hydraulic gradient monitoring indicated that landward gradients exceeded the minimum gradient target of 0.001 feet/foot during each month of the reporting period. The strong landward gradients were maintained even during the period of lower river stages in November 2007 through January 2008.
- The landward gradients measured during the first half of 2007 were up to four times greater than the required minimum magnitude (central and southern well pairs). During the second half of 2007, the landward gradients measured at the new central and southern well pairs (monitoring the PE-1 pumping center) ranged from over four to 11 times the target gradient. Gradients measured in the northern well pair were lower but still well above the target each month.
- The current gradient well pairs (updated in third quarter 2007) are adequate to define the capture of the plume while pumping from extraction wells TW-3D and PE-1.
- The hydraulic gradient monitoring showed that all floodplain monitoring wells where Cr(VI) was detected at greater than 20 μg/L were within the capture zone of the IM extraction system.

6.1.2 Cr(VI) Distribution and Trends

The key conclusions on Cr(VI) distribution and trends observed in the IM performance monitoring area during 2007 include:

- Overall, the groundwater Cr(VI) concentrations in the floodplain are stable or decreasing. The ongoing monitoring has shown marked decreases in Cr(VI) concentration in the floodplain areas where IM pumping exerts a strong influence on hydraulic gradients (e.g., well clusters MW-36, MW-39, and MW-44).
- Based on comprehensive groundwater sampling events (conducted October 2006 through October 2007), the positions of the 50 µg/L and 20 µg/L Cr(VI) concentration contours have remained consistent overall in the performance monitoring area. However, the Cr(VI) concentrations have decreased in many wells within the groundwater plume over this monitoring period.
- The concentration trend for MW-34-100 has shown both short-term declines and increases in concentrations since PE-1 pumping commenced in January 2006. Since June 2006, concentrations at this well have shown a general downward trend. Concentrations have slightly increased during fourth quarter 2007 sampling. Landward gradients have been present at this location since IM pumping began; therefore, the periodic increases in concentration observed at MW-34-100 do not indicate any movement of the plume toward the river.
- The distribution of Cr(VI) in the performance monitoring area is significantly affected by the redox conditions in the aquifer. Organic-rich fluvial sediments in the floodplain support a broad area of reducing conditions that convert Cr(VI) to trivalent chromium.
- The groundwater ORP and stable isotopes monitoring data confirm that continued IM extraction is drawing more oxidizing river-influenced groundwater into the performance monitoring area.

6.2 Status of Operations and Monitoring

6.2.1 Extraction System Operations

Per DTSC direction, PG&E will continue to operate both TW-3D and PE-1 at a target combined pumping rate of 135 gpm, except for periods of planned and unplanned downtime. Treated groundwater will be discharged into the IM No. 3 injection wells in accordance with Waste Discharge Requirements Order No. R7-2006-0060. Saline water generated as a byproduct of the reverse osmosis process will continue to be transported offsite for treatment and disposal.

PG&E will balance the pumping rates between TW-3D and PE-1 to maintain the target pumping rate and maintain appropriate hydraulic gradients across the Alluvial Aquifer. If, at any time, hydraulic data indicate that PE-1 pumping has the potential to draw higher concentrations of chromium away from the capture zone of TW-3D, PG&E will request authorization from DTSC to increase the pumping rate at TW-3D and decrease the rate at PE-1. TW-2D will serve as a backup extraction well to TW-3D and PE-1.

Current USBR projections show that the river levels will increase during the next quarterly reporting period (February through April 2008), and into the summer months, followed by a decline during the fall. The lowest river levels during the upcoming IM operations year are expected to occur in December 2008-January 2009. By April 2009, the average monthly river elevations are projected to reach their maximum level of the year (Figure 2-8).

6.2.2 Performance Monitoring Program

The extraction and groundwater monitoring wells in the PMP are described in Section 1.1 of this report and the specific monitoring activities are summarized in Sections 2.2 (chromium sampling), Section 2.3 (general chemistry sampling), and Section 2.4 (hydraulic gradient monitoring). Appendix E contains updated listings of the extraction and monitoring wells in the PMP area that are currently used for IM hydraulic monitoring, as well as groundwater sampling information for the wells used for chromium, geochemical, and general chemistry performance monitoring.

The PMP monitoring, evaluation, and reporting activities for the 2008 operations period will continue as described in the Performance Monitoring Plan and as directed by the DTSC. In accordance with DTSC's recent approval (DTSC, 2007a), the next IM performance monitoring report will present IM operations and performance monitoring data from February 1, 2008 through April 30, 2008 (first quarter 2008 reporting period). The next quarterly performance monitoring report will be submitted on May 30, 2008.

7.0 Recommendations for IM Performance Monitoring

As of March 2008, the IM has operated full-time for four years, and has been successful in meeting the IM objectives and performance criteria (DTSC, 2005). Given the successful performance of the current hydraulic containment system and the current IM operations strategy, described in Section 6.2.1, modifications and enhancements to the PMP are warranted at this time. This section outlines several proposed changes and modifications to the PMP that are recommended to optimize the data collection and evaluation to demonstrate IM performance.

Three components of the PMP are identified for updating and modification, based on current IM operations, recent improvements in the extraction and monitoring systems, and the evaluation of the extensive set of performance data collected to date. Table 7-1 summarizes the activities, rationale, and recommendations for the following three components of the PMP:

- Well network for hydraulic monitoring data collection,
- Contingency plan for monitoring chromium concentrations, and
- IM chemical performance monitoring.

A summary of the PMP recommendations is provided below and the supporting submittals and information for the specific recommendations are included in Appendix F.

7.1 Water Level Monitoring Well Network

Currently, approximately 65 monitoring wells are equipped with dedicated pressure transducers for full-time water level monitoring. Table E-1 and Figure E-1 in Appendix E summarize the depths and elevations of the monitoring wells on the current PMP water level network. A preliminary evaluation and rationale for updating the PMP water level data collection activity was presented in technical memorandum, dated August 23, 2006 (CH2M HILL, 2006b). This proposal was subsequently updated and included in the recommendations presented in the 2006 annual IM performance monitoring evaluation report (CH2M HILL, 2007b).

The 2006 report presented the rationale and recommendation for optimizing the PMP hydraulic monitoring activity by eliminating pressure transducer data collection at wells that are either redundant with other monitoring locations, or are not used for the routine gradient mapping and performance monitoring evaluation. The proposed modified data collection well network and rationale for this recommendation is included as Attachment F1 in Appendix F. As summarized in Table 7-1, 15 shallow, 14 mid-depth, and 21 deep monitoring wells (total 50 wells) in the PMP area are recommended to be used for routine (full-time) hydraulic data collection with dedicated pressure transducers. See Attachment F1 for the specific wells recommended for the PMP hydraulic monitoring network.

7.2 IM Contingency Plan for Cr(VI) Monitoring

An additional component of the PMP involves the IM Contingency Plan (IMCP) for monitoring and reporting Cr(VI) results in the floodplain performance monitoring area. The original IMCP was approved by DTSC as part of the IM performance requirements (DTSC, 2005). The original 2005 IMCP is outdated and doesn't reflect the current monitoring wells and current IM extraction operations strategy. Table 7-1 summarizes the background and prior submittals of the IMCP.

In August 2006, at DTSC request, PG&E submitted a revised IMCP (CH2M HILL, 2006c) that identified an expanded list of assessment monitoring wells and a revised contingency plan decision process and approach for Cr(VI) sampling, reporting, and response actions. In October 2007, the revised IMCP was submitted with a list of proposed Cr(VI) control limits (including several preliminary statistical-based limits) to be used for triggering the IMCP (CH2M HILL, 2007d). In January 2008, after additional sampling events were completed, the list of proposed Cr(VI) control limits was updated and submitted to DTSC via e-mail (CH2M HILL, 2008). The January 2008 revised IMCP, with the updated statistical control limits, is included as Attachment F2 in Appendix F. Because the IMCP that is currently in place is significantly outdated, and in light of the consistently reliable operation of the IM in the years since the initial requirement, it is recommended that DTSC evaluate the need for an IMCP and either eliminate that requirement or work with PG&E to adopt an IMCP for the PMP that is suited to the current situation.

7.3 IM Chemical Performance Monitoring

An additional recommendation for updating the general chemistry performance monitoring was developed as part of the 2007 PMP review effort and initially discussed with DTSC in October 2007. As described in Section 2.3, the chemical performance monitoring includes sampling 14 selected wells and two river locations for general chemistry parameters and stable isotopes to monitor groundwater quality changes associated with IM pumping. The IM chemical performance sampling has been ongoing since March 2004 and the analytical data collected to date is presented in Table C-2 in Appendix C. The current sampling frequency (DTSC, 2007b) and rationale for modifying the chemical performance monitoring activity is presented in Attachment F3 in Appendix F.

As outlined in Table 7-1, seven selected wells and one river location are proposed for continued sampling of general chemistry parameters and stables isotopes. The modified sampling activity (eight locations sampled annually) will maintain collection of groundwater chemistry data in key monitoring locations in the PMP area for the purposes of evaluating long-term water quality trends associated with IM extraction.

8.0 References

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Tables

TABLE 2-1
Pumping Rate and Extracted Volume from November 2007 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Extraction Well	November 2007 to January 2008[a]		Project To Date[b]
	Average Quarterly Pumping Rate[c] (gpm)	**Volume Pumped (gal)**	**Cumulative Volume Pumped (gal)**
TW-2S	0.0	5,810	1,000,779
TW-2D	0.3	36,733	53,058,650
TW-3D	100.7	13,339,675	108,827,073
PE-1	31.0	4,107,655	34,893,511
Total	132.0	17,489,873	197,780,013
		Volume Pumped from the MW-20 Well Cluster	1,527,724
		Total Volume Pumped (gal)	199,307,737
		Total Volume Pumped (ac-ft)	611.7

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

[a] Pumping information during the quarterly period is based on readings collected between November 1, 2007 at 12:00 a.m. and January 31, 2008 at 11:59 p.m. (92 days).
[b] Interim Measure groundwater extraction at the Topock site was initiated in March 2004.
[c] The "Average Quarterly Pumping Rate" is the overall average during the quarterly period, including system downtime based on flow meter readings.

TABLE 2-2
Analytical Results for Extraction Wells, August 2007 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Sample Date	Dissolved Total Chromium µg/L	Hexavalent Chromium µg/L	Total Dissolved Solids mg/L
TW-3D	08-Aug-07	1800	1930	5130
TW-3D	05-Sep-07	2110	2260	4940
TW-3D	03-Oct-07	1860	2000	5110
TW-3D	13-Nov-07	1570	1790	4910
TW-3D	12-Dec-07	2040	1800	5660
TW-3D	03-Jan-08	2210	1830	5070
PE-1	08-Aug-07	60.7	51.4	4270
PE-1	05-Sep-07	49.2	49.1	4220
PE-1	03-Oct-07	45.4	52.6	4400
PE-1	13-Nov-07	51.8	49.6	4150
PE-1	12-Dec-07	54.5	47.3	4530
PE-1	03-Jan-08	56.9	48.4	3790

NOTES:

µg/L = concentration in micrograms per liter
mg/L = concentration in milligrams per liter

Analytical results from inactive extraction wells are presented in Table B-2.
Groundwater samples from active extraction wells are taken at sample taps in Valve Vault 1 on the MW-20 Bench.

TABLE 2-3
Calculated Hydraulic Gradients for Well Pairs, November 2007 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well Pair[1]	Reporting Period 2007-2008	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Period 2007-2008
Northern Gradient Pair			
MW-31-135 / MW-33-150	November	0.0025	Nov-1 through Nov-30
	December	0.0023	Dec-1 through Dec-31
	January	0.0025	Jan-1 through Jan-31
Central Gradient Pair[3]			
MW-45-95 / MW-34-100	November	0.0111	Nov-1 through Nov-30
	December	0.0115	Dec-1 through Dec-31
	January	0.0101	Jan-1 through Jan-28
Southern Gradient Pair[4]			
MW-45-95 / MW-27-85	November	0.0044	Nov-1 through Nov-30
	December	0.0044	Dec-1 through Dec-31
	January	0.0043	Jan-1 through Jan-28

Notes:

1. Refer to Figure 1-2 for location of well pairs
2. For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot
3. With approval from DTSC, this well pair replaced MW-20-130 / MW-34-80.
4. With approval from DTSC, this well pair replaced MW-20-130 / MW-42-65.

TABLE 2-4
Predicted and Actual Monthly Average Davis Dam Discharge and Colorado River Elevation at I-3
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

	Davis Dam Release			Colorado River Elevation at I-3		
Month	Projected (cfs)	Actual (cfs)	Difference (cfs)	Predicted (ft AMSL)	Actual (ft AMSL)	Difference (feet)
February 2005	8,000	4,820	-3,180	453.1	452.6	-0.5
March 2005	15,600	7,110	-8,490	455.8	452.9	-2.9
April 2005	16,700	16,306	-394	455.9	456.0	0.1
May 2005	16,700	15,579	-1,121	456.2	456.1	-0.1
June 2005	14,600	15,223	623	455.8	456.1	0.3
July 2005	15,400	15,612	212	456.0	456.0	0.0
August 2005	11,700	11,544	-156	454.6	454.8	0.2
September 2005	12,400	12,335	-65	454.6	NA	NA
October 2005	12,300	11,201	-1,099	454.5	454.3	-0.2
November 2005	10,900	10,216	-684	454.3	454.3	0
December 2005	6,900	6,745	-155	452.8	452.7	-0.1
January 2006	8,400	9,166	766	453.2	453.6	0.4
February 2006	11,100	10,790	-310	454.1	454.1	0.1
March 2006	13,000	12,429	-571	454.7	454.8	0.2
April 2006	16,600	18,300	1700	456.0	456.1	0.0
May 2006	15,500	16,818	1318	456.0	456.3	0.3
June 2006	16,100	17,547	1447	456.2	456.4	0.2
July 2006	14,700	15,171	-471	455.7	455.8	0.1
August 2006	12,900	12,871	29	454.9	455.1	0.1
September 2006	12,100	12,409	-309	454.7	454.7	0.0
October 2006	11,400	11,150	250	454.1	454.4	0.3
November 2006	8,300	8,222	78	452.9	453.3	0.4
December 2006	8,100	8,823	-723	453.0	453.4	0.4
January 2007	8,600	8,796	-196	453.2	453.6	0.4
February 2007	9,800	11,680	-1,880	453.6	454.3	0.7
March 2007	14,300	14,554	-254	455.1	455.6	0.5
April 2007	17,300	16,818	482	456.4	456.4	0.0
May 2007	16,800	16,199	601	456.5	456.4	-0.1
June 2007	16,000	16,212	-212	456.4	456.4	0.0
July 2007	14,900	14,897	3	455.8	456.0	0.2
August 2007	12,100	12,776	-676	454.7	455.4	0.7
September 2007	12,700	13,050	-350	454.8	455.4	0.5
October 2007	10,600	10,324	276	454.0	454.3	0.3
November 2007	9,100	8,387	713	453.6	453.6	0.0
December 2007	5,700	6,445	-745	452.3	452.7	0.4
January 2008	9,300	8,900	400	453.5	453.6	0.1
February 2008	10,100	--	--	453.8	--	--

Notes:

1. cfs = cubic feet per second; ft AMSL = feet above mean sea level; NA = not available

2. Predicted Colorado River elevations (river levels) at I-3 are based upon USBR projections for Davis Dam releases and Lake Havasu elevations from the preceding month, using a multiple regression between historical dam releases and measured river levels at I-3 (updated monthly). This data is reported monthly by the USBR at http://www.usbr.gov/lc/region/g4000/24mo.pdf

3. The difference in I-3 elevation is the difference between the I-3 elevation predicted, and the actual elevation measured at I-3. The main source of this difference is differences between BOR projections and actual dam releases/Havasu reservoir levels, rather than the multiple regression error.

TABLE 3-1

Summary of Pumping Rate and Extracted Volume for 2007 Reporting Period

Annual IM Performance Monitoring Report

PG&E Topock Compressor Station

Reporting Period	Target Pump Rate[1] (gpm)	Actual Monthly Pump Rate (gpm)	Individual Extraction Well Operations				Total Volume (gallons)
			TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	
Feb-07	135	134.3	0	0	4,085,607	1,329,440	5,415,047
Mar-07	135	131.5	0	0	4,401,973	1,468,489	5,870,462
Apr-07	135	104.0	0	0	3,370,364	1,122,608	4,492,972
May-07	135	135.6	0	0	4,572,112	1,479,560	6,051,672
Jun-07	135	136.4	0	0	4,490,440	1,401,282	5,891,722
Jul-07	135	132.2	0	0	4,472,504	1,429,508	5,902,012
Aug-07	135	132.0	0	2,164	4,469,536	1,419,770	5,891,470
Sep-07	135	134.2	0	1,810	4,432,824	1,363,426	5,798,060
Oct-07	135	135.8	531	2,942	4,636,776	1,421,656	6,061,905
Nov-07	135	132.1	0	21,438	4,345,369	1,338,040	5,704,847
Dec-07	135	132.6	5,810	12,102	4,510,090	1,391,988	5,919,990
Jan-08	135	131.4	0	3,193	4,484,216	1,377,627	5,865,036
Totals for 2007 Annual Period		**131.4**	**6,341**	**43,649**	**52,271,811**	**16,543,394**	**68,865,195**

Notes:

gpm: gallons per minute

[1]The target pumping rate of 135 gpm, excluding periods of planned and unplanned downtime, was maintained by pumping from extraction wells TW-3D and PE-1 during the 2007 reporting period.

Extraction wells TW-2S and TW-2D were only used for interim service or to support field operations.

TABLE 3-2
Analytical Results from Extraction Wells for 2007 Reporting Period
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Sample Date	Dissolved Total Chromium µg/L	Hexavalent Chromium µg/L	Total Dissolved Solids mg/L
TW-3D	10-Jan-07	2580	2440	5520
TW-3D	06-Feb-07	2310	2400	5780
TW-3D	07-Mar-07	2500	2420	6040
TW-3D	13-Jun-07	2350	2000	5570
TW-3D	11-Jul-07	2390	2000	5390
TW-3D	08-Aug-07	1800	1930	5130
TW-3D	05-Sep-07	2110	2260	4940
TW-3D	03-Oct-07	1860	2000	5110
TW-3D	13-Nov-07	1570	1790	4910
TW-3D	12-Dec-07	2040	1800	5660
TW-3D	03-Jan-08	2210	1830	5070
* TW-3D/PE-1	04-Apr-07	1250	1630	5310
* TW-3D/PE-1	02-May-07	1380	1690	5480
PE-1	10-Jan-07	103	88.9	5320
PE-1	06-Feb-07	89.5	80.8	5440
PE-1	07-Mar-07	91.0	84.7	5500
PE-1	13-Jun-07	48.1	52.0	4920
PE-1	11-Jul-07	39.7	47.1	4320
PE-1	08-Aug-07	60.7	51.4	4270
PE-1	05-Sep-07	49.2	49.1	4220
PE-1	03-Oct-07	45.4	52.6	4400
PE-1	13-Nov-07	51.8	49.6	4150
PE-1	12-Dec-07	54.5	47.3	4530
PE-1	03-Jan-08	56.9	48.4	3790

NOTES

µg/L = concentration in micrograms per liter
mg/L = concentration in milligrams per liter
Analytical results from inactive extraction wells are presented in Table B-2.
Groundwater samples from active extraction wells are taken at sample taps in Valve Vault 1 on the MW-20 Bench.

* Well specific samples were not collected in April and May 2007. Results are presented from samples that were obtained from a sample point (SC-100B) on the influent conveyance system at the IM3 treatment system. These samples were unfiltered.

TABLE 4-1
Calculated Hydraulic Gradients for Well Pairs by Month for 2007 Reporting Period
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well Pair[1]	Reporting Period 2007-2008	Mean Landward Hydraulic Gradient[2] (feet/foot)	Measurement Period 2007-2008
Northern Gradient Pair			
MW-31-135 / MW-33-150	February	0.0028	Feb-1 through Feb-28
	March	0.0028	Mar-1 through Mar-30
	April	0.0022	Apr-1 through Apr-30
	May	0.0024	May-1 through May-30
	June	0.0024	Jun-1 through Jun-28
	July	0.0024	Jul-1 through Jul-31
	August	0.0024	Aug-1 through Aug-31
	September	0.0025	Sep-1 through Sep-30
	October	0.0024	Oct-1 through Oct 31
	November	0.0025	Nov-1 through Nov-30
	December	0.0023	Dec-1 through Dec-31
	January	0.0025	Jan-1 through Jan-31
Central Gradient Pair			
MW-20-130 / MW-34-80	February	0.0037	Feb-1 through Feb-28
	March	0.0040	Mar-1 through Mar-30
	April	0.0036	Apr-1 through Apr-30 [3]
	May	0.0042	May-1 through May-31
	June	0.0041	Jun-1 through Jun-28
	July	0.0036	Jul-1 through Jul-31
MW-45-95 / MW-34-100[4]	August	0.0117	Aug-1 through Aug-31
	September	0.0119	Sep-1 through Sep-30
	October	0.0119	Oct-1 through Oct-31
	November	0.0111	Nov-1 through Nov-30
	December	0.0115	Dec-1 through Dec-31
	January	0.0101	Jan-1 through Jan-28
Southern Gradient Pair			
MW-20-130 / MW-42-65	February	0.0042	Feb-1 through Feb-28
	March	0.0045	Mar-1 through Mar-31
	April	0.0037	Apr-1 through Apr-30 [3]
	May	0.0045	May-1 through May-31
	June	0.0045	Jun-1 through Jun-28
	July	0.0035	Jul-1 through Jul-31
MW-45-95 / MW-27-85[5]	August	0.0047	Aug-1 through Aug-31
	September	0.0043	Sep-1 through Sep-30
	October	0.0047	Oct-1 through Oct 31
	November	0.0044	Nov-1 through Nov-30
	December	0.0044	Dec-1 through Dec-31
	January	0.0043	Jan-1 through Jan-28

Notes:

1. Refer to Figure 1-2 for location of well pairs
2. For IM pumping, the target landward gradient for the selected well pairs is 0.001 feet/foot
3. Data not available April 7-8, 2007 for this well pair.
4. With approval from DTSC, this well pair replaced MW-20-130 / MW-34-80.
5. With approval from DTSC, this well pair replaced MW-20-130 / MW-42-65.

TABLE 7-1
Summary of Recommended Modifications to IM Performance Monitoring Program
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

PMP Component	Current Activity	Proposed Activity	Rationale
1. Well Network Maintained for Full-Time Hydraulic Monitoring for Gradient Contour Maps	21 Shallow Wells 15 Mid-Depth Wells 29 Deep Wells	15 Shallow Wells 14 Mid-Depth Wells 21 Deep Wells	Only monitoring wells in IM containment area with well screens at comparable elevations within the primary aquifer depth intervals are needed and applicable for gradient contour mapping.
2. IM Contingency Plan (IMCP) for Monitoring Chromium Concentrations in IM Containment Area	Original IMCP (February 2005) identified 3 sentry wells where new Cr(VI) detections or increasing concentrations would trigger response actions for IM.	IMCP submittals August 2006, October 2007, and January 2008 identified an expanded list of assessment wells, revised decision process, and assigned Cr(VI) control limits that would trigger response actions.	February 2005 IMCP is outdated and doesn't reflect current monitoring wells and current IM extraction operations strategy.
3. IM Chemical Performance Monitoring	IM chemical monitoring initiated March 2004. Currently monitoring: 5 wells sampled semiannually 6 wells sampled annually 1 well sampled biennially 2 river stations sampled quartertly	7 wells sampled annually 1 river station sampled annually	Chemical monitoring at selected locations and reduced frequency will be adequate for evaluating long-term water quality trends associated with IM pumping.

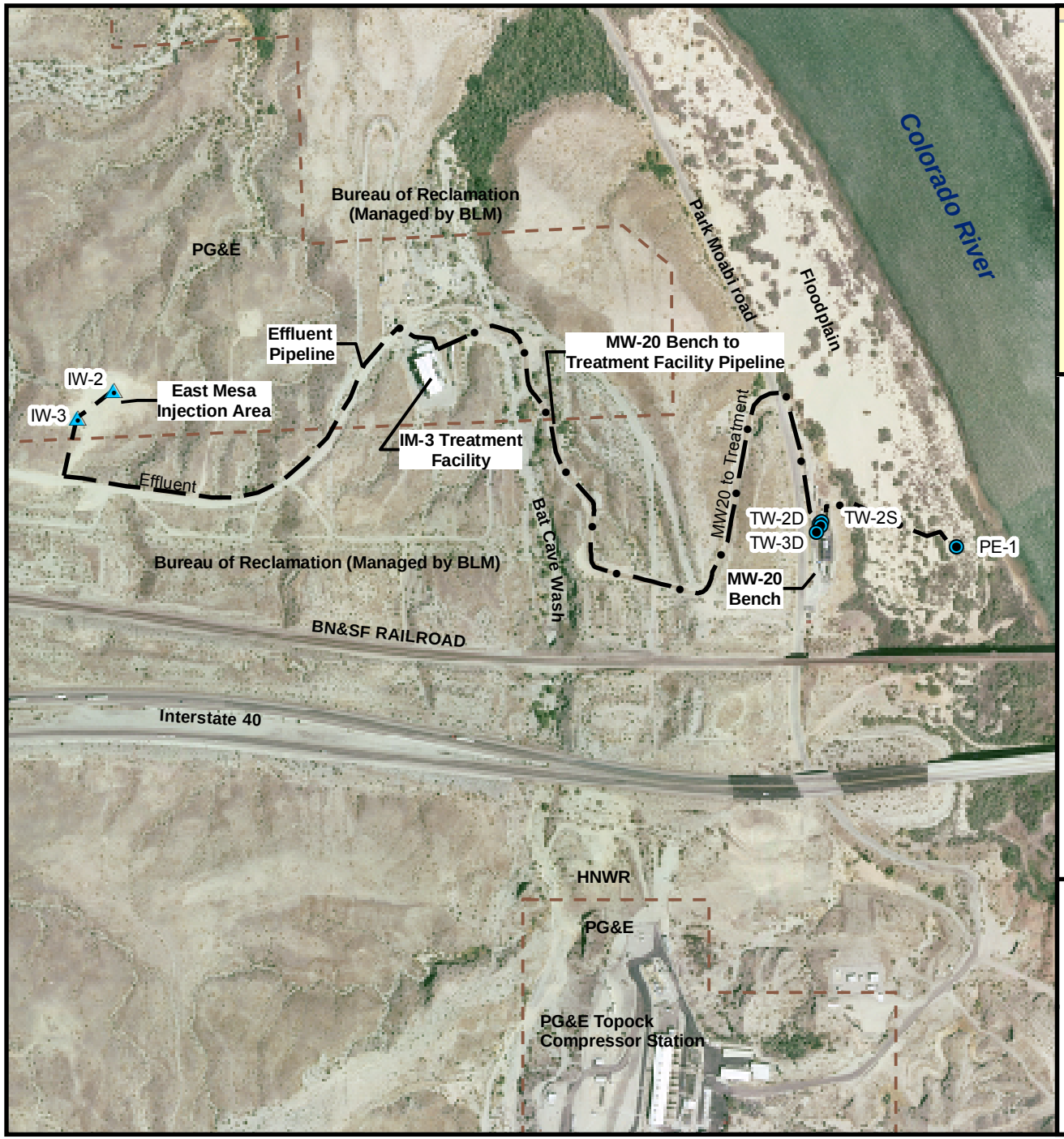
Notes:

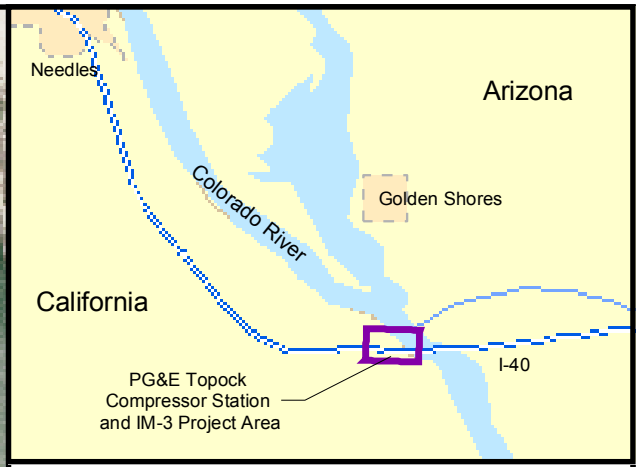
1. Hydraulic Monitoring Network Submittals:
   Initial Technical Memorandum for modifying hydraulic data collection activity submitted to DTSC August 23, 2006
   Updated proposal for hydraulic monitoring network submitted in 2006 Annual Performance Monitoring Report, April 6, 2007 [**see Attachment F1, Appendix F**]

2. IM Contingency Plan Submittals:
   Revised IMCP, developed with DTSC, submitted to DTSC August 15, 2006
   Revised IMCP (with preliminary statistical control limits) submitted to DTSC October 2, 2007
   Revised IMCP (with updated statistical control limits) submitted to DTSC January 15, 2008 [**see Attachment F2, Appendix F**]

3. IM Chemical Performance Monitoring Submittals:
   Initial proposal for modifying chemical monitoring submitted to DTSC October 2, 2007
   Revised proposal for modifying chemical monitoring, updated December 19, 2007 and submitted in this Report [**see Attachment F3, Appendix F**]

Figures





N

0 550 1,100 Feet

1 inch equals 550 feet

LEGEND

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

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

FIGURE 1-1
LOCATIONS OF IM NO. 3 GROUNDWATER EXTRACTION, CONVEYANCE, AND TREATMENT FACILITIES

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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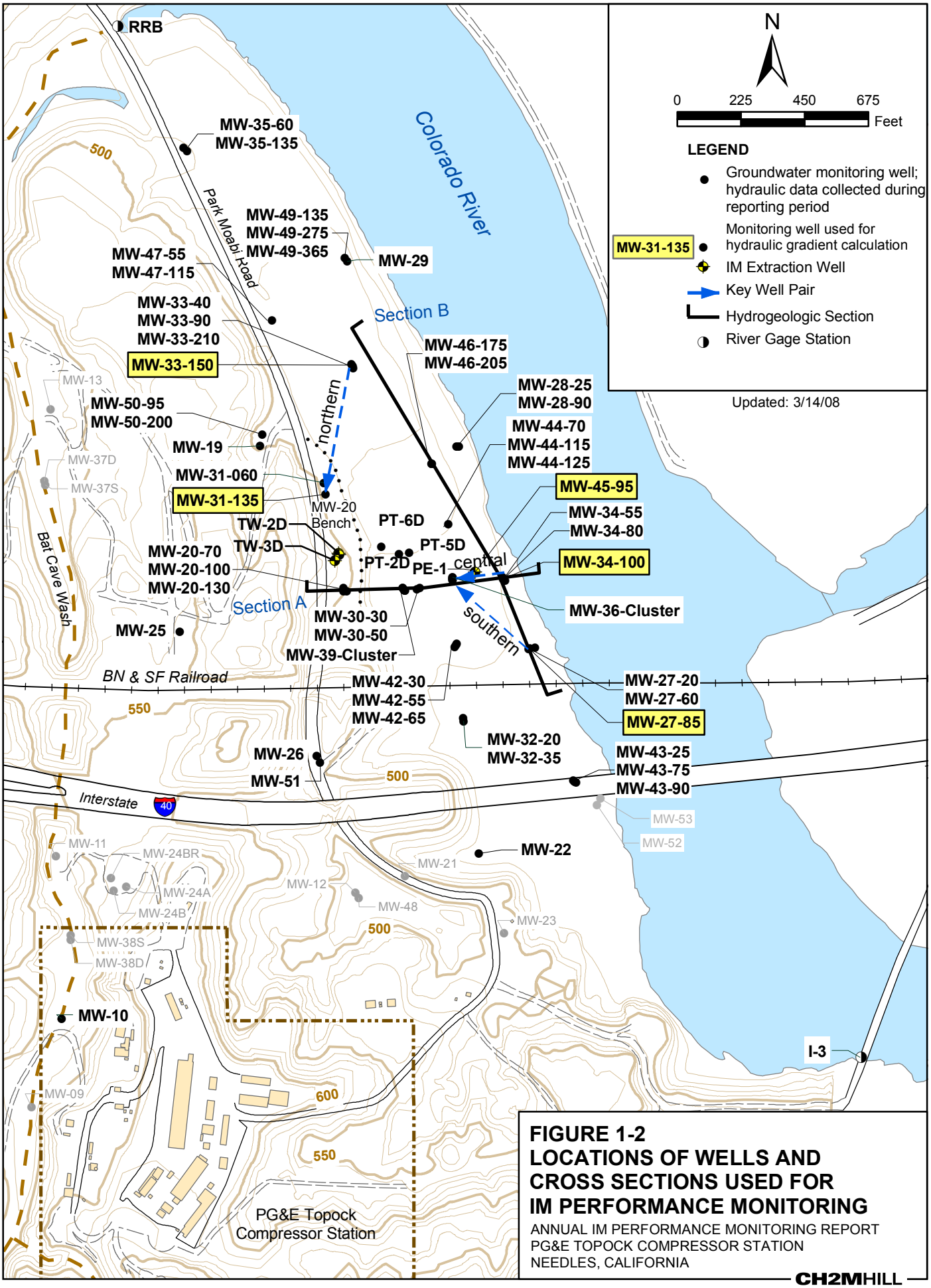

FIGURE 1-2
LOCATIONS OF WELLS AND CROSS SECTIONS USED FOR IM PERFORMANCE MONITORING
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PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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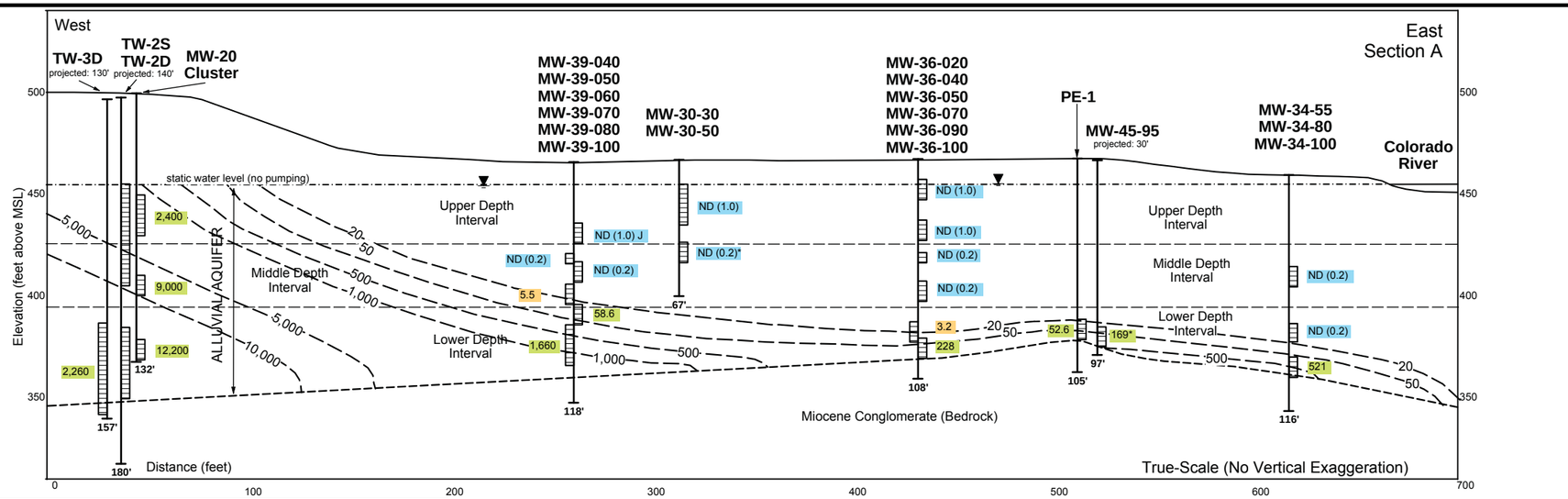

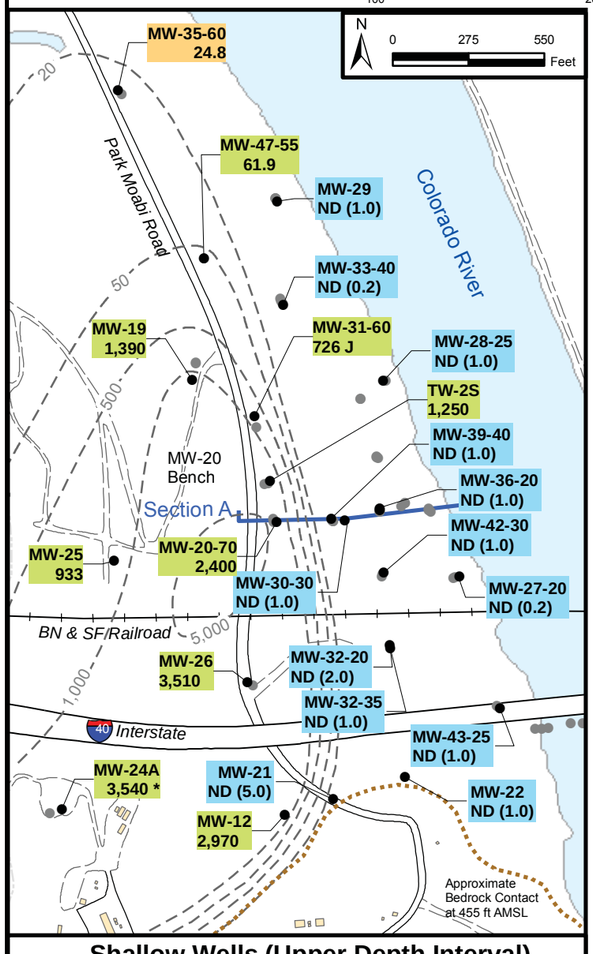

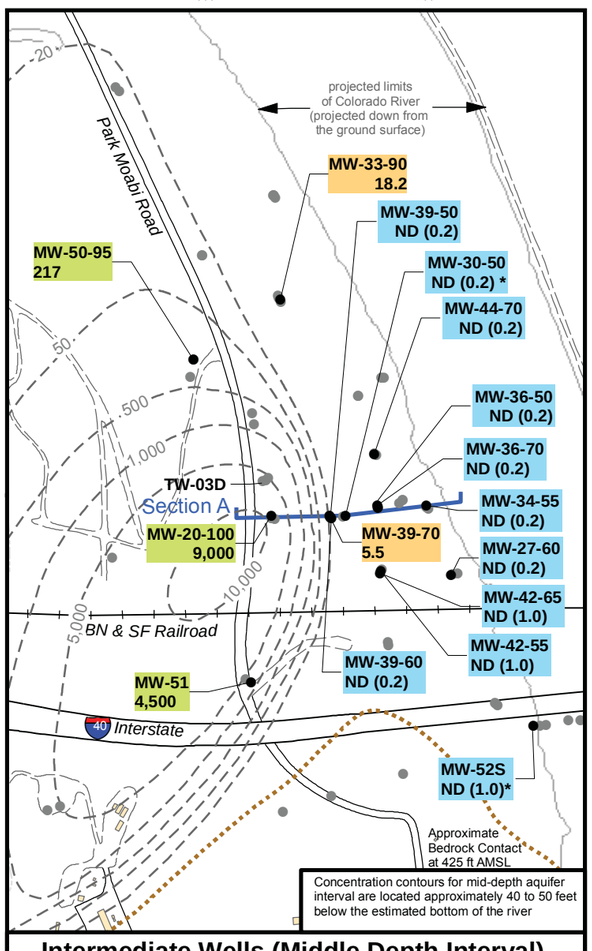

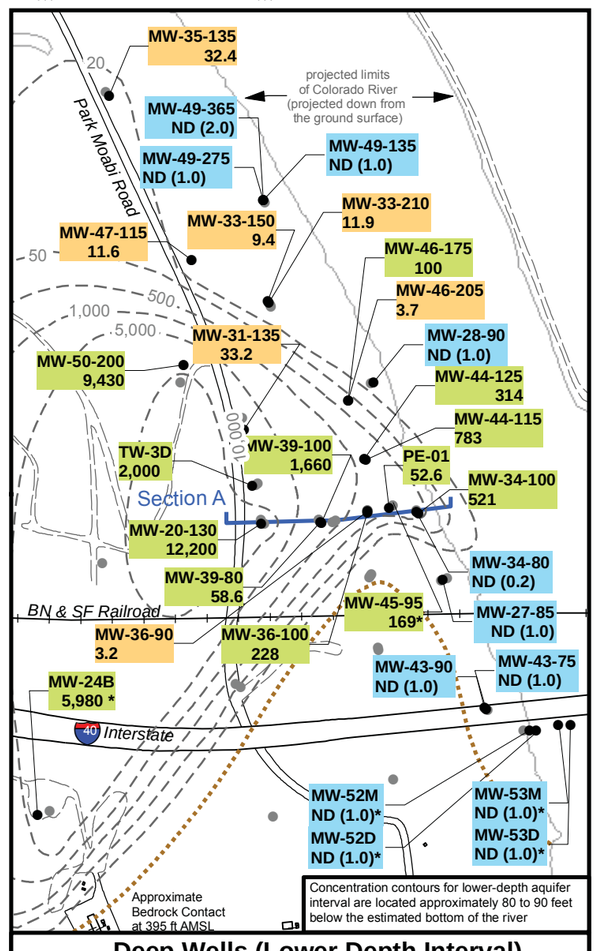

LEGEND

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

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

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

Results from October 2007 groundwater sampling are posted.
* Indicates results from March & May 2007 sampling.

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

ND (1)	Not detected at listed reporting limit (ppb)
41	Less than 50 ppb
3,810	Greater than 50 ppb
50	Inferred Cr(VI) concentration contour within aquifer depth interval
	Contours incorporate the maximum concentration from wells within each depth interval
	Hydrogeologic Section A (true-scale) showing aquifer depth intervals, well screens, and Cr(VI) sampling results.

NOTES ON CONTOUR MAPS

1. The Cr(VI) contour maps for 2006-2007 performance monitoring incorporate data from new wells and water quality data trends for the floodplain area. The contour maps provide additional interpretation of plume limits and do not reflect plume migration during performance monitoring

2. The locations of the Cr(VI) contours shown for depths 80-90 feet below the Colorado River (east and southeast of well clusters MW-34) are estimated based on hydrogeologic and geochemical conditions documented in site investigations 2004-2006. The actual locations of contours beyond well control points in these areas are not certain, but are inferred using available site investigation and monitoring data (bedrock structure, hydraulic gradients, observed distribution of geochemically reducing conditions and Cr(VI) concentration gradients). There are no data confirming the existence of Cr(VI) under the Colorado River.

FIGURE 2-1
MAXIMUM CR(VI) CONCENTRATIONS IN ALLUVIAL AQUIFER, OCTOBER 2007

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PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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North

South
Section B

Cross-Section Parallel to the Colorado River

BN & SF Railroad

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

MW-46-175
MW-46-205

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

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

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

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

water table (average 454' MSL)

Upper Depth Interval

Middle Depth Interval

Lower Depth Interval

ALLUVIAL AQUIFER

Oldest Alluvium

Fluvial Deposits

Approximate geologic contact between alluvial fan and fluvial deposits

ND (0.2)
18.2
9.4
11.9
237'

ND (1.0)
ND (1.0)
100
3.7
216'

ND (0.2)
783
314
134'

ND (0.2)
ND (0.2)
ND (0.2)
521
116'

Upper Depth Interval
Middle Depth Interval
Lower Depth Interval
ND (0.2)
ND (0.2)
ND (1.0)
107'

20
50
500

Miocene Conglomerate (Bedrock)

Elevation (feet above MSL)

700
600
500
400
300
200
100
0

True-Scale (No Vertical Exaggeration)

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

Notes:

Results are from October 2007 sampling event. See Table B-1 for sampling data.

Results posted are maximum concentrations from primary and duplicate samples.

water level

well screen

3,810

boring depth (feet) 103'

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

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

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

FIGURE 2-2a
MAXIMUM Cr(VI) CONCENTRATIONS FLOODPLAIN CROSS-SECTION B, OCTOBER 2007

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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North

South
Section B

Cross-Section Parallel to the Colorado River

BN & SF Railroad

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

MW-46-175
MW-46-205

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

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

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

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

Elevation (feet above MSL)

700
600
500
400
300
200
100
0

water table (average 454' MSL)

ALLUVIAL AQUIFER

Oldest Alluvium

Fluvial Deposits

Upper Depth Interval
Middle Depth Interval
Lower Depth Interval

0.4
21.0
8.9
13.3
237'

NS
ND (0.2)
123
3.5
216'

ND (0.2)
767
359
134'

NS
ND (1.0)
614
116'

NS
NS
ND (1.0)
107'

20
50
500

Approximate geologic contact between alluvial fan and fluvial deposits

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

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

Notes:
Results posted are maximum concentrations from primary and duplicate samples, December 2007 and January 2008 sampling events.

See Table B-1 for complete sampling results and results for wells not sampled during December 2007 or January 2008.

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

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

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

ND (1)	Not detected at listed reporting limit (ppb)
42	Less than 50 ppb
3,810	Greater than 50 ppb
NS	Well not sampled during reporting period

FIGURE 2-2b
MAXIMUM Cr(VI) CONCENTRATIONS FLOODPLAIN CROSS-SECTION B, DECEMBER 2007 AND JANUARY 2008

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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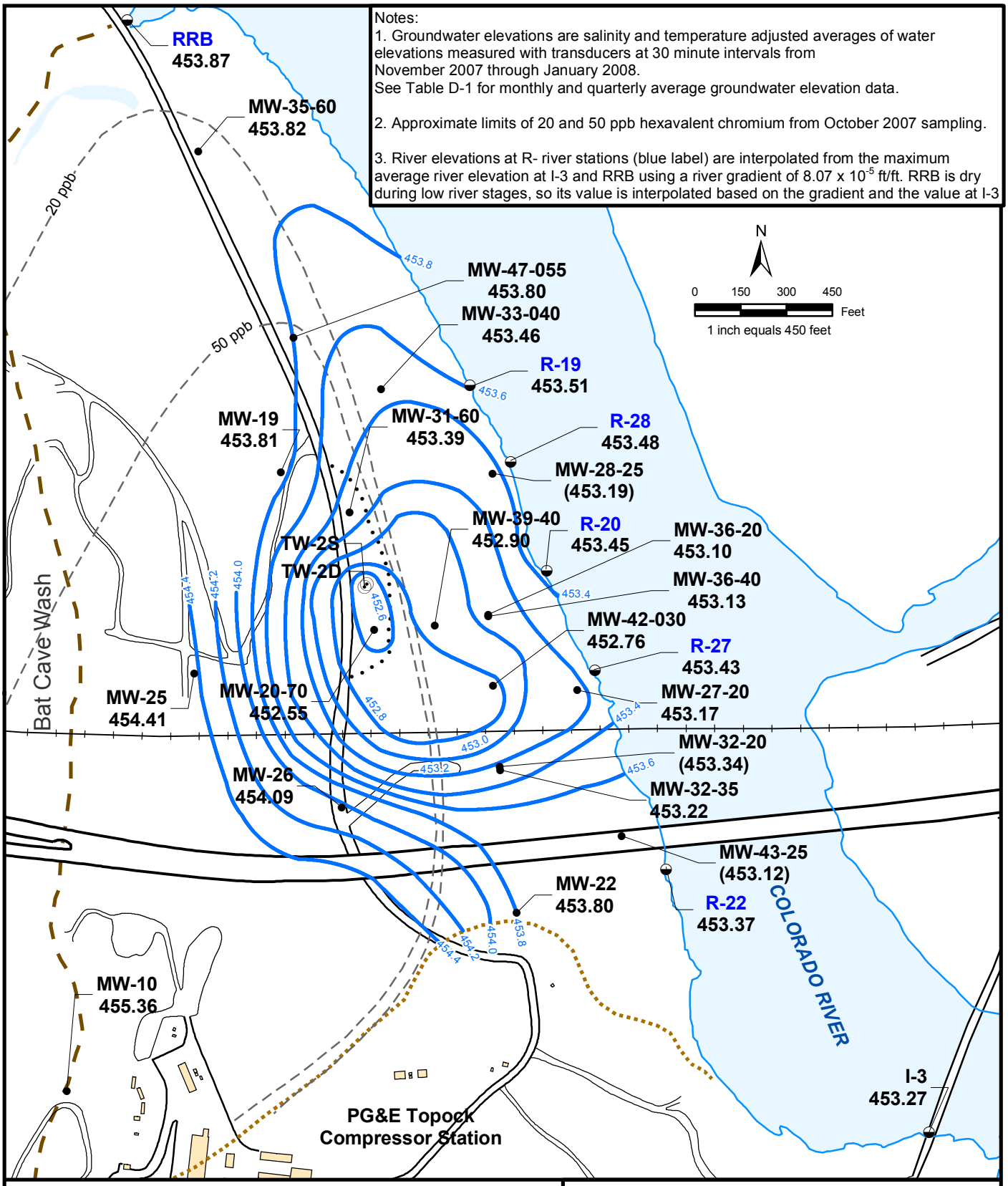

FIGURE 2-3
AVERAGE GROUNDWATER ELEVATIONS IN SHALLOW WELLS, NOVEMBER 2007 THROUGH JANUARY 2008

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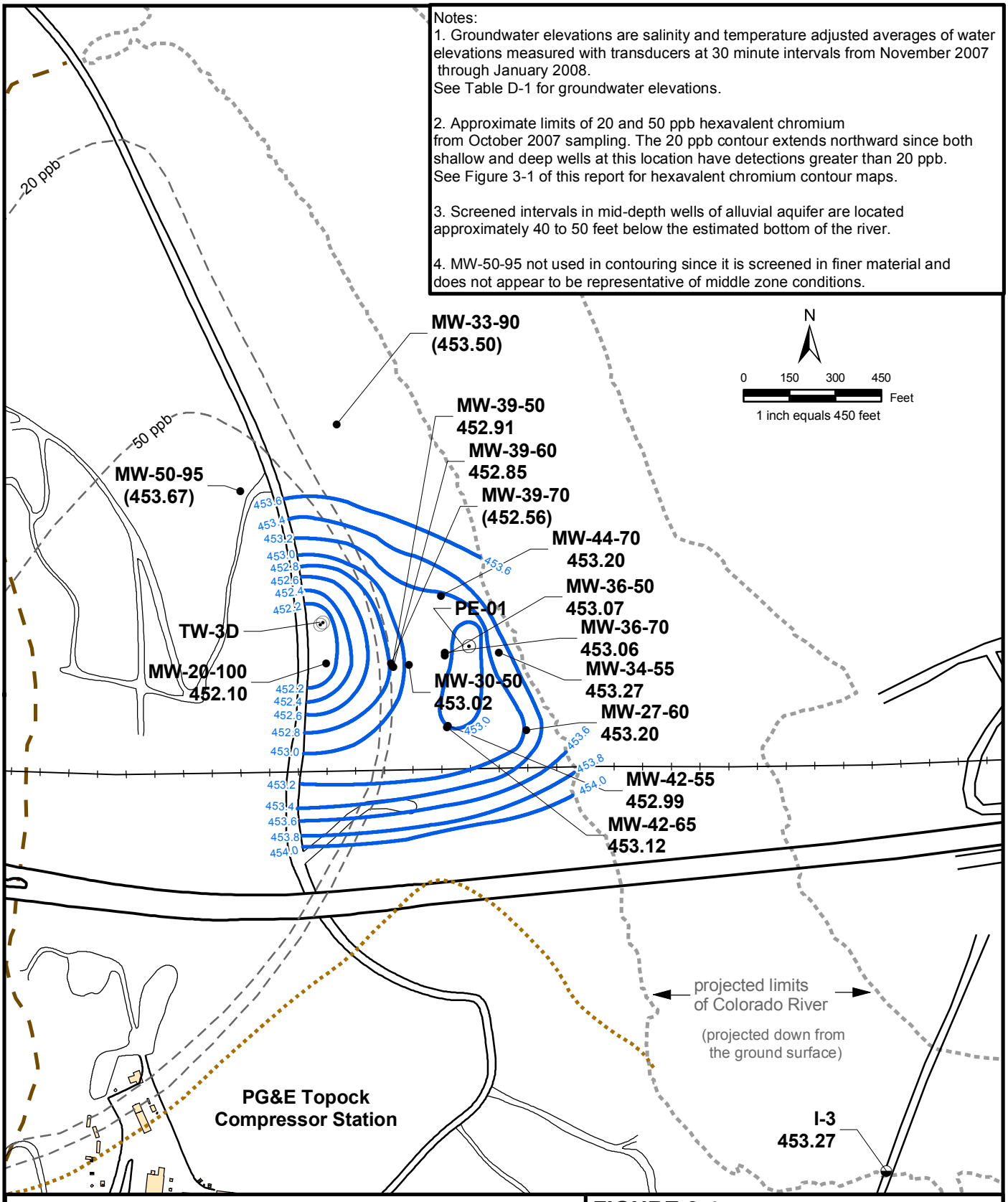

FIGURE 2-4
AVERAGE GROUNDWATER ELEVATIONS IN MID-DEPTH WELLS, NOVEMBER 2007 THROUGH JANUARY 2008

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PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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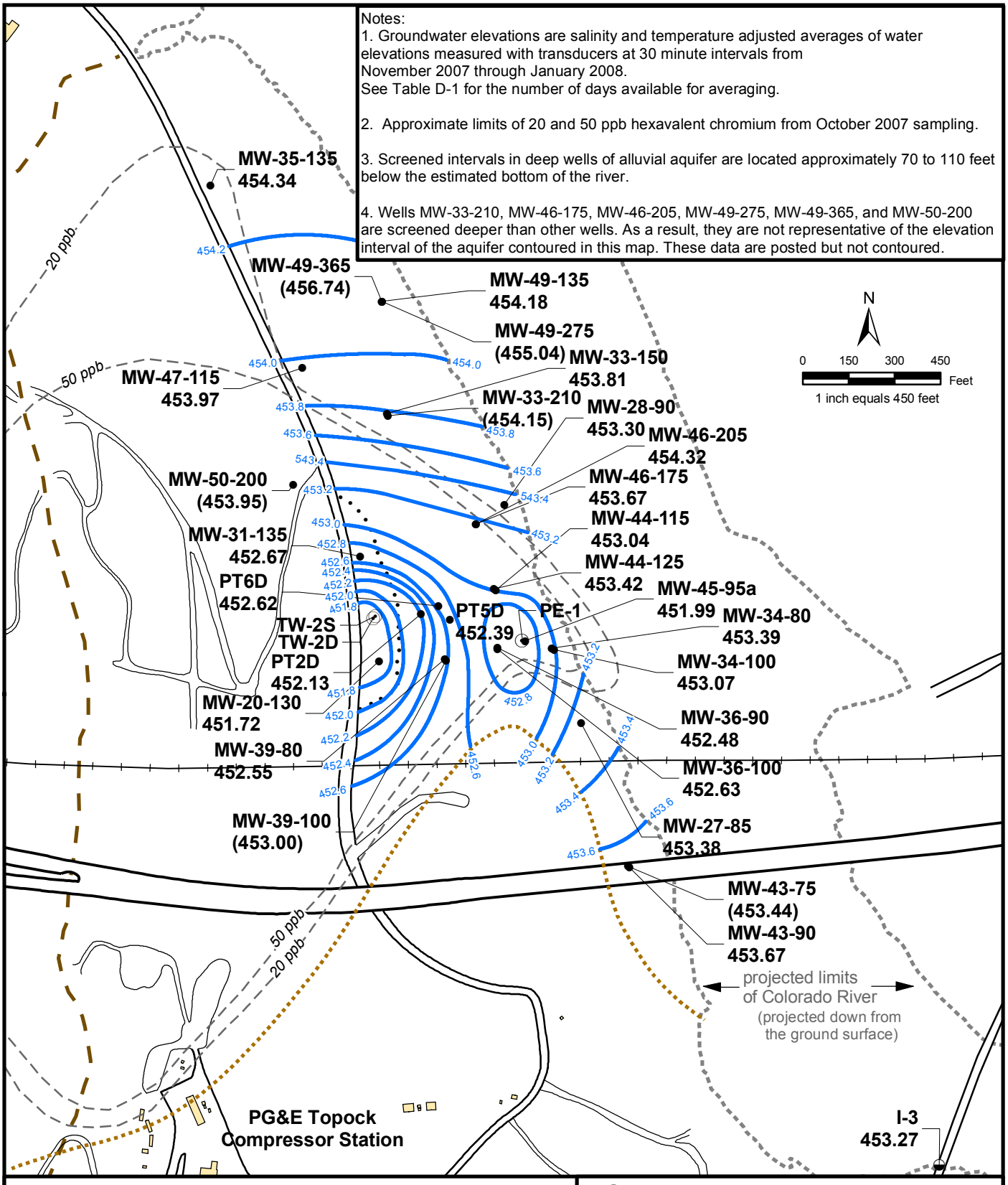

FIGURE 2-5
AVERAGE GROUNDWATER ELEVATIONS IN DEEP WELLS, NOVEMBER 2007 THROUGH JANUARY 2008

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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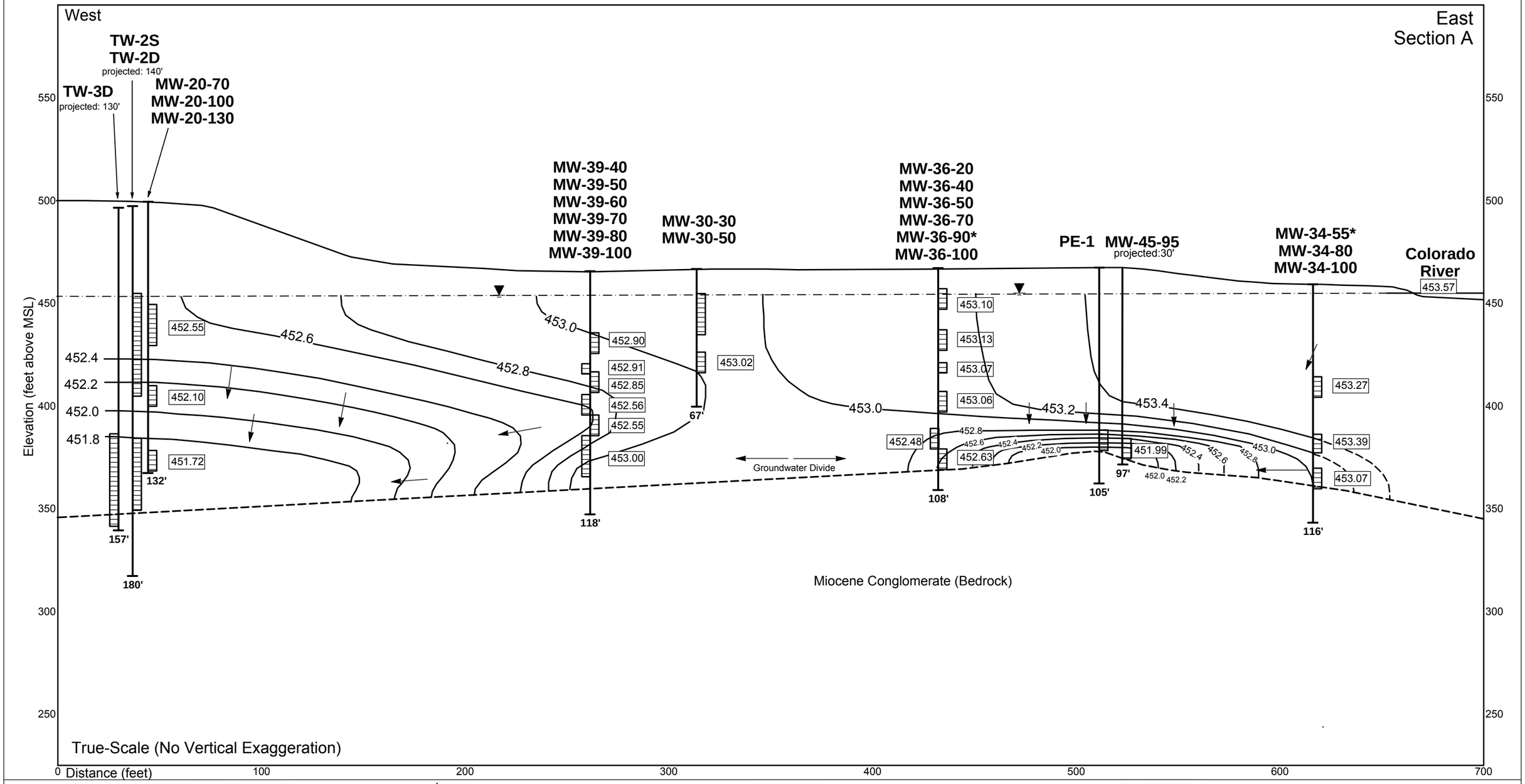

Notes:
Results show average groundwater elevations for November 1, 2007 through January 31, 2008.

Groundwater elevations adjusted for salinity and temperature.
Wells MW-34-55* and MW-36-90* are excluded from contouring.
River elevation (R-20) is the calculated average river level based upon the river gradient between RRB and I-3.

Legend:

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

453.5 Groundwater head contour

453.5 Inferred groundwater head contour

Interpreted groundwater flow direction

FIGURE 2-6
AVERAGE GROUNDWATER ELEVATIONS FOR WELLS ON FLOODPLAIN
CROSS SECTION A
NOVEMBER 2007 THROUGH JANUARY 2008

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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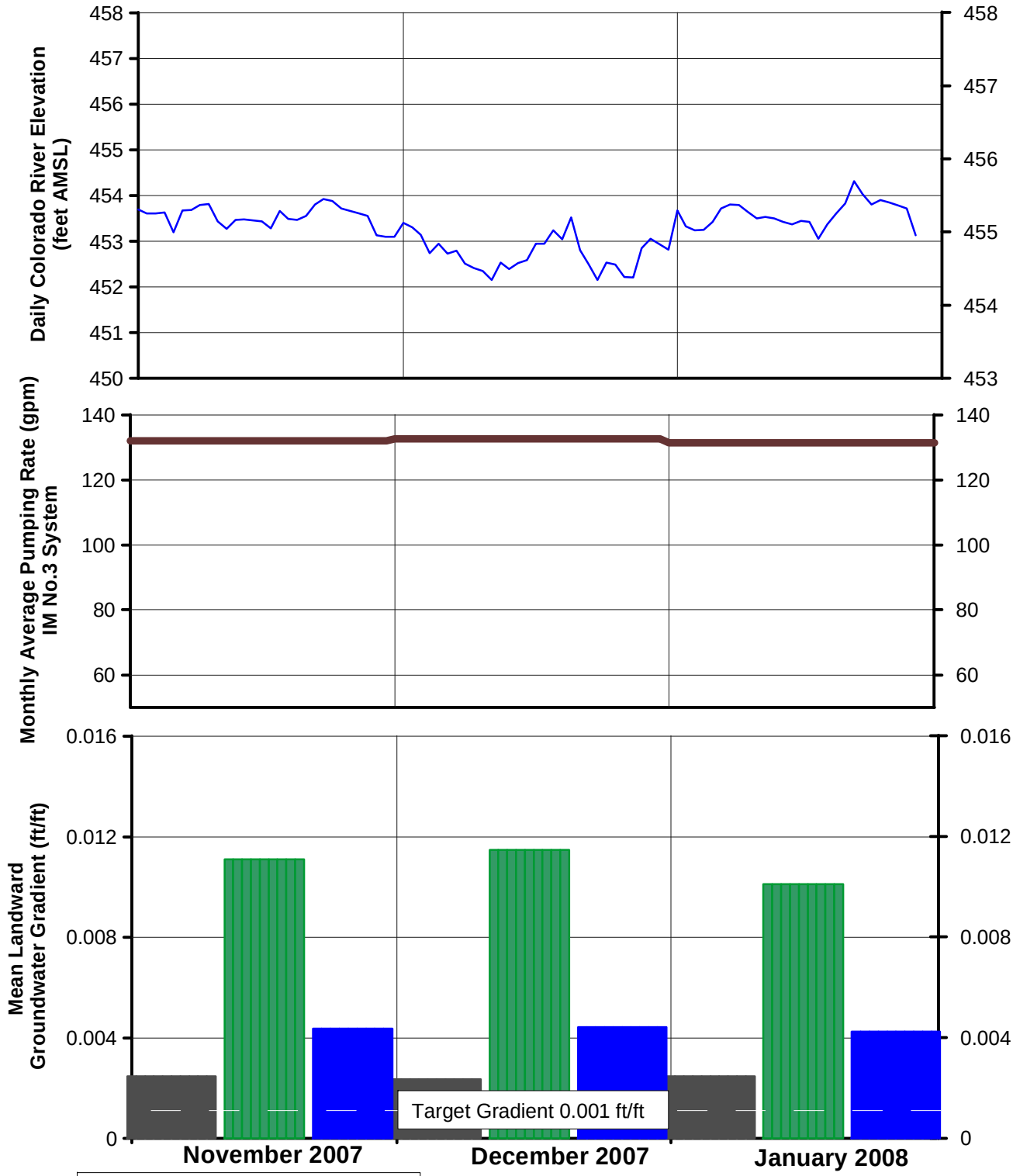

Notes:

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

FIGURE 2-7
MEASURED HYDRAULIC GRADIENTS, RIVER ELEVATION AND PUMPING RATE NOVEMBER 2007 THROUGH JANUARY 2008
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
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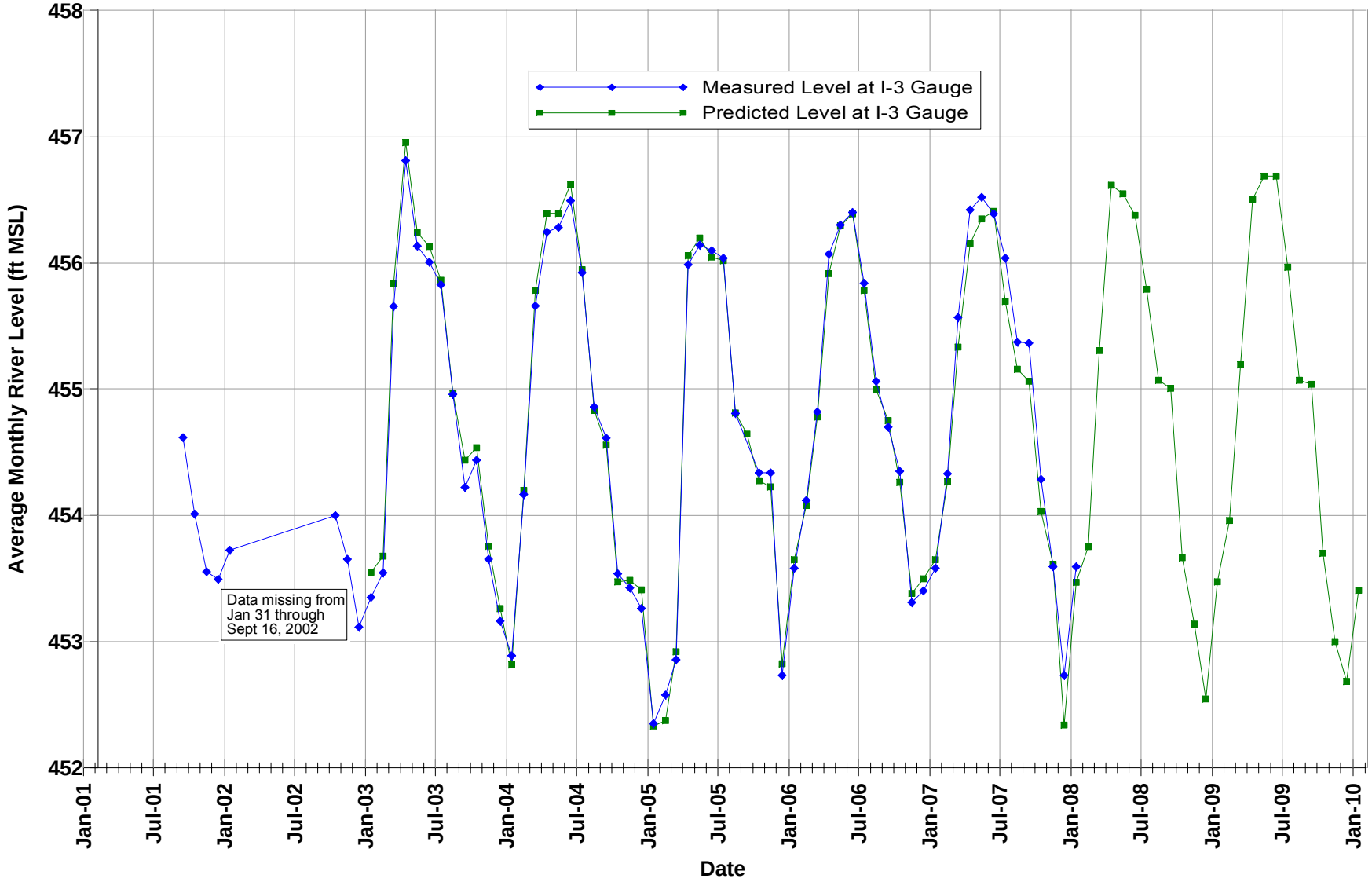

Note:
Projected river level is calculated based on monthly averages of Davis Dam release and stage in Lake Havasu as of February 12, 2008.
Measured data through January 31, 2008.
I-3 data unavailable from September 18 through October 4, 2006
River projections at I-3 are based upon February 2008 USBR projections.

FIGURE 2-8
PAST AND PREDICTED FUTURE RIVER LEVELS AT TOPOCK COMPRESSOR STATION

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NEEDLES, CALIFORNIA

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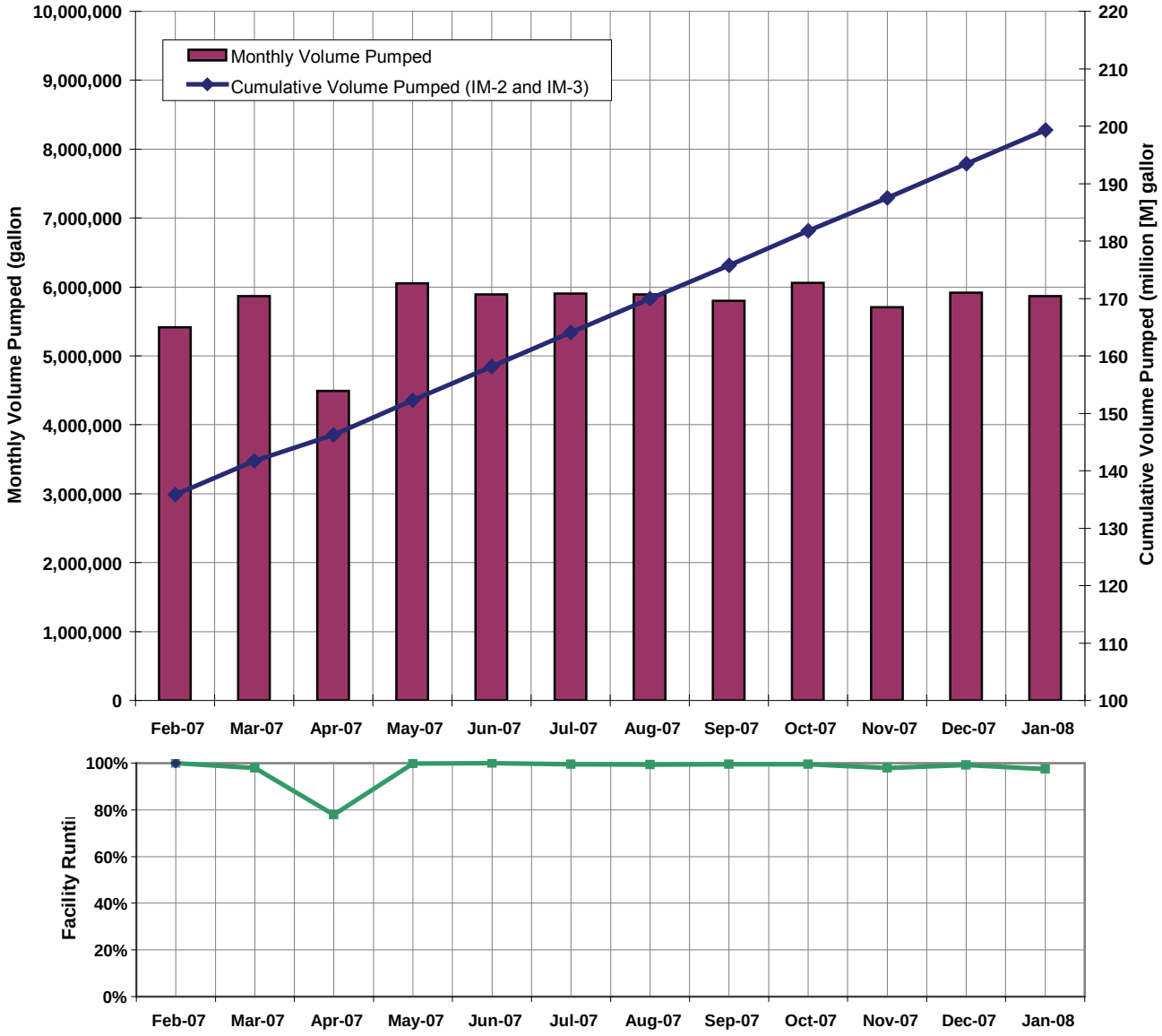

FIGURE 3-1
MONTHLY COMBINED PUMPING VOLUMES AND PERCENT UPTIME OVER 2007 REPORTING PERIOD
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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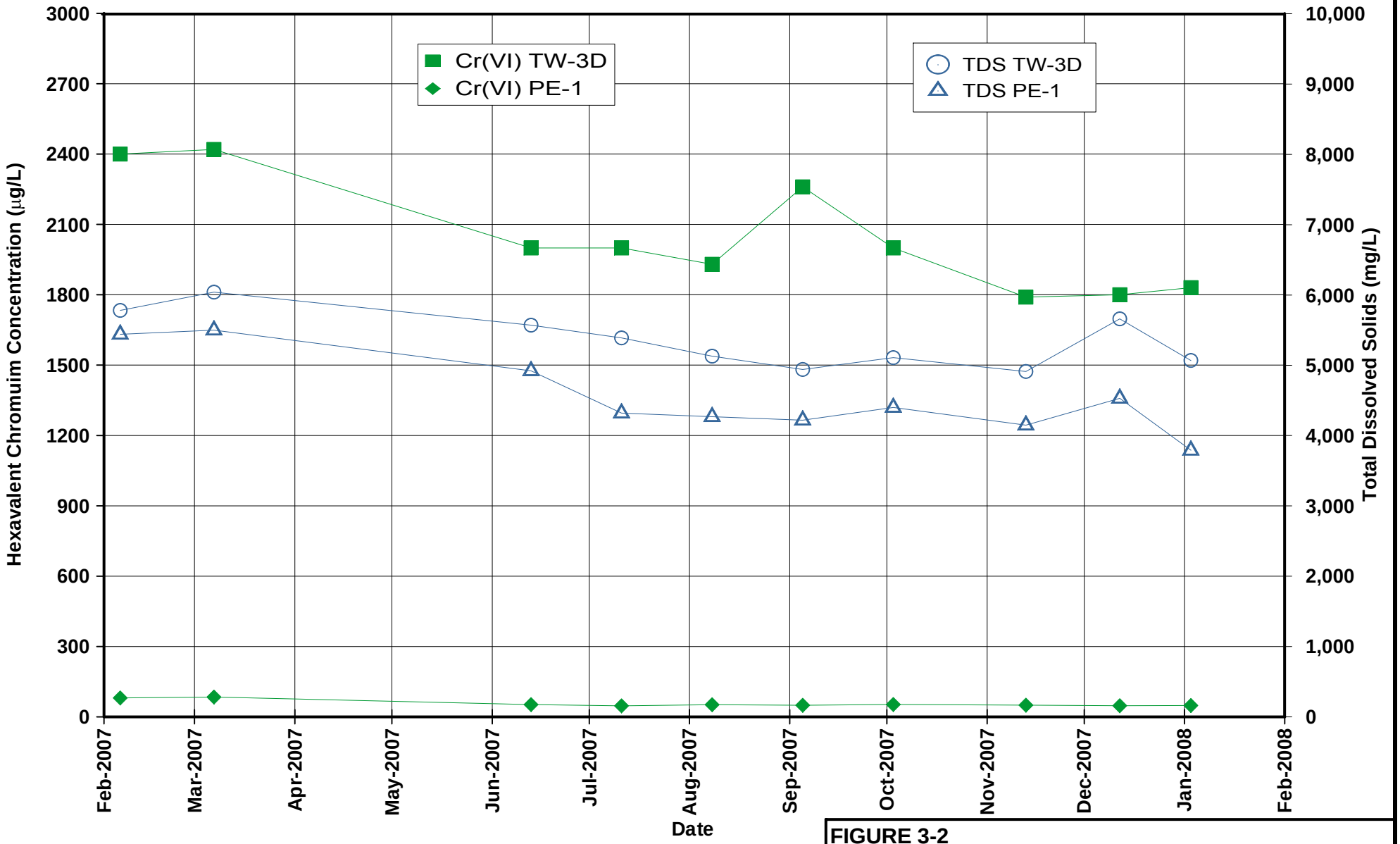

Notes:
TW-3D pumping began on 20-Dec-05.
TW-3D average extraction rate during 2007 was 99.4 gpm.
PE-1 pumping began on 26-Jan-06.
PE-1 average extraction rate during 2007 was 31.6 gpm.

FIGURE 3-2
Cr(VI) AND TOTAL DISSOLVED SOLIDS CONCENTRATIONS IN EXTRACTION WELLS TW-3D AND PE-1, 2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
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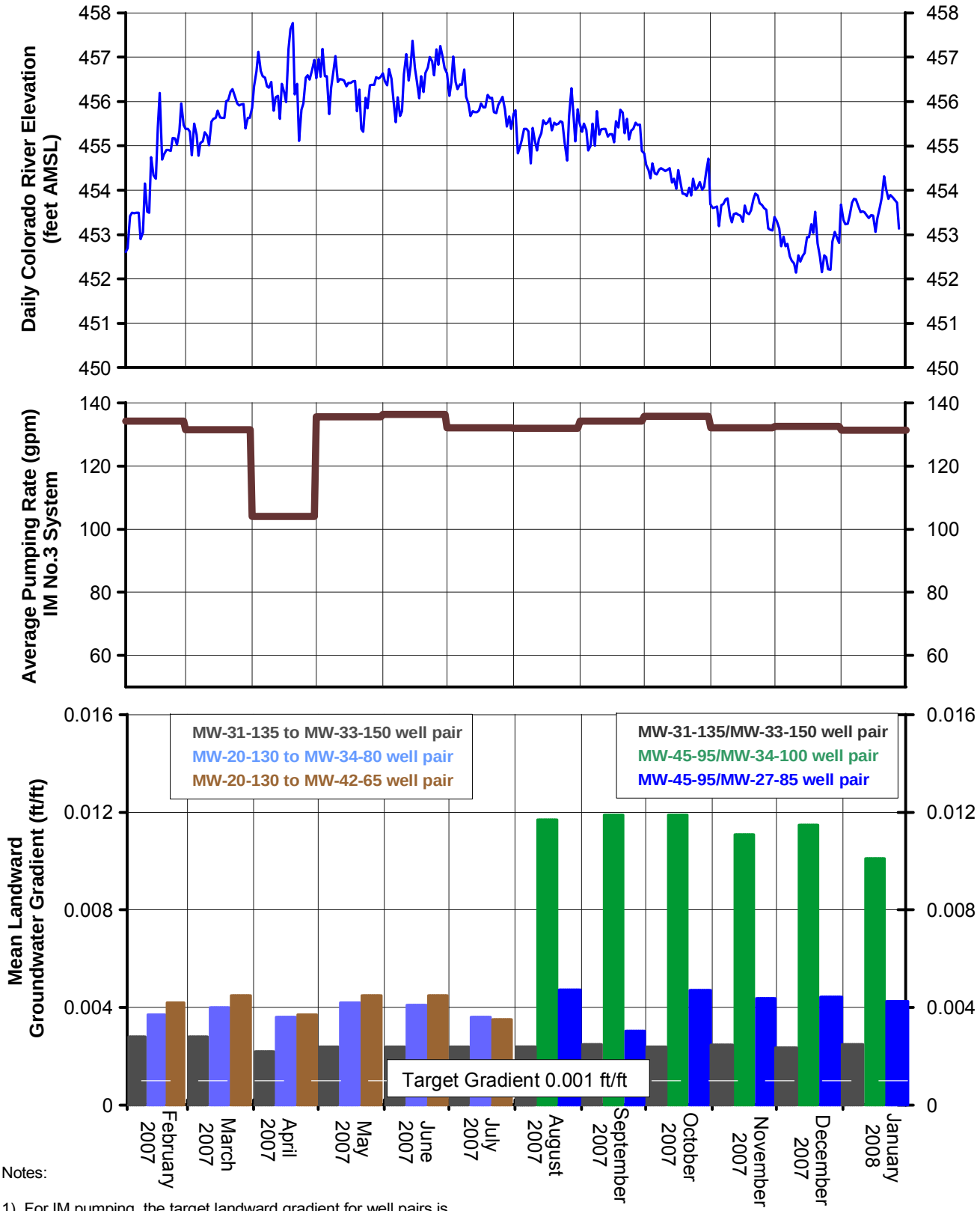

Notes:

1) For IM pumping, the target landward gradient for well pairs is 0.001 feet/foot.
2) Refer to Table 3-1 and Section 3.0 for discussion of pumping data.
3) Pumping rate plotted is the the combined rate of extraction wells in operation each month.
4) Refer to Table 4-1 and Section 4.0 for discussion of gradient data.
5) With the approval of DTSC, well pairs MW-45-95/MW-34-100 and MW-45-94/MW-27-85 replaced MW-20-130/MW-34-80 and MW-20-130/MW-42-65, respectively, in August 2007.

FIGURE 4-1
MEASURED HYDRAULIC GRADIENTS, RIVER ELEVATION AND PUMPING RATE 2007 REPORTING PERIOD
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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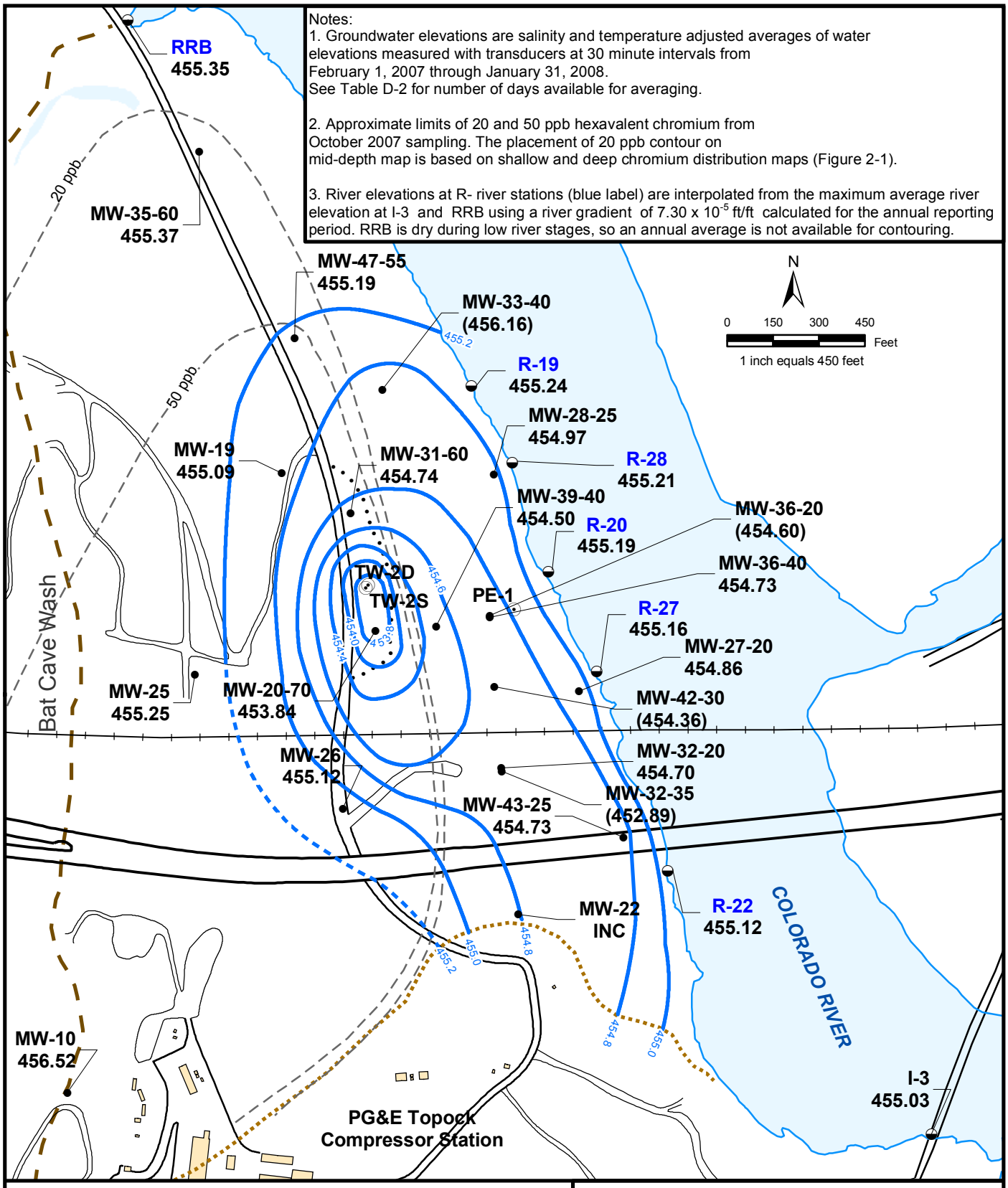

FIGURE 4-2
AVERAGE GROUNDWATER ELEVATIONS IN SHALLOW WELLS AND RIVER ELEVATIONS, 2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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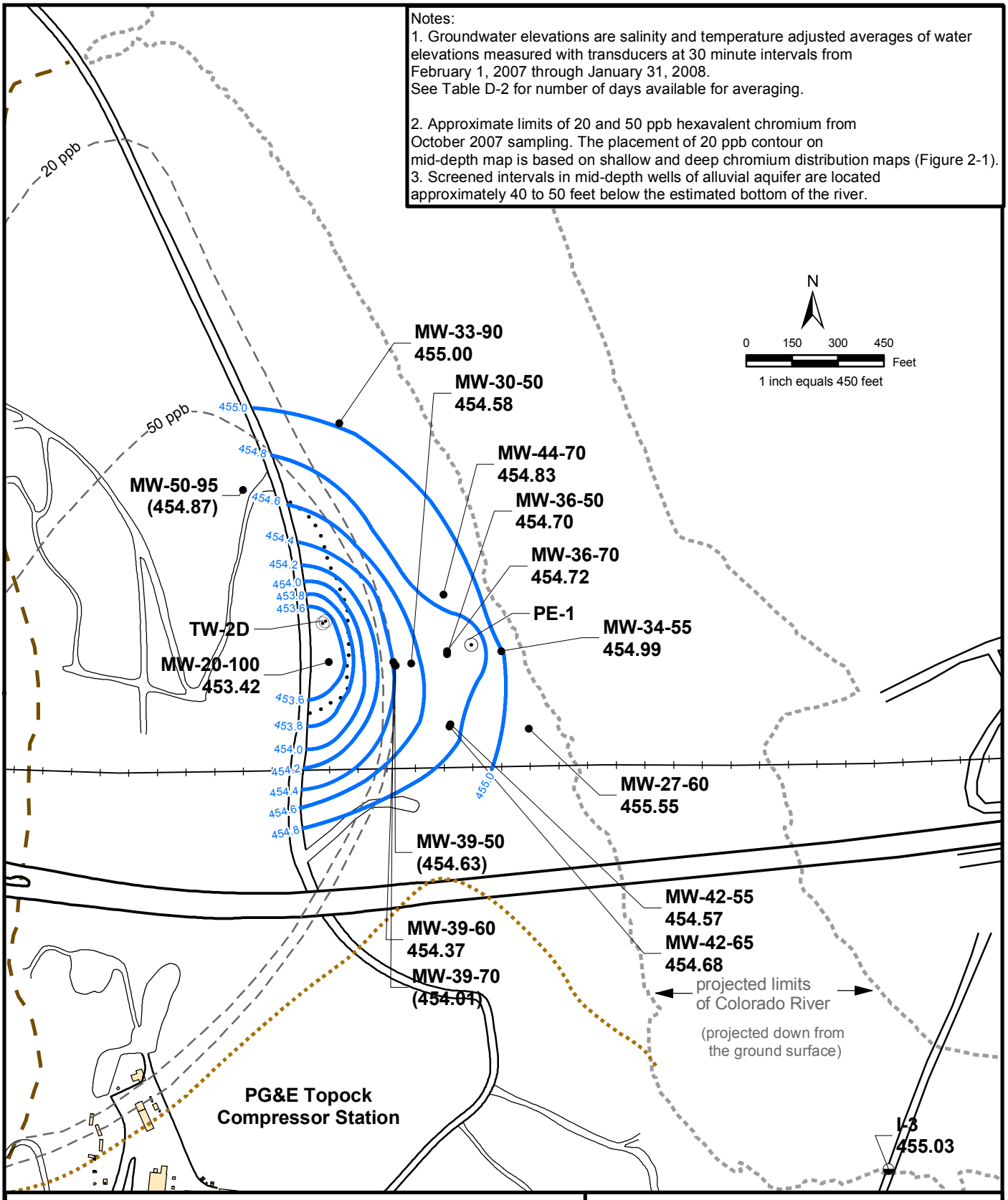

FIGURE 4-3
AVERAGE GROUNDWATER ELEVATIONS IN MID-DEPTH WELLS 2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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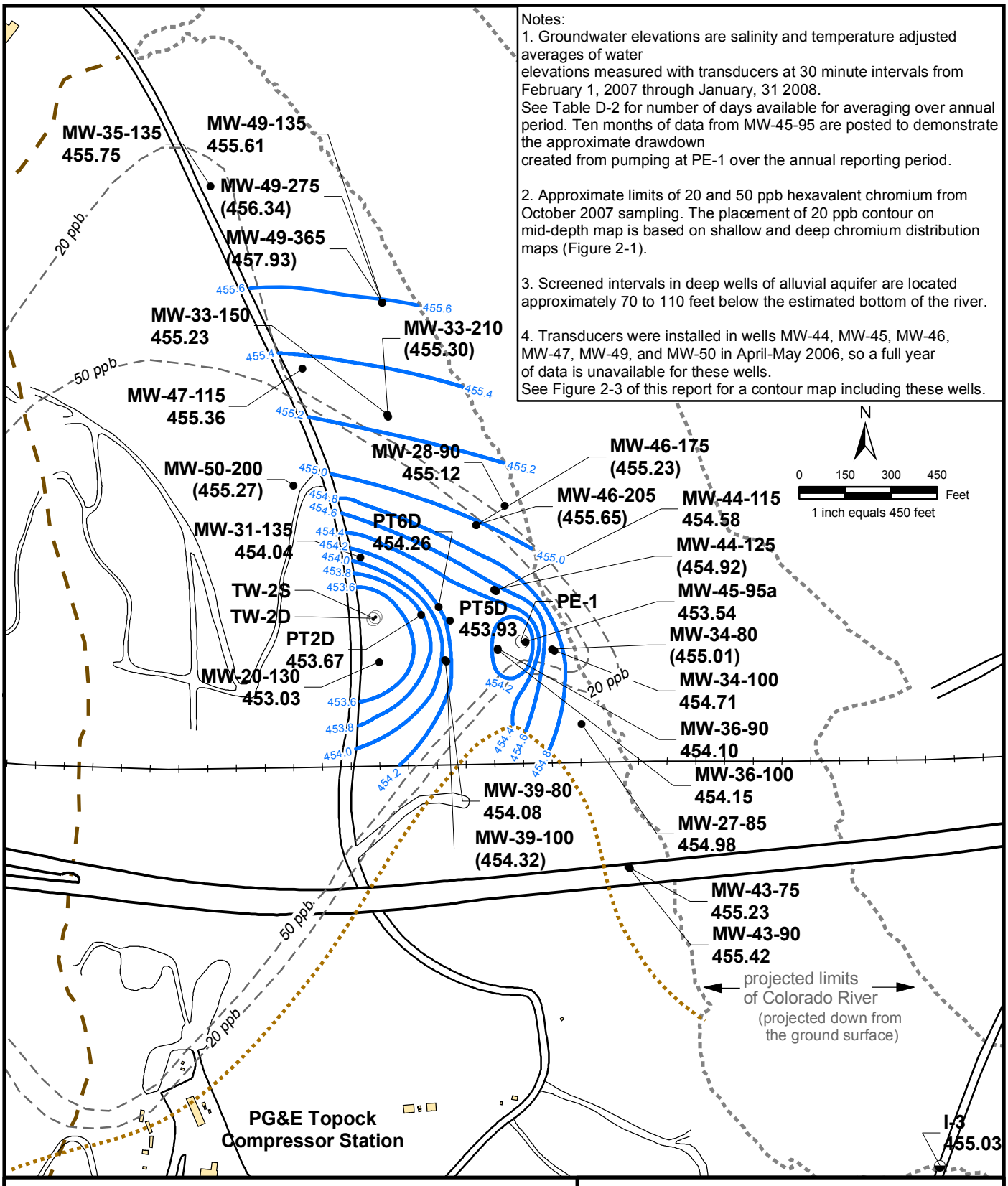

FIGURE 4-4
AVERAGE GROUNDWATER ELEVATIONS IN DEEP WELLS, 2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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PMR_AVERAGE_GROUNDWATER_LA_ANNUAL2007.PDF 2/21/2008 14:53:08

West

East
Section A

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

TW-3D
projected: 130'

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

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

MW-30-30
MW-30-50

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

PE-1

MW-45-95
projected:30'

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

Colorado River
455.16

Elevation (feet above MSL)

550
500
450
400
350
300
250

453.84
453.42
453.03
454.50
454.63
454.37
454.01
454.08
454.32
454.58
454.60
454.73
454.70
454.72
454.10
454.4
454.2
454.15
453.54
454.99
455.01
454.71

453.8
453.6
453.4
453.2
454.0
454.2
454.4
454.6
455.0
454.8

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

Groundwater Divide

Miocene Conglomerate (Bedrock)

True-Scale (No Vertical Exaggeration)

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

Notes:
Results show average groundwater elevations for February 1, 2007 through January 31, 2008.

Groundwater elevations adjusted for salinity and temperature.
Wells MW-36-90* and MW-39-50* are excluded from contouring.
River elevation (R-20) is the calculated average river level based upon the river gradient between RRB and I-3.

Legend:

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

453.5 Groundwater head contour
453.5 Inferred groundwater head contour
Interpreted groundwater flow direction

FIGURE 4-5
AVERAGE GROUNDWATER ELEVATIONS FOR WELLS ON FLOODPLAIN
CROSS SECTION A
2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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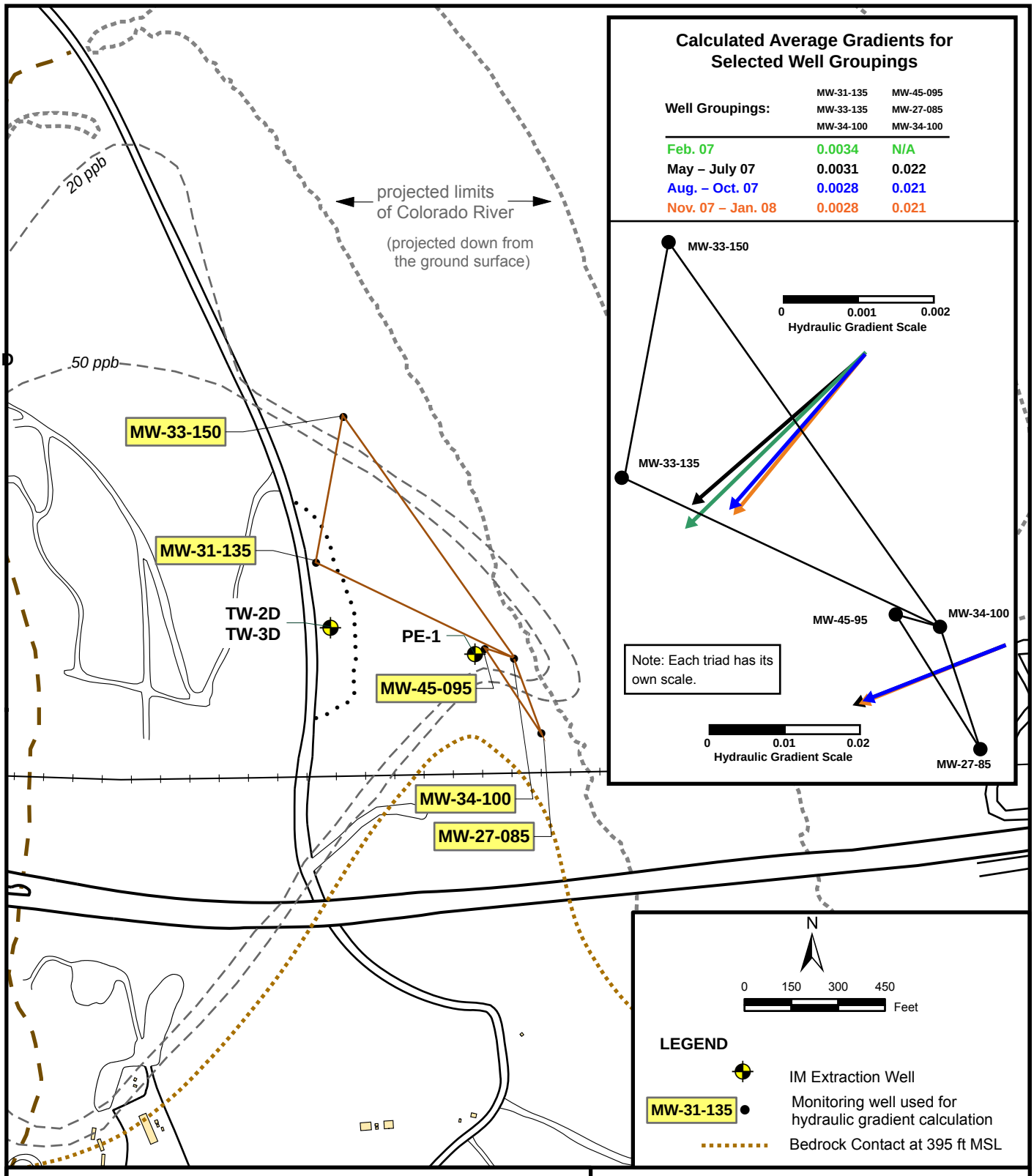

Notes:

1. Direction and magnitude of hydraulic gradient for each well triad (MW-45-095, MW-33-150, MW-31-135 and MW-45-095, MW-34-100, MW-27-085) were calculated using triangulation with linear interpretation and average head values for each quaterly reporting period. No 1st quarter data available for MW-45-095. For MW-34-100, 1st Quarter data from Feb. only.

2. Approximate limits of 20 and 50 ppb hexavalent chromium from January 2008 sampling.

3. Screened intervals in deep wells of alluvial aquifer are located approximately 80 to 90 feet below the estimated bottom of the river

FIGURE 4-6
MAGNITUDE AND DIRECTION OF HYDRAULIC GRADIENTS IN LOWER DEPTH INTERVAL DURING 2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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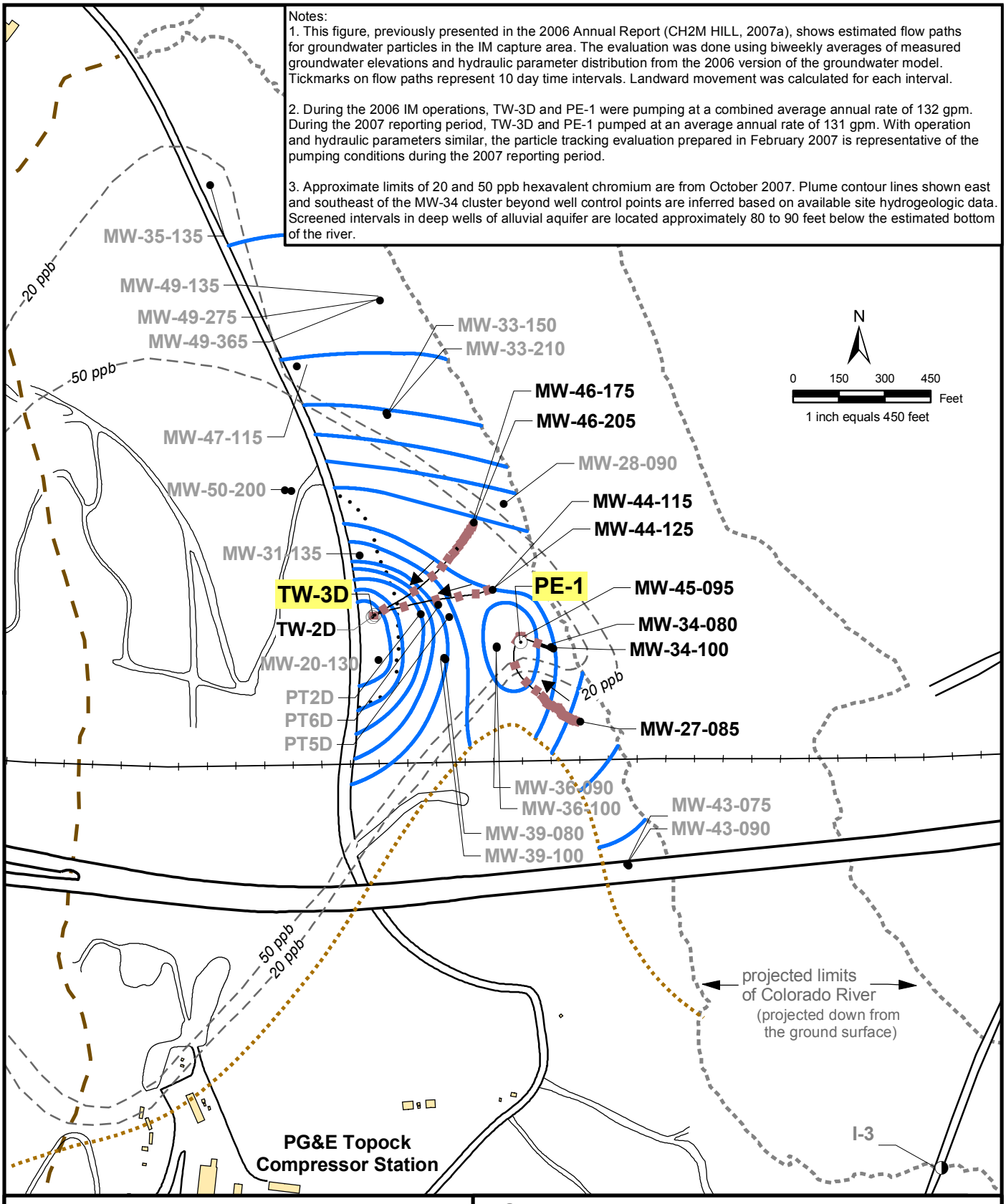

FIGURE 4-7
ESTIMATED FLOW PATHS FROM SELECTED DEEP FLOODPLAIN WELLS, 2006 IM PUMPING

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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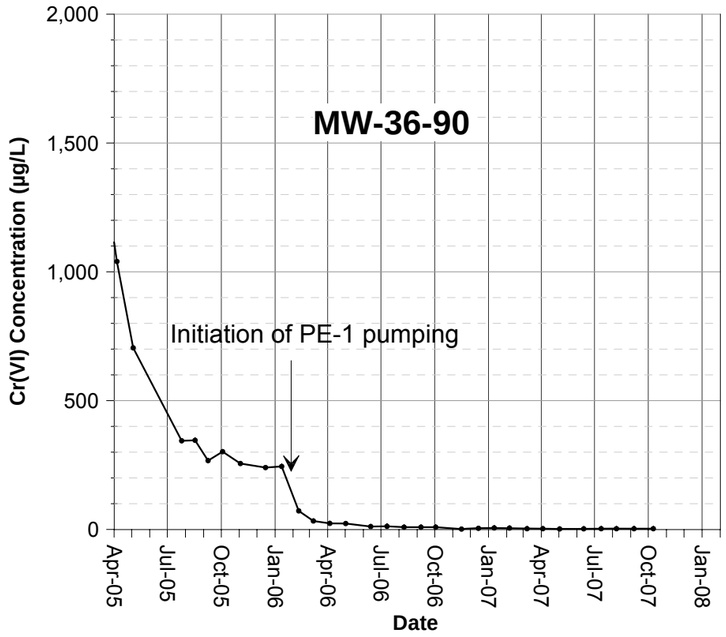

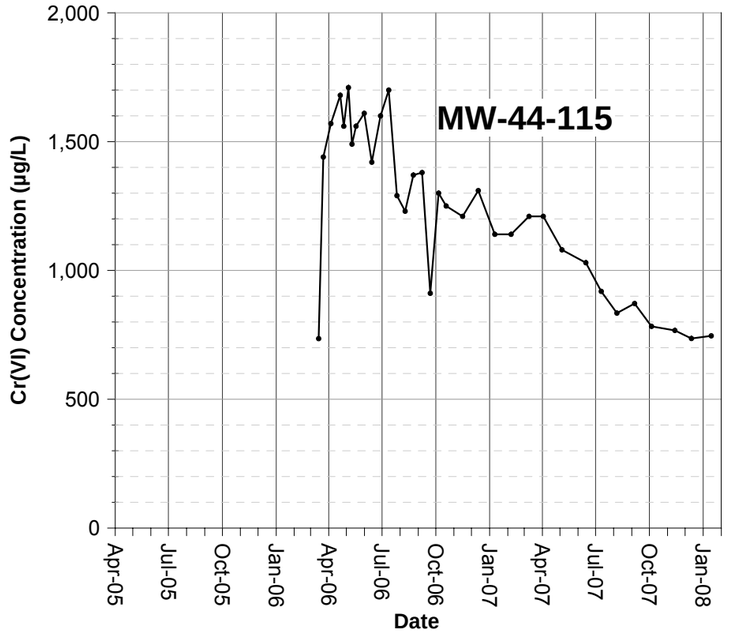

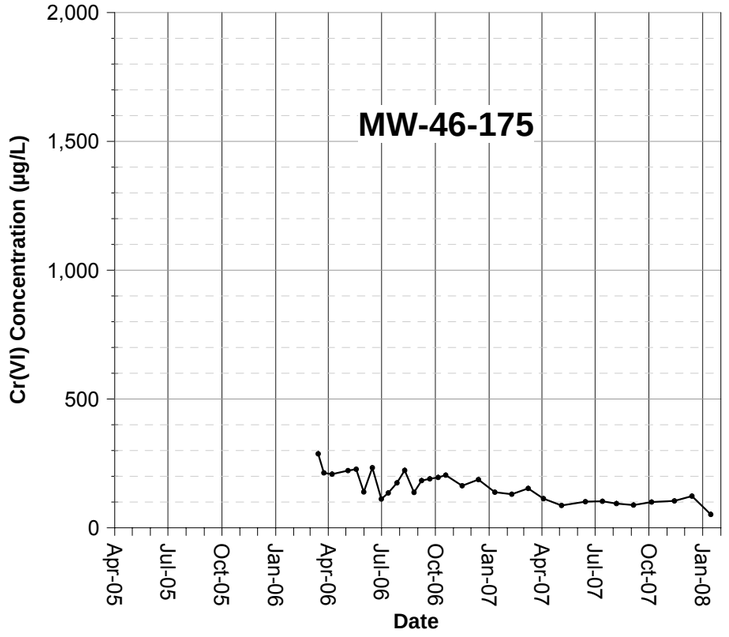

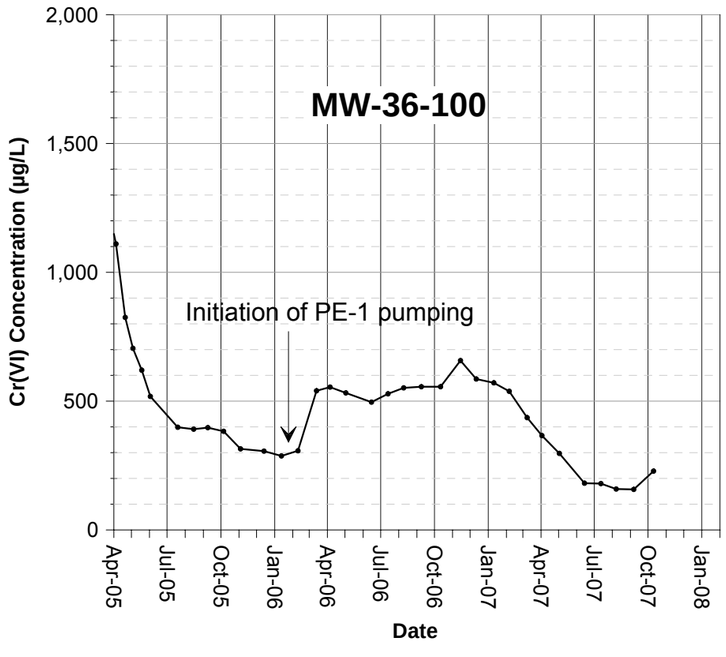

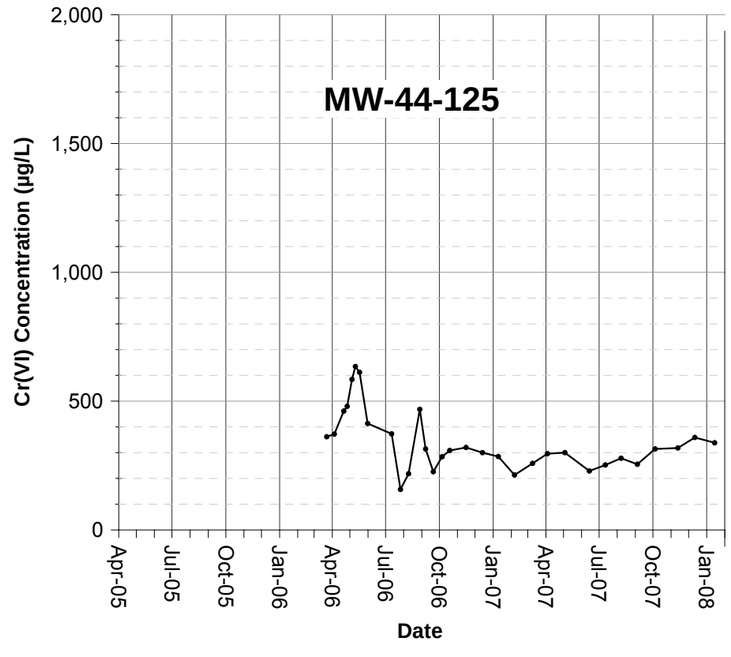

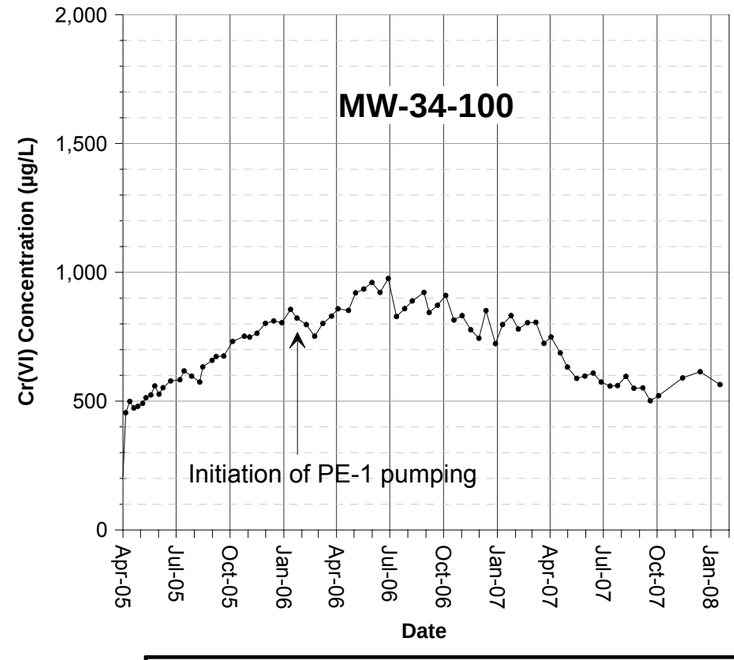

Notes
1. Hexavalent chromium [Cr(VI)] results in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
2. Results plotted are maximum concentrations from primary and duplicate samples; see Table B-1 for complete results.
3. MW-36 wells selected to monitor effects of PE-1 pumping on plume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

FIGURE 5-1
Cr(VI) CONCENTRATION TRENDS IN SELECTED PERFORMANCE MONITORING WELLS APRIL 2005 THROUGH JANUARY 2008
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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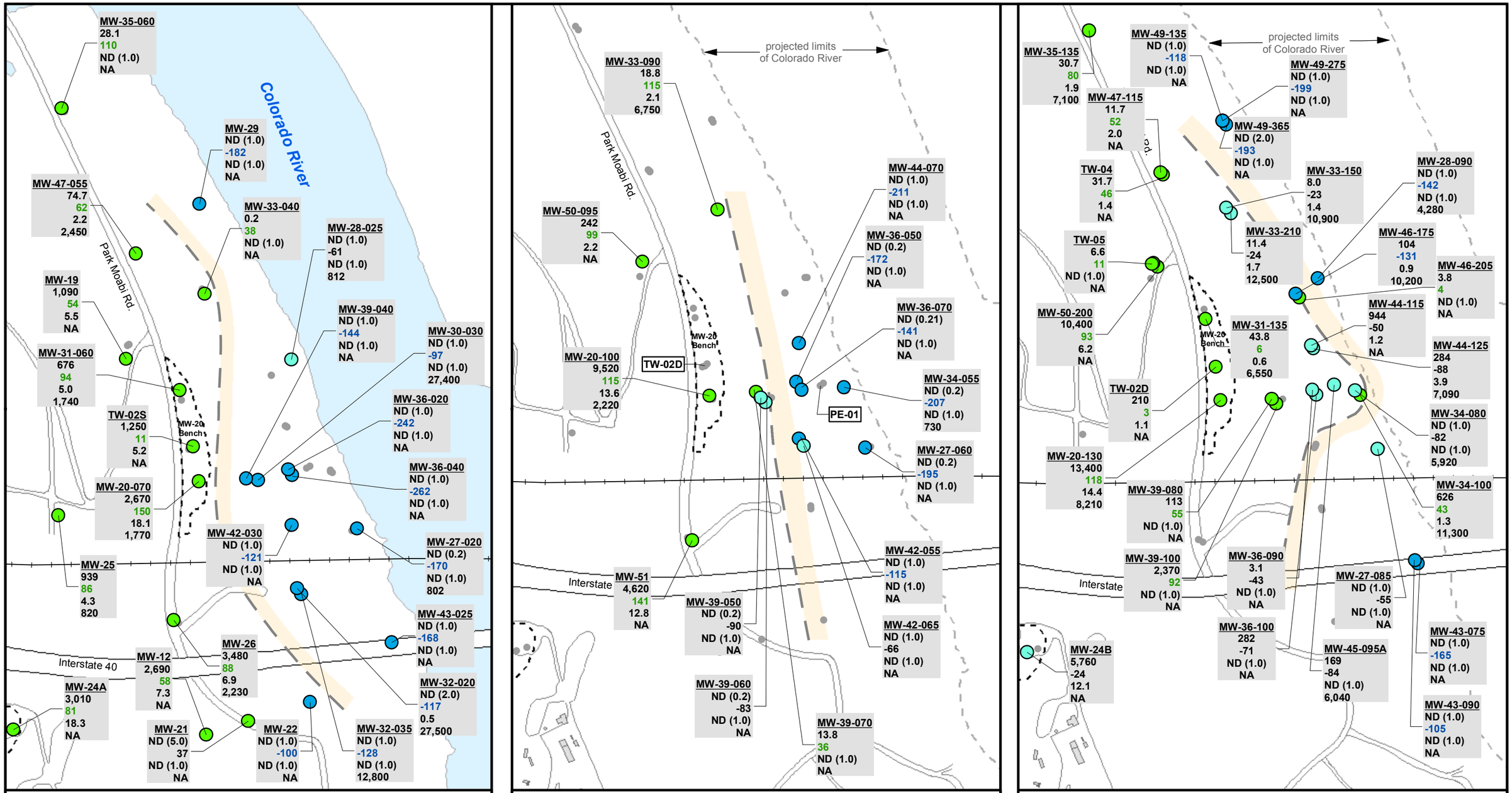

Shallow Wells (Upper Depth Interval) | **Intermediate Wells (Middle Depth Interval)** | **Deep Wells (Lower Depth Interval)**

LEGEND

- Groundwater ORP < -90 mV
- Groundwater ORP > -90 mV < 1 mV
- Groundwater ORP > 1 mV

Notes:
ND = not detected at listed reporting limit
INC = not sampled over the reporting period

MW-22
ND (0.01)
-104
ND (4)

Average Groundwater Results From February 2007 - January 2008 Sampling
Hexavalent chromium, micrograms per liter (µg/L)
Oxidation reduction potential (ORP), millivolts (mV)
Nitrate as N, milligrams per liter (mg/L)

ORP values less than -90mV highlighted blue. Positive ORP values highlighted green.

Approximate limit of reducing groundwater (ORP less than -90mV)

N

0 400 800 Feet

1 inch equals 400 feet

FIGURE 5-2
DISTRIBUTION OF Cr(VI) AND GEOCHEMICAL INDICATOR PARAMETERS IN FLOODPLAIN WELLS, 2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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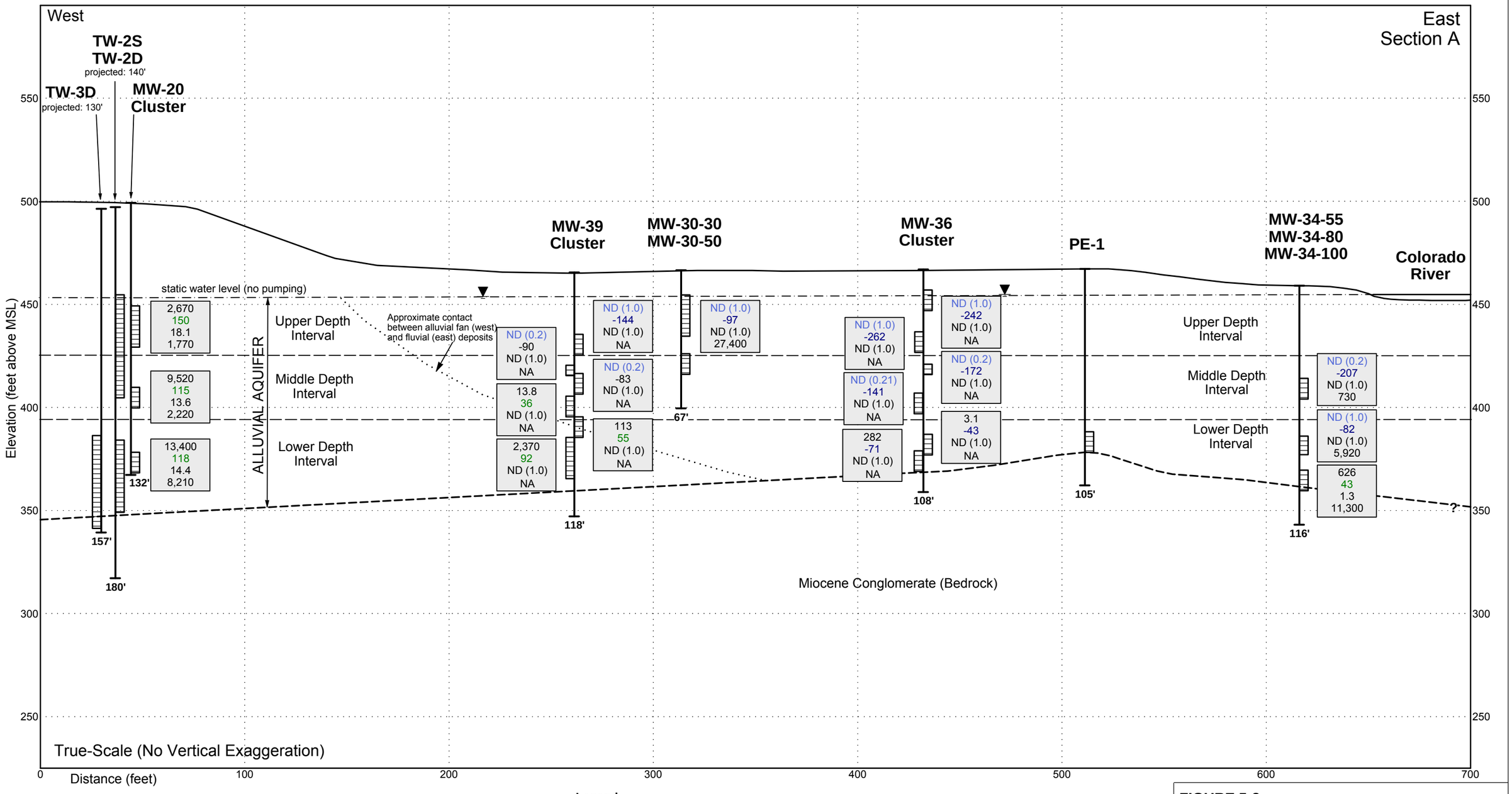

Legend

water level

well screen

boring depth (feet) 103

ND (5.0)
-121.0
ND (5.0)
37,000

Average Groundwater Results from February 2007 - January 2008

Hexavalent chromium, micrograms per liter (ug/L)
Oxidation reduction potential, millivolts (mV)
Nitrate as N, milligrams per liter (mg/L)
Total dissolved solids (mg/L)

ORP values less than -90mV highlighted blue.
Positive ORP values highlighted green.
NA = Data not available

Note: Results from February 1, 2007- January 31, 2008;
Results plotted are averages from the maximum primary or duplicate sample for monitoring events during the reporting period;
ND = not detected at listed reporting limit;
see Tables B-1 and B-2 for complete results

FIGURE 5-3
Cr(VI) AND GEOCHEMICAL INDICATOR PARAMETERS FLOODPLAIN CROSS-SECTION A
2007 REPORTING PERIOD

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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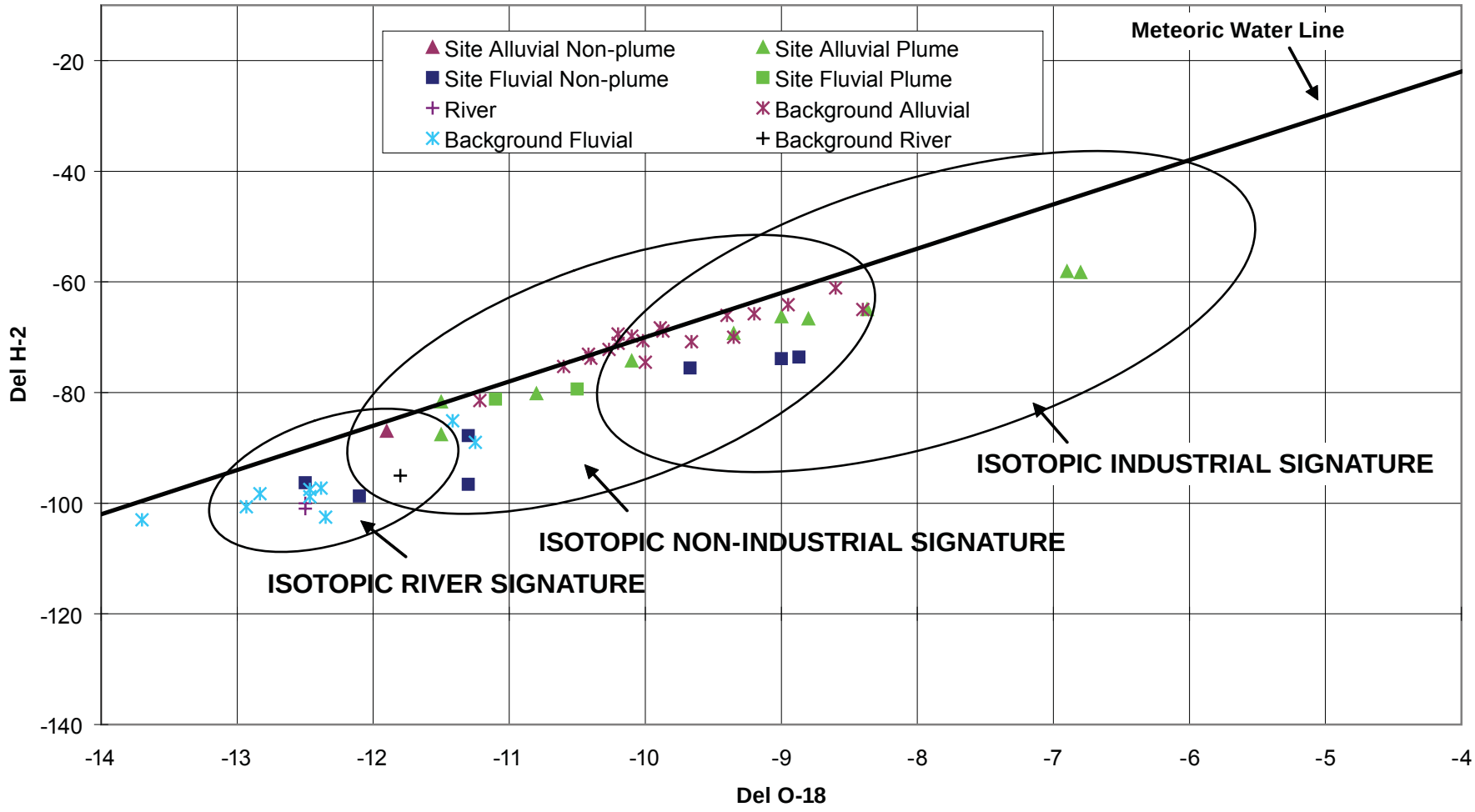

Notes:
This figure is also presented in Appendix C, Figure C-1 with each well labeled.
Values for PMP wells are averages from the 2007 Reporting Period.
Values for Background wells are cummulative averages from all years.
Due to a change in sampling frequency, some wells were not
sampled for stable isotopes in the 2007 Reporting Period.

FIGURE 5-4
AVERAGE STABLE ISOTOPES OF OXYGEN AND DEUTERIUM FEBRUARY 2007 THROUGH JANUARY 2008
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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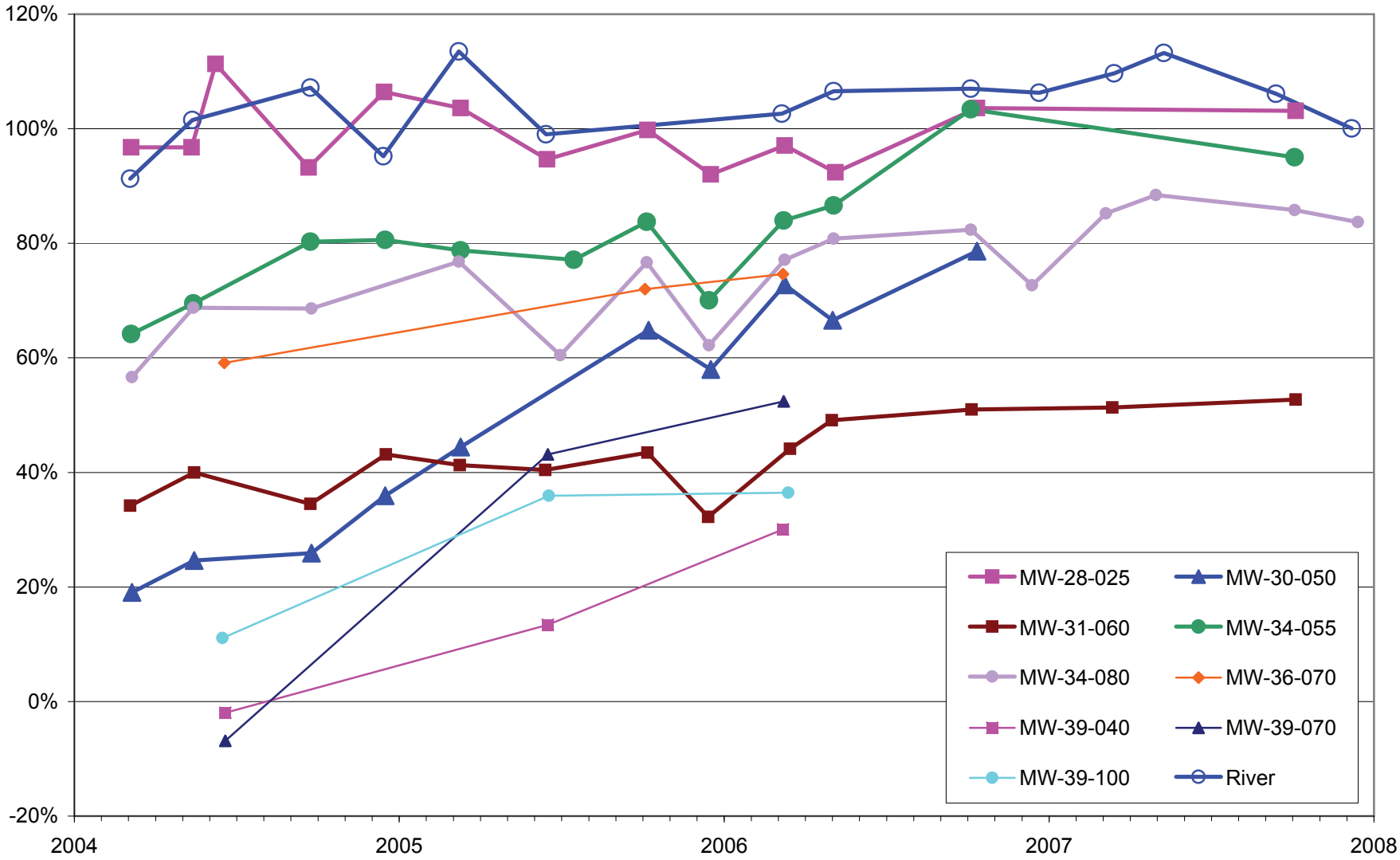

Notes:
Due to a change in sampling frequency, some wells were not sampled for stable isotopes in the 2007 Reporting Period.

FIGURE 5-5
CALCULATED PERCENTAGE OF RIVER WATER IN SELECT FLOODPLAIN WELLS FROM STABLE ISOTOPES
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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Appendix A
Extraction System Operations Information, Fourth Quarter 2007 and Maintenance Records for Annual Reporting Period

Appendix A
Extraction System Operations Log – November 2007 through January 2008
PG&E Topock Interim Measures Performance Monitoring Program

During the Fourth Quarter 2007 (November 2007 through January 2008), extraction wells TW-3D and PE-1 operated at a target pump rate of at 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime. The operational run time for the IM groundwater extraction system (combined or individual pumping) was over 98 percent during the Fourth Quarter 2007.

The IM No. 3 facility treated approximately 17,489,873 gallons of extracted groundwater during the Fourth Quarter 2007. The IM No. 3 facility also treated approximately 8,165 gallons of water generated from the groundwater monitoring program. IM No. 3 injection well development was not conducted during the Fourth Quarter 2007. Five containers of solids from the IM No. 3 facility were transported offsite during the Fourth Quarter 2007.

Periods of planned and unplanned extraction system down time (that together resulted in less than 2 percent of downtime during the Fourth Quarter 2007) are summarized below. The times shown are in Pacific Standard Time (PST) to be consistent with other data collected (e.g., water level data) at the site.

NOVEMBER 2007

- **November 6, 2007 (planned):** The extraction well system was temporarily offline from 11:41 am until 11:44 am to complete operator training. Extraction system downtime was 3 minutes.
- **November 10, 2007 (unplanned):** The extraction well system was offline from 2:15 pm until 2:17 pm to re-start the facility after a City of Needles power failure. Extraction system downtime was 2 minutes.
- **November 14 and 15, 2007 (planned)**: The extraction well system was offline during November 14th and 15th two days to complete plant maintenance and re-start, as described below. The total extraction system downtime was 13 hours 31 minutes.
  - November 14th from 7:40 am until 4:03 pm to complete planned facility maintenance associated with the RO unit, iron oxidation tanks, and clarifier.
  - November 14th from 5:32 pm until 7:10 pm, and for one minute at 7:21 pm, while replacing a fouled microfilter strainer encountered while re-starting the facility.
  - November 14th from 7:23 pm until 8:38 pm to replace a failed gasket on the RO Unit discovered while re-starting the facility.
  - November 15th from 12:44 am until 12:57 am and 1:23 am until 3:24 am to operate the facility in a re-circulation mode to attain normal operating parameters while bringing the plant back on-line after maintenance activities.
- **November 19, 2007 (unplanned):** The extraction well system was offline from 2:28 am until 2:43 am and 3:14 am until 3:18 am to re-start the facility after failure of the variable frequency drive on pump P-400. Extraction system downtime was 19 minutes.

- **November 21, 2007 (planned):** The extraction well system was offline from 11:31 am until 11:33 am, 11:56 until 11:57 am, and 1:17 pm until 1:18 pm while testing the pipeline leak detection system. Extraction system downtime was 4 minutes.
- **November 26, 2007 (unplanned):** The extraction well system was offline from 1:30 pm until 1:34 pm, 1:39 pm until 1:42 pm, and 2:03 pm until 2:13 pm to complete testing of the City of Needles power supply and to transfer operations to generator power. Extraction system downtime was 17 minutes.
- **November 27, 2007 (unplanned):** The extraction well system was offline from 11:21 am until 11:41 am to return operation from generator power to City of Needles power. Extraction system downtime was 20 minutes.
- **November 28, 2007 (unplanned):** The extraction well system was offline from 3:15 pm until 3:21 pm to test City of Needles power. Extraction system downtime was 6 minutes.
- **November 30, 2007 (unplanned):** The extraction well system was offline from 11:02 am until 11:04 am to transfer operations from generator power to City of Needles power. Extraction system downtime was 2 minutes.
- **November 30, 2007 (unplanned):** The extraction well system was offline from 9:06 pm until 9:20 pm to transfer operations to generator power after a City of Needles power imbalance. Extraction system downtime was 14 minutes.

DECEMBER 2007

- **December 1, 2007 (planned):** The extraction well system was temporarily offline from 3:13 am until 3:31 am while cleaning the screen on flow control valve FCV-200. Extraction system downtime was 18 minutes.
- **December 1, 2007 (unplanned):** The extraction well system was temporarily offline from 7:03 am until 7:05 am to return operations from generator power to City of Needles power. Extraction system downtime was 2 minutes.
- **December 1, 2007 (unplanned):** The extraction well system was temporarily offline from 9:00 pm until 9:04 pm to transfer operations to generator power after a City of Needles power failure. Extraction system downtime was 4 minutes.
- **December 2, 2007 (unplanned):** The extraction well system was temporarily offline from 7:07 am until 7:11 am to return operations from generator power to City of Needles power. Extraction system downtime was 4 minutes.
- **December 3, 2007 (unplanned):** The extraction well system was temporarily offline from 6:20 pm until 6:23 pm to transfer operations to generator power after a City of Needles power failure. Extraction system downtime was 3 minutes.
- **December 4, 2007 (unplanned):** The extraction well system was temporarily offline from 7:31 am until 7:32 am to return operations from generator power to City of Needles power. Extraction system downtime was 1 minute.
- **December 4, 2007 (unplanned):** The extraction well system was temporarily offline from 4:55 pm until 5:13 pm to transfer operations to generator power after a City of Needles power failure. Extraction system downtime was 18 minutes.

- **December 5, 2007 (unplanned):** The extraction well system was temporarily offline from 9:04 am until 9:10 am to return operations from generator power to City of Needles power. Extraction system downtime was 6 minutes.
- **December 5, 2007 (unplanned):** The extraction well system was temporarily offline from 8:44 pm until 8:47 pm to transfer operations to generator power after a City of Needles power failure. Extraction system downtime was 3 minutes.
- **December 6, 2007 (unplanned):** The extraction well system was temporarily offline from 7:26 am until 7:31 am to return operations from generator power to City of Needles power. Extraction system downtime was 5 minutes.
- **December 6, 2007 (unplanned):** The extraction well system was temporarily offline from 8:41 pm until 10:12 pm while transferring operations to generator power after a City of Needles power failure, during which time the unit power control source failed for the PLC and was replaced with a temporary backup. Extraction system downtime was 1 hour 31 minutes.
- **December 11, 2007 (unplanned):** The extraction well system was temporarily offline from 1:39 pm until 1:42 pm, to troubleshoot power supply at the facility. Extraction system downtime was 3 minutes.
- **December 12, 2007 (unplanned):** The extraction well system was temporarily offline from 1:38 pm until 1:42 pm, 4:02 pm until 5:02 pm, 5:39 pm until 5:42 pm, and 6:06 pm until 6:07 pm to troubleshoot power supply at the facility. Extraction system downtime was 1 hour 8 minutes.
- **December 20, 2007 (planned):** The extraction well system was temporarily offline from 7:55 am until 8:03 am while installing a new unit power control source for the PLC. Extraction system downtime was 8 minutes.
- **December 27, 2007 (unplanned):** The extraction well system was temporarily offline from 5:36 pm until 5:46 pm and from 7:43 pm until 8:40 pm, which was initially due to a City of Needles power outage. After switching to generator power, additional troubleshooting was required to bring the Reverse Osmosis Unit back into service and transfer operation back to City of Needles power. Extraction system downtime was 1 hour 7 minutes.

JANUARY 2008

- **January 2, 2008 (planned):** The extraction well system was temporarily offline from 8:41 am until 1:25 pm and from 1:28 pm until 1:53 pm to complete reverse osmosis unit maintenance and replace two valves within the IM-3 facility process piping. Extraction system downtime was 5 hours 9 minutes.
- **January 9, 2008 (planned):** The extraction well system was temporarily offline from 11:34 am until 11:39 am, 11:40 am until 11:45 am, and 12:10 pm until 1:34 pm to clean the iron oxidation tank piping. Extraction system downtime was 1 hour 34 minutes.
- **January 16, 2008 (planned):** The extraction well system was temporarily offline from 7:34 am until 1:46 pm and 2:42 pm until 2:44 pm to repair two joints of the treated water pipeline between the IM-3 treatment plant and injection well field. The repairs were

accomplished at the flanged ends between the pipe sections, and were identified during routine pipeline inspections when droplets were identified on the two joints. Only a few fluid ounces of treated water leaked from each location. Extraction system downtime was 6 hours 14 minutes.

- **January 23, 2008 (planned):** The extraction well system was temporarily offline from 9:34 am until 12:34 pm and 2:36 pm until 4:34 pm to to switch to a clean bank of microfilter modules. Extraction system downtime was 4 hours 58 minutes.
- **January 25, 2008 (unplanned):** The extraction well system was temporarily offline from 7:21 am until 8:10 am for microfilter repairs Extraction system downtime was 49 minutes.
- **January 28, 2008 (unplanned):** The extraction well system was temporarily offline from 8:15 pm until 8:23 pm to re-start the facility after an in-line pH probe failure and repair. Extraction system downtime was 8 minutes.

TABLE A-1
Summary of IM Extraction System Modifications and Maintenance - February 2007 to January 2008
2007 Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Reporting Period	Extraction System Maintenance Activities	Extraction System Modifications	Completion Date
February-07	No extraction well maintenance during month.	None during month	---
March-07	No extraction well maintenance during month.	None during month	---
April-07	No extraction well maintenance during month.	None during month	---
May-07	No extraction well maintenance during month.	None during month	---
June-07	No extraction well maintenance during month.	None during month	---
July-07	No extraction well maintenance during month.	None during month	---
August-07	No extraction well maintenance during month.	None during month	---
September-07	No extraction well maintenance during month.	None during month	---
October-07	No extraction well maintenance during month.	None during month	---
November-07	Power supply to PE-1 was inspected on November 5th.	None during month	---
December-07	No extraction well maintenance during month.	None during month	---
January-08	No extraction well maintenance during month.	None during month	---

General Notes

1. Periods of extraction well downtime are not provided in this chronology.
   See Monthly Performance Monitoring Reports for downtime periods.
2. Extraction Wells TW-3D and PE-1 provided primary service throughout the annual reporting period, operating at a combined target pumping rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW-2S and TW-2D provided backup operation.

Appendix B
Chromium Monitoring Data and Concentration Graphs for PMP Wells

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Shallow Wells								
MW-27-020	06-Mar-06	ND (0.2)	ND (1.0)	-153	0.4	910	455.0	455.1
	01-May-06	ND (0.2)	ND (1.0)	---	2.5	1,510	455.4	454.7
	03-Oct-06	ND (0.2)	ND (1.0)	-176	0.5	1,240	455.0	M
	02-Oct-07	ND (0.2)	2.20	-170	0.2	1,133	454.5	453.6
MW-28-025	09-Mar-06	ND (0.2)	ND (1.0)	-54	3.5	1,140	455.2	455.2
	05-May-06	ND (0.2)	ND (1.0)	-126	0.8	1,260	456.3	455.8
	11-Oct-06	ND (0.2)	ND (1.0)	-111	1.5	1,860	454.4	453.8
	04-Oct-07	ND (1.0)	ND (1.0)	-61	0.5	1,394	454.8	454.5
MW-29	13-Apr-06	ND (0.2)	ND (1.0)	-142	4.2	4,220	455.7	455.2
	05-May-06	ND (0.2)	ND (1.0)	-128	1.3	4,430	456.0	455.4
	13-Oct-06	ND (0.2)	ND (1.0)	-56	5.3	4,770	454.9	455.1
	04-Oct-07	ND (1.0)	ND (1.0)	-112	0.5	3,172	455.3	454.3
MW-30-030	13-Mar-06	ND (5.0)	ND (1.0)	-99	1.1	55,600	454.1	454.2
	02-May-06	ND (2.0)	ND (1.0)	-104	2.4	54,600	455.3	455.7
	10-Oct-06	ND (2.0)	ND (1.0)	-129	1.4	56,500	454.3	453.6
	08-Oct-07	ND (1.0)	ND (1.0) LF	-97	0.5	42,690	454.6	454.1
MW-32-020	10-Mar-06	ND (2.0)	ND (1.0)	-125	0.4	---	454.5	455.1
	04-May-06	ND (1.0)	ND (1.0)	-120	0.4	25,500	455.5	454.9
	02-Oct-06	ND (5.0)	ND (1.0)	-122	0.9	59,800	454.5	M
	11-Dec-06	ND (2.0)	ND (1.0)	-110	1.8	61,300	453.8	455.4
	06-Mar-07	ND (2.0)	ND (1.0)	-84	0.1	39,700	454.5	454.7
	30-Apr-07	ND (2.0)	ND (1.0)	-165	4.6	34,900	456.0	456.0
	01-Oct-07	ND (2.0)	ND (1.0)	-101	0.5	50,258	455.0	454.2
MW-32-035	10-Mar-06	ND (2.0)	ND (1.0)	-161	0.1	9,570	454.8	454.9
	04-May-06	ND (1.0)	ND (1.0)	-171	0.3	16,500	455.7	455.1
	02-Oct-06	ND (1.0)	ND (1.0)	-162	0.7	20,000	454.5	M
	11-Dec-06	ND (1.0)	ND (1.0)	-149	1.5	23,700	454.2	455.4
	06-Mar-07	ND (1.0)	ND (1.0)	-66	0.0	14,800	454.7	454.7
	30-Apr-07	ND (1.0)	ND (1.0)	-158	3.8	23,500	456.0	456.0
	01-Oct-07	ND (1.0)	1.20	-141	0.2	19,607	454.7	454.1
	10-Dec-07	---	ND (2.0)	-145	0.2	19,800	452.7	452.3
MW-33-040	09-Mar-06	ND (0.2)	ND (1.0) LF	---	---	---	454.8	455.2
	04-May-06	ND (0.2)	ND (1.0) LF	12	5.3	4,580	455.5	454.8
	06-Oct-06	ND (0.2)	ND (1.0)	167	---	6,710	455.2	455.2
	14-Dec-06	ND (0.2)	1.20	31	2.8	7,080	454.0	453.2
	06-Mar-07	ND (0.2)	ND (1.0)	---	1.7	27,000	454.9	454.7
	02-May-07	ND (0.2)	ND (1.0)	-16	0.6	20,200	456.5	456.5
	05-Oct-07	ND (0.2)	1.10	109	0.6	8,015	455.2	454.6
	12-Dec-07	0.40	4.10	22	0.2	8,969	453.0	452.5
MW-36-020	07-Mar-06	ND (1.0)	ND (1.0)	-148	2.5	18,900	---	455.2
	01-May-06	ND (1.0)	ND (1.0)	-180	5.3	20,100	455.6	456.0
	02-Oct-06	ND (1.0)	ND (1.0)	-177	1.8	24,000	454.6	M
	03-Oct-07	ND (1.0)	ND (1.0)	-216	0.7	25,659	456.7	453.7

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
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	07-Mar-06	ND (1.0)	ND (1.0)	-166	3.3	17,000	454.4	454.6
	01-May-06	ND (1.0)	ND (1.0)	-179	5.1	13,500	455.3	455.0
	05-Oct-06	ND (1.0)	ND (1.0)	-194	1.4	16,000	454.2	455.0
	03-Oct-07	ND (1.0)	ND (1.0)	-249	0.3	9,051	454.1	453.6
MW-39-040	07-Mar-06	ND (1.0)	ND (1.0)	-162	3.0	8,450	454.1	454.3
	02-May-06	ND (1.0)	ND (1.0)	-188	0.1	8,150	455.7	456.4
	05-Oct-06	ND (0.2)	ND (1.0)	-198	1.4	12,500	454.1	454.0
	14-Dec-06	ND (1.0)	ND (1.0)	-174	1.7	13,200	453.4	453.1
	05-Mar-07	ND (1.0)	ND (1.0)	-55	---	8,770	454.5	455.1
	03-May-07	ND (1.0) J	ND (1.0)	-195	2.0	---	456.2	456.8
	08-Oct-07	ND (1.0)	ND (1.0)	-181	0.0	14,900	454.0	453.9
MW-42-030	07-Mar-06	ND (1.0)	ND (1.0)	-154	0.4	11,400	454.3	454.5
	02-May-06	ND (1.0)	ND (1.0)	-160	2.3	18,500	455.3	455.2
	03-Oct-06	ND (1.0)	ND (1.0)	-160	0.9	19,700	454.4	M
	07-Mar-07	ND (0.2)	ND (1.0)	-109	0.0	14,400	454.2	454.5
	04-Oct-07	ND (1.0)	ND (1.0)	-130	0.1	21,073	453.8	453.6
MW-43-025	10-Mar-06	ND (0.2)	ND (1.0)	-153	0.3	1,350	455.3	455.4
	04-May-06	ND (0.2)	ND (1.0)	-176	0.4	1,280	456.2	455.4
	02-Oct-06	ND (0.2)	ND (1.0)	-172	0.6	1,310	454.8	M
	06-Mar-07	ND (0.2)	ND (1.0)	-168	0.0	6,410	455.0	454.8
	02-Oct-07	ND (1.0)	ND (1.0)	-166	0.3	1,226	454.8	454.3
	10-Dec-07	---	ND (1.0)	-171	0.1	1,333	452.3	452.4
Middle Wells								
MW-27-060	07-Mar-06	ND (1.0)	ND (1.0)	-118	2.5	13,700	454.8	454.9
	01-May-06	ND (1.0)	ND (1.0)	-140	1.0	12,100	455.7	455.1
	03-Oct-06	ND (1.0)	ND (1.0)	-122	0.8	14,300	455.0	M
	02-Oct-07	ND (0.2)	ND (1.0)	-109	0.4	7,542	454.5	453.9
MW-30-050	09-Mar-06	ND (1.0)	ND (1.0)	-81	2.4	8,800	454.1	454.2
	02-May-06	ND (1.0)	ND (1.0)	-102	2.8	14,300	455.5	456.1
	11-Oct-06	ND (0.2)	ND (1.0)	-113	0.8	8,280	454.4	454.6
	11-Oct-06 FD	ND (0.2)	ND (1.0)	FD	FD	FD	FD	FD
MW-33-090	08-Mar-06	16.7	14.3	-42	0.3	10,200	454.9	455.0
	03-May-06	16.1	16.4	-44	0.4	10,400	455.4	454.7
	03-May-06 FD	19.3	15.3	FD	FD	FD	FD	FD
	06-Oct-06	17.3	20.9	110	0.9	12,500	455.2	454.6
	15-Dec-06	17.8 J	13.8	110	1.7	14,600	453.8	453.6
	15-Dec-06 FD	2.30 R	13.5	FD	FD	FD	FD	FD
	12-Mar-07	17.1	18.0	97	0.4	11,600	454.9	454.5
	02-May-07	18.8	16.8	18	0.0	16,000	456.4	456.2
	05-Oct-07	18.2	19.4	206	0.1	9,719	455.1	454.8
	13-Dec-07	21.0	22.7	138	0.1	10,680	453.0	452.6
	13-Dec-07 FD	20.6	21.3	FD	FD	FD	FD	FD

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Middle Wells								
MW-34-055	08-Mar-06	ND (1.0)	ND (1.0)	-106	---	8,460	454.4	454.4
	03-May-06	ND (0.2)	ND (1.0)	-117	0.3	7,580	456.2	456.0
	04-Oct-06	ND (0.2)	ND (1.0)	-178	2.2	3,080	455.0	453.9
	03-Oct-07	ND (0.2)	ND (1.0)	-207	0.4	1,116	455.0	454.6
MW-36-050	07-Mar-06	ND (1.0)	ND (1.0)	-110	2.7	8,400	454.5	454.8
	07-Mar-06 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	01-May-06	ND (0.2)	ND (1.0)	-162	3.6	6,810	454.8	454.7
	05-Oct-06	ND (0.2)	ND (1.0)	-165	1.4	4,200	454.9	455.3
	10-Oct-07	ND (0.2)	2.00	-172	0.0	3,810	454.4	454.1
MW-36-070	10-Feb-06	ND (10)	ND (1.0)	-91	2.7	12,600	453.4	453.7
	07-Mar-06	ND (1.0)	ND (1.0)	-67	2.5	9,720	454.5	455.0
	06-Apr-06	ND (1.0)	ND (1.0)	---	1.8	7,740	455.4	456.0
	01-May-06	ND (1.0)	ND (1.0)	-130	4.6	8,180	455.6	455.4
	13-Jun-06	ND (0.2) J	ND (1.0)	---	---	7,840	456.0	455.9
	11-Jul-06	ND (1.0)	ND (1.0)	-108	0.6	7,320	455.3	454.8
	09-Aug-06	ND (0.2)	ND (1.0)	-149	0.7	6,920	455.2	455.4
	07-Sep-06	ND (0.2)	ND (1.0)	-105	1.7	5,930	455.0	455.5
	02-Oct-06	ND (0.2)	ND (1.0)	-122	1.4	5,220	454.5	M
	14-Dec-06	ND (0.2)	ND (1.0) LF	-112	1.8	3,440	453.2	453.3
	07-Mar-07	ND (0.2)	ND (1.0)	-128	0.5	3,000	454.6	454.5
	01-May-07	ND (0.2)	ND (1.0)	-144	1.7	2,530	455.6	455.2
	09-Oct-07	ND (0.2)	ND (1.0)	-150	0.0	1,800	454.0	453.5
MW-39-050	08-Mar-06	ND (1.0)	ND (1.0)	71	2.3	16,000	454.2	455.0
	02-May-06	ND (1.0)	ND (1.0)	-45	0.2	9,380	455.3	455.3
	05-Oct-06	ND (0.2)	ND (1.0)	-77	1.4	11,200	454.2	454.2
	08-Oct-07	ND (0.2)	ND (1.0)	-90	0.0	3,780	453.9	453.5
MW-39-060	08-Mar-06	7.10	2.70	12	2.1	---	453.8	454.3
	08-Mar-06 FD	6.90	2.40	FD	FD	FD	FD	FD
	02-May-06	1.10	1.40	-39	0.2	12,000	455.1	454.8
	05-Oct-06	ND (1.0)	ND (1.0)	-54	1.2	11,300	454.1	454.7
	05-Oct-06 FD	ND (2.0)	ND (1.0)	FD	FD	FD	FD	FD
	08-Oct-07	ND (0.2)	ND (1.0)	-83	0.1	5,211	453.6	453.4
MW-39-070	10-Feb-06	338	340	48	2.8	15,500	452.9	454.0
	08-Mar-06	200	169	201	2.8	16,300	453.5	454.5
	06-Apr-06	223	204	88	2.1	12,300	454.7	456.3
	02-May-06	137	123	31	0.2	11,200	454.9	455.7
	14-Jun-06	107 J	94.6	197	0.0	10,300	455.8	457.0
	12-Jul-06	77.0 J	66.7	74	0.9	9,570	455.0	456.4
	10-Aug-06	89.6	86.2	67	0.6	---	454.6	456.0
	07-Sep-06	155	153	21	1.7	9,760	454.9	454.7
	05-Oct-06	112	103	-1	1.2	12,200	453.6	454.0
	14-Dec-06	101	94.0	2	1.8	8,190	453.8	453.2
	05-Mar-07	35.0	37.2	219	---	8,310	453.6	455.1

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Middle Wells								
MW-39-070	03-May-07	10.1 R	10.4	-18	2.1	16,700	455.5	456.6
	07-Jun-07	4.50	4.30 LF	-112	3.3	6,570	454.5	454.7
	08-Oct-07	5.50	6.20	19	0.2	6,159	453.7	453.9
MW-42-055	07-Mar-06	ND (1.0)	ND (1.0)	-122	0.3	16,500	454.3	454.4
	02-May-06	ND (1.0)	ND (1.0)	-138	2.2	21,400	456.1	455.0
	03-Oct-06	ND (1.0)	ND (1.0)	-126	0.8	19,100	454.4	M
	14-Dec-06	ND (2.0)	ND (1.0)	-132	0.5	16,500	453.7	453.3
	07-Mar-07	ND (0.2)	ND (1.0)	-62	0.0	17,700	454.4	454.5
	07-Mar-07 FD	ND (0.2)	ND (1.0)	FD	FD	FD	FD	FD
	01-May-07	ND (1.0)	ND (1.0)	-139	1.5	14,900	456.0	455.6
	04-Oct-07	ND (1.0)	ND (1.0)	-128	0.1	13,972	454.3	453.8
	11-Dec-07	ND (1.0)	ND (1.0)	-132	0.2	14,960	452.3	452.1
MW-42-065	07-Mar-06	ND (1.0)	ND (1.0)	-58	0.4	20,100	454.4	454.3
	02-May-06	ND (1.0)	ND (1.0)	-76	2.2	25,400	455.3	454.6
	03-Oct-06	ND (1.0)	ND (1.0)	-50	0.7	20,400	454.4	M
	14-Dec-06	ND (2.0)	ND (1.0)	-42	0.6	18,300	453.8	453.4
	07-Mar-07	ND (0.2)	ND (1.0)	---	0.0	18,500	454.4	454.5
	01-May-07	ND (1.0)	ND (1.0)	-60	7.7	15,800	456.3	455.7
	03-Oct-07	ND (1.0)	ND (1.0)	-81	0.4	12,290	454.3	453.6
	11-Dec-07	ND (1.0)	ND (1.0)	-59	0.1	16,470	452.5	452.1
MW-44-070	09-Mar-06	ND (1.0)	ND (1.0)	-393	2.4	6,970	453.2	454.0
	23-Mar-06	ND (1.0) J	ND (1.0)	-166	2.4	7,600	454.1	454.1
	04-Apr-06	ND (1.0)	ND (1.0)	-96	1.6	9,200	455.3	455.3
	04-May-06	ND (1.0)	ND (1.0)	-156	4.5	10,000	455.6	455.3
	13-Jun-06	ND (1.0)	ND (1.0)	-131	4.3	12,200	456.3	456.1
	13-Jun-06 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	15-Jun-06	ND (1.0)	ND (1.0)	-118	5.4	14,900	456.4	456.8
	04-Oct-06	ND (1.0)	ND (1.0)	-181	2.3	8,910	454.0	453.8
	14-Dec-06	ND (1.0)	ND (1.0)	-129	1.7	6,730	453.6	453.6
	09-Mar-07	ND (1.0)	ND (1.0)	-144	0.0	8,700	454.8	455.1
	03-May-07	ND (0.2)	ND (1.0)	-150	2.4	13,400	456.0	455.5
	04-Oct-07	ND (0.2)	ND (1.0)	-404	0.2	4,816	454.5	454.0
	11-Dec-07	ND (0.2)	ND (1.0)	-147	0.1	4,448	452.3	452.1
MW-52S	13-Mar-07	ND (1.0)	ND (1.0)	-230	0.2	17,600	---	455.4
	01-May-07	ND (1.0)	ND (1.0)	-234	0.0	10,100	---	455.7
	05-Jun-07	ND (1.0)	ND (1.0)	-252	1.1	23,100	---	455.3
	12-Jul-07	ND (1.0)	ND (1.0)	-226	3.1	14,800	---	455.6
	08-Aug-07	ND (1.0)	ND (1.0)	-173	1.1	11,544	---	455.8
	05-Sep-07	ND (1.0)	ND (1.0)	-154	0.6	11,800	---	454.7
	11-Oct-07	ND (1.0)	ND (1.0)	-175	0.2	12,740	---	453.7
	17-Dec-07	ND (1.0)	ND (1.0)	-232	0.0	14,800	---	453.3
Deep Wells								
MW-27-085	08-Feb-06	ND (1.0)	ND (1.0)	-82	2.6	21,100	454.0	453.7

Refer to table footnotes for data qualifier explanation.

TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
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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	06-Mar-06	ND (1.0)	ND (1.0)	-92	0.2	15,800	454.9	454.8
	03-Apr-06	ND (1.0)	ND (1.0)	-102	2.5	18,200	454.6	454.3
	01-May-06	ND (1.0)	ND (1.0)	-104	0.9	18,300	455.3	454.7
	14-Jun-06	ND (1.0)	ND (1.0)	-98	3.3	22,400	456.5	456.3
	12-Jul-06	ND (2.0)	ND (1.0)	-71	2.2	21,400	456.4	456.8
	08-Aug-06	ND (1.0)	ND (1.0)	-33	2.7	22,900	454.9	456.2
	06-Sep-06	ND (1.0)	ND (1.0)	-87	2.4	23,200	454.8	454.4
	13-Oct-06	ND (1.0)	ND (1.0)	-78	1.1	24,100	454.0	454.2
	16-Nov-06	ND (1.0)	ND (1.0)	-87	1.2	23,400	453.1	452.8
	11-Dec-06	ND (1.0)	ND (1.0)	-82	1.3	26,700	455.0	455.8
	10-Jan-07	ND (1.0)	4.40	-61	0.3	18,640	453.6	453.7
	06-Feb-07	ND (1.0)	ND (1.0)	-47	0.1	23,100	453.6	453.5
	07-Mar-07	ND (0.2)	ND (1.0)	-80	0.2	---	454.8	454.5
	03-Apr-07	ND (1.0)	ND (1.0)	-97	2.2	23,100	455.7	455.7
	01-May-07	ND (1.0)	1.00	-69	0.4	20,800	456.9	456.4
	13-Jun-07	ND (1.0)	ND (1.0)	-40	0.3	18,800	456.2	455.6
	11-Jul-07	ND (1.0)	ND (1.0)	-54	0.0	20,100	453.9	455.8
	08-Aug-07	ND (1.0)	ND (1.0)	-26	0.2	16,800	455.3	454.7
	08-Aug-07 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	05-Sep-07	ND (1.0)	ND (1.0)	-37	0.5	18,000	454.8	454.1
	02-Oct-07	ND (1.0)	ND (1.0)	-53	0.3	16,793	454.6	453.7
	11-Dec-07	ND (1.0)	ND (1.0)	-44	0.1	18,240	452.5	452.1
MW-28-090	09-Feb-06	ND (0.2) J	ND (1.0)	-156	2.8	8,830	453.7	453.8
	06-Mar-06	ND (1.0)	ND (1.0)	-151	0.3	6,830	454.4	454.4
	06-Apr-06	ND (1.0)	ND (1.0)	---	2.1	8,160	455.6	455.4
	05-May-06	ND (1.0)	ND (1.0)	-150	0.8	8,690	456.0	456.2
	15-Jun-06	ND (1.0)	ND (1.0)	-153	3.9	7,980	456.5	456.5
	13-Jul-06	ND (1.0) J	ND (1.0)	-150	1.6	---	456.7	457.1
	11-Aug-06	ND (0.2)	ND (1.0)	-159	0.6	12,300	456.1	456.5
	08-Sep-06	ND (0.2)	ND (1.0)	-133	3.2	7,830	454.3	454.1
	13-Oct-06	ND (0.2)	ND (1.0)	-156	1.0	9,700	454.8	455.0
	14-Dec-06	ND (1.0)	ND (1.0)	-160	0.3	7,590	453.7	453.7
	08-Mar-07	ND (1.0)	ND (1.0)	-154	4.1	6,910	454.7	454.7
	04-May-07	ND (0.2)	ND (1.0)	-156	0.2	7,492	456.9	456.8
	04-Oct-07	ND (1.0)	ND (1.0)	-123	0.3	8,091	454.9	454.8
	14-Dec-07	ND (0.2)	ND (1.0)	-133	0.2	7,932	452.7	452.9
MW-33-150	07-Feb-06	4.30 J	6.40	-61	2.7	20,400	455.2	453.9
	08-Mar-06	4.20	3.20	-55	0.3	20,400	454.9	455.2
	06-Apr-06	4.50	3.00	39	2.1	18,300	455.5	455.2
	03-May-06	6.60	5.50	-23	1.0	17,100	455.5	454.5
	16-Jun-06	5.50	5.40	38	2.8	21,300	456.7	457.1
	13-Jul-06	7.40 J	6.70	-14	1.1	22,400	456.3	456.5
	11-Aug-06	9.30	8.10	-19	1.8	20,200	456.1	456.4
	08-Sep-06	7.40	4.10	28	1.8	17,900	454.9	454.3

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-33-150	06-Oct-06	7.70	5.70	15	0.9	20,500	454.9	454.1
	13-Dec-06	10.8	9.80	-5	0.4	17,500	454.1	453.8
	06-Mar-07	6.90	7.00	37	0.0	---	455.0	454.7
	02-May-07	6.80	6.10	-65	0.9	31,200	456.2	456.0
	09-Oct-07	8.90	8.30	3	0.1	18,600	454.9	453.7
	09-Oct-07 FD	9.40	7.90	FD	FD	FD	FD	FD
	12-Dec-07	8.90	10.0	-67	0.1	17,920	453.4	452.4
MW-33-210	07-Feb-06	9.00	7.20	-14	2.7	22,800	454.6	454.0
	06-Mar-06	10.7	6.50	-37	0.2	16,600	455.1	454.5
	13-Apr-06	4.20	ND (4.2)	21	6.8	18,100	455.7	454.7
	05-May-06	10.0	8.80	34	0.4	20,100	456.5	456.5
	16-Jun-06	9.20	8.30	-27	2.9	23,600	456.8	456.9
	13-Jul-06	10.0 J	7.50	36	2.2	27,100	456.7	456.8
	08-Aug-06	9.80	8.70	70	3.1	23,900	455.8	454.8
	08-Sep-06	9.20	4.90	59	1.7	21,000	455.4	454.4
	06-Oct-06	10.2	10.0	28	0.9	24,000	455.4	454.2
	11-Dec-06	11.1	8.00	157	1.2	27,600	455.1	455.9
	05-Mar-07	11.2	11.0	-2	0.3	---	455.7	455.0
	02-May-07	9.20	9.30	-52	0.2	23,700	456.6	456.0
	05-Oct-07	11.9	11.5	-27	0.2	18,138	455.6	455.1
	12-Dec-07	13.3	14.3	-14	0.0	19,800	453.7	452.4
MW-34-080	08-Feb-06	ND (1.0)	ND (1.0)	-22	2.6	16,400	454.1	454.2
	09-Mar-06	ND (1.0)	ND (1.0)	-12	2.2	15,100	454.9	454.8
	03-Apr-06	ND (1.0)	ND (1.0)	-38	2.4	13,500	454.5	454.0
	03-May-06	ND (1.0)	ND (1.0)	-68	0.2	13,800	456.4	455.3
	14-Jun-06	ND (1.0)	ND (1.0)	-99	2.7	15,600	457.0	456.8
	12-Jul-06	ND (1.0)	ND (1.0)	-75	1.6	14,800	456.3	456.3
	08-Aug-06	ND (1.0)	ND (1.0)	-33	0.6	16,200	455.6	455.4
	06-Sep-06	ND (1.0)	ND (1.0)	-84	0.9	16,000	454.9	454.7
	04-Oct-06	ND (1.0)	ND (1.0)	-111	2.1	14,400	453.7	453.9
	16-Nov-06	ND (1.0)	ND (1.0)	-86	1.1	13,200	453.0	452.6
	12-Dec-06	ND (1.0)	ND (1.0)	-23	0.3	15,000	454.5	454.6
	09-Jan-07	ND (1.0)	3.20	-36	0.3	14,300	453.5	453.6
	05-Feb-07	ND (1.0)	ND (1.0)	-51	0.2	10,300	453.6	453.5
	05-Mar-07	ND (1.0)	ND (1.0)	-54	0.2	24,800	455.2	455.1
	02-Apr-07	ND (0.2)	ND (1.0)	-89	0.0	10,800	455.7	455.0
	30-Apr-07	ND (1.0)	1.10	-121	0.1	9,000	456.2	456.0
	13-Jun-07	ND (1.0)	ND (1.0)	-90	0.3	10,120	456.5	455.9
	11-Jul-07	ND (1.0)	ND (1.0)	-79	0.0	14,800	456.1	455.3
	08-Aug-07	ND (1.0)	ND (1.0)	-24	0.2	9,050	455.7	455.5
	06-Sep-07	ND (1.0)	ND (1.0)	-23	0.2	9,600	455.5	455.0
	03-Oct-07	ND (0.2)	ND (1.0)	-63	0.2	8,443	454.9	454.3
	12-Nov-07	ND (1.0)	ND (1.0)	-327	0.1	9,046	453.8	453.0
	13-Dec-07	ND (1.0)	ND (1.0)	-34	0.1	5,648	452.7	452.4

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
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	16-Jan-08	ND (1.0)	ND (1.0)	-26	0.1	9,135	453.9	453.6
	16-Jan-08 FD	ND (1.0)	1.20	FD	FD	FD	FD	FD
MW-34-100	08-Feb-06	797	706	65	2.5	20,100	453.9	453.8
	08-Feb-06 FD	785	708	FD	FD	FD	FD	FD
	22-Feb-06	752	831	225	3.0	21,900	---	453.6
	22-Feb-06 FD	748	846	FD	FD	FD	FD	FD
	08-Mar-06	800	857	-8	---	18,600	454.3	454.3
	08-Mar-06 FD	801	773	FD	FD	FD	FD	FD
	23-Mar-06	830	851	113	2.2	18,400	454.3	454.4
	23-Mar-06 FD	828	855	FD	FD	FD	FD	FD
	03-Apr-06	858	910	42	2.8	16,800	454.2	454.1
	21-Apr-06	852	873	---	---	---	---	455.8
	03-May-06	900	946	-10	0.3	18,200	455.3	454.8
	03-May-06 FD	920	946	FD	FD	FD	FD	FD
	17-May-06	935	1180	44	3.1	23,800	455.5	455.2
	17-May-06 FD	930	1190	FD	FD	FD	FD	FD
	31-May-06	960	929	104	3.1	16,100	456.7	456.3
	14-Jun-06	922	839	-2	3.2	20,800	456.6	456.6
	14-Jun-06 FD	921	864	FD	FD	FD	FD	FD
	28-Jun-06	976	1130	132	5.0	21,800	456.3	456.6
	12-Jul-06	823 J	851	27	1.5	19,300	456.1	456.6
	12-Jul-06 FD	828 J	864	FD	FD	FD	FD	FD
	26-Jul-06	859	955	36	2.2	---	456.3	456.7
	08-Aug-06	889	982	64	0.5	20,600	455.6	455.9
	28-Aug-06	922	945	69	1.3	28,900	453.8	453.6
	06-Sep-06	844	963	117	1.9	22,500	454.9	454.9
	06-Sep-06 FD	797	907	FD	FD	FD	FD	FD
	20-Sep-06	872	984	181	1.5	19,600	454.2	M
	04-Oct-06	910	889	0	2.0	20,700	454.5	453.9
	18-Oct-06	815	920	52	0.8	21,700	453.9	454.0
	01-Nov-06	832	752	33	1.6	20,200	453.9	453.4
	16-Nov-06	777	801	146	1.4	20,500	452.9	453.0
	30-Nov-06	744	712	115	0.9	21,900	452.4	452.2
	12-Dec-06	851	625 J	-16	0.3	21,000	454.1	454.5
	28-Dec-06	723	603	115	---	16,760	453.2	452.7
	09-Jan-07	797	830	52	0.2	---	453.2	453.6
	24-Jan-07	832	817	129	0.3	17,700	453.4	453.3
	05-Feb-07	780	646	-28	0.2	26,800	453.3	453.5
	05-Feb-07 FD	764	634	FD	FD	FD	FD	FD
	21-Feb-07	804	895	37	0.2	39,100	454.5	454.6
	07-Mar-07	806	788	71	0.2	37,800	454.5	454.6
	21-Mar-07	724	642	67	0.0	20,000	455.0	455.5
	02-Apr-07	749	786	9	0.0	22,800	455.1	455.1
	02-Apr-07 FD	720	800	FD	FD	FD	FD	FD
	18-Apr-07	687	641	114	0.0	18,100	456.2	456.4

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-34-100	30-Apr-07	626	590	22	2.1	12,400	456.0	456.0
	30-Apr-07 FD	632	599	FD	FD	FD	FD	FD
	16-May-07	588	573	55	1.5	38,400	456.3	456.0
	30-May-07	597	656	76	1.9	33,500	456.4	456.0
	13-Jun-07	609	644	127	0.7	17,470	456.4	456.3
	13-Jun-07 FD	608	633	FD	FD	FD	FD	FD
	27-Jun-07	574	536	63	4.4	20,600	456.6	456.6
	12-Jul-07	557	520	45	0.0	25,000	455.9	456.0
	12-Jul-07 FD	558	521	FD	FD	FD	FD	FD
	25-Jul-07	560	627	52	0.0	18,000	455.7	455.5
	08-Aug-07	596	670	-17	0.1	16,070	455.1	454.9
	22-Aug-07	550	490	72	0.0	18,100	455.4	455.3
	06-Sep-07	551	581	112	0.3	17,400	455.2	455.5
	06-Sep-07 FD	546	516	FD	FD	FD	FD	FD
	19-Sep-07	501	603	---	---	---	---	455.3
	03-Oct-07	521	609 J	-51	0.2	14,026	454.2	453.8
	03-Oct-07 FD	513	424 J	FD	FD	FD	FD	FD
	13-Nov-07	590	598	-68	0.1	17,040	453.3	453.3
	13-Dec-07	567	591	115	0.1	17,000	452.4	452.5
	13-Dec-07 FD	614	610	FD	FD	FD	FD	FD
	16-Jan-08	564	648	-7	0.1	17,830	453.4	453.5
MW-36-090	10-Feb-06	71.8	71.4	37	3.4	16,100	452.7	453.8
	07-Mar-06	33.0	27.5	42	3.1	14,700	453.4	454.4
	04-Apr-06	23.5	15.7	5	2.4	12,700	455.1	455.3
	01-May-06	22.8	18.3	24	4.4	11,400	454.1	454.6
	13-Jun-06	10.9	9.00	---	---	10,300	455.4	456.4
	11-Jul-06	12.2	11.1	-34	0.8	14,000	454.2	455.3
	09-Aug-06	9.00	8.20	-96	0.8	9,190	454.7	455.9
	07-Sep-06	8.80	7.70	-55	1.7	8,400	454.7	455.4
	02-Oct-06	9.00	8.50	-20	1.0	8,270	453.6	M
	02-Oct-06 FD	8.90	10.8	FD	FD	FD	FD	FD
	15-Nov-06	ND (1.0)	2.40	-64	1.0	11,700	452.4	453.6
	14-Dec-06	3.80 J	5.80 J	-39	1.7	7,250	453.6	453.4
	14-Dec-06 FD	4.00	3.00 J	FD	FD	FD	FD	FD
	10-Jan-07	6.00	9.70	-83	0.2	7,743	452.4	453.7
	05-Feb-07	5.40	4.90	-28	0.2	10,100	452.4	453.5
	07-Mar-07	3.10	3.70	28	0.4	7,470	453.7	454.5
	03-Apr-07	2.90	3.20	-17	2.2	6,970	454.8	455.5
	02-May-07	2.00	1.80	-35	0.0	7,580	455.8	457.0
	02-May-07 FD	1.90	1.80	FD	FD	FD	FD	FD
	12-Jun-07	2.60	2.80	-71	0.2	5,510	455.3	456.1
	12-Jul-07	2.90	3.10	-135	0.0	6,530	454.9	455.5
	07-Aug-07	3.00	3.60	-44	0.1	4,100	454.3	454.4
	06-Sep-07	2.90	3.60	-60	0.2	3,800	454.1	454.4
	09-Oct-07	3.20	2.90	-30	0.1	3,832	453.4	453.5

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Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
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PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-36-100	09-Feb-06	307	288	18	2.6	19,700	452.9	453.6
	13-Mar-06	540	531	-16	0.2	17,400	453.1	453.7
	05-Apr-06	554	492	24	0.1	15,300	453.7	455.3
	02-May-06	532	517	23	2.7	21,900	454.5	454.8
	15-Jun-06	496 J	465	7	3.6	18,200	455.5	456.2
	13-Jul-06	528	497	37	1.0	19,600	455.8	457.5
	09-Aug-06	551	474	67	1.6	14,600	455.1	456.3
	08-Sep-06	556	561	-10	2.6	16,200	453.5	454.0
	11-Oct-06	556	629	17	0.9	16,500	453.8	453.9
	14-Nov-06	657	764	13	1.0	17,900	452.6	453.1
	11-Dec-06	586	513	-64	1.1	21,700	453.8	455.7
	10-Jan-07	571	554	-55	0.3	20,300	452.8	453.7
	05-Feb-07	538	474	-66	0.2	23,800	452.7	453.5
	08-Mar-07	436	454	-62	3.7	15,700	453.8	454.7
	02-Apr-07	366	378	-58	0.0	16,600	454.4	455.3
	02-May-07	297	348	-51	0.0	16,100	455.8	456.8
	14-Jun-07	181	192	-118	0.5	13,950	455.8	456.6
	12-Jul-07	180	219	-67	0.0	17,400	455.1	455.6
	07-Aug-07	159 J	187	-45	0.1	12,720	454.4	454.6
	06-Sep-07	157	184	-141	0.1	13,700	454.2	454.3
	10-Oct-07	228	196	-27	0.1	14,740	453.9	454.1
MW-39-080	10-Feb-06	1750	1610	66	2.6	18,900	453.0	454.0
	08-Mar-06	1420	1400	154	2.2	20,900	453.7	454.6
	06-Apr-06	1200	1120	86	2.0	15,800	454.8	456.2
	02-May-06	1410	1450	61	0.2	14,900	454.9	455.0
	14-Jun-06	1000 J	934	184	0.0	15,100	455.9	456.8
	12-Jul-06	830 J	750	69	1.1	14,600	455.2	456.8
	10-Aug-06	481	447	78	0.6	15,800	454.5	455.4
	07-Sep-06	1160	1160	47	1.6	17,500	455.2	454.5
	05-Oct-06	580	594	76	1.2	19,500	454.3	454.4
	15-Nov-06	339	422	52	0.9	17,600	452.7	453.5
	14-Dec-06	326	272	44	1.7	17,300	453.9	453.2
	10-Jan-07	302	292	---	0.2	13,900	452.7	453.7
	08-Feb-07	286	247	105	0.3	24,600	452.1	452.3
	05-Mar-07	151	144	269	---	10,800	453.9	455.0
	04-Apr-07	112	126	157	0.0	13,400	455.3	456.8
	03-May-07	156	146	59	1.9	25,300	455.5	456.5
	12-Jun-07	83.6	72.7	12	0.3	13,217	455.4	456.4
	12-Jul-07	62.8	56.2	-12	0.0	16,600	454.7	455.0
	08-Aug-07	43.3	45.2	-39	1.1	11,078	455.0	454.2
	06-Sep-07	65.3	65.7	-45	0.1	13,000	454.0	454.0
	08-Oct-07	58.6	48.3	-10	0.1	13,529	453.6	453.5
MW-39-100	09-Feb-06	4500	4310	120	2.9	21,700	453.2	453.5
	13-Mar-06	4070	4640	51	0.7	20,400	453.0	453.9

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	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-39-100	05-Apr-06	4470	4050	73	0.9	18,300	454.3	454.9
	05-Apr-06 FD	4460	4330	FD	FD	FD	FD	FD
	02-May-06	3680	3480	67	3.5	---	454.6	454.7
	14-Jun-06	3270	3250	79	3.4	23,100	455.9	455.7
	13-Jul-06	3790	3470	80	1.5	26,200	455.7	457.4
	10-Aug-06	3230	3440	141	1.6	23,000	455.0	456.0
	10-Aug-06 FD	3170	3410	FD	FD	FD	FD	FD
	08-Sep-06	3290	3780	46	2.8	20,700	453.8	453.9
	11-Oct-06	3370	3500	87	1.2	23,100	454.5	454.4
	15-Nov-06	2850	3190	96	2.5	23,000	453.0	453.2
	15-Nov-06 FD	2960	3060	FD	FD	FD	FD	FD
	12-Dec-06	3820	3350	95	0.4	24,200	453.6	454.5
	10-Jan-07	2930	2560	75	0.5	19,570	452.9	453.7
	08-Feb-07	2880	2400	74	0.3	---	452.4	452.3
	12-Mar-07	2850	2770	139	0.7	20,800	455.1	454.5
	04-Apr-07	3190	2990	170	2.7	25,000	455.5	456.9
	03-May-07	2670	2920	102	1.9	---	455.6	456.1
	13-Jun-07	2530	2730	48	0.6	20,490	455.4	455.3
	12-Jul-07	2020	2430	77	0.0	20,800	455.2	455.1
	07-Aug-07	1830	1780	---	0.7	19,340	454.6	454.3
	07-Sep-07	1660	1690	165	0.7	20,900	454.9	456.0
	10-Oct-07	1660	1840	87	0.2	22,110	454.3	454.5
MW-43-075	10-Feb-06	ND (1.0)	ND (1.0)	-154	3.0	18,500	454.5	454.3
	10-Mar-06	ND (1.0)	ND (1.0)	-149	0.1	14,400	455.4	455.4
	03-Apr-06	ND (1.0)	ND (1.0)	-148	2.3	15,000	455.0	454.2
	04-May-06	ND (1.0)	ND (1.0)	-167	0.3	15,400	456.7	456.1
	02-Oct-06	ND (1.0)	ND (1.0)	-128	1.2	17,900	454.3	M
	12-Dec-06	ND (1.0)	ND (1.0)	-109	1.2	17,400	454.7	454.7
	06-Mar-07	ND (1.0)	ND (1.0)	-151	0.0	---	455.4	454.9
	30-Apr-07	ND (1.0)	ND (1.0)	-213	0.0	12,000	457.0	456.4
	02-Oct-07	ND (1.0)	ND (1.0)	-147	0.3	13,587	455.1	454.4
MW-43-090	10-Feb-06	ND (1.0)	ND (1.0)	-112	2.8	25,900	453.9	454.2
	10-Mar-06	ND (2.0)	ND (1.0)	-116	0.0	21,100	455.6	455.1
	03-Apr-06	ND (1.0)	ND (1.0)	-97	2.3	21,100	455.3	454.3
	04-May-06	ND (1.0)	ND (1.0)	-124	0.4	22,400	456.7	455.9
	02-Oct-06	ND (1.0)	ND (1.0)	-108	0.4	23,600	455.3	M
	12-Dec-06	ND (1.0)	ND (1.0)	-85	0.5	25,200	454.9	454.7
	06-Mar-07	ND (1.0)	ND (1.0)	-97	0.0	37,300	455.7	455.0
	30-Apr-07	ND (1.0)	ND (1.0)	-150	1.4	14,000	457.3	456.2
	02-Oct-07	ND (1.0)	ND (1.0)	-79	0.4	18,809	455.6	454.7
MW-44-115	14-Mar-06	735 J	730	-11	1.5	16,500	453.0	454.2
	22-Mar-06	1440	1970	-74	3.0	---	453.6	453.8
	04-Apr-06	1550	1620	37	1.8	15,800	455.5	455.3
	04-Apr-06 FD	1570	1570	FD	FD	FD	FD	FD

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TABLE B-1
Groundwater Sampling Results for Floodplain Monitoring Wells, February 2006 through January 2008
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PG&E Topock Compressor Station

	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-44-115	20-Apr-06	1680	1650	-38	0.4	11,400	455.1	455.4
	20-Apr-06 FD	1680	1610	FD	FD	FD	FD	FD
	26-Apr-06	1560	1580	-27	2.5	15,800	456.2	455.8
	04-May-06	1710	1870	-21	4.9	17,300	455.1	454.8
	10-May-06	1490	1550	7	2.2	22,700	455.1	454.7
	17-May-06	1560	1880	-10	1.9	19,600	455.7	456.1
	31-May-06	1610	1580	-11	0.2	13,100	455.2	455.5
	31-May-06 FD	1610	1600	FD	FD	FD	FD	FD
	13-Jun-06	1420	1350	-26	3.3	17,700	455.7	455.9
	28-Jun-06	1600	1830	-37	4.0	16,800	455.7	456.5
	12-Jul-06	1700 J	1430	14	1.2	17,300	455.4	455.9
	26-Jul-06	1290	1530	-31	0.6	---	455.6	455.9
	09-Aug-06	1230	1460 LF	63	2.9	17,700	455.1	455.3
	23-Aug-06	1370	1440	93	0.6	16,800	454.8	455.0
	07-Sep-06	1380	1340	139	1.7	15,600	454.9	455.5
	21-Sep-06	911	1180	57	2.7	14,600	454.5	M
	05-Oct-06	1300	1310	3	2.9	18,400	454.7	454.4
	18-Oct-06	1250	1380	23	0.8	18,300	454.1	454.5
	15-Nov-06	1210	1480	19	1.5	14,000	453.1	453.5
	12-Dec-06	1310	1090	116	0.6	18,300	453.8	454.4
	09-Jan-07	1140	1260	-34	0.2	20,400	453.1	453.6
	06-Feb-07	1140	1020	-53	0.2	25,200	453.1	453.5
	09-Mar-07	1210	1340 LF	-33	0.1	---	454.4	455.1
	09-Mar-07 FD	1200	1340	FD	FD	FD	FD	FD
	02-Apr-07	1210	1420	-2	0.0	18,100	454.8	455.2
	04-May-07	1080	1190	-61	0.2	13,366	456.2	456.5
	14-Jun-07	1030	1110	-23	0.2	13,560	455.7	455.9
	10-Jul-07	919	1060	23	3.6	16,300	455.3	455.1
	06-Aug-07	834	924	-72	0.8	12,700	454.5	454.3
	05-Sep-07	872	850	4	0.2	13,300	454.3	453.9
	04-Oct-07	763	866	-72	0.1	12,519	454.4	454.3
	04-Oct-07 FD	783	830	FD	FD	FD	FD	FD
	13-Nov-07	766	890	-206	0.1	13,360	453.1	453.2
	13-Nov-07 FD	767	884	FD	FD	FD	FD	FD
	11-Dec-07	736	766	-60	0.1	13,420	453.0	452.1
	14-Jan-08	746	652	-48	0.1	13,550	452.9	453.0
MW-44-125	09-Mar-06	66.6 R	67.5 R	-419	2.6	13,500	453.3	454.1
	22-Mar-06	362	430	-280	1.5	15,000	454.2	453.7
	04-Apr-06	372	374	10	1.9	15,600	456.2	455.5
	20-Apr-06	461	504	-138	0.0	11,400	455.6	455.9
	26-Apr-06	480	485	-147	2.5	16,200	456.7	456.0
	26-Apr-06 FD	479	493	FD	FD	FD	FD	FD
	04-May-06	584	592	-144	4.4	17,200	456.1	455.4
	10-May-06	634 J	667	-96	2.2	23,000	455.8	454.9
	17-May-06	612	740	-103	1.7	19,700	456.3	456.1

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	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-44-125	31-May-06	413	398	-95	0.4	13,600	455.9	455.6
	28-Jun-06	---	---	-186	4.3	13,000	456.2	456.5
	11-Jul-06	373	395	-16	0.7	12,100	455.4	455.1
	11-Jul-06 FD	365	335	FD	FD	FD	FD	FD
	26-Jul-06	155	177	-140	1.9	---	456.1	455.9
	26-Jul-06 FD	157	180	FD	FD	FD	FD	FD
	09-Aug-06	218	227 LF	-93	0.6	16,800	455.7	455.7
	28-Aug-06	468	486	-188	1.1	17,700	454.7	454.2
	28-Aug-06 FD	462	540	FD	FD	FD	FD	FD
	07-Sep-06	314	297	-39	4.1	14,600	455.1	455.2
	07-Sep-06 FD	311	275	FD	FD	FD	FD	FD
	20-Sep-06	224	262	-130	0.4	16,700	453.9	M
	20-Sep-06 FD	226	261	FD	FD	FD	FD	FD
	05-Oct-06	284	280	-97	2.6	18,000	455.1	454.7
	18-Oct-06	304	327	-112	0.8	18,900	454.7	454.8
	18-Oct-06 FD	308	272	FD	FD	FD	FD	FD
	15-Nov-06	320	363	-119	1.3	14,200	453.6	453.7
	13-Dec-06	300	321	-67	0.8	14,200	454.1	454.3
	09-Jan-07	285	285	-92	0.2	22,700	453.4	453.6
	09-Jan-07 FD	284	268	FD	FD	FD	FD	FD
	06-Feb-07	213	190	-85	0.2	12,900	453.3	453.5
	09-Mar-07	258	287	-70	0.0	19,100	454.9	455.1
	03-Apr-07	296	272	-118	2.1	15,700	456.2	455.8
	03-May-07	254	326	-76	1.9	25,000	455.9	455.2
	03-May-07 FD	300	309	FD	FD	FD	FD	FD
	14-Jun-07	229	258	-76	0.1	11,520	456.0	455.9
	11-Jul-07	252	283	-94	0.0	17,000	456.3	456.2
	07-Aug-07	278	251	-37	0.1	11,700	455.7	455.8
	04-Sep-07	255	253	-70	0.1	11,200	455.0	454.2
	04-Oct-07	314	347	-15	0.1	12,049	455.0	454.5
	12-Nov-07	318	330	-295	0.1	13,300	453.5	452.6
	11-Dec-07	359	311	-61	0.1	14,030	452.7	452.1
	14-Jan-08	338	344	-55	0.1	13,630	453.6	453.2
MW-45-095a	24-Mar-06	259	216	-20	2.3	16,100	453.4	454.6
	13-Jul-06	197	202	45	1.4	22,200	454.5	456.1
	04-May-07	169	140	-84	0.3	10,337	455.2	456.7
MW-45-095b	24-Mar-06	332	327	-12	2.1	16,700	452.1	454.5
MW-46-175	14-Mar-06	287	279	-44	2.2	19,500	455.3	454.5
	24-Mar-06	213	173	-93	1.9	19,900	456.6	454.7
	07-Apr-06	208 J	186	-116	2.1	18,500	456.0	455.9
	04-May-06	222	237	-27	4.8	20,800	455.5	454.7
	18-May-06	227	268	-17	2.6	20,500	455.8	454.8
	31-May-06	139 J	169	37	1.2	15,900	455.9	455.3
	15-Jun-06	233	211	-16	3.2	19,900	456.8	456.9

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	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-46-175	30-Jun-06	112	160	56	6.2	21,800	456.4	456.0
	30-Jun-06 FD	111	164	FD	FD	FD	FD	FD
	12-Jul-06	135 J	85.8	38	1.5	19,500	456.4	455.6
	27-Jul-06	174	206	16	0.7	---	456.4	456.6
	09-Aug-06	210	186	65	0.7	21,900	455.6	454.8
	09-Aug-06 FD	223	214	FD	FD	FD	FD	FD
	25-Aug-06	137	136	-24	1.1	19,800	455.4	454.9
	07-Sep-06	183	170	90	2.2	26,400	455.2	454.7
	21-Sep-06	190	244	43	2.3	18,300	455.5	M
	05-Oct-06	194	192	0	2.8	22,200	454.8	453.9
	05-Oct-06 FD	195	187	FD	FD	FD	FD	FD
	18-Oct-06	204	253	15	0.9	21,900	454.7	454.1
	15-Nov-06	163	147	-118	1.1	17,100	453.8	453.1
	13-Dec-06	187	174	-33	0.3	17,700	454.3	453.9
	10-Jan-07	138	133	-160	0.1	17,450	453.9	453.7
	08-Feb-07	130	108	-91	0.3	19,100	453.4	452.4
	08-Mar-07	153	147	222	0.0	14,100	455.1	455.0
	03-Apr-07	113	95.8	-135	2.0	20,700	455.7	455.5
	04-May-07	86.4	114	-137	0.2	16,514	456.6	456.4
	14-Jun-07	101	109	-136	0.2	16,940	456.6	456.4
	13-Jul-07	103	101	-254	0.0	20,900	456.1	455.8
	06-Aug-07	94.0	98.9	-100	0.1	16,100	455.4	454.5
	04-Sep-07	88.1	94.8	-188	0.1	16,800	455.6	454.7
	05-Oct-07	100	86.7	-96	0.1	16,392	455.4	455.2
	13-Nov-07	104	95.0	-292	0.1	17,300	453.7	452.9
	13-Dec-07	123	128	-202	0.0	17,510	453.0	452.3
	14-Jan-08	51.5	133	-159	0.1	17,520	453.6	452.9
MW-46-205	14-Mar-06	ND (1.0)	ND (1.0)	-117	2.3	22,600	455.3	454.9
	24-Mar-06	ND (1.0)	ND (1.0)	-202	1.7	24,000	456.7	454.4
	07-Apr-06	ND (1.0) J	ND (1.0)	-200	1.9	22,400	460.5	456.2
	04-May-06	ND (1.0)	ND (1.0)	-177	4.6	25,900	455.9	454.8
	15-Jun-06	ND (1.0)	1.80	-147	2.9	24,100	457.1	457.2
	13-Jul-06	ND (1.0)	3.50	-152	1.0	24,900	456.9	457.4
	10-Aug-06	ND (1.0)	ND (1.0)	-88	1.3	22,900	456.2	455.4
	07-Sep-06	2.00	2.30	-37	1.6	26,000	455.7	454.5
	05-Oct-06	2.10	2.30	-96	2.4	27,500	455.2	453.8
	13-Dec-06	3.20	3.00	10	1.0	21,000	454.8	454.0
	08-Mar-07	4.00	5.40	159	0.0	18,100	455.5	454.8
	04-May-07	3.90	3.10	-131	0.1	20,373	456.7	456.4
	05-Oct-07	3.70	4.60	2	0.1	20,051	455.7	454.8
	14-Dec-07	3.50	4.20	-12	0.1	21,470	453.6	452.8
MW-49-135	25-Apr-06	ND (1.0) J	ND (1.0)	-167	2.4	18,800	456.2	455.2
	18-May-06	ND (1.0)	ND (1.0)	-178	2.3	17,100	456.7	455.8
	12-Oct-06	ND (1.0)	ND (1.0)	-200	1.9	21,200	455.4	454.0

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	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters			Groundwater and River Elevations at Sampling Time	
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm	Groundwater Elevation salinity-adjusted feet MSL	River Elevation Downstream I-3 Station
Deep Wells								
MW-49-135	15-Dec-06	ND (1.0)	ND (1.0)	-157	0.3	27,700	454.6	453.3
	09-Mar-07	ND (1.0)	ND (1.0)	-173	0.3	30,500	455.4	455.5
	04-May-07	ND (0.2)	ND (1.0)	-144	0.4	13,491	457.4	457.3
	10-Oct-07	ND (1.0)	2.80	-37	1.3	14,690	455.2	453.6
MW-49-275	25-Apr-06	ND (1.0)	ND (1.0)	-143	3.3	29,400	456.8	454.9
	18-May-06	ND (1.0)	ND (1.0)	-214	2.2	26,700	457.0	455.1
	12-Oct-06	ND (1.0)	ND (1.0)	-252	1.8	31,100	456.1	453.6
	15-Dec-06	ND (1.0)	ND (1.0)	-213	1.7	30,000	455.4	453.4
	09-Mar-07	ND (1.0)	ND (1.0)	-228	0.2	37,700	456.3	455.2
	04-May-07	ND (0.2)	ND (1.0)	-190	0.2	23,656	457.8	457.4
	09-Oct-07	ND (1.0)	ND (1.0)	-178	0.1	26,890	456.3	454.1
MW-49-365	26-Apr-06	ND (2.0)	ND (1.0)	-244	2.2	37,600	458.3	455.1
	16-May-06	ND (2.0)	ND (1.0)	-192	1.8	44,900	458.7	455.5
	12-Oct-06	ND (2.0)	ND (1.0)	-275	1.4	47,700	457.6	453.1
	15-Dec-06	ND (2.0)	1.10	-172	1.7	44,400	457.0	453.2
	09-Mar-07	ND (2.0)	ND (1.0)	-237	0.0	42,800	458.0	455.4
	04-May-07	ND (0.2)	ND (1.0)	-184	0.1	37,373	459.2	456.9
	09-Oct-07	ND (2.0)	ND (1.0)	-158	0.1	41,790	458.1	454.6
MW-52D	13-Mar-07	ND (1.0)	ND (1.0)	-306	0.2	16,800	---	454.8
	01-May-07	ND (1.0)	ND (1.0)	-221	0.2	18,600	---	456.4
	05-Jun-07	ND (1.0)	ND (1.0)	-265	0.6	---	---	455.3
	12-Jul-07	ND (1.0)	ND (1.0)	-247	3.1	26,700	---	455.8
	08-Aug-07	ND (1.0)	ND (1.0)	-189	1.2	19,157	---	455.2
	05-Sep-07	ND (1.0)	ND (1.0)	-201	0.3	21,300	---	454.5
	11-Oct-07	ND (1.0)	ND (1.0)	-201	1.2	25,600	---	453.9
	17-Dec-07	ND (1.0)	ND (1.0)	-280	0.0	24,100	---	453.5
MW-52M	13-Mar-07	ND (1.0)	ND (1.0)	-263	0.2	18,500	---	455.1
	01-May-07	ND (1.0)	ND (1.0)	-240	0.0	13,100	---	456.1
	05-Jun-07	ND (1.0)	ND (1.0)	-280	3.4	18,700	---	455.3
	12-Jul-07	ND (1.0)	ND (1.0)	-246	3.0	20,800	---	455.6
	08-Aug-07	ND (1.0)	ND (1.0)	-161	0.6	15,989	---	455.5
	08-Aug-07 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	05-Sep-07	ND (1.0)	ND (1.0)	-171	0.2	16,900	---	454.7
	11-Oct-07	ND (1.0)	ND (1.0)	-164	0.2	18,170	---	454.0
	17-Dec-07	ND (1.0)	ND (1.0)	-240	0.0	21,200	---	453.4
MW-53D	03-Apr-07	ND (1.0)	ND (1.0)	-131	4.9	24,800	---	455.3
	02-May-07	ND (1.0)	1.41	-280	0.0	22,700	---	456.6
	05-Jun-07	ND (1.0)	ND (1.0)	-309	3.3	31,100	---	455.6
	05-Jun-07 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD
	12-Jul-07	ND (1.0)	ND (1.0)	-270	2.9	33,700	---	455.3
	08-Aug-07	ND (1.0)	ND (1.0)	-237	1.4	25,312	---	454.7
	05-Sep-07	ND (1.0)	ND (1.0)	-200	1.8	27,000	---	455.1
	05-Sep-07 FD	ND (1.0)	ND (1.0)	FD	FD	FD	FD	FD

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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-53D	11-Oct-07	ND (2.0)	2.30 J	-159	0.3	28,930	---	454.4
	11-Oct-07 FD	ND (1.0)	ND (1.0) J	FD	FD	FD	FD	FD
	17-Dec-07	ND (1.0)	ND (1.0)	-283	0.0	30,000	---	453.2
MW-53M	03-Apr-07	ND (1.0)	ND (1.0)	-339	0.6	13,400	---	455.5
	01-May-07	ND (1.0)	ND (1.0)	-222	0.0	11,300	---	455.2
	05-Jun-07	ND (1.0)	ND (1.0)	-281	1.2	30,500	---	455.6
	12-Jul-07	ND (1.0)	ND (1.0)	-171	3.5	20,100	---	455.1
	08-Aug-07	ND (1.0)	ND (1.0)	-188	6.1	16,339	---	454.7
	05-Sep-07	ND (1.0)	ND (1.0)	-135	2.2	17,300	---	454.9
	11-Oct-07	ND (1.0)	ND (1.0)	-160	7.4	21,500	---	454.3
	17-Dec-07	ND (1.0)	ND (1.0)	-176	0.0	22,000	---	453.2

NOTES:

ND = not detected at listed reporting limit (RL)
FD = field duplicate
LF = lab filtered
J = concentration or RL estimated by laboratory or data validation
T = data from the downhole transducers to fill groundwater elevation data gaps at some locations
MSL = mean sea level
(---) = data not collected, available, rejected, or field instrumentation malfunctioned
µg/L= micrograms per liter
mV = oxidation-reduction potential (ORP)
µS/cm = microSiemens per centimeter
M = I-3 Transducer damaged
R = result exceeded analytical criteria for precision and accuracy; should not be used for project decision-making

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

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

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

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
Shallow Wells						
MW-12	18-Apr-06	1210	1300	91.0	7.28	3460
	01-May-06	1250	1280	---	---	3840
	04-Oct-06	1740	1790	128	5.22	6510
	13-Dec-06	2050	1880	155	6.20	4660
	06-Mar-07	2630	2440	117	6.67	4940
	03-May-07	2620	2880	115	7.28	5600
	04-Oct-07	2830	2700	15.6	5.76	5820
	04-Oct-07 FD	2970	2800	FD	FD	FD
	13-Dec-07	2530	2930	-14.1	6.15	5740
MW-19	09-Mar-06	1090	1080	227	7.43	3850
	02-May-06	1130	1120	38.0	3.30	2450
	02-Oct-06	970	1300	44.0	---	2450
	15-Dec-06	1070 J	1090	76.0	6.64	2360
	06-Mar-07	1040	1030	95.0	7.03	2280
	02-May-07	836	777	109	---	2560
	06-Jun-07	---	---	88.0	6.70	2240
	05-Oct-07	1390	1510	33.9	6.67	2260
	15-Nov-07	---	---	-56	6.31	2340
MW-20-070	10-Mar-06	5170	4510	228	7.32	5830
	05-May-06	4100	4440	97.0	7.21	3050
	03-Oct-06	3290	3390	117	7.47	3460
	03-Oct-06 FD	3410	3330	FD	FD	FD
	13-Dec-06	3430	3120	203	7.93	2890
	14-Mar-07	2820	2720	152	8.37	2260
	03-May-07	2790	3050	151	8.68	3210
	11-Oct-07	2400	2140	147	9.14	3230
MW-21	09-Mar-06	---	---	---	4.20	15100
	02-May-06	ND (1.0)	ND (1.0)	-77	---	11500
	03-Oct-06	ND (1.0)	ND (1.0)	-67	6.90	15900
	13-Dec-06	ND (1.0)	ND (1.0)	-68	1.22	13000
	09-Mar-07	ND (1.0)	ND (1.0) LF	11.0	2.04	19700
	01-May-07	ND (1.0)	1.40	---	3.20	12300
	04-Oct-07	ND (5.0)	ND (1.0)	18.0	0.98	15200
	11-Dec-07	ND (1.0)	ND (1.0)	80.7	1.71	14500
MW-22	15-Mar-06	ND (2.0)	ND (1.0)	---	8.54	34800
	03-May-06	ND (1.0) J	ND (1.0)	-88	4.14	34200
	13-Oct-06	ND (1.0)	ND (1.0)	-105	0.97	42200
	08-Mar-07	ND (1.0)	ND (1.0)	-99	0.25	51300
	10-Oct-07	ND (1.0)	ND (1.0)	-72	0.21	28500
	17-Dec-07	---	1.50	-129	0.00	33500
MW-24A	06-Mar-06	3490	3980	239	5.17	3140
	03-Oct-06	4300	4260	101	2.87	3910
	14-Dec-06	3310	4250	76.0	0.33	---
	06-Mar-07	3540	3600	142	0.99	3230
	18-Jul-07	---	---	-43.9	2.89	2710

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
MW-24A	12-Dec-07	---	3300	145	1.96	2950
MW-25	09-Mar-06	1360	1430	210	7.40	2750
	03-May-06	1390	1310	98.0	7.72	2110
	03-May-06 FD	1280	1310	FD	FD	FD
	03-Oct-06	1140	1150	81.0	6.88	1720
	06-Mar-07	945	951	120	6.84	1350
	04-May-07	---	---	103	6.85	1520
	02-Oct-07	895	805	33.0	6.67	1320
	02-Oct-07 FD	933	884	FD	FD	FD
MW-26	08-Mar-06	3280	3020	170	9.16	3840
	01-May-06	3210	3110	---	---	3290
	03-Oct-06	3590	3850	104	---	4140
	12-Mar-07	3440	3540	90.0	4.84	3590
	02-Oct-07	3510	3740	25.0	6.90	3790
	11-Dec-07	---	2980	148	4.89	3870
MW-31-060	15-Mar-06	1020	1010	217	7.01	2750
	15-Mar-06 FD	1000	1010	FD	FD	FD
	01-May-06	952	959	---	---	2740
	05-Oct-06	773	849	82.0	7.77	3440
	12-Mar-07	626	638	93.0	5.29	2650
	04-Oct-07	726 J	669	94.4	6.10	3040
MW-35-060	14-Mar-06	31.6	24.3	42.0	2.92	---
	01-May-06	25.7	26.4	-37	---	6770
	12-Oct-06	28.6	29.1	112	1.26	12200
	08-Mar-07	31.3	35.1	176	0.78	5660
	08-Mar-07 FD	30.8	32.7	FD	FD	FD
	01-Oct-07	24.8	21.3	52.2	0.80	7430
	01-Oct-07 FD	24.8	20.6	FD	FD	FD
	14-Nov-07	---	---	102	0.93	7340
MW-47-055	23-Mar-06	10.9 J	7.90	-94	2.98	5800
	16-May-06	24.0	27.3	22.0	2.89	4430
	10-Oct-06	56.9	56.8	6.00	2.83	5300
	14-Dec-06	61.2	82.0	28.0	2.19	3970
	06-Mar-07	54.6	53.0	55.0	3.09	9400
	04-Oct-07	61.9	59.2	50.6	2.50	3880
	12-Dec-07	152	134	30.3	2.15	4040
TW-02S	15-Mar-06	2720	2870	-38	7.53	3200
	03-May-06	2400	2600	80.0	6.75	3150
	04-Oct-06	1920	2130	224	6.70	3470
	04-Oct-07	1250	1220	9.00	4.80	4830
	17-Dec-07	---	---	12.0	6.51	3040
Middle Wells						
MW-20-100	10-Mar-06	10100	10200	198	3.77	4360
	05-May-06	10400	12100	98.0	5.20	3760
	03-Oct-06	9520	10300	106	3.46	4340

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
MW-20-100	13-Dec-06	9610	9220 J	188	2.19	5200
	13-Dec-06 FD	9400	11500 J	FD	FD	FD
	14-Mar-07	9470	9270	153	3.01	2820
	03-May-07	10100	9820	137	3.14	3980
	03-May-07 FD	10000	10500	FD	FD	FD
	10-Oct-07	9000	10700	55.2	4.75	3980
MW-50-095	09-May-06	199	194	30.0	3.00	5480
	24-May-06	218	221	50.0	3.42	---
	10-Oct-06	278	277	24.0	2.85	7120
	12-Dec-06	273	262	112	2.40	4590
	07-Mar-07	274	372	108	2.99	5060
	02-May-07	304	264	135	31.4	3390
	04-Oct-07	217	216	68.0	2.00	5320
	11-Dec-07	173	163	83.5	2.30	5120
MW-51	12-May-06	4370	4630	92.0	2.51	12100
	30-May-06	4130	4530	17.0	1.53	10600
	06-Oct-06	4560	4590	119	3.79	13800
	12-Dec-06	4620	5360	129	3.07	10800
	06-Mar-07	4690	5090	252	2.48	---
	01-May-07	4670	5120	94.0	3.65	10300
	05-Oct-07	4500	4340	127	2.20	10600
	11-Dec-07	---	4460	89.0	3.78	10900
Deep Wells						
MW-20-130	10-Mar-06	10700	10600	213	3.49	14500
	05-May-06	12000	13700	97.0	2.21	12400
	18-Oct-06	11600	16400	78.0	2.68	19500
	13-Dec-06	12000	10500	181	0.80	---
	13-Dec-06 FD	11800	10700	FD	FD	FD
	08-Mar-07	12800	11900	91.0	1.11	---
	08-Mar-07 FD	14400	12100	FD	FD	FD
	03-May-07	13400	16200	183	2.07	14700
	03-May-07 FD	13500	14800	FD	FD	FD
	05-Oct-07	12200	13000	80.3	1.60	12100
MW-24B	07-Mar-06	5650	5970	199	2.59	17200
	03-Oct-06	6120	5830	85.0	2.72	18700
	14-Dec-06	5520	5060	4.00	0.51	---
	05-Mar-07	5980	6100	10.0	1.40	16400
	18-Jul-07	---	---	-57.9	3.02	15400
MW-31-135	15-Mar-06	173	186	33.0	3.05	13400
	09-May-06	154	146 LF	82.0	2.75	15900
	05-Oct-06	85.7	81.7	65.0	2.91	13600
	08-Mar-07	51.0	55.2	142	0.60	8730
	08-Mar-07 FD	52.0	54.2	FD	FD	FD
	01-Oct-07	33.2	29.4	14.4	0.80	10000
	14-Nov-07	---	---	-131	0.50	10900

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Sample Date	Hexavalent Chromium µg/L	Dissolved Total Chromium µg/L	Selected Field Parameters		
				ORP mV	Dissolved Oxygen mg/L	Specific Conductance µS/cm
MW-35-135	10-Mar-06	28.0	24.0	103	2.44	12400
	10-Mar-06 FD	26.5	25.7	FD	FD	FD
	02-May-06	21.0	20.7	0.00	2.70	13000
	12-Oct-06	35.4	34.6	113	1.20	14400
	12-Oct-06 FD	34.0	30.8	FD	FD	FD
	08-Mar-07	32.0	39.2	218	0.22	8580
	01-Oct-07	32.4	28.9	37.6	0.60	9470
	14-Nov-07	---	---	37.9	0.41	10300
MW-47-115	23-Mar-06	ND (2.0) J	ND (1.0)	-161	2.32	15600
	16-May-06	1.40	5.10	-67	1.93	18400
	10-Oct-06	ND (3.5)	6.90	-80	1.13	16800
	14-Dec-06	7.90	6.10	-25	0.36	14800
	06-Mar-07	10.6	10.8	-34	0.33	---
	04-May-07	14.1	13.0	126	0.20	13800
	04-Oct-07	11.6	12.2	63.4	0.20	13000
	12-Dec-07	10.3	10.9	52.8	0.10	15000
	12-Dec-07 FD	10.5	11.3	FD	FD	FD
MW-50-200	09-May-06	7750	7360	-11	1.91	20200
	24-May-06	5810	5910	60.0	4.11	37000
	10-Oct-06	9660	11800	93.0	2.99	28100
	12-Dec-06	10100	9250	123	3.17	20600
	07-Mar-07	12300	14600	114	3.22	25600
	30-Apr-07	10900	12100	65.0	4.75	23700
	04-Oct-07	9430	9780	70.0	4.30	24100
	11-Dec-07	8930	9340	123	2.86	21300
TW-02D	15-Mar-06	1360	1360	5.00	5.20	8470
	03-May-06	1120	1120	82.0	6.10	8490
	04-Oct-06	872	910	162	4.91	11900
	04-Oct-07	210	228	18.0	1.30	6970
	17-Dec-07	---	---	-13	0.19	9050
TW-04	18-May-06	1.00	6.40	-97	0.56	15600
	05-Jun-06	ND (1.0)	4.10	-131	0.00	18300
	09-Oct-06	28.5	26.6	12.0	1.11	24700
	07-Mar-07	35.2	31.1	37.0	0.28	25800
	07-Mar-07 FD	35.5	36.9	FD	FD	FD
	03-Oct-07	33.4	32.2	21.6	0.10	20300
	03-Oct-07 FD	33.6	32.7	FD	FD	FD
	12-Dec-07	26.1	23.2	78.1	0.05	21900
TW-05	10-May-06	1.10 J	1.30	-161	0.60	15100
	01-Jun-06	ND (1.0) J	ND (1.0)	17.0	1.51	10600
	09-Oct-06	3.60	3.20	60.0	1.12	15800
	04-Oct-07	6.60	7.50	53.0	0.40	16800
	13-Dec-07	---	---	-31	0.17	15500

TABLE B-2
Groundwater Sampling Results for Other Monitoring Wells in PMP Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

NOTES:

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

PMP = Interim Measure Performance Monitoring Program

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

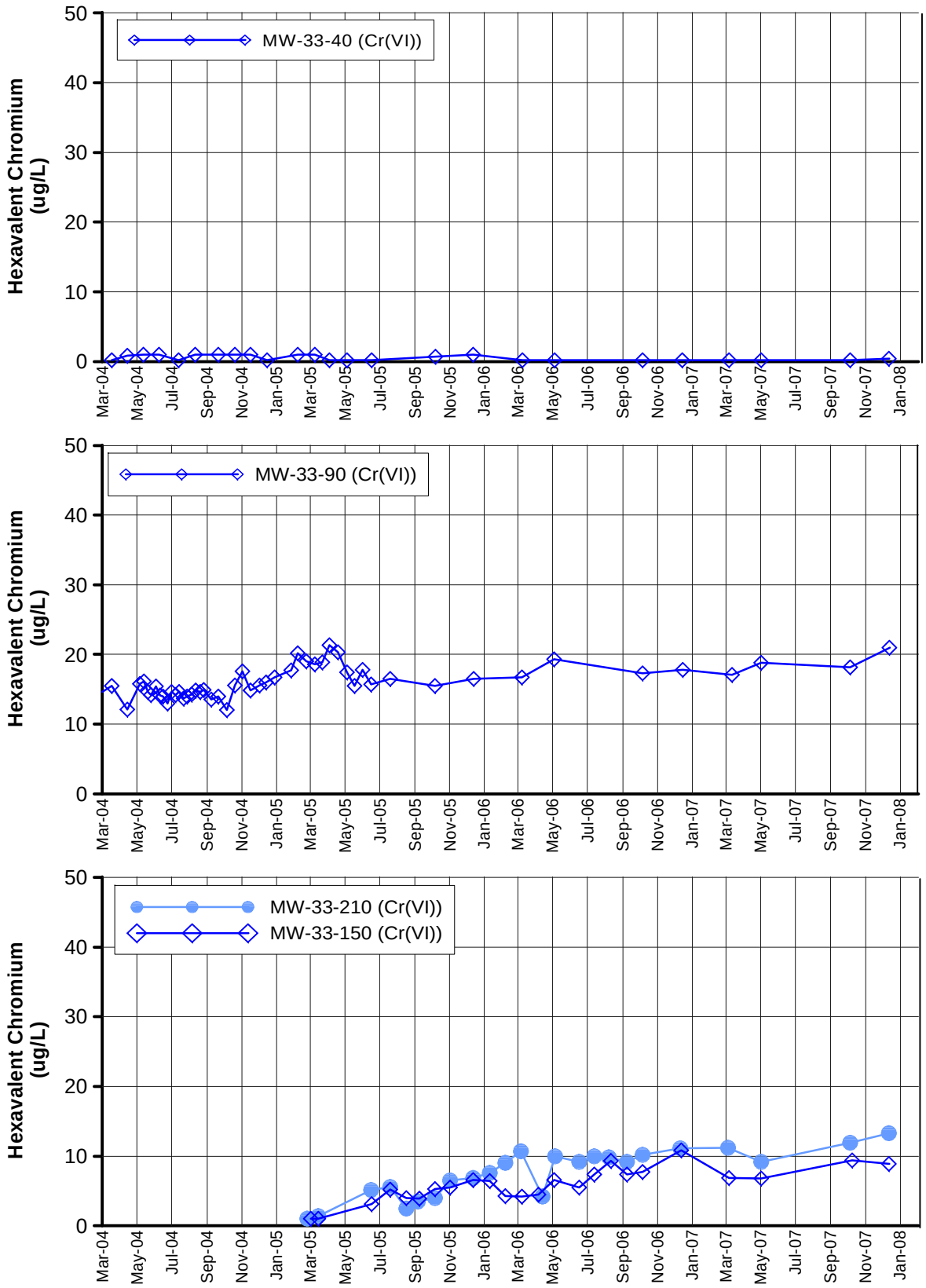

FIGURE B-1
HEXAVALENT CHROMIUM IN MW-33 CLUSTER

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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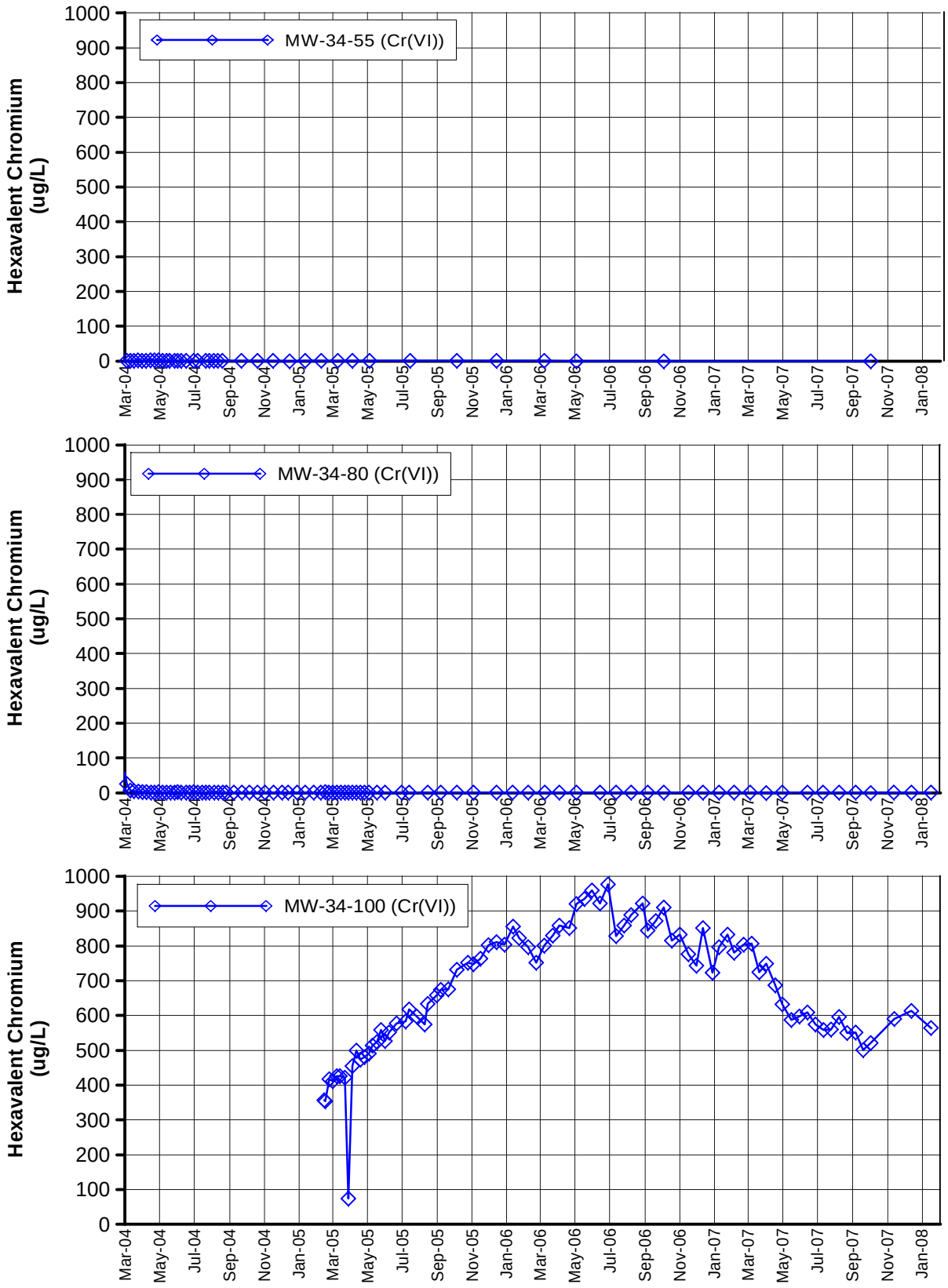

FIGURE B-2
HEXAVALENT CHROMIUM IN MW-34 CLUSTER

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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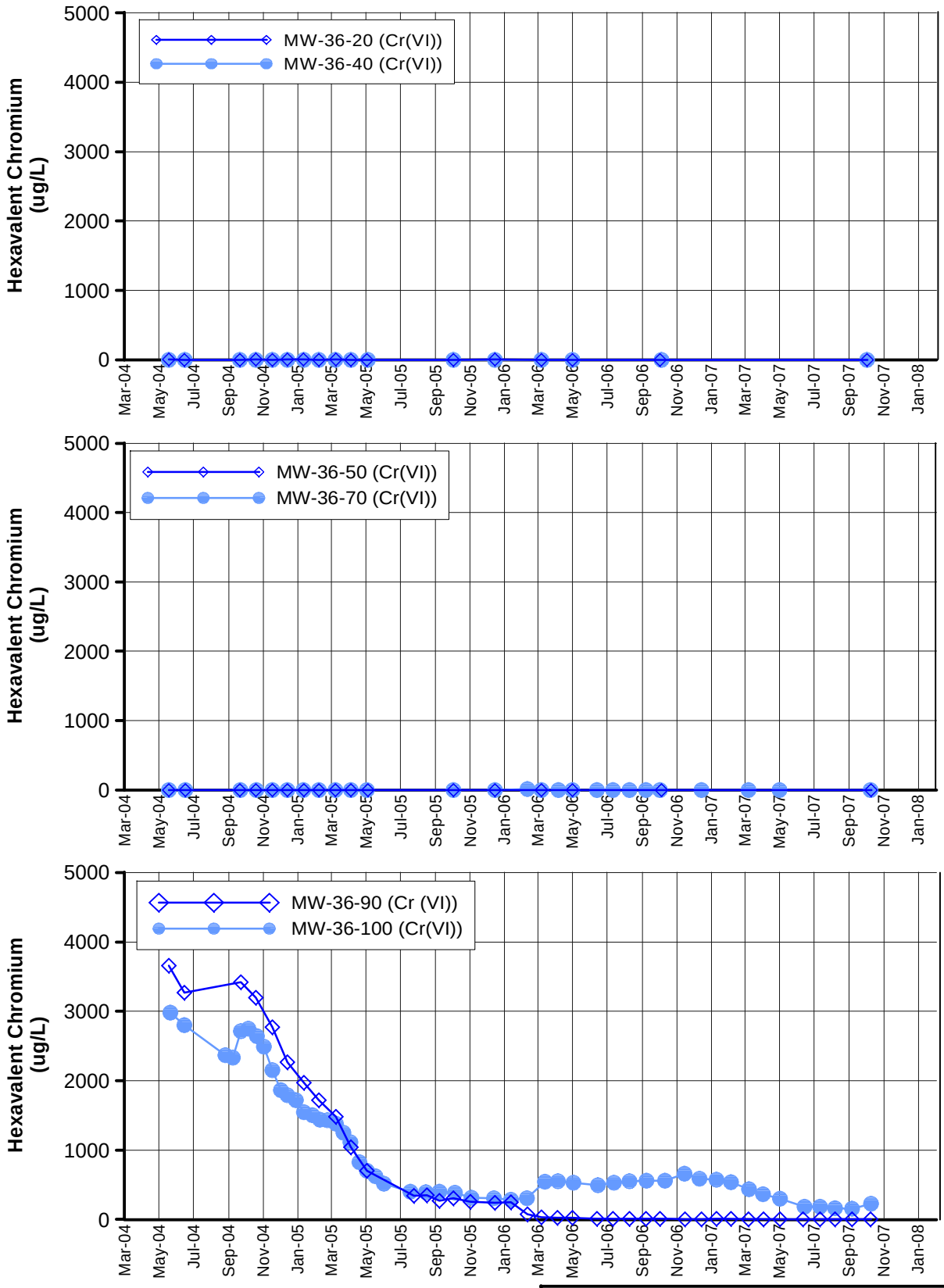

FIGURE B-3
HEXAVALENT CHROMIUM IN MW-36 CLUSTER
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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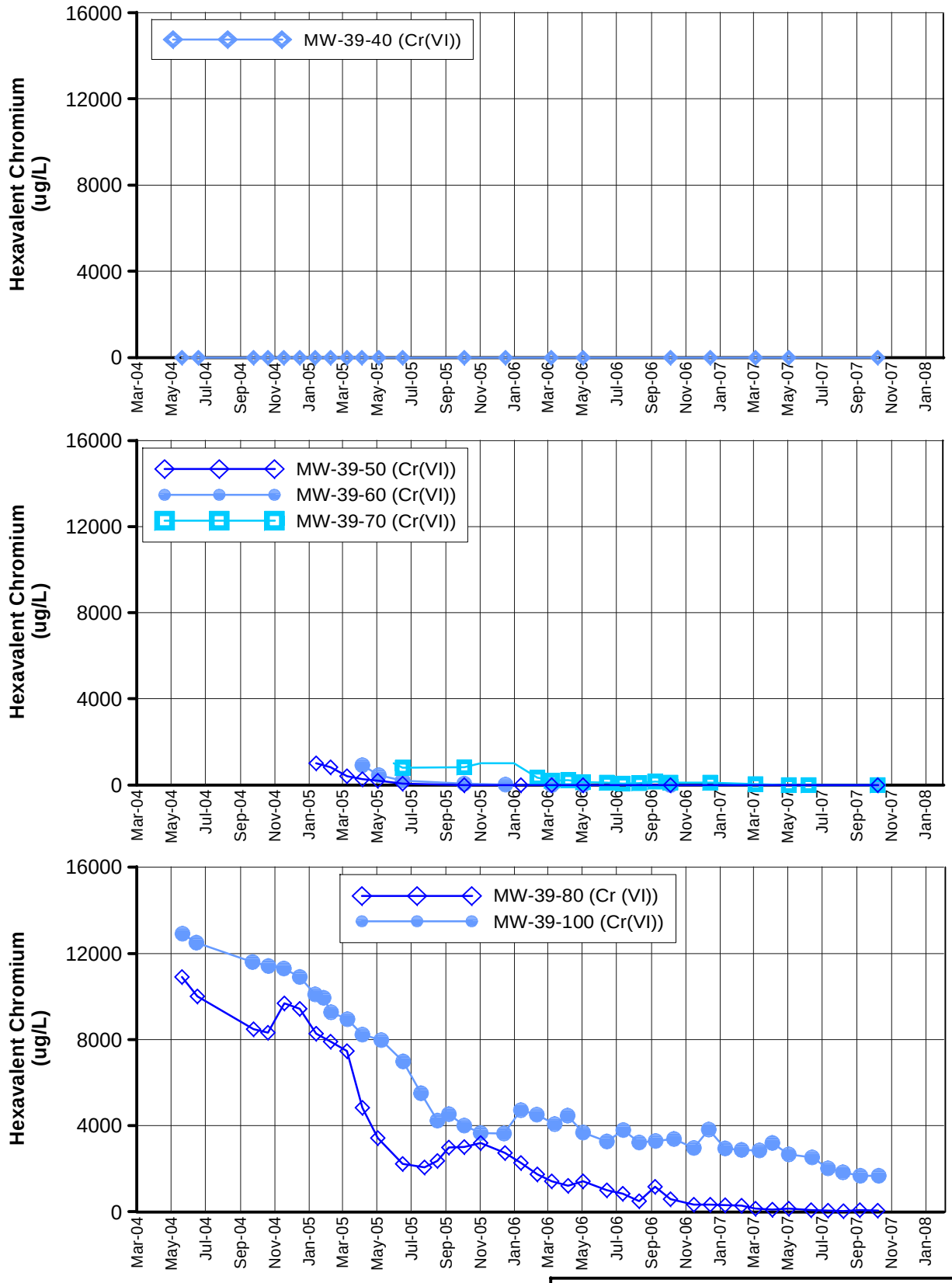

FIGURE B-4
HEXAVALENT CHROMIUM IN MW-39 CLUSTER
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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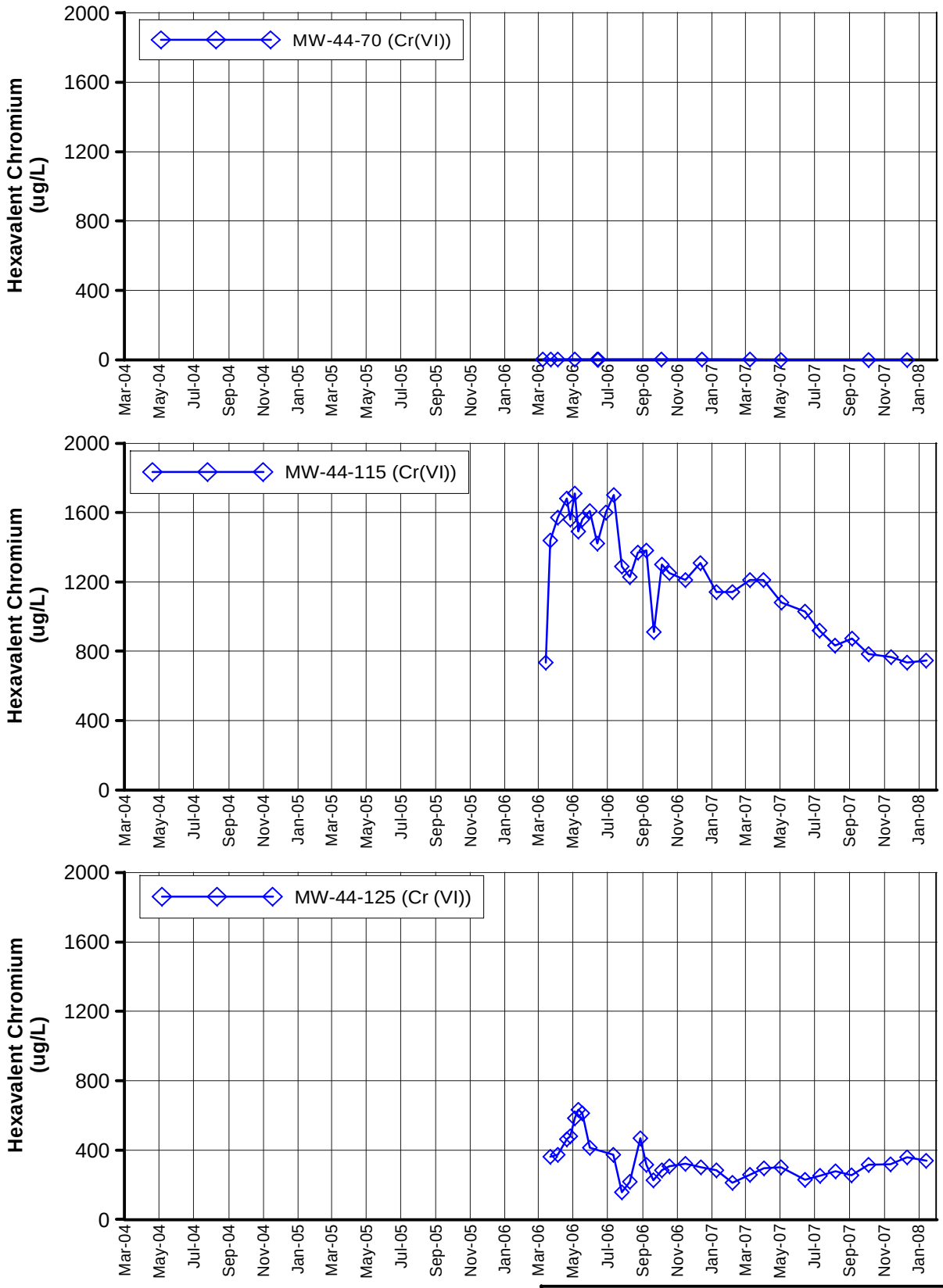

FIGURE B-5
HEXAVALENT CHROMIUM IN MW-44 CLUSTER
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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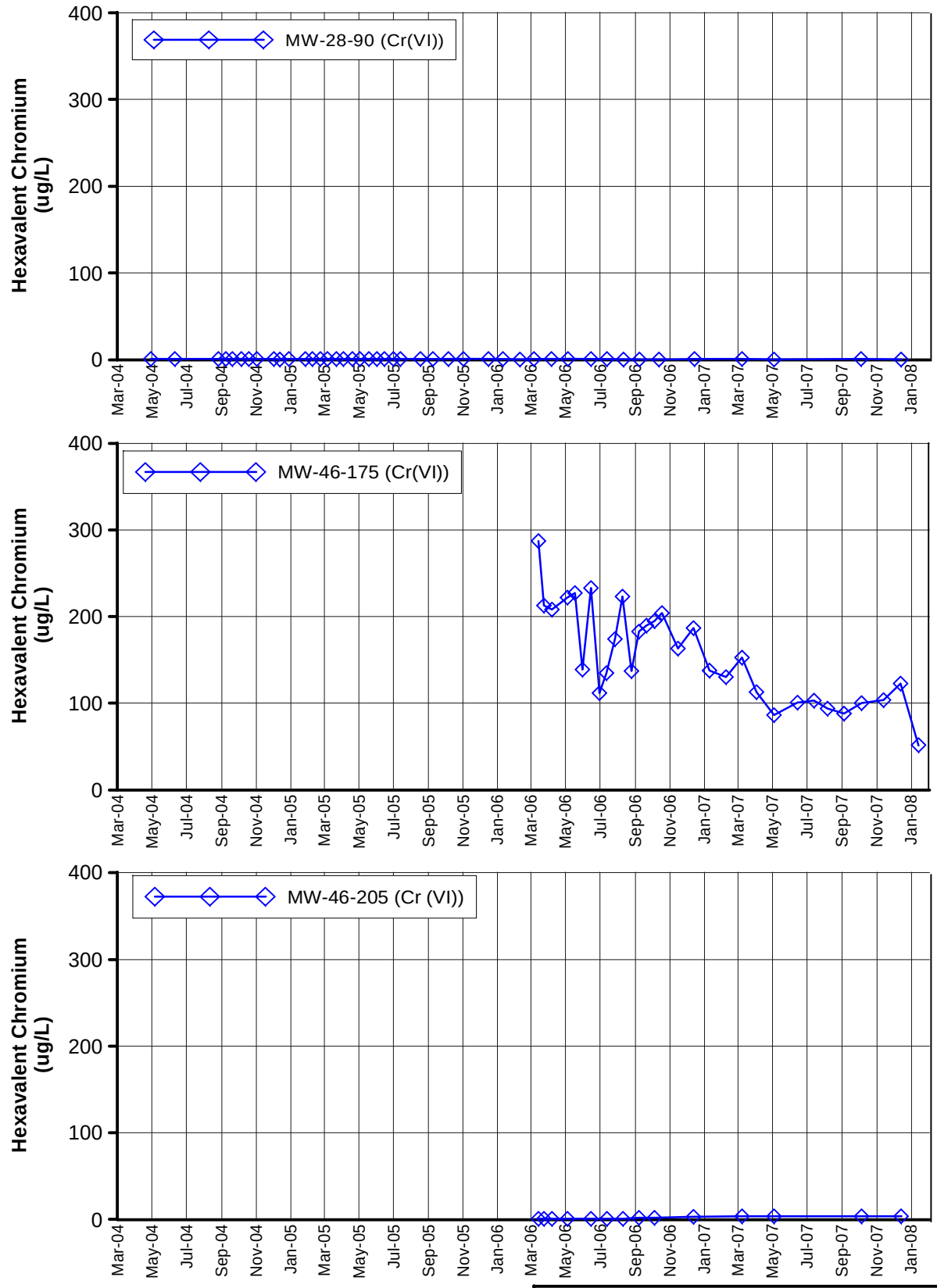

FIGURE B-6
HEXAVALENT CHROMIUM IN MW-46 CLUSTER
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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Appendix C
Groundwater Quality Data for Evaluating IM Performance

TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Shallow Wells								
MW-12	18-Apr-06	1210	91.0	4.70	2080	0.20	-8.8	-63
	01-May-06	1250	---	---	---	0.20	---	---
	04-Oct-06	1740	128	---	---	0.35	---	---
	13-Dec-06	2050	155	---	---	0.20	---	---
	06-Mar-07	2630	117	---	---	0.30	---	---
	03-May-07	2620	115	---	---	0.30	---	---
	04-Oct-07	2830	15.6	---	---	---	---	---
	04-Oct-07 FD	2970	---	---	---	---	---	---
	13-Dec-07	2530	-14.1	7.33	---	---	---	---
MW-19	09-Mar-06	1090	227	4.88	1270	0.20	-8.3	-69.2
	02-May-06	1170	38.0	4.86	1380 J	0.10	-8.3	-61.7
	02-Oct-06	970	44.0	---	---	0.10	---	---
	15-Dec-06	1070 J	76.0	---	---	0.10	---	---
	06-Mar-07	1040	95.0	---	---	0.10	---	---
	02-May-07	836	109	---	---	---	---	---
	06-Jun-07	---	88.0	---	---	0.10	---	---
	05-Oct-07	1390	33.9	---	---	---	---	---
	15-Nov-07	---	-56	5.45	---	0.118	---	---
MW-20-070	10-Mar-06	5170	228	10.5	1940	0.30	-7.2	-54
	05-May-06	4600	97.0	9.86	1750	0.15	-8.2	-55.9
	03-Oct-06	3290	117	13.0	1890	0.20	-8.1	-60.4
	03-Oct-06 FD	3410	---	12.9	1840	---	-8.1	-60.5
	13-Dec-06	3430	203	12.7	1910	0.10	-7.6	-61.2
	14-Mar-07	2820	152	13.7	1740	0.10	-8.5	-64.3
	03-May-07	2790	151	25.1	1750	0.20	-8.4	-66.7
	11-Oct-07	2400	147	15.6	1820	---	-8.2	-63.9
MW-21	09-Mar-06	---	---	---	---	0.90	---	---
	02-May-06	ND (1.0)	-77	---	---	0.65	---	---
	03-Oct-06	ND (1.0)	-67	---	---	0.90	---	---
	13-Dec-06	ND (1.0)	-68	---	---	0.70	---	---
	09-Mar-07	ND (1.0)	11.0	---	---	1.20	---	---
	01-May-07	ND (1.0)	---	---	---	0.70	---	---
	04-Oct-07	ND (5.0)	18.0	---	---	---	---	---
	11-Dec-07	ND (1.0)	80.7	ND (1.0)	---	---	---	---
MW-22	15-Mar-06	ND (2.0)	---	ND (0.5) J	22600 J	2.20	-8.9	-74
	03-May-06	ND (1.0) J	-88	---	---	2.16	---	---
	13-Oct-06	ND (1.0)	-105	---	---	2.73	---	---
	08-Mar-07	ND (1.0)	-99	---	---	3.40	---	---
	10-Oct-07	ND (1.0)	-72	ND (1.0)	---	---	---	---
	17-Dec-07	---	-129	---	---	2.10	---	---
MW-24A	06-Mar-06	3490	239	15.9	1850	0.20	-8.3	-60.2
	03-Oct-06	4300	101	---	---	0.20	---	---
	14-Dec-06	3310	76.0	---	---	---	---	---
	06-Mar-07	3540	142	---	---	0.20	---	---
	18-Jul-07	---	-43.9	---	---	---	---	---
	12-Dec-07	---	145	---	---	---	---	---
MW-25	09-Mar-06	1360	210	3.83	910	0.10	-8.4	-64.1

Refer to table footnotes for data qualifier explanation.

TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Shallow Wells								
MW-25	03-May-06	1390	98.0	3.95	907	0.10	-9.0	-59.4
	03-May-06 FD	1280	---	3.94	924	---	-9.0	-61
	03-Oct-06	1140	81.0	4.09	892	0.10	-8.9	-62.7
	06-Mar-07	945	120	3.95	843	0.10	-9.0	-66.9
	04-May-07	---	103	---	---	---	---	---
	02-Oct-07	895	33.0	4.58	796	---	-9.0	-65.8
	02-Oct-07 FD	933	---	4.40	758	---	-9.0	-65.7
MW-26	08-Mar-06	3280	170	4.90	2070	0.20	-8.6	-60.4
	01-May-06	3210	---	4.87	2130	0.17	-8.9	-62.7
	03-Oct-06	3590	104	6.22	2220	0.20	-8.8	-63
	12-Mar-07	3440	90.0	6.02	2280	0.20	-9.0	-67
	02-Oct-07	3510	25.0	7.84	2180	---	-8.6	-66.3
	11-Dec-07	---	148	---	---	---	---	---
MW-27-020	06-Mar-06	ND (0.2)	-153	ND (0.2)	664	0.04	-12.1	-90.9
	01-May-06	ND (0.2)	---	---	---	0.07	---	---
	14-Jun-06	---	-178	ND (0.5)	730	0.10	-12	-89.8
	03-Oct-06	ND (0.2)	-176	ND (0.5)	600	0.06	-13.1	-96.6
	02-Oct-07	ND (0.2)	-170	ND (1.0)	802	---	-12.5	-96.3
MW-28-025	09-Mar-06	ND (0.2)	-54	ND (0.5)	746	0.05	-11.5	-93.9
	05-May-06	ND (0.2)	-126	ND (0.5)	741	0.06	-11.4	-90.3
	11-Oct-06	ND (0.2)	-111	ND (0.5)	1050	0.09	-12.2	-95
	04-Oct-07	ND (1.0)	-60.5	ND (1.0)	812	---	-12.1	-98.7
MW-29	13-Apr-06	ND (0.2)	-142	ND (0.5)	2290	0.21	-8.9	-61
	05-May-06	ND (0.2)	-128	---	---	0.25	---	---
	13-Oct-06	ND (0.2)	-56	---	---	0.25	---	---
	04-Oct-07	ND (1.0)	-112	---	---	---	---	---
	13-Nov-07	---	-251	ND (1.0)	---	0.125	---	---
MW-30-030	13-Mar-06	ND (5.0)	-99	ND (0.5)	39700 J	3.70	-8.8	-70.5
	02-May-06	ND (2.0)	-104	ND (0.5)	32400	3.60	-10.3	-70.7
	10-Oct-06	ND (2.0)	-129	ND (2.5)	29400	3.78	-9.4	-68.7
	08-Oct-07	ND (1.0)	-96.9	ND (1.0)	27400	---	-9.0	-73.9
MW-31-060	15-Mar-06	1020	217	4.37	1560 J	0.14	-8.6	-65.6
	15-Mar-06 FD	1000	---	4.34	1640 J	---	-8.6	-64.9
	01-May-06	952	---	4.58	1630	0.13	-9.6	-63.2
	05-Oct-06	773	82.0	5.00	1620	0.50	-9.4	-66.3
	12-Mar-07	626	93.0	4.93	1750	0.10	-9.3	-69
	04-Oct-07	726 J	94.4	5.15	1720	---	-9.4	-69.6
MW-32-020	10-Mar-06	ND (2.0)	-125	ND (0.5)	20900	---	-8.3	-65.5
	04-May-06	ND (1.0)	-120	ND (0.5)	16900	1.57	-8.1	-64.9
	02-Oct-06	ND (5.0)	-122	ND (2.5)	46200 J	3.99	-8.6	-67.1
	11-Dec-06	ND (2.0)	-110	ND (5.0)	37900	---	-8.0	-67
	06-Mar-07	ND (2.0)	-84	0.925	27600	2.60	-8.7	-72.7
	30-Apr-07	ND (2.0)	-165	ND (0.2)	17700	2.20	-9.6	-78.1
	01-Oct-07	ND (2.0)	-101	ND (1.0)	37200	---	-8.3	-70.1
MW-32-035	10-Mar-06	ND (2.0)	-161	ND (0.5)	9230	0.53	-8.6	-74
	04-May-06	ND (1.0)	-171	ND (0.5)	9840	0.98	-9.1	-67.8
	02-Oct-06	ND (1.0)	-162	ND (2.5)	11200	---	-9.4	-71.4

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Shallow Wells								
MW-32-035	11-Dec-06	ND (1.0)	-149	ND (0.5)	10400	1.44	-9.0	-70.4
	06-Mar-07	ND (1.0)	-66	ND (0.5)	12600	0.90	-10.2	-75.4
	30-Apr-07	ND (1.0)	-158	ND (0.2)	12100	1.40	-9.9	-78.7
	01-Oct-07	ND (1.0)	-141	ND (1.0)	13700	---	-8.9	-72.7
	10-Dec-07	---	-145	---	---	---	---	---
MW-33-040	09-Mar-06	ND (0.2)	---	ND (0.5)	3020	---	-9.2	-73.8
	04-May-06	ND (0.2)	12.0	---	---	0.24	---	---
	06-Oct-06	ND (0.2)	167	---	---	0.36	---	---
	14-Dec-06	ND (0.2)	31.0	---	---	0.40	---	---
	06-Mar-07	ND (0.2)	---	---	---	4.00	---	---
	02-May-07	ND (0.2)	-16	---	---	1.10	---	---
	05-Oct-07	ND (0.2)	109	---	---	---	---	---
	12-Dec-07	0.40	22.0	ND (1.0)	---	---	---	---
MW-35-060	14-Mar-06	31.6	42.0	1.93	4480 J	---	-9.6	-75.5
	01-May-06	25.7	-37	---	---	0.36	---	---
	02-May-06	26.0	---	1.93	4000 J	---	-9.6	-70.2
	12-Oct-06	28.6	112	---	---	0.70	---	---
	08-Mar-07	31.3	176	---	---	0.30	---	---
	08-Mar-07 FD	30.8	---	---	---	---	---	---
	01-Oct-07	24.8	52.2	---	---	---	---	---
	01-Oct-07 FD	24.8	---	---	---	---	---	---
	14-Nov-07	---	102	ND (2.4)	---	0.402	---	---
MW-36-020	07-Mar-06	ND (1.0)	-148	ND (0.5)	8460	1.13	-10.3	-73.7
	01-May-06	ND (1.0)	-180	---	---	1.21	---	---
	02-Oct-06	ND (1.0)	-177	---	---	1.47	---	---
	03-Oct-07	ND (1.0)	-216	---	---	---	---	---
	14-Nov-07	---	-267	ND (1.0)	---	1.23	---	---
MW-36-040	07-Mar-06	ND (1.0)	-166	ND (0.5)	7990	1.00	-10.8	-73.9
	01-May-06	ND (1.0)	-179	---	---	0.78	---	---
	05-Oct-06	ND (1.0)	-194	---	---	0.94	---	---
	03-Oct-07	ND (1.0)	-249	---	---	---	---	---
	14-Nov-07	---	-274	ND (1.0)	---	0.53	---	---
MW-39-040	07-Mar-06	ND (1.0)	-162	ND (0.5)	4510	0.47	-7.5	-60.4
	02-May-06	ND (1.0)	-188	---	---	0.45	---	---
	05-Oct-06	ND (0.2)	-198	---	---	0.71	---	---
	14-Dec-06	ND (1.0)	-174	---	---	0.76	---	---
	05-Mar-07	ND (1.0)	-55	---	---	0.50	---	---
	03-May-07	ND (1.0) J	-195	---	---	1.40	---	---
	08-Oct-07	ND (1.0)	-181	ND (1.0) J	---	---	---	---
MW-42-030	07-Mar-06	ND (1.0)	-154	ND (0.5)	6180	0.65	-4.6	-41.5
	02-May-06	ND (1.0)	-160	---	---	1.10	---	---
	03-Oct-06	ND (1.0)	-160	---	---	1.18	---	---
	07-Mar-07	ND (0.2)	-109	---	---	0.80	---	---
	04-Oct-07	ND (1.0)	-130	---	---	---	---	---
	11-Dec-07	---	-123	ND (1.0)	---	---	---	---
MW-43-025	10-Mar-06	ND (0.2)	-153	ND (0.5)	881	0.06	-12.3	-94.8
	04-May-06	ND (0.2)	-176	---	---	0.06	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Shallow Wells								
MW-43-025	02-Oct-06	ND (0.2)	-172	---	---	0.06	---	---
	06-Mar-07	ND (0.2)	-168	---	---	0.30	---	---
	02-Oct-07	ND (1.0)	-166	---	---	---	---	---
	10-Dec-07	---	-171	ND (1.0)	---	---	---	---
MW-47-055	23-Mar-06	10.9 J	-94	1.31	2160	0.30	-9.3	-65
	16-May-06	24.0	22.0	---	---	0.20	---	---
	10-Oct-06	56.9	6.00	---	---	0.28	---	---
	14-Dec-06	61.2	28.0	---	---	0.20	---	---
	06-Mar-07	54.6	55.0	---	---	0.50	---	---
	04-May-07	30.3	112	2.00	2450	0.20	-10.1	-74.3
	04-Oct-07	61.9	50.6	---	---	---	---	---
	12-Dec-07	152	30.3	2.47	---	---	---	---
TW-02S	15-Mar-06	2720	-38	5.30	1620 J	0.20	-8.2	-59.5
	03-May-06	2400	80.0	---	---	0.16	---	---
	04-Oct-06	1920	224	---	---	0.18	---	---
	04-Oct-07	1250	9.00	---	---	---	---	---
	17-Dec-07	---	12.0	5.24	---	0.13	---	---
Middle Wells								
MW-20-100	10-Mar-06	10100	198	9.94	2500	0.20	-5.6	-50.3
	05-May-06	10400	98.0	9.99	2260	0.19	-5.1	-46.4
	03-Oct-06	9520	106	13.4	2320	0.20	-5.8	-51.5
	13-Dec-06	9610	188	12.3	1960	0.30	-6.2	-54.4
	13-Dec-06 FD	9400	---	12.2	2200	---	-6.2	-54.5
	14-Mar-07	9470	153	14.2	2180	0.10	-6.8	-57.8
	03-May-07	10100	137	23.2	2300	---	-7.3	-59.2
	03-May-07 FD	10000	---	19.7	2330	---	-6.7	-59.3
	10-Oct-07	9000	55.2	3.25	2160	---	-7.2	-57.2
MW-27-060	07-Mar-06	ND (1.0)	-118	ND (0.5)	7570	0.79	-9.5	-74.6
	01-May-06	ND (1.0)	-140	---	---	0.68	---	---
	03-Oct-06	ND (1.0)	-122	---	---	0.83	---	---
	02-Oct-07	ND (0.2)	-109	---	---	---	---	---
	13-Nov-07	---	-281	ND (1.0)	---	0.438	---	---
MW-30-050	09-Mar-06	ND (1.0)	-81	ND (0.5)	5380	0.49	-9.8	-83.5
	02-May-06	ND (1.0)	-102	ND (0.5)	5420	0.80	-10.4	-73.6
	11-Oct-06	ND (0.2)	-113	ND (0.5)	4170	0.45	-10.7	-82.2
	11-Oct-06 FD	ND (0.2)	---	ND (0.5)	3930	---	-11	-82.6
MW-33-090	08-Mar-06	16.7	-42	1.04	5660	0.58	-9.8	-70.9
	03-May-06	16.1	-44	1.09	5690	0.58	-10.6	-73.5
	03-May-06 FD	19.3	---	---	---	---	---	---
	06-Oct-06	17.3	110	---	---	0.72	---	---
	15-Dec-06	17.8 J	110	---	---	0.83	---	---
	15-Dec-06 FD	2.30 R	---	---	---	---	---	---
	12-Mar-07	17.1	97.0	---	---	0.60	---	---
	02-May-07	18.8	18.0	---	---	0.90	---	---
	05-Oct-07	18.2	206	---	6750	---	---	---
	13-Dec-07	21.0	138	1.87	---	---	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Middle Wells								
MW-33-090	13-Dec-07 FD	20.6	---	2.08	---	---	---	---
MW-34-055	08-Mar-06	ND (1.0)	-106	ND (0.5)	4850	0.47	-10.8	-86.8
	03-May-06	ND (0.2)	-117	ND (0.5)	4320	0.41	-11.5	-84.3
	04-Oct-06	ND (0.2)	-178	ND (0.5)	1680 J	0.20	-12.2	-94.8
	03-Oct-07	ND (0.2)	-207	ND (1.0)	730	---	-11.3	-96.6
MW-36-050	07-Mar-06	ND (1.0)	-110	ND (0.5)	4340	0.46	-10.5	-73.2
	07-Mar-06 FD	ND (1.0)	---	ND (0.5)	4470	---	-11.2	-73.1
	01-May-06	ND (0.2)	-162	---	---	0.37	---	---
	05-Oct-06	ND (0.2)	-165	---	---	---	---	---
	10-Oct-07	ND (0.2)	-172	ND (1.0)	---	---	---	---
MW-36-070	10-Feb-06	ND (10)	-91	---	---	0.70	---	---
	07-Mar-06	ND (1.0)	-67	ND (0.5)	5070	0.54	-10.7	-78.9
	06-Apr-06	ND (1.0)	---	---	---	0.42	---	---
	01-May-06	ND (1.0)	-130	---	---	0.45	---	---
	13-Jun-06	ND (0.2) J	---	---	---	0.43	---	---
	11-Jul-06	ND (1.0)	-108	---	---	0.40	---	---
	09-Aug-06	ND (0.2)	-149	---	---	0.37	---	---
	07-Sep-06	ND (0.2)	-105	---	---	0.30	---	---
	02-Oct-06	ND (0.2)	-122	---	---	0.27	---	---
	14-Dec-06	ND (0.2)	-112	---	---	0.17	---	---
	07-Mar-07	ND (0.2)	-128	---	---	0.10	---	---
	01-May-07	ND (0.2)	-144	---	---	0.10	---	---
	09-Oct-07	ND (0.2)	-150	ND (1.0)	---	---	---	---
MW-39-050	08-Mar-06	ND (1.0)	71.0	ND (0.5)	6940	0.94	-9.9	-65.3
	02-May-06	ND (1.0)	-45	---	---	0.52	---	---
	05-Oct-06	ND (0.2)	-77	---	---	0.63	---	---
	08-Oct-07	ND (0.2)	-90	ND (1.0) J	---	---	---	---
MW-39-060	08-Mar-06	7.10	12.0	ND (0.5)	9060	---	-9.7	-67.9
	08-Mar-06 FD	6.90	---	ND (0.5)	8980	---	-9.5	-66.4
	02-May-06	2.00	-39	ND (0.5)	4600 J	0.68	-9.7	-72.9
	05-Oct-06	ND (1.0)	-54	---	---	0.64	---	---
	05-Oct-06 FD	ND (2.0)	---	---	---	---	---	---
	08-Oct-07	ND (0.2)	-82.9	ND (1.0) J	---	---	---	---
MW-39-070	10-Feb-06	338	48.0	---	---	0.90	---	---
	08-Mar-06	200	201	ND (0.5)	7060	0.96	-9.5	-66.9
	06-Apr-06	223	88.0	---	---	0.70	---	---
	02-May-06	137	31.0	---	---	0.63	---	---
	14-Jun-06	107 J	197	---	---	0.58	---	---
	12-Jul-06	77.0 J	74.0	---	---	0.54	---	---
	10-Aug-06	89.6	67.0	---	---	3.28	---	---
	07-Sep-06	155	21.0	---	---	0.60	---	---
	05-Oct-06	112	-1.0	---	---	0.70	---	---
	14-Dec-06	101	2.00	---	---	0.45	---	---
	05-Mar-07	35.0	219	---	---	0.50	---	---
	03-May-07	10.1 R	-18	---	---	1.00	---	---
	07-Jun-07	4.50	-112	---	---	0.40	---	---
	12-Jun-07	---	70.4	---	---	0.406	---	---

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Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Middle Wells								
MW-39-070	08-Oct-07	5.50	19.4	ND (1.0) J	---	---	---	---
MW-42-055	07-Mar-06	ND (1.0)	-122	ND (0.5)	9540	0.96	-9.2	-64.8
	02-May-06	ND (1.0)	-138	---	---	1.30	---	---
	03-Oct-06	ND (1.0)	-126	---	---	1.14	---	---
	14-Dec-06	ND (2.0)	-132	---	---	1.00	---	---
	07-Mar-07	ND (0.2)	-62	---	---	1.00	---	---
	07-Mar-07 FD	ND (0.2)	---	---	---	---	---	---
	01-May-07	ND (1.0)	-139	---	---	0.90	---	---
	04-Oct-07	ND (1.0)	-128	---	---	---	---	---
	11-Dec-07	ND (1.0)	-132	ND (1.0)	---	---	---	---
MW-42-065	07-Mar-06	ND (1.0)	-58	ND (0.5)	11500	1.20	-9.1	-67.2
	02-May-06	ND (1.0)	-76	---	---	1.60	---	---
	03-Oct-06	ND (1.0)	-50	---	---	1.23	---	---
	14-Dec-06	ND (2.0)	-42	---	---	1.10	---	---
	07-Mar-07	ND (0.2)	---	---	---	1.00	---	---
	01-May-07	ND (1.0)	-60	---	---	0.90	---	---
	03-Oct-07	ND (1.0)	-80.7	---	---	---	---	---
	11-Dec-07	ND (1.0)	-58.5	ND (1.0)	---	---	---	---
MW-44-070	09-Mar-06	ND (1.0)	-393	---	---	0.38	---	---
	23-Mar-06	ND (1.0) J	-166	ND (0.5)	4430	0.40	-10.5	-71
	04-Apr-06	ND (1.0)	-96	---	---	0.51	---	---
	04-May-06	ND (1.0)	-156	---	---	0.56	---	---
	13-Jun-06	ND (1.0)	-131	---	---	0.70	---	---
	13-Jun-06 FD	ND (1.0)	---	---	---	---	---	---
	15-Jun-06	ND (1.0)	-118	---	---	0.90	---	---
	04-Oct-06	ND (1.0)	-181	---	---	0.50	---	---
	14-Dec-06	ND (1.0)	-129	---	---	0.40	---	---
	09-Mar-07	ND (1.0)	-144	---	---	0.50	---	---
	03-May-07	ND (0.2)	-150	---	---	0.80	---	---
	04-Oct-07	ND (0.2)	-404	---	---	---	---	---
	11-Dec-07	ND (0.2)	-147	ND (1.0)	---	---	---	---
MW-50-095	09-May-06	199	30.0	2.20	2650	0.30	-9.4	-74
	24-May-06	218	50.0	---	---	---	---	---
	10-Oct-06	278	24.0	---	---	0.39	---	---
	12-Dec-06	273	112	---	---	0.20	---	---
	07-Mar-07	274	108	---	---	0.30	---	---
	02-May-07	304	135	---	---	0.30	---	---
	04-Oct-07	217	68.0	---	---	---	---	---
	11-Dec-07	173	83.5	2.22	---	---	---	---
MW-51	09-Apr-06	---	-244	---	---	0.18	---	---
	10-Apr-06	---	-267	---	---	0.35	---	---
	12-Apr-06	---	-19	---	---	---	---	---
	12-May-06	4370	92.0	14.1	6190 J	0.69	-7.7	-60.1
	30-May-06	4130	17.0	---	---	0.60	---	---
	06-Oct-06	4560	119	---	---	0.80	---	---
	12-Dec-06	4620	129	---	---	0.60	---	---
	06-Mar-07	4690	252	---	---	---	---	---

Refer to table footnotes for data qualifier explanation.

TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Middle Wells								
MW-51	01-May-07	4670	94.0	---	---	0.60	---	---
	05-Oct-07	4500	127	---	---	---	---	---
	11-Dec-07	---	89.0	12.8	---	---	---	---
MW-52S	13-Mar-07	ND (1.0)	-230	---	---	1.00	-11.5	-86.8
	01-May-07	ND (1.0)	-234	---	7020	0.60	---	---
	05-Jun-07	ND (1.0)	-252	---	---	1.40	---	---
	12-Jul-07	ND (1.0)	-226	---	---	0.90	---	---
	08-Aug-07	ND (1.0)	-173	1.42	---	0.66	---	---
	05-Sep-07	ND (1.0)	-154	ND (1.0)	---	0.67	---	---
	11-Oct-07	ND (1.0)	-175	ND (1.0)	---	0.734	-10.9	-83.3
	17-Dec-07	ND (1.0)	-232	ND (1.0)	---	0.86	---	---
Deep Wells								
MW-20-130	10-Mar-06	10700	213	10.6	8610	0.80	-5.5	-48.8
	05-May-06	12000	97.0	8.95	7700	0.71	-5.3	-47.2
	18-Oct-06	11600	78.0	11.5	8450	1.16	-6.3	-51.4
	13-Dec-06	12000	181	10.6	7890	---	-6.0	-54.9
	13-Dec-06 FD	11800	---	10.5	8250	---	-5.9	-54.4
	08-Mar-07	12800	91.0	11.3	8450	---	-6.5	-57.7
	08-Mar-07 FD	14400	---	11.3	8510	---	-6.6	-57.4
	03-May-07	13400	183	9.80 J	8150	---	-7.7	-60
	03-May-07 FD	13500	---	20.4 J	8100	---	-6.9	-60.1
	05-Oct-07	12200	80.3	11.6	7980	---	-7.0	-57.5
MW-24B	07-Mar-06	5650	199	13.8	8740	1.00	-8.0	-47.5
	04-May-06	6610	149	11.4	9220	1.50	-4.4 J	-53
	04-May-06 FD	5760	---	11.5	8630	---	-5.1 J	-52.9
	03-Oct-06	6120	85.0	---	---	1.10	---	---
	14-Dec-06	5520	4.00	---	---	---	---	---
	05-Mar-07	5980	10.0	---	---	1.00	---	---
	18-Jul-07	---	-57.9	---	---	---	---	---
MW-27-085	08-Feb-06	ND (1.0)	-82	---	---	1.30	---	---
	06-Mar-06	ND (1.0)	-92	ND (0.5)	11500	0.92	-10	-71.4
	03-Apr-06	ND (1.0)	-102	---	---	1.10	---	---
	01-May-06	ND (1.0)	-104	---	---	1.08	---	---
	14-Jun-06	ND (1.0)	-98	---	---	1.40	---	---
	12-Jul-06	ND (2.0)	-71	---	---	1.30	---	---
	08-Aug-06	ND (1.0)	-33	---	---	1.40	---	---
	06-Sep-06	ND (1.0)	-87	---	---	1.42	---	---
	13-Oct-06	ND (1.0)	-78	---	---	1.47	---	---
	16-Nov-06	ND (1.0)	-87	---	---	1.40	---	---
	11-Dec-06	ND (1.0)	-82	---	---	1.65	---	---
	10-Jan-07	ND (1.0)	-61	---	---	1.10	---	---
	06-Feb-07	ND (1.0)	-47	---	---	1.40	---	---
	07-Mar-07	ND (0.2)	-80	---	---	---	---	---
	03-Apr-07	ND (1.0)	-97	---	---	1.40	---	---
	01-May-07	ND (1.0)	-69	---	---	1.00	---	---
	13-Jun-07	ND (1.0)	-40.4	---	---	1.11	---	---
	11-Jul-07	ND (1.0)	-54	---	---	1.20	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-27-085	08-Aug-07	ND (1.0)	-25.6	---	---	0.988	---	---
	08-Aug-07 FD	ND (1.0)	---	---	---	---	---	---
	05-Sep-07	ND (1.0)	-36.9	---	---	1.06	---	---
	02-Oct-07	ND (1.0)	-53	---	---	---	---	---
	11-Dec-07	ND (1.0)	-43.8	ND (1.0)	---	---	---	---
MW-28-090	09-Feb-06	ND (0.2) J	-156	---	---	0.50	---	---
	06-Mar-06	ND (1.0)	-151	ND (0.5)	5000	0.37	-11.1	-74.1
	06-Apr-06	ND (1.0)	---	---	---	0.45	---	---
	05-May-06	ND (1.0)	-150	---	---	0.48	---	---
	15-Jun-06	ND (1.0)	-153	---	---	0.40	---	---
	13-Jul-06	ND (1.0) J	-150	---	---	0.90	---	---
	11-Aug-06	ND (0.2)	-159	---	---	0.70	---	---
	08-Sep-06	ND (0.2)	-133	---	---	0.40	---	---
	13-Oct-06	ND (0.2)	-156	---	---	0.54	---	---
	14-Dec-06	ND (1.0)	-160	---	---	0.40	---	---
	08-Mar-07	ND (1.0)	-154	---	---	0.40	---	---
	04-May-07	ND (0.2)	-156	---	---	---	---	---
	04-Oct-07	ND (1.0)	-123	---	4280	---	---	---
	14-Dec-07	ND (0.2)	-133	ND (1.0)	---	---	---	---
MW-31-135	15-Mar-06	173	33.0	0.80	6310 J	0.80	-9.5	-76.1
	09-May-06	154	82.0	---	---	0.90	---	---
	05-Oct-06	85.7	65.0	---	---	0.80	---	---
	08-Mar-07	51.0	142	---	---	0.50	---	---
	08-Mar-07 FD	52.0	---	---	---	---	---	---
	01-May-07	46.1	-3.0	0.797	6550	0.50	-11.5 J	-81.7 J
	01-Oct-07	33.2	14.4	---	---	---	---	---
	14-Nov-07	---	-131	ND (1.0)	---	0.615	---	---
MW-33-150	07-Feb-06	4.30 J	-61	---	---	1.20	---	---
	08-Mar-06	4.20	-55	1.05	10100	1.21	-10.3	-75.2
	06-Apr-06	4.50	39.0	---	---	1.09	---	---
	03-May-06	6.60	-23	---	---	1.01	---	---
	16-Jun-06	5.50	38.0	---	---	1.30	---	---
	13-Jul-06	7.40 J	-14	---	---	1.40	---	---
	11-Aug-06	9.30	-19	---	---	1.20	---	---
	08-Sep-06	7.40	28.0	---	---	1.10	---	---
	06-Oct-06	7.70	15.0	---	---	1.24	---	---
	13-Dec-06	10.8	-5.0	---	---	1.00	---	---
	06-Mar-07	6.90	37.0	---	---	---	---	---
	02-May-07	6.80	-65	---	---	1.90	---	---
	09-Oct-07	8.90	2.90	1.41	10900	---	---	---
	09-Oct-07 FD	9.40	---	1.26	10600	---	---	---
	12-Dec-07	8.90	-66.5	---	---	---	---	---
MW-33-210	07-Feb-06	9.00	-14	---	---	1.40	---	---
	06-Mar-06	10.7	-37	1.86	12100	0.98	-11.2	-82.3
	13-Apr-06	4.20	21.0	---	---	1.07	---	---
	05-May-06	11.0	34.0	1.05	12200	1.21	-11.3	-75.4
	16-Jun-06	9.20	-27	---	---	1.40	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-33-210	13-Jul-06	10.0 J	36.0	---	---	1.70	---	---
	08-Aug-06	9.80	70.0	---	---	1.50	---	---
	08-Sep-06	9.20	59.0	---	---	1.30	---	---
	06-Oct-06	10.2	28.0	---	---	1.47	---	---
	11-Dec-06	11.1	157	---	---	1.71	---	---
	05-Mar-07	11.2	-2.0	---	---	---	---	---
	02-May-07	9.20	-52	---	---	1.40	---	---
	05-Oct-07	11.9	-27.4	---	12500	---	---	---
	12-Dec-07	13.3	-13.6	1.68	---	---	---	---
MW-34-080	08-Feb-06	ND (1.0)	-22	---	---	1.00	---	---
	09-Mar-06	ND (1.0)	-12	ND (0.5)	7830	0.88	-9.9	-86.8
	03-Apr-06	ND (1.0)	-38	---	---	0.80	---	---
	03-May-06	ND (1.0)	-68	ND (0.5)	7950	0.80	-11.7	-77.6
	14-Jun-06	ND (1.0)	-99	---	---	0.90	---	---
	12-Jul-06	ND (1.0)	-75	---	---	0.90	---	---
	08-Aug-06	ND (1.0)	-33	---	---	0.90	---	---
	06-Sep-06	ND (1.0)	-84	---	---	0.94	---	---
	04-Oct-06	ND (1.0)	-111	ND (0.5)	7080	0.80	-11.3	-81.8
	16-Nov-06	ND (1.0)	-86	---	---	0.76	---	---
	12-Dec-06	ND (1.0)	-23	ND (0.5)	6510	0.90	-10.5	-80.9
	09-Jan-07	ND (1.0)	-36	---	---	0.80	---	---
	05-Feb-07	ND (1.0)	-51	---	---	0.60	---	---
	05-Mar-07	ND (1.0)	-54	ND (0.5)	6360 J	1.50	-11.5	-85.8
	02-Apr-07	ND (0.2)	-89	---	---	0.60	---	---
	30-Apr-07	ND (1.0)	-121	ND (0.2)	6390	0.60	-11.5	-88.9
	13-Jun-07	ND (1.0)	-89.8	---	---	0.571	---	---
	11-Jul-07	ND (1.0)	-79	---	---	0.80	---	---
	08-Aug-07	ND (1.0)	-23.9	---	---	0.508	---	---
	06-Sep-07	ND (1.0)	-23.3	---	---	0.54	---	---
	03-Oct-07	ND (0.2)	-63	ND (1.0)	5490	---	-11.3	-87.8
	12-Nov-07	ND (1.0)	-327	---	---	---	---	---
	13-Dec-07	ND (1.0)	-34.3	ND (1.0)	5420	---	-10.9	-88.6
	16-Jan-08	ND (1.0)	-26.2	---	---	0.513	---	---
	16-Jan-08 FD	ND (1.0)	---	---	---	---	---	---
MW-34-100	08-Feb-06	797	65.0	---	---	1.20	---	---
	08-Feb-06 FD	785	---	---	---	---	---	---
	22-Feb-06	752	225	---	---	1.30	---	---
	22-Feb-06 FD	748	---	---	---	---	---	---
	08-Mar-06	800	-8.0	1.39	10000	1.11	-11.4	-75.5 J
	08-Mar-06 FD	801	---	1.39	10100	---	-10.1	-102 J
	23-Mar-06	830	113	---	---	1.10	---	---
	23-Mar-06 FD	828	---	---	---	---	---	---
	03-Apr-06	858	42.0	---	---	1.00	---	---
	21-Apr-06	852	---	---	---	---	---	---
	03-May-06	900	-10	1.34	9940	1.07	-10.5	-74.5
	03-May-06 FD	920	---	1.33	9990	---	-10.6	-71.9
	17-May-06	935	44.0	---	---	1.50	---	---

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Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
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PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-34-100	17-May-06 FD	930	---	---	---	---	---	---
	31-May-06	960	104	---	---	0.95	---	---
	14-Jun-06	922	-2.0	---	---	1.30	---	---
	14-Jun-06 FD	921	---	---	---	---	---	---
	28-Jun-06	976	132	---	---	1.30	---	---
	12-Jul-06	823 J	27.0	---	---	1.20	---	---
	12-Jul-06 FD	828 J	---	---	---	---	---	---
	26-Jul-06	859	36.0	---	---	---	---	---
	08-Aug-06	889	64.0	---	---	1.20	---	---
	28-Aug-06	922	69.0	---	---	1.81	---	---
	06-Sep-06	844	117	---	---	1.36	---	---
	06-Sep-06 FD	797	---	---	---	---	---	---
	20-Sep-06	872	181	---	---	1.17	---	---
	04-Oct-06	910	0.00	---	---	1.20	---	---
	18-Oct-06	815	52.0	---	---	1.31	---	---
	01-Nov-06	832	33.0	---	---	1.22	---	---
	16-Nov-06	777	146	---	---	1.20	---	---
	30-Nov-06	744	115	---	---	1.33	---	---
	12-Dec-06	851	-16	---	---	1.30	---	---
	28-Dec-06	723	115	---	---	---	---	---
	09-Jan-07	797	52.0	---	---	3.80	---	---
	24-Jan-07	832	129	---	---	1.10	---	---
	05-Feb-07	780	-28	---	---	1.60	---	---
	05-Feb-07 FD	764	---	---	---	---	---	---
	21-Feb-07	804	37.0	---	---	2.00	---	---
	07-Mar-07	806	71.0	---	---	2.40	---	---
	21-Mar-07	724	67.0	---	---	1.30	---	---
	02-Apr-07	749	9.00	---	---	1.40	---	---
	02-Apr-07 FD	720	---	---	---	---	---	---
	18-Apr-07	687	114	---	---	0.90	---	---
	30-Apr-07	626	22.0	1.38	10600	0.70	-10.9	-80.7
	30-Apr-07 FD	632	---	1.37	11900	---	-11.2	-82.1
	16-May-07	588	55.0	---	---	2.20	---	---
	30-May-07	597	76.0	---	---	1.90	---	---
	13-Jun-07	609	127	---	---	1.03	---	---
	13-Jun-07 FD	608	---	---	---	---	---	---
	27-Jun-07	574	63.0	---	---	1.20	---	---
	12-Jul-07	557	45.0	---	---	1.50	---	---
	12-Jul-07 FD	558	---	---	---	---	---	---
	25-Jul-07	560	52.0	---	---	1.06	---	---
	08-Aug-07	596	-16.9	---	---	0.942	---	---
	22-Aug-07	550	72.0	---	---	1.08	---	---
	06-Sep-07	551	112	---	---	1.02	---	---
	06-Sep-07 FD	546	---	---	---	---	---	---
	19-Sep-07	501	---	---	---	---	---	---
	03-Oct-07	521	-50.6	1.19	10700	---	-10.2	-78.2
	03-Oct-07 FD	513	---	1.03	10500	---	-10.6	-78.4

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PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-34-100	13-Nov-07	590	-68	---	---	---	---	---
	13-Dec-07	567	115	---	---	---	---	---
	13-Dec-07 FD	614	---	---	---	---	---	---
	16-Jan-08	564	-7.2	---	---	1.06	---	---
MW-35-135	10-Mar-06	28.0	103	2.41	6720	0.71	-10.5	-76.1
	10-Mar-06 FD	26.5	---	2.46	6480	---	-10.1	-79.3
	02-May-06	21.0	0.00	2.25	6460 J	0.70	-10.6	-79.7
	12-Oct-06	35.4	113	---	---	0.85	---	---
	12-Oct-06 FD	34.0	---	---	---	---	---	---
	08-Mar-07	32.0	218	---	---	0.50	---	---
	04-May-07	27.2	28.0	2.39	6900	1.40	-12	-87.1
	04-May-07 FD	27.8	---	2.38	7100	---	-11.9	-87
	01-Oct-07	32.4	37.6	---	---	---	---	---
	14-Nov-07	---	37.9	ND (2.7)	---	0.581	---	---
MW-36-090	10-Feb-06	71.8	37.0	---	---	0.90	---	---
	07-Mar-06	33.0	42.0	ND (0.5)	6670	0.86	-10.2	-71.8
	04-Apr-06	23.5	5.00	---	---	0.70	---	---
	01-May-06	22.8	24.0	---	---	0.65	---	---
	13-Jun-06	10.9	---	---	---	0.58	---	---
	11-Jul-06	12.2	-34	---	---	0.80	---	---
	09-Aug-06	9.00	-96	---	---	0.51	---	---
	07-Sep-06	8.80	-55	---	---	0.50	---	---
	02-Oct-06	9.00	-20	---	---	0.46	---	---
	02-Oct-06 FD	8.90	---	---	---	---	---	---
	15-Nov-06	ND (1.0)	-64	---	---	0.67	---	---
	14-Dec-06	3.80 J	-39	---	---	0.39	---	---
	14-Dec-06 FD	4.00	---	---	---	---	---	---
	10-Jan-07	6.00	-83.3	---	---	---	---	---
	05-Feb-07	5.40	-28	---	---	0.50	---	---
	07-Mar-07	3.10	28.0	---	---	0.40	---	---
	03-Apr-07	2.90	-17	---	---	0.40	---	---
	02-May-07	2.00	-35	---	---	0.40	---	---
	02-May-07 FD	1.90	---	---	---	---	---	---
	12-Jun-07	2.60	-71	---	---	0.298	---	---
	12-Jul-07	2.90	-135	---	---	0.34	---	---
	07-Aug-07	3.00	-43.6	---	---	0.217	---	---
	06-Sep-07	2.90	-59.5	---	---	0.20	---	---
	09-Oct-07	3.20	-29.7	ND (1.0)	---	---	---	---
MW-36-100	09-Feb-06	307	18.0	---	---	1.20	---	---
	13-Mar-06	540	-16	0.572	10400 J	1.03	-9.0	-71.1
	05-Apr-06	554	24.0	---	---	0.90	---	---
	02-May-06	532	23.0	---	---	1.30	---	---
	15-Jun-06	496 J	7.00	---	---	1.10	---	---
	13-Jul-06	528	37.0	---	---	1.20	---	---
	09-Aug-06	551	67.0	---	---	0.85	---	---
	08-Sep-06	556	-10	---	---	1.00	---	---
	11-Oct-06	556	17.0	---	---	0.97	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-36-100	14-Nov-06	657	13.0	---	---	1.10	---	---
	11-Dec-06	586	-64	---	---	1.31	---	---
	10-Jan-07	571	-55	---	---	1.20	---	---
	05-Feb-07	538	-66	---	---	1.40	---	---
	08-Mar-07	436	-62	---	---	0.80	---	---
	02-Apr-07	366	-58	---	---	1.00	---	---
	02-May-07	297	-51	---	---	1.00	---	---
	14-Jun-07	181	-118	---	---	0.807	---	---
	12-Jul-07	180	-67	---	---	1.00	---	---
	07-Aug-07	159 J	-44.7	---	---	0.73	---	---
	06-Sep-07	157	-141	---	---	0.79	---	---
	10-Oct-07	228	-27	ND (1.0)	---	---	---	---
MW-39-080	10-Feb-06	1750	66.0	---	---	1.10	---	---
	08-Mar-06	1420	154	0.931	9140	1.26	-8.2	-61.2
	06-Apr-06	1200	86.0	---	---	0.93	---	---
	02-May-06	1410	61.0	---	---	0.87	---	---
	14-Jun-06	1000 J	184	---	---	0.89	---	---
	12-Jul-06	830 J	69.0	---	---	0.85	---	---
	10-Aug-06	481	78.0	---	---	0.93	---	---
	07-Sep-06	1160	47.0	---	---	1.00	---	---
	05-Oct-06	580	76.0	---	---	1.17	---	---
	15-Nov-06	339	52.0	---	---	1.05	---	---
	14-Dec-06	326	44.0	---	---	1.02	---	---
	10-Jan-07	302	---	---	---	---	---	---
	08-Feb-07	286	105	---	---	1.40	---	---
	05-Mar-07	151	269	---	---	0.60	---	---
	04-Apr-07	112	157	---	---	0.80	---	---
	03-May-07	156	59.0	---	---	1.60	---	---
	12-Jun-07	83.6	12.3	---	---	0.759	---	---
	12-Jul-07	62.8	-12	---	---	0.98	---	---
	08-Aug-07	43.3	-38.7	---	---	0.658	---	---
	06-Sep-07	65.3	-44.6	---	---	0.75	---	---
	08-Oct-07	58.6	-9.7	ND (1.0) J	---	---	---	---
MW-39-100	09-Feb-06	4500	120	---	---	1.30	---	---
	13-Mar-06	4070	51.0	2.68	12400 J	1.23	-8.1	-62.1
	05-Apr-06	4470	73.0	---	---	1.10	---	---
	05-Apr-06 FD	4460	---	---	---	---	---	---
	02-May-06	3680	67.0	---	---	---	---	---
	14-Jun-06	3270	79.0	---	---	1.40	---	---
	13-Jul-06	3790	80.0	---	---	1.60	---	---
	10-Aug-06	3230	141	---	---	1.40	---	---
	10-Aug-06 FD	3170	---	---	---	---	---	---
	08-Sep-06	3290	46.0	---	---	1.20	---	---
	11-Oct-06	3370	87.0	---	---	1.41	---	---
	15-Nov-06	2850	96.0	---	---	1.40	---	---
	15-Nov-06 FD	2960	---	---	---	---	---	---
	12-Dec-06	3820	95.0	---	---	1.50	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-39-100	10-Jan-07	2930	75.0	---	---	---	---	---
	08-Feb-07	2880	74.0	---	---	---	---	---
	12-Mar-07	2850	139	---	---	1.30	---	---
	04-Apr-07	3190	170	---	---	1.50	---	---
	03-May-07	2670	102	---	---	---	---	---
	13-Jun-07	2530	47.7	---	---	1.22	---	---
	12-Jul-07	2020	77.0	---	---	1.20	---	---
	07-Aug-07	1830	---	---	---	1.15	---	---
	07-Sep-07	1660	165	---	---	1.25	---	---
	10-Oct-07	1660	86.7	ND (1.0)	---	---	---	---
MW-43-075	10-Feb-06	ND (1.0)	-154	---	---	1.10	---	---
	10-Mar-06	ND (1.0)	-149	ND (0.5)	9450	0.83	-11	-87.3
	03-Apr-06	ND (1.0)	-148	---	---	0.90	---	---
	04-May-06	ND (1.0)	-167	---	---	0.90	---	---
	02-Oct-06	ND (1.0)	-128	---	---	1.06	---	---
	12-Dec-06	ND (1.0)	-109	---	---	1.00	---	---
	06-Mar-07	ND (1.0)	-151	---	---	1.60	---	---
	30-Apr-07	ND (1.0)	-213	---	---	0.70	---	---
	02-Oct-07	ND (1.0)	-147	---	---	---	---	---
	10-Dec-07	---	-148	ND (1.0)	---	---	---	---
MW-43-090	10-Feb-06	ND (1.0)	-112	---	---	1.60	---	---
	10-Mar-06	ND (2.0)	-116	ND (0.5)	14800	1.23	-10.6	-78.6
	03-Apr-06	ND (1.0)	-97	---	---	1.30	---	---
	04-May-06	ND (1.0)	-124	---	---	1.36	---	---
	02-Oct-06	ND (1.0)	-108	---	---	1.44	---	---
	12-Dec-06	ND (1.0)	-85	---	---	1.60	---	---
	06-Mar-07	ND (1.0)	-97	---	---	2.40	---	---
	30-Apr-07	ND (1.0)	-150	---	---	0.80	---	---
	02-Oct-07	ND (1.0)	-78.8	---	---	---	---	---
	10-Dec-07	---	-95.4	ND (1.0)	---	---	---	---
MW-44-115	14-Mar-06	735 J	-11	0.787	7930 J	1.00	-10.1	-86.3
	22-Mar-06	1440	-74	---	---	1.90	---	---
	04-Apr-06	1550	37.0	---	---	0.93	---	---
	04-Apr-06 FD	1570	---	---	---	---	---	---
	20-Apr-06	1680	-38	---	---	0.60	---	---
	20-Apr-06 FD	1680	---	---	---	---	---	---
	26-Apr-06	1560	-27	---	---	0.90	---	---
	04-May-06	1710	-21	---	---	1.02	---	---
	10-May-06	1490	7.00	---	---	1.40	---	---
	17-May-06	1560	-10	---	---	1.20	---	---
	31-May-06	1610	-11	---	---	0.75	---	---
	31-May-06 FD	1610	---	---	---	---	---	---
	13-Jun-06	1420	-26	---	---	1.10	---	---
	28-Jun-06	1600	-37	---	---	1.10	---	---
	12-Jul-06	1700 J	14.0	---	---	1.00	---	---
	26-Jul-06	1290	-31	---	---	---	---	---
	09-Aug-06	1230	63.0	---	---	1.00	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-44-115	23-Aug-06	1370	93.0	---	---	1.00	---	---
	07-Sep-06	1380	139	---	---	0.91	---	---
	21-Sep-06	911	57.0	---	---	0.90	---	---
	05-Oct-06	1300	3.00	---	---	1.09	---	---
	18-Oct-06	1250	23.0	---	---	1.09	---	---
	15-Nov-06	1210	19.0	---	---	0.81	---	---
	12-Dec-06	1310	116	---	---	1.10	---	---
	09-Jan-07	1140	-34	---	---	1.20	---	---
	06-Feb-07	1140	-53	---	---	1.50	---	---
	09-Mar-07	1210	-33	---	---	---	---	---
	09-Mar-07 FD	1200	---	---	---	---	---	---
	02-Apr-07	1210	-2.0	---	---	1.10	---	---
	04-May-07	1080	-61	---	---	0.771	---	---
	14-Jun-07	1030	-22.5	---	---	0.783	---	---
	10-Jul-07	919	23.0	---	---	1.00	---	---
	06-Aug-07	834	-71.7	---	---	0.732	---	---
	05-Sep-07	872	3.90	---	---	0.77	---	---
	04-Oct-07	763	-72.2	---	---	---	---	---
	04-Oct-07 FD	783	---	---	---	---	---	---
	13-Nov-07	766	-206	---	---	---	---	---
	13-Nov-07 FD	767	---	---	---	---	---	---
	11-Dec-07	736	-59.8	1.24	---	---	---	---
	14-Jan-08	746	-48	---	---	0.782	---	---
MW-44-125	09-Mar-06	66.6 R	-419	---	---	0.78	---	---
	22-Mar-06	362	-280	1.72	7250	0.87	-9.8	-72
	04-Apr-06	372	10.0	---	---	0.91	---	---
	20-Apr-06	461	-138	---	---	0.60	---	---
	26-Apr-06	480	-147	---	---	1.00	---	---
	26-Apr-06 FD	479	---	---	---	---	---	---
	04-May-06	584	-144	---	---	1.02	---	---
	10-May-06	634 J	-96	---	---	1.40	---	---
	17-May-06	612	-103	---	---	1.20	---	---
	31-May-06	413	-95	---	---	0.78	---	---
	28-Jun-06	ND (1.0)	-186	---	---	0.80	---	---
	11-Jul-06	373	-16	---	---	0.69	---	---
	11-Jul-06 FD	365	---	---	---	---	---	---
	26-Jul-06	155	-140	---	---	---	---	---
	26-Jul-06 FD	157	---	---	---	---	---	---
	09-Aug-06	218	-93	---	---	1.00	---	---
	28-Aug-06	468	-188	---	---	1.05	---	---
	28-Aug-06 FD	462	---	---	---	---	---	---
	07-Sep-06	314	-39	---	---	0.85	---	---
	07-Sep-06 FD	311	---	---	---	---	---	---
	20-Sep-06	224	-130	---	---	0.99	---	---
	20-Sep-06 FD	226	---	---	---	---	---	---
	05-Oct-06	284	-97	---	---	1.07	---	---
	18-Oct-06	304	-112	---	---	1.13	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-44-125	18-Oct-06 FD	308	---	---	---	---	---	---
	15-Nov-06	320	-119	---	---	0.82	---	---
	13-Dec-06	300	-67	---	---	0.80	---	---
	09-Jan-07	285	-92	---	---	1.40	---	---
	09-Jan-07 FD	284	---	---	---	---	---	---
	06-Feb-07	213	-85	---	---	0.80	---	---
	09-Mar-07	258	-70	---	---	1.20	---	---
	03-Apr-07	296	-118	---	---	0.90	---	---
	03-May-07	254	-76	6.43	7090	1.50	-10.8	-80.2
	03-May-07 FD	300	---	---	---	---	-10.8	-80.9
	14-Jun-07	229	-76.2	---	---	0.687	---	---
	11-Jul-07	252	-94	---	---	1.00	---	---
	07-Aug-07	278	-36.8	---	---	0.641	---	---
	04-Sep-07	255	-70	---	---	0.65	---	---
	04-Oct-07	314	-15.2	---	---	---	---	---
	12-Nov-07	318	-295	---	---	---	---	---
	11-Dec-07	359	-61.1	1.37	---	---	---	---
	14-Jan-08	338	-55	---	---	0.783	---	---
MW-45-095A	24-Mar-06	259	-20	0.508	8160	1.00	-10.7	-78
	13-Jul-06	197	45.0	---	---	---	---	---
	04-May-07	169	-83.6	ND (1.0)	6040	5.85	-11.1	-81.2
MW-45-095B	24-Mar-06	332	-12	0.604	8800	1.00	-10.3	-77
MW-46-175	14-Mar-06	287	-44	1.57	10100 J	1.20	-10	-76.1
	24-Mar-06	213	-93	---	---	1.19	---	---
	07-Apr-06	208 J	-116	---	---	1.10	---	---
	04-May-06	222	-27	---	---	1.25	---	---
	18-May-06	227	-17	---	---	1.20	---	---
	31-May-06	139 J	37.0	---	---	0.93	---	---
	15-Jun-06	233	-16	---	---	1.20	---	---
	30-Jun-06	112	56.0	---	---	1.30	---	---
	30-Jun-06 FD	111	---	---	---	---	---	---
	12-Jul-06	135 J	38.0	---	---	1.10	---	---
	27-Jul-06	174	16.0	---	---	---	---	---
	09-Aug-06	210	65.0	---	---	1.50	---	---
	09-Aug-06 FD	223	---	---	---	---	---	---
	25-Aug-06	137	-24	---	---	1.20	---	---
	07-Sep-06	183	90.0	---	---	1.63	---	---
	21-Sep-06	190	43.0	---	---	1.10	---	---
	05-Oct-06	194	0.00	---	---	1.35	---	---
	05-Oct-06 FD	195	---	---	---	---	---	---
	18-Oct-06	204	15.0	---	---	1.33	---	---
	15-Nov-06	163	-118	---	---	1.00	---	---
	13-Dec-06	187	-33	---	---	1.00	---	---
	10-Jan-07	138	-160	---	---	1.00	---	---
	08-Feb-07	130	-91	---	---	1.10	---	---
	08-Mar-07	153	222	---	---	0.80	---	---
	03-Apr-07	113	-135	---	---	1.20	---	---

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TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-46-175	04-May-07	86.4	-137	ND (1.0)	10200	1.00	-11.5	-87.6
	14-Jun-07	101	-136	---	---	0.995	---	---
	13-Jul-07	103	-254	---	---	1.20	---	---
	06-Aug-07	94.0	-100	---	---	---	---	---
	04-Sep-07	88.1	-188	---	---	0.98	---	---
	05-Oct-07	100	-95.7	---	---	---	---	---
	13-Nov-07	104	-292	---	---	---	---	---
	13-Dec-07	123	-202	1.21	---	---	---	---
	14-Jan-08	51.5	-159	---	---	1.03	---	---
MW-46-205	14-Mar-06	ND (1.0)	-117	0.573	12700 J	1.40	-10.4	-100
	24-Mar-06	ND (1.0)	-202	---	---	1.47	---	---
	07-Apr-06	ND (1.0) J	-200	---	---	1.36	---	---
	04-May-06	ND (1.0)	-177	---	---	1.60	---	---
	15-Jun-06	ND (1.0)	-147	---	---	1.50	---	---
	13-Jul-06	ND (1.0)	-152	---	---	1.50	---	---
	10-Aug-06	ND (1.0)	-88	---	---	1.40	---	---
	07-Sep-06	2.00	-37	---	---	1.60	---	---
	05-Oct-06	2.10	-96	---	---	1.70	---	---
	13-Dec-06	3.20	10.0	---	---	1.30	---	---
	08-Mar-07	4.00	159	---	---	1.10	---	---
	04-May-07	3.90	-131	---	---	1.20	---	---
	05-Oct-07	3.70	1.60	---	---	---	---	---
	14-Dec-07	3.50	-11.9	ND (1.0)	---	---	---	---
MW-47-115	23-Mar-06	ND (2.0) J	-161	1.23	7800	0.90	-10.2	-72
	16-May-06	1.40	-67	---	---	1.10	---	---
	10-Oct-06	ND (3.5)	-80	---	---	0.99	---	---
	14-Dec-06	7.90	-25	---	---	0.90	---	---
	06-Mar-07	10.6	-34	---	---	---	---	---
	04-May-07	14.1	126	---	---	0.70	---	---
	04-Oct-07	11.6	63.4	---	---	---	---	---
	12-Dec-07	10.3	52.8	1.90	---	---	---	---
	12-Dec-07 FD	10.5	---	2.00	---	---	---	---
MW-49-135	25-Apr-06	ND (1.0) J	-167	1.31	8780	1.10	-10.9	-71
	18-May-06	ND (1.0)	-178	---	---	1.00	---	---
	12-Oct-06	ND (1.0)	-200	---	---	1.30	---	---
	15-Dec-06	ND (1.0)	-157	---	---	1.70	---	---
	09-Mar-07	ND (1.0)	-173	---	---	1.90	---	---
	04-May-07	ND (0.2)	-144	---	---	0.80	---	---
	10-Oct-07	ND (1.0)	-37.1	ND (1.0)	---	---	---	---
MW-49-275	25-Apr-06	ND (1.0)	-143	0.745	15700	1.80	-11.6	-76
	18-May-06	ND (1.0)	-214	---	---	1.60	---	---
	12-Oct-06	ND (1.0)	-252	---	---	2.00	---	---
	15-Dec-06	ND (1.0)	-213	---	---	1.87	---	---
	09-Mar-07	ND (1.0)	-228	---	---	2.30	---	---
	04-May-07	ND (0.2)	-190	---	---	1.40	---	---
	09-Oct-07	ND (1.0)	-178	ND (1.0)	---	---	---	---
MW-49-365	26-Apr-06	ND (2.0)	-244	ND (0.5)	24800	2.40	-11.8	-78

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Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-49-365	16-May-06	ND (2.0)	-192	---	---	2.90	---	---
	12-Oct-06	ND (2.0)	-275	---	---	3.10	---	---
	15-Dec-06	ND (2.0)	-172	---	---	2.90	---	---
	09-Mar-07	ND (2.0)	-237	---	---	2.80	---	---
	04-May-07	ND (0.2)	-184	---	---	2.40	---	---
	09-Oct-07	ND (2.0)	-158	ND (1.0)	---	---	---	---
MW-50-200	09-May-06	7750	-11	6.06	13000	1.21	-8.4	-64.4
	24-May-06	5810	60.0	---	---	2.40	---	---
	10-Oct-06	9660	93.0	---	---	1.75	---	---
	12-Dec-06	10100	123	---	---	1.20	---	---
	07-Mar-07	12300	114	---	---	1.60	---	---
	30-Apr-07	10900	65.0	---	---	1.40	---	---
	04-Oct-07	9430	70.0	---	---	---	---	---
	11-Dec-07	8930	123	6.16	---	---	---	---
MW-52D	13-Mar-07	ND (1.0)	-306	---	---	1.00	-11.6	-85.2
	01-May-07	ND (1.0)	-221	---	13200	1.10	---	---
	05-Jun-07	ND (1.0)	-265	---	---	2.70	---	---
	12-Jul-07	ND (1.0)	-247	---	---	1.60	---	---
	08-Aug-07	ND (1.0)	-189	ND (1.0)	---	1.19	---	---
	05-Sep-07	ND (1.0)	-201	ND (1.0)	---	1.28	---	---
	11-Oct-07	ND (1.0)	-201	ND (1.0)	---	1.58	-10.7	-80.9
	17-Dec-07	ND (1.0)	-280	ND (1.0)	---	1.53	---	---
MW-52M	13-Mar-07	ND (1.0)	-263	---	---	1.00	-12	-89.8
	01-May-07	ND (1.0)	-240	---	9180	0.70	---	---
	05-Jun-07	ND (1.0)	-280	---	---	1.10	---	---
	12-Jul-07	ND (1.0)	-246	---	---	1.20	---	---
	08-Aug-07	ND (1.0)	-161	ND (1.0)	---	0.938	---	---
	08-Aug-07 FD	ND (1.0)	---	ND (1.0)	---	---	---	---
	05-Sep-07	ND (1.0)	-171	ND (1.0)	---	0.99	---	---
	11-Oct-07	ND (1.0)	-164	ND (1.0)	---	1.78	-10.6	-81.9
	17-Dec-07	ND (1.0)	-240	ND (1.0)	---	1.26	---	---
MW-53D	03-Apr-07	ND (1.0)	-131	---	---	1.50	-11.4	-87.6
	02-May-07	ND (1.0)	-280	---	14800	1.40	---	---
	05-Jun-07	ND (1.0)	-309	---	---	2.00	---	---
	05-Jun-07 FD	ND (1.0)	---	---	---	---	---	---
	12-Jul-07	ND (1.0)	-270	---	---	2.10	---	---
	08-Aug-07	ND (1.0)	-237	ND (1.0)	---	1.57	---	---
	05-Sep-07	ND (1.0)	-200	ND (1.0)	---	1.66	---	---
	05-Sep-07 FD	ND (1.0)	---	ND (1.0)	---	---	---	---
	11-Oct-07	ND (2.0)	-159	ND (1.0)	---	17.9	-10.8	-82.1
	11-Oct-07 FD	ND (1.0)	---	ND (1.0)	---	---	-10.8	-81.5
	17-Dec-07	ND (1.0)	-283	ND (1.0)	---	1.87	---	---
MW-53M	03-Apr-07	ND (1.0)	-339	---	---	0.80	-12.2	-96.4
	01-May-07	ND (1.0)	-222	---	7510	0.60	---	---
	05-Jun-07	ND (1.0)	-281	---	---	1.80	---	---
	12-Jul-07	ND (1.0)	-171	---	---	1.20	---	---
	08-Aug-07	ND (1.0)	-188	ND (1.0)	---	0.959	---	---

Refer to table footnotes for data qualifier explanation.

TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
MW-53M	05-Sep-07	ND (1.0)	-135	ND (1.0)	---	1.01	---	---
	11-Oct-07	ND (1.0)	-160	ND (1.0)	---	1.30	-11.1	-82.9
	17-Dec-07	ND (1.0)	-176	ND (1.0)	---	1.34	---	---
PE-01	08-Feb-06	136	---	---	7380	---	---	---
	08-Mar-06	136	---	---	6830	---	---	---
	06-Apr-06	133	---	---	6680	---	---	---
	11-May-06	118	---	---	7000	---	---	---
	15-Jun-06	101	---	---	6050	---	---	---
	12-Jul-06	95.9	---	---	6160	---	---	---
	09-Aug-06	95.9	---	---	5270	---	---	---
	07-Sep-06	85.4	---	---	5920	---	---	---
	04-Oct-06	90.1	---	---	5950 J	---	---	---
	01-Nov-06	92.5	---	---	5010	---	---	---
	06-Dec-06	97.2	---	---	5650	---	---	---
	10-Jan-07	88.9	---	---	5320	---	---	---
	06-Feb-07	80.8	---	---	5440	---	---	---
	07-Mar-07	84.7	---	---	5500	---	---	---
	13-Jun-07	52.0	---	---	4920	---	---	---
	11-Jul-07	47.1	---	---	4320	---	---	---
	08-Aug-07	51.4	---	---	4270	---	---	---
	05-Sep-07	49.1	---	---	4220	---	---	---
	03-Oct-07	52.6	---	---	4400	---	---	---
	13-Nov-07	49.6	---	---	4150	---	---	---
	12-Dec-07	47.3	---	---	4530	---	---	---
	03-Jan-08	48.4	---	---	3790	---	---	---
TW-02D	15-Mar-06	1360	5.00	1.42	5220 J	0.50	-9.2	-68.8
	03-May-06	1120	82.0	---	---	0.46	---	---
	04-Oct-06	872	162	---	---	0.68	---	---
	04-Oct-07	210	18.0	---	---	---	---	---
	17-Dec-07	---	-13	1.06	---	0.50	---	---
TW-03D	08-Feb-06	3250	---	---	5490	---	---	---
	08-Mar-06	3040	---	---	5380	---	---	---
	06-Apr-06	2950	---	---	5740	---	---	---
	11-May-06	2740	---	---	5720	---	---	---
	15-Jun-06	2610	---	---	5510	---	---	---
	12-Jul-06	2590	---	---	5510	---	---	---
	09-Aug-06	2660	---	---	5860	---	---	---
	07-Sep-06	2380	---	---	5700	---	---	---
	04-Oct-06	2470	---	---	5350 J	---	---	---
	01-Nov-06	2490	---	---	4920	---	---	---
	06-Dec-06	2500	---	---	5420	---	---	---
	10-Jan-07	2440	---	---	5520	---	---	---
	06-Feb-07	2400	---	---	5780	---	---	---
	07-Mar-07	2420	---	---	6040	---	---	---
	13-Jun-07	2000	---	---	5570	---	---	---
	11-Jul-07	2000	---	---	5390	---	---	---
	08-Aug-07	1930	---	---	5130	---	---	---

Refer to table footnotes for data qualifier explanation.

TABLE C-1
Groundwater Indicator Parameters and Selected General Chemistry Results for Wells in IM Area, February 2006 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Hexavalent Chromium µg/L	Field ORP mV	Nitrate mg/L	Total Dissolved Solids mg/L	Field Salinity %	Oxygen 18 ‰	Deuterium ‰
Deep Wells								
TW-03D	05-Sep-07	2260	---	---	4940	---	---	---
	03-Oct-07	2000	---	---	5110	---	---	---
	13-Nov-07	1790	---	---	4910	---	---	---
	12-Dec-07	1800	---	---	5660	---	---	---
	03-Jan-08	1830	---	---	5070	---	---	---
TW-04	18-May-06	1.00	-97	1.43	13300	0.91	-10.9	-80.8
	05-Jun-06	ND (1.0)	-131	---	---	1.09	---	---
	09-Oct-06	28.5	12.0	---	---	1.51	---	---
	07-Mar-07	35.2	37.0	---	---	1.60	---	---
	07-Mar-07 FD	35.5	---	---	---	---	---	---
	03-Oct-07	33.4	21.6	---	---	---	---	---
	03-Oct-07 FD	33.6	---	---	---	---	---	---
	12-Dec-07	26.1	78.1	1.38	---	---	---	---
TW-05	10-May-06	1.10 J	-161	0.542	7780	---	-9.6	-74.7
	01-Jun-06	ND (1.0) J	17.0	---	---	0.61	---	---
	09-Oct-06	3.60	60.0	---	---	0.93	---	---
	04-Oct-07	6.60	53.0	---	---	---	---	---
	13-Dec-07	---	-31	ND (1.0)	---	---	---	---
MW-52	24-Feb-07	---	-265	---	---	---	---	---
	25-Feb-07	---	-255	---	---	---	---	---
	26-Feb-07	---	-346	---	---	---	---	---
MW-53	12-Mar-07	---	120	---	---	---	---	---
	13-Mar-07	---	50.0	---	---	---	---	---
	14-Mar-07	---	-218	---	---	---	---	---
	15-Mar-07	---	-426	---	---	---	---	---
	20-Mar-07	---	-452	---	---	---	---	---
	21-Mar-07	---	-223	---	---	---	---	---
	22-Mar-07	---	-256	---	---	---	---	---
	25-Mar-07	---	-530	---	---	---	---	---

NOTES:

ND = not detected at listed reporting limit (RL)
FD = field duplicate
J = concentration or RL estimated by laboratory or data validation
R = result exceeded analytical criteria for precision and accuracy; should not be used for project decision-making
NV = not validated
(---) = data not collected, available, rejected, or field instrumentation malfunctioned
µg/L= micrograms per liter
mg/L = milligrams per liter
mV = millivolts
‰ = differences from global standards in parts per thousand

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.

Refer to table footnotes for data qualifier explanation.

TABLE C-2
Chemical Performance Monitoring Results, March 2004 through January 2008
Annual IM Performance Monitoring Report
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
	15-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	11-May-04	2100	-5.5	-53.0	800	450	10	ND (0.5)	210	48	9.7	490	0.4	76
	11-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	24-Sep-04	2200	-6.5	-57.0	824	402	9.7	ND (1)	180	58.5	12	430	0.2	74
	16-Dec-04	2080	-7.3	-60.0	753	374	9.68	0.604	177 J	52.5	9.05	410	0.497	70
	10-Mar-05	1940	-7.1	-59.0	740	378	9.98	ND (1)	198	55.4	9.89	431	0.412	81.7
	15-Jun-05	1980	-7	-60.0	749	388	9.79	ND (1)	189	55.4	10.5	433	0.414	73.8
	15-Jun-05 FD	2050	-8.3	-57.0	760	392	9.81	ND (1)	204	60.7	11.4	468	0.445	71.3
	11-Oct-05	1950	-7.2	-57.0	737	359	9.48	0.641	198	49.9	14.6	323	0.402	69.9
	15-Dec-05	1830	-7.1	-49.0	645	326	9.9	ND (1)	138	42.3	14.5	267	0.441	77.8
	10-Mar-06	1940	-7.2	-54.0	679	358	10.5	ND (0.5)	161	48.6	9.22	424	0.427	82.2
	05-May-06	1750	-8.2	-55.9	696	376	9.86	0.574	162	49.2	9.55	461	0.476	74.5
	03-Oct-06	1890	-8.1	-60.4	677	357	13	ND (5)	158	47.6	9.82	472	0.535	85
	03-Oct-06 FD	1840	-8.1	-60.5	669	352	12.9	ND (5)	154	45.9	9.51	466	0.515	80
	13-Dec-06	1910	-7.6	-61.2	678	352	12.7	0.699	149	44.3	9.09	458	0.459	77.5
	14-Mar-07	1740	-8.5	-64.3	689	358	13.7	0.641	139	42.2	8.83	451	0.503	80
	03-May-07	1750	-8.4	-66.7	697	344	25.1	ND (1)	139	41.2	8.65	390	0.477	77.5
	11-Oct-07	1820	-8.2	-63.9	699	367	15.6	ND (1)	130	39.1	11	600	0.54	80
MW-20-100	03-Mar-04	3400	-4.2	-38.0	1300	740	9.6	0.7	170	20	11	1100	1	82
	15-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	11-May-04	3600	-2.7	-37.0	1300	700	9.6	0.5	150	18	10	1100	1	81
	11-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	24-Sep-04	3000	-4.8	-44.0	1180	621	8.85	ND (1)	140	23	13	860	0.8	100
	16-Dec-04	2840	-5	-47.0	1050	562	8.5	0.654	152	23.4	16.6	772	0.971	90
	10-Mar-05	2490	-5.2	-49.0	466	511	9.98	ND (1)	133	19.8	8.98	712	0.859	84.2
	15-Jun-05	2500	-4.7	-46.0	921	506	9.02	ND (1)	137	21.3	9.06	592	0.713	84
	11-Oct-05	2400	-5.3	-48.0	887	484	8.87	0.731	170	23.7	15.2	500	0.718	82.3
	15-Dec-05	2340	-5.4	-40.0	813	404	9.65	ND (1)	136	21.4	14.8	406	0.709	82.7
	10-Mar-06	2500	-5.6	-50.3	861	475	9.94	ND (0.5)	171	27	7.75	597	0.803	92.5

TABLE C-2
Chemical Performance Monitoring Results, March 2004 through January 2008
Annual IM Performance Monitoring Report
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-20-100	05-May-06	2260	-5.1	-46.4	927	522	9.99	ND (1)	193	32	10.8	577	0.716	82.5
	03-Oct-06	2320	-5.8	-51.5	863	456	13.4	ND (5)	202	34.4	10.9 J	568	0.874	90
	13-Dec-06	1960	-6.2	-54.4	861	459	12.3	0.83	205	32.2	11.4	579	0.889	97.5
	13-Dec-06 FD	2200	-6.2	-54.5	874	457	12.2	0.851	205	32.2	9.55	575	0.881	92.5
	14-Mar-07	2180	-6.8	-57.8	847	477	14.2	0.785	194	31.7	9.9	521	0.715	87.5
	03-May-07	2300	-7.3	-59.2	879	493	23.2	ND (1)	209	36	12 J	559	0.699	87.5
	03-May-07 FD	2330	-6.7	-59.3	888	484	19.7	ND (1)	208	34.6	9.63 J	532	0.686	87.5
	10-Oct-07	2160	-7.2	-57.2	858	468	3.25	ND (1)	190	32	15	560	0.81	92
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
	15-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	11-May-04	8300	-5	-49.0	3300	1000	9.8	ND (0.5)	280	14	26	2500	1.7	62
	11-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	24-Sep-04	7800	-4.4	-45.0	7240	2280	9.8	ND (4)	240	15	33	2400	1.9	66
	27-Jan-05	7350	-5.7	-48.0	3790	1140	10.4	3.16	313	16.1	43.5	2260	2.03	66
	09-Mar-05	5520	-5.8	-56.0	3120	1080	10.9	ND (1)	219	12.1	24.7	2250	1.9	68.9
	09-Mar-05 FD	6200	-5.4	-51.0	3080	1080	10.9	ND (1)	231	12.8	25.4	2390	1.99	68.9
	15-Jun-05	7790	-5	-48.0	3410	1230	11.1	ND (1)	352	23.2	31.3	2980	2.75	68.7
	07-Oct-05	7330	-5	-47.0	3010	1210	10.9	1.04 J	349	13.9	38.4	2070	2.41	72.4
	16-Dec-05	7860	-5.8	-43.0	3260	1000	10.7	ND (2.5)	324	16.3	44.4	1780	1.98	63.2
	10-Mar-06	8610	-5.5	-48.8	3370	1250	10.6	ND (0.5)	312	18.9	27.7	2730	2.03	74.5
	05-May-06	7700	-5.3	-47.2	3900	1280	8.95	ND (1)	349	20.3	27.7	2810	2.4	69.2
	18-Oct-06	8450	-6.3	-51.4	3680	1100	11.5	ND (5)	358	20.9	28	2870	2.28	70
	13-Dec-06	7890	-6	-54.9	3970	1250	10.6	0.896	335	19.7	27.6	2900	2.31	72.5
	13-Dec-06 FD	8250	-5.9	-54.4	3950	1260	10.5	1.09	328	19.1	27.3	2830	2.24	72.5
	08-Mar-07	8450	-6.5	-57.7	3930	1240	11.3	1.08	353	21.3	27	2760	2.24	70
	08-Mar-07 FD	8510	-6.6	-57.4	3900	1210	11.3	1.06	351	21.3	26.8	2750	2.19	72.5
	03-May-07	8150	-7.7	-60.0	4020	1310	9.8 J	ND (1)	338	22.5	27.8	2550	2.49	75
	03-May-07 FD	8100	-6.9	-60.1	3950	1290	20.4 J	ND (1)	338	21.9	27.3	2550	2.47	72.5
	05-Oct-07	7980	-7	-57.5	3670	1070	11.6	ND (1)	310	19	31	2900	2.4	77
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
	17-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE C-2
Chemical Performance Monitoring Results, March 2004 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-25	17-Mar-04 FD	---	---	---	---	---	---	---	---	---	---	---	---	---
	14-May-04	1000	-8.9	-59.0	310	210	4.2	ND (0.5)	89	19	8	230	0.4	130
	09-Jun-04	---	---	---	---	---	---	---	108	17.1	---	---	0.376	---
	22-Sep-04	1000	-7.6	-58.0	296	196	3.93	0.42	81	16.6	7.4	230	ND (0.2)	140
	09-Mar-05	877	-8.4	-62.0	247	169	3.64	ND (0.5)	77.6	16.1	6.24	211	0.441	158
	14-Jun-05	942	-8.6	-61.0	289	183	3.89	ND (0.5)	93.5	20	8.91	253	0.464	137
	14-Jun-05 FD	980	-7.2	-59.0	294	185	3.94	ND (0.5)	100	20.9	9.06	268	0.475	137
	04-Oct-05	950	-8.2	-68.0	252	171	3.77	ND (0.5)	83.3	14.9	9.93	164	0.362	141
	04-Oct-05 FD	910	-8.3	-60.0	251	171	3.75	ND (0.5)	94.6	15.3	10.2	185	0.371	146
	14-Dec-05	838	-8.4	-55.0	224	158	3.74	ND (0.5)	75.5	14.5	9.8	143	0.396	153
	14-Dec-05 FD	896	-8.4	-50.0	219	155	3.75	ND (0.5)	73	14.1	9.71	151	0.382	156
	09-Mar-06	910	-8.4	-64.1	245	164	3.83	ND (0.5)	76.4	15.6	6.97	210	0.39	170
	03-May-06	907	-9	-59.4	272	172	3.95	ND (0.5)	78	17.3	7.38	222	0.418	150
	03-May-06 FD	924	-9	-61.0	274	173	3.94	ND (0.5)	79.7	17.8	7.53	245	0.431	155
	03-Oct-06	892	-8.9	-62.7	222	158	4.09	ND (0.5)	73.3	15	7.25	206	0.466	163
	06-Mar-07	843	-9	-66.9	221	164	3.95	ND (0.5)	72.9	14.4	6.85	203	0.459	160
	02-Oct-07	796	-9	-65.8	189	155	4.58	ND (1)	66	14	7.9	200	0.49	180
	02-Oct-07 FD	758	-9	-65.7	195	157	4.4	ND (1)	63	13	7.7	220	0.46	190
MW-26	03-Mar-04	1900	-6.7	-54.0	770	400	4.6	ND (0.5)	170	40	12	470	0.5	110
	16-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	14-May-04	9300 R	-8.4	-60.0	850	480	5.1	ND (0.5)	190	50	14	490	0.6	110
	08-Jun-04	2300	---	---	---	---	---	---	---	---	---	---	---	---
	08-Jun-04 FD	2200	---	---	---	---	---	---	---	---	---	---	---	---
	29-Jul-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	22-Sep-04	2300	-6.7	-59.0	821	472	5.65	ND (1)	170	46	13	390	0.4	98
	16-Dec-04	2130	-8.6	-64.0	835	388	5	0.578	176	45.7	17.8	466	0.662	100
	08-Mar-05	1840	-8.8	-70.0	756	370	4.48	ND (0.5)	166	41.6	10.7	439	0.557	98.7
	08-Mar-05 FD	1800	-8.7	-70.0	708	338	4.45	ND (0.5)	166	40.9	11.4	438	0.559	96.1
	13-Jun-05	2130	-8.2	-65.0	847	371	4.9	ND (0.5)	178	44.6	14	511	0.663	103
	04-Oct-05	2120	-7.8	-68.0	779	372	4.88	0.601	166	40.4	19.8	352	0.526	109
	12-Dec-05	2610	-8.5	-55.0	788	372	4.88	0.546	162	39.9	20.3	349	0.613	99.7

TABLE C-2
Chemical Performance Monitoring Results, March 2004 through January 2008
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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-26	08-Mar-06	2070	-8.6	-60.4	772	324	4.9	ND (0.5)	155	38.1	11.7	434 J	0.621	121
	01-May-06	2130	-8.9	-62.7	927	382	4.87	ND (0.5)	165	42	12.8	555	0.723	121
	03-Oct-06	2220	-8.8	-63.0	894	370	6.22	ND (2.5)	170	43.9	12.8	510	0.692	105
	12-Mar-07	2280	-9	-67.0	917	387	6.02	0.646	163	41.6	12.9	621	0.622	90
	02-Oct-07	2180	-8.6	-66.3	945	391	7.84	ND (1)	170	42	15	620	0.66	100
	11-Dec-07	---	---	---	---	---	---	---	---	---	---	---	---	---
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
	17-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	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
	08-Jun-04	630	---	---	---	---	---	---	---	---	---	---	---	---
	21-Sep-04	670	-12.3	-92.0	77.2	212	ND (0.2)	ND (0.2)	76	26	5	82	ND (0.2)	160
	15-Dec-04	692	-11.9	-101.0	87.2	236	ND (0.5)	ND (0.5)	91.5	32.6	4.61	88.4	ND (0.2)	169
	08-Mar-05	1250	-12	-102.0	190	432	ND (0.5)	ND (0.5)	137	56.6	4.89	195	ND (0.2)	215
	18-Jul-05	---	-11.9	-98.0	81.9	228	ND (0.5)	ND (0.5)	96.1	30.1	4.27	94.8	ND (0.2)	160
	05-Oct-05	742	-11.8	-102.0	91.1	252	ND (0.5)	ND (0.5)	88.6	31.4	5.48	81	ND (0.2)	175
	14-Dec-05	1020	-11.7	-91.0	118	347	ND (0.5)	ND (0.5)	116	41.8	6.96	116	ND (0.2)	216
	06-Mar-06	664	-12.1	-90.9	89.7	231	ND (0.2)	ND (0.2)	89.1	28.8	4.9	103	ND (0.2)	385
	01-May-06	---	---	---	---	---	---	---	---	---	---	---	---	---
	14-Jun-06	730	-12	-89.8	98.3	272	ND (0.5)	ND (0.5)	91.1	28.5	2.79 J	96.9	ND (0.2)	195
	03-Oct-06	600	-13.1	-96.6	90.8	261	ND (0.5)	ND (0.5)	102	34.5	6.45	113	ND (0.2)	160
	02-Oct-07	802	-12.5	-96.3	102	320	ND (1)	ND (1)	97	34	5.3	150	0.22	170
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
	17-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	11-May-04	800	-11.3	-95.0	110	270	ND (0.4)	ND (0.5)	110	29	3.9	120	ND (0.2)	240
	07-Jun-04	890	-12.5	-100.0	150	220	ND (0.4)	---	---	---	---	---	---	---
	20-Sep-04	850 J	-11.7	-89.0	99.1	286	ND (0.4)	ND (0.2)	110	30	4.6	120	ND (0.2)	210
	14-Dec-04	810	-12	-99.0	110	310	ND (0.5)	ND (0.5)	122	35.7	4.78	103	ND (0.2) J	202
	10-Mar-05	880	-12.2	-95.0	112	302	ND (0.5)	ND (0.5)	129	36.3	3.5	122	ND (0.2)	204
	15-Jun-05	974	-11.6	-91.0	108	359	ND (0.5)	ND (0.5)	133	38.9	6.54	117	ND (0.2)	221
	06-Oct-05	884	-11.7	-95.0	99.8	300	ND (0.5)	ND (0.5)	123	37	6.61	88.7	ND (0.2)	197
	16-Dec-05	1010	-11.4	-90.0	128	348	ND (0.5)	ND (0.5)	134	41.5	6.46	107	ND (0.2)	212

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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-28-25	09-Mar-06	746	-11.5	-93.9	84.4	225	ND (0.5)	ND (0.5)	98.5	27.5	4.15 J	88.5	ND (0.2)	244
	05-May-06	741	-11.4	-90.3	110	302	ND (0.5)	ND (0.5)	117	35.7	5.77	118	ND (0.2)	216
	11-Oct-06	1050	-12.2	-95.0	86.3	247	ND (0.5)	ND (0.5)	133	40.8	5.47	132	ND (0.2)	225
	04-Oct-07	812	-12.1	-98.7	110	307	ND (1)	ND (1)	120	37 J	4.8	150	0.26 J	230
MW-30-30	04-Mar-04	36000	-9	-76.0	19000	4100	ND (4)	5.2	1000	1000	50	9600	3.6	570
	18-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	12-May-04	30000	-7.8	-71.0	14000	3000	ND (4)	ND (50)	1300	800	47	8300	2.8	610
	09-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	23-Sep-04	42000	-9.5	-73.0	22000	4500	ND (200)	ND (100)	900	890	76	11000	4.1	570
	15-Dec-04	45500	-9.5	-79.0	19900	4730	ND (5)	8.14	1300	1400	118	6110	7.84	458
	10-Mar-05	38800	-9.8	-79.0	16000	4270	ND (5)	7.91	1590	1600	95.4	13600	4.97	421
	07-Oct-05	36400	-8.5	-75.0	17600	4000	ND (0.5)	ND (10)	1020	842	93.6	7650	5.2	521
	15-Dec-05	35700	-8.7	-59.0	19700	4070	ND (1)	3.13	1060	894	110	8540	6.14	504
	13-Mar-06	39700 J	-8.8	-70.5	18600	4530	ND (0.5)	ND (50)	1050	892	77.2	11300	4.62	650
	02-May-06	32400	-10.3	-70.7	15400	3300	ND (0.5)	ND (5)	882	828	59.4	10280	3.95	756
	10-Oct-06	29400	-9.4	-68.7	17800	4400	ND (2.5)	ND (2.5)	729	653	55	10200	4.32	550
	08-Oct-07	27400	-9	-73.9	13700	3370	ND (1)	3.88	650	540	56	9600	4.5	800
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
	18-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	18-Mar-04 FD	---	---	---	---	---	---	---	---	---	---	---	---	---
	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
	09-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	09-Jun-04 FD	---	---	---	---	---	---	---	---	---	---	---	---	---
	23-Sep-04	6600	-7.3	-58.0	3330	742	1.58	ND (10)	290	100	18	1800	0.9	240
	23-Sep-04 FD	6800	-6.7	-58.0	3220	694	1.64	ND (10)	310	110	19	1900	0.9	240
	15-Dec-04	6750	-7.9	-63.0	3040	716	ND (0.5)	1.14	378	117	36.5	1720	1.39	249
	15-Dec-04 FD	6690	-7.8	-64.0	2920	725	ND (0.5)	1.13	372	114	37.8	1700	1.43	249
	10-Mar-05	6470 J	-8.3	-68.0	4660	672	ND (0.5)	1.03	335	107	16.5	2040	1.15	324
	07-Oct-05	6860	-9.4	-79.0	3060	857	ND (0.5)	0.899 J	438	101	37	1780	1.27	252

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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-30-50	16-Dec-05	5850	-10.5	-65.0	2360	578	ND (0.5)	0.645	265	77.9	32.9	1260	1.19	212
	09-Mar-06	5380	-9.8	-83.5	2420	651	ND (0.5)	ND (0.5)	226	66.2	14.6	1640	1.18	275
	02-May-06	5420	-10.4	-73.6	2380	612	ND (0.5)	3.41	243	70.3	16.4	1750	1.22	261
	11-Oct-06	4170	-10.7	-82.2	1980	468	ND (0.5)	ND (0.5)	171	48.5	14	1370	1.11	290
	11-Oct-06 FD	3930	-11	-82.6	1810	462	ND (0.5)	ND (0.5)	163	46.1	14.1	1340	1.08	298
MW-31-60	03-Mar-04	1700	-8.1	-60.0	750	280	6.2	ND (0.5)	160	22	7.9	420	0.4	72
	16-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	14-May-04	1900	-9	-59.0	750	260	5.5	ND (0.5)	150	22	7.5	420	0.4	74
	08-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	22-Sep-04	1700	-8	-61.0	691	236	5.45	0.46	130	19	7.9	430	ND (0.2)	79
	16-Dec-04	1640	-8.7	-64.0	691	246	5.36	ND (0.5)	118	18.5	9.67	421	0.44	80
	09-Mar-05	1540	-8.6	-63.0	649	210	4.94	ND (0.5)	108	17.3	5.97	424	0.401	76.6
	13-Jun-05	1660	-8.2	-65.0	745	207	4.12	ND (0.5)	121	18.9	6.57	403	0.388	70
	06-Oct-05	1660	-8.6	-65.0	691	206	4.01	ND (0.5)	109	16.5	9.75	308	0.462	77.3
	13-Dec-05	1620	-8.7	-54.0	669	199	4.14	ND (0.5)	87	15.4	9.32	275	0.359	73
	15-Mar-06	1560 J	-8.6	-65.6	661	191	4.37	ND (0.5)	106	17.5	7.3	403	0.393	89.3
	15-Mar-06 FD	1640 J	-8.6	-64.9	662	192	4.34	ND (0.5)	101	16.8	6.94	391	0.383	81.9
	01-May-06	1630	-9.6	-63.2	691	209	4.58	ND (0.5)	118	20.1	7.78	467	0.449	79.6
	05-Oct-06	1620	-9.4	-66.3	687	205	5	ND (0.5)	113	20.6	9.6 J	325	0.464	80
	12-Mar-07	1750	-9.3	-69.0	757	222	4.93	ND (0.5)	116	20.3	6.05	454	0.402 J	72.5
	04-Oct-07	1720	-9.4	-69.6	799	208	5.15	ND (1)	150	26	7.3	580	0.64	80
MW-32-20	04-Mar-04	6200	-8	-64.0	2900	540	ND (0.4)	ND (5)	520	180	13	1500	1.1	570
	18-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	12-May-04	5000	-7.1	-70.0	2100	130	ND (0.4)	ND (5)	510	180	16	1100	0.8	600
	07-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	20-Sep-04	21000 J	-7.3	-63.0	10200	3800	ND (0.4)	ND (100)	1100	420	45	4900	3	920
	14-Dec-04	16100	-8.2	-66.0	8890	1990	ND (5)	ND (5)	1140	400	46.8	3500	4.22 J	784
	09-Mar-05	12500	-7.2	-65.0	6930	1660	ND (0.5)	3.51	838	302	36.9	4000	2.76	123
	17-Jun-05	10200	-9	-67.0	4810	690	ND (0.5)	ND (2.5)	566	231	23.3	2620	1.75	676
	04-Oct-05	28800	-7.8	-65.0	14200	2420	ND (5)	6.19	1380 J	613 J	91.1 J	5400 J	4.75 J	733
	16-Dec-05	24600	-7.8	-61.0	12200	2140	ND (1)	3.48	1470	552	90.4	4950	4.16	861

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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-32-20	10-Mar-06	20900	-8.3	-65.5	10600	1970	ND (0.5)	ND (0.5)	1350	530	56.1	6440	3.54	432
	04-May-06	16900	-8.1	-64.9	9430	1380	ND (0.5)	2.35	937	445	46	4780	2.87	218
	02-Oct-06	46200 J	-8.6	-67.1	20200	3190	ND (2.5)	7.3	1870	1070	87	11300	6.34	660
	11-Dec-06	37900	-8	-67.0	17900	3020	ND (5)	7.67	1530	785	81.7	8420	4.98	825
	06-Mar-07	27600	-8.7	-72.7	16200	2210	0.925	5.93	1460	635	64.4	7110	3.92	765
	30-Apr-07	17700	-9.6	-78.1	9820	1310	ND (0.2)	3.78	965	484	51.4	5520	3.02	770
	01-Oct-07	37200	-8.3	-70.1	20600	3160	ND (1)	6.44	1800	1100	93	9900	5.7	700
MW-32-35	04-Mar-04	4200	-8	-65.0	1900	470	ND (0.4)	ND (5)	340	99	13	1100	1	310
	18-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	12-May-04	4500	-6.9	-64.0	1900	460	ND (0.4)	ND (5)	330	94	12	1100	0.9	320
	08-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	21-Sep-04	4500	-8.7	-63.0	2150	422	ND (0.2)	ND (10)	320	89	14	990	0.9	310
	15-Dec-04	4120	-8.5	-67.0	1760	524	ND (0.5)	0.89	351	96.3	24.7 J	954	1.28	276
	09-Mar-05	3560	-8.2	-68.0	1770	465	ND (0.5)	0.845	312	85.5	13	944	1.07	260
	17-Jun-05	7550	-9.5	-72.0	3520	787	ND (0.5)	ND (2.5)	506	120	14.8	2110	1.18	223
	04-Oct-05	8340	-8.3	-70.0	3840	765	ND (0.5)	ND (5)	567	134	29.3	1530	1.26	208
	16-Dec-05	7660	-8.8	-63.0	3510	710	ND (1)	1.02	606	128	30	1580	1.25	219
	10-Mar-06	9230	-8.6	-74.0	4210	1010	ND (0.5)	ND (0.5)	654	129	19.2	2360	1.13	234
	04-May-06	9840	-9.1	-67.8	4960	1130	ND (0.5)	ND (0.5)	693	148	19.5	2800	1.38	218
	02-Oct-06	11200	-9.4	-71.4	5430	1050	ND (2.5)	ND (2.5)	839	165	23.9	3260	1.48	290
	11-Dec-06	10400	-9	-70.4	5090	1000	ND (0.5)	1.9	845	173	22.5	2620	1.43	338
	06-Mar-07	12600	-10.2	-75.4	6070	1200	ND (0.5)	2.65	1080	209	23.5	2910	1.35	360
	30-Apr-07	12100	-9.9	-78.7	6610	1280	ND (0.2)	2.6	1250	273	26.2	3280	1.35	475
	01-Oct-07	13700	-8.9	-72.7	6830	1120	ND (1)	2.62	1000	390	29	4000	1.7	490
	10-Dec-07	---	---	---	---	---	---	---	---	---	---	---	---	---
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
	17-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	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

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Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Monitoring Wells														
MW-34-55	10-Mar-05	6230	-10.8	-82.0	2620	739	ND (0.5)	0.654	366	71.3	29.1	1900	1.19	240
	15-Jul-05	---	-10.3	-84.0	2250	607	ND (0.5)	ND (0.5)	247	52	16.5	1420	1.02	242
	05-Oct-05	5150	-10.6	-88.0	2170	619	ND (0.5)	ND (0.5)	272	59.1	25.8	1230	1.2	232
	14-Dec-05	5100	-10.8	-74.0	2150	552	ND (0.5)	0.588	217	45	27.2	965	0.937	236
	08-Mar-06	4850	-10.8	-86.8	2080	593	ND (0.5)	ND (0.5)	256	54.2	13.5	1640	0.956	272
	03-May-06	4320	-11.5	-84.3	2070	500	ND (0.5)	ND (0.5)	198	44.8	11.1	1360	0.846	302
	04-Oct-06	1680 J	-12.2	-94.8	443	230	ND (0.5)	ND (0.5)	37.6	8.08	4.59	536	0.54	368
	03-Oct-07	730	-11.3	-96.6	109	266	ND (1)	ND (1)	15	3.3	3.3	290	0.26	190
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
	17-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	13-May-04	8800	-10.2	-77.0	3900	1000	ND (4)	ND (5)	390	54	27	2800	1.4	270
	13-May-04 FD	9100	-10.2	-76.0	4000	1000	ND (4)	ND (5)	390	53	27	2700	1.5	280
	08-Jun-04	---	---	---	---	---	---	---	396	56.6	---	---	1.72	---
	23-Sep-04	8900	-9.9	-79.0	4050	997	ND (10)	ND (10)	410	76	32	2800	1.4	290
	23-Sep-04 FD	9900	-9.6	-78.0	4170	998	ND (10)	ND (10)	410	84.3	35	2800	1.5	290
	13-Dec-04	---	---	---	---	---	---	---	455	55	40.4	2220	1.63	---
	16-Feb-05	7640	---	---	---	---	---	---	---	---	---	---	---	---
	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
	15-Mar-05	---	---	---	---	---	---	---	---	---	---	---	---	---
	30-Jun-05	7840	-8.4	-82.0	3910	979	ND (0.5)	ND (0.5)	497	76.5	27.7	2670	1.66	302
	05-Oct-05	10200	-10.1	-85.0	3880	1060	ND (0.5)	ND (0.5)	429	72.5	47.4	1660	1.57	302
	14-Dec-05	8800	-10.2	-71.0	3700	880	ND (0.5)	0.854	432	68.3	54.9	1710	1.54	297
	09-Mar-06	7830	-9.9	-86.8	3520	986	ND (0.5)	ND (0.5)	383	65.8	24	2420	1.49	313
	03-May-06	7950	-11.7	-77.6	3700	921	ND (0.5)	ND (0.5)	425	70.3	23.9	2480	1.38	297
	04-Oct-06	7080	-11.3	-81.8	3210	786	ND (0.5)	0.737	341	65.4	21.1	2170	1.31	268
	12-Dec-06	6510	-10.5	-80.9	3190	789	ND (0.5)	0.742	298	62.9	18.9	2040	1.26	288
	05-Mar-07	6360 J	-11.5	-85.8	3300	783	ND (0.5)	0.72	315	68.3	19.4	2020	1.29	205
	30-Apr-07	6390	-11.5	-88.9	3320 J	889 J	ND (0.2)	ND (1)	282	57	18.6	2080	1.33	245
	03-Oct-07	5490	-11.3	-87.8	2630	696	ND (1)	ND (1)	220	53	21	2000	1.2	240
	13-Dec-07	5420	---	---	2380	698	ND (1)	ND (1)	193	49.1	25.4	1450	1.09	264

TABLE C-2
Chemical Performance Monitoring Results, March 2004 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Surface Water Stations														
R-27	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
	15-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	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
	10-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	22-Sep-04	680	-12.1	-98.0	88.4	237	0.38	ND (0.2)	77	29	4.8	99	ND (0.2)	130
	13-Dec-04	632	-11.4	-95.0	84.4	235	ND (0.5) R	ND (0.5)	79.6	31.4	4.95	86.5	ND (0.2) J	125
	07-Mar-05	669	-12.3	-102.0	92.7	244	ND (0.5)	ND (0.5)	82.8	31.3	4.72	108	ND (0.2)	136
	14-Jun-05	686	-11.4	-92.0	90.9	266	ND (0.5)	ND (0.5)	81.9	29.8	6.04	98.9	ND (0.2)	127
	05-Oct-05	678	-11.6	-94.0	85.1	255	ND (0.5)	ND (0.5)	101	36.2	6.56	91.2	ND (0.2)	130
	16-Dec-05	718	-11.7	-87.0	87.9	253	ND (0.5)	ND (0.5)	85.5	29.5	5.99	75.6	ND (0.2)	126
	06-Mar-06	656	-11.8	-92.1	90.6	268	ND (0.5)	ND (0.5)	83.5	29.4	5.44 J	101	ND (0.2)	144
	03-May-06	567	-12.8	-93.9	93.1	267	ND (0.5)	ND (0.5)	87	31.1	3.12 J	106	ND (0.2)	139
	04-Oct-06	752 J	-12.2	-94.9	91.5	261	ND (0.5)	ND (0.5)	82.9	31.5	6.24 J	98.1	ND (0.2)	128
	20-Dec-06	680	-12.7	-98.1	94.5	266	ND (0.5)	ND (0.5)	83.2	30.9	3.64	106	ND (0.2)	138
	13-Mar-07	750 J	-13	-99.5	96.5	267	0.537	ND (0.5)	86.9	31.3	4.73	106	ND (0.2)	130
	08-May-07	715 J	-12.9	-103.6	92.6	269	ND (0.5)	ND (0.5)	84.3	29.8	5.55	100	ND (0.2)	143
	11-Sep-07	650	-12.5	-100.5	89.4	253	0.336	ND (0.2)	74.2	28.9	5.47	86.5	ND (0.2)	132
	05-Dec-07	---	---	---	94.7	256	ND (1)	ND (0.2)	89.8	31.7	6.6	93.4	0.157	137
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
	15-Mar-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	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
	10-Jun-04	---	---	---	---	---	---	---	---	---	---	---	---	---
	22-Sep-04	680	-12.1	-99.0	104	240	0.38	ND (0.2)	79	30	4.9	99	ND (0.2)	130
	13-Dec-04	652	-11.1	-95.0	84.8	236	ND (0.5) R	ND (0.5)	79.9	31.5	4.93	86	ND (0.2) J	133
	08-Mar-05	651	-12.5	-102.0	90.4	231	ND (12.5)	ND (0.5)	83.7	31.4	5.02	107	ND (0.2)	132
	14-Jun-05	680	-11.6	-95.0	91.2	268	ND (0.5)	ND (0.5)	78.5	28.5	5.08	94.5	ND (0.2)	127
	05-Oct-05	672	-11.6	-94.0	85.5	255	ND (0.5)	ND (0.5)	85.7	30.4	6.3	77	ND (0.2)	122
	16-Dec-05	710	-11.5	-83.0	88.1	254	ND (0.5)	ND (0.5)	87.2	29.8	6.11	76.8	ND (0.2)	126
	06-Mar-06	675	-12.3	-93.4	91	270	ND (0.5)	ND (0.5)	76.6	26.6	5.22 J	91.5	ND (0.2)	146
	03-May-06	586	-13	-92.1	93.4	270	ND (0.5)	ND (0.5)	88.1	31.4	4.04 J	107	ND (0.2)	136
	04-Oct-06	644 J	-12.6	-95.3	90.9	259	ND (0.5)	ND (0.5)	84.2	32.1	6.17 J	96.5	ND (0.2)	133

TABLE C-2
Chemical Performance Monitoring Results, March 2004 through January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Location	Sample Date	Total Dissolved Solids	Oxygen 18	Deuterium	Chloride	Sulfate	Nitrate	Bromide	Calcium	Magnesium	Potassium	Sodium	Boron	Alkalinity
Surface Water Stations														
R-28	20-Dec-06	615	-12.4	-99.6	93.3	262	ND (0.5)	ND (0.5)	85.7	32	4.66	108	ND (0.2)	143
	14-Mar-07	710	-12.8	-100.4	96.7	268	0.534	ND (0.5)	87.9	31	5.71	105	ND (0.2)	133
	09-May-07	690	-13	-102.3	95.8	271	ND (0.5)	ND (0.5)	86.1	30.5	5.92	103	ND (0.2)	143
	12-Sep-07	682	-12.4	-99.4	106	296	0.372	ND (0.2)	73.8	29.9	6.36	89.2	ND (0.2)	122
	06-Dec-07	---	---	---	96.5	258	0.345	ND (0.2)	75.7	30.4	6.62	79.4	ND (0.2)	139

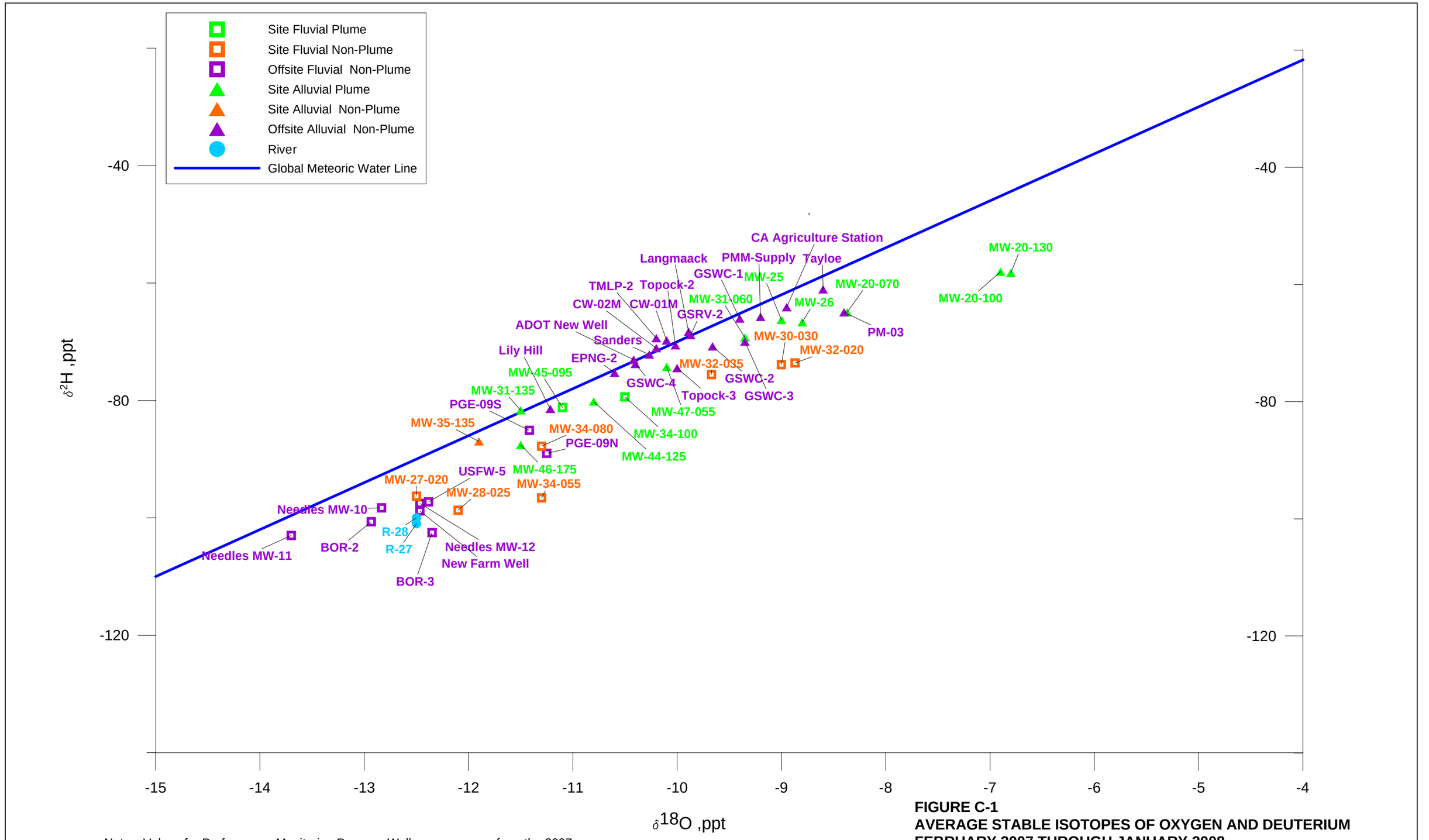
NOTES:

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.



Notes: Values for Performance Monitoring Program Wells are averages from the 2007 Reporting Period. Values from Background Wells are cumulative averages from all years.

FIGURE C-1
AVERAGE STABLE ISOTOPES OF OXYGEN AND DEUTERIUM
FEBRUARY 2007 THROUGH JANUARY 2008
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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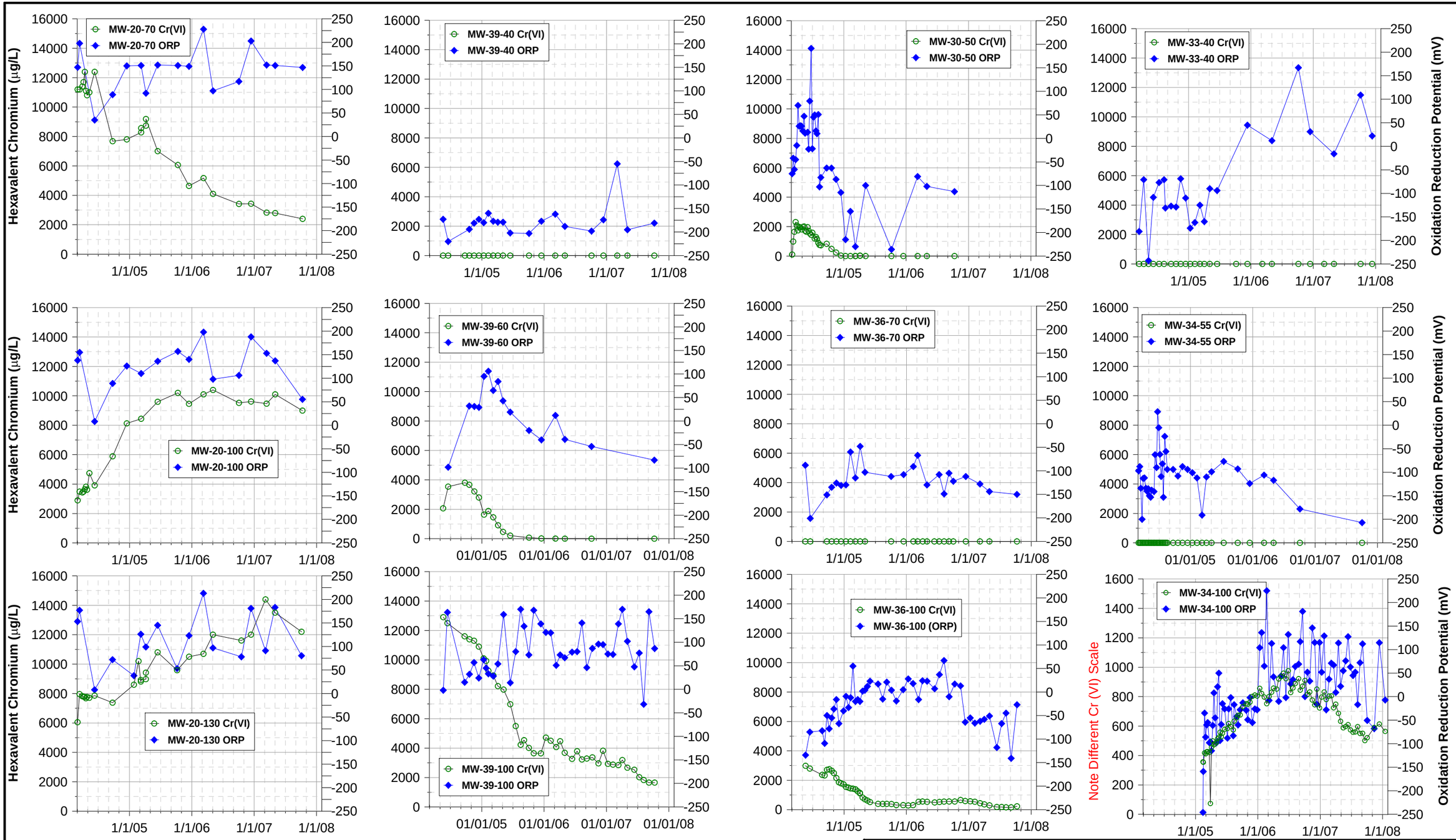

FIGURE C-2
GRAPHS OF HEXAVALENT CHROMIUM AND OXIDATION REDUCTION POTENTIAL FOR WELLS ALONG FLOODPLAIN CROSS SECTION A

ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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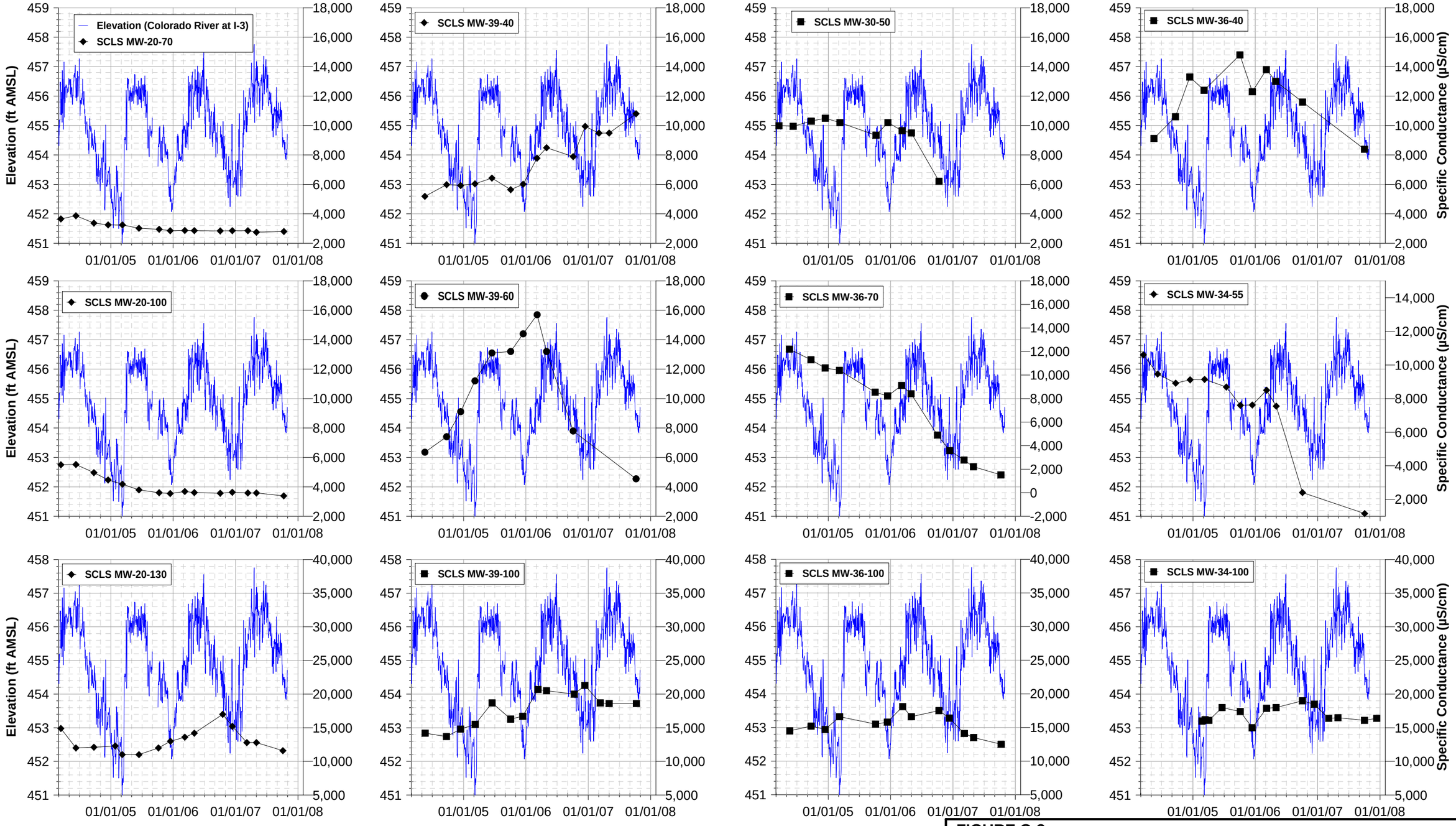

Note: Elevation = Colorado River Elevation at I-3.
SCLS = specific conductance lab sample.

FIGURE C-3
GRAPHS OF RIVER ELEVATION (I-3) AND SPECIFIC CONDUCTANCE FOR FLOODPLAIN WELLS IN CROSS SECTION A
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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Appendix D
Hydraulic Monitoring Data for Annual Reporting Period

TABLE D-1
Average Monthly and Quarterly Groundwater Elevations, November 2007 through January 2008
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	November 2007	December 2007	January 2008	Quarter Average	Days in Quarter Average
I-3	River Station	453.54	452.73	453.59	453.27	89
MW-10	Shallow Wells	455.73	455.31	455.00	455.36	89
MW-19	Shallow Wells	454.21	453.53	453.70	453.81	92
MW-20-070	Shallow Wells	452.96	452.27	452.43	452.55	92
MW-20-100	Middle Wells	452.47	451.83	452.06	452.10	88
MW-20-130	Deep Wells	452.11	451.41	451.66	451.72	92
MW-22	Shallow Wells	454.09	453.66	453.64	453.80	89
MW-25	Shallow Wells	454.86	454.28	454.12	454.41	92
MW-26	Shallow Wells	454.53	453.93	453.76	454.09	87
MW-27-020	Shallow Wells	453.47	452.69	453.38	453.17	89
MW-27-060	Middle Wells	453.47	452.71	453.46	453.20	89
MW-27-085	Deep Wells	453.66	452.90	453.61	453.38	89
MW-28-025	Shallow Wells	453.50	452.69	453.41	453.19	89
MW-28-090	Deep Wells	453.59	452.81	453.54	453.30	89
MW-30-050	Middle Wells	453.34	452.58	453.16	453.02	89
MW-31-060	Shallow Wells	453.80	453.07	453.30	453.39	92
MW-31-135	Deep Wells	453.02	452.36	452.64	452.67	92
MW-32-020	Shallow Wells	453.67	453.05	453.30	453.34	89
MW-32-035	Shallow Wells	453.59	452.81	453.29	453.22	89
MW-33-040	Shallow Wells	453.83	453.07	453.50	453.46	92
MW-33-090	Middle Wells	453.84	453.09	453.59	453.50	92
MW-33-150	Deep Wells	454.19	453.44	453.82	453.81	92
MW-33-210	Deep Wells	454.52	453.87	454.07	454.15	92
MW-34-055	Middle Wells	453.55	452.77	453.52	453.27	89
MW-34-080	Deep Wells	453.70	452.90	453.60	453.39	89
MW-34-100	Deep Wells	453.36	452.61	453.26	453.07	89
MW-35-060	Shallow Wells	454.15	453.43	453.90	453.82	92
MW-35-135	Deep Wells	454.69	454.04	454.30	454.34	92
MW-36-020	Shallow Wells	453.41	452.64	453.26	453.10	89
MW-36-040	Shallow Wells	453.39	452.69	453.33	453.13	89
MW-36-050	Middle Wells	453.37	452.61	453.25	453.07	89
MW-36-070	Middle Wells	453.37	452.60	453.25	453.06	89
MW-36-090	Deep Wells	452.80	452.05	452.62	452.48	89
MW-36-100	Deep Wells	452.92	452.22	452.78	452.63	89
MW-39-040	Shallow Wells	453.22	452.48	453.04	452.90	89
MW-39-050	Middle Wells	453.24	452.48	453.03	452.91	89
MW-39-060	Middle Wells	453.18	452.44	452.96	452.85	89
MW-39-070	Middle Wells	452.89	452.17	452.63	452.56	89
MW-39-080	Deep Wells	452.90	452.17	452.61	452.55	89
MW-39-100	Deep Wells	453.29	452.63	453.11	453.00	89
MW-42-030	Shallow Wells	453.08	452.34	452.87	452.76	89
MW-42-055	Middle Wells	453.32	452.56	453.11	452.99	89
MW-42-065	Middle Wells	453.45	452.70	453.23	453.12	89
MW-43-025	Shallow Wells	453.40	452.63	453.38	453.12	89
MW-43-075	Deep Wells	453.72	452.94	453.70	453.44	89
MW-43-090	Deep Wells	453.96	453.18	453.91	453.67	89
MW-44-070	Middle Wells	453.50	452.72	453.42	453.20	89
MW-44-115	Deep Wells	453.37	452.62	453.17	453.04	89

TABLE D-1
Average Monthly and Quarterly Groundwater Elevations, November 2007 through January 2008
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	November 2007	December 2007	January 2008	Quarter Average	Days in Quarter Average
MW-44-125	Deep Wells	453.71	453.01	453.55	453.42	89
MW-45-095a	Deep Wells	452.28	451.52	452.21	451.99	89
MW-46-175	Deep Wells	453.92	453.27	453.84	453.67	89
MW-46-205	Deep Wells	454.65	453.94	454.37	454.32	89
MW-47-055	Shallow Wells	454.16	453.45	453.81	453.80	92
MW-47-115	Deep Wells	454.37	453.66	453.91	453.97	92
MW-49-135	Deep Wells	454.50	453.80	454.26	454.18	92
MW-49-275	Deep Wells	455.35	454.76	455.02	455.04	92
MW-49-365	Deep Wells	457.04	456.48	456.71	456.74	92
MW-50-095	Middle Wells	454.06	453.39	453.58	453.67	92
MW-50-200	Deep Wells	454.36	453.69	453.82	453.95	92
MW-51	Middle Wells	454.44	453.88	453.77	454.03	92
PT2D	Deep Wells	452.47	451.73	452.22	452.13	89
PT5D	Deep Wells	452.67	451.99	452.52	452.39	89
PT6D	Deep Wells	452.95	452.22	452.71	452.62	89
RRB	River Station	454.02	453.65	453.96	453.87	92

NOTES:

Averages include data collected from November 2007 through January 2008

Averages reported in ft AMSL (feet above mean sea level)

TABLE D-2
Average, Minimum, and Maximum Groundwater Elevations, February 2007 through January 2008
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	Minimum[1] (ft AMSL)	Maximum [1] (ft AMSL)	Average[1] (ft AMSL)	Number of Days reporting data
I-3	River Station	452.15	457.77	455.03	362
MW-10	Shallow Wells	454.89	471.87	456.52	312
MW-19	Shallow Wells	453.20	456.45	455.09	365
MW-20-070	Shallow Wells	451.93	455.92	453.84	365
MW-20-100	Middle Wells	451.51	456.05	453.42	321
MW-20-130	Deep Wells	451.07	456.07	453.03	365
MW-22	Shallow Wells	453.37	455.95	454.80	263
MW-25	Shallow Wells	453.97	456.46	455.25	269
MW-26	Shallow Wells	453.61	456.08	455.12	333
MW-27-020	Shallow Wells	452.21	457.21	454.86	356
MW-27-060	Middle Wells	452.22	468.83	455.55	362
MW-27-085	Deep Wells	452.20	457.25	454.98	363
MW-28-025	Shallow Wells	452.21	457.31	454.97	362
MW-28-090	Deep Wells	452.37	458.71	455.12	365
MW-30-050	Middle Wells	452.16	456.49	454.58	362
MW-31-060	Shallow Wells	452.70	456.21	454.74	365
MW-31-135	Deep Wells	452.02	456.20	454.04	365
MW-32-020	Shallow Wells	452.72	456.19	454.70	362
MW-32-035	Shallow Wells	432.51	456.59	452.89	304
MW-33-040	Shallow Wells	452.66	467.56	456.16	365
MW-33-090	Middle Wells	451.96	456.77	455.00	365
MW-33-150	Deep Wells	452.73	456.87	455.23	365
MW-33-210	Deep Wells	453.45	457.19	455.30	302
MW-34-055	Middle Wells	452.30	457.33	454.99	354
MW-34-080	Deep Wells	451.70	457.21	455.00	363
MW-34-100	Deep Wells	452.18	456.84	454.71	363
MW-35-060	Shallow Wells	453.05	457.44	455.37	365
MW-35-135	Deep Wells	453.72	457.40	455.75	365
MW-36-020	Shallow Wells	452.20	456.58	454.60	334
MW-36-040	Shallow Wells	452.28	456.88	454.73	347
MW-36-050	Middle Wells	452.17	456.85	454.70	349
MW-36-070	Middle Wells	452.16	456.79	454.72	362
MW-36-090	Deep Wells	451.68	456.58	454.10	362
MW-36-100	Deep Wells	451.84	456.73	454.15	365
MW-39-040	Shallow Wells	452.06	456.35	454.50	341
MW-39-050	Middle Wells	452.07	514.27	454.63	362
MW-39-060	Middle Wells	452.04	456.38	454.37	362
MW-39-070	Middle Wells	451.80	456.43	454.01	362
MW-39-080	Deep Wells	451.79	456.44	454.08	362
MW-39-100	Deep Wells	452.27	456.46	454.32	362
MW-42-030	Shallow Wells	451.79	456.32	454.36	362
MW-42-055	Middle Wells	452.00	456.56	454.57	362
MW-42-065	Middle Wells	452.14	456.63	454.66	363
MW-43-025	Shallow Wells	452.13	457.51	454.73	327
MW-43-075	Deep Wells	452.44	458.23	455.23	362
MW-43-090	Deep Wells	452.69	457.98	455.42	362
MW-44-070	Middle Wells	452.03	457.13	454.83	363

TABLE D-2
Average, Minimum, and Maximum Groundwater Elevations, February 2007 through January 2008
Interim Measures Performance Monitoring
PG&E Topock Compressor Station

Well ID	Aquifer Zone	Minimum[1] (ft AMSL)	Maximum [1] (ft AMSL)	Average[1] (ft AMSL)	Number of Days reporting data
MW-44-115	Deep Wells	452.21	456.73	454.58	363
MW-44-125	Deep Wells	452.11	457.25	454.92	363
MW-45-095a	Deep Wells	451.12	458.44	453.54	363
MW-46-175	Deep Wells	452.89	457.29	455.23	362
MW-46-205	Deep Wells	452.53	457.42	455.65	362
MW-47-055	Shallow Wells	453.10	456.72	455.19	360
MW-47-115	Deep Wells	453.29	456.82	455.36	365
MW-49-135	Deep Wells	453.41	457.47	455.61	365
MW-49-275	Deep Wells	454.45	457.83	456.34	365
MW-49-365	Deep Wells	456.19	459.39	457.93	365
MW-50-095	Middle Wells	453.07	456.25	454.87	326
MW-50-200	Deep Wells	453.31	456.47	455.27	326
MW-51	Middle Wells	447.69	456.01	454.84	333
PT2D	Deep Wells	450.14	456.16	453.67	362
PT5D	Deep Wells	451.65	456.40	453.93	362
PT6D	Deep Wells	451.85	457.56	454.26	362
RRB	River Station	453.15	457.85	455.38	365

NOTES:

Averages include data collected from 2/1/2007 through 1/28/2008

ft AMSL feet above mean sea level

1 minimium, maximum and average of daily groundwater elevation averages

Transducer data for MW-10 is incomplete this month due to transducer failure. This transducer was replaced on June 30, 2007

Data collection began on June 29, 2007 so averaging during the month of June was limited to 28 days of data.

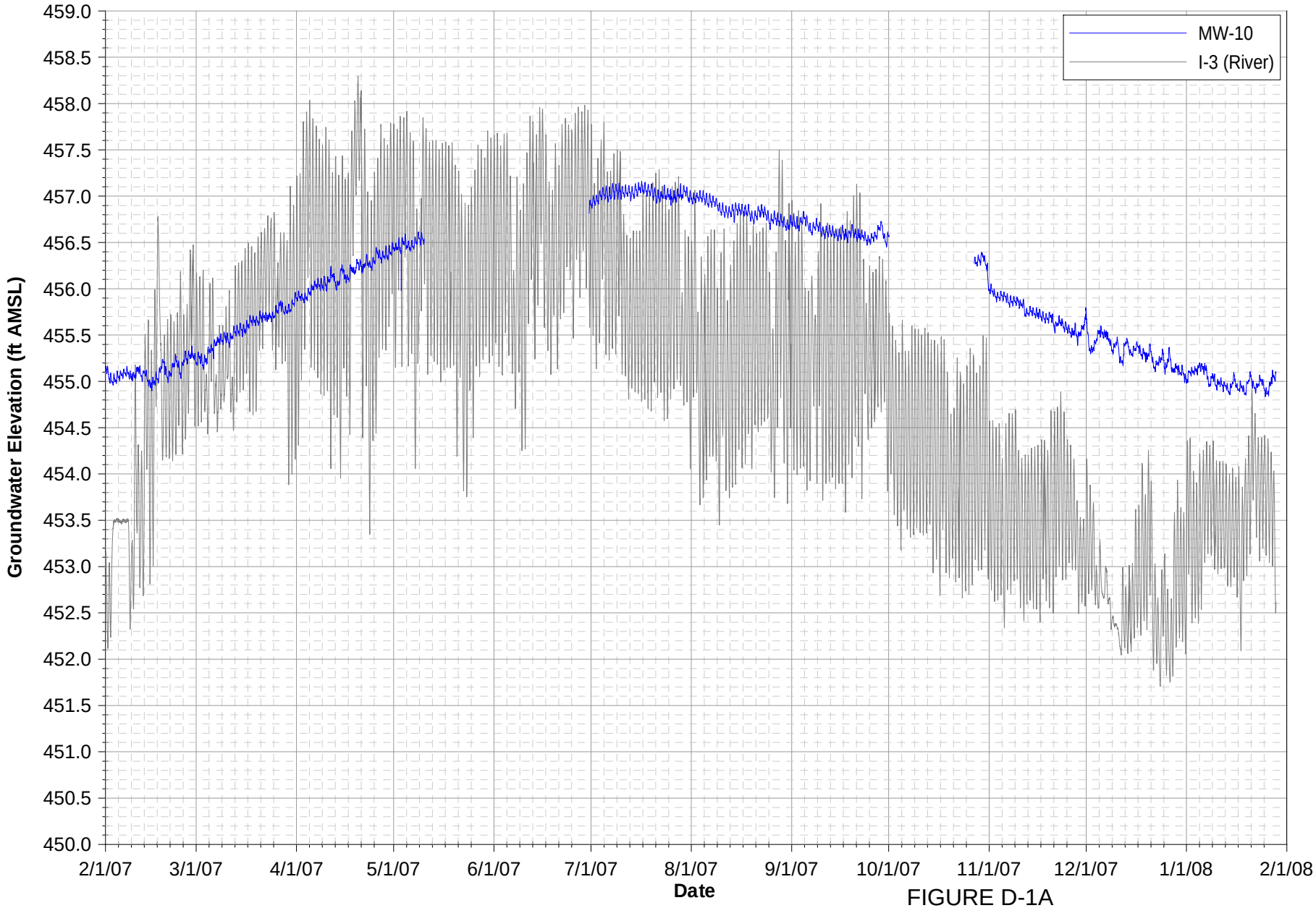

FIGURE D-1A
MW-10 HYDROGRAPH
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Note: Data subject to review.
MW-10 data unavailable 5/10/2007 and 6/30/2007
and 10/1/2007 through 10/21/2007.

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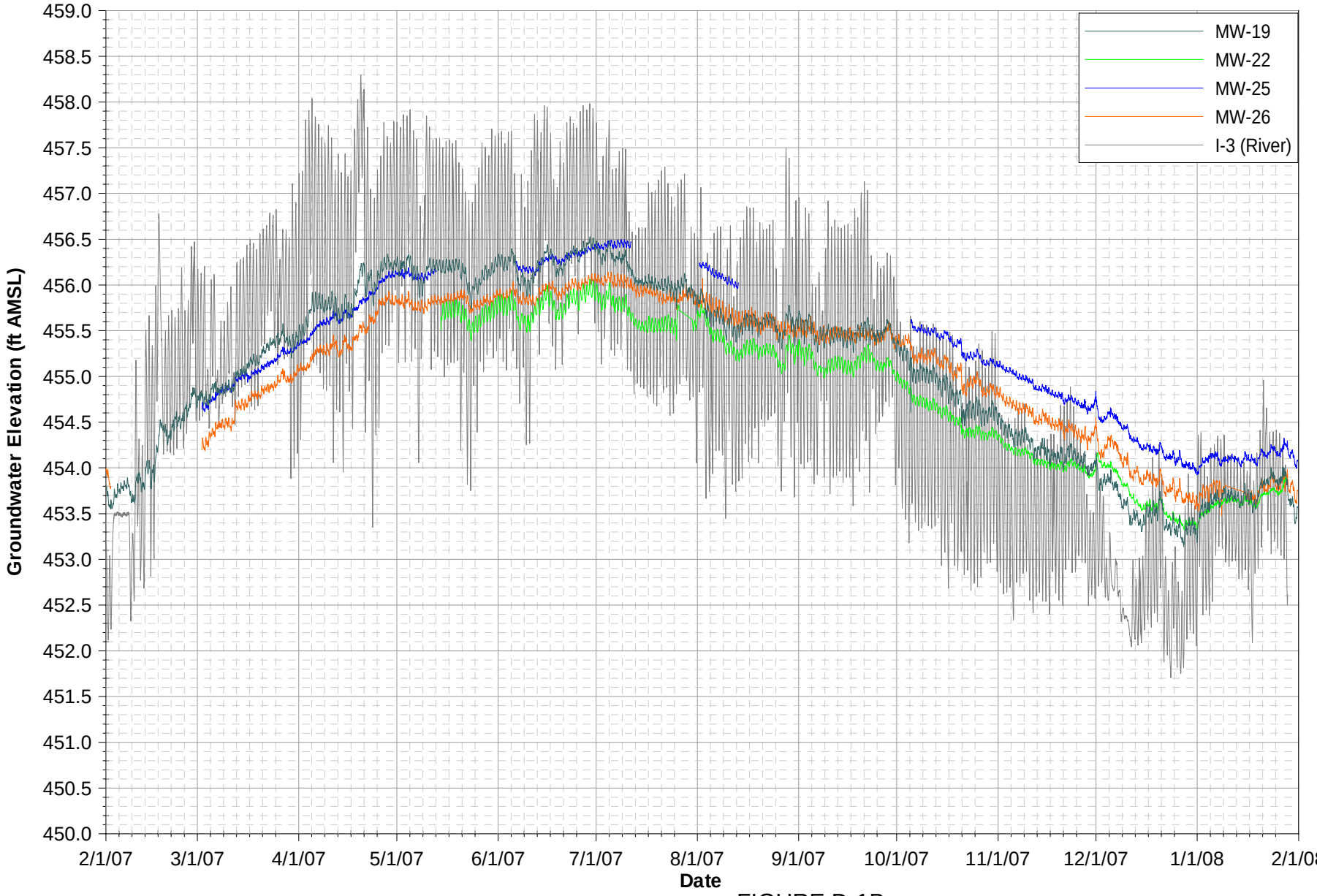
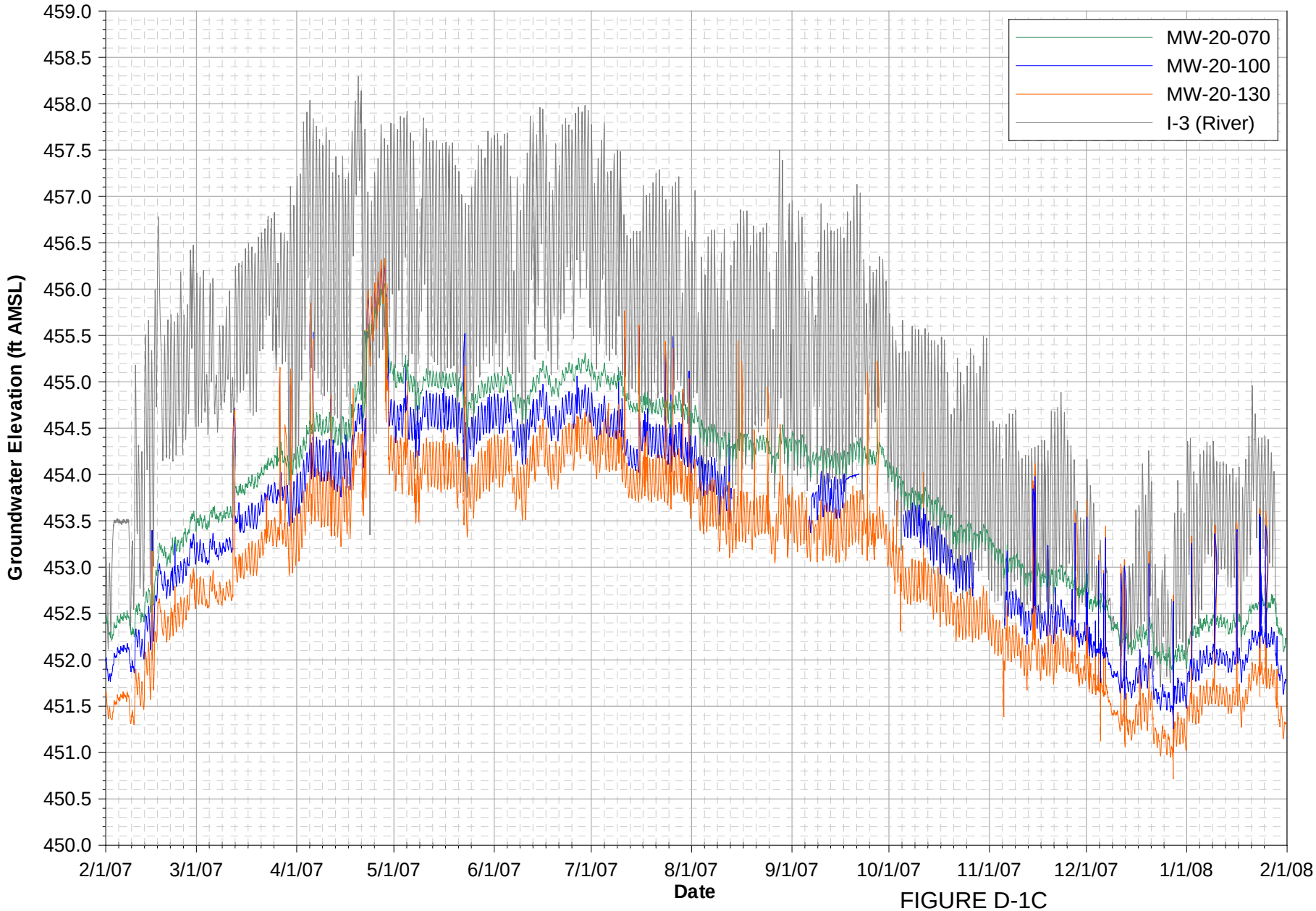


Notes:
Data subject to review.
MW-22 data unavailable before 5/14/2007.
MW-25 data unavailable before 3/2/2007 and 5/13/2007 through 6/6/2007, 7/11/2007 through 8/1/2007, and 8/13/2007 through 10/5/2007.
MW-26 data unavailable 2/2/2007 through 3/2/2007.

FIGURE D-1B
MW-19, MW-22, MW-25, AND MW-26 HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

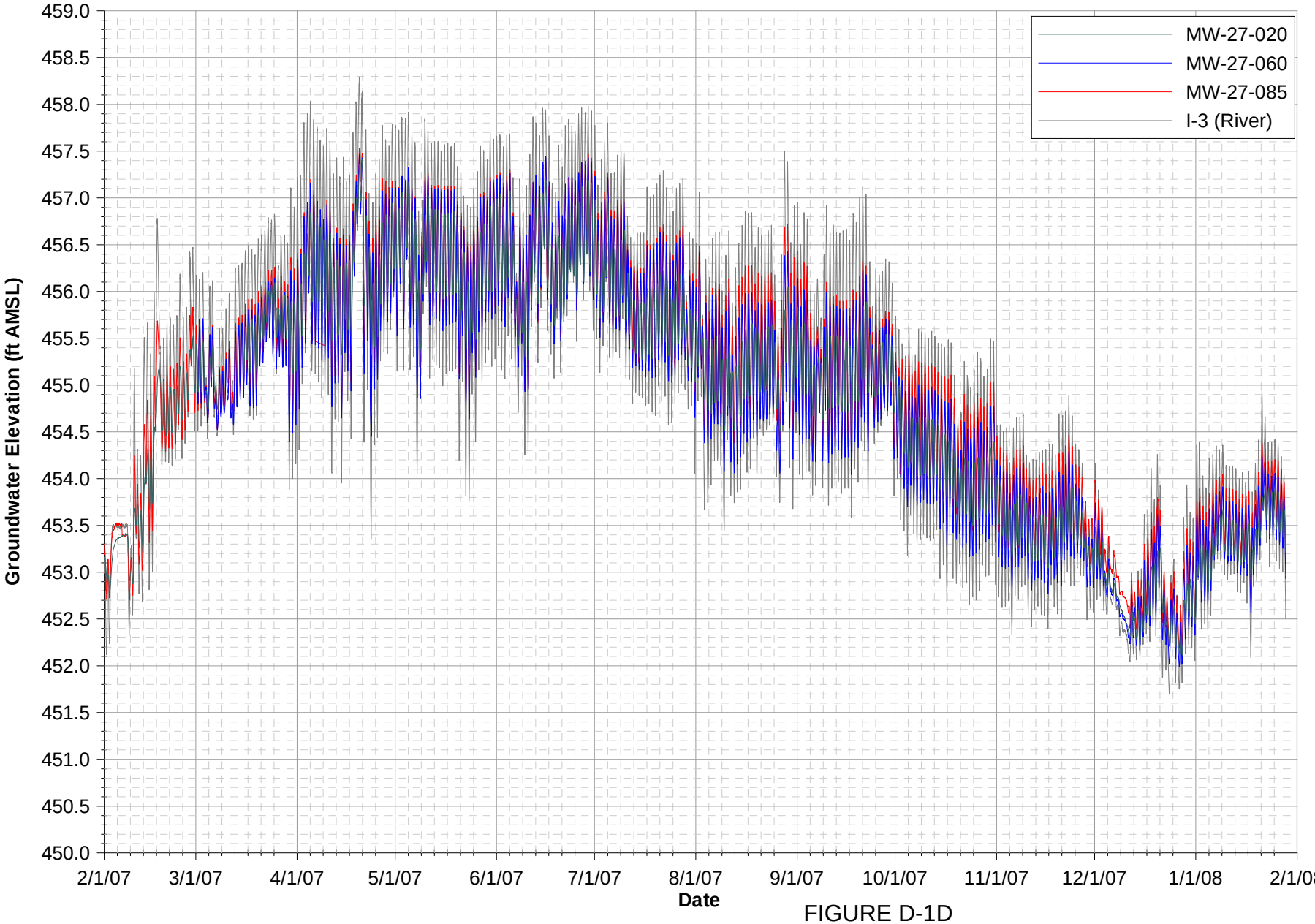
CH2MHILL



Notes:
Data subject to review.
MW-20-100 data unavailable 8/13/2007 through 9/6/2007, 9/21/2007 through 10/5/2007, and 10/27/2007 through 11/5/2007.

FIGURE D-1C
MW-20 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

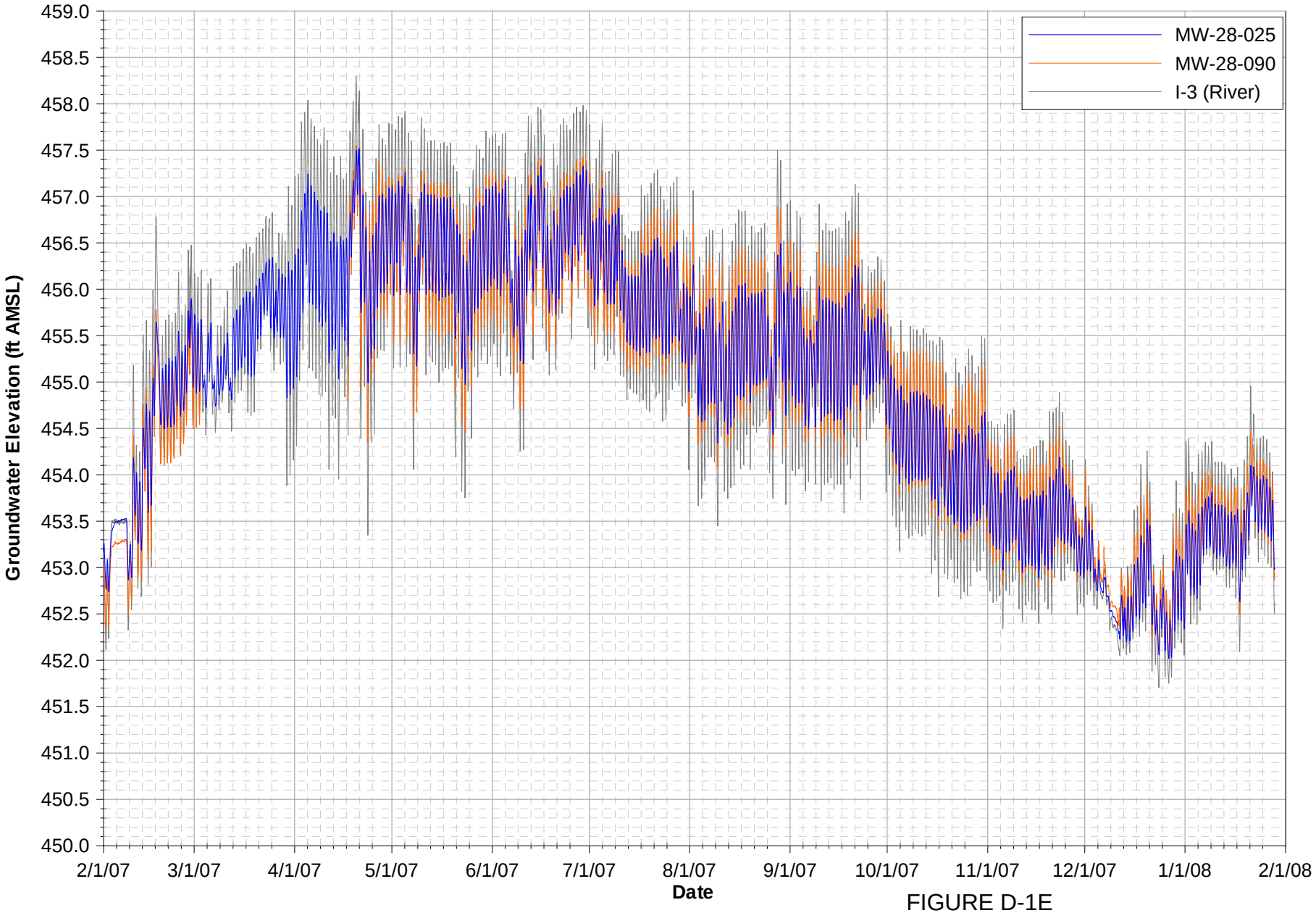
CH2MHILL



Notes:
Data subject to review.
MW-27-020 data unavailable 3/8/2007 through 3/15/2007
MW-27-060 data unavailable prior to 3/1/2007.

FIGURE D-1D
MW-27 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL



Notes:
Data subject to review.
MW-28-90 data unavailable 3/2/2007 through 4/17/2007.

FIGURE D-1E
MW-28 WELL HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

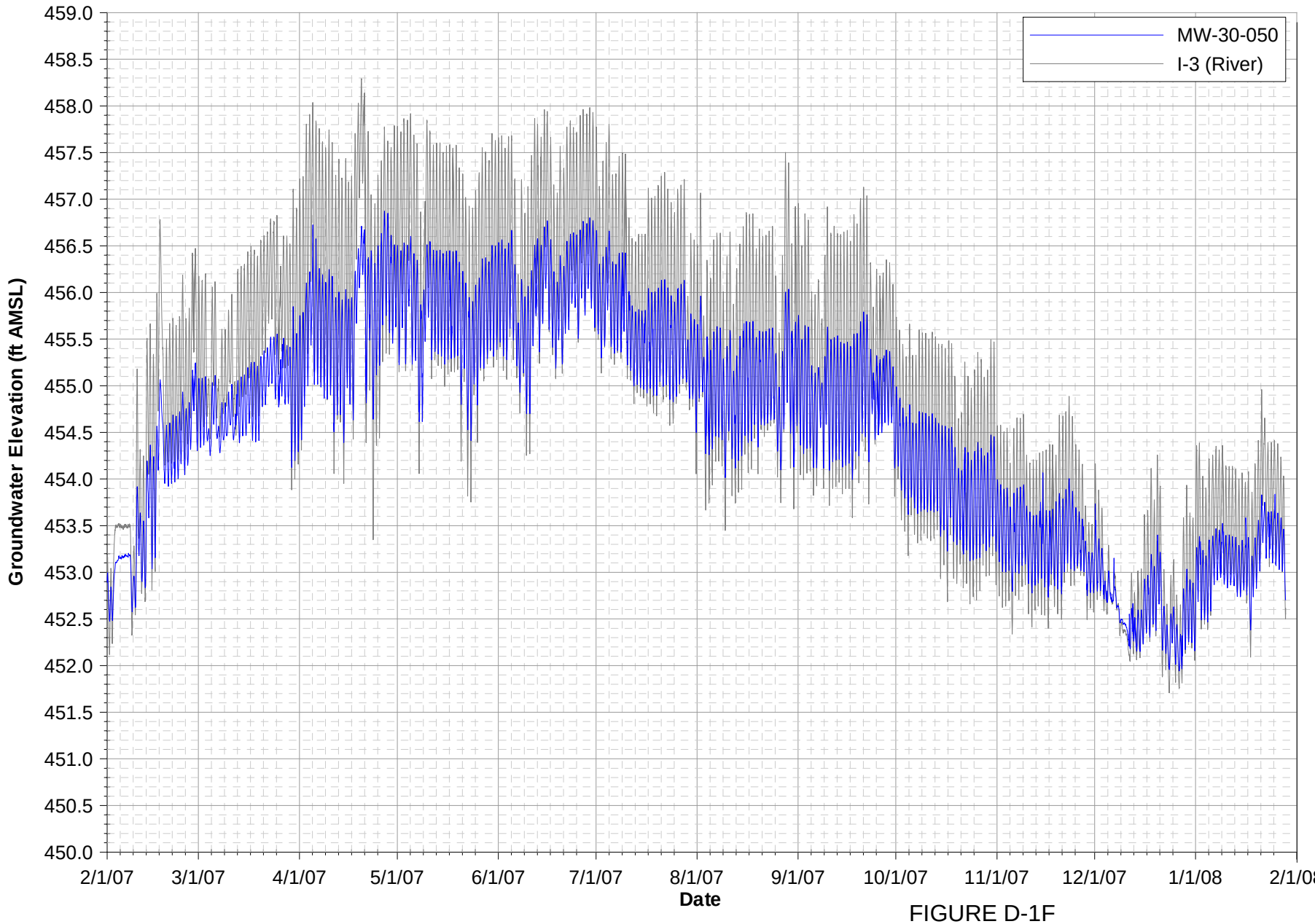


FIGURE D-1F
MW-30 WELL HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.

CH2MHILL

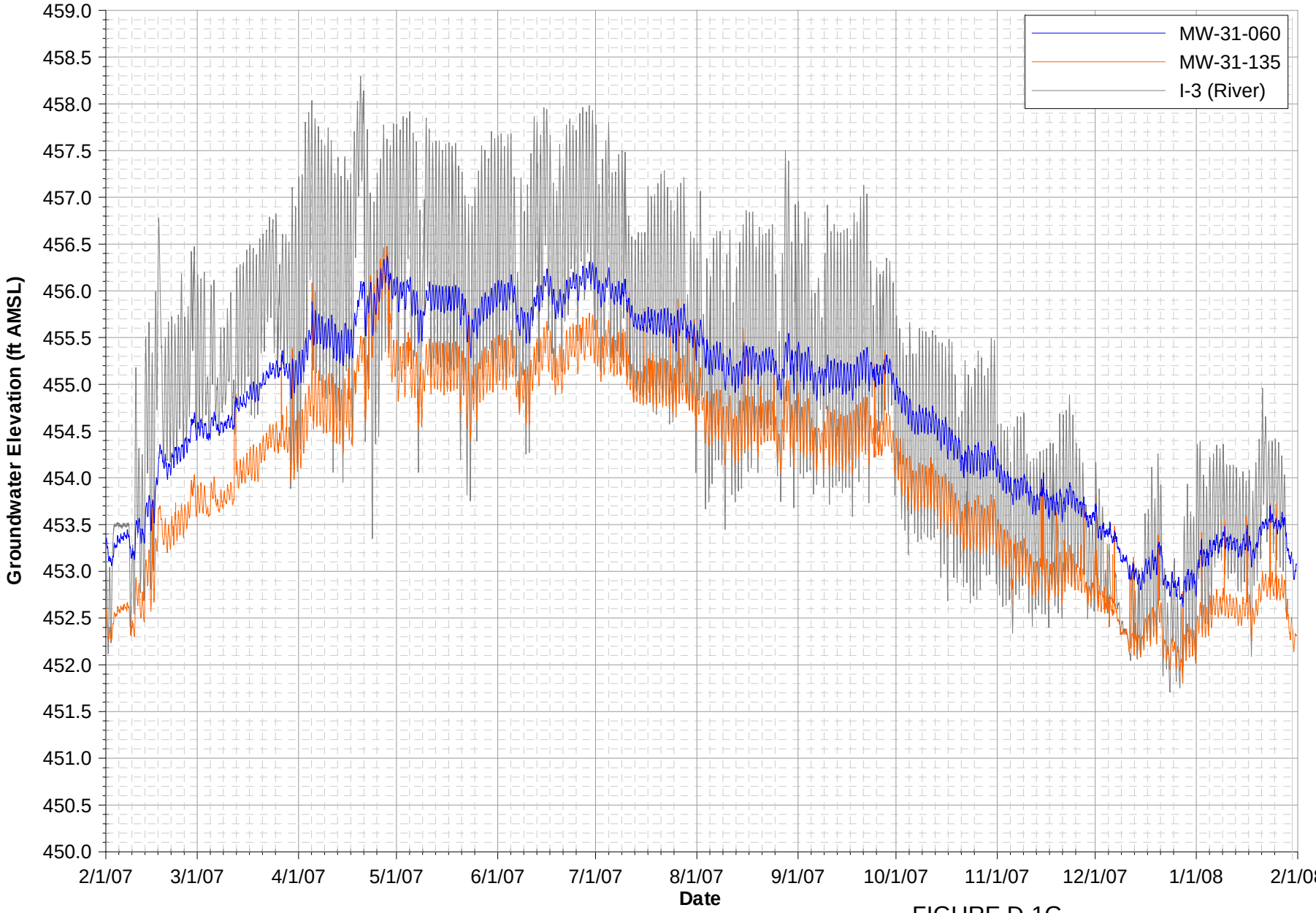
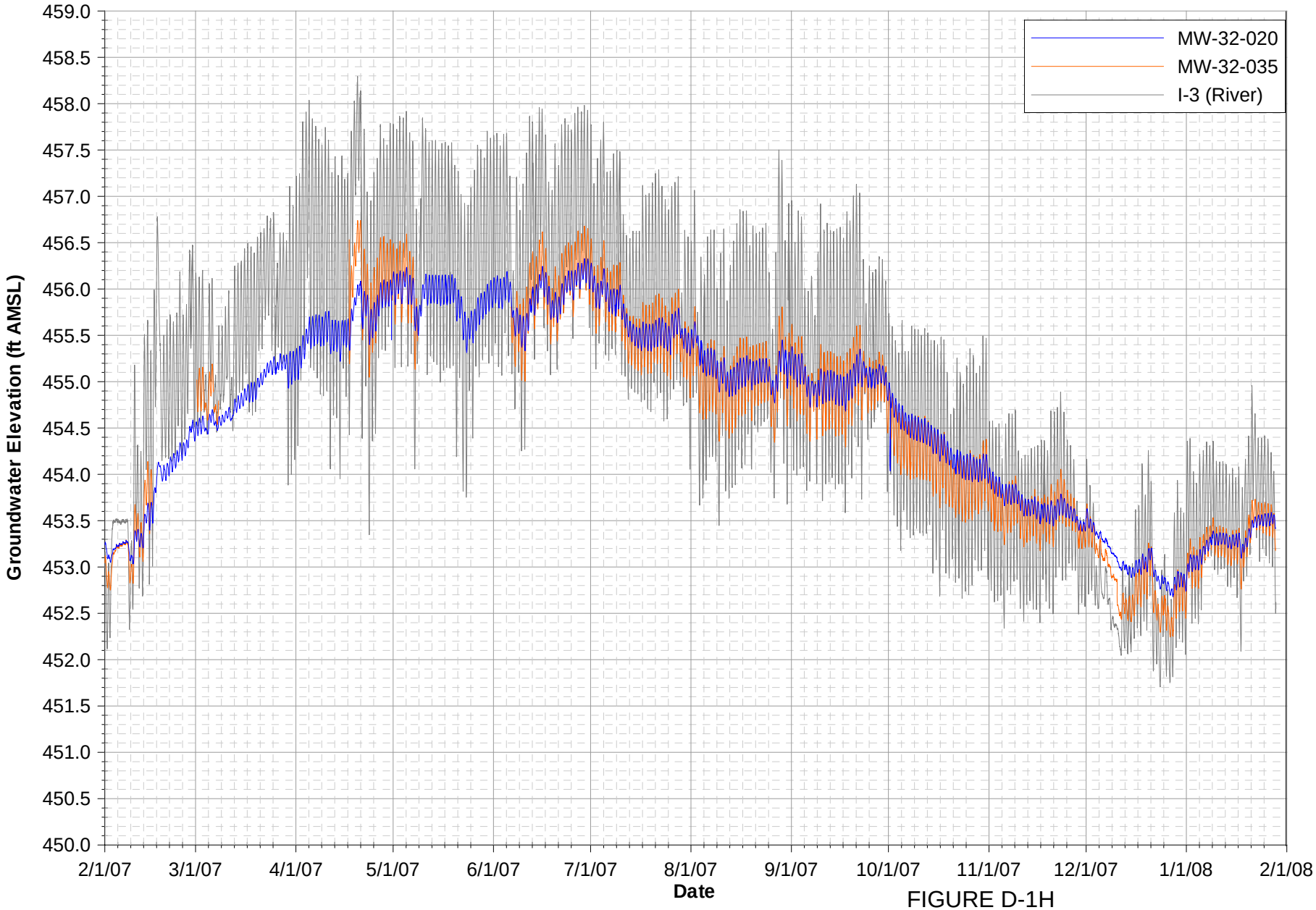


FIGURE D-1G
MW-31 WELL HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.

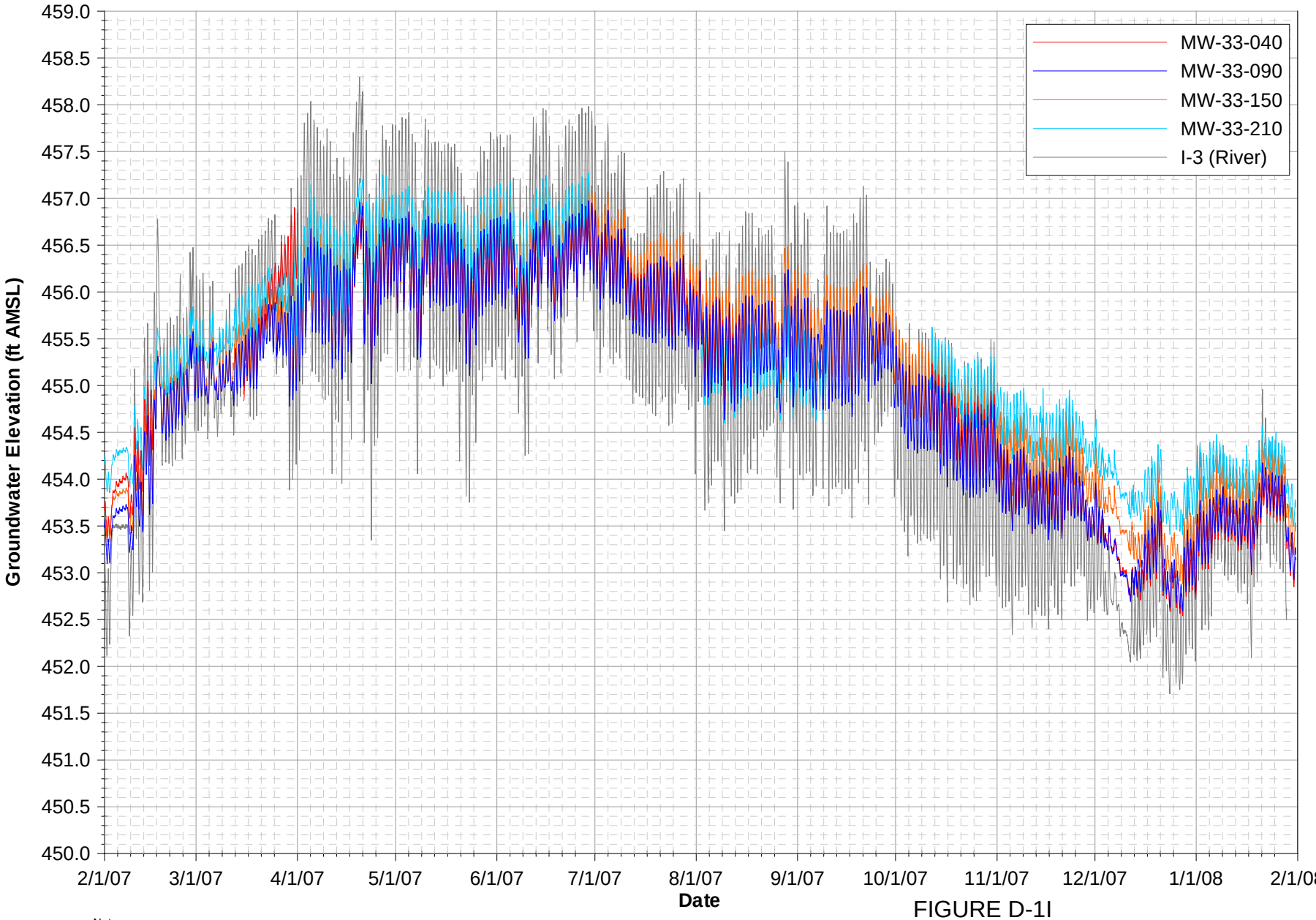
CH2MHILL



Notes:
Data subject to review.
MW-32-035 data unavailable 2/15/2007 through 3/1/2007, 3/8/2007 through 4/17/2007, and 5/8/2007 through 6/6/2007.

FIGURE D-1H
MW-32 WELL HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

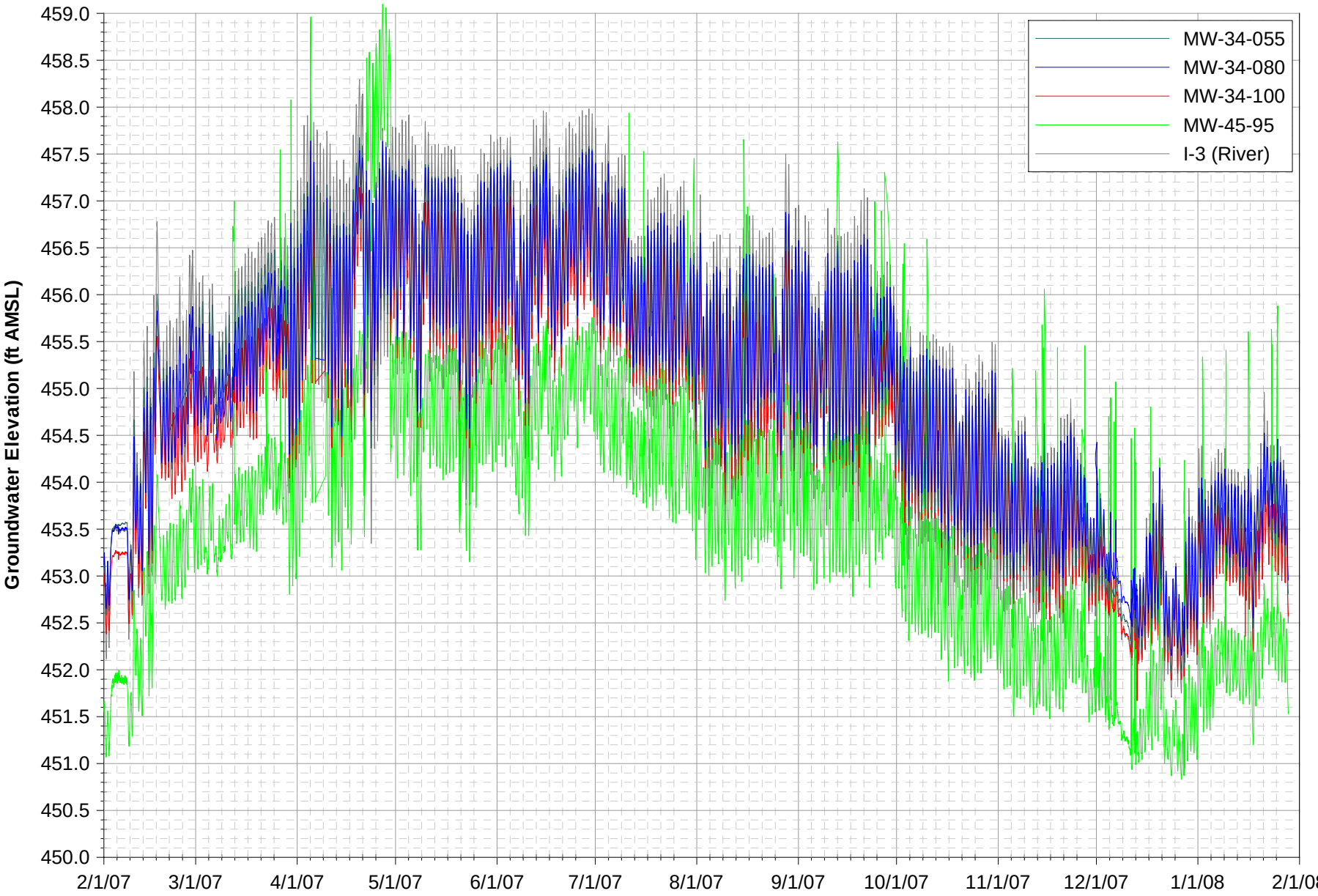
CH2MHILL



Notes:
Data subject to review.
MW-33-40 data unavailable 2/16/2007 through 3/15/2007, 4/1/2007 through 4/16/2007 and 8/17/2007 through 10/11/2007.
MW-33-210 data unavailable 6/29/2007 through 8/2/2007 and 9/10/2007 through 10/11/2007.

FIGURE D-1I
MW-33 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

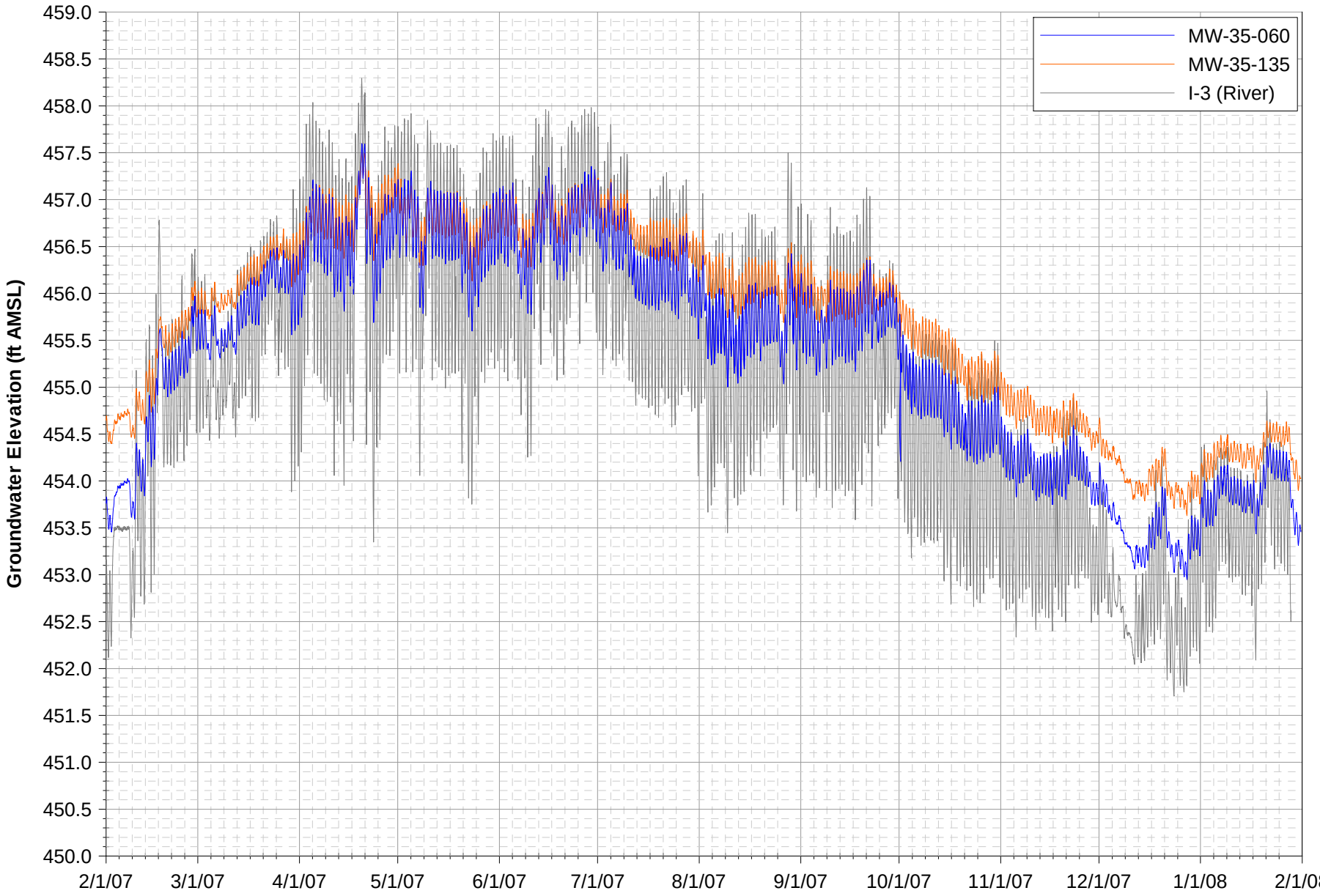
CH2MHILL



Notes:
Data subject to review.

FIGURE D-1J
MW-34 CLUSTER AND MW-45-95 HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

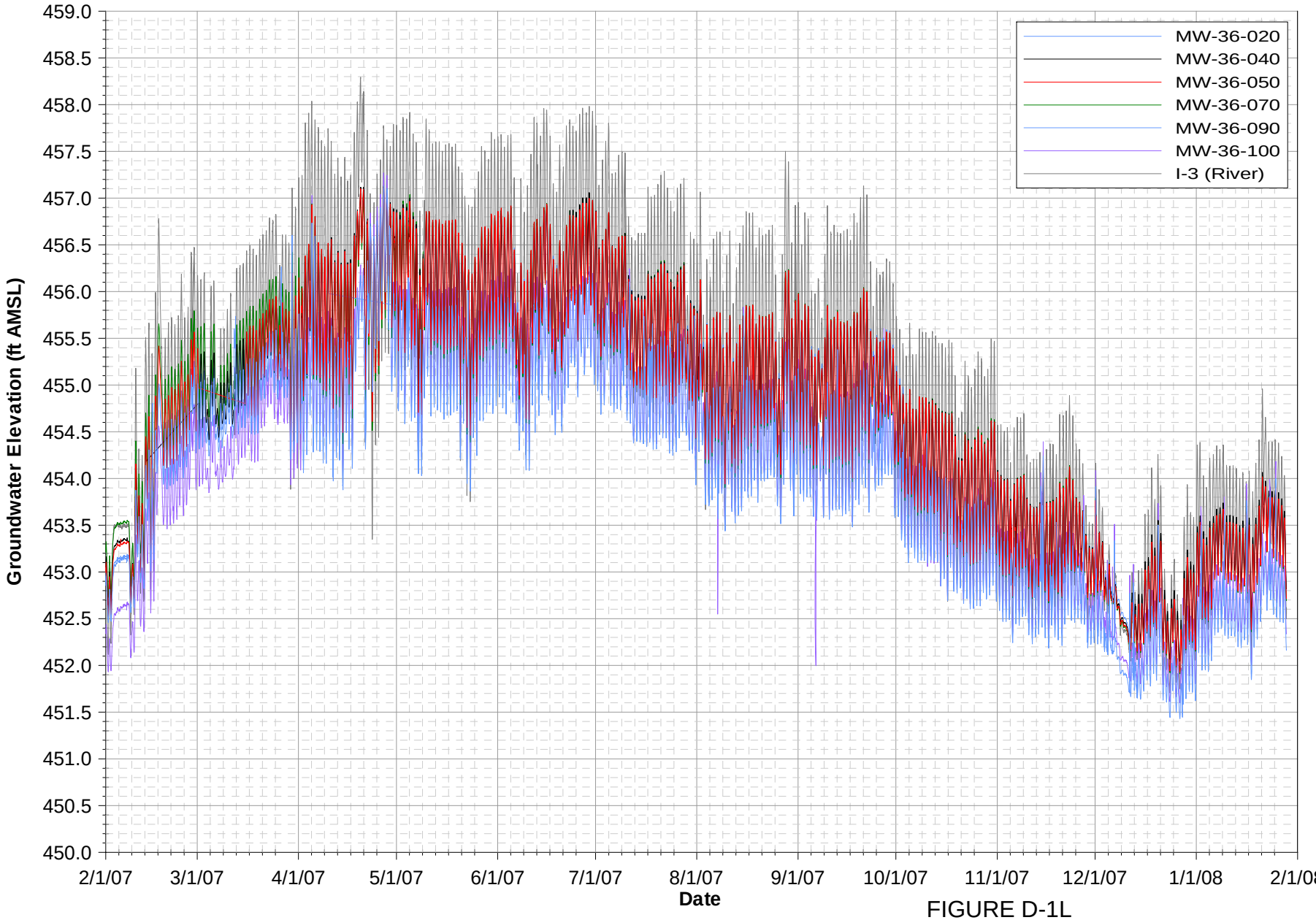
CH2MHILL



Notes:
Data subject to review.

FIGURE D-1K
MW-35 WELL HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

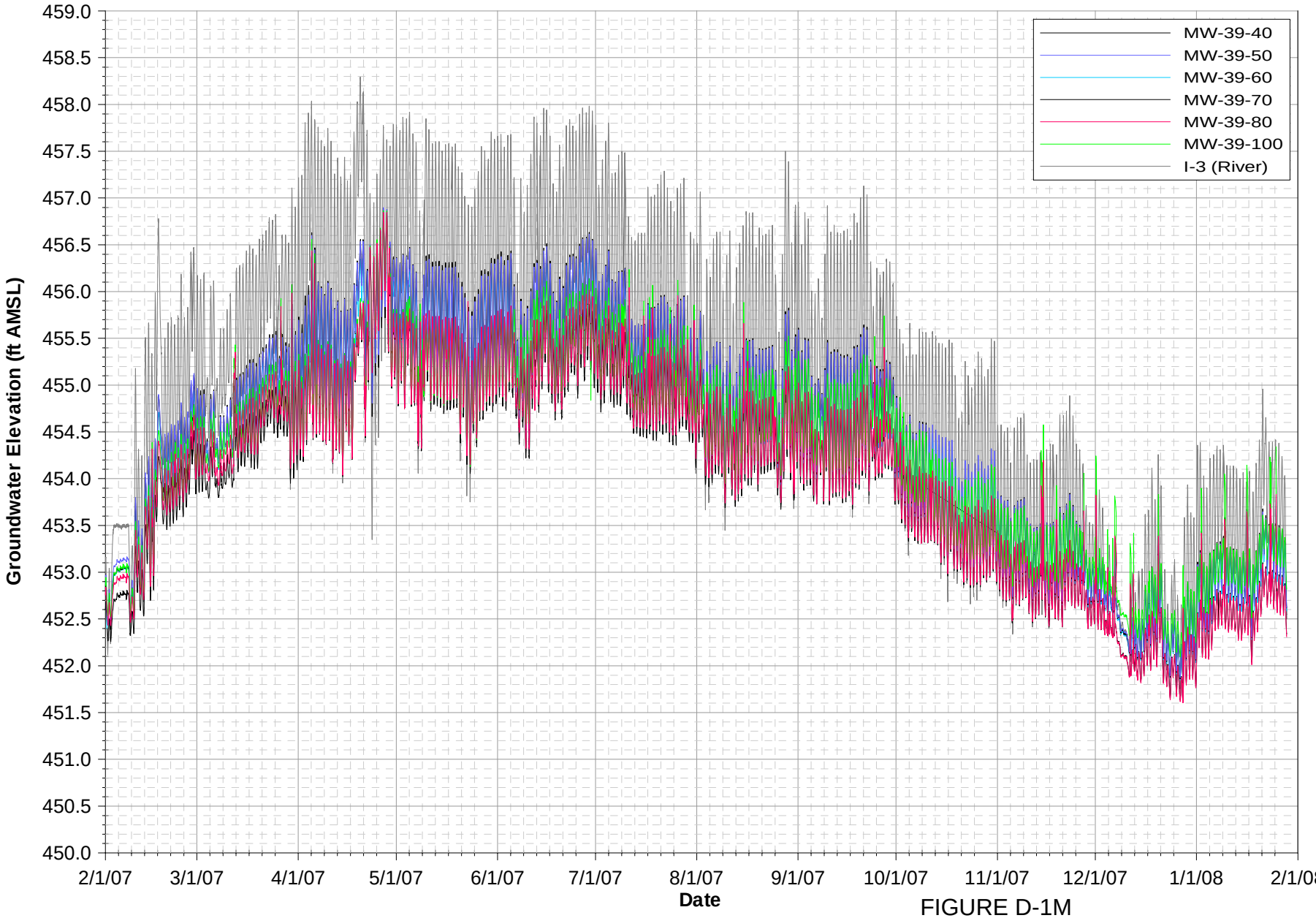
CH2MHILL



Notes:
Data subject to review.

FIGURE D-1L
MW-36 CLUSTER
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL



Notes:
Data subject to review.

FIGURE D-1M
MW-39 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

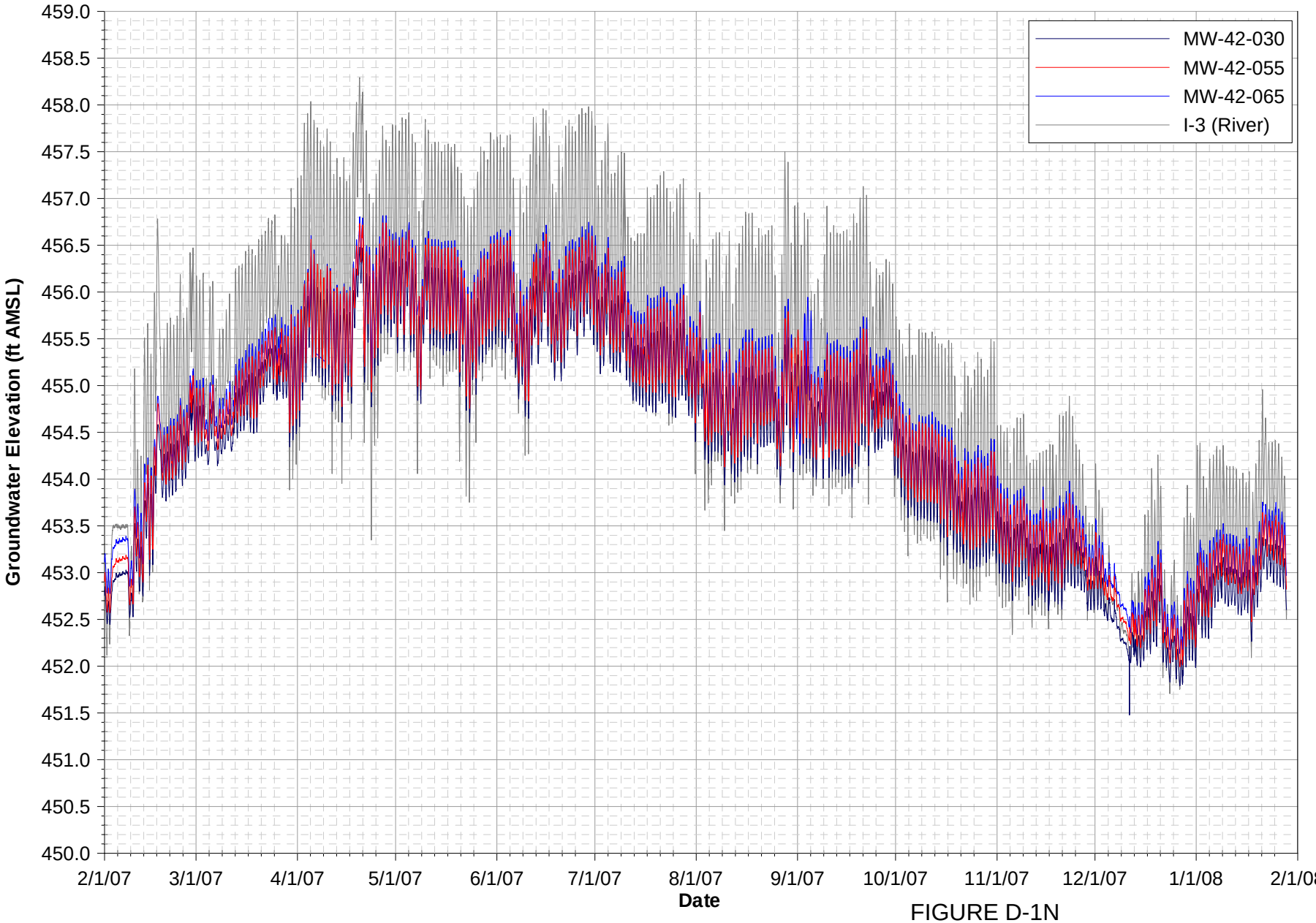
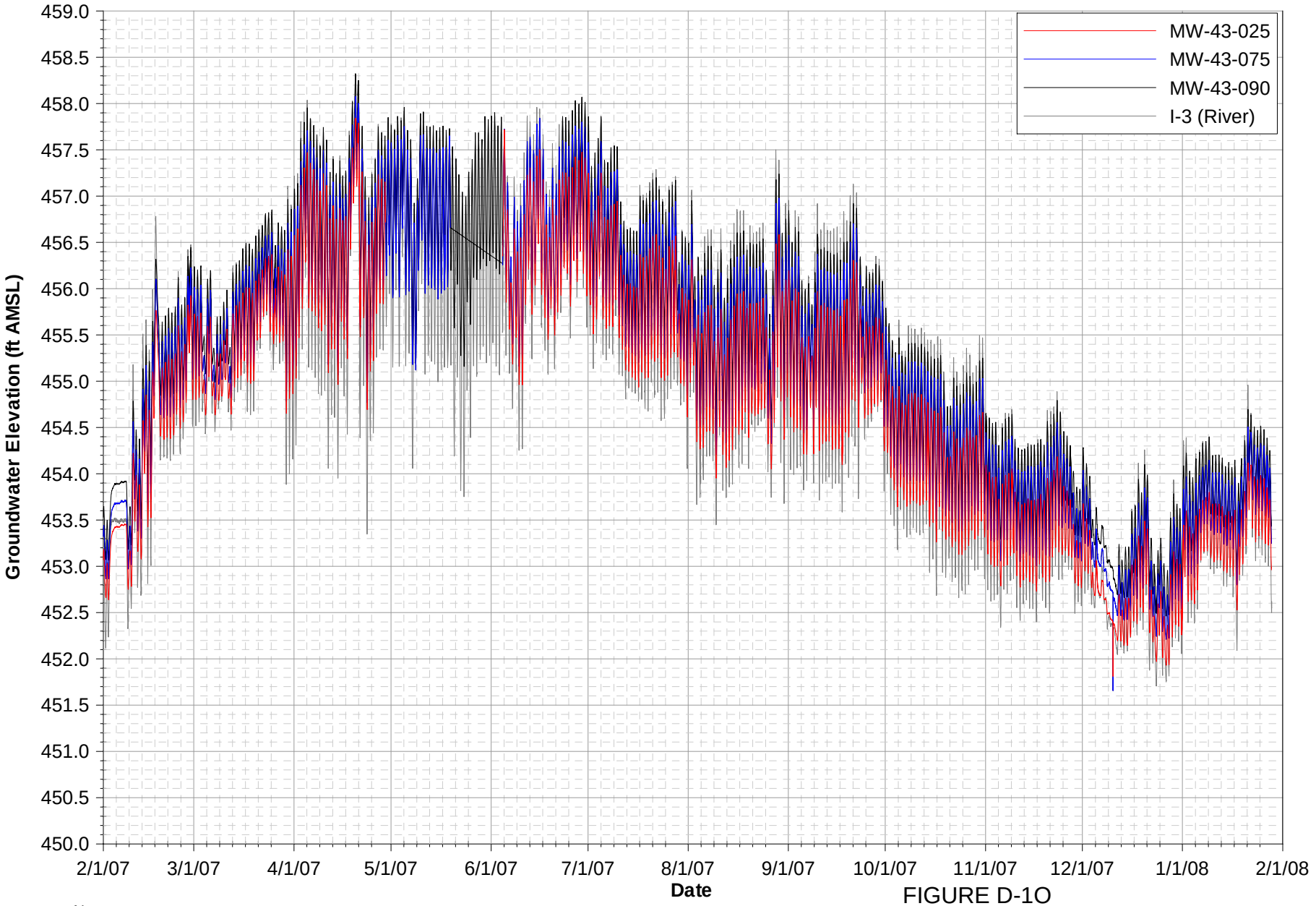


FIGURE D-1N
MW-42 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.

CH2MHILL



Notes:
Data subject to review.
MW-43-025 data unavailable from 4/29/2007 through 6/4/2007.
MW-43-075 data unavailable from 5/19/2007 through 6/4/2007.
MW-43-090 data unavailable from 6/4/2007 through 6/22/2007.

FIGURE D-1O
MW-43 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

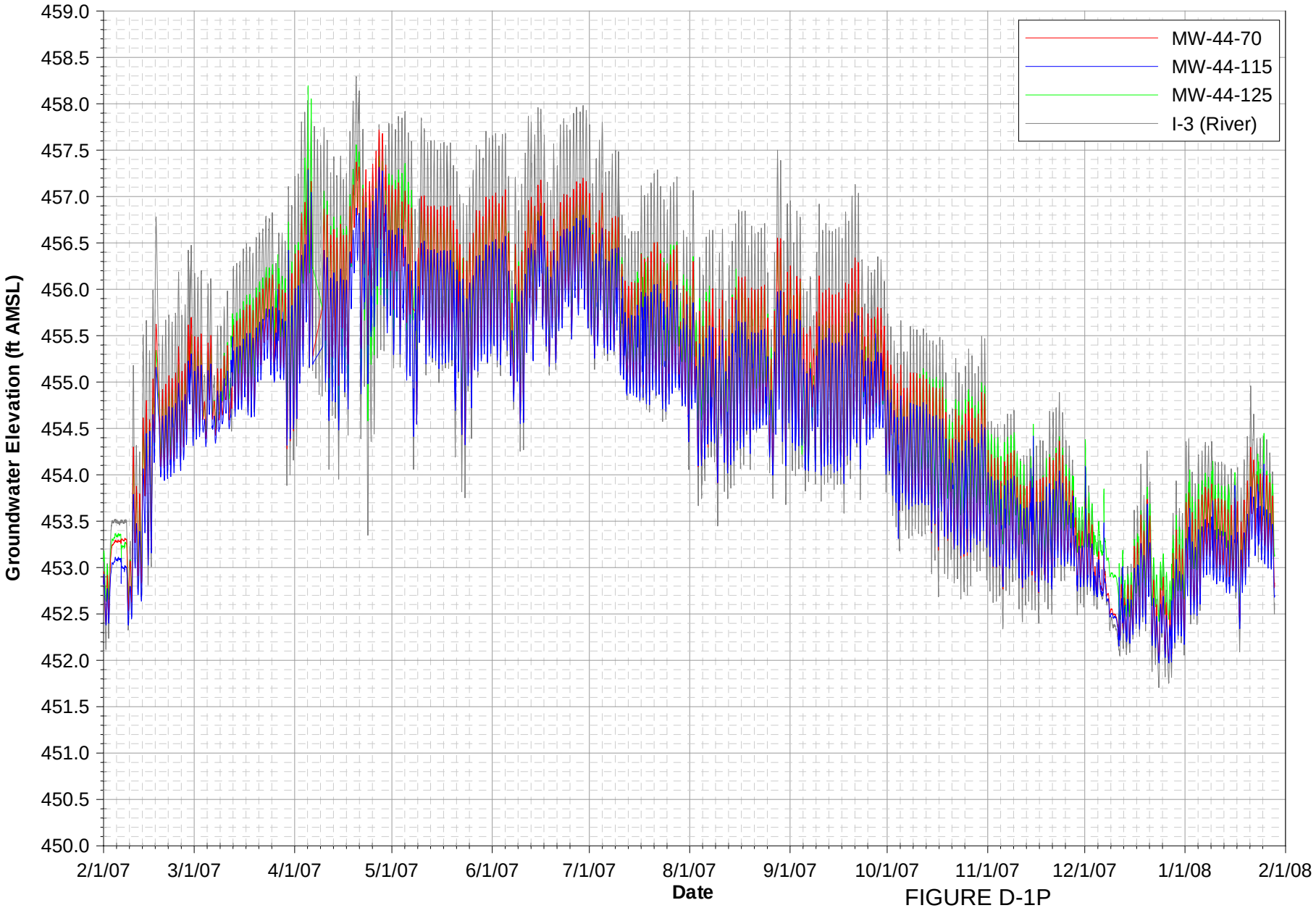


FIGURE D-1P
MW-44 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.

CH2MHILL

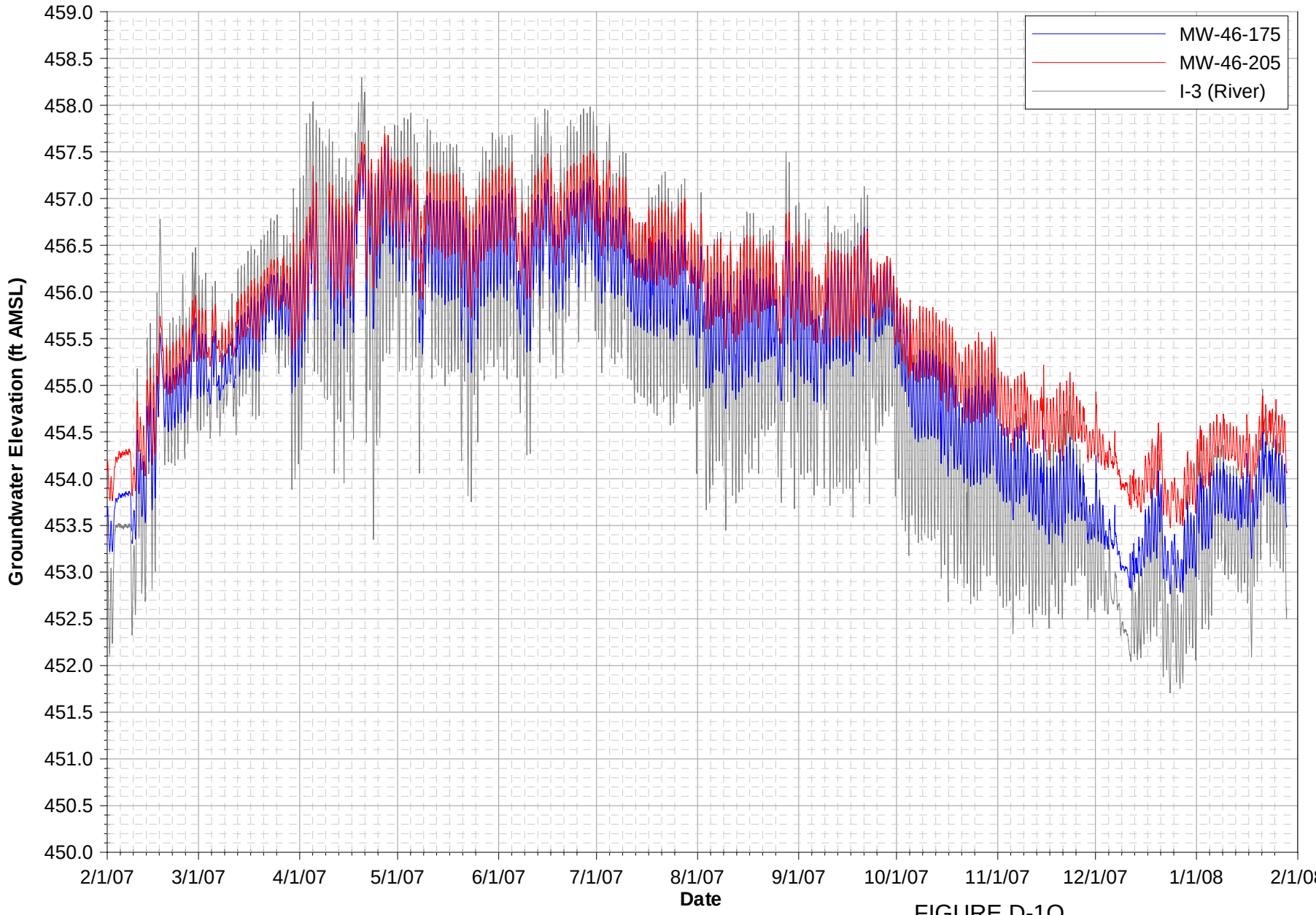


FIGURE D-1Q
MW-46 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
MW-46-175 data unavailable 4/6/2007 through 4/9/2007.
MW-46-205 data unavailable 4/6/2007 through 4/9/2007.

CH2MHILL

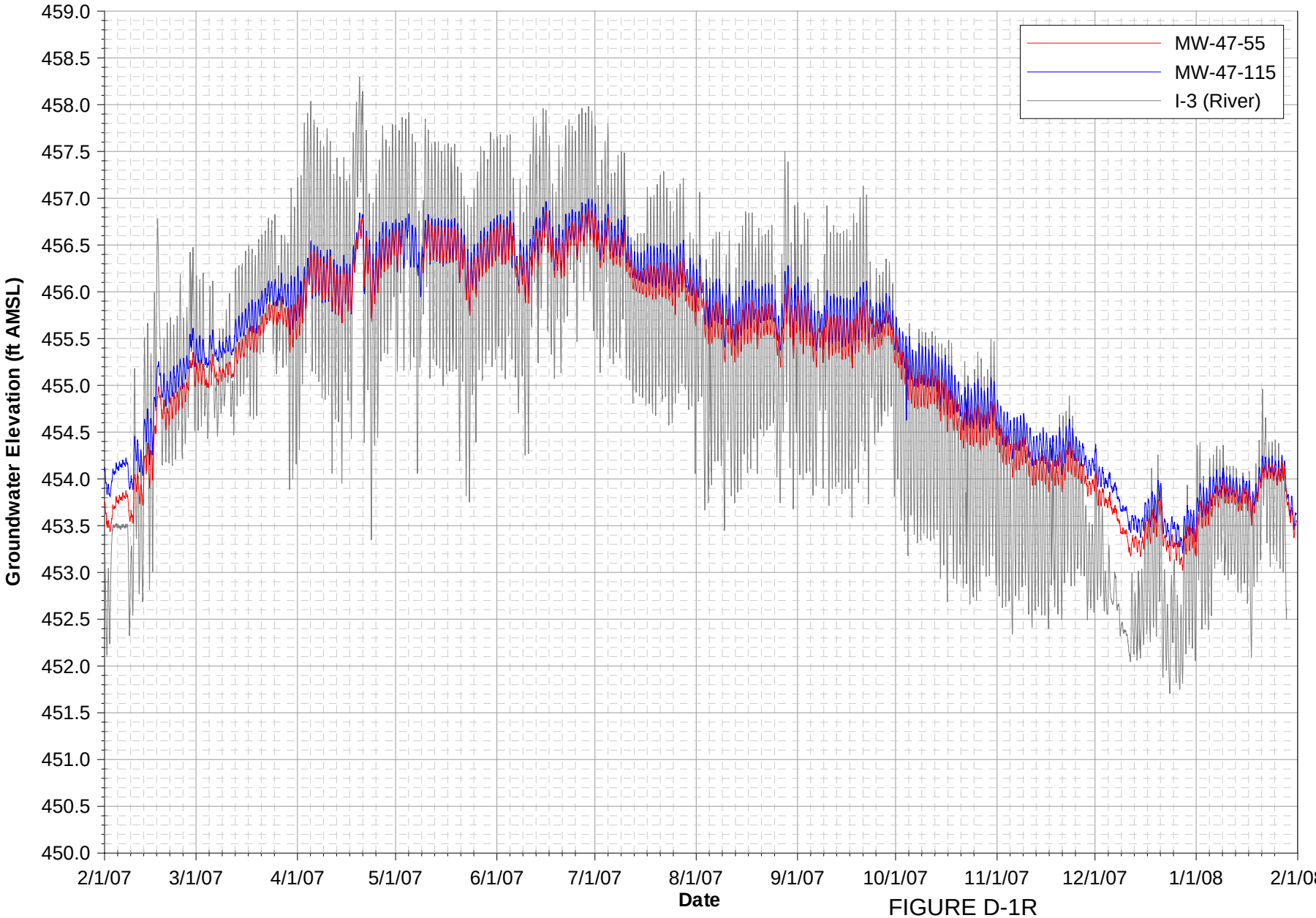


FIGURE D-1R
MW-47 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

Notes:
Data subject to review.
MW-47-055 data unavailable 5/3/2007 through 5/9/2007.

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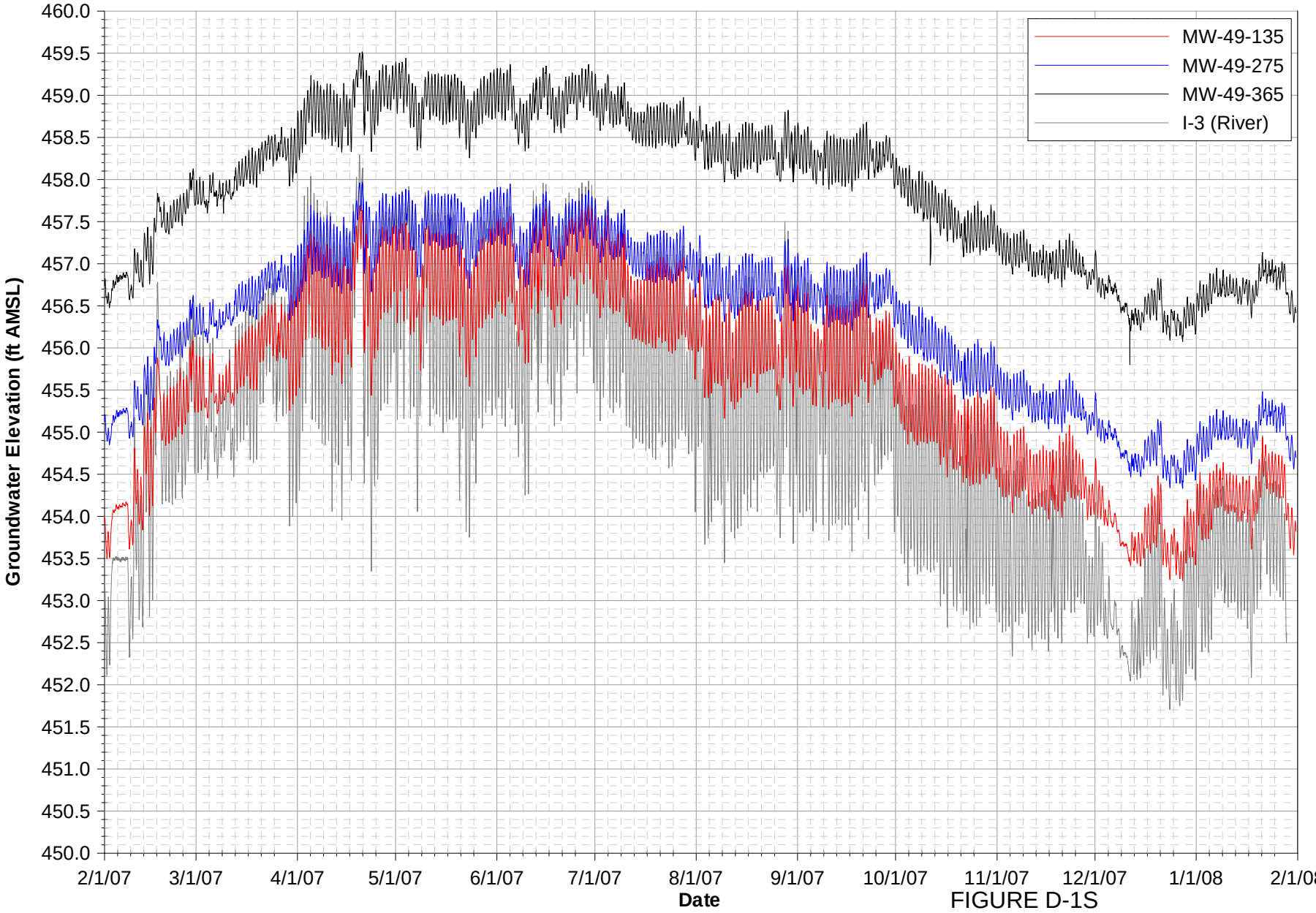

Notes:
Data subject to review.

FIGURE D-1S
MW-49 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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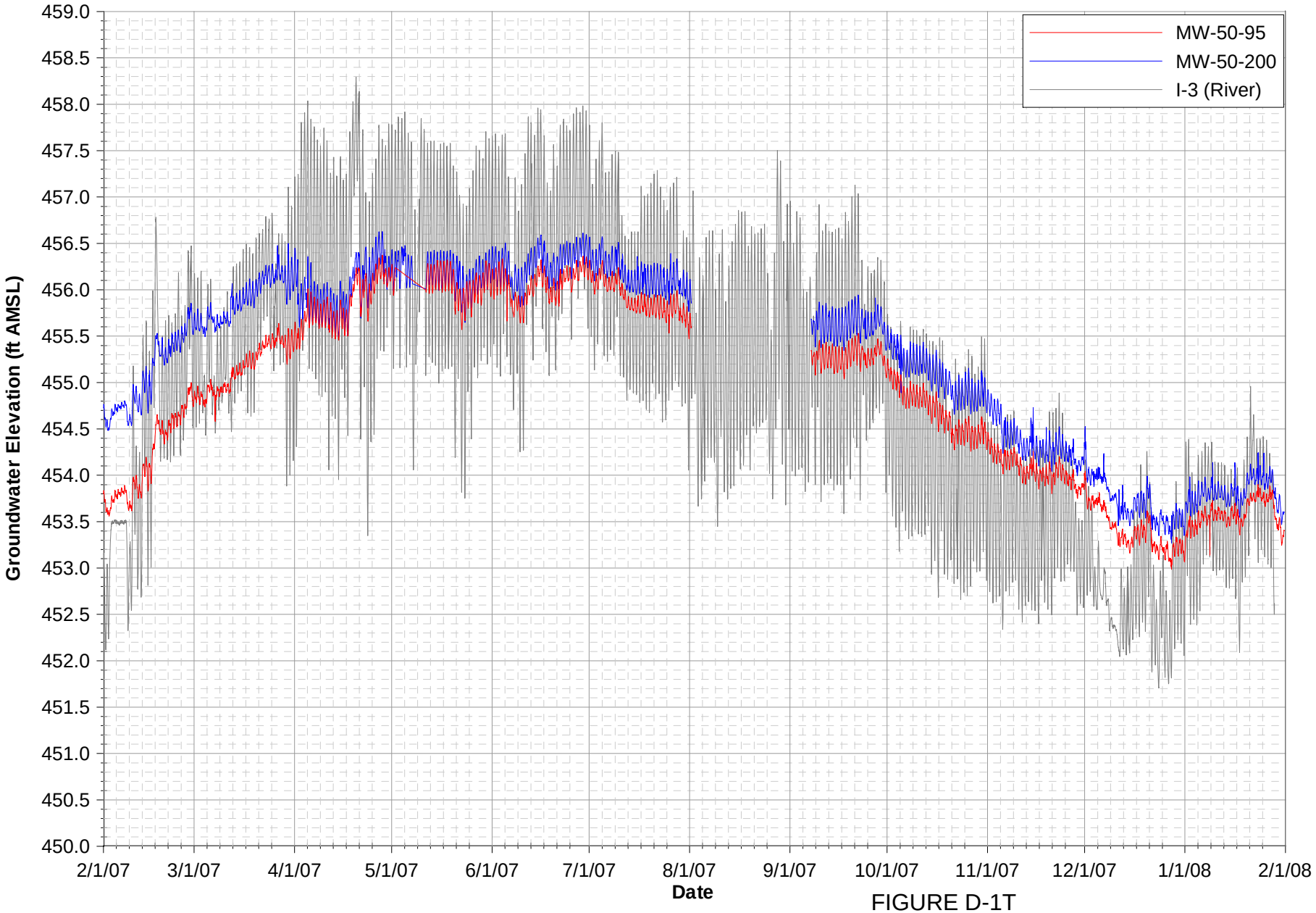
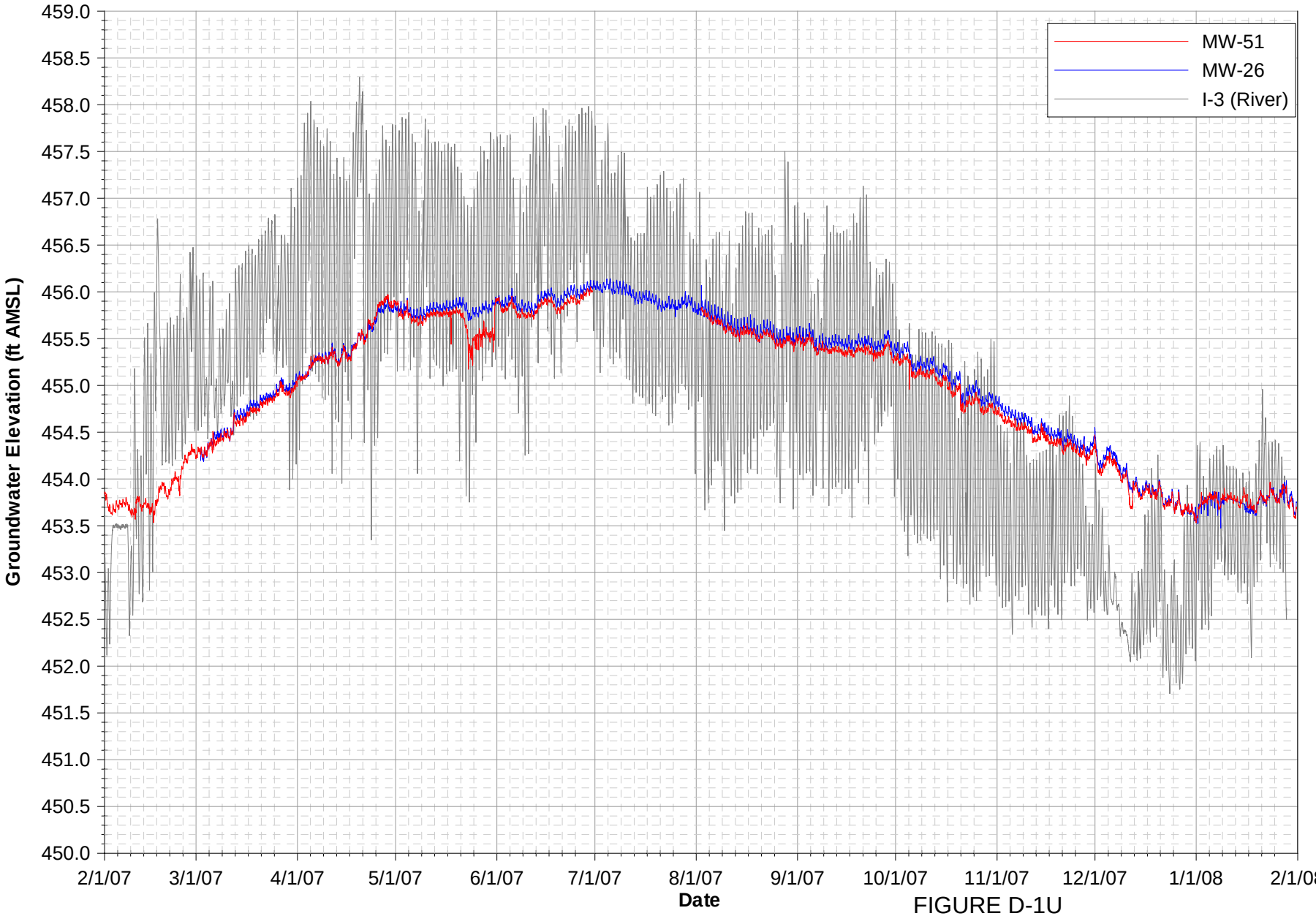


Notes:
Data subject to review.
MW-50-095 and MW-50-200 data unavailable 8/1/2007 through 9/7/2007

FIGURE D-1T
MW-50 CLUSTER HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

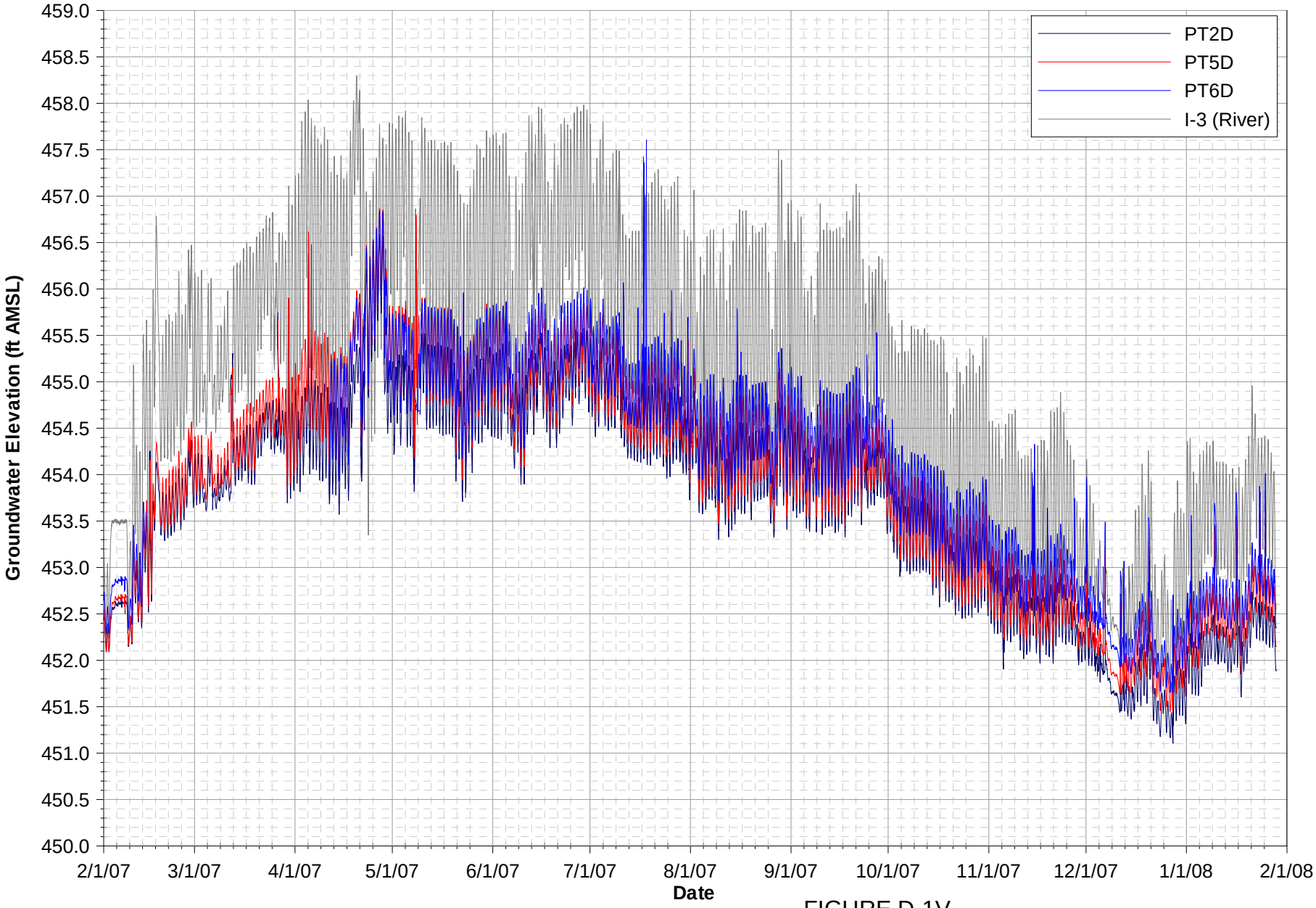
CH2MHILL



Notes:
Data subject to review.
MW-26 data unavailable 2/2/2007 through 3/2/2007.
MW-51 data unavailable 6/30/2007 through 8/2/2007.

FIGURE D-1U
MW-51& MW-26 HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL



Note: Data subject to review.
PT6D data unavailable 2/14/2007 thorugh 4/11/2007.

FIGURE D-1V
INSITU PILOT STUDY WELL HYDROGRAPHS
ANNUAL IM PERFORMANCE MONITORING REPORT
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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Appendix E
Summary Information for IM Performance Monitoring

TABLE E-1

Summary of IM Extraction and Performance Monitoring Wells, January 2008

Annual IM Performance Monitoring Report

PG&E Topock Compressor Station

Well ID	Description & Well Use in 2007 PMP	Date Incorporated in Hydraulic Monitoring Network	Well Elevation		TOP of Screen		BASE of Screen	
			Measure Pt. Elevation	Ground Elevation	Depth	Elevation	Depth	Elevation
			feet MSL	feet MSL	feet BGS	feet MSL	feet BGS	feet MSL
Wells in Upper Interval								
MW-10	Interior well for upgradient mapping	Jan-04	530.65	529	74	456	94	436
MW-19	Monitoring well for gradient mapping	Mar-04	499.92	499	46	453	66	433
MW-20-70	Monitoring well for gradient mapping	Feb-04	500.15	499	50	449	70	429
MW-22	very shallow well - not used for grad. mapping	Apr-05	460.72	458	6	453	11	447
MW-25	Monitoring well for gradient mapping	Mar-04	542.90	541	85	457	105	437
MW-26	Monitoring well for gradient mapping	Mar-04	502.22	503	52	451	72	431
MW-27-20	Monitoring well for gradient mapping	Apr-04	460.56	459	7	452	17	442
MW-28-25	Monitoring well for gradient mapping	Feb-04	466.85	465	13	452	23	442
MW-29	well in floodplain silt - not used for gradient mapping	Feb-04	485.21	483	30	454	40	444
MW-30-30	saline well - not used for grad. mapping	Jan-04	468.12	466	12	454	32	434
MW-31-60	Monitoring well for gradient mapping	Feb-04	496.81	495	42	454	62	434
MW-32-20	Monitoring well for gradient mapping	Mar-04	461.51	459	10	449	20	439
MW-32-35	Redundant well with MW-32-20 (not used)	Mar-04	461.63	459	28	432	35	424
MW-33-40	Monitoring well for gradient mapping	Mar-04	487.41	485	30	455	40	445
MW-35-60	Monitoring well for gradient mapping	Apr-04	484.19	481	37	444	57	424
MW-36-20	Monitoring well for gradient mapping	Jun-04	469.55	467	10	457	20	447
MW-36-40	Monitoring well for gradient mapping	Jun-04	469.83	467	30	437	40	427
MW-42-30	Monitoring well for gradient mapping	Feb-05	463.91	461	10	451	30	431
MW-43-25	Monitoring well for gradient mapping	Mar-05	462.54	460	15	445	25	435
MW-47-55	Monitoring well for gradient mapping	Apr-06	483.87	483	45	438	55	428
Wells in Middle Interval								
MW-20-100	Monitoring well for gradient mapping	Feb-04	500.58	499	90	410	100	400
MW-27-60	Monitoring well for gradient mapping	Feb-05	461.38	458	47	411	57	401
MW-30-50	Monitoring well for gradient mapping	Jan-04	468.81	466	41	426	51	416
MW-33-90	Monitoring well for gradient mapping	Mar-04	487.57	485	67	418	87	398
MW-34-55	Monitoring well for gradient mapping	Jan-04	460.88	459	45	414	55	404
MW-36-50	Monitoring well for gradient mapping	Jun-04	469.82	467	46	421	51	416
MW-36-70	Monitoring well for gradient mapping	Jun-04	469.55	467	60	407	70	397
MW-39-40	Monitoring well for gradient mapping	Apr-04	467.98	465	30	435	40	425
MW-39-50	Monitoring well for gradient mapping	Apr-04	468.43	465	47	418	52	413
MW-39-60	Monitoring well for gradient mapping	Apr-04	468.21	465	49	416	59	406
MW-39-70	Monitoring well for gradient mapping	Apr-04	467.98	465	60	405	70	395
MW-42-55	Redundant well with MW-42-65 (not used)	Feb-05	463.87	461	43	418	53	408
MW-42-65	Monitoring well for gradient mapping	Feb-05	463.37	461	56	405	66	395
MW-44-70	Monitoring well for gradient mapping	Apr-06	471.88	471	61	410	71	400
MW-50-95	Monitoring well for gradient mapping (not used)	May-06	496.55	495	85	410	95	400
MW-51	Monitoring well for gradient mapping	May-06	501.56	502	97	405	112	390
TW-2S	Standby Extraction Well (MW-20 bench)	Apr-04	499.95	497	43	454	93	404

TABLE E-1

Summary of IM Extraction and Performance Monitoring Wells, January 2008

Annual IM Performance Monitoring Report

PG&E Topock Compressor Station

Well ID	Description & Well Use in 2007 PMP	Date Incorporated in Hydraulic Monitoring Network	Well Elevation		TOP of Screen		BASE of Screen	
			Measure Pt. Elevation	Ground Elevation	Depth	Elevation	Depth	Elevation
			feet MSL	feet MSL	feet BGS	feet MSL	feet BGS	feet MSL
Wells in Lower Interval-1								
MW-27-85	Current Gradient Control Well	Feb-05	460.99	458	78	380	88	370
MW-28-90	Monitoring well for gradient mapping	Jun-04	467.86	465	70	395	90	375
MW-34-80	Key monitoring well for gradient mapping	Jan-04	460.99	459	73	386	83	376
MW-36-90	Monitoring well for gradient mapping	Jun-04	469.83	467	80	387	90	377
MW-39-80	Monitoring well for gradient mapping	Apr-04	468.43	465	70	395	80	385
MW-43-75	Redundant well with MW-43-90 (not used)	Mar-05	462.71	460	65	395	75	385
MW-43-90	Monitoring well for gradient mapping	Mar-05	462.76	460	80	380	90	370
MW-45-95	Current Gradient Control Well	Apr-06	470.03	467	83	384	93	374
PE-01	Active Extraction Well (Floodplain)	May-05	469.65	467	79	388	89	378
PT-2D	IS pilot test well - used for grad. mapping	Jun-06	473.52	472	95	377	105	367
PT-5D	IS pilot test well - used for grad. mapping	Jun-06	473.63	471	95	376	105	366
PT-6D	IS pilot test well - used for grad. mapping	Jun-06	476.01	474	95	379	105	369
Wells in Lower Interval-2								
MW-20-130	Key monitoring well for gradient mapping	Feb-04	500.66	499	121	378	131	368
MW-31-135	Current Gradient Control Well	Apr-05	498.40	495	113	382	133	362
MW-33-150	Current Gradient Control Well	Mar-05	487.77	485	132	353	152	333
MW-34-100	Current Gradient Control Well	Feb-05	460.97	459	90	369	100	359
MW-35-135	Monitoring well for gradient mapping	Apr-04	484.07	481	117	364	137	344
MW-36-100	Monitoring well for gradient mapping	May-04	469.82	467	88	379	98	369
MW-39-100	Monitoring well for gradient mapping	Apr-04	468.21	465	80	385	100	365
MW-44-115	Key monitoring well for gradient mapping	Apr-06	471.99	471	105	366	115	356
MW-44-125	Redundant well with MW-44-115 (not used)	Apr-06	471.99	471	114	357	124	347
MW-47-115	Monitoring well for gradient mapping	Apr-06	484.06	483	105	378	115	368
TW-2D	Standby Extraction Well (MW-20 bench)	Apr-04	500.38	497	113	384	148	349
TW-3D	Active Extraction Well (MW-20 bench)	Nov-05	498.09	497	111	386	156	341
TW-05	Hydraulic test well (40-foot screen)	May-06	496.30	497	110	387	150	347
MW-49-135	Monitoring well for gradient mapping	May-06	483.97	483	125	358	135	348
Wells in Lower Interval-3								
MW-33-210	Deep well - not used for gradient mapping	Mar-05	487.25	485	190	295	210	275
MW-46-175	Deep well - not used for gradient mapping	Apr-06	482.16	481	165	316	175	306
MW-46-205	Deep well - not used for gradient mapping	Apr-06	482.23	481	196	285	206	275
MW-50-200	Deep well - not used for gradient mapping	May-06	496.45	495	188	307	198	297

TABLE E-1

Summary of IM Extraction and Performance Monitoring Wells, January 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Description & Well Use in 2007 PMP	Date Incorporated in Hydraulic Monitoring Network	Well Elevation		TOP of Screen		BASE of Screen	
			Measure Pt. Elevation	Ground Elevation	Depth	Elevation	Depth	Elevation
			feet MSL	feet MSL	feet BGS	feet MSL	feet BGS	feet MSL
Wells in Lower Interval-4								
MW-49-275	Deep well - not used for gradient mapping	May-06	483.97	483	265	218	275	208
MW-49-365	Deep well - not used for gradient mapping	May-06	483.97	483	356	127	366	117
TW-04	Hydraulic test well (40-foot screen)	Apr-06	484.11	483	210	273	250	233

NOTES:

1. MSL = mean sea level, bgs = below ground surface, IS = Floodplain In-situ pilot test
2. Alluvial Aquifer elevation intervals in feet above mean sea level (MSL):
   Upper Interval (Upper) = water table (ave. 455' MSL) to 425', Mid-Depth Interval (Middle) = 425-395, Lower Interval-1 (Lower-1) = 395-37(
   Lower Interval-2 (Lower-2) = 370-330, Lower Interval-3 (Lower-3) = 330-250, and Lower Interval-4 (Lower-4) = below 250' MS
   See Figure E-1 for graphical presentation of well screen elevations
3. Ground surface elevations and all well and screen depths and elevations rounded to whole-foot values.

TABLE E-2

Chemical Sampling Program for IM Extraction and Monitoring Wells, February 2008

Annual IM Performance Monitoring Report

PG&E Topock Compressor Station

Well ID	Current Sampling Frequency[1]	Hexavalent Chromium and Total Chromium	Water Quality Field Parameters[2]	IM Chemical Performance Parameters[3]
Shallow Wells				
MW-12	Quarterly	X	X	
MW-19	Annually	X	X	
MW-20-70	Semiannually	X	X	X
MW-21	Quarterly	X	X	
MW-22	Semiannually	X	X	
MW-24A	Semiannually	X	X	
MW-25	Annually	X	X	X
MW-26	Semiannually	X	X	X
MW-27-20	Annually	X	X	X
MW-28-25	Annually	X	X	X
MW-29	Semiannually	X	X	
MW-30-30	Biennially	X	X	X
MW-31-60	Annually	X	X	X
MW-32-20	Semiannually	X	X	X
MW-32-35	Annually	X	X	X
MW-33-40	Quarterly	X	X	
MW-35-60	Semiannually	X	X	
MW-36-20	Biennially	X	X	
MW-39-40	Biennially	X	X	
MW-42-30	Biennially	X	X	
MW-43-25	Annually	X	X	
MW-47-55	Quarterly	X	X	
TW-2S	Annually	X	X	
Mid-depth wells				
MW-20-100	Semiannually	X	X	X
MW-27-60	Annually	X	X	
MW-30-50	Not Sampled	X	X	
MW-33-90	Quarterly	X	X	
MW-34-55	Annually	X	X	X
MW-36-50	Biennially	X	X	
MW-36-70	Annually	X	X	
MW-39-50	Annually	X	X	
MW-39-60	Annually	X	X	
MW-39-70	Annually	X	X	
MW-42-55	Quarterly	X	X	
MW-42-65	Quarterly	X	X	
MW-44-70	Quarterly	X	X	
MW-50-95	Quarterly	X	X	
MW-51	Semiannually	X	X	
MW-52S	Quarterly	X	X	

TABLE E-2

Chemical Sampling Program for IM Extraction and Monitoring Wells, February 2008

Annual IM Performance Monitoring Report

PG&E Topock Compressor Station

Well ID	Current Sampling Frequency[1]	Hexavalent Chromium and Total Chromium	Water Quality Field Parameters[2]	IM Chemical Performance Parameters[3]
Deep wells				
MW-20-130	Semiannually	X	X	X
MW-24B	Semiannually	X	X	
MW-27-85	Quarterly	X	X	
MW-28-90	Quarterly	X	X	
MW-33-150	Quarterly	X	X	
MW-33-210	Quarterly	X	X	
MW-34-80	Monthly	X	X	X
MW-34-100	Monthly	X	X	
MW-35-135	Annually	X	X	
MW-36-90	Semiannually	X	X	
MW-36-100	Semiannually	X	X	
MW-39-80	Semiannually	X	X	
MW-43-75	Annually	X	X	
MW-43-90	Annually	X	X	
MW-44-115	Monthly	X	X	
MW-44-125	Monthly	X	X	
MW-46-175	Monthly	X	X	
MW-46-205	Quarterly	X	X	
MW-47-115	Quarterly	X	X	
MW-49-135	Semiannually	X	X	
MW-49-275	Semiannually	X	X	
MW-49-365	Semiannually	X	X	
MW-50-200	Quarterly	X	X	
MW-52D	Quarterly	X	X	
MW-52M	Quarterly	X	X	
MW-53D	Quarterly	X	X	
MW-53M	Quarterly	X	X	
PE-1	Monthly	X	X	
TW-2D	Annually	X	X	
TW-3D	Monthly	X	X	

Notes:

[1] Sampling frequencies listed are current as of February 2008, and reflect updated sampling frequencies approved by DTSC (2007b).

[2] Water quality field parameters include: ORP, specific conductance, pH, and temperature.

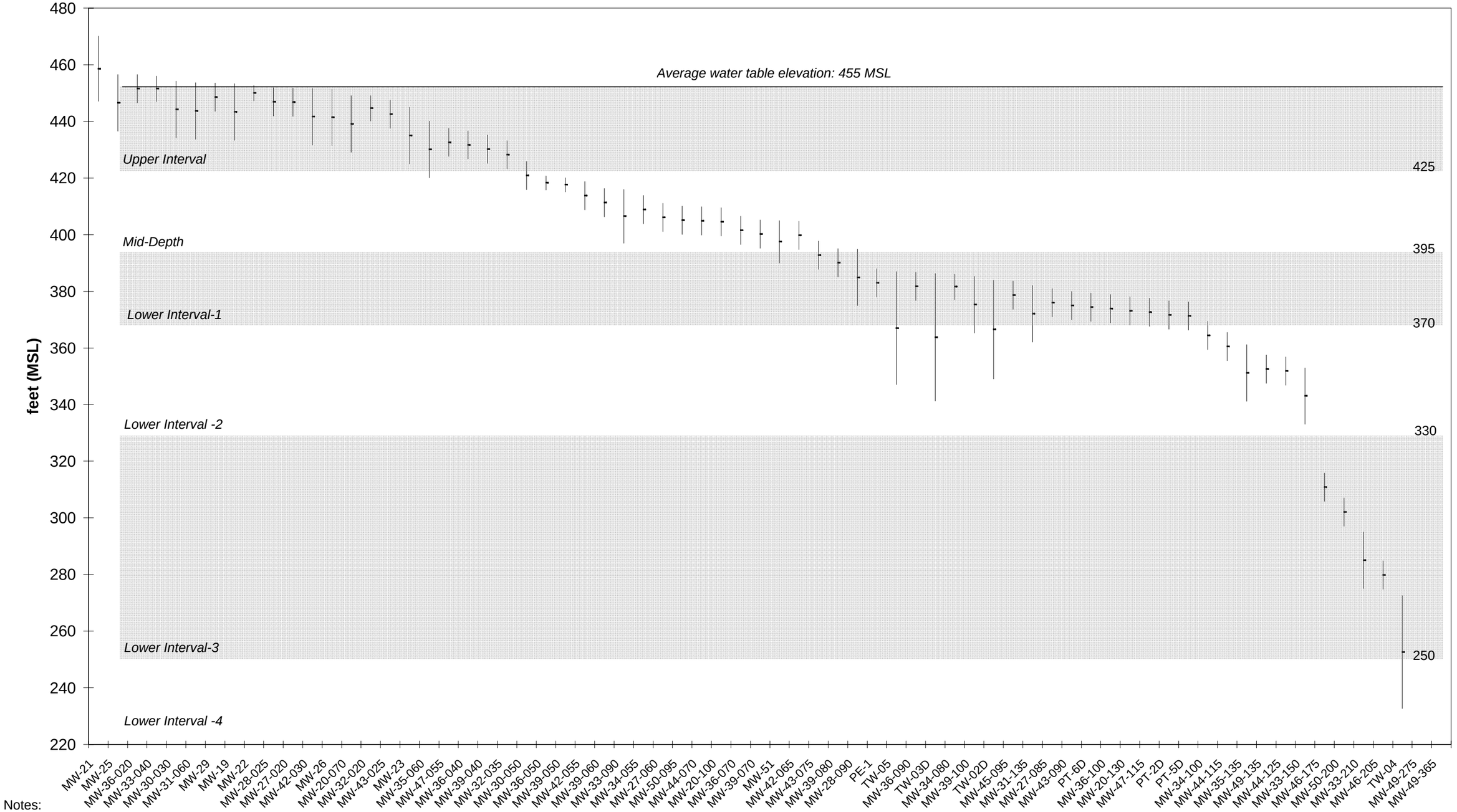
[3] Chemical performance parameters include: TDS, chloride, sulfate, nitrate, bromide, calcium, potassium, magnesium, sodium, boron, alkalinity, deuterium, and oxygen-18.

Additional notes:

Active extraction wells TW-3D and PE-1 are sampled for Cr(VI), Cr(T), and TDS monthly for IM operations.

This table indicates sampling included in the scheduled chemical performance monitoring program only.

FIGURE E-1
Well Screen Elevations for Groundwater Monitoring Wells and Extraction Wells in the PMP area.
Annual IM Performance Monitoring Report
PGE Topock Compressor Station



Notes:
MSL = Mean Sea Level
Well screen elevations in feet above mean sea level (MSL)
Wells MW-49-275 and MW-49-365 are screened below 220 ft MSL
FigE-1_WellScreenElevPlot.xls, All Wells Chart

Appendix F
Supporting Submittals for Recommended Modifications to IM Performance Monitoring Program

Attachment F1

ATTACHMENT F1
Proposed Modifications to PMP Hydraulic Data Collection for 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Proposed Transducer Data Collection	Rationale / Remarks
Shallow Wells (Upper Depth)		
MW-10	**None**	Interior well not needed to demonstrate landward gradients for PMP
MW-19	**None**	Interior well not needed to demonstrate landward gradients for PMP
MW-20-70	monthly averaging	
MW-22	**None**	Very shallow well outside of plume; not needed for PMP gradient contouring
MW-27-20	monthly averaging	
MW-25	monthly averaging	
MW-26	monthly averaging	
MW-28-25	monthly averaging	
MW-29	**None**	Well completion in floodplain silt; not representative or used for UA contouring
MW-30-30	**None**	Well completion in high saline zone; not used for UA contouring
MW-31-60	monthly averaging	
MW-32-20	monthly averaging	
MW-32-35	**None**	Screened in both UA and MA intervals; redundant well with MW-32-20
MW-33-40	monthly averaging	
MW-35-60	monthly averaging	
MW-36-20	monthly averaging	
MW-36-40	monthly averaging	
MW-39-40	monthly averaging	
MW-42-30	monthly averaging	
MW-43-25	monthly averaging	
MW-47-55	monthly averaging	
Intermediate Wells (Middle Depth)		
MW-20-100	monthly averaging	
MW-27-60	monthly averaging	
MW-30-50	monthly averaging	
MW-33-90	monthly averaging	
MW-34-55	monthly averaging	
MW-36-50	monthly averaging	
MW-36-70	monthly averaging	
MW-39-50	monthly averaging	
MW-39-60	monthly averaging	
MW-39-70	monthly averaging	
MW-42-30	monthly averaging	
MW-42-55	**None**	Redundant well with MW-42-65 (screen intervals are equivalent)
MW-42-65	monthly averaging	
MW-44-70	monthly averaging	
MW-50-95	**None**	Data does not fit Mid-depth contour maps
MW-51	monthly averaging	

ATTACHMENT F1
Proposed Modifications to PMP Hydraulic Data Collection for 2008
Annual IM Performance Monitoring Report
PG&E Topock Compressor Station

Well ID	Proposed Transducer Data Collection	Rationale / Remarks
Deep Wells (Lower Depth)		
MW-20-130	monthly averaging	Gradient control well; monitors LA-2 interval. Will be backup gradient control well
MW-27-85	monthly averaging	New Gradient Control Well; monitors LA-1 interval
MW-28-90	monthly averaging	Monitors LA-1 interval
MW-31-135	monthly averaging	Gradient Control Well; monitors LA-2 interval. Will be backup gradient control well
MW-33-150	monthly averaging	Current Gradient Control Well; monitors LA-2 interval
MW-33-210	**None**	Monitors LA-3 interval; too deep for gradient contouring (LA control provided by MW-33-150)
MW-34-80	monthly averaging	Monitors LA-1 interval; key floodplain cluster and current Gradient Control Well
MW-34-100	monthly averaging	New Gradient Control Well; key floodplain cluster; monitors LA-2 interval.
MW-35-135	monthly averaging	Monitors LA-2 interval
MW-36-90	monthly averaging	Monitors LA-1 interval
MW-36-100	monthly averaging	Monitors LA-2 interval
MW-39-80	monthly averaging	Monitors LA-1 interval
MW-39-100	monthly averaging	Monitors LA-2 interval
MW-43-75	**None**	Redundant with MW-43-90; screened partially in both MA and LA intervals
MW-43-90	monthly averaging	Monitors LA-1 interval
MW-44-115	monthly averaging	Key floodplain well, monitors LA-2 interval
MW-44-125	monthly averaging	Monitors LA-2 interval
MW-45-95	monthly averaging	New Gradient Control Well at PE-1 pumping center; monitors LA-1 interval
MW-46-175	**None**	Monitors deeper portion of LA-3 interval; not used for LA gradient map
MW-46-205	**None**	Monitors deeper portion of LA-3 interval; not used for LA gradient map
MW-47-115	monthly averaging	Monitors LA-2 interval
MW-49-135	monthly averaging	Monitors LA-2 interval
MW-49-275	**None**	Monitors LA-4 interval; too deep for gradient contouring (LA control provided by MW-49-135)
MW-49-365	**None**	Monitors LA-4 interval; too deep for gradient contouring; very saline groundwater (LA control provided by MW-49-135)
MW-50-200	**None**	Monitors deeper portion of LA-3 interval; not used for LA gradient map
PT-2D	monthly averaging	In-Situ pilot well, needed for WDR & gradient evaluation; monitors LA-1 interval
PT-5D	monthly averaging	In-Situ pilot well, needed for WDR & gradient evaluation; monitors LA-1 interval
PT-6D	monthly averaging	In-Situ pilot well, needed for WDR & gradient evaluation; monitors LA-1 interval
Test Wells in Lower Depth Interval		
TW-2D	**None**	40-foot well screen (not comparable to other PMP wells); monitors LA-2 interval
TW-4	**None**	40-foot well screen (not comparable to other PMP wells); monitors LA-4 interval
TW-5	**None**	40-foot well screen (not comparable to other PMP wells); monitors LA-2 interval
	50	**Total Wells for Transducer Monitoring**

NOTES:

1. Alluvial Aquifer elevation intervals in feet above mean se level (MSL):
   UA = water table (ave. 455' MSL) to 425', MA = 425-395', LA-1 = 395-370', LA-2 = 370-330', LA-3 = 330-250', and LA-4 below 250' MSL.
2. The last field in monitoring well ID indicates the approximate base depth of well screen (feet below ground surface)
3. See May 2007 gradient maps (Attachment F1) for well locations.

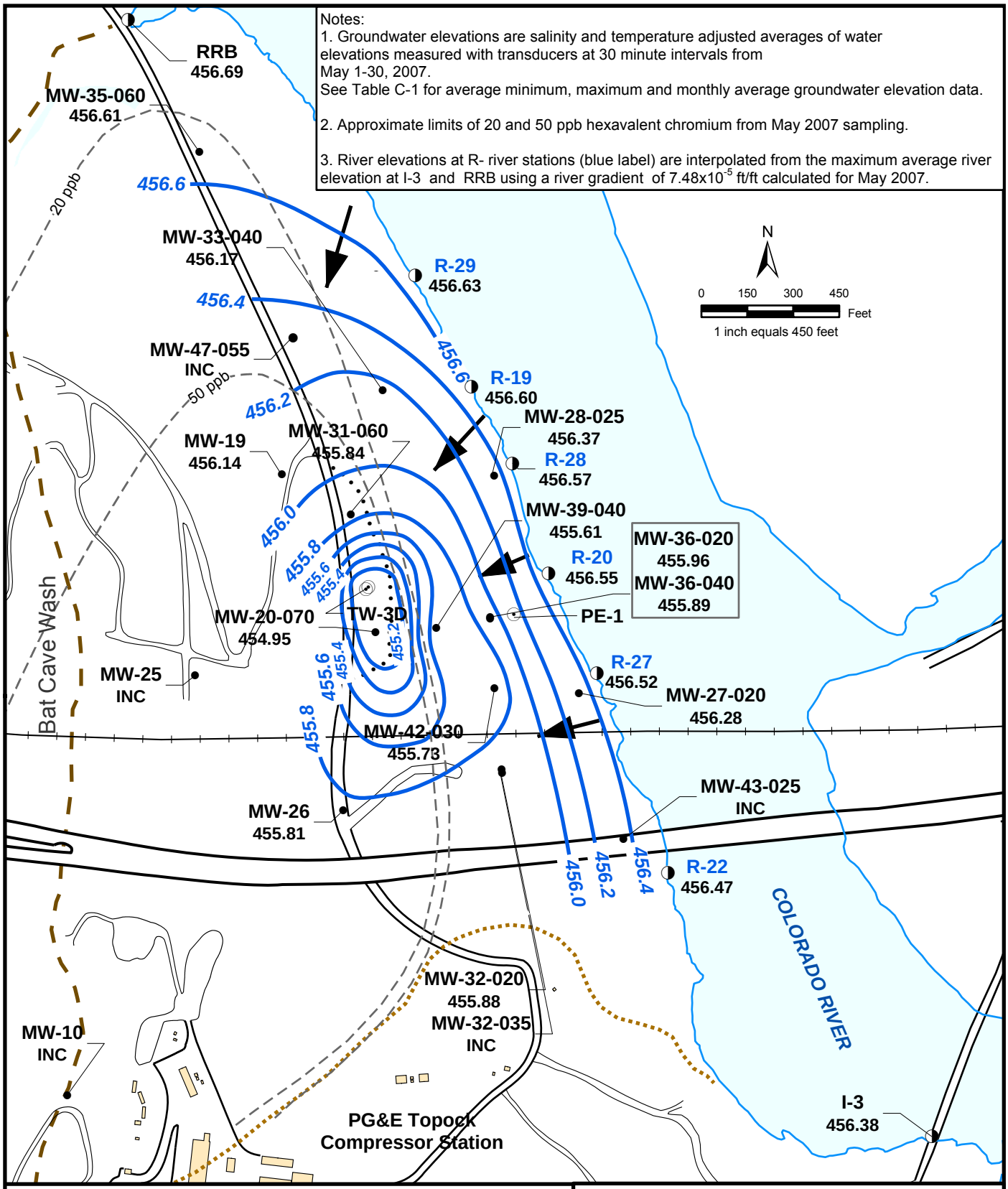


FIGURE F1-A
AVERAGE GROUNDWATER ELEVATIONS SHALLOW WELLS AND RIVER ELEVATIONS, MAY 2007

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

CH2MHILL

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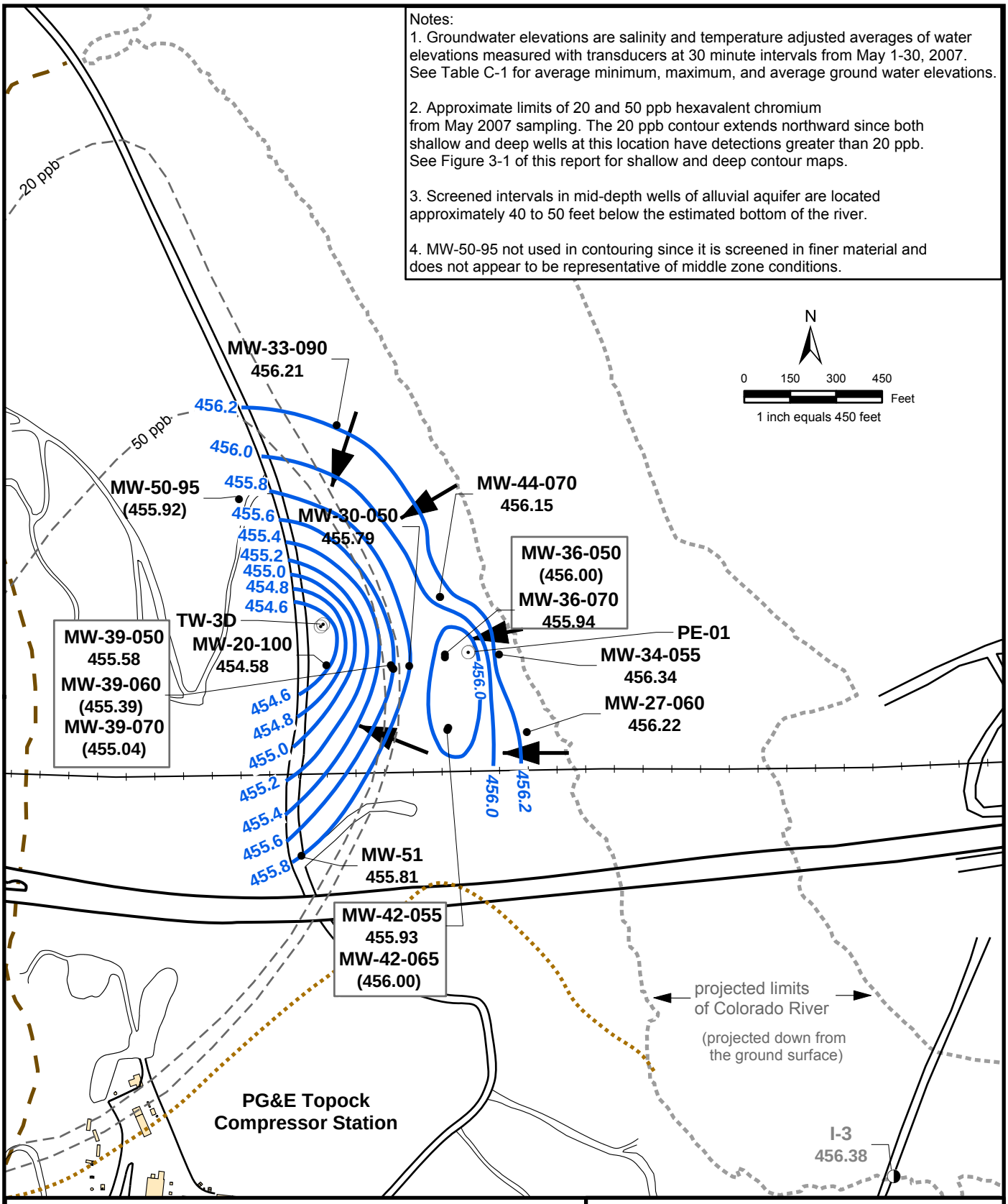

FIGURE F1-B
AVERAGE GROUNDWATER ELEVATIONS MID-DEPTH WELLS MAY 2007

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

CH2MHILL

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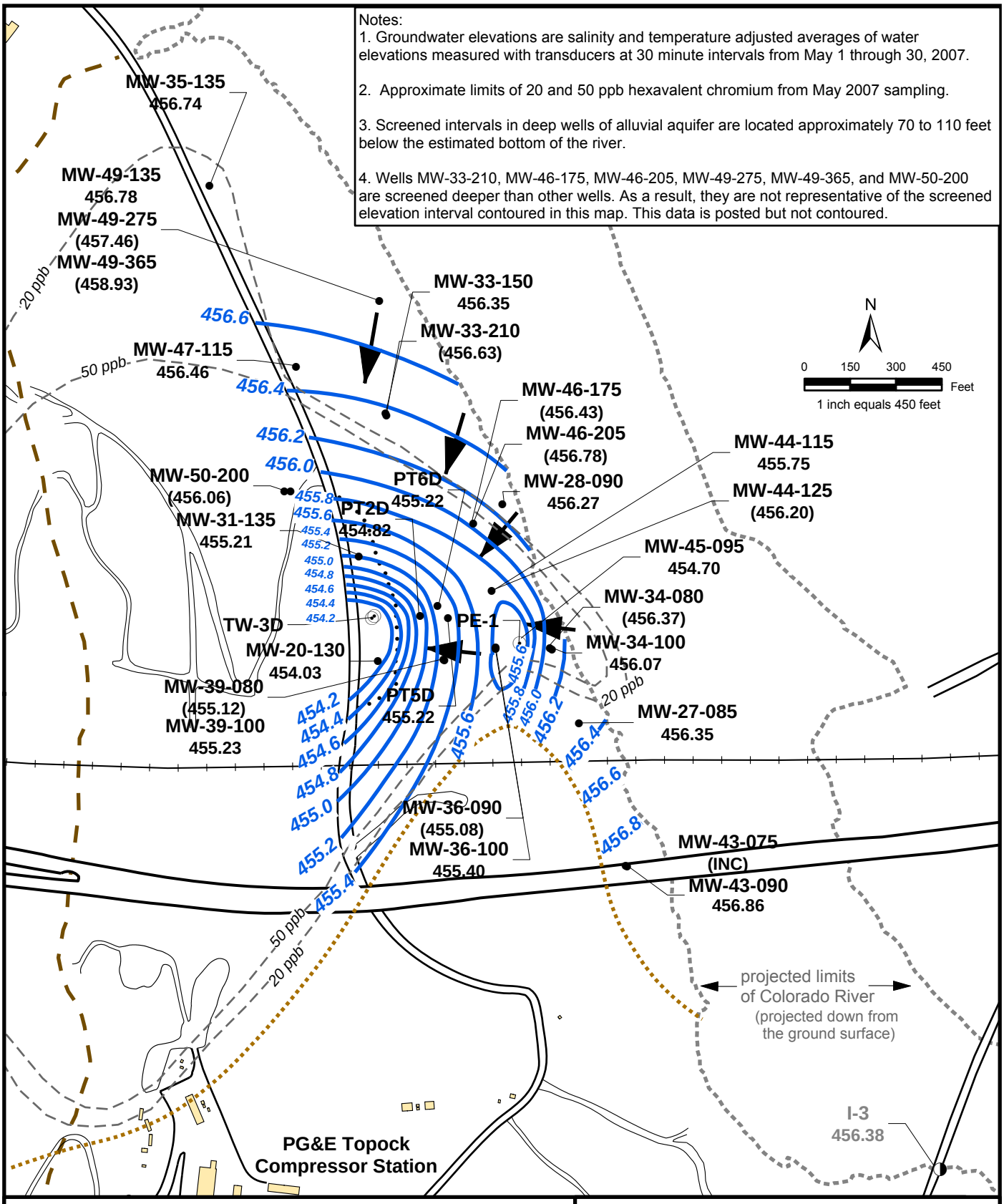

FIGURE F1-C
AVERAGE GROUNDWATER ELEVATIONS DEEP WELLS MAY 2007

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

CH2MHILL

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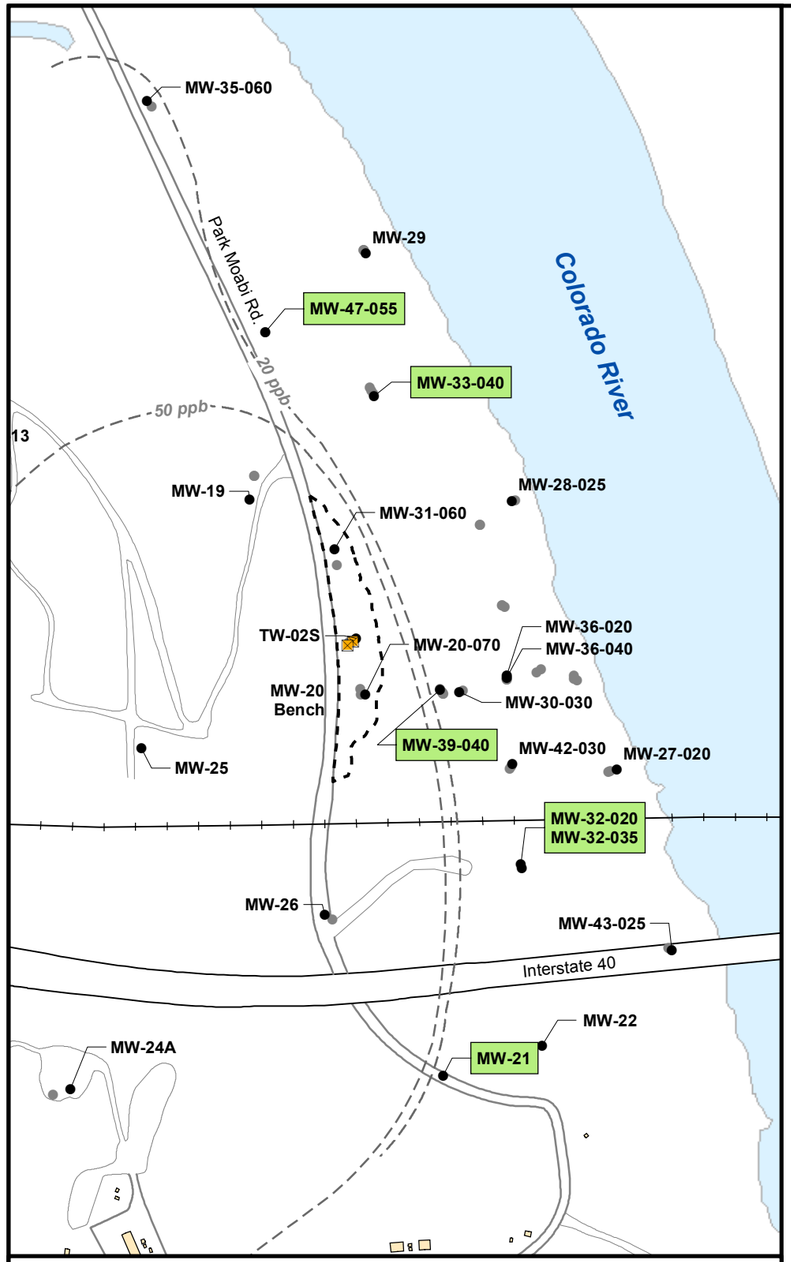
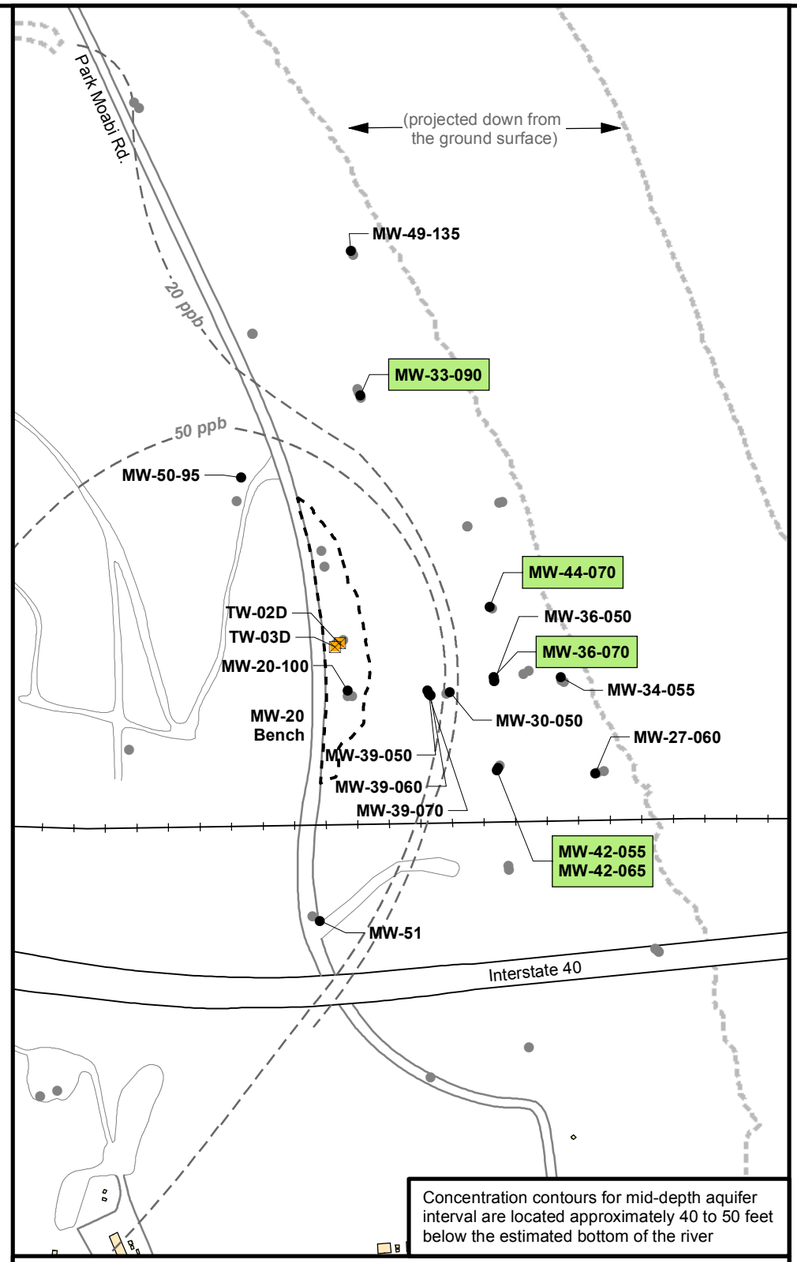
Attachment F2

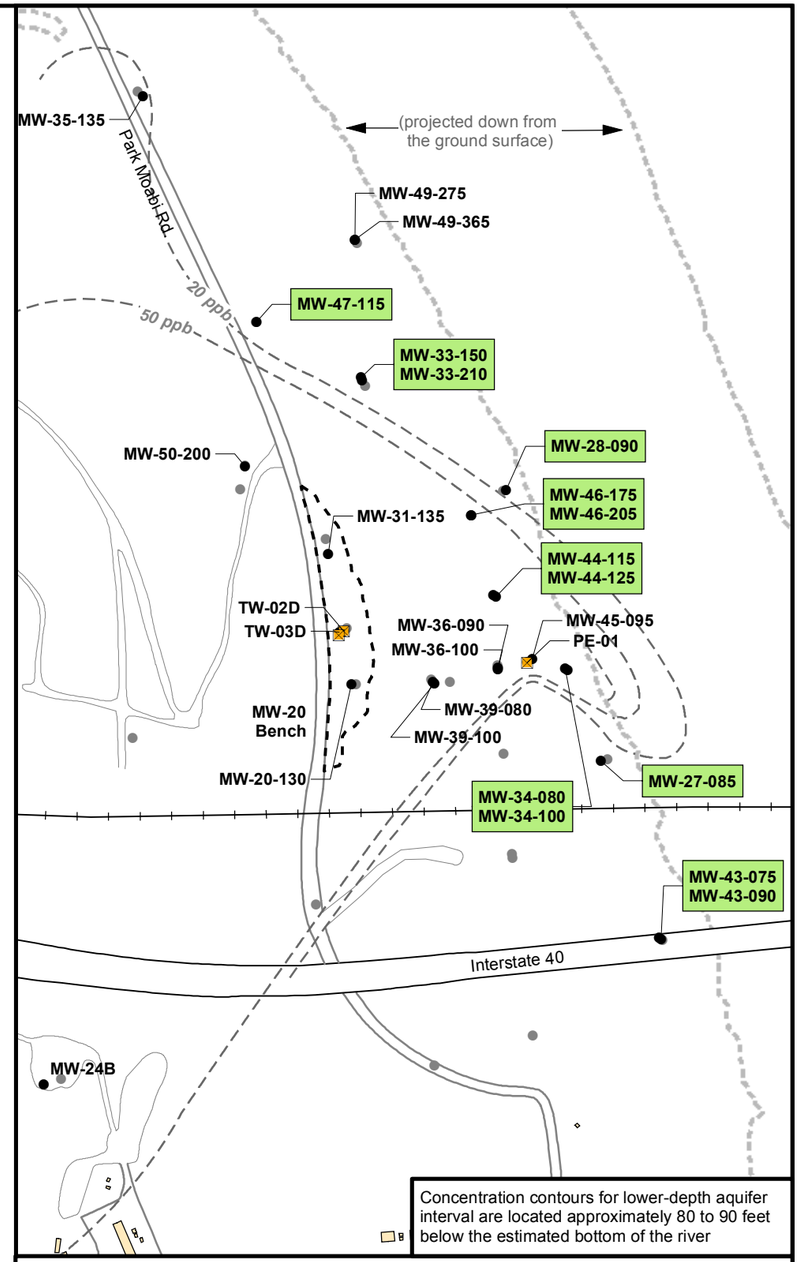
ATTACHMENT F2



Shallow Wells (Upper Depth Interval)



Intermediate Wells (Middle Depth Interval)



Deep Wells (Lower Depth Interval)

LEGEND

- Groundwater Monitoring Well
- Interim Measures (IM) Extraction Well
- 50 — Inferred hexavalent chromium Cr(VI) concentration contour (ug/L or ppb) based on April-May 2006 sampling results

IM PERFORMANCE MONITORING CONTINGENCY PLAN - AUGUST 2006

MW-33-40 Selected Well for Contingency Plan Monitoring

Refer to Table 1 for Cr(VI) trigger concentrations for implementing Contingency Plan (Figure 2).

Revision - 1
Update August 2006

N

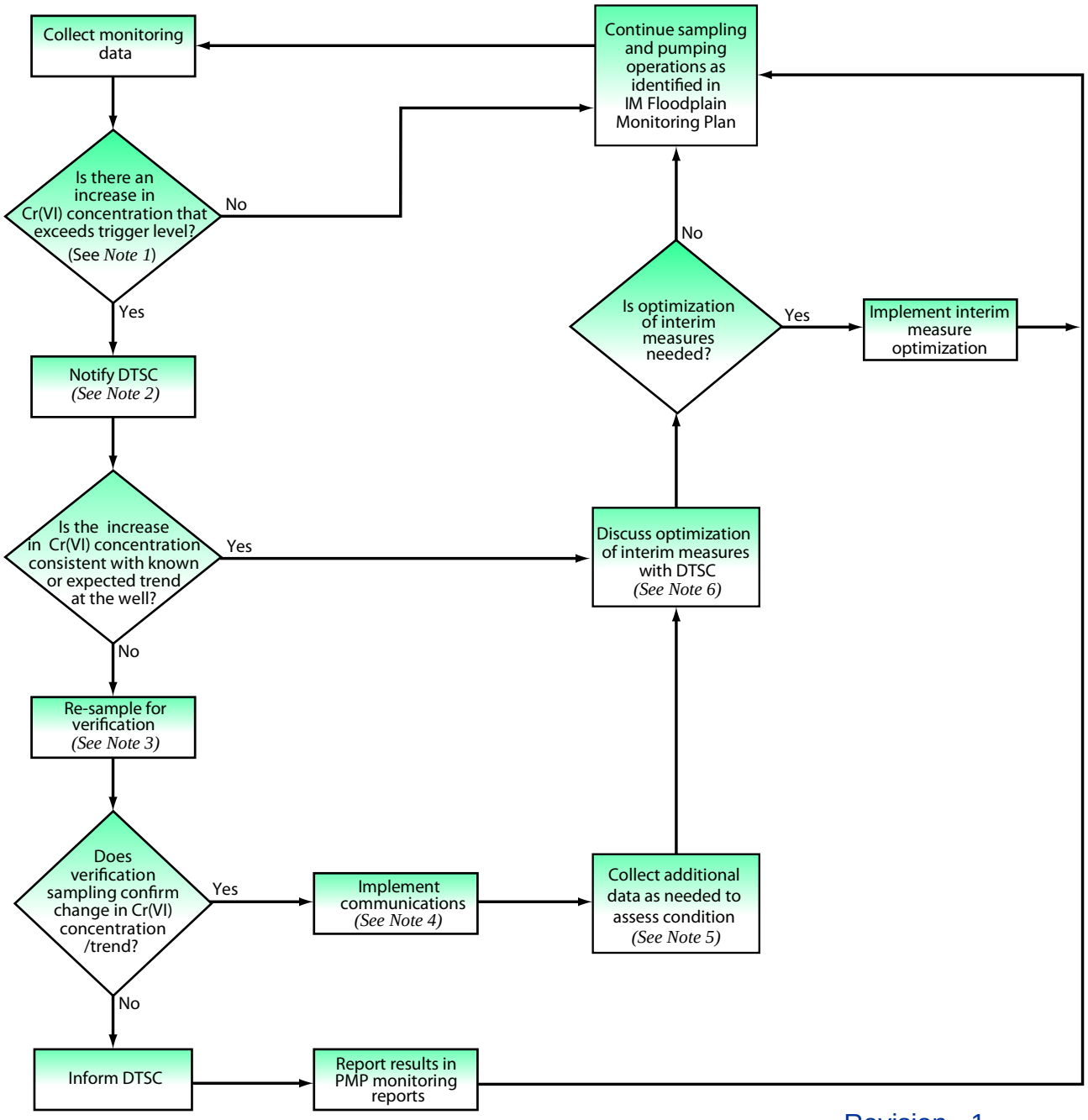
0 400 800 Feet

1 inch equals 400 feet

FIGURE 1
CONTINGENCY ASSESSMENT WELLS FOR PERFORMANCE MONITORING

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

CH2MHILL



Revision - 1
Update August 2006

NOTES:

1. The wells subject to this contingency plan are defined in Table 1 and shown on Figure 1. Trigger concentrations for implementing Contingency Plan defined in Table 1 for each well.
2. Notification will be provided to DTSC within 48 hours following receipt of validated laboratory results.
3. For Lower Depth Interval wells, verification sampling to consist of re-sampling the well on a bi- weekly frequency for two events, with results reported to DTSC within 8 days of sample collection for each event. For wells in the Upper and Middle Intervals, verification sampling to consist of monthly sampling for two events, with results reported to DTSC within 20 days of sample collection for each event.
4. DTSC to notify Consultative Workgroup. For Lower Depth Interval Wells, PG&E to notify key stakeholders.
5. Data needed to assess trend or condition may include increased sampling frequency at triggered well, increased sampling at adjacent wells (i.e., lateral, vertical), or collection of additional data to assess change in geochemical conditions.
6. Assess the gradient direction and extent of capture zone near the triggered well and optimize Interim Measures accordingly. Optimization may include change to pumping rates or extraction well locations to ensure capture, or other measures such as enhanced reductive treatment in affected area.

FIGURE 2
CONTINGENCY PLAN
INTERIM MEASURES PERFORMANCE MONITORING PROGRAM,
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

ES042006016RDD_01 (8/15/06)

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ATTACHMENT F2

Update Compiled 1/14/2008

TABLE 1
Assessment Monitoring Wells and Trigger Levels for Performance Monitoring
Updates to the Interim Measures Performance Monitoring Contingency Plan developed August 2006
PG&E Topock Compressor Station, Needles, California

			Trigger Level [3] for Implementing IM Contingency Plan	
Assessment Monitoring Well [1]	**Well Location Relative to Cr(VI) Plume**	**Cr(VI) Concentrations [2] Jan. - June 2007**	**Statistical Update prepared July 2007 (data through June 2007)**	**Statistical Update prepared January 2008 (data through Dec. 2007)**
Shallow Wells (Upper Interval)				
MW-21	outside plume	ND (1)	IM target concentration	*no update*
MW-32-20	outside plume	ND (2)	IM target concentration	*no update*
MW-32-35	outside plume	ND (1)	IM target concentration	*no update*
MW-33-40	outside plume	ND (0.2)	IM target concentration	*no update*
MW-39-40	outside (above) plume	ND (1)	IM target concentration	*no update*
MW-47-55	plume margin	30.3 - 54.6	133 µg/L* (statistical CL)	250 µg/L (statistical CL)
Intermediate Wells (Mid-Depth)				
MW-33-90	plume edge	17.1 - 18.8	23 µg/L (statistical CL)	*no update*
MW-36-70	outside (above) plume	ND (0.2)	IM target concentration	*no update*
MW-42-55	outside plume	ND (1)	IM target concentration	*no update*
MW-42-65	outside plume	ND (1)	IM target concentration	*no update*
MW-44-70	outside (above) plume	ND (1)	IM target concentration	*no update*
Deep Wells (Lower Interval)				
MW-27-85	outside plume	ND (1)	IM target concentration	*no update*
MW-28-90	outside plume	ND (1)	IM target concentration	*no update*
MW-33-150	outside (below) plume	6.8 - 6.9	IM target concentration	*no update*
MW-33-210	outside (below) plume	9.2 - 11.2	IM target concentration	*no update*
MW-34-80	outside (above) plume	ND (1)	IM target concentration	*no update*
MW-34-100	easternmost well in plume	574 - 832	1,246 µg/L (statistical CL)	*no update*
MW-43-75	outside plume	ND (1)	IM target concentration	*no update*
MW-43-90	outside plume	ND (1)	IM target concentration	*no update*
MW-44-115	inside plume	1,030 - 1,210	2,103 µg/L (statistical CL)	*no update*
MW-44-125	inside plume	213 - 300	707 µg/L (statistical CL)	*no update*
MW-46-175	within plume, central floodplain	86.4 - 153	357 µg/L (statistical CL)	*no update*
MW-46-205	outside (below) plume	3.9 - 4.0	IM target concentration	*no update*
MW-47-115	plume edge	10.6 - 14.1	31 µg/L* (statistical CL)	31 µg/L (statistical CL)

Notes:

1. See Figure 1 for location of monitoring wells in Contingency Plan for Interim Measures performance monitoring.
2. Hexavalent chromium [Cr(VI)] results are range of concentrations, in micrograms per liter (µg/L), detected in January-June 2007.
   ND (1) = not detected at listed reporting limit.
3. The Cr(VI) sampling **Trigger Levels** for implementing the IM Contingency Plan (provided as Figure 2):
   a) ND wells and wells with Cr(VI) detections <20 µg/L: Trigger level = **target concentration** for IM hydraulic containment (20 µg/L).
   b) Wells with Cr(VI) detections >20 µg/L: Trigger level = **Shewhart Control Limit (CL)** calculated from 2 years data (Jun-05 to Jun-07).
   * Trigger level is calculated from 6 sampling events.

The Contingency Plan trigger levels updated with 8 sampling events (data through December 2007) are highlighted in blue.

Contingency Plan trigger levels or evaluation methods may be modified pending consultation with DTSC.

Attachment F3

Revision: 12/19/2007

ATTACHMENT F3

Proposed Modifications to IM Chemical Performance Sampling Frequency
Interim Measures Performance Monitoring Program
PG&E Topock Compressor Station

Sampling Location	Approved Updated Site COPC Sampling Frequency [1] (October 2007)	Proposed Chemical Performance [2] Sampling Frequency	Rationale for Proposed Modifications
MW-20-70	Semiannual	**Annual**	Maintain water quality trend at MW-20 bench pumping center (shallow-depth groundwater)
MW-20-100	Semiannual	**Annual**	Maintain water quality trend at MW-20 bench pumping center (mid-depth groundwater)
MW-20-130	Semiannual	**Annual**	Maintain water quality trend at MW-20 bench pumping center (deep groundwater)
MW-25	Annual	**Annual**	Well location for monitoring water quality upgradient of IM pumping
MW-26	Semiannual	*None*	Chemistry trend unchanged since IM pumping began; located on periphery of IM pumping
MW-27-20	Annual	*None*	Shallow groundwater chemistry trends associated with river stages are well established
MW-28-25	Annual	*None*	Shallow groundwater chemistry trends associated with river stages are well established
MW-30-30	Biennial	*None*	Shallow well completed in highly saline zone (not representative of floodplain groundwater)
MW-30-50	None	*None*	Chemistry trend well established and well not monitored per DTSC Oct. 2006 letter
MW-31-60	Annual	*None*	No significant changes observed at this shallow well; continued monitoring not warranted
MW-32-20	Semiannual	*None*	Shallow well yields water quality data redundant with deeper MW-32-35
MW-32-35	Annual	**Annual**	Continue monitoring the increasing TDS trend at this floodplain location produced by IM pumping
MW-34-55	Annual	**Annual**	Continue monitoring water quality data at mid-depth floodplain well near river
MW-34-80	Monthly	**Annual**	Continue monitoring water quality data at easternmost deep floodplain well near river
River R-28	Quarterly	**Annual**	Maintain river water quality data for evaluating IM pumping influence
River R-27	Quarterly	*None*	Two river samples are not necessary for comparison with monitoring wells

Notes:

[1] The groundater sampling frequencies for site COPCs (chromium, specific conductance, pH) were approved and updated by DTSC letter, September 28, 2007.

[2] IM chemical performance sampling includes monitoring stable isotope and general chemistry parameters (in addition to the site COPC sampling).
See PMR Appendix D for chemical performance monitoring data, March 2004 to April 2007, for the 14 selected wells and river locations.

In addition to chromium monitoring, the active IM extraction wells (TW-3D and PE-1) are sampled monthly for total dissolved solids (TDS).
No changes are proposed at this time for the TDS monitoring of the active extraction wells.

ATTACHMENT F3

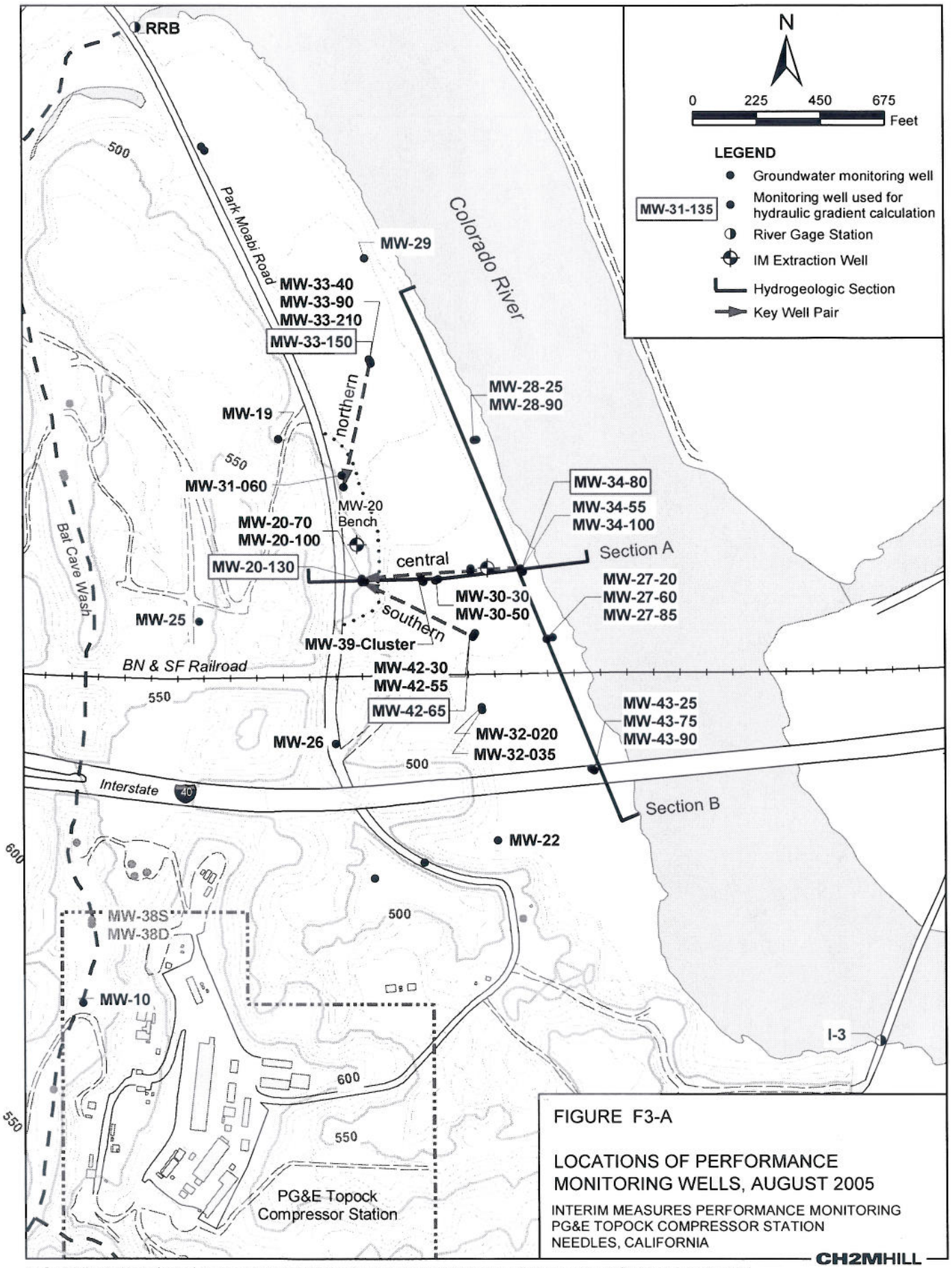

FIGURE F3-A

LOCATIONS OF PERFORMANCE MONITORING WELLS, AUGUST 2005

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

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