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October 15, 2008

Aaron Yue
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California Department of Toxic Substances Control
5796 Corporate Avenue
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Robert Perdue
Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Subject: Board Order R7-2006-0060, WDID No. 7B 36 2033 001 - Interim Measures Compliance Monitoring Program Groundwater Monitoring Report, Third Quarter 2008, PG&E Topock Compressor Station, Needles, California

Dear Mr. Yue and Mr. Perdue:

Enclosed is the *Groundwater Monitoring Report, Third Quarter 2008* for the Interim Measure Compliance Monitoring Program (CMP) at the Pacific Gas and Electric Company (PG&E) Topock Compressor Station. This monitoring report presents the results of the third quarter 2008 CMP groundwater monitoring event, and has been prepared in conformance with California Regional Water Quality Board (Water Board) Order No. R7-2006-0060, as well as with the Department of Toxic Substances Control (DTSC)'s July 15, 2005 letter approving the Compliance Monitoring Plan and June 9, 2006 letter modifying the reporting requirements.

On August 8, 2006, PG&E submitted a revised contingency plan flowchart for groundwater quality changes associated with the injection system. The contingency plan specifies the concentrations and values for hexavalent chromium (Cr[VI]), total chromium (Cr[T]), total dissolved solids (TDS), and pH to be used to determine if contingency plan actions were necessary based on sample results. The concentrations used to trigger the contingency plan are as follows: Cr(VI) greater than 32.6 micrograms per liter (µg/L), Cr(T) greater than 28.0 µg/L, TDS greater than 10,800 milligrams per liter, and pH outside of the range of 7.6 to 8.89. The following paragraph discusses third quarter 2008 data and associated contingency plan actions.

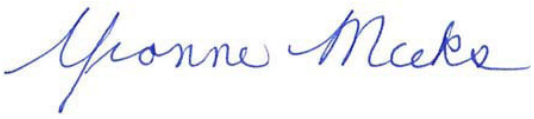
During the third quarter 2008 monitoring event, a sample from the well OW-2S (30.8 µg/L) exceeded the Cr(T) action level. A review of the water quality parameters indicative of treated groundwater injection (Cr(VI), TDS, sulfate, nitrate/nitrite, and fluoride) confirm that injected water has not yet reached OW-2S and that the concentration of Cr(T) is not related to injected water (which has significantly lower chromium concentrations), but instead is related to the natural variability within the shallower portions of the aquifer.

In a letter dated January 5, 2007, DTSC stated that it was not necessary to follow contingency plan requirements for Cr(VI) and Cr(T) with respect to OW-2S and OW-5S. The Colorado River Basin Water Board concurred with this decision in a letter dated March 2, 2007. As such, the contingency plan was not triggered due to the Cr(T) concentration detected in OW-2S during the third quarter 2008.

No other samples exceeded the action levels for Cr(VI), Cr(T), pH, or TDS during third quarter 2008 sampling. The next CMP sampling event is scheduled to occur in November 2008.

Please contact me at (805) 546-5243 if you have any questions on the CMP.

Sincerely,



Yvonne Meeks
Topock Remediation Project Manager

Cc: Cliff Raley, Water Board
Abdi Haile, Water Board
Christopher Guerre, DTSC

Enclosure

Final Report

Compliance Monitoring Program Groundwater Monitoring Report, Third Quarter 2008

Interim Measure No. 3
PG&E Topock Compressor Station
Needles, California
Board Order R7-2006-0060
WDID No. 7B 36 2033 001

Prepared for

California Department of Toxic Substances Control and the California Regional Water Quality Control Board, Colorado River Basin Region

On behalf of

Pacific Gas and Electric Company

October 15, 2008

CH2MHILL

155 Grand Avenue, Suite 1000
Oakland, CA 94612

Compliance Monitoring Program
Groundwater Monitoring Report
Third Quarter 2008

PG&E Topock Compressor Station
Needles, California
Board Order R7-2006-0060, WDID No. 7B 36 2033 001

Prepared for

California Department of Toxic Substance Control and the California Regional Water Quality Control Board Colorado River Basin Region

on Behalf of

Pacific Gas and Electric Company

October 15, 2008

This report was prepared under the supervision of a California Professional Geologist

Serena Lee, P.G. No. 8259
Associate Hydrogeologist

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Acronyms and Abbreviations

µg/L	micrograms per liter
CMP	Compliance Monitoring Program
Cr(T)	total dissolved chromium
Cr(VI)	hexavalent chromium
CW	Compliance well
DTSC	California Department of Toxic Substances Control
IM	Interim Measure
IM No. 3	Interim Measure No. 3
IW	injection well
mg/L	milligrams per liter
MRP	Monitoring and Reporting Program
PG&E	Pacific Gas and Electric Company
OW	observation well
QAPP	Quality Assurance Project Plan
TDS	total dissolved solids
Water Board	California Regional Water Quality Control Board, Colorado River Basin Region
WDR	Waste Discharge Requirements
WQO	water quality objective

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 in the Colorado River floodplain and management of extracted groundwater. The groundwater extraction, treatment, and injection systems are collectively referred to as Interim Measure No. 3 (IM No. 3). Currently, the IM No. 3 facilities include a groundwater extraction system, conveyance piping, a groundwater treatment plant, and an injection well field for the discharge of the treated groundwater. Figure 1 shows the location of the IM No. 3 extraction, conveyance, treatment, and injection facilities. (All figures are provided at the end of this report.)

On October 13, 2004, the California Regional Water Quality Control Board, Colorado River Basin Region (Water Board) adopted Waste Discharge Requirements (WDR) Order No. R7-2004-0103. This WDR authorized PG&E to inject treated groundwater into wells located in the East Mesa area of the Topock site. This WDR was superseded on September 20, 2006 by WDR No. R7-2006-0060. Work described in this report was performed in accordance with the WDR No. R7-2006-0060.

The WDR specifies effluent limitations, prohibitions, specifications, and provisions for subsurface injection. Monitoring and Reporting Program (MRP) No. R7-2004-0103 specified the requirements for the Compliance Monitoring Program (CMP) to monitor the aquifer in the injection well area to ensure that the injection of treated groundwater is not causing an adverse effect on the aquifer water quality. As with the WDR, MRP No. R7-2004-0103 was superseded on September 20, 2006 by MRP No. R7-2006-0060. This report adheres to requirements established in MRP No. R7-2006-0060. The *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* (CH2M HILL, 2005a) was submitted to the Water Board and the California Department of Toxic Substances Control (DTSC) on June 17, 2005 (herein referred to as the Compliance Monitoring Plan). The Compliance Monitoring Plan and its addendum provide the objectives, proposed monitoring program, data evaluation methods, and reporting requirements for the CMP. In a letter dated June 9, 2006, DTSC modified the reporting requirements of the Compliance Monitoring Plan (DTSC, 2006). This report incorporates the additional requirements.

The injection system consists of two injection wells (IWs): IW-2 and IW-3. Operation of the treatment system was conditionally approved on July 15, 2005 (DTSC, 2005), and injection into IW-2 began on July 31, 2005. Table 1 summarizes the history of injection for IM No. 3. (All tables are provided at the end of this report.)

Figure 2 shows the locations of the injection wells and the groundwater monitoring wells (observation wells and compliance wells) in the CMP. Table 2 summarizes information on well construction and sampling methods for all wells in the CMP.

On January 22, 2007 (DTSC, 2007), DTSC approved a reduction of constituents analyzed during quarterly sampling of the CMP observation wells (details are provided in

CH2M HILL, 2006). The Water Board concurred in a letter dated January 23, 2007 (Water Board, 2007a). Observation wells (OWs) are sampled for a limited suite of constituents during quarterly monitoring events. Semiannual CMP events still retain the original constituent suite for the OWs and compliance wells (CWs).

Under the CMP, as of July 2008, samples are collected from OWs and CWs (Figure 2) according to the following schedule:

- Nine observation wells located near the IM No. 3 injection well field are sampled quarterly for a limited suite of constituents.
- Eight compliance monitoring wells and nine observation wells located around the IM No. 3 injection well field are sampled semiannually for a full suite of constituents.

On October 16, 2007, the Water Board approved collecting pH measurements in the field rather than through laboratory analysis due to the new 15-minute holding time for laboratory measurements with United States Environmental Protection Agency Method 150.1 (Water Board, 2007b). DTSC provided concurrence for the field pH change in an email dated January 22, 2008 (DTSC, 2008). This change became effective with the first quarter 2008 sampling event.

On November 13, 2007, the Water Board approved the modification to hexavalent chromium (Cr[VI]) analytical methods, which extended the holding time from 24 hours to 28 days (Water Board, 2007c). DTSC provided concurrence for the 28-day holding time for Cr(VI) analyses in an e-mail dated January 22, 2008 (DTSC, 2008). The first quarter 2008 sampling event was the first event to adhere to the new 28-day holding time for analyzing Cr(VI).

For both quarterly and semiannual sampling events, laboratory analyses include dissolved total chromium (Cr[T]), Cr(VI), metals, specific conductance, total dissolved solids (TDS), turbidity, and major inorganic cations and anions. For quarterly events, the metals, cations, and anions list is reduced. Groundwater elevation data and field water quality data—including specific conductance, temperature, pH, oxidation-reduction potential, dissolved oxygen, turbidity and salinity—are also measured during each monitoring event (CH2M HILL, 2005a).

This report presents the results of the third quarter 2008 CMP groundwater monitoring event.

2.0 Third Quarter 2008 Activities

This section provides a summary of the monitoring and sampling activities completed during the third quarter 2008. The third quarter 2008 monitoring event was conducted on August 4 and 5, 2008 and consisted of:

- Nine observation monitoring wells were sampled for water quality analyses.
- Groundwater elevations and field water quality data were collected prior to sampling.
- One duplicate sample was collected at well OW-1S to assess field sampling and analytical quality control.

Continuous groundwater elevation data were collected using pressure transducers/data loggers at each of the 17 CMP wells and were downloaded monthly during the reporting period.

The sampling methods, procedures, field documentation of the CMP sampling, water level measurements, and field water quality monitoring were performed in accordance with the *Sampling, Analysis, and Field Procedures Manual* (CH2M HILL, 2005b).

CMP groundwater samples were analyzed by Truesdail Laboratories, Inc. in Tustin, California and EMAX Laboratories, Inc. in Torrance, California, both California-certified analytical laboratories. Analytical methods, sample volumes and containers, sample preservation, and quality control sample requirements were in accordance with the *Sampling, Analysis, and Field Procedures Manual* (CH2M HILL, 2005b). Data validation and management were conducted in accordance with the *Quality Assurance Project Plan* (QAPP) provided as Appendix D of the *Sampling, Analysis, and Field Procedures Manual*.

3.0 Third Quarter 2008 Results

This section summarizes the results of the CMP groundwater sampling conducted during the third quarter 2008. Figure 2 presents the locations of the CMP groundwater wells.

The data presented include results for Cr(VI), Cr(T), specific conductance, metals, TDS, turbidity, and major inorganic cations and anions. Laboratory data quality review, water level measurements, and water quality field parameter data are also presented in this section. The laboratory reports and field data sheets for the third quarter 2008 monitoring are presented in Appendices A and B, respectively.

3.1 Analytical Results

Nine observation wells were sampled during the third quarter 2008 sampling event. Analytical results for Cr(VI) and Cr(T), other metals, and general chemistry parameters are presented in Tables 3 and 4 and are discussed below. Interim action levels/water quality objectives (WQOs) were updated in the *Addendum to the Compliance Monitoring Plan*, which was submitted to DTSC and the Water Board on December 13, 2005 (CH2M HILL, 2005c). On August 8, 2006, PG&E submitted a revised contingency plan flowchart for groundwater quality changes associated with the injection system. The contingency plan specifies the concentrations and values for Cr(VI), Cr(T), TDS, and pH to be used to determine if contingency plan actions were necessary based on sample results.

3.1.1 Hexavalent and Total Chromium

Table 3 presents the Cr(VI) and Cr(T) results for groundwater in the shallow, middle, and deep wells for the third quarter 2008 CMP sampling event. For shallow wells, the maximum detected Cr(VI) concentration was 28.9 micrograms per liter (µg/L) in well OW-2S on August 5, 2008. For the middle wells, the maximum detected Cr(VI) concentration was 0.83 µg/L in well OW-5M on August 4, 2008. For the deep wells, the maximum detected Cr(VI) concentration was 0.51 µg/L in well OW-1D on August 5, 2008.

During the third quarter 2008, none of the samples collected from shallow, middle, and deep wells exceeded the WQO of 32.6 µg/L for Cr(VI).

For shallow wells, the maximum detected Cr(T) concentration was 30.8 µg/L in well OW-2S on August 5, 2008. For the middle wells, the maximum detected Cr(T) concentration was 1.52 µg/L in well OW-5M on August 4, 2008. For the deep wells, all of the Cr(T) concentrations were below the laboratory reporting limit.

During the third quarter 2008, a sample from one well exceeded the WQO of 28 µg/L for Cr(T). The August 4, 2008 sample from well OW-2S had a concentration of 30.8 µg/L. For this exceedance, the result is not considered to be the result of injection of treated groundwater as the average effluent concentration of Cr(T) from the IM No. 3 treatment plant is normally non-detect with a reporting limit of 0.2 µg/L (CH2M HILL, 2008a). Cr(T) and Cr(VI) concentrations at OW-2S have been consistently above the WQOs since

November 2005. This exceedance of Cr(T) is thus considered reflective of the natural variance in background water quality.

3.1.2 Other Metals and General Chemistry

Table 4 presents the other metals and general chemistry results for the CMP groundwater wells sampled during the third quarter 2008. Since the first quarter 2007, the observation wells have been sampled for a limited suite of constituents during quarterly monitoring events. Metals and ions detected in the third quarter 2008 sampling included boron, sodium, chloride, fluoride, molybdenum, nitrate/nitrite as nitrogen, and sulfate. In general, concentrations of metals and ions detected during the third quarter 2008 sampling event are similar to those detected in previous sampling events.

During the third quarter 2008, the sampling results from all wells were within the WQOs for TDS (10,800 milligrams per liter [mg/L]) and pH (7.6 to 8.89). Sampling results for TDS varied from 1,010 mg/L in well OW-2S to 4,630 mg/L in well OW-5M and for pH varied from 7.64 in wells OW-5M and OW-5D to 7.89 in well OW-2S.

3.2 Analytical Data Quality Review

The laboratory analytical data generated from the third quarter 2008 CMP monitoring event were independently reviewed by project chemists to assess data quality and identify deviations from analytical requirements. The quality assurance and quality control requirements are outlined in the QAPP for the PG&E Topock Program, which is Appendix D of the *Sampling, Analysis, and Field Procedures Manual, Revision 1* (CH2M HILL, 2005b). A detailed discussion of data quality for CMP sampling data is presented in the data validation reports, which are kept in the project file and are available upon request.

3.2.1 Matrix Interference

For the third quarter 2008, matrix interference was encountered in three groundwater samples that affected the sensitivity for Cr(VI) when using Method E218.6. The Cr(VI) sample results from OW-1M, OW-2D, and OW-2M reflected an adjusted reporting limit of 1 µg/L as a result of the serial dilution that was required to overcome the matrix interference and provide an acceptable matrix spike recovery. No qualifier flags were applied.

3.2.2 Matrix Spike Samples

For the third quarter 2008 sampling event, all matrix spike acceptance criteria were met.

3.2.3 Quantitation and Sensitivity

For the third quarter 2008 sampling event, with the exception of the matrix interference issues discussed in Section 3.2.1, all method and analyte combinations met the project reporting limit objectives.

3.2.4 Holding Time Data Qualification

For the third quarter 2008 sampling event, all method holding time requirements were met with the following exception:

- Three turbidity (SM2130B) samples were analyzed outside the recommended holding time by one day. The detected sample result was qualified as estimated and flagged "J." The non-detect sample results were qualified as estimated and flagged "UJ."

Based on the March 2007 United States Environmental Protection Agency Ruling, pH now has a 15-minute holding time. As a result pH measurements are performed in the field and are no longer considered a laboratory parameter for this project.

3.2.5 Field Duplicates

For the third quarter 2008 sampling event, all field duplicate acceptance criteria were met.

3.2.6 Method Blanks

For the third quarter 2008 sampling event, method blank acceptance criteria were met.

3.2.7 Equipment Blanks

For the third quarter 2008 sampling event, equipment blank acceptance criteria were met.

3.2.8 Laboratory Duplicates

For the third quarter 2008 sampling event, laboratory duplicate acceptance criteria for the methods were met.

3.2.9 Calibration

For the third quarter 2008 sampling event, initial and continuing calibrations were performed as required by the methods. All calibration criteria were met with the following exception:

- One fluoride (E300.0) sample was analyzed outside the method performance check protocol of 10 samples analyzed between continuing calibration standards. The detected sample result was qualified as estimated and flagged "J."

3.2.10 Conclusion

For the third quarter 2008 sampling event, the completeness objectives were met for all method and analyte combinations. The analyses and data quality met the QAPP and laboratory method quality control criteria except as noted above. Overall, the analytical data are considered acceptable for the purpose of the CMP.

3.3 Influence of Treated Water

3.3.1 Post-injection Versus Pre-injection

Injection of treated water began on July 31, 2005. Under WDR No. R7-2006-0060 for the IM No. 3 groundwater treatment system, PG&E is required to submit WDR monitoring

reports on the operation of the system. These reports contain the analytical results of treated water effluent sampling and, as such, the reports are useful in determining the baseline water quality of the treated water being injected into the IM No. 3 injection well field. Table 5 provides selected analytical results from three of the monthly reports: August 29, 2005, March 18, 2006, and July 2, 2008. While there are differences among some parameters in these samples, a number of parameters show relatively consistent concentrations in the effluent over time. Analytes that are relatively consistent over the injection time period include Cr(VI), Cr(T), fluoride, molybdenum, nitrate as nitrogen, sulfate, and TDS. These seven constituents provide a characterization of the effluent that does not appear to vary greatly over time and can serve as a basis for determining if a groundwater monitoring well is being affected by injection. In general terms, treated water has the following characteristics (based on review of August 2005 through July 2008 effluent characteristics):

- Cr(VI): typically non-detect (1.0) µg/L
- Cr(T): typically non-detect (1.0) µg/L
- Fluoride: approximately 2 mg/L
- Molybdenum: approximately 8 to 19 µg/L
- Nitrate/nitrite as nitrogen: approximately 3.0 mg/L
- Sulfate: approximately 485 mg/L
- TDS: approximately 4,050 mg/L

These treated water quality characteristics are meant to serve as a general guideline and not as a statistically representative sampling of the treated water quality over time.

Table 5 also lists the results of baseline sampling for the observation wells and compliance wells. A full set of nine OW groundwater samples were collected on July 27 and 28, 2005, and a full set of eight CW groundwater samples were collected on September 15, 2005. These samples are considered representative of conditions unaffected by injection and serve to characterize the pre-injection water quality. In comparing these sampling results to the treated injection water sampling results, there are some similarities in the constituent concentrations. For example, most of the pre-injection OW or CW deep well samples (OW-1D, OW-2D, OW-5D, CW-3D, and CW-4D) contain no detectable Cr(VI) or Cr(T), which is similar to the treated injection water. Most of the well samples show concentrations similar to the treated water for two or three constituents but observable differences in concentration from the treated water for the remaining four or five. By considering the entire suite of seven analytes and focusing on those parameters that show differences, it is relatively easy to distinguish between the pre-injection water quality at the monitoring wells and the treated water effluent quality.

Table 6 presents a comparison between the treated water quality and the results from the most recent sampling event, the third quarter 2008 sampling event. These samples were collected after approximately 36 months of injection. While the pre-injection OW and CW sample results were significantly different from the treated water quality, a number of the third quarter 2008 sample results have changed in that these results show a marked similarity to the treated water results. The following wells display the general characteristics of treated water: OW-1M, OW-1D, OW-2M, OW-2D, OW-5M, and OW-5D.

Wells OW-1M, OW-1D, OW-2M, OW-2D, OW-5M, and OW-5D are locations and depths where the treated water injection front has largely replaced the local pre-injection

groundwater. To date, all shallow observations wells (wells OW-1S, OW-2S, and OW-5S) show no water quality effects due to injection of treated water, indicating that injected water has not yet reached these depths and locations.

3.3.2 Water Quality Hydrographs

Trend data can be used to determine when a rapid change has occurred between sampling events, such as the arrival of the injection front. It can also be used to look at more gradual changes that occur over several sampling events, such as seasonal effects or the interaction of treated water with local groundwater and host aquifer material. Eleven analytes were selected for time-series analysis; these analytes are considered to be most representative of the IM No. 3 injection well field area and have sufficient detections to make time series analysis useful. The analytes include chloride, Cr(T), fluoride, Cr(VI), molybdenum, nitrate/nitrite as nitrogen, pH, sodium, sulfate, TDS, and vanadium. Water quality hydrographs (time-series plots) of these 11 analytes in each observation well during the quarter within the IM No. 3 injection well field are presented in Figures 3A through 3C.

Observation well water quality hydrographs are presented in Figures 3A through 3C. These hydrographs show the same overall patterns: wells that are identified as affected by treated water injection show a shift in water quality for characteristic parameters, while those identified as being unaffected by injection show no net trends. The water quality change brought on by the arrival of the treated water injection front can be either gradual (OW-5M) or step-wise (OW-2M), with most affected wells showing a pattern of change somewhere between the two. Based on the variability in response, it is inferred that the movement of treated water is non-uniform laterally between wells. This variability in lateral movement can be inferred from differences in the water quality hydrographs in both the mid-depth and deep wells. The OW shallow-depth wells (OW-1S, OW-2S, and OW-5S) show little water quality variation over time and generally have no net trends over time. TDS, sodium, chloride, vanadium, molybdenum, and sulfate are particularly consistent with baseline pre-injection concentrations and show that the local groundwater quality at shallow depths is not being affected by injection of treated water or outside water sources.

3.4 Water Level Measurements

Table 7 presents the manual water level measurements and groundwater elevations for the third quarter 2008 monitoring event.

As a requirement of the conditional approval by DTSC (DTSC, 2005), water level measurements were used to produce hydrographs for each well cluster. Figures 4A through 4G present hydrographs that illustrate groundwater elevation trends and vertical hydraulic gradients observed over the third quarter 2008 reporting period at the observation and compliance monitoring wells.

Average groundwater elevation maps for shallow, middle, and deep wells are also provided as Figures 5A through 5C. Water levels used to produce the monthly average groundwater elevation contour plots were taken from a select number of days in which the levels remained reasonably constant. These dates are noted on each figure.

3.4.1 Groundwater Flow Characteristics

The injection well field is located in the East Mesa area of the Topock site (Figure 2). Overall sitewide water level contour maps for shallow wells are prepared annually, with flow consistently being shown to move to the east across the uplands portions of the site (CH2M HILL, 2008b).

The effects of injection in the IM No. 3 injection well field are superimposed on the more regional Topock site flow system and, as expected, a groundwater mound can be seen around the injection wells. This mound is centered around the active injection well IW-3. The potentiometric surfaces in prior CMP reports mapped the growth of the groundwater mound over time and show that, after 36 months of injection, the mound has increased and then stabilized in height by several tenths of a foot in elevation above the surrounding water level elevations. Figures 5B and 5C present groundwater elevation contours for the average groundwater elevation of the mound within the middle and deep wells using July 15 through August 15, 2008 averages. As expected with a mound, the potentiometric surface of the deep wells is broader, while the potentiometric surface of the middle wells is more localized to the vicinity of the injection wells. The mound is elliptical in shape, with the major axis running in a southwest to northeast direction. The lower gradients (broader contours) in the direction of the major axis are an indication that the aquifer permeabilities are greater in this direction, indicating that there may be a preferred direction to flow in this area.

The vertical gradient in the IM No. 3 injection well field area is directed upward at all of the CW and OW well clusters and also upward between each of the depth intervals in those same well clusters. Table 8 presents the vertical gradient data calculated using the July 15 through August 15, 2008 average groundwater levels. The magnitude of the vertical gradients is similar between clusters and between the depth intervals, indicating that the vertical gradient is of the same order of magnitude throughout the injection area. A component of the vertical gradients calculated in the vicinity of the IM No. 3 injection well field is undoubtedly related to the injection of treated water in the lower portions of the aquifer. The observed groundwater gradients in the IM No. 3 injection well field are consistent with expected regional groundwater flow within the southern Mohave Valley.

3.5 Field Parameter Data

A field water quality instrument and flow-through cell were used to measure water quality parameters during well purging and groundwater sampling. The measured field parameters included specific conductance, temperature, pH, oxidation-reduction potential, dissolved oxygen, turbidity, and salinity. Table 9 summarizes the field water quality data measured during the third quarter 2008 monitoring event. Field data sheets for the third quarter 2008 event are presented in Appendix B.

3.6 WDR Monitoring Requirements

Table 10 identifies the laboratory that performed each analysis and lists the following information as required by the WDR for the third quarter of 2008 monitoring event:

- Sample location
- Sample identification number
- Sampler name
- Sample date
- Sample time
- Laboratory performing analysis
- Analysis method
- Parameter
- Analysis date
- Laboratory technician
- Result unit
- Sample result
- Reporting limit
- Minimum detection limit

4.0 Status of Monitoring Activities

4.1 Quarterly Monitoring

The next quarterly monitoring event will occur in January during the first quarter of 2009. This event will include the sampling and analysis scope that was presented in the Compliance Monitoring Plan (CH2M HILL, 2005a, c) and subsequent approved scope revisions (DTSC, 2007, 2008; Water Board, 2007a-c). The groundwater monitoring report for this quarterly CMP monitoring event will be submitted by April 15, 2009.

4.2 Semiannual Monitoring

The next semiannual monitoring event will occur in November during the fourth quarter of 2008. This CMP monitoring event, which encompasses both the OW and CW wells, will include the sampling and analysis scope presented in the Compliance Monitoring Plan (CH2M HILL, 2005a, c) and subsequent approved scope revisions (DTSC, 2007, 2008; Water Board, 2007a-b). The groundwater monitoring report for this semiannual CMP monitoring event will be submitted by January 15, 2009.

5.0 References

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CH2M HILL. 2005a. *Groundwater Compliance Monitoring Plan for Interim Measure No. 3 Injection Area, Topock Compressor Station, Needles, California*. June 17.

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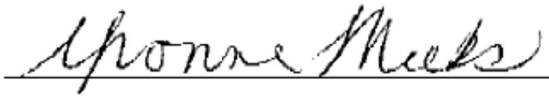
6.0 Certification

PG&E submitted a signature delegation letter to the Water Board on September 20, 2006. The letter delegated PG&E signature authority to Mr. Curt Russell and Ms. Yvonne Meeks for correspondence regarding Board Order R7-2006-0060.

Certification Statement:

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Signature: 

Name: Yvonne J. Meeks

Company: Pacific Gas and Electric Company

Title: Topock Project Manager

Date: October 15, 2008

Tables

TABLE 1
Operational Status of Interim Measures No. 3 Injection Wells Through Third Quarter 2008
PG&E Topock Compliance Monitoring Program

Time Period	Injection Status
July 31, 2005 to Fourth Quarter 2005	Injection occurred at IW-2.
First Quarter 2006	Injection occurred primarily at IW-2 except during periods of operational testing, when injection was divided equally between IW-2 and IW-3.
Second Quarter 2006	Injection occurred at IW-2.
Third Quarter 2006	In August 2006, IW-2 went offline for routine maintenance, and injection commenced at IW-3.
Fourth Quarter 2006	Injection occurred at IW-3, except during routine maintenance.
First Quarter 2007	Injection occurred at IW-3 and transitioned over to IW-2 on March 8.
Second Quarter 2007	Injection occurred at IW-3 from April 3 through June 20. Injection switched to IW-2 on June 20 and continued through July 20, 2007.
Third Quarter 2007	Injection occurred at IW-3 after July 20. Injection occurred at IW-2 on August 30 for an injection test and then returned to IW-3 after August 31.
Fourth Quarter 2007	Injection occurred at IW-3 and then switched to IW-2 on September 25 for routine maintenance. Injection returned to IW-3 after October 9.
First Quarter 2008	Injection occurred at IW-3 only. From February 5 through February 13, well maintenance activities were conducted at IW-2.
Second Quarter 2008	Injection occurred at IW-3 only. IM-3 system offline from April 21 through April 28 due to routine maintenance. Backwashing occurred at IW-3 on April 9, May 7, May 15, May 22, June 3, and June 4, 2008.
Third Quarter 2008	Injection occurred primarily at IW-3. Injection also occurred at IW-2 for short period on July 25 and from August 12 – August 31, 2008. Backwashing events occurred at IW-3 on June 17, June 27, July 9, July 15, July 17, July 18, August 12, August 13, September 2, and September 3, 2008. Backwashing events occurred at IW-2 on September 9 - September 11, 2008.

TABLE 2
Well Construction and Sampling Summary for Groundwater Samples, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

Well ID	Site Area	Measuring Point Elevation (ft AMSL)	Screen Interval (ft bgs)	Well Casing (inches)	Well Depth (ft btoc)	Depth to Water (ft btoc)	Sampling System	Typical Purge Rate (gpm)	Typical Purge Volume (gallons)	Pump Depth (ft bgs)	Transducer Status	Remarks
IM Compliance Wells												
CW-01M	East Mesa	566.16	140 - 190	2 (PVC)	190.0	109.0	Temp Redi-Flo AR	3	42	124	Active	
CW-01D	East Mesa	566.57	250 - 300	2 (PVC)	300.2	109.7	Temp Redi-Flo AR	3	100	125	Active	
CW-02M	East Mesa	549.37	152 - 202	2 (PVC)	202.0	92.4	Temp Redi-Flo AR	2	56	108	Active	
CW-02D	East Mesa	549.64	285 - 335	2 (PVC)	355.0	92.4	Temp Redi-Flo AR	3	135	108	Active	
CW-03M	East Mesa	534.21	172 - 222	2 (PVC)	222.0	77.3	Temp Redi-Flo AR	2	75	93	Active	
CW-03D	East Mesa	534.27	270 - 320	2 (PVC)	340.0	76.7	Temp Redi-Flo AR	3	135	93	Active	
CW-04M	East Mesa	518.66	119.5 - 169.8	2 (PVC)	169.8	61.4	Temp Redi-Flo AR	2	56	77	Active	
CW-04D	East Mesa	518.68	233 - 283	2 (PVC)	303.0	61.5	Temp Redi-Flo AR	3	126	77	Active	
IM Observation Wells												
OW-01S	East Mesa	550.21	83.5 - 113.5	2 (PVC)	113.5	93.6	Temp Redi-Flo AR	0.5	12	109	Active	
OW-01M	East Mesa	550.45	165 - 185	2 (PVC)	185.8	92.6	Temp Redi-Flo AR	2	48	109	Active	
OW-01D	East Mesa	550.48	257 - 277	2 (PVC)	277.0	92.5	Temp Redi-Flo AR	3	105	108	Active	
OW-02S	East Mesa	548.88	71 - 101	2 (PVC)	121.0	92.3	Temp Redi-Flo AR	2	16	108	Active	
OW-02M	East Mesa	548.59	190 - 210	2 (PVC)	210.3	90.8	Temp Redi-Flo AR	3	61	107	Active	
OW-02D	East Mesa	549.15	310 - 330	2 (PVC)	340.0	91.0	Temp Redi-Flo AR	3	127	107	Active	
OW-05S	East Mesa	551.83	70 - 110	2 (PVC)	110.3	94.1	Temp Redi-Flo AR	1	8	110	Active	
OW-05M	East Mesa	551.81	210 - 250	2 (PVC)	250.3	93.3	Temp Redi-Flo AR	3	81	110	Active	
OW-05D	East Mesa	552.33	300 - 320	2 (PVC)	350.0	94.2	Temp Redi-Flo AR	3	132	110	Active	

Notes:

AMSL	above mean sea level
BGS	below ground surface
BTOC	below top of polyvinyl chloride (PVC) casing
Redi-Flo AR	adjustable-rate electric submersible pump
Temp	temporary
gpm	gallons per minute

Depth to water shown is the most recently measured depth to water.
All wells were purged and sampled using well-volume method.

TABLE 3
Chromium Results for Groundwater Samples, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

			Method:	E218.6	E200.8
Location ID	**Sample Date**			**Hexavalent Chromium (µg/L)**	**Dissolved Chromium (µg/L)**
OW-01S	8/5/2008			17.3	18.0
OW-01S	8/5/2008	(FD)		19.2	18.6
OW-01M	8/5/2008			ND (1.0)	ND (1.0)
OW-01D	8/5/2008			0.51	ND (1.0)
OW-02S	8/5/2008			28.9	30.8
OW-02M	8/5/2008			ND (1.0)	ND (1.0)
OW-02D	8/5/2008			ND (1.0)	ND (1.0)
OW-05S	8/4/2008			22.6	21.6
OW-05M	8/4/2008			0.83	1.52
OW-05D	8/4/2008			0.38	ND (1.0)

Notes:

FD field duplicate
ND parameter not detected at the listed reporting limit
µg/L micrograms per liter

Hexavalent Chromium is lab filtered and Dissolved Chromium is field filtered.

TABLE 4
Metals and General Chemistry Results for Groundwater Samples, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

	Method:	E120.1		SM2540C	SM2130B	E200.7	E200.7	E200.8	E300.0	E300.0	E300.0	SM4500NO3
Location ID	**Sample Date**	**Specific Conductance (µmhos/cm)**	**Field pH (pH units)**	**Total Dissolved Solids (mg/L)**	**Turbidity (NTU)**	**Dissolved Boron (mg/L)**	**Dissolved Sodium (mg/L)**	**Dissolved Molybdenum (µg/L)**	**Chloride (mg/L)**	**Fluoride (mg/L)**	**Sulfate (mg/L)**	**Nitrate/Nitrite as Nitrogen (mg/L)**
OW-01S	8/5/2008	2680	7.72	1720	0.29	0.466	386	ND (10)	753	2.24 J	146	2.78
OW-01S	8/5/2008 (FD)	2720	FD	1710	0.272	0.418	391	ND (10)	773	2.16	163	2.79
OW-01M	8/5/2008	6950	7.66	3950	0.499	ND (0.02)	1260	ND (10)	2250	1.78	480	2.72
OW-01D	8/5/2008	6680	7.68	4120	0.35	0.952	1310	ND (10)	2140	2.08	479	2.63
OW-02S	8/5/2008	1740	7.89	1010	1.18	ND (0.02)	285	37.5	411	4.61	119	3.80
OW-02M	8/5/2008	6880	7.72	4120	0.176	0.939	1290	ND (10)	2090	1.77	481	2.80
OW-02D	8/5/2008	7090	7.88	4470	ND (0.1)	1.21	1360	11.3	2130	1.94	498	2.83
OW-05S	8/4/2008	1880	7.71	1110	1.96 J	ND (0.02)	275	12.8	470	2.47	112	3.53
OW-05M	8/4/2008	7120	7.64	4630	ND (0.1)J	1.31	1230	11.4	2140	2.09	490	2.71
OW-05D	8/4/2008	6920	7.64	4270	ND (0.1)J	1.25	1330	ND (10)	2090	2.34	483	2.76

Notes:

FD	field duplicate
ND	parameter not detected at the listed reporting limit
J	concentration or RL (reporting limit) estimated by laboratory or data validation
µmhos/cm	micro-mhos per centimeter
NTU	Nephelometric Turbidity Unit
mg/L	milligrams per liter
µg/L	micrograms per liter

Nitrate/Nitrite as nitrogen was calculated as the sum of nitrate as nitrogen and nitrite as nitrogen. For non detect results, the reporting limit was used.

TABLE 5
Treated Water Quality Compared to OW and CW Pre-injection Water Quality
PG&E Topock Compliance Monitoring Program

Location ID	Sample Date	Hexavalent Chromium (µg/L)	Total Chromium (µg/L)	Fluoride (mg/L)	Dissolved Molybdenum (µg/L)	Nitrate/ Nitrite as Nitrogen (mg/L)	Sulfate (mg/L)	TDS (mg/L)
Treated Water	8/29/2005	ND(1.0)	ND(2.1)	1.95	8.3	3.7	450	3620
Treated Water	3/18/2006	ND(1.0)	ND(1.0)	1.92	8.2	2.79	482	4040
Treated Water	7/2/2008	ND(0.2)	ND(1.0)	2.74	18.6	2.65	526	4510
OW-01S	7/28/2005	19.4	23.5	2.45	17.2	3.2	114	1320
OW-01M	7/27/2005	16.3	18.9	2.31	27	1.01	311	3450
OW-01D	7/27/2005	ND(1.0)	ND(1.3)	1.14	46.1	0.321	441	6170
OW-02S	7/28/2005	15.3	14.8	3.79	35.6	3.81	126	1090
OW-02M	7/28/2005	5.4	5.7	2.19	32.4	0.735	342	4380
OW-02D	7/28/2005	ND(1.0)	ND(1.2)	0.966	51.2	0.1	616	9550
OW-05S	7/28/2005	23.4	25.6	2.3	17.1	3.55	105	1060
OW-05M	7/28/2005	8.6	8.8	2.74	35.4	0.621	417	5550
OW-05D	7/28/2005	ND(1.0)	ND(1.2)	1.11	57	0.151	480	8970
CW-01M	9/15/2005	18.1	17.8	2.34	21.6	1.11	318	2990
CW-01D	9/15/2005	ND(1.0)	1.6	0.951	32.1	0.972	379	6230
CW-02M	9/15/2005	15.8	15.5	2.3	23.1	0.908	342	3500
CW-02D	9/15/2005	ND(1.0)	1.6	0.982	41.6	0.28	601	8770
CW-03M	9/15/2005	8.8	8.1	2.57	24.2	0.642	464	4740
CW-03D	9/15/2005	ND(1.0)	ND(1.0)	1.4	29.2	0.304	672	9550
CW-04M	9/15/2005	19.2	19	1.5	12.3	1.18	240	3310
CW-04D	9/15/2005	ND(1.0)	ND(1.0)	1.01	26	0.188	534	7470

NOTES:

ND Not detected at the listed reporting limit.
mg/L milligrams per liter
µg/L micrograms per liter

Hexavalent chromium samples were analyzed with method E218.6.
Total chromium samples were analyzed with method E200.7.
Total chromium samples of the treated water were unfiltered.

TABLE 6
Treated Water Quality Compared to Third Quarter 2008 Sampling Event Water Quality
PG&E Topock Compliance Monitoring Program

Location ID	Sample Date	Hexavalent Chromium (µg/L)	Total Chromium (µg/L)	Fluoride (mg/L)	Dissolved Molybdenum (µg/L)	Nitrate/Nitrite as Nitrogen (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
Treated Water	3/8/2006	ND (1.0)	ND (1.0)	1.92	8.20	2.79	482	4040
Treated Water	9/7/2006	ND (1.0)	ND (1.0)	1.93	13.6	2.50	486	4420
Treated Water	7/2/2008	ND (0.2)	ND (1.0)	2.74	18.6	2.65	526	4510
OW-01S	8/5/2008	17.3	18.0	2.24 J	ND (10)	2.78	146	1720
OW-01S	8/5/2008 (FD)	19.2	18.6	2.16	ND (10)	2.79	163	1710
OW-01M	8/5/2008	ND (1.0)	ND (1.0)	1.78	ND (10)	2.72	480	3950
OW-01D	8/5/2008	0.51	ND (1.0)	2.08	ND (10)	2.63	479	4120
OW-02S	8/5/2008	28.9	30.8	4.61	37.5	3.80	119	1010
OW-02M	8/5/2008	ND (1.0)	ND (1.0)	1.77	ND (10)	2.80	481	4120
OW-02D	8/5/2008	ND (1.0)	ND (1.0)	1.94	11.3	2.83	498	4470
OW-05S	8/4/2008	22.6	21.6	2.47	12.8	3.53	112	1110
OW-05M	8/4/2008	0.83	1.52	2.09	11.4	2.71	490	4630
OW-05D	8/4/2008	0.38	ND (1.0)	2.34	ND (10)	2.76	483	4270

Notes:

FD field duplicate
ND parameter not detected at the listed reporting limit
mg/L milligrams per liter
µg/L micrograms per liter
J concentration or RL (reporting limit) estimated by laboratory or data validation

Hexavalent chromium samples were analyzed with method E218.6.

Total chromium samples were analyzed with methods E200.7 and E200.8. Total chromium and molybdenum samples were filtered, except for the treated water.

Molybdenum samples were analyzed with method E200.8.

Fluoride and Sulfate samples were analyzed with method E300.0.

Nitrate/Nitrite as Nitrogen samples were analyzed with methods E300.0 and SM4500NO3E.

Total Dissolved Solid samples were analyzed with methods E160.1 and SM2540C.

TABLE 7
Manual Water Level Measurements and Elevations, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

Location ID	Well Depth (feet BTOC)	Measuring Point Elevation (feet AMSL)	Monitoring Date & Time		Water Level Measurement (feet BTOC)	Salinity (percent)	Groundwater/Water Elevation Adjusted for Salinity (feet AMSL)
OW-01S	113.5	550.21	05-Aug-08	12:39 PM	92.67	0.19	457.48
OW-01M	185.8	550.45	05-Aug-08	1:48 PM	92.64	0.51	457.78
OW-01D	277.0	550.48	05-Aug-08	11:24 AM	92.48	0.48	457.88
OW-02S	121.0	548.88	05-Aug-08	9:33 AM	91.44	0.13	457.35
OW-02M	210.3	548.59	05-Aug-08	8:30 AM	90.76	0.52	457.84
OW-02D	340.0	549.15	05-Aug-08	7:15 AM	91.02	0.52	458.08
OW-05S	110.3	551.83	04-Aug-08	2:04 PM	94.13	0.14	457.65
OW-05M	250.3	551.81	04-Aug-08	12:51 PM	93.29	0.49	458.42
OW-05D	350.0	552.33	04-Aug-08	11:23 AM	94.20	0.58	458.03

Notes:

AMSL above mean sea level
BTOC below top of polyvinyl chloride (PVC) casing

Salinity used to adjust water level to freshwater equivalent. Salinity values have been averaged in accordance with the Performance Monitoring Program.

TABLE 8
Vertical Gradients within the OW and CW clusters
PG&E Topock Compliance Monitoring Program

Well Pairs	Vertical Gradient (ft/ft)[a]
CW-01D to CW-01M	0.0017
CW-02D to CW-02M	0.0121
CW-03D to CW-03M	0.0095
CW-04D to CW-04M	0.0023
OW-01M to OW-01S	0.0048
OW-01D to OW-01M	0.0017
OW-02M to OW-02S	0.0036
OW-02D to OW-02M	0.0032

[a] Positive value signifies an upward gradient.

Gradients calculated using July 15 through August 15, 2008 average groundwater levels.

TABLE 9
Field Parameter Measurements for Groundwater Samples, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

Location ID	Sampling Date	Specific Conductance (µmhos/cm)	Temperature (°C)	pH (pH units)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Salinity (%)
OW-01S	8/5/2008	3001	31.7	7.72	68.7	4	2	0.19
OW-01M	8/5/2008	7643	30.7	7.66	74.1	7.56	3	0.49
OW-01D	8/5/2008	7609	30.5	7.68	78.8	6.4	1	0.49
OW-02S	8/5/2008	1931	31.5	7.89	77.5	7.46	4	0.12
OW-02M	8/5/2008	7608	30.7	7.72	105.7	7.3	0.7	0.49
OW-02D	8/5/2008	7674	28.7	7.88	107.7	7.51	0.5	0.5
OW-05S	8/4/2008	2067	31.1	7.71	73.1	7.06	14	0.13
OW-05M	8/4/2008	7718	29.3	7.64	101.6	7.38	0.5	0.5
OW-05D	8/4/2008	7600	30.4	7.64	127.6	7.25	1	0.49

Notes:

µmhos/cm	micro-mhos per centimeter
°C	degree centigrade
ORP	oxidation reduction potential
mV	millivolts
mg/L	milligrams per liter
NTU	Nephelometric Turbidity Unit
%	percentage

TABLE 10

Board Order No. R7-2006-0060 WDR Monitoring Information for Groundwater Samples, Third Quarter 2008

PG&E Topock Compliance Monitoring Program

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-01D	OW-01D-017	Barry Collom	8/5/2008	1:00:37 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	6680	2.00	0.153
					TLI	EPA 200.7	NAD	9/24/2008	Hope Trinidad	mg/L	1310	100	0.22
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	0.952	0.02	0.0048
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	ND (10)	10	0.0168
					TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	ND (1.0)	1.0	0.0532
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	0.51	0.20	0.0304
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	479	25.0	1.20
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	2140	100	14.0
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	2.08	0.50	0.025
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	0.35	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	4120	250	50.4
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.63	0.10	0.02
OW-01M	OW-01M-017	Barry Collom	8/5/2008	3:15:00 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	6950	2.00	0.153
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	ND (0.02)	0.02	0.0048
					TLI	EPA 200.7	NAD	9/24/2008	Hope Trinidad	mg/L	1260	100	0.22
					TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	ND (1.0)	1.0	0.0532
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	ND (10)	10	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	ND (1.0)	1.0	0.152
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	2250	100	14.0
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	480	25.0	1.20
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	1.78	0.50	0.025
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	0.499	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	3950	250	50.4
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.72	0.10	0.02
OW-01S	OW-01S-017	Barry Collom	8/5/2008	2:05:11 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	2680	2.00	0.153
					TLI	EPA 200.7	NAD	9/24/2008	Hope Trinidad	mg/L	386	20.0	0.044
					TLI	EPA 200.7	BD	9/2/2008	Hao Ton	mg/L	0.466	0.02	0.0048

TABLE 10

Board Order No. R7-2006-0060 WDR Monitoring Information for Groundwater Samples, Third Quarter 2008

PG&E Topock Compliance Monitoring Program

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-01S	OW-01S-017	Barry Collom	8/5/2008	2:05:11 PM	TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	18.0	1.00	0.0532
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	ND (10)	10	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	17.3	1.05	0.152
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	2.24 J	0.50	0.025
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	146	5.00	0.24
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	753	100	14.0
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	0.29	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	1720	50.0	10.1
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.78	0.10	0.02
OW-01S	MW-91-017	Barry Collom	8/5/2008	2:15:11 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	2720	2.00	0.153
					TLI	EPA 200.7	BD	9/2/2008	Hao Ton	mg/L	0.418	0.02	0.0048
					TLI	EPA 200.7	NAD	9/24/2008	Hope Trinidad	mg/L	391	20.0	0.044
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	ND (10)	10	0.0168
					TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	18.6	1.00	0.0532
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	19.2	0.20	0.0304
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	2.16	0.50	0.025
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	163	5.00	0.24
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	773	40.0	5.60
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	0.272	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	1710	50.0	10.1
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.79	0.10	0.02
OW-02D	OW-02D-017	Barry Collom	8/5/2008	9:00:33 AM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	7090	2.00	0.153
					TLI	EPA 200.7	NAD	9/24/2008	Hope Trinidad	mg/L	1360	20.0	0.044
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	1.21	0.02	0.0048
					TLI	EPA 200.8	CRTD	8/14/2008	Romuel Chaves	µg/L	ND (1.0)	1.0	0.0532
					TLI	EPA 200.8	MOD	8/14/2008	Romuel Chaves	µg/L	11.3	10.0	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	ND (1.0)	1.0	0.152

TABLE 10
Board Order No. R7-2006-0060 WDR Monitoring Information for Groundwater Samples, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-02D	OW-02D-017	Barry Collom	8/5/2008	9:00:33 AM	TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	2130	100	14.0
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	1.94	0.50	0.025
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	498	25.0	1.20
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	ND (0.1)	0.1	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	4470	250	50.4
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.83	0.10	0.02
OW-02M	OW-02M-017	Barry Collom	8/5/2008	9:55:00 AM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	6880	2.00	0.153
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	0.939	0.02	0.0048
					TLI	EPA 200.7	NAD	9/24/2008	Hope Trinidad	mg/L	1290	20.0	0.044
					TLI	EPA 200.8	CRTD	8/14/2008	Romuel Chaves	µg/L	ND (1.0)	1.0	0.0532
					TLI	EPA 200.8	MOD	8/14/2008	Romuel Chaves	µg/L	ND (10)	10	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	ND (1.0)	1.0	0.152
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	2090	100	14.0
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	1.77	0.50	0.025
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	481	25.0	1.20
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	0.176	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	4120	250	50.4
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.80	0.10	0.02
OW-02S	OW-02S-017	Barry Collom	8/5/2008	10:55:31 AM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	1740	2.00	0.153
					TLI	EPA 200.7	NAD	9/23/2008	Hope Trinidad	mg/L	285	20.0	0.044
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	ND (0.02)	0.02	0.0048
					TLI	EPA 200.8	MOD	8/14/2008	Romuel Chaves	µg/L	37.5	10.0	0.0168
					TLI	EPA 200.8	CRTD	8/14/2008	Romuel Chaves	µg/L	30.8	1.00	0.0532
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	28.9	1.05	0.152
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	411	20.0	2.80
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	4.61	0.50	0.025
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	119	5.00	0.24

TABLE 10
Board Order No. R7-2006-0060 WDR Monitoring Information for Groundwater Samples, Third Quarter 2008
PG&E Topock Compliance Monitoring Program

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-02S	OW-02S-017	Barry Collom	8/5/2008	10:55:31 AM	TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	1.18	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	1010	50.0	10.1
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	3.80	0.10	0.02
OW-05D	OW-05D-017	Barry Collom	8/4/2008	1:10:31 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	6920	2.00	0.153
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	1.25	0.02	0.0048
					TLI	EPA 200.7	NAD	9/23/2008	Hope Trinidad	mg/L	1330	100	0.22
					TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	ND (1.0)	1.0	0.0532
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	ND (10)	10	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	0.38	0.20	0.0304
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	483	25.0	1.20
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	2.34	0.50	0.025
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	2090	100	14.0
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	ND (0.1)J	0.1	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	4270	250	50.4
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.76	0.10	0.02
OW-05M	OW-05M-017	Barry Collom	8/4/2008	2:20:20 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	7120	2.00	0.153
					TLI	EPA 200.7	BD	8/11/2008	Hao Ton	mg/L	1.31	0.02	0.0048
					TLI	EPA 200.7	NAD	9/23/2008	Hope Trinidad	mg/L	1230	100	0.22
					TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	1.52	1.00	0.0532
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	11.4	10.0	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	0.83	0.20	0.0304
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	490	25.0	1.20
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	2140	100	14.0
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	2.09	0.50	0.025
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	ND (0.1)J	0.1	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	4630	250	50.4
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	2.71	0.10	0.02

TABLE 10

Board Order No. R7-2006-0060 WDR Monitoring Information for Groundwater Samples, Third Quarter 2008

PG&E Topock Compliance Monitoring Program

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician	Units	Result	RL	MDL
OW-05S	OW-05S-017	Barry Collom	8/4/2008	3:15:56 PM	TLI	EPA 120.1	SC	8/8/2008	Tina Acquiat	µmhos/cm	1880	2.00	0.153
					TLI	EPA 200.7	BD	8/8/2008	Hao Ton	mg/L	ND (0.02)	0.02	0.0048
					TLI	EPA 200.7	NAD	9/23/2008	Hope Trinidad	mg/L	275	20.0	0.044
					TLI	EPA 200.8	CRTD	8/13/2008	Romuel Chaves	µg/L	21.6	1.00	0.0532
					TLI	EPA 200.8	MOD	8/13/2008	Romuel Chaves	µg/L	12.8	10.0	0.0168
					TLI	EPA 218.6	CR6	8/7/2008	Jean-Paul Gleeson	µg/L	22.6	1.05	0.152
					TLI	EPA 300.0	CL	8/7/2008	Giawad Ghenniwa	mg/L	470	20.0	2.80
					TLI	EPA 300.0	FL	8/7/2008	Giawad Ghenniwa	mg/L	2.47	0.50	0.025
					TLI	EPA 300.0	SO4	8/7/2008	Giawad Ghenniwa	mg/L	112	5.00	0.24
					TLI	SM2130B	TRB	8/7/2008	Gautam Savani	NTU	1.96 J	0.10	0.007
					TLI	SM2540C	TDS	8/8/2008	Tina Acquiat	mg/L	1110	50.0	10.1
					EMXT	SM4500NO3-E	NO3NO2N	8/14/2008	Elena Robles	mg/L	3.53	0.10	0.02

TABLE 10

Board Order No. R7-2006-0060 WDR Monitoring Information for Groundwater Samples, Third Quarter 2008

PG&E Topock Compliance Monitoring Program

NOTES:

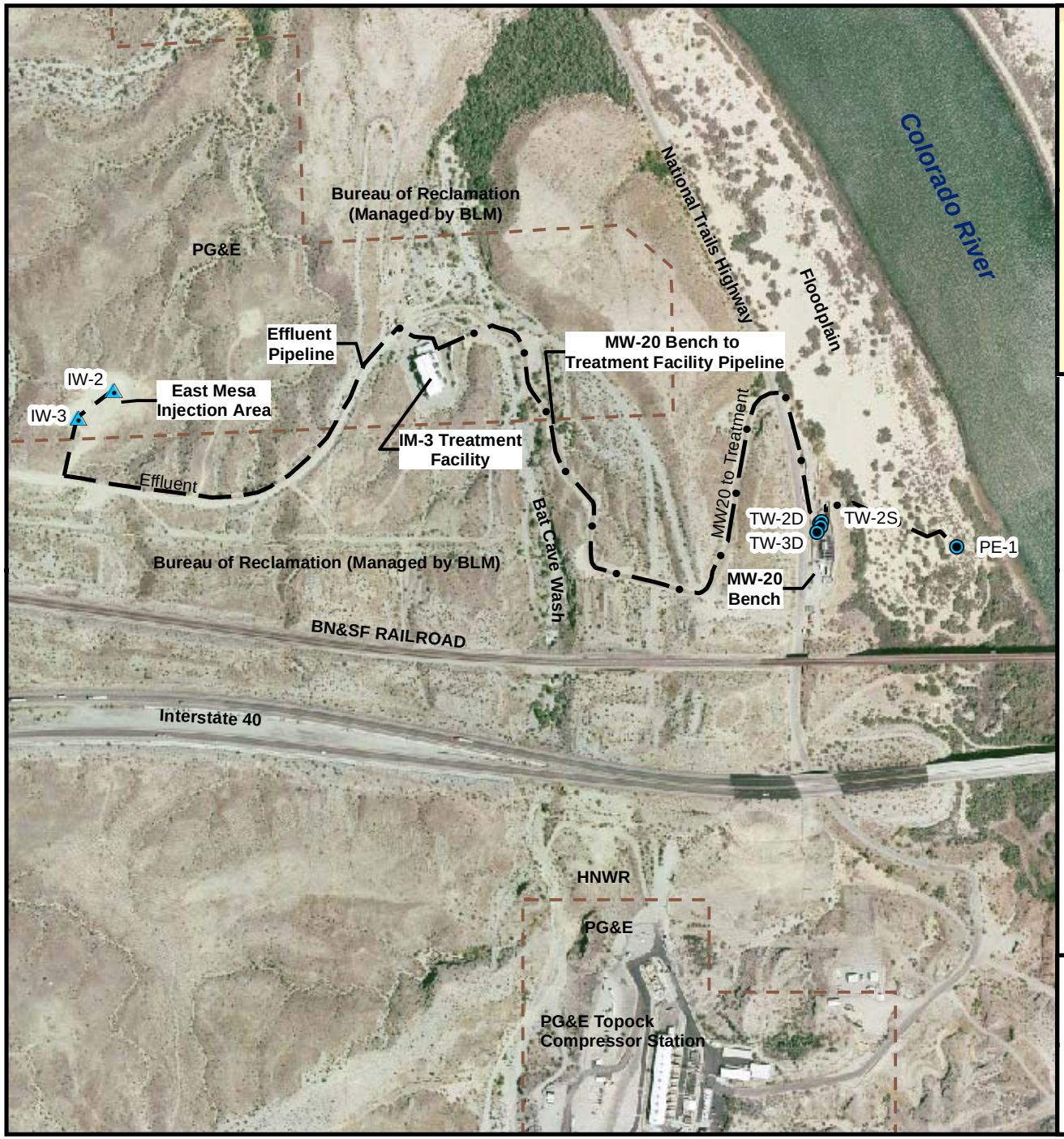
MDL	method detection limit corrected for sample dilution
RL	reporting limit
ND	parameter not detected at the listed reporting limit
J	concentration or RL estimated by laboratory or data validation
µmhos/cm	micro-mhos per centimeter
NTU	Nephelometric Turbidity Unit
mg/L	milligrams per liter
µg/L	micrograms per liter

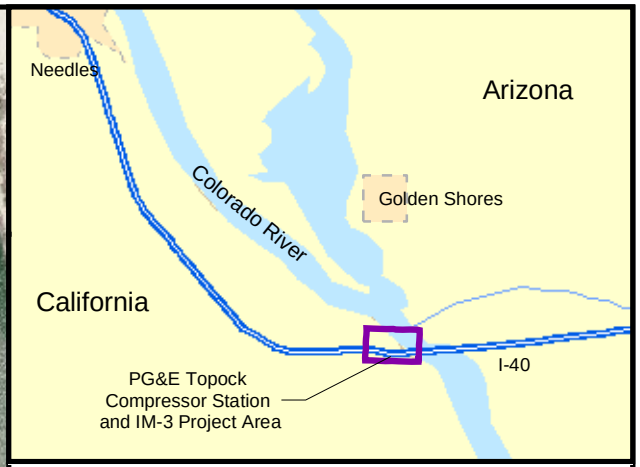
TLI	Truesdail Laboratories, Inc.
EMXT	Emax Laboratories
WDR	Waste Discharge Requirements

SC	specific conductance
NAD	sodium, dissolved
TDS	total dissolved solids
TRB	turbidity
CRTD	chromium, dissolved
CR6	hexavalent chromium
CL	chloride
FL	fluoride
BD	boron, dissolved
MOD	molybdenum, dissolved
NO3NO2N	nitrate/nitrite (as N)
SO4	sulfate

NO2NO3NC nitrate/nitrite as nitrogen was calculated as the sum of nitrate as nitrogen and nitrite as nitrogen.

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
SITE LOCATION AND LAYOUT

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

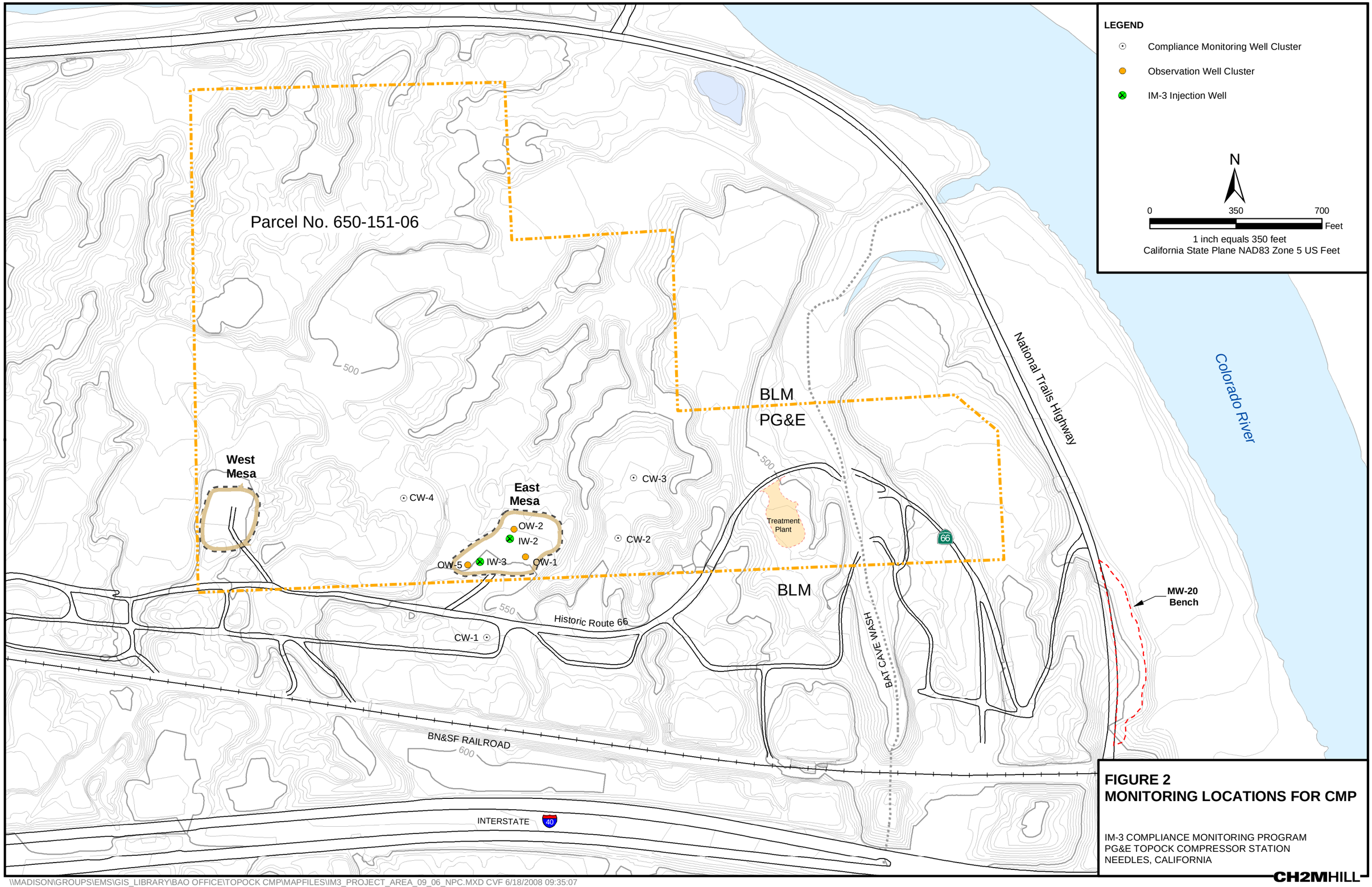
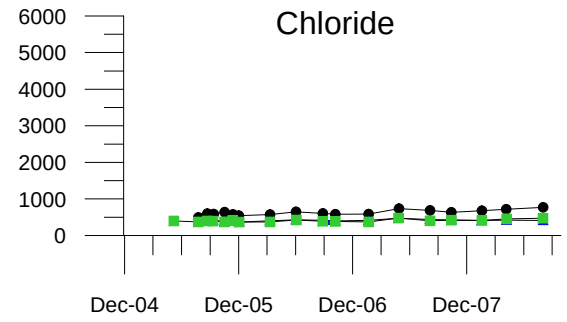


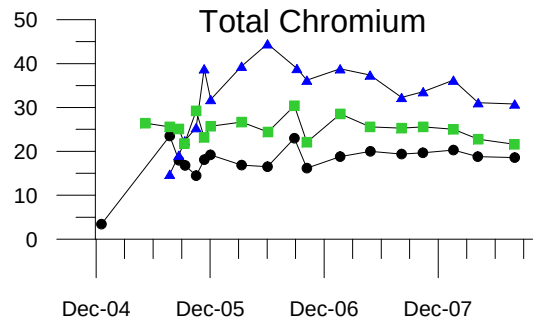
FIGURE 2
MONITORING LOCATIONS FOR CMP

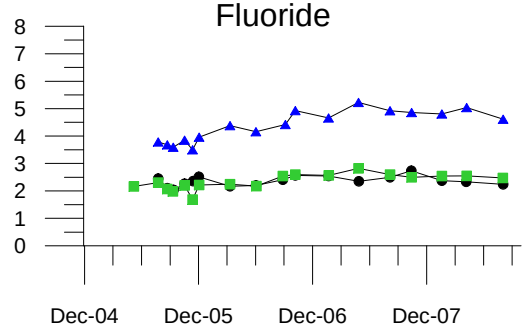
IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

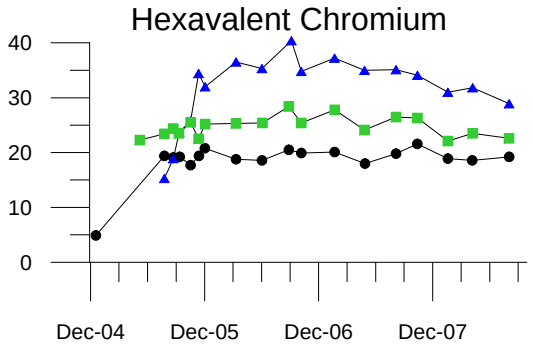
CH2MHILL

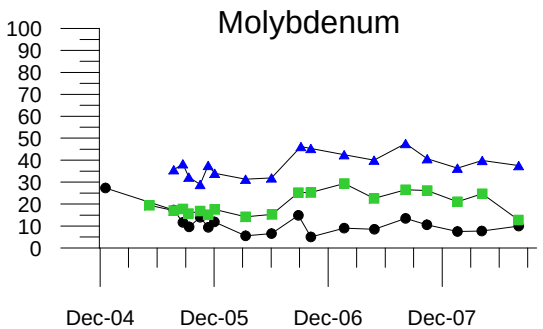
\\MADISON\GROUPS\EMS\GIS_LIBRARY\BAO OFFICE\TOPOCK CMP\MAPFILES\IM3_PROJECT_AREA_09_06_NPC.MXD CVF 6/18/2008 09:35:07

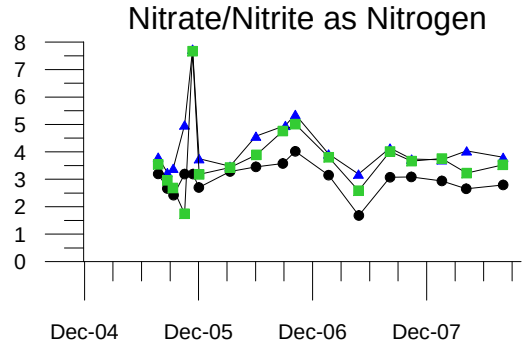


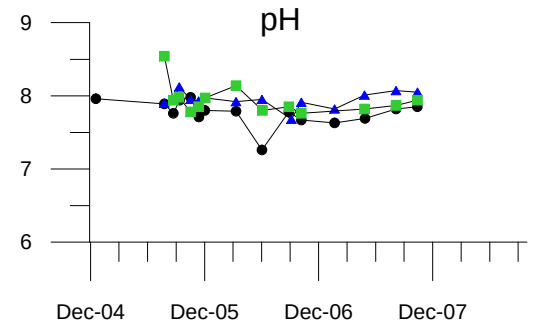


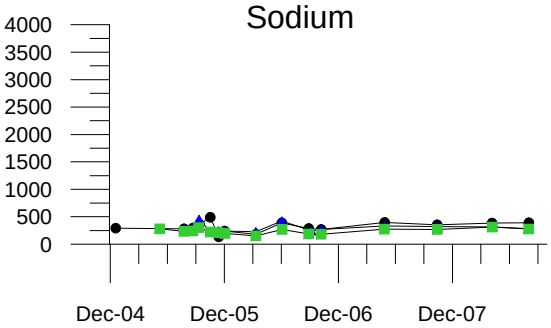


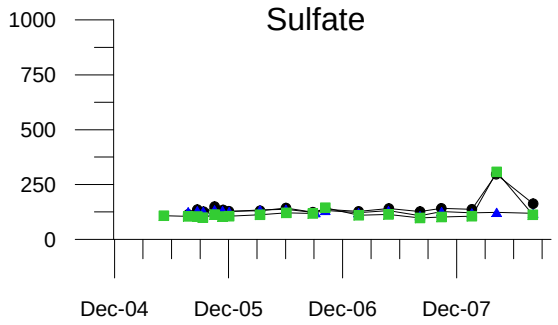


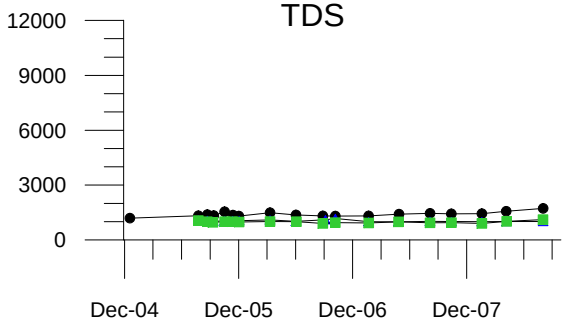


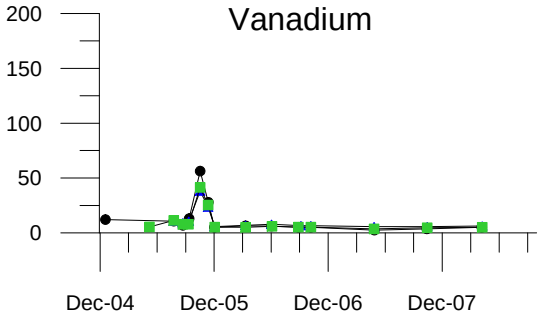


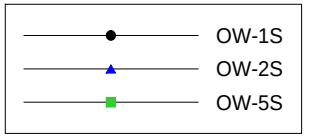








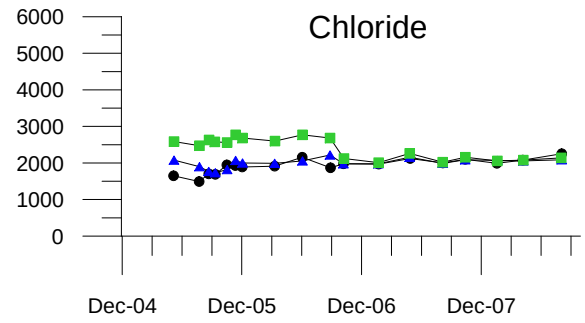


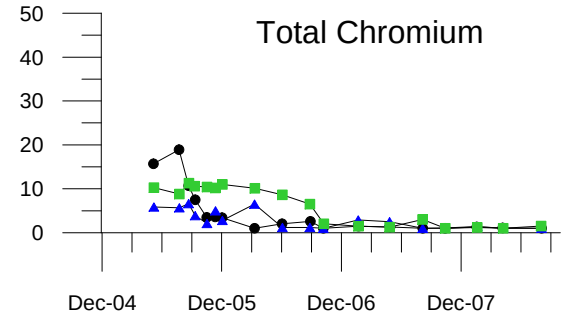


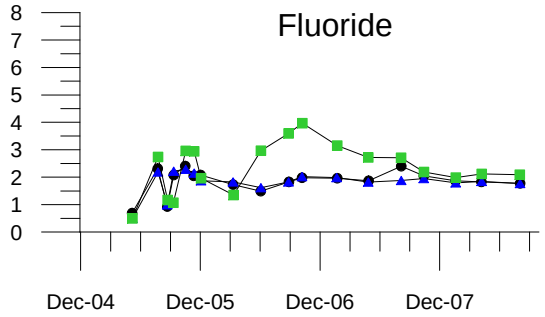
Cr(T), Cr(VI), molybdenum, and vanadium concentration units in µg/L. Other analyte concentration units in mg/L. pH in pH units.

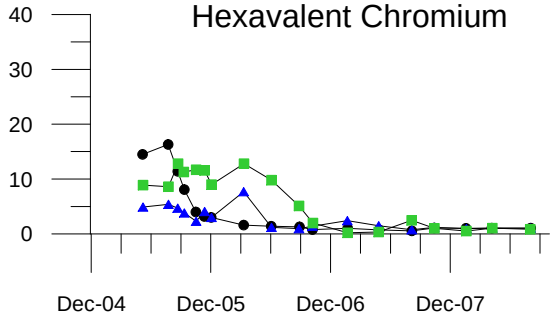
FIGURE 3A
OW-1S, OW-2S, OW-5S
WATER QUALITY HYDROGRAPHS
IM3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

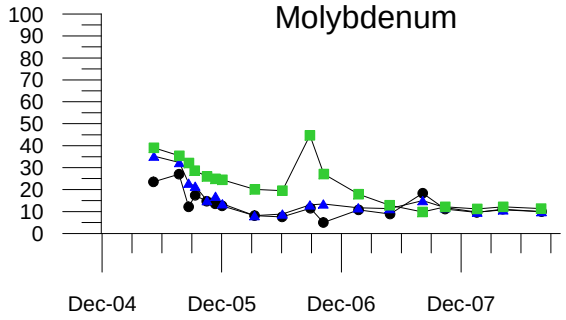
CH2MHILL

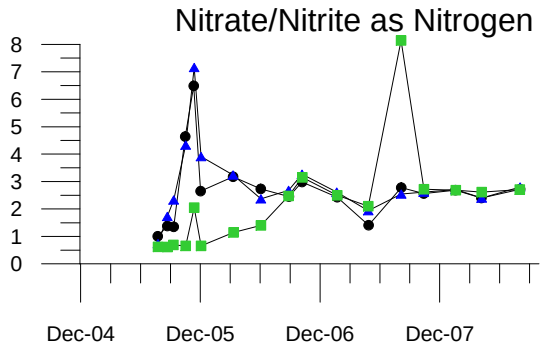


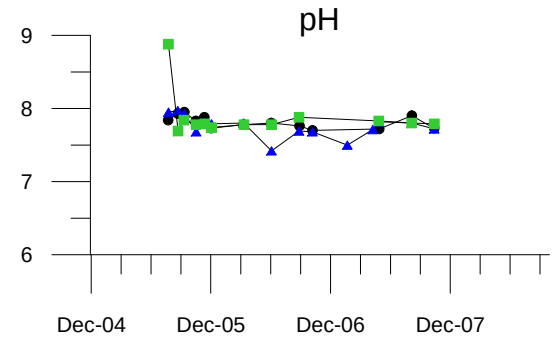


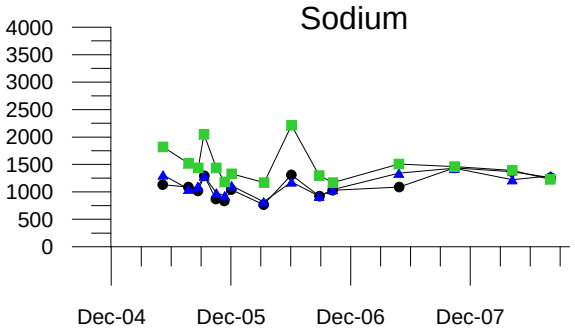


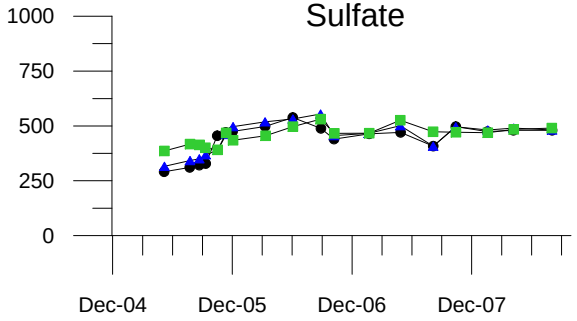


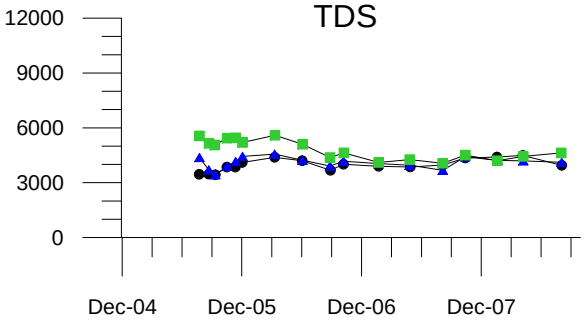


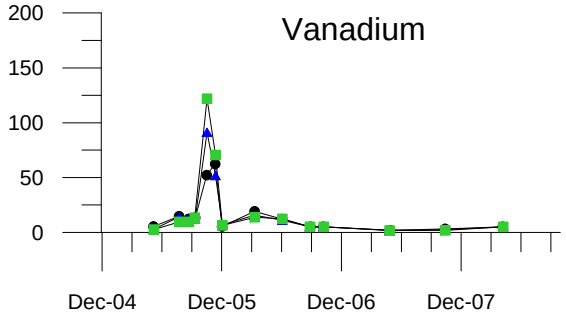


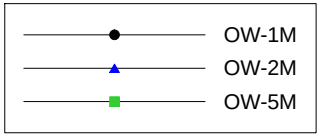












Cr(T), Cr(VI), molybdenum, and vanadium concentration units in µg/L. Other analyte concentration units in mg/L. pH in pH units.

FIGURE 3B
OW-1M, OW-2M, OW-5M
WATER QUALITY HYDROGRAPHS
IM3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

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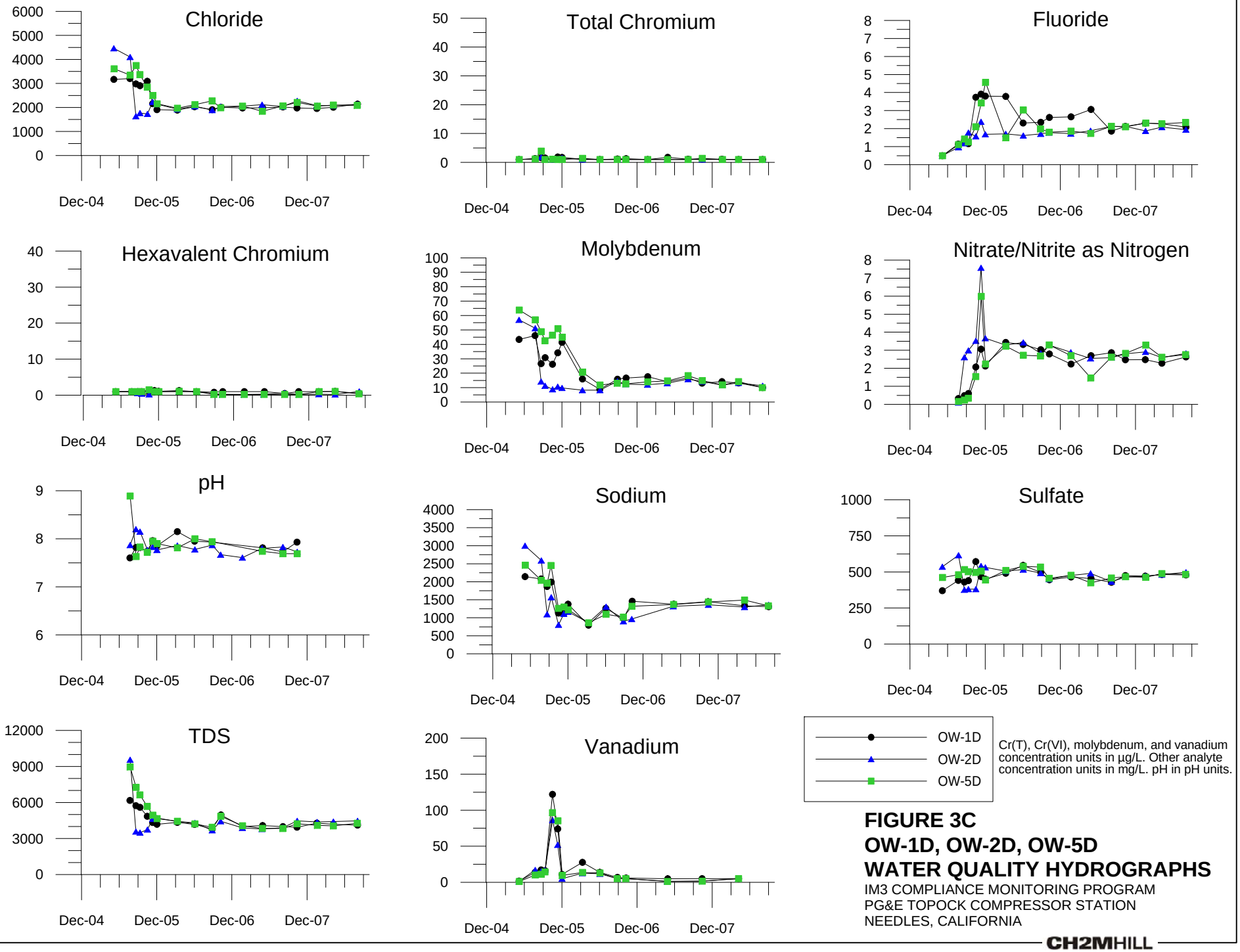
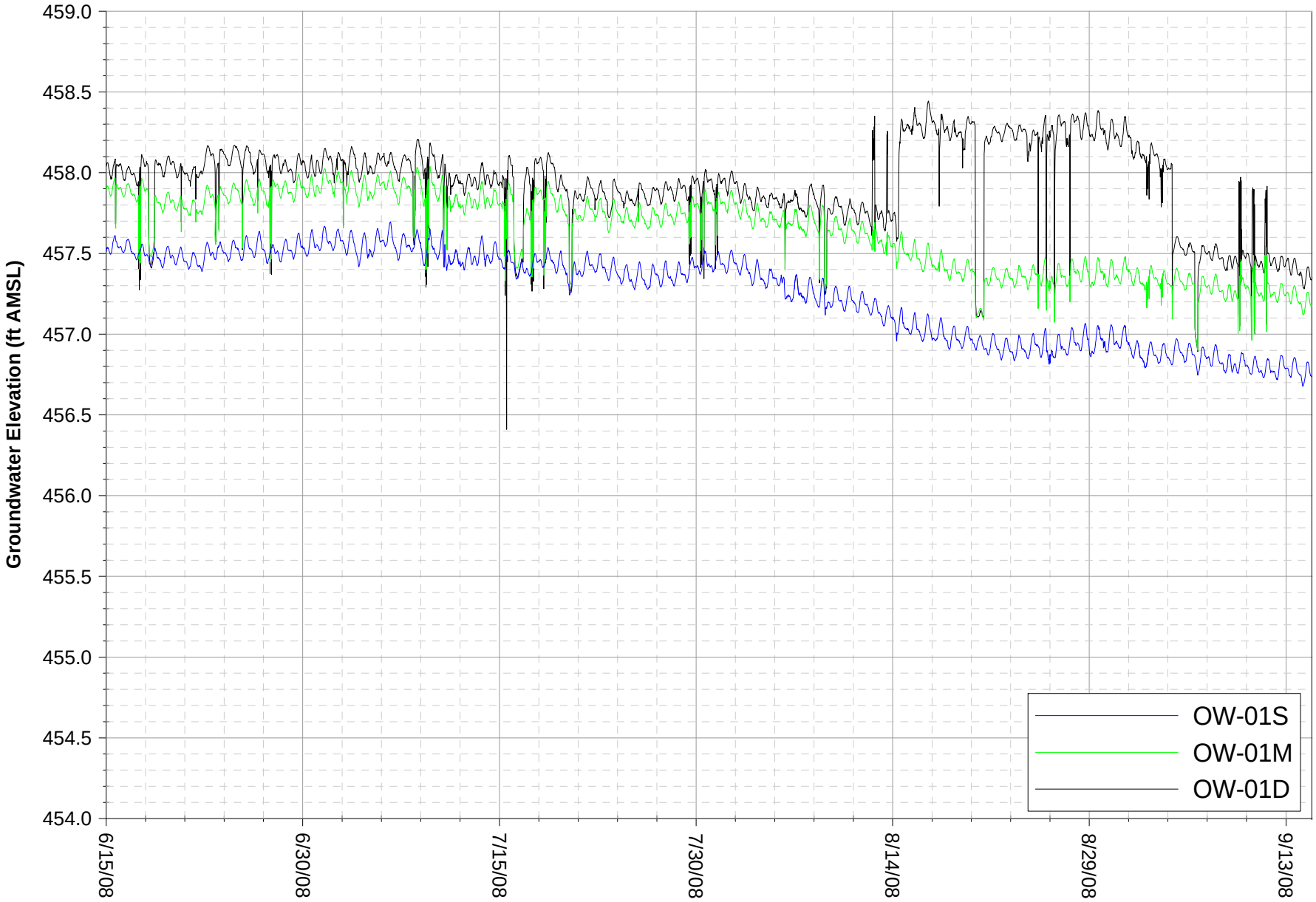


FIGURE 3C
OW-1D, OW-2D, OW-5D
WATER QUALITY HYDROGRAPHS
IM3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

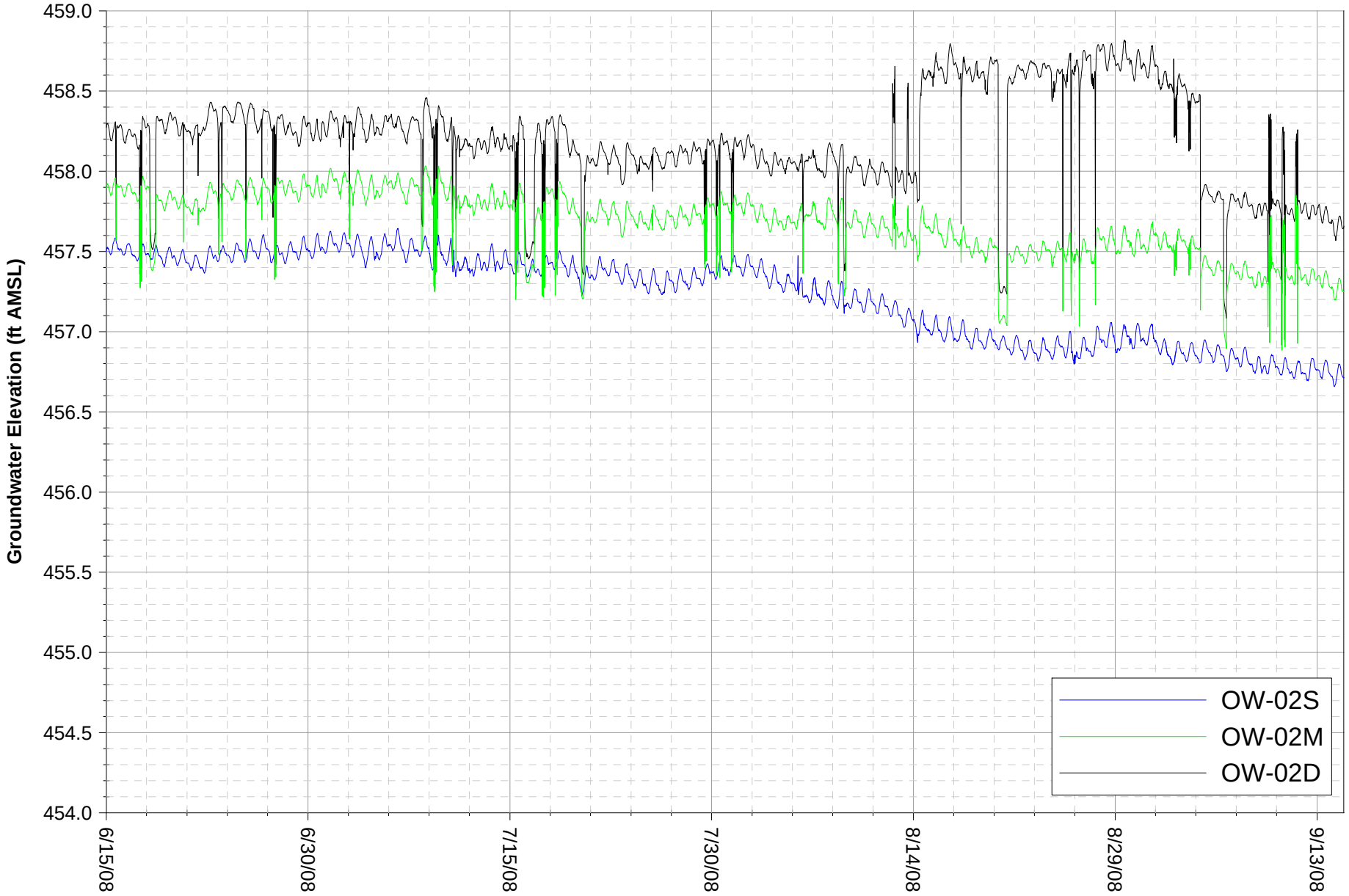
CH2MHILL



Note:
Data subject to review.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008.
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.
Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4A
OW-01 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

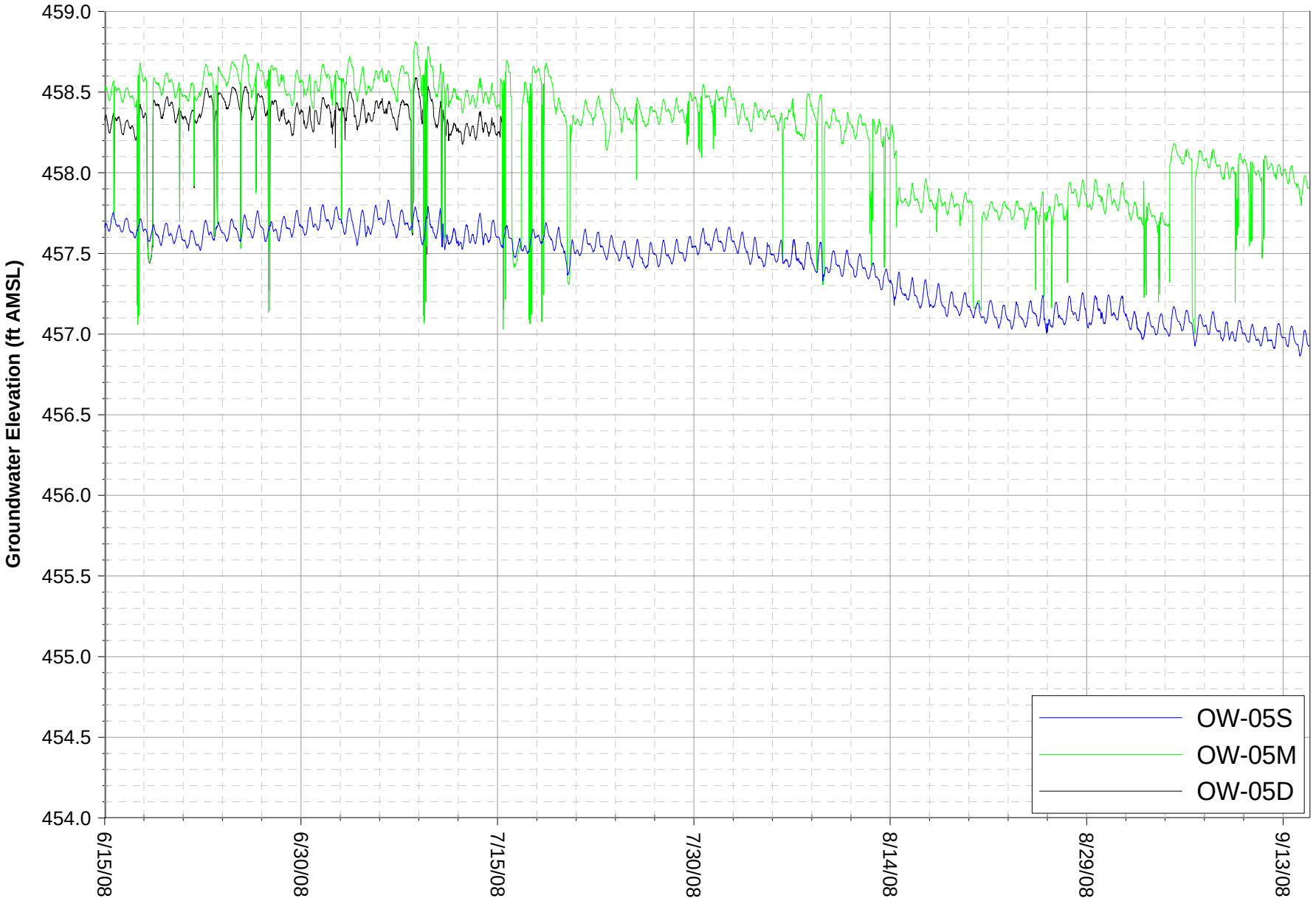
CH2MHILL



Note:
Data subject to review.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008..
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.
Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4B
OW-02 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

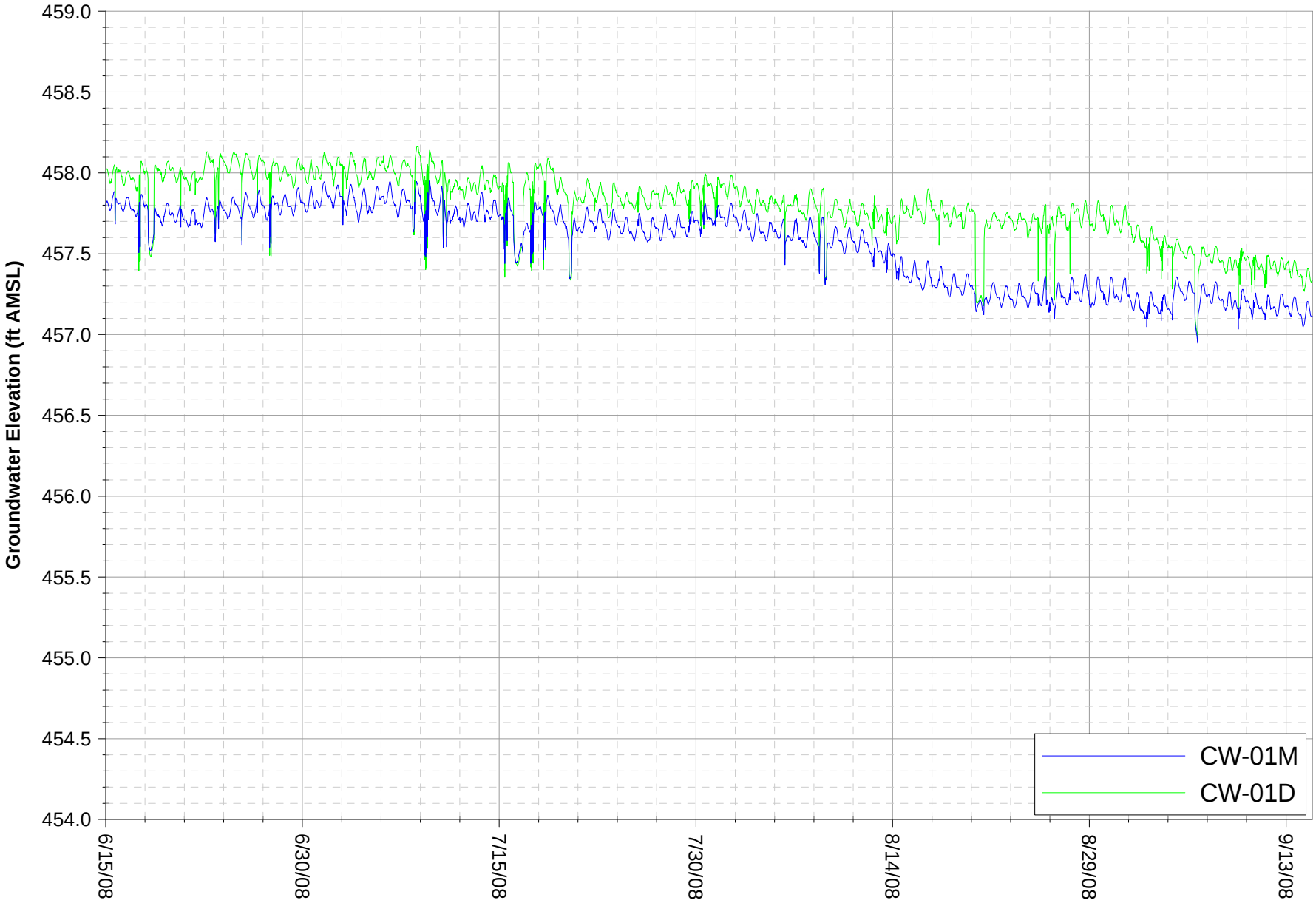


Note:
Data subject to review.
OW-05D data unavailable 7/15/08 to 9/15/08 due to transducer failure.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008..
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.

Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4C
OW-05 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

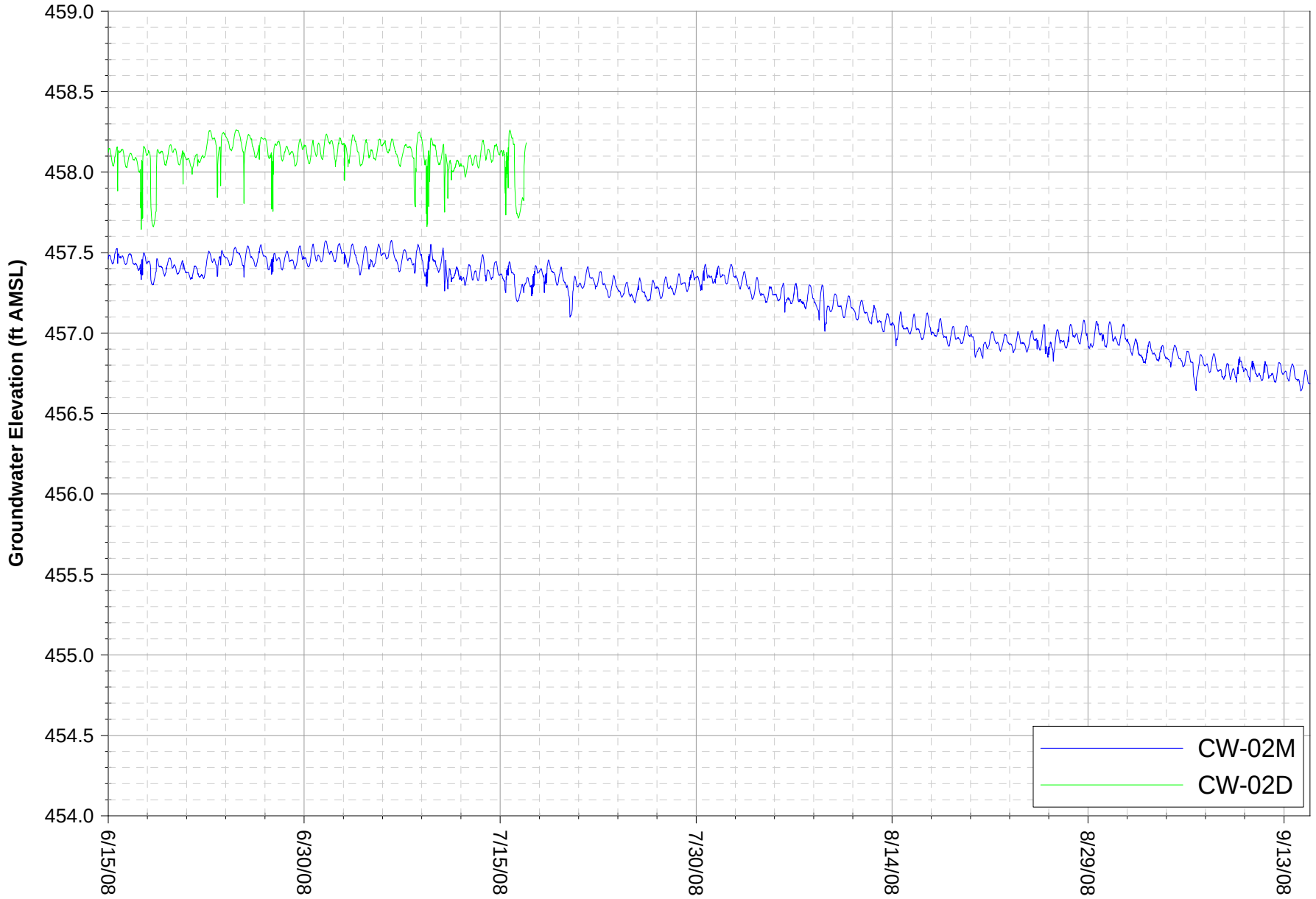
CH2MHILL



Note:
Data subject to review.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008..
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.
Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4D
CW-01 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

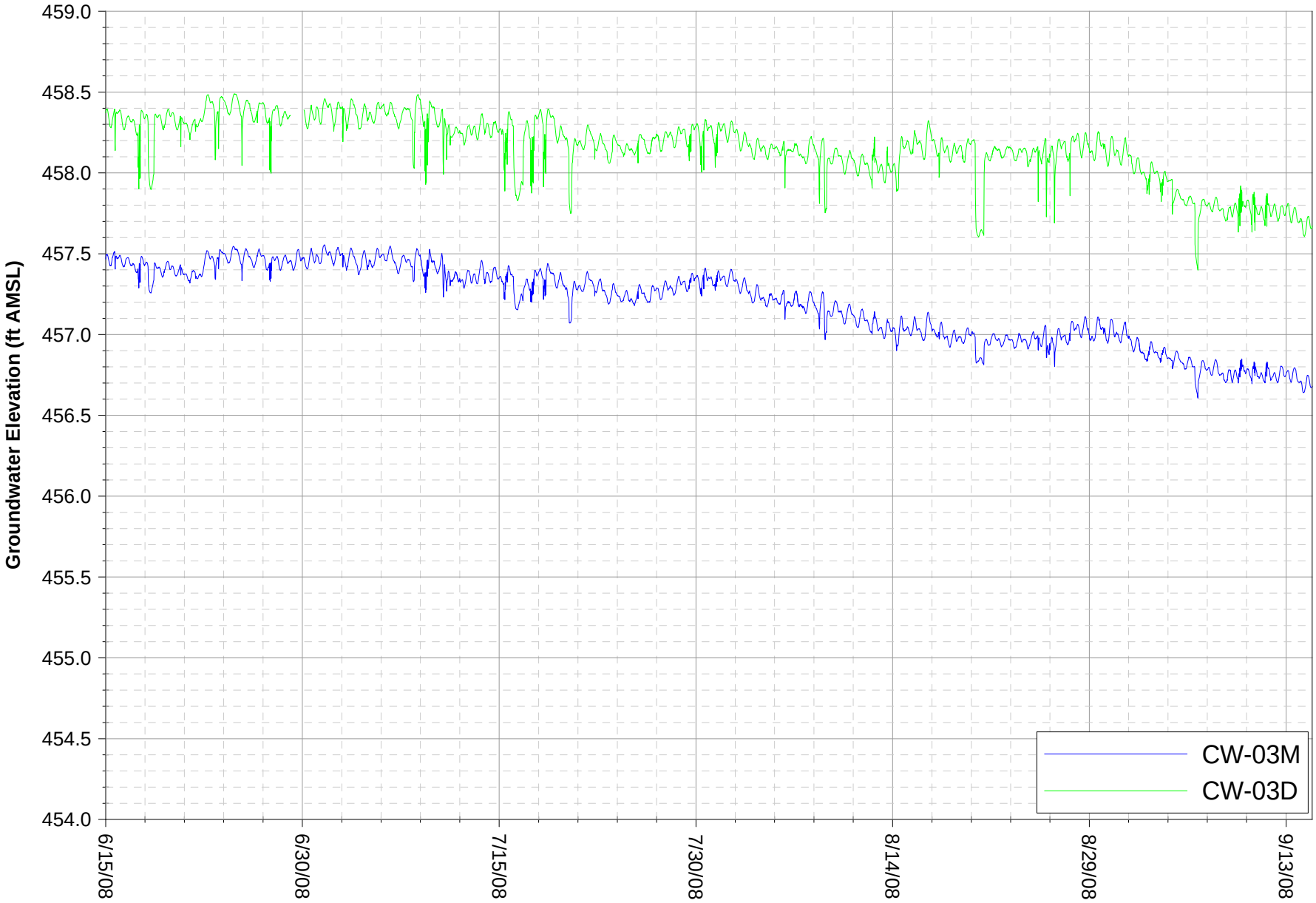


Note: Data subject to review.
CW-02D data unavailable 7/15/08 to 9/15/08 due to transducer failure.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008..
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.

Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4E
CW-02 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

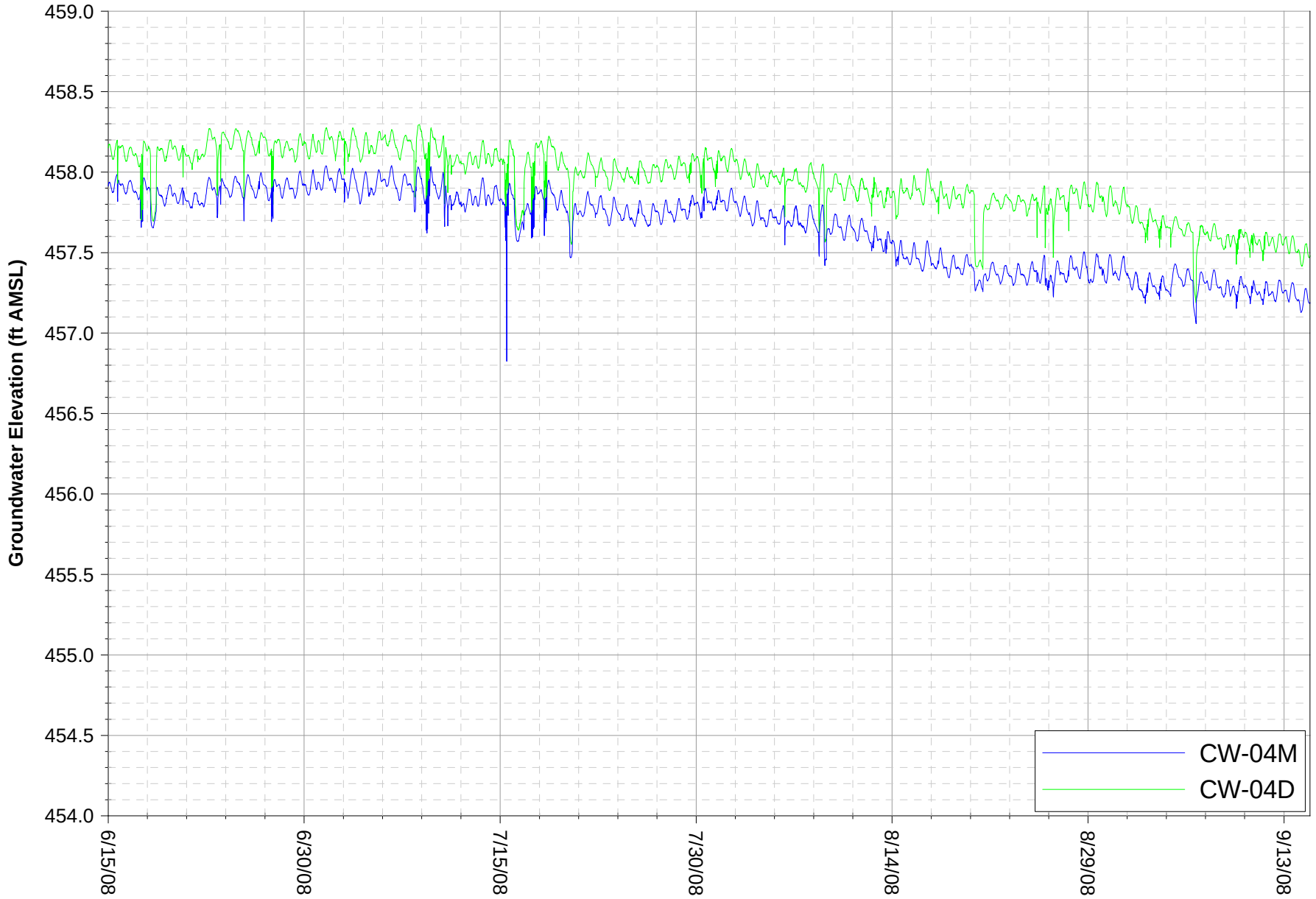
CH2MHILL



Note:
Data subject to review.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008..
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.
Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4F
CW-03 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

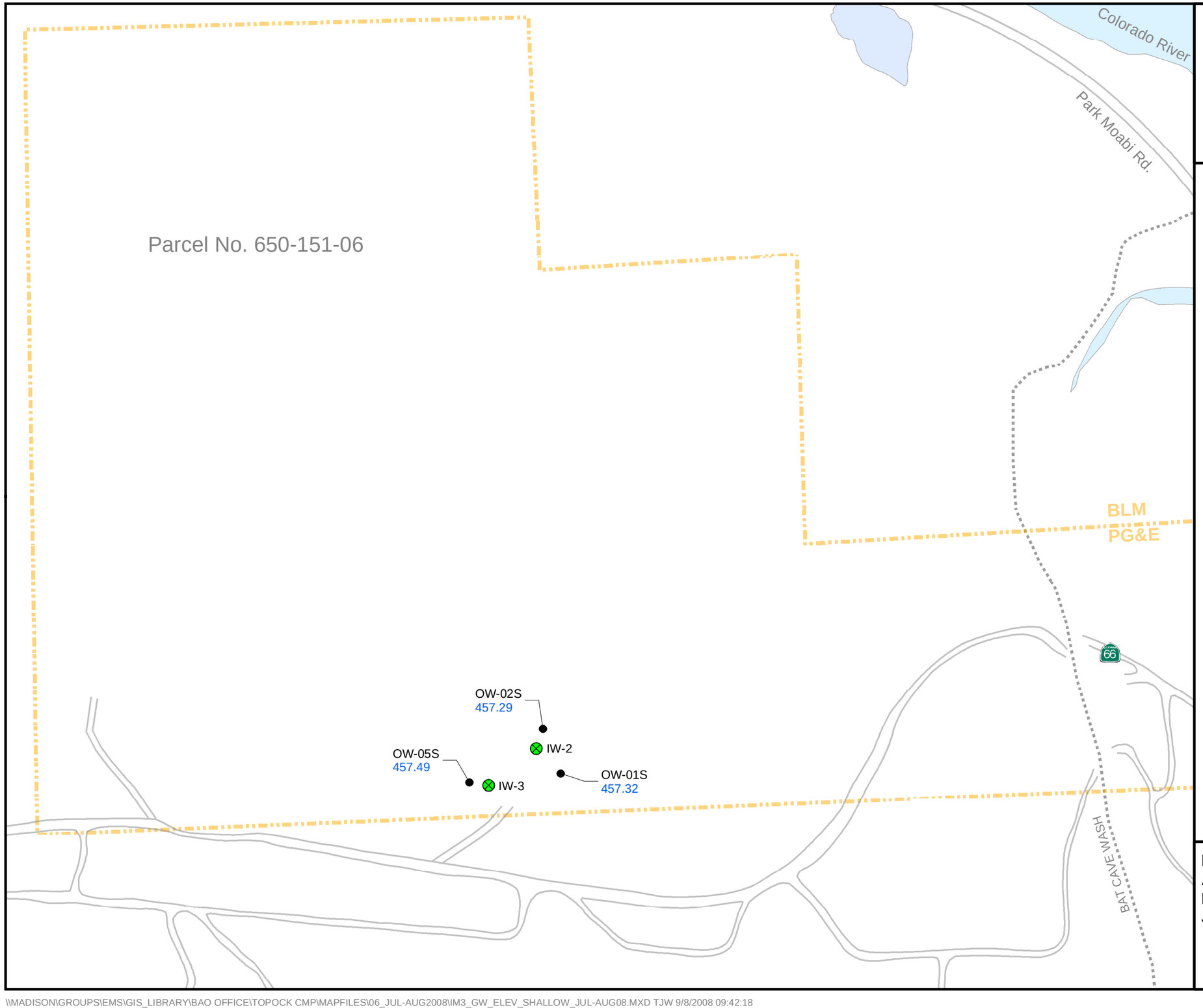
CH2MHILL



Note:
Data subject to review.
Injection well IW-03 was in operation 6/25 - 8/11, 8/12 - 8/15, 8/17 - 8/19/2008..
Injection well IW-02 was in operation on 7/25, 8/12 - 8/31/2008.
Backwashing events occurred as follows:
IW-02: 9/9, 9/10, and 9/11/2008.
IW-03: 6/17, 6/27, 7/9, 7/15, 7/17, 7/18, 8/12, 8/13, 9/2, and 9/3/2008.

FIGURE 4G
CW-04 GROUNDWATER ELEVATION HYDROGRAPHS
IM-3 COMPLIANCE MONITORING PROGRAM
PG & E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL



N

0 250 500 Feet

1 inch equals 250 feet

California State Plane NAD83 Zone 5 US Feet

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well

Groundwater Elevations for Shallow Wells in IM-3 Injection Area

OW-02S
457.29
Salinity and temperature adjusted groundwater head elevation in feet above mean sea level (MSL)

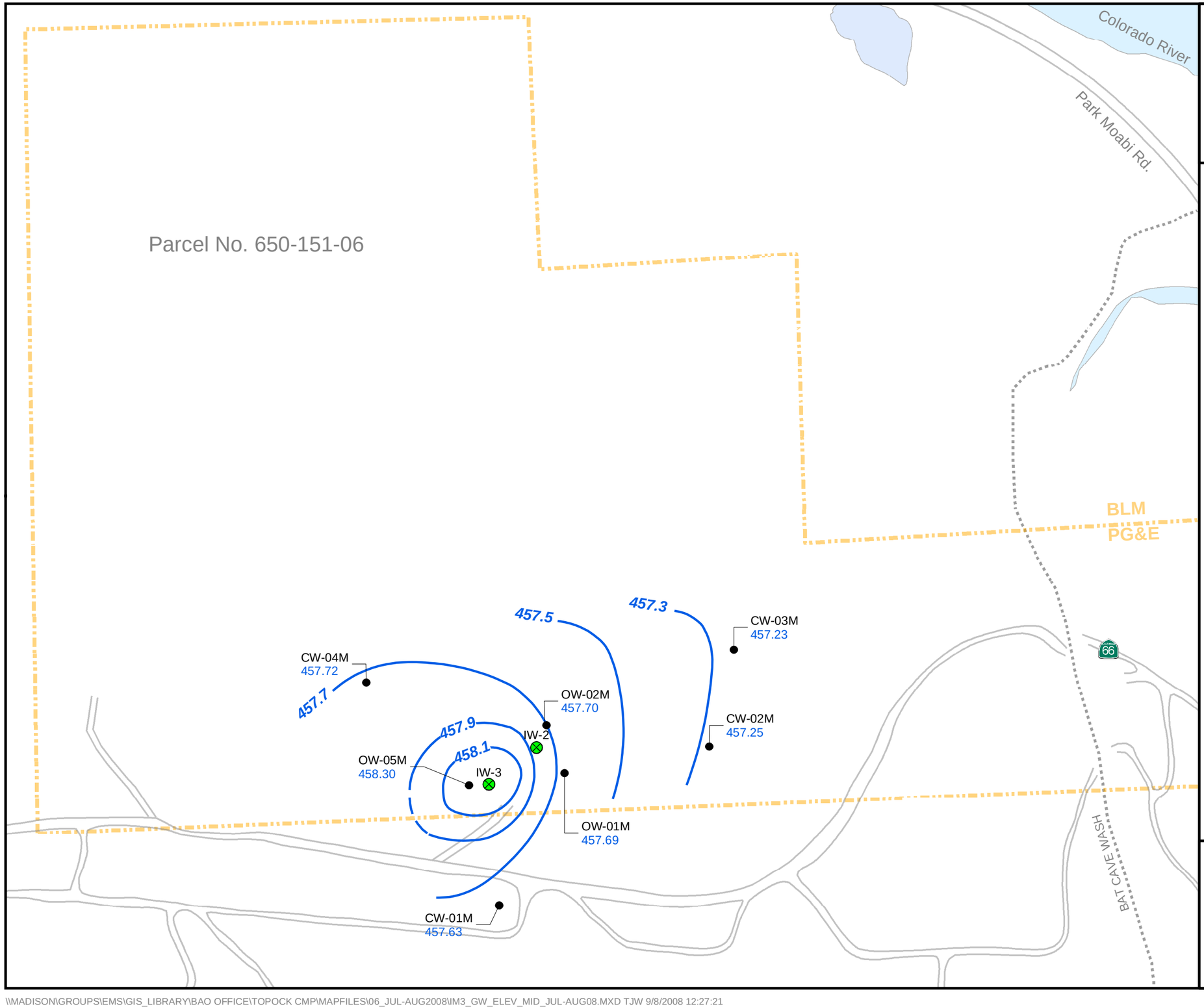
Notes:
Data posted and contoured from monthly average heads measured with transducers at 30 minute intervals.

FIGURE 5A
AVERAGE GROUNDWATER ELEVATIONS FOR SHALLOW WELLS JULY 15 TO AUGUST 15, 2008

IM3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\BAO OFFICE\TOPOCK CMP\MAPFILES\06_JUL-AUG2008\IM3_GW_ELEV_SHALLOW_JUL-AUG08.MXD TJW 9/8/2008 09:42:18



N

0 250 500 Feet

1 inch equals 250 feet

California State Plane NAD83 Zone 5 US Feet

LEGEND

- Groundwater Monitoring, Compliance, and Observation Well
- IM-3 Injection Well

Groundwater Elevations for Mid-depth Wells in IM-3 Injection Area

- OW-02M 457.70 — Salinity and temperature adjusted groundwater head elevation in feet above mean sea level (MSL)
- Groundwater elevation contour in feet above MSL (0.2 foot interval), dashed where inferred

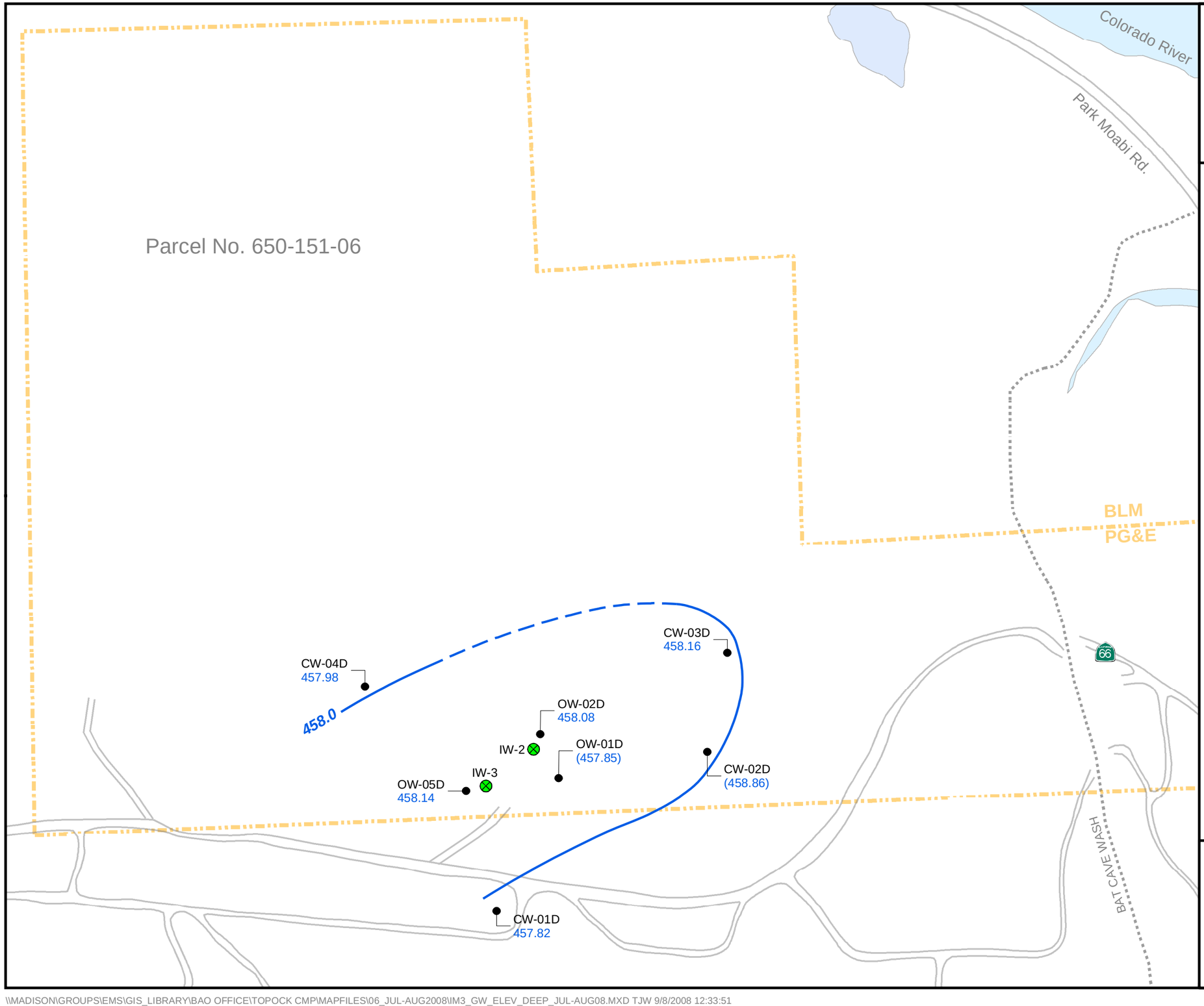
Notes:
Data posted and contoured from monthly average heads measured with transducers at 30 minute intervals.

FIGURE 5B
AVERAGE GROUNDWATER ELEVATION CONTOURS FOR MID-DEPTH WELLS JULY 15 TO AUGUST 15, 2008

IM3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\BAO OFFICE\TOPOCK CMP\MAPFILES\06_JUL-AUG2008\IM3_GW_ELEV_MID_JUL-AUG08.MXD TJW 9/8/2008 12:27:21



N

0 250 500 Feet

1 inch equals 250 feet

California State Plane NAD83 Zone 5 US Feet

LEGEND

- Groundwater Monitoring, Compliance and Observation Well
- IM-3 Injection Well

Groundwater Elevations for Deep Wells in IM-3 Injection Area

- OW-05D 458.14 — Salinity and temperature adjusted groundwater head elevation in feet above mean sea level (MSL)
- Groundwater elevation contour in feet above MSL (0.2 foot interval), dashed where inferred

Notes:
Data posted and contoured from monthly average heads measured with tranducers at 30 minute intervals. (OW-01D) and (CW-02D) excluded from contouring.

FIGURE 5C
AVERAGE GROUNDWATER ELEVATION CONTOURS FOR DEEP WELLS JULY 15 TO AUGUST 15, 2008

IM3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\BAO OFFICE\TOPOCK CMP\MAPFILES\06_JUL-AUG2008\IM3_GW_ELEV_DEEP_JUL-AUG08.MXD TJW 9/8/2008 12:33:51

Appendix A
Laboratory Reports, Third Quarter 2008

Appendix B
Field Data Sheets, Third Quarter 2008