July 13, 2011

Exelon Generation

NP-11-0030
July 13, 2011

10 CFR 52, Subpart A

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Exelon Nuclear Texas Holdings, LLC
Victoria County Station Early Site Permit Application
Response to Request for Additional Information Letter No. 08
NRC Docket No. 52-042

Attached are responses to NRC staff questions included in Request for Additional Information (RAI) Letter No. 08, dated April 19, 2011, related to Early Site Permit Application (ESPA), Part 2, Sections 02.03.02, 02.04.03, 02.04.12, and 02.04.13. NRC RAI Letter No. 08 contained fourteen (14) Questions. This submittal comprises a partial response to RAI Letter No. 08, and includes responses to the following Question:

02.04.12-8

When a change to the ESPA is indicated by a Question response, the change will be incorporated into the next routine revision of the ESPA, planned for no later than March 31, 2012.

Of the remaining thirteen (13) RAIs associated with RAI Letter No. 08, responses to nine (9) Questions were submitted to the NRC in Exelon Letter NP-11-0017, dated May 18, 2011, and responses to two (2) Questions were submitted to the NRC in Exelon Letter No. NP-11-0021, dated June 2, 2011. The response to RAI Questions 02.04.12-2 and 02.04.13-1 will be provided by August 17, 2011. These response times are consistent with the response times described in NRC RAI Letter No. 08, dated April 19, 2011.

Regulatory commitments established in this submittal are identified in Attachment 2.

If any additional information is needed, please contact David J. Distel at (610) 765-5517 or Joshua Trembley at 610-765-5345.

D087
NRO

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13th day of July, 2011.

Respectfully,

Marilyn C. Kray
Vice President, Nuclear Project Development

Attachments:
1. Question 02.04.12-8
2. Summary of Regulatory Commitments

cc: USNRC, Director, Office of New Reactors/NRLPO (w/Attachments)
USNRC, Project Manager, VCS, Division of New Reactor Licensing (w/Attachments)
USNRC Region IV, Regional Administrator (w/Attachments)

RAI 02.04.12-8:

Question:

In accordance with the requirements of 10 CFR 100.20(c) "Factors to be considered when evaluating sites" relating to hydrology and, 10 CFR 52.79(a) "Contents of applications; technical information in final safety analysis report" relating to hydrologic characteristics of the proposed site, and as recommended by Standard Review Plans 2.4.12 "Groundwater" and 2.4.13 "Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Waters" acceptance criteria,, the NRC Staff requests that the Applicant discuss the hydraulic connections between river hydrographs, the level in Linn Lake and the water levels measured in wells on the eastern side of the site (OW2348 U/L). Describe the potential hydraulic communication postulated in the FSAR (Rev0, page 2.4.12-22) and causal mechanisms for the pervasive downward trend in well hydrographs and if the model is in agreement with the observed pattern of vertical gradients.

Response:

The series of hydrographs presented in the attached, updated SSAR Figure 2.4.12-17 shows groundwater levels in observation well pairs at the VCS site. The hydrographs show a consistent downward trend in groundwater levels beginning in late 2007 and continuing through approximately November 2009. Thereafter, groundwater levels began an increasing trend. This pattern was observed in each well in the Upper Shallow, Lower Shallow and Deep aquifers at the VCS site through October 2010. The water-level trend in well pairs OW-2324U/L and OW-2348U/L is slightly different in that these were the only wells that showed a decrease (of less than one foot) for the last measurement in October 2010.

Figure 1 depicts the monthly Palmer Drought Severity Index for the period 2007 through 2010 for South Central Texas (Division 7) and the Texas Upper Gulf Coast (Division 8), (Reference 1). The VCS site is located in Division 8 whereas most of the Guadalupe River watershed is located northwest of the site in Division 7. These are climatic divisions monitored by the National Climatic Data Center of the U.S. Department of Commerce. The Palmer index uses temperature and rainfall data to determine relative dryness. An index of 0 indicates normal dryness, -4 indicates extreme drought and +4 indicates extreme wetness. Figure 1 indicates that a drought of increasing severity began in the VCS region in September 2007 and continued through September 2009. After September 2009, a reversal in the climatic trend occurred that resulted in a condition of relative wetness.

Figure 2 is a hydrograph showing the daily height of the Guadalupe River at the USGS gage near Bloomington, Texas (approximately 5 miles northeast of the VCS power block area) from January 2007 through December 2010 (Reference 2). With the exception of a few brief events, the hydrograph shows a decreasing water level in the river from a gage height of approximately

24 feet in September 2007 to approximately 7 feet in September 2009. After September 2009 the water level in the river was generally higher and fluctuated around a gage height of approximately 20 feet. During low-flow periods after March 2010 the water level trended downward approximately 5 feet through the end of the year.

Based on the close correlation of the monthly Palmer Drought Severity Index with the river stage and groundwater levels during the period 2007 through 2010, it appears that the causal mechanism for the pervasive downward trend in VCS observation well hydrographs from September 2007 through approximately November 2009 was a regional drought that began in September 2007 and lasted until September 2009.

The hydraulic connection between the Guadalupe River, Linn Lake and groundwater levels in observation wells on the VCS site can be explained in terms of the site's location within the lower portion of the outcrop area of the Chicot aquifer. Vertical hydraulic gradients are predominantly downward in the recharge area of regional groundwater flow systems, and upward in areas of groundwater discharge (SSAR Reference 2.4.12-15). Groundwater recharged to the Chicot aquifer in the upland portion of the outcrop area (including the northern and western parts of the VCS site) flows down-gradient and discharges to the river and lake. Hydrographs of well pairs in the northern and western parts of the VCS site generally show relatively large downward vertical hydraulic gradients; whereas near areas of groundwater discharge (including the eastern part of the VCS site), well-pair hydrographs indicate upward or relatively small downward vertical hydraulic gradients. These relationships are depicted in the updated hydrographs in SSAR Figure 2.4.12-17 and are most likely due to the location of the VCS site within the Guadalupe River basin groundwater flow system. This hypothesis is suggested rather than preferential hydraulic communication on the eastern side of the site, as postulated on page 2.4.12-22 (Subsection 2.4.12.2.3) of SSAR Rev 000.

Figure 3 shows average observed and modeled vertical hydraulic gradients for the period from October 2007 through August 2009 at each VCS observation well pair. The average groundwater level measured in each observation well over this period was used to calibrate the VCS numerical model. Table 1 provides the calculated observed and modeled vertical hydraulic gradients shown in Figure 3. As depicted in the figure, the observed vertical hydraulic gradients in the northern and western parts of the VCS site are consistently downward, and the modeled vertical hydraulic gradients are in general agreement with this trend. In the eastern part of the site, near the floodplain of the Guadalupe River, the observed vertical hydraulic gradients are upward or only weakly downward. This condition in the eastern part of the site suggests transition from an area of groundwater recharge to one of groundwater discharge. The trend in modeled vertical hydraulic gradients shown in Figure 3 is generally the same as that of the observed gradients, in that the modeled gradients are generally highest in the northern and western parts of the site and lowest in the eastern part.

Updates to the SSAR are presented in this response. SSAR Subsections 2.4.12.2.2 and 2.4.12.2.3 will be updated in a future revision of the ESP application to include discussion of

water levels measured from November 2009 to October 2010. Groundwater levels measured during this period demonstrate a rising trend compared to approximately the previous two years. Together with Figures 1 and 2, these new groundwater level data provide evidence to support the conclusion that the pervasive downward trend in well hydrographs during the period from October 2007 to August 2009 was due to regional drought.

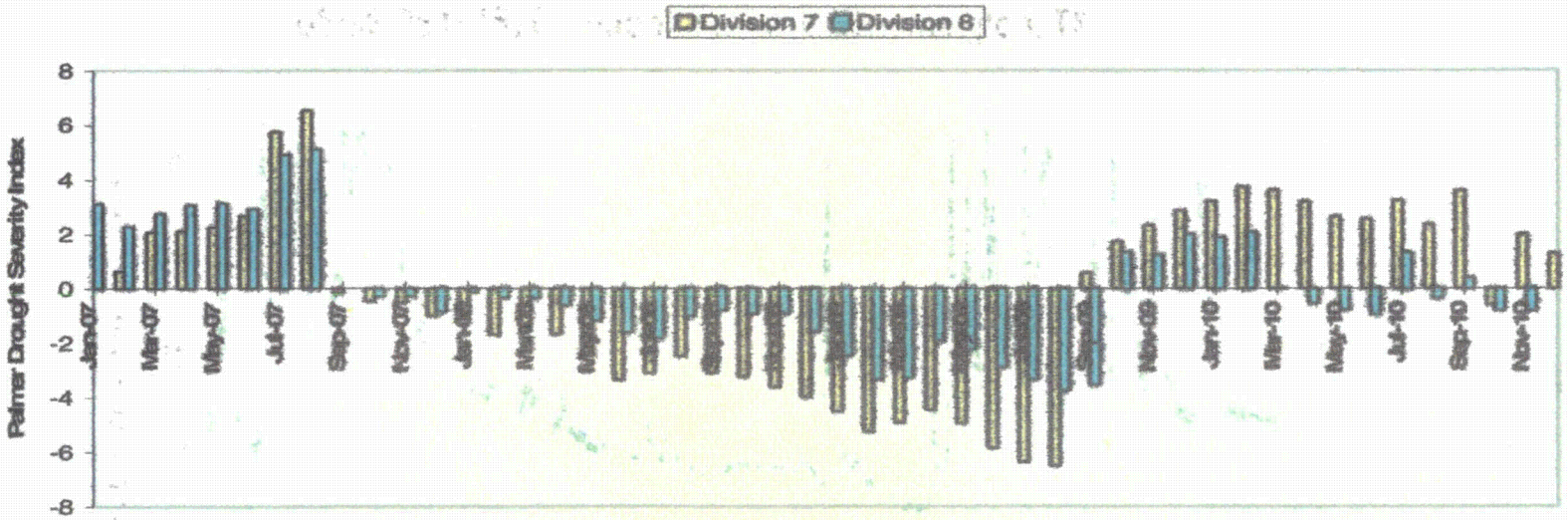
SSAR Subsection 2.4.12.2.3 will be revised to discuss the position of the VCS site within its regional groundwater flow regime and how that regime causes the larger vertical hydraulic gradients observed on the western side of the site relative to the eastern side. A paragraph will also be added to SSAR Subsection 2.4.12.2.3 to discuss the geomorphology of Linn Lake and the inferred relationship between water levels in the lake and the Guadalupe River. Linn Lake is an oxbow lake on the west side of the Guadalupe River valley. The lake is a former meander that has been cut off from the main channel of the Guadalupe River. The Bloomington, Texas 7.5-minute USGS topographic map (Reference 2.4.12-32) shows the river to be approximately 1,000 feet from the lake at their closest point, and both to be at approximately the same elevation. No water level measurements for Linn Lake are available. However, because of the geomorphology of Linn Lake and its proximity to the river, it is likely that the lake and river are hydraulically connected and that the stage in the lake trends similarly to the stage of the nearby river.

SSAR Figure 2.4.12-15 will be updated to include potentiometric surface maps based on water levels measured on March 17, 2010 and October 18, 2010. The hydrographs in SSAR Figure 2.4.12-17 will be updated to include water levels measured on November 19, 2009, March 17, 2010, June 8, 2010 and October 18, 2010. SSAR Table 2.4.12-1 will be updated to correct the elevations of the top and bottom of all observation well screens. SSAR Tables 2.4.12-6 and 2.4.12-7 will be updated to include groundwater level measurements on November 19, 2009, March 17, 2010, June 8, 2010 and October 18, 2010.

Response References:

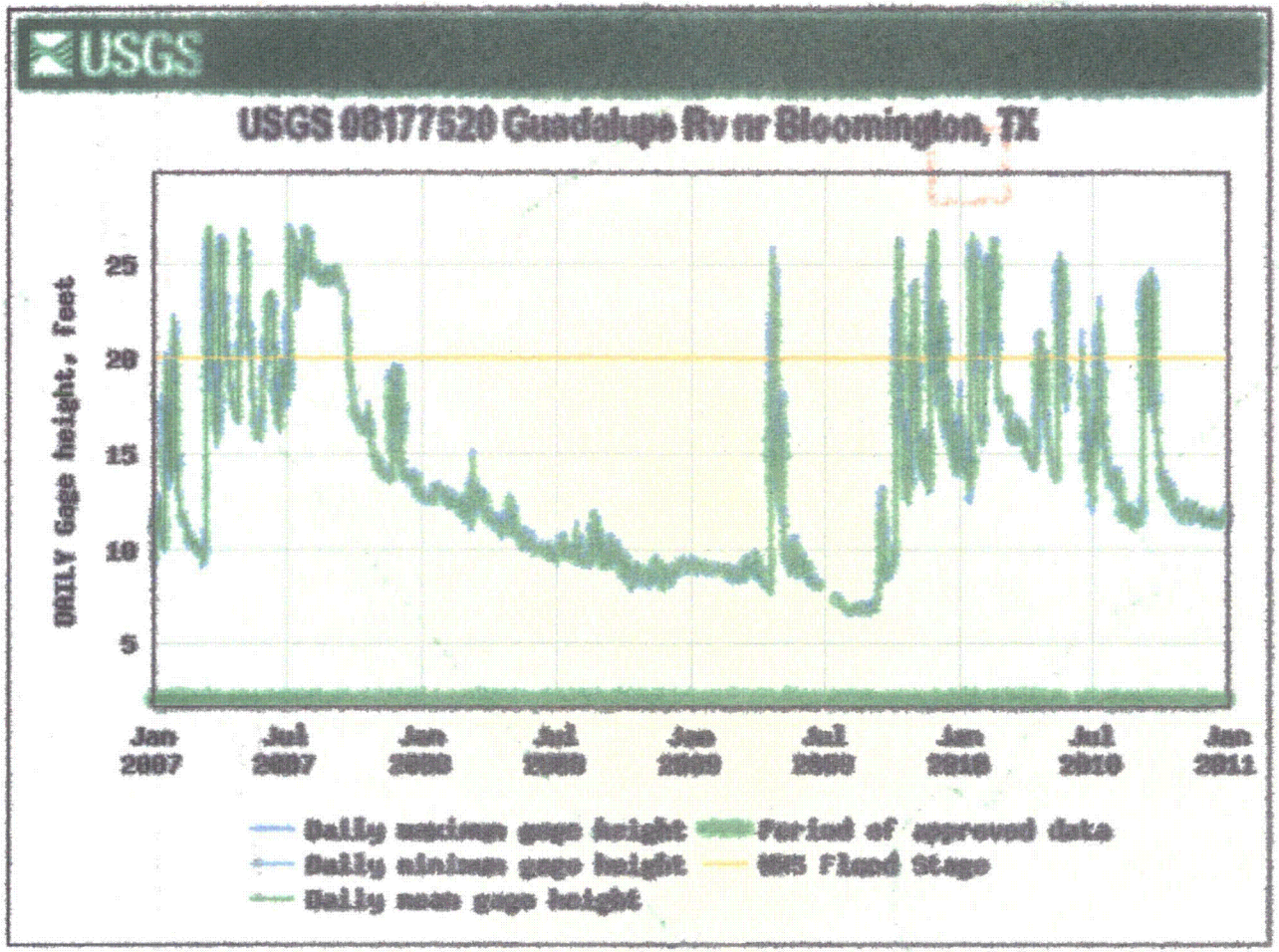
1. "NCDC Climate Data Online," National Climate Data Center (NCDC), 2011. Available at: http://www7.ncdc.noaa.gov/CDO/CDODivisionalSelect.jsp#, accessed May 18, 2011.

2. U.S. Department of the Interior, U.S. Geological Survey, Surface Water Data for Texas, USGS Surface-Water Annual Statistics. Available at: http://waterdata.usgs.gov/tx/nwis/annual?, accessed May 23, 2011.



Source: Reference 1

Figure 1 Monthly Palmer Drought Severity Indices for South Central Texas (Division 7) and the Texas Upper Gulf Coast (Division 8)



Source: Reference 2

Figure 2 Hydrograph of Daily Gage Height in the Guadalupe River Near Bloomington, Texas

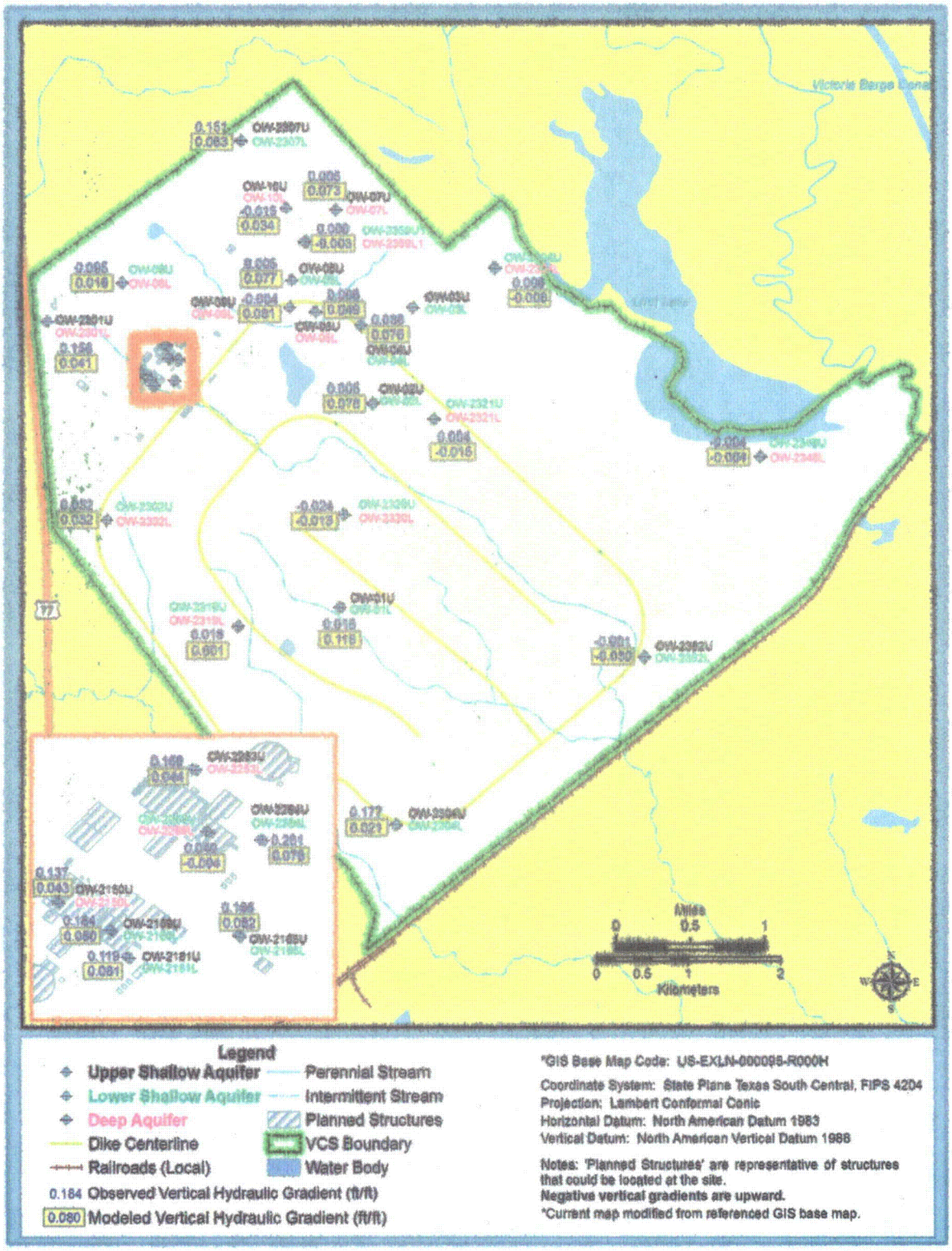


Figure 3 Average Observed and Modeled Vertical Hydraulic Gradients Throughout the VCS Site

Table 1 Calculation of Average Observed and Modeled Vertical Hydraulic Gradients (Sheet 1 of 2)

Well No.	Hydro-geologic Unit	Observed Vertical Gradient					Modeled Vertical Gradient							
		Midpoint Screen (ft NAVD 88)[a]	Average Monthly Water Elevation (ft NAVD 88)[a,b]	Δx (ft)[e]	Average Δh (ft)[b,f]	Average i,[b,g]	Sand Unit	Top of Sand (ft NAVD 88)[c]	Bottom of Sand (ft NAVD 88)[c]	Midpoint Sand (ft NAVD 88)	Modeled Water Elevation (ft NAVD 88)[d]	Δx (ft)[e]	Δh (ft)[f]	i,[g]
OW-01L	Lower	-32.78	30.00	49.94	0.73	0.015	Sand 4	-3.0	-34.7	-18.9	25.91	34.8	4.1	0.118
OW-01U	Upper	17.16	30.73				Sand 2	26.4	5.5	16.0	30.02			
OW-02L	Lower	-27.93	24.31	45.18	0.24	0.005	Sand 4	-15.6	-42.3	-29.0	23.96	54.7	4.3	0.078
OW-02U	Upper	17.25	24.55				Sand 2	40.0	11.4	25.7	28.22			
OW-03L	Lower	-16.79	19.03	44.39	n/a	n/a	Sand 4	10.1	-34.9	-12.4	22.46	38.8	n/a	n/a
OW-03U	Upper	27.60	dry				Sand 2	31.4	21.4	26.4	n/a			
OW-04L	Lower	-25.87	22.62	25.48	0.97	0.038	Sand 4	0.0	-39.3	-19.7	23.96	51.1	3.9	0.076
OW-04U	Upper	-0.39	23.59				Sand 2	40.0	22.9	31.5	27.82			
OW-05L	Deep	-46.74	25.61	73.81	0.46	0.006	Sand 5	-42.9	-56.9	-49.9	25.69	79.3	3.9	0.049
OW-05U	Upper	27.07	26.07				Sand 2	40.0	18.8	29.4	29.58			
OW-06L	Lower	-10.51	26.19	31.97	0.16	0.005	Sand 4	-9.0	-35.6	-22.3	26.23	50.0	3.8	0.077
OW-06U	Upper	21.46	26.35				Sand 2	40.0	15.3	27.7	30.06			
OW-07L	Deep	-40.53	19.62	59.85	0.29	0.005	Sand 5	-34.6	-43.2	-38.9	24.17	58.5	4.3	0.073
OW-07U	Upper	19.32	19.91				Sand 2	28.6	10.5	19.6	28.45			
OW-08L	Deep	-49.44	32.54	36.82	3.48	0.095	Sand 6	-49.2	-110.5	-79.9	30.70	64.5	1.0	0.016
OW-08U	Lower	-12.62	36.02				Sand 4	-6.0	-24.7	-15.4	31.71			
OW-09L	Deep	-37.14	27.17	60.05	-0.24	-0.004	Sand 4	-9.0	-36.5	-22.8	26.25	49.8	4.1	0.081
OW-09U	Upper	22.91	26.93				Sand 2	40.0	14.1	27.1	30.30			
OW-10L	Deep	-53.93	23.48	79.02	-1.21	-0.015	Sand 6	-48.6	-116.5	-82.6	26.20	108.5	3.7	0.034
OW-10U	Upper	25.09	22.27				Sand 2	36.5	15.4	26.0	29.93			
OW-2150L	Deep	-64.13	33.22	85.04	11.63	0.137	Sand 5	-45.0	-62.0	-53.5	31.10	78.5	3.4	0.043
OW-2150U	Upper	20.91	44.85				Sand 2	36.0	14.0	25.0	34.48			
OW-2169L	Lower	-14.96	35.45	35.07	6.47	0.184	Sand 4	-5.0	-24.0	-14.5	31.08	39.5	3.2	0.080
OW-2169U	Upper	20.11	41.92				Sand 2	36.0	14.0	25.0	34.24			
OW-2181L	Lower	-15.12	35.64	50.13	5.93	0.119	Sand 4	-5.0	-24.0	-14.5	30.97	39.5	3.2	0.081
OW-2181U	Upper	35.01	41.62				Sand 2	36.0	14.0	25.0	34.17			
OW-2185L	Lower	-15.24	34.12	25.13	4.18	0.166	Sand 4	-7.0	-28.4	-17.7	30.07	43.7	3.6	0.082
OW-2185U	Upper	9.89	38.30				Sand 2	36.0	16.0	26.0	33.66			
OW-2253L	Deep	-58.83	31.88	80.01	13.52	0.169	Sand 5	-46.1	-61.4	-53.8	30.31	79.8	3.5	0.044
OW-2253U	Upper	21.18	45.40				Sand 2	36.0	16.0	26.0	33.79			
OW-2269L	Deep	-54.11	32.03	49.86	2.00	0.040	Sand 5	-45.0	-66.5	-55.8	30.29	34.0	-0.1	-0.004
OW-2269U	Lower	-4.25	34.03				Sand 4	-7.0	-36.5	-21.8	30.17			

Table 1 Calculation of Average Observed and Modeled Vertical Hydraulic Gradients (Sheet 2 of 2)

Well No.	Hydro-geologic Unit	Observed Vertical Gradient					Modeled Vertical Gradient							
		Midpoint Screen (ft NAVD 88)[a]	Average Monthly Water Elevation (ft NAVD 88)[a,b]	Δx (ft)[e]	Average Δh (ft)[b,f]	Average i_v[b,g]	Sand Unit	Top of Sand (ft NAVD 88)[c]	Bottom of Sand (ft NAVD 88)[c]	Midpoint Sand (ft NAVD 88)	Modeled Water Elevation (ft NAVD 88)[d]	Δx (ft)[e]	Δh (ft)[f]	i_v[g]
OW-2284L	Lower	-24.02	33.63	34.99	9.12	0.261	Sand 4	-7.0	-34.8	-20.9	29.84	47.4	3.7	0.078
OW-2284U	Upper	10.97	42.75				Sand 2	37.0	16.0	26.5	33.52			
OW-2301L	Deep	-53.11	36.75	79.88	12.50	0.156	Sand 5	-43.4	-61.2	-52.3	33.49	81.9	3.4	0.041
OW-2301U	Upper	26.77	49.25				Sand 2	40.5	18.7	29.6	36.86			
OW-2302L	Deep	-64.54	35.56	55.06	1.74	0.032	Sand 5	-53.1	-63.0	-58.1	32.10	39.0	1.3	0.032
OW-2302U	Lower	-9.48	37.30				Sand 4	-3.1	-35.0	-19.1	33.36			
OW-2304L	Lower	-21.12	26.19	44.92	7.93	0.177	Sand 4	-13.1	-23.0	-18.1	25.00	47.3	1.0	0.021
OW-2304U	Upper	23.80	34.12				Sand 2	41.4	17.0	29.2	26.01			
OW-2307L	Lower	-28.09	24.57	45.16	6.82	0.151	Sand 5	-25.5	-34.9	-30.2	27.17	63.8	4.1	0.063
OW-2307U	Upper	17.07	31.39				Sand 2	53.4	13.8	33.6	31.22			
OW-2319L	Deep	-75.32	32.87	59.65	1.08	0.018	Sand 6	-68.2	-127.6	-97.9	28.71	78.5	0.1	0.001
OW-2319U	Lower	-15.67	33.95				Sand 4	-3.1	-35.8	-19.5	28.76			
OW-2320L	Deep	-73.24	29.73	40.04	-0.98	-0.024	Sand 5	-67.0	-75.4	-71.2	25.78	33.4	-0.4	-0.013
OW-2320U	Lower	-33.20	27.75				Sand 4	-27.5	-48.2	-37.9	25.36			
OW-2321L	Deep	-73.01	20.23	39.80	0.17	0.004	Sand 5	-65.3	-77.3	-71.3	23.24	42.6	-0.6	-0.015
OW-2321U	Lower	-33.21	20.40				Sand 4	-8.9	-48.6	-28.8	22.60			
OW-2324L	Deep	-95.15	12.28	79.82	0.46	0.006	Sand 6	-82.5	-113.6	-98.1	20.95	78.2	-0.5	-0.006
OW-2324U	Lower	-15.33	12.74				Sand 4	7.4	-47.2	-19.9	20.49			
OW-2348L	Deep	-87.79	11.14	63.35	-0.23	-0.004	Sand 6	-82.1	-112.4	-97.3	15.18	74.5	-0.3	-0.004
OW-2348U	Lower	-24.44	10.91				Sand 4	-5.6	-40.0	-22.8	14.90			
OW-2352L	Lower	-21.67	18.86	34.84	-0.03	-0.001	Sand 4	-8.2	-29.9	-19.1	19.92	32.4	-1.0	-0.030
OW-2352U	Upper	13.17	18.83				Sand 2	20.6	6.0	13.3	18.94			
OW-2359L1	Deep	-86.92	22.94	74.58	0.00	0.000	Sand 6	-51.5	-120.0	-85.8	25.83	77.2	-0.2	-0.003
OW-2359U1	Lower	-12.34	22.94				Sand 4	3.3	-20.5	-8.6	25.59			

Notes:
a: Source = SSAR Table 2.4.12-C-1
b: Oct '07 to Feb '09 plus May '09 and Aug '09
c: VCS numerical model described in SSAR Subsection 2.4.12, Appendix C
d: Source = SSAR Table 2.4.12-C-7
e: Δx = Distance between midpoint of upper and lower well screens
f: Δh = Difference in potentiometric head between upper and lower well screens
g: i_v = Δh/Δx (feet per foot)

Associated ESPA Revisions:

SSAR Subsection 2.4.12.2.2 will be revised in a future ESPA revision, as indicated:

2.4.12.2.2 Groundwater Flow Directions

Limited historical groundwater level data exist for the site proper because it is a greenfield site; however, the Texas Water Development Board (TWDB) does maintain several observation wells close to the site to measure water levels in the Chicot Aquifer. Regionally, groundwater flow in the Chicot Aquifer is generally southeast toward the Gulf of Mexico as shown in Figure 2.4.12-13, which is a regional potentiometric surface map of the Chicot Aquifer for 1999. The limited number of data points in the site area obscures any localized impacts from rivers in the site area. Figure 2.4.12-14 presents the steady-state simulated groundwater level elevations in the Chicot Aquifer using the calibrated Central Gulf Coast Groundwater Availability Model (GAM) (Reference 2.4.12-14). This map shows the influence of the Guadalupe and San Antonio Rivers on localized flow conditions adjacent to the site, where a west to east component of flow is overlain on the regional flow pattern.

Regional groundwater flow in the Evangeline Aquifer is also generally to the south and east toward the Gulf of Mexico, based on groundwater level data collected by the TWDB between 2001 and 2005 (Reference 2.4.12-6). As depicted in Figure 2.4.12-9, localized pumping has caused a decline in water level in some parts of the Gulf Coast Aquifer, such as Harris and Kleberg counties. The pumping has created large cones of depression in these pumping areas, which divert groundwater flow from the Gulf of Mexico to the pumping centers.

As described in Subsection 2.4.12.1.4, groundwater observation well pairs were installed at 27 locations (54 individual wells) to investigate groundwater flow directions and horizontal and vertical hydraulic gradients at the VCS site. In addition, the four pumping test observation wells for each of the two test well locations (additional eight wells) were added to the observation well network resulting in 62 groundwater level monitoring wells.

Monthly groundwater level measurements have been collected from the newly installed observation wells since October 2007, when the first wells were installed. By February 2008, all of the site investigation wells had been installed and the first complete set of groundwater levels was collected. Monthly groundwater level measurements were collected through February 2009. Approximately ~~Q~~quarterly groundwater level measurements were collected thereafter until ~~August 2009~~ October 2010.

For the first three months of data collection, only the OW-01U/L through OW-10U/L well pairs were installed, for a total of 20 observation wells. By February 2008, an additional 42 observation wells (17 well pairs and two sets of 4 observation wells associated with the aquifer pumping test wells) were installed. The two aquifer pumping test wells were not incorporated into the groundwater monitoring program. Water level measurements from October 2007 through ~~August 2009~~ October 2010 are presented on Table 2.4.12-6. (Anomalous or suspect water level measurements due to

instrument malfunction, operator error, or transcription errors are indicated in the table).

Groundwater level measurements collected from the observation wells at the VCS site in February 2008, May 2008, August 2008, and November 2008; February 2009, May 2009 and August 2009; and March and October 2010 were used to develop potentiometric surface maps for the Upper Shallow, Lower Shallow, and Deep aquifers, (Figure 2.4.12-15). These potentiometric surface maps show that groundwater flow direction at the VCS site in the three aquifers is generally to the east toward the Guadalupe River valley.

The potentiometric surface maps are used to estimate horizontal hydraulic gradients at the site. For each map, horizontal hydraulic gradients are calculated by drawing a flow line on the potentiometric surface map and determining the head loss (h) over the horizontal projection of the flow path length (L) to determine the horizontal hydraulic gradient (i_h or h/L).

The Upper Shallow aquifer potentiometric map surfaces indicate a hydraulic gradient of between 0.002 and 0.003 foot per foot. The Lower Shallow aquifer potentiometric map surfaces indicate a hydraulic gradient of between 0.001 and 0.002 foot per foot. The Deep aquifer potentiometric map surfaces indicate a hydraulic gradient of between 0.001 and 0.002 foot per foot.

The vertical hydraulic gradient (i_v) is calculated by dividing the difference in hydraulic head between adjacent upper and lower observation wells by the length of the vertical flow path. The vertical flow path length is assumed to be from the midpoint elevation of the upper observation well screen to the midpoint elevation of the lower observation well screen. Table 2.4.12-7 presents the calculated vertical hydraulic gradients.

Measurement data collected from the observation well pairs generally indicate a downward flow between the Upper Shallow, Lower Shallow, and Deep aquifer zones in the Chicot Aquifer. The downward vertical hydraulic gradients at the VCS site range from less than 0.01 to approximately 0.28 foot per foot. Those well pairs indicating upward flow are described as follows:

- Well pairs exhibiting an upward vertical gradient (OW-10U/L, OW-2320U/L, and OW-2352 U/ L). Excluding anomalous measurements, the upward vertical hydraulic gradient exhibited by these well pairs ranged up to ~~-0.04~~ -0.07 foot per foot. Well pair OW-2352 U/L consistently shows a subtle, nearly imperceptible upwards hydraulic gradient. The August 2009 readings at OW-10 U/L ~~readings~~ indicate a weak downward hydraulic gradient (0.01 foot per foot).

- Well pairs exhibiting occasional to infrequent upward vertical gradients (OW-05U/L, OW-07 U/L, OW-09U/L, OW-2321U/L, OW-2348U/L, and OW-2359U1/L1). Some of the readings show a subtle, nearly imperceptible upwards hydraulic gradient.

- Wells pairs exhibiting an upward gradient only in months where suspect measurements were made (OW-02U/L, OW-06U/L, and OW-2319U/L). Ignoring the suspect readings, these well pairs all show a downward vertical hydraulic gradient.

The well pairs exhibiting upward vertical hydraulic gradients are, in general, located in the eastern half of the site. However, other well pairs in the eastern half of the site exhibit a downward hydraulic gradient, suggesting that the aquifer is ~~the influence of~~ heterogeneous ~~conditions~~.

Construction dewatering, operation of the proposed onsite production wells, and the operation of the cooling basin have the potential to alter or reverse the local flow patterns at the VCS site. Post-construction groundwater flow patterns were simulated through the development of a site groundwater computer model (see Subsection 2.4.12.3.1).

SSAR Subsection 2.4.12.2.3 will be revised in a future ESPA revision as indicated:

2.4.12.2.3 Temporal Groundwater Trends

As depicted in Figure 2.4.12-16, groundwater levels in Victoria County were on the decline from the 1950s to 2000, until the city of Victoria switched to surface water for much of its needs (Reference 2.4.12-2). Data obtained from the TWDB for three observation wells (well numbers 7924702, 7932602, and 8017502); (Reference 2.4.12-10) located near the VCS site were selected to prepare the regional hydrographs shown on Figure 2.4.12-16. Water level data from these wells through approximately 2008 were used in the temporal groundwater analysis based on their proximity to the VCS site.

Well 8017502 is located approximately 6.3 miles northeast of the power block area at the VCS site and is screened in the Goliad Sand of the Evangeline Aquifer to a depth of 1026 feet below ground surface. Historical water level data from this well indicates that between 1958 and 2000 a decrease in groundwater level occurred. Since 2000, the groundwater level has recovered and has surpassed the 1958 level.

Well number 7932602 is located approximately 5.5 miles northeast of the power block area at the VCS site and is screened in the Lissie Formation of the Chicot Aquifer to a depth of 595 feet below ground surface (Reference 2.4.12-10). As with well 8017502, historical water level data from this well indicates that between 1958 and 2000, a decrease in groundwater level occurred. Since 2000, the groundwater level has recovered and has also surpassed the 1958 level.

Well 7924702 is located approximately 6 miles northwest of the power block area at the VCS site and is screened in the Chicot Aquifer to a depth of 180 feet below ground surface (Reference 2.4.12-10). This well exhibits a generally decreasing water level over the period of record for the well. Groundwater level data are ~~were~~ not available from this well from 1998 to 2003. Therefore, the relationship, if any, of the decrease in groundwater level in this well to the city of Victoria switching to surface water for its needs in 2001 is unclear.

Figure 2.4.12-17 presents ~~the~~ hydrographs for the observation wells installed at the VCS site. Review of the data suggests that there are a few ~~several~~ suspect water level readings that deviate from the general water level trend in some wells. These suspect readings may result from

misreading of the water level device or from conditions in the well that can produce false readings when using an electric water level measuring ~~measurement~~ device, such as water condensate droplets on the interior wall of the well casing. Excluding the suspect water level measurements, the following trends are apparent for the three monitoring intervals:

Upper Shallow aquifer: Readings generally show an overall rise in water level elevations of up to ~~no more than~~ 2 feet between October 2007 and January 2008. Between January 2008 and November 2009 ~~August 2009~~, the wells in this zone generally show a downward trend of up to approximately ~~that is generally less than~~ 6 feet across the site. From November 2009 to October 2010 readings showed a rise in water levels of up to approximately 3 feet.

Lower Shallow aquifer: Water levels typically show ~~Readings are typified by~~ minor fluctuations ~~in the water level elevation~~ of less than 1 foot between October 2007 and January 2008. Between January 2008 and November 2009 ~~August 2009~~, the wells in this zone show a general downward trend, with some wells exhibiting stable water levels with minor fluctuations during the fall and winter months of late 2008 into early 2009. Water levels show an overall rise between November 2009 and October 2010 of up to approximately 2.5 feet.

Wells OW-2324U and OW-2348U stand out as ~~an~~ exceptions to these general trends. These wells are screened in the Lower Shallow aquifer and are ~~Well OW-2324U is~~ located in the eastern part of the site near ~~on~~ the floodplain of the Guadalupe River and ~~near~~ Linn Lake. ~~Well OW-2348U is adjacent to the Guadalupe River floodplain and near Linn Lake.~~ Groundwater ~~The groundwater regime~~ in this area is believed to be influenced by ~~both~~ surface water ~~and groundwater~~ conditions. ~~in the floodplain.~~ Some water level fluctuations in wells OW-2324U and OW-2348U (particularly those between September 2008 and May 2009) appear to be related to fluctuations in the stage of the Guadalupe River based on river stage data recorded at USGS Gage 08177520 on the Guadalupe River near Bloomington, Texas (Reference 2.4.12-33).

Linn Lake is an oxbow lake on the west side of the Guadalupe River valley. The lake is a former meander that has been cut off from the main channel of the Guadalupe River. The Bloomington, Texas 7.5-minute USGS topographic map (Reference 2.4.12-32) shows the river to be approximately 1,000 feet from the lake at their closest point, and both to be at approximately the same elevation. No water level measurements for Linn Lake are available. However, because of the geomorphology of Linn Lake and its proximity to the river, it is likely that the lake and river are hydraulically connected and that the stage in the lake trends similarly to the stage of the nearby river.

Deep aquifer: During the winter of 2007, water level readings show small variations of less than 1 foot in this zone. Beginning in 2008, and ending in November 2009, there is an overall downward trend in the water level elevation data, with the exception of a few wells showing a flattening of the hydrograph curve during the fall and winter months of late 2008 and into early 2009. From November 2009 to October 2010, water levels rose up to 2.5 feet. ~~However,~~ Water levels in wells OW-2324L and OW-2348L, screened in the Deep aquifer and also located near Linn Lake and the

Guadalupe River, follow a similar trends to those observed in wells that previously discussed for OW-2324U and OW-2348U screened in the Lower Shallow aquifer. Some of the water level fluctuations in OW-2324L and OW-2348L also appear to be related to fluctuations in the stage of the Guadalupe River based on river stage data recorded at USGS Gage 08177520 for the Guadalupe River near Bloomington, Texas (Reference 2.4.12-33).

There was an overall decline in groundwater level elevations during the monitoring period (October 2007 to August 2008) in every observation well at the site. Excluding data collected during the first months of 2007, there is only minimal evidence of seasonal fluctuation in the dataset.

In general, the difference in groundwater levels between wells screened in the Upper Shallow, Lower Shallow and Deep aquifers is greater in the well pairs located on the western side of the site exhibit a greater difference in their individual groundwater level elevations than in well pairs on the eastern side of the site. This condition appears to be related to transition from an upland area of net groundwater recharge to a lowland area within a river valley where groundwater discharge predominates. Thus, the Upper Shallow, Lower Shallow, and Deep aquifer zones appear to be less hydraulically connected on the western side of the site than on the eastern side of the site. This seemingly greater hydraulic communication to the east suggests a possible area of groundwater discharge at Linn Lake.

Figure 2.4.12-7 is a regional hydrogeologic cross-section through the Gulf Coast aquifer system. The figure shows that the outcrop area of the Chicot aquifer extends inland from the VCS site to approximately the southeastern DeWitt County line, where the ground surface elevation is approximately 150 feet NAVD88. Precipitation falling on the outcrop area recharges groundwater in the Chicot aquifer. The higher ground surface elevation inland near DeWitt County induces a regional hydraulic gradient within the aquifer toward the southeast and the Gulf of Mexico, where the ground surface elevation is nominally 0 feet NAVD88.

Figure 2.4.12-13 shows that in 1999 a southeastern regional hydraulic gradient was observed in the Chicot aquifer near the VCS site. Figure 2.4.12-14 shows groundwater elevations in the Chicot aquifer simulated by the Groundwater Availability Model (GAM) developed by the Texas Water Development Board (Reference 2.4.12-14). This figure shows a similar regional hydraulic gradient toward the southeast.

Figure 2.4.12-14 shows, in the area of the VCS site, the 50-foot equipotential line to be diverted locally near the San Antonio and Guadalupe rivers. That diversion occurs because groundwater from higher elevations in the Chicot aquifer drains down-gradient toward and discharges to the rivers. The surface elevation within the power block area of the VCS site is about 80 feet NAVD88 (Table 2.5.4-36). At observation well pair OW-2348, near the eastern boundary of the VCS site and the Guadalupe River valley, the surface elevation is approximately 50 feet NAVD88 (Table 2.4.12-1). Within the floodplain of the river and near Linn Lake the surface elevation is approximately 15 feet NAVD88 (Reference 2.4.12-32).

In the upland areas of the Chicot aquifer, and potentially the northern and western parts of the VCS site, groundwater recharge prevails. Vertical hydraulic gradients are predominantly downward in areas of groundwater recharge and upward in areas of groundwater discharge (Reference 2.4.12-15). Table 2.4.12-7 presents the observed vertical hydraulic gradients in the northern and western parts of the VCS site, which are consistently downward.

In the eastern part of the site, near the floodplain of the Guadalupe River, the observed vertical hydraulic gradients tend to be upward or only weakly downward. This condition in the eastern part of the site suggests transition from an area of groundwater recharge to one of groundwater discharge. None of the VCS observation well pairs are located within the floodplain near the Guadalupe river channel or Linn Lake. Stronger upward vertical hydraulic gradients are likely to exist there, indicating groundwater discharge to the Guadalupe River Valley hydraulic system.

The groundwater potentiometric head of the Upper Shallow aquifer beneath the VCS site power block area ranges between approximately elevation 31 and 49 feet (see Table 2.4.12-6). Post-construction changes to the hydrogeologic regime were evaluated using a groundwater computer model. The results are described in Subsection 2.4.12.3.1.

(End of Subsection 2.4.12.2.3)

The following references are added to Section 2.4.12:

2.4.12-32 U.S. Department of the Interior, U.S. Geological Survey, 7.5-minute series topographic map, Bloomington, Texas, 1995.

2.4.12-33 U.S. Department of the Interior, U.S. Geological Survey, Surface Water Data for Texas, USGS Surface-Water Annual Statistics. Available at: http://waterdata.usgs.gov/tx/nwis/annual?, accessed May 23, 2011.

The following figures in Section 2.4.12 are revised:

Figure 2.4.12-15, "Potentiometric Surface Maps": Revised to include VCS potentiometric surface maps for the Upper Shallow, Lower Shallow, and Deep aquifers for March 2010 and October 2010. [Added sheets 22 through 27.]

Figure 2.4.12-17, "VCS Site Hydrographs": Updated VCS observation well hydrographs to include groundwater level measurements from November 2009, March 2010, June 2010, and October 2010.

The following tables in Section 2.4.12 are revised:

Table 2.4.12-1, "Observation Well Construction Details": Corrections to the top and bottom well screen elevations.

Table 2.4.12-6, "VCS Groundwater Level Measurements": Revised to include VCS observation well groundwater level measurements (November 2009, March 2010, June 2010, and October 2010).

Table 2.4.12-7, "Vertical Hydraulic Gradient Calculations": Revise to include VCS observation well groundwater level measurements (November 2009, March 2010, June 2010, and October 2010).

Revisions to the corresponding sections of the environmental report (Subsections 2.3.1.2.2.2 and 2.3.1.2.2.3) that are consistent with the SSAR revisions will be made in the next revision of the ESPA.

The following table entirely replaces and supersedes SSAR Table 2.4.12-1, Rev. 0, to revise the top and bottom elevations of the observation well screens.

Table 2.4.12-1: Observation Well Construction Details (Sheet 1 of 3)

Well Number[1]	Hydro-geologic Unit	Northing (ft)[2]	Easting (ft)[2]	Top of Casing Elevation (ft NAVD 88)[2]	Top of Concrete Pad (ft NAVD 88)[2]	Well Diameter (in)	Well Depth (ft bgs)	Top of Screen (ft bgs)[3]	Bottom of Screen (ft bgs)[3]	Top of Screen (ft NAVD 88)[3]	Bottom of Screen (ft NAVD 88)[3]	Top of Filter Pack (ft bgs)	Bottom of Filter Pack (ft bgs)
OW-01L	Lower Shallow	13404252.09	2606686.52	73.74	72.22	2	111	100	110	-27.78	-37.78	96	113
OW-01U	Upper Shallow	13404253.64	2606866.85	73.65	72.16	2	61	50	60	22.16	12.16	47	63
OW-02L	Lower Shallow	13411520.51	2607869.3	76.53	75.07	2	109	98	108	-22.93	-32.93	94	112
OW-02U	Upper Shallow	13411502.39	2607862.19	76.74	75.25	2	64	53	63	22.25	12.25	50	66
OW-03L	Lower Shallow	13414918.69	2609286.61	76.67	75.21	2	98	87	97	-11.79	-21.79	84.1	100
OW-03U	Upper Shallow	13414934.48	2609294.86	77.05	75.6	2	54	43	53	32.6	22.6	40	56
OW-04L	Lower Shallow	13414268.74	2607440.23	80.67	79.13	2	111	100	110	-30.87	-30.87	96	113
OW-04U	Upper Shallow	13414280.51	2607428.57	81.08	79.61	2	86	75	85	4.61	-5.39	71	88
OW-05L	Deep	13414774.22	2605813.28	79.9	78.26	2	131	120	130	-41.74	-51.74	116.3	135
OW-05U	Upper Shallow	13414770.21	2605832.08	79.55	78.07	2	57	46	56	32.07	22.07	43	60
OW-06L	Lower Shallow	13415889.64	2604964.9	81.55	79.49	2	98	85	95	-3.51	-15.51	80.5	99
OW-06U	Upper Shallow	13415875.58	2604966.94	80.77	79.46	2	64	53	63	26.46	16.46	50	66
OW-07L	Deep	13418420.52	2606531.28	79.04	77.47	4	124	113	123	-35.53	-45.53	110	127
OW-07U	Upper Shallow	13418421.4	2606542.01	79.02	77.32	2	64	53	63	24.32	14.32	50.2	66
OW-08L	Deep	13415818.85	2598942.49	84.07	82.56	4	138	127	137	-44.44	-54.44	124	140
OW-08U	Lower Shallow	13415801.21	2598934.58	83.88	82.38	2	101	90	100	-7.62	-17.62	86	103
OW-09L	Deep	13414937.42	2604893.58	80	77.86	2	121	110	120	-32.14	-42.14	106	125
OW-09U	Upper Shallow	13414956.05	2604894.51	79.24	77.91	2	61	50	60	27.91	17.91	47	61
OW-10L	Deep	13418486.44	2604760.99	79.88	78.07	2	138	127	137	-48.93	-58.93	123	141
OW-10U	Upper Shallow	13418474.37	2604768.43	79.53	78.09	2	59	48	58	30.09	20.09	45	62
OW-2150L	Deep	13412552.91	2599585.12	82.45	80.87	2	151.15	140	150	-59.13	-69.13	138	152
OW-2150U	Upper Shallow	13412568.08	2599582.77	82.78	80.91	2	66.15	55	65	25.91	15.91	51	67
OW-2169L	Lower Shallow	13412356.74	2599930.2	81.72	80.04	2	101	90	100	-9.96	-19.96	86	102
OW-2169U	Upper Shallow	13412343.77	2599945.85	81.77	80.11	2	66	55	65	25.11	15.11	51	67
OW-2181L	Lower Shallow	13412138.42	2600071.96	81.32	79.86	2	101	90	100	-10.12	-20.12	86	102
OW-2181U	Upper Shallow	13412147.38	2600052.86	81.31	80.01	2	51	40	50	40.01	30.01	36	52
OW-2185L	Lower Shallow	13412314.47	2600815.69	81.36	79.76	2	101	90	100	-10.24	-20.24	86	102
OW-2185U	Upper Shallow	13412328.07	2600801.11	81.45	79.89	2	76	65	75	14.89	4.89	61	77
OW-2253L	Deep	13413591.55	2600474.37	82.66	81.17	2	146	135	145	-53.83	-63.83	131	147

Table 2.4.12-1: Observation Well Construction Details (Sheet 2 of 3)

Well Number[1]	Hydro-geologic Unit	Northing (ft)[2]	Easting (ft)[2]	Top of Casing Elevation (ft NAVD 88)[2]	Top of Concrete Pad (ft NAVD 88)[2]	Well Diameter (in)	Well Depth (ft bgs)	Top of Screen (ft bgs)[3]	Bottom of Screen (ft bgs)[3]	Top of Screen (ft NAVD 88)[3]	Bottom of Screen (ft NAVD 88)[3]	Top of Filter Pack (ft bgs)	Bottom of Filter Pack (ft bgs)
OW-2253U	Upper Shallow	13413584.76	2600494.74	82.82	81.18	2	66	55	65	26.18	16.18	51	67
OW-2269L	Deep	13413123.29	2600574.23	82.55	80.89	2	141.15	130	140	-48.11	-58.11	126	143
OW-2269U	Lower Shallow	13413110.1	2600589.08	82.43	80.75	2	91.15	80	90	0.75	-9.25	76	92
OW-2284L	Lower Shallow	13413063.71	2600939.04	82.74	80.98	2	111.06	100	110	-19.02	-29.02	96	112
OW-2284U	Upper Shallow	13413055.14	2600956.6	82.62	80.97	2	76.07	65	75	15.97	5.97	61	77
OW-2301L	Deep	13414429.77	2596268.29	83.19	81.89	2	141	130	140	-46.11	-56.11	126	142
OW-2301U	Upper Shallow	13414430.08	2596268.46	83.27	81.77	2	61	50	60	31.77	21.77	46	62
OW-2302L	Deep	13407382.11	2598388.94	81.95	80.46	2	151	140	150	-49.54	-69.54	136	152
OW-2302U	Lower Shallow	13407361.5	2598388.47	81.99	80.52	2	96	85	95	-4.48	-14.48	81	97
OW-2304L	Lower Shallow	13396528.12	2608678.06	69.73	68.88	2	96	85	95	-16.12	-26.12	81	97
OW-2304U	Upper Shallow	13396542.39	2608679.35	70.1	68.8	2	51	40	50	28.8	18.8	36	52
OW-2307L	Lower Shallow	13420879.09	2603152.12	78.56	76.91	2	111	100	110	-23.09	-33.09	95	112
OW-2307U	Upper Shallow	13420896.73	2603164.23	78.59	77.07	2	66	55	65	22.07	12.07	50	67
OW-2319L	Deep	13403611.3	2603051.83	76.05	74.68	2	156	145	155	-70.32	-80.32	141	157
OW-2319U	Lower Shallow	13403590.4	2603046.21	75.97	74.33	2	96	85	95	-10.67	-20.67	81	97
OW-2320L	Deep	13407580.88	2606834.36	73.19	71.76	2	151	140	150	-66.24	-76.24	136	152
OW-2320U	Lower Shallow	13407569.51	2606849.7	73.5	71.8	2	111	100	110	-28.2	-38.2	96	112
OW-2321L	Deep	13410955.46	2610027.59	73.54	71.99	2	151	140	150	-68.01	-78.01	136	152
OW-2321U	Lower Shallow	13410943.58	2610040.96	73.27	71.79	2	111	100	110	-28.21	-38.21	96	112
OW-2324L	Deep	13416300.52	2612217	26.27	24.85	2	126	115	125	-90.15	-100.15	110	127
OW-2324U	Lower Shallow	13416316.54	2612203.23	26.17	24.67	2	46	35	45	-10.33	-20.33	31	47
OW-2348L	Deep	13409617.75	2621644.36	52.7	51.21	2	145	134	144	-82.79	-92.79	130	146
OW-2348U	Lower Shallow	13409636.31	2621660.58	52.12	50.56	2	81	70	80	-19.44	-29.44	66	82
OW-2352L	Lower Shallow	13402468.45	2617518.54	64.6	63.33	2	91	80	90	-16.67	-26.67	76	92
OW-2352U	Upper Shallow	13402470.61	2617538.69	64.47	63.17	2	56	45	55	18.17	8.17	41	57

Table 2.4.12-1: Observation Well Construction Details (Sheet 3 of 3)

Well Number[1]	Hydro-geologic Unit	Northing (ft)[2]	Easting (ft)[2]	Top of Casing Elevation (ft NAVD 88)[2]	Top of Concrete Pad (ft NAVD 88)[2]	Well Diameter (in)	Well Depth (ft bgs)	Top of Screen (ft bgs)[3]	Bottom of Screen (ft bgs)[3]	Top of Screen (ft NAVD 88)[3]	Bottom of Screen (ft NAVD 88)[3]	Top of Filter Pack (ft bgs)	Bottom of Filter Pack (ft bgs)
TW-2320U[4]	Upper Shallow	13407428.59	2607105.51	72.72	71.5	6	82	55	80	16.5	-8.5	50	82
OW-2320U1	Upper Shallow	13407445.66	2607080.05	72.9	71.36	2	81	60	80	11.36	-8.64	55	82
OW-2320U2	Upper Shallow	13407436.76	2607093.25	72.92	71.36	2	81	60	80	11.36	-8.64	55	82
OW-2320U3	Upper Shallow	13407448.17	2607121.37	72.84	71.36	2	81	60	80	11.36	-8.64	55	82
OW-2320U4	Upper Shallow	13407466.49	2607138.42	72.91	71.42	2	81	60	80	11.42	-8.58	55	82
TW-2359L	Deep	13417241.41	2605450.48	79.88	77.69	6	182	150	180	-72.31	-102.31	145	182
OW-2359L1	Deep	13417263.65	2605470.56	79.36	78.08	2	176	155	175	-76.92	-96.92	151	177
OW-2359L2	Deep	13417259.76	2605433.37	78.93	77.56	2	176	155	175	-77.44	-97.44	150	177
OW-2359L3	Deep	13417278.58	2605416.18	78.83	77.26	2	176	155	175	-77.74	-97.74	151	177
OW-2359U1	Lower Shallow	13417252.64	2605460.64	79.29	77.86	2	96	85	95	-7.14	-17.14	80	97

Abbreviations:

bgs = below ground surface
ft = feet
in = inches
OW = Observation Well
TW = Aquifer Test Well

Footnotes:

(1) "L" suffix wells are the lower well in well pair, installed in Lower Shallow or Deep aquifer zones. "U" suffix wells are the upper well in well pairs, installed in Upper Shallow or Lower Shallow aquifer zones

(2) Coordinates based on the North American Datum of 1983 (NAD 83) and elevations based on North American Vertical Datum of 1988 (NAVD 88)

(3) Observation well screens are 0.020 in slot width

(4) Well screen interval contains a 5 ft casing blank at 65 to 70 ft bgs.

The following table entirely replaces and supersedes SSAR Table 2.4.12-6, Rev. 0, to add groundwater levels measured on November 19, 2009 and March 17, June 8, and October 18, 2010 to Sheet 3.

Table 2.4.12-6: VCS Groundwater Level Measurements (Sheet 1 of 3)

Well No.	Ref. Elev. (NAVD88)	Hydro-geologic Unit	25-Oct-07			17-Nov-07			19-Dec-07			30-Jan-08			18-Feb-08			31-Mar-08			30-Apr-08			28-May-08		
			Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)
OW-01L	73.74	Lower	12:28	42.39	31.35	9:37	42.39	31.35	16:33	42.51	31.23	9:16	42.77	30.97	10:20	42.94	30.80	10:51	42.99	30.75	14:12	42.41	31.33	12:31	42.32	30.42
OW-01U	73.65	Upper	12:33	41.46	32.19	9:34	41.45	32.20	16:30	41.56	32.09	9:14	41.97	31.68	10:19	42.19	31.46	10:50	42.18	31.47	13:11	41.91	31.74	12:28	42.52	31.13
OW-02L	76.53	Lower	12:16	51.36	25.17	9:26	51.21	25.32	16:30	51.12	25.41	9:30	51.21	25.32	10:48	51.31	25.22	10:29	51.32	25.21	12:54	50.81	25.72	11:37	51.66	24.87
OW-02U	76.74	Upper	12:19	51.49	25.25	9:29	51.35	25.39	16:22	51.19	25.55	9:29	51.26	25.48	10:45	51.35	25.39	10:28	51.28	25.46	12:56	51.48	25.28	11:30	51.58	25.16
OW-03L	76.67	Lower	12:02	55.63	21.04	9:15	55.73	20.94	16:13	55.58	20.79	9:39	55.17	20.59	10:55	55.31	20.36	10:20	55.47	20.20	12:46	56.69	19.98	11:19	56.84	19.83
OW-03U	77.05	Upper	12:06	55.95	21.09	9:18	55.04	22.01	16:16	DRY	NA	9:40	DRY	NA	10:59	DRY	NA	10:19	DRY	NA	12:46	DRY	NA	11:23	DRY	NA
OW-04L	80.57	Lower	11:55	56.69	23.98	9:07	56.61	24.06	16:09	56.54	24.13	9:49	56.75	23.92	11:02	56.81	23.76	10:10	56.96	23.60	12:41	57.22	23.45	11:10	57.39	23.28
OW-04U	81.08	Upper	11:49	56.15	24.93	9:04	56.02	25.06	16:07	56.06	25.02	9:47	56.20	24.88	11:00	56.32	24.76	10:09	56.44	24.64	12:38	56.70	24.38	11:12	56.87	24.21
OW-05L	79.90	Deep	11:37	53.17	26.73	8:57	53.02	26.88	16:00	52.97	26.93	9:58	53.05	26.85	11:09	53.21	26.69	10:04	53.25	26.65	12:34	53.52	26.38	11:04	53.71	26.19
OW-05U	79.55	Upper	11:44	52.71	26.84	9:00	52.48	27.07	16:02	52.31	27.24	9:56	52.35	27.20	11:06	52.45	27.10	10:05	52.50	27.05	12:36	52.75	26.80	11:02	52.88	26.67
OW-06L	81.55	Lower	11:12	54.46	27.09	8:47	54.35	27.20	15:50	53.98	27.58	10:15	54.22	27.33	11:23	54.34	27.21	9:58	54.41	27.14	12:21	54.22	27.33	10:48	54.32	27.23
OW-06U	80.77	Upper	11:18	53.59	27.18	8:49	53.38	27.39	15:51	53.20	27.57	10:12	53.29	27.48	11:22	53.35	27.42	9:53	53.49	27.34	12:23	53.66	27.11	10:45	53.84	26.93
OW-07L	79.04	Deep	11:00	57.78	21.26	8:39	57.88	21.16	15:40	57.98	21.06	10:25	58.17	20.87	11:30	58.33	20.71	9:20	58.41	20.63	11:44	58.68	20.36	10:17	58.88	20.16
OW-07U	79.02	Upper	11:04	58.02	21.00	8:42	57.89	21.13	15:42	58.08	20.94	10:24	58.17	20.85	11:48	58.30	20.72	9:18	58.39	20.63	11:42	58.55	20.47	10:14	58.69	20.33
OW-08L	84.07	Deep	10:00	49.75	34.32	8:17	49.98	34.09	15:23	50.1	33.97	11:07	50.08	33.99	12:40	50.19	33.91	9:35	50.30	33.77	9:56	50.69	33.38	9:00	51.02	33.05
OW-08U	83.88	Lower	10:03	46.26	37.62	8:21	46.24	37.64	15:26	46.36	37.52	11:09	46.49	37.39	12:36	46.64	37.24	8:53	46.79	37.09	9:54	46.93	36.90	8:55	47.25	36.63
OW-09L	80.00	Deep	11:28	52.19	27.81	8:53	51.91	28.09	15:56	51.82	28.18	10:06	51.97	28.03	11:14	52.13	27.87	9:50	52.10	27.90	12:29	52.74	27.26	10:55	52.56	27.42
OW-09U	79.24	Upper	11:32	51.77	27.47	8:51	51.37	27.87	15:55	50.83	28.41	10:04	51.31	27.93	11:13	51.46	27.78	9:58	51.32	27.92	12:28	51.71	27.53	10:52	51.77	27.47
OW-10L	79.88	Deep	10:45	54.52	25.36	8:31	54.79	25.12	15:35	54.81	25.07	10:36	54.89	24.99	12:16	54.96	24.92	9:19	55.15	24.73	11:33	55.61	24.27	9:38	56.00	23.88
OW-10U	79.53	Upper	10:50	57.24	22.29	8:34	57.04	22.49	15:37	56.92	22.61	10:33	57.00	22.53	12:14	57.04	22.49	9:11	56.83	22.70	11:35	56.91	22.62	9:32	56.90	22.63
OW-2150L	82.45	Deep	-	-	-	-	-	-	-	-	-	13:46	48.01	34.44	13:27	47.90	34.55	8:15	47.87	34.58	10:40	48.11	34.34	16:09	48.29	34.16
OW-2150U	82.76	Upper	-	-	-	-	-	-	-	-	-	13:43	46.40	46.29	13:26	46.70	46.06	8:19	46.51	46.27	10:38	46.72	46.05	16:07	46.93	45.85
OW-2169L	81.72	Lower	-	-	-	-	-	-	-	-	-	13:52	44.58	37.14	14:42	44.76	36.96	8:24	44.91	36.81	10:44	45.15	36.57	16:15	45.40	36.32
OW-2169U	81.77	Upper	-	-	-	-	-	-	-	-	-	13:54	38.29	43.48	14:40	38.59	43.18	8:20	38.40	43.37	10:46	38.71	43.06	16:17	38.82	42.95
OW-2181L	81.32	Lower	-	-	-	-	-	-	-	-	-	14:00	44.87	36.45	14:04	44.74	36.58	8:29	44.78	36.54	10:51	44.89	36.43	16:23	44.91	36.41
OW-2181U	81.31	Upper	-	-	-	-	-	-	-	-	-	13:58	38.07	43.24	13:51	38.46	42.85	8:27	38.27	43.04	10:50	38.60	42.71	16:21	38.37	42.94
OW-2185L	81.36	Lower	-	-	-	-	-	-	-	-	-	14:17	45.54	35.82	14:16	45.72	35.64	8:37	45.88	35.48	11:02	46.13	35.23	16:42	46.38	34.98
OW-2185U	81.45	Upper	-	-	-	-	-	-	-	-	-	14:16	41.84	39.61	14:19	41.76	39.69	9:35	41.77	39.68	10:59	41.96	39.49	16:30	42.19	39.26
OW-2253L	82.82	Deep	-	-	-	-	-	-	-	-	-	13:09	49.23	33.59	14:49	49.29	33.53	7:43	49.52	33.30	10:29	49.82	33.00	17:56	50.19	32.72
OW-2253U	82.66	Upper	-	-	-	-	-	-	-	-	-	13:11	34.35	48.31	14:49	34.82	47.85	7:41	34.49	48.18	10:27	34.65	48.01	17:59	35.08	46.58
OW-2269L	82.55	Deep	-	-	-	-	-	-	-	-	-	13:21	48.87	33.68	15:03	48.99	33.56	7:49	49.12	33.43	10:16	49.42	33.13	17:47	49.70	32.85
OW-2269U	82.43	Lower	-	-	-	-	-	-	-	-	-	13:18	46.70	35.73	15:00	46.89	35.54	7:50	47.02	35.41	10:12	47.25	35.18	17:50	47.55	34.88
OW-2284L	82.74	Lower	-	-	-	-	-	-	-	-	-	13:28	47.49	35.34	15:09	47.68	35.15	8:03	47.73	35.01	10:08	47.98	34.76	17:34	48.32	34.42
OW-2284U	82.62	Upper	-	-	-	-	-	-	-	-	-	13:25	38.13	44.49	15:07	38.32	44.30	8:01	38.18	44.44	10:09	38.21	44.41	17:38	38.62	44.00
OW-2301L	83.19	Deep	-	-	-	-	-	-	-	-	-	-	-	-	7:39	44.84	38.35	7:16	44.97	38.22	9:19	45.23	37.96	17:21	45.51	37.68
OW-2301U	83.27	Upper	-	-	-	-	-	-	-	-	-	-	-	-	7:37	33.03	50.24	7:14	32.75	50.52	9:15	33.07	50.20	17:19	33.27	50.00
OW-2302L	81.95	Deep	-	-	-	-	-	-	-	-	-	-	-	-	7:54	44.94	37.01	7:27	45.02	36.93	9:37	45.27	36.68	8:31	45.48	36.47
OW-2302U	81.99	Lower	-	-	-	-	-	-	-	-	-	-	-	-	7:53	43.10	38.89	7:26	43.22	38.77	9:39	43.49	38.50	8:37	43.70	38.29
OW-2304L	69.73	Lower	-	-	-	-	-	-	-	-	-	-	-	-	8:33	42.38	27.47	11:01	42.31	27.42	16:04	42.41	27.32	15:58	42.84	26.89
OW-2304U	70.10	Upper	-	-	-	-	-	-	-	-	-	-	-	-	8:31	33.96	36.14	11:10	34.17	35.93	16:06	34.37	35.73	16:00	34.57	35.53
OW-2307L	78.56	Lower	-	-	-	-	-	-	-	-	-	10:47	51.54	27.02	12:31	51.75	26.81	9:05	51.92	26.64	11:38	52.35	26.21	9:25	52.53	26.03
OW-2307U	78.59	Upper	-	-	-	-	-	-	-	-	-	10:44	45.77	32.82	12:29	46.91	31.68	9:09	46.99	31.60	11:23	46.32	32.27	9:20	46.45	32.14
OW-2319L	76.05	Deep	-	-	-	-	-	-	-	-	-	9:00	42.37	33.68	8:13	41.54	34.51	11:01	42.31	33.74	14:22	37.44	38.61	12:42	42.71	33.34
OW-2319U	75.97	Lower	-	-	-	-	-	-	-	-	-	9:01	40.62	35.35	8:11	40.74	35.23	11:00	40.84	35.13	14:26	41.02	34.95	12:49	41.23	34.74
OW-2320L	73.19	Deep	-	-	-	-	-	-	-	-	-	8:10	43.02	30.17	10:09	43.14	30.05	10:35	43.24	29.95	13:54	43.51	29.68	16:20	43.68	29.51
OW-2320U	73.50	Lower	-	-	-	-	-	-	-	-	-	8:09	44.59	28.91	10:27	44.69	28.81	10:34	44.70	28.80	13:52	44.86	28.64	16:17	45.02	28.48
OW-2320U1	72.90	Upper	-	-	-	-	-	-	-	-	-	8:05	43.52	29.38	10:33	43.65	29.25	10:45	43.62	29.28	13:57	43.79	29.11	16:08	43.90	29.00
OW-2320U2	72.92	Upper	-	-	-	-	-	-	-	-	-	8:04	43.53	29.39	10:35	43.69	29.23	10:44	43.55	29.27	14:00	43.80	29.12	16:11	43.93	28.99
OW-2320U3	72.84	Upper	-	-	-	-	-	-	-	-	-	8:00	43.58	29.26	10:37	43.72	29.12	10:42	43.69	29.15	14:02	43.69	29.15	16:14	43.97	28.87
OW-2320U4	72.91	Upper	-	-	-	-	-	-	-	-	-	8:01	43.79	29.12	10:39	43.91	29.00	10:41	43.89	29.02	14:05	40.87	32.04	12:21	44.19	28.72
OW-2321L	73.54	Deep	-	-	-	-	-	-	-	-	-	-	-	-	9:59	51.89	21.65	12:17	51.79	21.75	13:31	52.02	21.52	11:57	52.28	21.26
OW-2321U	73.27	Lower	-	-	-	-	-	-	-	-	-	-	-	-	9:56	51.70	21.57	12:16	51.70	21.57	13:29	51.86	21.41	11:55	52.01	21.26
OW-2324L	26.27	Deep	-	-	-	-	-	-	-	-	-	-	-	-	12:03	11.79	14.48	9:29	11.99	14.28	11:52	12.13	14.14	10:03	13.08	13.19
OW-2324U	26.17	Lower	-	-	-	-	-	-	-	-	-	-	-	-	12:02	11.28	14.89	9:28	11.38	14.79	11:53	11.54	14.63	9:58	12.44	13.73
OW-2348L	52.70	Deep	-	-	-	-	-	-	-	-	-	-	-	-	9:31	39.53	13.17	11:33	39.73	12.97	15:04	39.31	13.39	13:24	40.69	12.04
OW-2348U	52.12	Lower	-	-	-	-	-	-	-	-	-	-	-	-	9:29	39.06	13.06	11:34	38.17	12.95	14:55	39.12	13.00	13:32	40.07	12.05
OW-2352L	64.60	Lower	-	-	-	-	-	-	-	-	-	-	-	-	9:03	45.17	19.43	11:39	45.09	19.51	15:30	45.19	19.41	13:36	45.21	19.39
OW-2352U	64.47	Upper	-	-	-	-	-	-	-	-	-	-	-	-	9:02	45.09	19.38	11:38	45.00	19.47	15:32	45.08	19.39	13:54	45.13	19.34
OW-2359L1	79.36	Deep	-	-	-	-	-	-	-	-	-	-	-	-	11:42	54.54	24.82	9:44	54.72	24.64	12:11	53.72	25.64	16:49	55.52	23.84
OW-2359L2	78.93	Deep	-	-	-	-	-	-	-	-	-	-	-	-	11:38	54.12	24.81	9:48	54.30	24.63	12:07	52.40	26.53	16:59	55.12	23.81
OW-2359L3	78.83	Deep	-	-	-	-	-	-	-	-	-	-	-	-	11:36	53.89	24.94	9:47	54.05	24.78	12:05	52.12	26.71	16:56	54.89	23.94
OW-2359U1	79.29	Lower	-	-	-	-	-	-	-	-	-	-	-	-	11:40	55.01	24.28	9:45	55.09	24.20	12:09	55.29	24.00	16:47	55.45	23.84

Table 2.4.12-6: VCS Groundwater Level Measurements (Sheet 2 of 3)

Well No.	Ref. Elev. (NAVD88)	Hydro-geologic Unit	17-Jun-08			15-Jul-08			11-Aug-08			24-Sep-08			23-Oct-08			12-Nov-08			16-Dec-08			13-Jan-09		
			Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)
OW-01L	73.74	Lower	11:24	43.57	30.17	11:14	43.67	30.07	14:25	43.85	29.89	11:15	44.14	29.60	13:06	44.26	29.48	15:16	44.34	29.40	11:46	44.59	29.15	12:46	44.74	29.00
OW-01U	73.65	Upper	11:20	42.72	30.93	11:11	42.86	30.79	14:23	42.99	30.66	11:16	43.33	30.32	13:07	43.40	30.25	15:20	43.54	30.11	11:45	43.75	29.90	12:45	43.93	29.72
OW-02L	76.53	Lower	10:26	51.87	24.66	10:11	52.00	24.53	13:30	52.15	24.37	11:05	52.49	24.04	12:22	52.64	23.89	14:41	52.76	23.77	11:16	53.05	23.47	12:04	53.28	23.27
OW-02U	76.74	Upper	10:24	51.80	24.94	10:13	51.94	24.80	13:32	52.05	24.69	11:07	52.40	24.34	12:21	52.48	24.26	14:39	52.62	24.12	11:14	52.90	23.84	12:03	53.12	23.62
OW-03L	76.67	Lower	10:17	57.11	19.56	10:05	57.42	19.25	13:21	57.76	18.91	10:57	58.26	18.41	12:15	58.52	18.15	14:33	58.75	17.92	11:08	59.01	17.66	11:54	59.43	17.24
OW-03U	77.05	Upper	10:19	DRY	NA	10:07	DRY	NA	13:24	DRY	NA	10:59	DRY	NA	12:17	DRY	NA	14:35	DRY	NA	11:10	DRY	NA	11:53	DRY	NA
OW-04L	80.67	Lower	10:06	57.57	23.10	9:55	57.78	22.89	13:12	58.01	22.66	10:50	58.43	22.24	12:08	58.63	22.04	14:24	58.81	21.86	11:09	59.12	21.55	11:46	59.35	21.32
OW-04U	81.08	Upper	10:08	57.03	24.05	9:58	57.22	23.86	13:15	57.47	23.61	10:53	57.83	23.25	12:10	58.02	23.06	14:22	58.20	22.88	11:06	58.52	22.56	11:45	58.74	22.34
OW-05L	79.90	Deep	10:06	53.93	25.97	9:49	54.11	25.79	13:07	54.31	25.59	10:42	54.64	25.26	12:05	54.78	25.11	14:17	54.93	24.97	10:59	55.22	24.67	11:39	55.45	24.45
OW-05U	79.55	Upper	10:03	53.06	26.49	9:45	53.21	26.34	13:04	53.36	26.19	10:39	53.71	25.84	12:04	53.83	25.72	14:10	53.98	25.57	10:58	54.29	25.26	11:38	54.51	25.04
OW-06L	81.55	Lower	9:55	55.02	26.53	9:25	55.19	26.36	12:52	55.38	26.17	10:27	55.71	25.84	11:52	55.85	25.70	14:09	55.98	25.57	10:46	56.27	25.28	11:26	56.50	25.05
OW-06U	80.77	Upper	9:53	54.02	26.75	9:23	54.20	26.57	12:54	54.39	26.41	10:29	54.71	26.06	11:54	54.84	25.93	14:06	54.97	25.80	10:47	55.26	25.51	11:27	55.49	25.28
OW-07L	79.04	Deep	9:17	59.14	19.90	8:59	59.41	19.63	12:07	59.75	19.29	9:49	59.97	19.07	11:21	60.21	18.83	13:31	60.29	18.75	10:06	60.37	18.67	10:51	60.44	18.60
OW-07U	79.02	Upper	9:13	58.61	20.21	8:57	58.90	20.02	12:04	59.21	19.81	9:37	59.58	19.44	11:33	59.76	19.26	13:33	59.91	19.11	10:04	60.16	18.86	10:52	60.30	18.72
OW-08L	84.07	Deep	8:46	51.39	32.68	8:08	51.56	32.51	10:07	52.09	32.04	9:02	52.16	31.91	11:09	52.33	31.74	8:32	52.34	31.73	8:58	52.56	31.51	10:26	52.63	31.44
OW-08U	83.88	Lower	8:43	47.80	36.26	8:10	47.79	36.09	10:05	48.17	35.71	9:05	48.38	35.50	11:09	48.54	35.34	8:35	48.62	35.26	8:59	48.90	34.98	10:27	49.03	34.85
OW-09L	80.00	Deep	9:59	52.75	27.25	9:30	52.91	27.09	13:00	53.11	26.89	10:35	53.41	26.59	11:58	53.51	26.49	14:12	53.68	26.32	10:55	54.02	25.98	11:32	54.27	25.73
OW-09U	79.24	Upper	9:57	51.93	27.31	9:33	52.07	27.17	12:58	52.02	27.22	10:33	52.53	26.71	11:56	52.59	26.65	14:14	52.76	26.48	10:53	53.13	26.11	11:31	53.43	25.81
OW-10L	79.88	Deep	9:05	56.54	23.34	8:48	56.84	23.04	11:54	57.34	22.54	9:28	57.38	22.50	11:27	57.58	22.30	13:25	57.52	22.36	9:56	57.51	22.37	10:44	57.42	22.46
OW-10U	79.53	Upper	9:07	56.95	22.58	8:50	57.01	22.52	11:58	57.09	22.44	9:25	57.29	22.24	11:28	57.29	22.24	13:27	57.36	22.17	9:55	57.53	22.00	10:43	57.75	21.78
OW-2150L	82.45	Deep	15:18	48.61	33.84	13:33	48.85	33.60	16:54	49.21	33.24	12:52	49.49	32.96	10:06	49.71	32.74	15:52	49.82	32.63	12:17	49.95	32.50	9:11	50.00	32.45
OW-2150U	82.78	Upper	15:16	37.17	45.61	13:30	37.43	45.35	16:52	37.68	45.10	12:54	38.00	44.78	10:04	38.12	44.66	15:50	38.28	44.50	12:18	38.58	44.20	9:10	38.81	43.97
OW-2169L	81.72	Lower	15:25	45.72	36.00	13:36	45.91	35.81	11:00	46.23	35.49	12:59	46.49	35.23	9:35	46.65	35.07	15:56	46.72	35.00	12:22	47.01	34.71	9:20	47.13	34.59
OW-2169U	81.77	Upper	15:29	39.19	42.58	13:38	39.38	42.39	11:01	39.62	42.15	13:01	39.99	41.78	9:37	40.06	41.69	15:59	40.15	41.62	12:23	40.55	41.22	9:18	40.82	40.95
OW-2181L	81.32	Lower	15:33	45.06	36.26	13:43	45.20	36.12	11:09	45.41	35.91	13:07	45.68	35.64	10:13	45.86	35.46	16:04	46.03	35.29	12:32	46.23	35.09	9:28	46.38	34.94
OW-2181U	81.31	Upper	15:30	39.05	42.26	13:41	39.23	42.08	11:07	39.46	41.85	13:05	39.88	41.43	10:12	39.91	41.40	16:07	39.98	41.33	12:30	40.41	40.90	9:27	40.70	40.61
OW-2185L	81.36	Lower	15:55	46.69	34.67	17:35	46.87	34.49	11:18	47.18	34.18	15:30	47.45	33.91	10:58	47.61	33.75	9:00	47.69	33.67	9:31	47.99	33.37	10:15	48.12	33.24
OW-2185U	81.45	Upper	15:57	42.54	38.91	17:37	42.73	38.72	11:16	43.01	38.44	15:34	43.37	38.08	10:57	43.47	37.98	9:02	43.53	37.92	9:33	43.87	37.58	10:16	44.00	37.45
OW-2253L	82.82	Deep	16:08	50.51	32.31	14:08	50.70	32.12	10:40	51.09	31.74	14:38	51.24	31.59	9:02	51.43	31.39	8:36	51.44	31.38	9:09	51.65	31.17	10:00	51.71	31.11
OW-2253U	82.66	Upper	16:10	36.14	46.52	14:10	36.59	46.07	10:43	37.01	45.65	14:41	37.61	45.05	9:03	37.95	44.71	8:35	38.21	44.45	9:11	38.67	43.99	9:59	38.05	43.61
OW-2269L	82.55	Deep	15:43	50.07	32.48	13:56	50.26	32.29	10:34	50.64	31.91	8:41	50.81	31.74	9:34	51.00	31.55	10:21	51.00	31.55	9:17	51.21	31.34	9:50	51.28	31.27
OW-2269U	82.43	Lower	15:40	47.84	34.59	13:54	48.03	34.40	10:39	48.37	34.06	8:46	48.62	33.81	9:38	48.79	33.65	10:20	48.88	33.57	9:15	49.16	33.27	9:51	49.28	33.15
OW-2284L	82.74	Lower	15:50	48.55	34.19	14:00	48.75	33.99	10:24	49.05	33.69	8:31	49.32	33.42	9:28	49.45	33.29	8:46	49.57	33.17	9:24	49.88	32.86	9:41	50.00	32.74
OW-2284U	82.62	Upper	15:52	38.94	43.68	14:02	39.26	43.36	10:29	39.55	43.07	8:27	39.94	42.68	9:25	40.22	42.40	8:48	40.44	42.18	9:22	40.77	41.85	9:40	41.05	41.57
OW-2301L	83.19	Deep	8:31	45.88	37.31	9:02	46.05	37.14	9:35	46.45	36.74	8:47	46.68	36.50	8:40	46.77	36.42	17:25	46.75	36.44	8:48	47.00	36.19	8:55	47.11	36.08
OW-2301U	83.27	Upper	8:34	33.60	49.67	7:59	33.74	49.53	9:39	33.89	49.38	8:52	34.09	49.18	8:37	34.11	49.16	17:28	34.24	49.03	8:47	34.48	48.79	8:54	34.67	48.60
OW-2302L	81.95	Deep	11:44	45.88	36.07	11:39	45.97	35.98	9:52	46.31	35.64	12:22	46.51	35.44	16:01	46.65	35.30	15:40	46.83	35.12	12:00	46.95	34.99	13:06	47.08	34.87
OW-2302U	81.99	Lower	11:46	44.12	37.87	11:42	44.23	37.76	9:54	44.57	37.42	12:34	44.79	37.20	16:03	44.99	37.00	15:42	45.02	36.97	12:05	45.29	36.70	13:08	45.42	36.57
OW-2304L	69.73	Lower	13:29	42.94	26.79	14:35	43.12	26.61	16:01	43.45	26.28	9:37	43.65	26.08	14:38	43.79	25.94	16:29	43.82	25.91	14:28	44.04	25.69	14:16	44.15	25.58
OW-2304U	70.10	Upper	13:31	34.84	35.26	14:37	35.16	34.94	16:59	35.50	34.60	9:41	36.00	34.10	14:24	36.20	33.90	16:32	36.32	33.78	14:29	36.81	33.29	14:15	37.02	33.07
OW-2307L	78.56	Lower	8:55	53.46	25.10	8:17	53.99	24.57	11:45	54.46	24.10	9:19	54.50	24.06	11:21	54.69	23.87	10:36	54.87	23.69	9:49	54.87	23.69	10:36	54.88	23.67
OW-2307U	78.59	Upper	8:57	46.59	32.00	8:15	46.73	31.86	11:43	46.92	31.67	9:15	47.21	31.38	11:20	47.37	31.22	10:38	47.52	31.07	9:47	47.70	30.89	10:35	48.02	30.57
OW-2319L	76.05	Deep	12:02	43.19	32.86	11:20	43.17	32.88	14:35	43.47	32.58	12:13	43.71	32.34	15:49	43.82	32.23	15:29	43.87	32.18	11:52	44.15	31.90	12:56	44.29	31.76
OW-2319U	75.97	Lower	12:04	41.83	34.14	11:23	41.87	34.10	14:37	41.94	34.03	12:15	42.20	33.77	15:50	42.33	33.64	15:27	42.40	33.57	11:54	42.67	33.30	12:55	42.79	33.18
OW-2320L	73.19	Deep	10:41	44.07	29.12	10:44	44.14	29.05	14:04	44.42	28.77	11:34	44.67	28.52	12:45	44.81	28.38	15:01	44.86	28.33	11:39	45.11	28.08	12:38	45.22	27.97
OW-2320U	73.50	Lower	10:44	45.24	28.26	10:40	45.38	28.12	14:01	45.54	27.96	11:30	45.84	27.66	12:47	45.98	27.54	15:03	46.07	27.43	11:40	46.31	27.19	12:27	46.47	27.03
OW-2320U1	72.90	Upper	10:35	44.09	28.81	10:53	44.23	28.67	14:11	44.38	28.54	11:27	44.66	28.24	12:38	44.78	28.12	15:08	44.89	28.01	11:34	45.10	27.80	12:36	45.24	27.66
OW-2320U2	72.92	Upper	10:33	44.10	28.82	10:50	44.24	28.68	14:15	44.38	28.54	11:29	44.67	28.25	12:54	44.77	28.15	15:08	44.91	28.01	11:33	45.10	27.82	12:39	45.23	27.69
OW-2320U3	72.84	Upper	10:37	44.15	28.69	10:56	44.29	28.55	14:16	44.42	28.42	11:29	44.72	28.12	12:59	44.83	28.01	15:13	44.95	27.89	11:33	45.15	27.69	12:40	45.30	27.54
OW-2320U4	72.91	Upper	10:39	44.35	28.56	10:58	44.49	28.42	14:17	44.62	28.29	11:26	44.82	27.99	12:58	45.04	27.87	15:11	45.14	27.77	11:32	45.35	27.56	12:41	45.49	27.42
OW-2321L	73.54	Deep	11:06	52.68	20.86	10:21	52.91	20.63	13:47	53.28	20.26	11:37	53.55	19.99	12:34	53.79	19.75	14:52	53.84	19.70	11:24	54.01	19.53	12:14	54.07	19.47
OW-2321U	73.27	Lower	11:04	52.17	21.10	10:25	52.31	20.96	13:50	52.48	20.79	11:39	52.82	20.45	12:35	52.99	20.28	14:50	53.14	20.13	11:22	53.41	19.86	12:13	53.52	19.75
OW-2324L	26.27	Deep	9:28	13.84	12.43	8:27	14.29	11.98	12:22	14.91	11.36	9:54	14.86	11.41	15:16	15.07	11.20	13:40	14.93	11.34	10:16	14.37	11.90	11:04	14.14	12.13
OW-2324U	26.17	Lower	9:25	13.26	12.91	8:30	13.69	12.48	12:24	14.38	11.79	9:57	14.19	11.98	15:15	14.45	11.72	13:42	14.14	12.03	10:18	13.74	12.43	11:09	13.71	12.46
OW-2348L	52.70	Deep	14:15	41.20	11.50	15:00	41.61	11.09	15:27	42.16	10.54	10:11	42.23	10.47	13:35	42.49	10.21	16:47	42.45	10.25	14:51	42.40	10.30	14:36	42.25	10.35
OW-2348U	52.12	Lower	14:18	40.63	11.49	15:09	41.15	10.97	15:28	41.75	10.37	10:14	41.81	10.31	13:37	42.11	10.01	16:50	42.00	10.12	14:53	41.85	10.27	14:35	41.76	10.36
OW-2352L	64.60	Lower	13:55	45.36	19.24	15:23	45.47	19.13	15:04	45.56	19.04	12:25	45.74	18.86	13:58	45.79	18.81	17:05	45.89	18.71	15:15	45.98	18.62	14:38	46.06	18.54
OW-2352U	64.47	Upper	13:57	45.27	19.20	15:21	45.38	19.09	15:02	45.47	19.00	12:22	45.68	18.81	13:59	45.70	18.77	17:02	45.81	18.66	15:12	45.88	18.59	14:37	45.96	18.51
OW-2359L1	79.36	Deep	9:50	56.02	23.34	9:10	56.33	23.03	12:38	56.82	22.54	10:06	56.86	22.51	11:42	57.06	22.29	13:56	57.04	22.32	10:35	57.09	22.29	11:15	57.01	22.36
OW-2359L2	78.93	Deep	9:41	55.61	23.32	9:06	55.91	23.02	12:42	56.41	22.52	10:21	56.44	22.49	11:45	56.66	22.27	14:02	56.62	22.31	10:41	56.66	22.27	11:17	56.60	22.33
OW-2359L3	78.83	Deep	9:44	55.37	23.46	9:06	55.67	23.16	12:44	56.16	22.66	10:19	56.20	22.63	11:44	56.42	22.41	14:00	56.38	22.45	10:39	56.42	22.41	11:18	56.34	22.49
OW-2359U1	79.29	Lower	9:47	55.67	23.62	9:13	55.87	23.42	12:40	56.07	23.22	10:15	56.42	22.87	11:40	56.60	22.69	13:58	56.43	22.86	10:37	56.98	22.31	11:16	57.16	22.13

Table 2.4.12-6: VCS Groundwater Level Measurements (Sheet 3 of 3)

Well No.	Ref. Elev. (NAVD88)	Hydro-geologic Unit	18-Feb-09			19-May-09			25-Aug-09			[illegible]			[illegible]			[illegible]			[illegible]		
			Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)	Time	Depth to Water (ftbtc)	Elevation of Water (NAVD88)
OW-01L	73.74	Lower	11:42	44.86	28.88	11:00	45.32	28.42	10:25	45.96	27.78												
OW-01U	73.65	Upper	11:44	44.03	29.62	10:59	44.56	29.09	10:25	45.15	28.50												
OW-02L	76.53	Lower	10:54	53.41	23.12	10:28	53.95	22.58	10:04	54.53	22.00												
OW-02U	76.74	Upper	10:56	53.22	23.52	10:30	53.79	22.95	10:03	54.33	22.41												
OW-03L	76.67	Lower	10:49	59.25	17.42	10:19	59.54	17.13	9:59	60.44	16.23												
OW-03U	77.05	Upper	10:46	DRY	NA	10:20	DRY	NA	9:58	DRY	NA												
OW-04L	80.67	Lower	10:39	59.50	21.17	10:13	59.97	20.70	9:52	60.67	20.00												
OW-04U	81.08	Upper	10:37	58.91	22.17	10:14	59.45	21.63	9:51	60.09	20.99												
OW-05L	79.99	Deep	10:28	55.47	24.43	10:10	56.04	23.86	9:47	56.74	23.16												
OW-05U	79.55	Upper	10:31	54.64	24.91	10:08	55.22	24.33	9:46	55.83	23.72												
OW-06L	81.55	Lower	10:18	56.58	24.97	9:58	57.10	24.45	9:37	57.75	23.80												
OW-06U	80.77	Upper	10:15	55.59	25.18	10:00	56.12	24.65	9:39	56.74	24.03												
OW-07L	79.04	Deep	9:51	60.45	18.59	9:40	60.83	18.21	8:57	61.95	17.09												
OW-07U	79.02	Upper	9:53	60.39	18.63	9:39	60.63	18.39	8:56	61.34	17.68												
OW-08L	84.07	Deep	8:32	52.66	31.41	7:56	53.17	30.90	8:34	54.14	29.93												
OW-08U	83.88	Lower	8:33	49.11	34.77	7:58	49.71	34.17	8:33	50.46	33.42												
OW-09L	80.00	Deep	10:22	54.25	25.75	10:04	54.85	25.15	9:42	55.49	24.51												
OW-09U	79.24	Upper	10:24	53.36	25.88	10:03	53.99	25.25	9:41	54.56	24.68												
OW-10L	79.88	Deep	9:30	57.38	22.50	9:07	58.07	21.81	8:51	59.52	20.36												
OW-10U	79.53	Upper	9:32	57.65	21.88	9:08	57.92	21.61	8:49	58.19	21.34												
OW-2150L	82.45	Deep	12:18	50.09	32.36	11:30	50.44	32.01	11:03	51.30	31.15												
OW-2150U	82.79	Upper	12:16	38.87	43.91	11:28	39.80	42.98	11:02	40.76	42.02												
OW-2169L	81.72	Lower	12:22	47.23	34.49	11:35	47.84	33.88	11:09	48.57	33.15												
OW-2169U	81.77	Upper	12:23	40.76	41.01	11:37	41.68	40.09	11:08	42.56	39.21												
OW-2181L	81.32	Lower	12:28	46.54	34.78	11:42	46.90	34.42	11:11	47.53	33.79												
OW-2181U	81.31	Upper	12:27	40.57	40.74	11:40	41.50	39.81	11:13	42.33	38.98												
OW-2185L	81.36	Lower	9:07	48.22	33.14	8:49	48.79	32.57	8:21	49.54	31.82												
OW-2185U	81.45	Upper	9:06	44.12	37.33	8:48	44.81	36.64	8:19	45.59	35.86												
OW-2253L	82.82	Deep	8:43	51.76	31.06	8:06	52.27	30.55	7:54	53.20	29.62												
OW-2253U	82.66	Upper	8:45	39.34	43.32	8:07	40.32	42.34	7:52	41.27	41.39												
OW-2269L	82.55	Deep	8:49	51.31	31.24	8:27	51.85	30.70	8:02	52.77	29.78												
OW-2269U	82.43	Lower	8:51	49.38	33.05	8:28	49.97	32.46	7:59	50.72	31.71												
OW-2284L	82.74	Lower	8:57	50.10	32.64	8:39	50.67	32.07	8:10	51.42	31.32												
OW-2284U	82.62	Upper	8:55	41.19	41.43	8:37	42.06	40.56	8:08	43.02	39.60												
OW-2301L	83.19	Deep	8:23	47.19	36.00	7:49	47.68	35.51	7:40	48.50	34.69												
OW-2301U	83.27	Upper	8:25	34.63	48.64	7:50	35.15	48.12	7:39	35.61	47.66												
OW-2302L	81.95	Deep	12:04	47.14	34.81	11:17	47.62	34.33	10:49	48.39	33.56												
OW-2302U	81.99	Lower	12:05	45.51	36.48	11:18	46.04	35.95	10:50	46.82	35.17												
OW-2304L	69.73	Lower	13:46	44.20	25.53	12:59	44.66	25.07	12:42	45.41	24.32												
OW-2304U	70.10	Upper	13:48	37.28	32.82	13:02	37.99	32.11	12:40	38.14	31.96												
OW-2307L	78.56	Lower	9:21	54.90	23.66	9:03	55.82	22.74	8:44	57.32	21.24												
OW-2307U	78.59	Upper	9:23	48.18	30.41	9:01	48.81	29.78	8:43	49.54	29.05												
OW-2319L	76.05	Deep	11:53	44.43	31.62	11:06	44.84	31.21	10:31	45.57	30.48												
OW-2319U	75.97	Lower	11:50	42.86	33.11	11:07	43.34	32.63	10:35	44.06	31.91												
OW-2320L	73.19	Deep	11:25	45.29	27.90	10:46	45.71	27.48	10:11	46.47	26.72												
OW-2320U	73.50	Lower	11:24	46.57	26.93	10:48	47.09	26.41	10:12	47.71	25.79												
OW-2320U1	72.90	Upper	11:35	45.38	27.54	10:51	45.88	27.02	10:16	46.49	26.41												
OW-2320U2	72.92	Upper	11:33	45.36	27.56	10:50	45.89	27.03	10:17	46.51	26.41												
OW-2320U3	72.84	Upper	11:29	45.41	27.43	10:54	45.94	26.90	10:19	46.55	26.29												
OW-2320U4	72.91	Upper	11:31	45.61	27.30	10:53	46.14	26.77	10:20	46.74	26.17												
OW-2321L	73.54	Deep	11:10	54.11	19.43	10:36	54.31	19.23	11:40	55.40	18.14												
OW-2321U	73.27	Lower	11:12	53.78	19.49	10:38	54.25	19.02	11:39	54.77	18.50												
OW-2324L	26.27	Deep	9:43	13.99	12.28	9:26	13.87	12.40	9:07	16.66	9.61												
OW-2324U	26.17	Lower	9:41	13.47	12.70	9:24	13.64	12.53	9:09	16.10	10.07												
OW-2348L	52.70	Deep	14:10	42.29	10.41	13:19	41.25	11.45	12:06	43.68	9.02												
OW-2348U	52.12	Lower	14:14	41.71	10.41	13:21	40.56	11.56	12:06	43.34	8.78												
OW-2352L	64.60	Lower	14:54	46.16	18.44	13:39	46.48	18.12	12:23	46.88	17.72												
OW-2352U	64.47	Upper	14:52	46.06	18.41	13:35	46.38	18.09	12:21	46.79	17.68												
OW-2359L1	79.36	Deep	10:07	56.97	22.39	9:50	57.59	21.77	9:24	58.97	20.39												
OW-2359L2	78.93	Deep	9:59	56.55	22.38	9:53	57.16	21.77	9:21	58.55	20.38												
OW-2359L3	78.83	Deep	10:01	56.31	22.52	9:51	56.92	21.91	9:20	58.31	20.52												
OW-2359U1	79.29	Lower	10:09	57.24	22.05	9:48	57.66	21.63	9:22	58.37	20.92												

Table 2.4.12-6: VCS Groundwater Level Measurements (Sheet 3 of 3, Continued)

Notes:

- Purple-shaded areas indicate an anomaly or suspect reading.
- Yellow-shadded areas indicate water levels corrected the following day. (September 2008 water levels were collected on 9-25-08; October 2010 water levels were collected on 10-19-10)
- Blue shading areas: Wells OW-2253U/L were field mislabeled. Shaded areas indicate data corrected to reflect the true well identities.

Abbreviations:

- NAVD 88 = North American Vertical Datum 1988
- Fbtc = feet below top of casing
- NA = Not Applicable

The following table entirely replaces and supersedes SSAR Table 2.4.12-7, Rev. 0, to add groundwater levels and vertical hydraulic gradients measured on November 19, 2009 and March 17, June 8, and October 18, 2010 to Sheets 1 through 14.

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 1 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i,
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-01U/L (Upper Shallow/Lower Shallow)	25-Oct-07	22.16	12.16	17.16	32.19	-27.78	-37.78	-32.78	31.36	49.94	0.84	0.02
	17-Nov-07	22.16	12.16	17.16	32.20	-27.78	-37.78	-32.78	31.35	49.94	0.85	0.02
	18-Dec-07	22.16	12.16	17.16	32.09	-27.78	-37.78	-32.78	31.23	49.94	0.86	0.02
	30-Jan-08	22.16	12.16	17.16	31.88	-27.78	-37.78	-32.78	30.97	49.94	0.71	0.01
	18-Feb-08	22.16	12.16	17.16	31.46	-27.78	-37.78	-32.78	30.80	49.94	0.66	0.01
	31-Mar-08	22.16	12.16	17.16	31.47	-27.78	-37.78	-32.78	30.75	49.94	0.72	0.01
	26-Apr-08	22.16	12.16	17.16	31.74	-27.78	-37.78	-32.78	31.33	49.94	0.41	0.01
	23-May-08	22.16	12.16	17.16	31.13	-27.78	-37.78	-32.78	30.42	49.94	0.71	0.01
	17-Jun-08	22.16	12.16	17.16	30.93	-27.78	-37.78	-32.78	30.17	49.94	0.76	0.02
	15-Jul-08	22.16	12.16	17.16	30.79	-27.78	-37.78	-32.78	30.07	49.94	0.72	0.01
	11-Aug-08	22.16	12.16	17.16	30.66	-27.78	-37.78	-32.78	29.89	49.94	0.77	0.02
	24-Sep-08	22.16	12.16	17.16	30.32	-27.78	-37.78	-32.78	29.60	49.94	0.72	0.01
	22-Oct-08	22.16	12.16	17.16	30.25	-27.78	-37.78	-32.78	29.48	49.94	0.77	0.02
	12-Nov-08	22.16	12.16	17.16	30.11	-27.78	-37.78	-32.78	29.40	49.94	0.71	0.01
	16-Dec-08	22.16	12.16	17.16	29.90	-27.78	-37.78	-32.78	29.15	49.94	0.75	0.02
	13-Jan-09	22.16	12.16	17.16	29.72	-27.78	-37.78	-32.78	29.00	49.94	0.72	0.01
	18-Feb-09	22.16	12.16	17.16	29.62	-27.78	-37.78	-32.78	28.88	49.94	0.74	0.01
	19-May-09	22.16	12.16	17.16	29.09	-27.78	-37.78	-32.78	28.42	49.94	0.67	0.01
	25-Aug-09	22.16	12.16	17.16	28.50	-27.78	-37.78	-32.78	27.78	49.94	0.72	0.01
	19-Nov-09	22.16	12.16	17.16	28.16	-27.78	-37.78	-32.78	27.50	49.94	0.66	0.01
	17-Mar-10	22.16	12.16	17.16	29.30	-27.78	-37.78	-32.78	27.72	49.94	0.58	0.01
	8-Jun-10	22.16	12.16	17.16	28.49	-27.78	-37.78	-32.78	27.84	49.94	0.65	0.01
	18-Oct-10	22.16	12.16	17.16	28.42	-27.78	-37.78	-32.78	28.61	49.94	0.70	0.01
OW-02U/L (Upper Shallow/Lower Shallow)	25-Oct-07	22.25	12.25	17.25	25.25	-22.93	-32.93	-27.93	25.17	45.18	0.08	0.00
	17-Nov-07	22.25	12.25	17.25	25.39	-22.93	-32.93	-27.93	25.32	45.18	0.07	0.00
	16-Dec-07	22.25	12.25	17.25	25.55	-22.93	-32.93	-27.93	25.41	45.18	0.14	0.00
	30-Jan-08	22.25	12.25	17.25	25.49	-22.93	-32.93	-27.93	25.32	45.18	0.17	0.00
	18-Feb-08	22.25	12.25	17.25	25.39	-22.93	-32.93	-27.93	25.22	45.18	0.17	0.00
	31-Mar-08	22.25	12.25	17.25	25.45	-22.93	-32.93	-27.93	25.21	45.18	0.24	0.01
	26-Apr-08	22.25	12.25	17.25	25.28	-22.93	-32.93	-27.93	25.72	45.18	-0.44	-0.01
	23-May-08	22.25	12.25	17.25	25.16	-22.93	-32.93	-27.93	24.87	45.18	0.29	0.01
	17-Jun-08	22.25	12.25	17.25	24.94	-22.93	-32.93	-27.93	24.66	45.18	0.28	0.01
	15-Jul-08	22.25	12.25	17.25	24.80	-22.93	-32.93	-27.93	24.53	45.18	0.27	0.01
	11-Aug-08	22.25	12.25	17.25	24.69	-22.93	-32.93	-27.93	24.37	45.18	0.32	0.01
	24-Sep-08	22.25	12.25	17.25	24.34	-22.93	-32.93	-27.93	24.04	45.18	0.30	0.01
	22-Oct-08	22.25	12.25	17.25	24.26	-22.93	-32.93	-27.93	23.89	45.18	0.37	0.01
	12-Nov-08	22.25	12.25	17.25	24.12	-22.93	-32.93	-27.93	23.75	45.18	0.37	0.01
	16-Dec-08	22.25	12.25	17.25	23.84	-22.93	-32.93	-27.93	23.47	45.18	0.37	0.01
	13-Jan-09	22.25	12.25	17.25	23.62	-22.93	-32.93	-27.93	23.27	45.18	0.35	0.01
	18-Feb-09	22.25	12.25	17.25	23.52	-22.93	-32.93	-27.93	23.12	45.18	0.40	0.01
	19-May-09	22.25	12.25	17.25	22.95	-22.93	-32.93	-27.93	22.58	45.18	0.37	0.01
	25-Aug-09	22.25	12.25	17.25	22.41	-22.93	-32.93	-27.93	22.00	45.18	0.41	0.01
	19-Nov-09	22.25	12.25	17.25	22.04	-22.93	-32.93	-27.93	21.62	45.18	0.42	0.01
	17-Mar-10	22.25	12.25	17.25	21.84	-22.93	-32.93	-27.93	21.66	45.18	0.18	0.00
	8-Jun-10	22.25	12.25	17.25	22.05	-22.93	-32.93	-27.93	21.88	45.18	0.17	0.00
	18-Oct-10	22.25	12.25	17.25	22.58	-22.93	-32.93	-27.93	22.54	45.18	0.04	0.00

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 2 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-03U/L (Upper Shallow/Lower Shallow)	25-Oct-07	32.60	22.60	27.60	21.09	-11.79	-21.79	-16.79	21.04	44.39	0.05	0.00
	17-Nov-07	32.60	22.60	27.60	22.01	-11.79	-21.79	-16.79	20.94	44.39	1.07	0.02
	18-Dec-07	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	20.79	44.39	NA	NA
	30-Jan-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	20.50	44.39	NA	NA
	18-Feb-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	20.36	44.39	NA	NA
	31-Mar-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	20.20	44.39	NA	NA
	26-Apr-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	19.98	44.39	NA	NA
	23-May-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	19.83	44.39	NA	NA
	17-Jun-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	19.56	44.39	NA	NA
	15-Jul-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	19.25	44.39	NA	NA
	11-Aug-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	18.91	44.39	NA	NA
	24-Sep-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	18.41	44.39	NA	NA
	22-Oct-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	18.15	44.39	NA	NA
	12-Nov-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.92	44.39	NA	NA
	16-Dec-08	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.66	44.39	NA	NA
	13-Jan-09	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.24	44.39	NA	NA
	18-Feb-09	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.42	44.39	NA	NA
	19-May-09	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.13	44.39	NA	NA
	25-Aug-09	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	16.23	44.39	NA	NA
	19-Nov-09	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	16.41	44.39	NA	NA
	17-Mar-10	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.82	44.39	NA	NA
	8-Jun-10	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	17.44	44.39	NA	NA
	18-Oct-10	32.60	22.60	27.60	DRY	-11.79	-21.79	-16.79	18.56	44.39	NA	NA
OW-04U/L (Upper Shallow/Lower Shallow)	25-Oct-07	4.61	-5.39	-0.39	24.93	-20.87	-30.87	-25.87	23.98	25.48	0.95	0.04
	17-Nov-07	4.61	-5.39	-0.39	25.06	-20.87	-30.87	-25.87	24.06	25.48	1.00	0.04
	18-Dec-07	4.61	-5.39	-0.39	25.02	-20.87	-30.87	-25.87	24.13	25.48	0.89	0.03
	30-Jan-08	4.61	-5.39	-0.39	24.88	-20.87	-30.87	-25.87	23.92	25.48	0.96	0.04
	18-Feb-08	4.61	-5.39	-0.39	24.76	-20.87	-30.87	-25.87	23.76	25.48	1.00	0.04
	31-Mar-08	4.61	-5.39	-0.39	24.64	-20.87	-30.87	-25.87	23.69	25.48	0.95	0.04
	26-Apr-08	4.61	-5.39	-0.39	24.38	-20.87	-30.87	-25.87	23.45	25.48	0.93	0.04
	23-May-08	4.61	-5.39	-0.39	24.21	-20.87	-30.87	-25.87	23.28	25.48	0.93	0.04
	17-Jun-08	4.61	-5.39	-0.39	24.05	-20.87	-30.87	-25.87	23.10	25.48	0.95	0.04
	15-Jul-08	4.61	-5.39	-0.39	23.86	-20.87	-30.87	-25.87	22.89	25.48	0.97	0.04
	11-Aug-08	4.61	-5.39	-0.39	23.61	-20.87	-30.87	-25.87	22.66	25.48	0.95	0.04
	24-Sep-08	4.61	-5.39	-0.39	23.25	-20.87	-30.87	-25.87	22.24	25.48	1.01	0.04
	22-Oct-08	4.61	-5.39	-0.39	23.06	-20.87	-30.87	-25.87	22.04	25.48	1.02	0.04
	12-Nov-08	4.61	-5.39	-0.39	22.88	-20.87	-30.87	-25.87	21.86	25.48	1.02	0.04
	16-Dec-08	4.61	-5.39	-0.39	22.56	-20.87	-30.87	-25.87	21.55	25.48	1.01	0.04
	13-Jan-09	4.61	-5.39	-0.39	22.34	-20.87	-30.87	-25.87	21.32	25.48	1.02	0.04
	18-Feb-09	4.61	-5.39	-0.39	22.17	-20.87	-30.87	-25.87	21.17	25.48	1.00	0.04
	19-May-09	4.61	-5.39	-0.39	21.63	-20.87	-30.87	-25.87	20.70	25.48	0.93	0.04
	25-Aug-09	4.61	-5.39	-0.39	20.99	-20.87	-30.87	-25.87	20.00	25.48	0.99	0.04
	19-Nov-09	4.61	-5.39	-0.39	20.62	-20.87	-30.87	-25.87	19.73	25.48	0.89	0.03
	17-Mar-10	4.61	-5.39	-0.39	20.86	-20.87	-30.87	-25.87	20.21	25.48	0.67	0.03
	8-Jun-10	4.61	-5.39	-0.39	21.13	-20.87	-30.87	-25.87	20.45	25.48	0.68	0.03
	18-Oct-10	4.61	-5.39	-0.39	21.93	-20.87	-30.87	-25.87	Damaged	25.48	NA	NA

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 3 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-05U/L (Upper Shallow/Deep)	25-Oct-07	32.07	22.07	27.07	26.84	-41.74	-51.74	-46.74	26.73	73.81	0.11	0.00
	17-Nov-07	32.07	22.07	27.07	27.07	-41.74	-51.74	-46.74	26.88	73.81	0.19	0.00
	18-Dec-07	32.07	22.07	27.07	27.24	-41.74	-51.74	-46.74	26.93	73.81	0.31	0.00
	30-Jan-08	32.07	22.07	27.07	27.22	-41.74	-51.74	-46.74	26.85	73.81	0.37	0.01
	18-Feb-08	32.07	22.07	27.07	27.10	-41.74	-51.74	-46.74	26.69	73.81	0.41	0.01
	31-Mar-08	32.07	22.07	27.07	27.05	-41.74	-51.74	-46.74	26.65	73.81	0.40	0.01
	26-Apr-08	32.07	22.07	27.07	26.80	-41.74	-51.74	-46.74	26.38	73.81	0.42	0.01
	23-May-08	32.07	22.07	27.07	26.67	-41.74	-51.74	-46.74	26.19	73.81	0.48	0.01
	17-Jun-08	32.07	22.07	27.07	26.49	-41.74	-51.74	-46.74	25.97	73.81	0.52	0.01
	15-Jul-08	32.07	22.07	27.07	26.34	-41.74	-51.74	-46.74	25.79	73.81	0.55	0.01
	11-Aug-08	32.07	22.07	27.07	26.19	-41.74	-51.74	-46.74	25.59	73.81	0.60	0.01
	24-Sep-08	32.07	22.07	27.07	25.84	-41.74	-51.74	-46.74	25.26	73.81	0.58	0.01
	22-Oct-08	32.07	22.07	27.07	25.72	-41.74	-51.74	-46.74	25.11	73.81	0.61	0.01
	12-Nov-08	32.07	22.07	27.07	25.57	-41.74	-51.74	-46.74	24.97	73.81	0.60	0.01
	16-Dec-08	32.07	22.07	27.07	25.26	-41.74	-51.74	-46.74	24.67	73.81	0.59	0.01
	13-Jan-09	32.07	22.07	27.07	25.04	-41.74	-51.74	-46.74	24.45	73.81	0.59	0.01
	18-Feb-09	32.07	22.07	27.07	24.91	-41.74	-51.74	-46.74	24.43	73.81	0.48	0.01
	19-May-09	32.07	22.07	27.07	24.33	-41.74	-51.74	-46.74	23.86	73.81	0.47	0.01
	25-Aug-09	32.07	22.07	27.07	23.72	-41.74	-51.74	-46.74	23.16	73.81	0.56	0.01
	19-Nov-09	32.07	22.07	27.07	23.38	-41.74	-51.74	-46.74	22.85	73.81	0.55	0.00
	17-Mar-10	32.07	22.07	27.07	23.07	-41.74	-51.74	-46.74	22.08	73.81	-0.01	0.00
	8-Jun-10	32.07	22.07	27.07	23.27	-41.74	-51.74	-46.74	22.68	73.81	-0.01	0.00
	18-Oct-10	32.07	22.07	27.07	22.93	-41.74	-51.74	-46.74	22.35	73.81	-0.02	0.00
OW-06U/L (Upper Shallow/Lower Shallow)	25-Oct-07	26.46	16.46	21.46	27.18	-5.51	-15.51	-10.51	27.09	31.97	0.09	0.00
	17-Nov-07	26.46	16.46	21.46	27.39	-5.51	-15.51	-10.51	27.30	31.97	0.09	0.00
	18-Dec-07	26.46	16.46	21.46	27.57	-5.51	-15.51	-10.51	27.69	31.97	-0.12	0.00
	30-Jan-08	26.46	16.46	21.46	27.54	-5.51	-15.51	-10.51	27.33	31.97	0.21	0.01
	18-Feb-08	26.46	16.46	21.46	27.42	-5.51	-15.51	-10.51	27.21	31.97	0.21	0.01
	31-Mar-08	26.46	16.46	21.46	27.34	-5.51	-15.51	-10.51	27.14	31.97	0.20	0.01
	26-Apr-08	26.46	16.46	21.46	27.11	-5.51	-15.51	-10.51	27.33	31.97	-0.22	-0.01
	23-May-08	26.46	16.46	21.46	26.93	-5.51	-15.51	-10.51	26.73	31.97	0.20	0.01
	17-Jun-08	26.46	16.46	21.46	26.75	-5.51	-15.51	-10.51	26.53	31.97	0.22	0.01
	15-Jul-08	26.46	16.46	21.46	26.57	-5.51	-15.51	-10.51	26.36	31.97	0.21	0.01
	11-Aug-08	26.46	16.46	21.46	26.41	-5.51	-15.51	-10.51	26.17	31.97	0.24	0.01
	24-Sep-08	26.46	16.46	21.46	26.06	-5.51	-15.51	-10.51	25.84	31.97	0.22	0.01
	22-Oct-08	26.46	16.46	21.46	25.93	-5.51	-15.51	-10.51	25.70	31.97	0.23	0.01
	12-Nov-08	26.46	16.46	21.46	25.80	-5.51	-15.51	-10.51	25.57	31.97	0.23	0.01
	16-Dec-08	26.46	16.46	21.46	25.51	-5.51	-15.51	-10.51	25.28	31.97	0.23	0.01
	13-Jan-09	26.46	16.46	21.46	25.28	-5.51	-15.51	-10.51	25.05	31.97	0.23	0.01
	18-Feb-09	26.46	16.46	21.46	25.18	-5.51	-15.51	-10.51	24.97	31.97	0.21	0.01
	19-May-09	26.46	16.46	21.46	24.65	-5.51	-15.51	-10.51	24.45	31.97	0.20	0.01
	25-Aug-09	26.46	16.46	21.46	24.03	-5.51	-15.51	-10.51	23.80	31.97	0.23	0.01
	19-Nov-09	26.46	16.46	21.46	23.64	-5.51	-15.51	-10.51	23.43	31.97	0.21	0.01
	17-Mar-10	26.46	16.46	21.46	23.56	-5.51	-15.51	-10.51	23.48	31.97	0.08	0.00
	8-Jun-10	26.46	16.46	21.46	23.73	-5.51	-15.51	-10.51	23.67	31.97	0.06	0.00
	18-Oct-10	26.46	16.46	21.46	24.25	-5.51	-15.51	-10.51	24.19	31.97	0.06	0.00

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 4 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-07U/L (Upper Shallow/Deep)	25-Oct-07	24.32	14.32	19.32	21.00	-35.53	-45.53	-40.53	21.26	59.85	-0.26	0.00
	17-Nov-07	24.32	14.32	19.32	21.03	-35.53	-45.53	-40.53	21.16	59.85	-0.13	0.00
	18-Dec-07	24.32	14.32	19.32	23.04	-35.53	-45.53	-40.53	21.05	59.85	1.99	0.03
	30-Jan-08	24.32	14.32	19.32	20.85	-35.53	-45.53	-40.53	20.87	59.85	-0.02	0.00
	18-Feb-08	24.32	14.32	19.32	20.72	-35.53	-45.53	-40.53	20.71	59.85	0.01	0.00
	31-Mar-08	24.32	14.32	19.32	20.63	-35.53	-45.53	-40.53	20.63	59.85	0.00	0.00
	26-Apr-08	24.32	14.32	19.32	20.47	-35.53	-45.53	-40.53	20.36	59.85	0.11	0.00
	23-May-08	24.32	14.32	19.32	20.36	-35.53	-45.53	-40.53	20.16	59.85	0.20	0.00
	17-Jun-08	24.32	14.32	19.32	20.21	-35.53	-45.53	-40.53	19.90	59.85	0.31	0.01
	15-Jul-08	24.32	14.32	19.32	20.02	-35.53	-45.53	-40.53	19.63	59.85	0.39	0.01
	11-Aug-08	24.32	14.32	19.32	19.61	-35.53	-45.53	-40.53	19.29	59.85	0.52	0.01
	24-Sep-08	24.32	14.32	19.32	19.44	-35.53	-45.53	-40.53	19.07	59.85	0.37	0.01
	22-Oct-08	24.32	14.32	19.32	19.24	-35.53	-45.53	-40.53	18.83	59.85	0.41	0.01
	12-Nov-08	24.32	14.32	19.32	19.11	-35.53	-45.53	-40.53	18.75	59.85	0.36	0.01
	16-Dec-08	24.32	14.32	19.32	18.88	-35.53	-45.53	-40.53	18.67	59.85	0.19	0.00
	13-Jan-09	24.32	14.32	19.32	18.72	-35.53	-45.53	-40.53	18.60	59.85	0.12	0.00
	18-Feb-09	24.32	14.32	19.32	18.63	-35.53	-45.53	-40.53	18.59	59.85	0.04	0.00
	19-May-09	24.32	14.32	19.32	18.39	-35.53	-45.53	-40.53	18.21	59.85	0.18	0.00
	25-Aug-09	24.32	14.32	19.32	17.68	-35.53	-45.53	-40.53	17.09	59.85	0.59	0.01
	19-Nov-09	24.32	14.32	19.32	17.47	-35.53	-45.53	-40.53	17.63	59.85	-0.16	0.00
	17-Mar-10	24.32	14.32	19.32	18.20	-35.53	-45.53	-40.53	18.59	59.85	-0.39	-0.01
	8-Jun-10	24.32	14.32	19.32	18.48	-35.53	-45.53	-40.53	18.72	59.85	-0.29	0.00
	18-Oct-10	24.32	14.32	19.32	18.06	-35.53	-45.53	-40.53	19.07	59.85	-0.41	-0.01
OW-08U/L (Lower Shallow/Deep)	25-Oct-07	-7.62	-17.62	-12.62	37.62	-44.44	-54.44	-49.44	34.32	36.82	3.30	0.09
	17-Nov-07	-7.62	-17.62	-12.62	37.64	-44.44	-54.44	-49.44	34.09	36.82	3.55	0.10
	18-Dec-07	-7.62	-17.62	-12.62	37.52	-44.44	-54.44	-49.44	33.97	36.82	3.55	0.10
	30-Jan-08	-7.62	-17.62	-12.62	37.39	-44.44	-54.44	-49.44	33.99	36.82	3.40	0.09
	18-Feb-08	-7.62	-17.62	-12.62	37.24	-44.44	-54.44	-49.44	33.91	36.82	3.33	0.09
	31-Mar-08	-7.62	-17.62	-12.62	37.09	-44.44	-54.44	-49.44	33.77	36.82	3.32	0.09
	26-Apr-08	-7.62	-17.62	-12.62	36.90	-44.44	-54.44	-49.44	33.38	36.82	3.52	0.10
	23-May-08	-7.62	-17.62	-12.62	36.63	-44.44	-54.44	-49.44	33.05	36.82	3.58	0.10
	17-Jun-08	-7.62	-17.62	-12.62	36.28	-44.44	-54.44	-49.44	32.68	36.82	3.60	0.10
	15-Jul-08	-7.62	-17.62	-12.62	36.09	-44.44	-54.44	-49.44	32.51	36.82	3.58	0.10
	11-Aug-08	-7.62	-17.62	-12.62	35.71	-44.44	-54.44	-49.44	32.04	36.82	3.67	0.10
	24-Sep-08	-7.62	-17.62	-12.62	35.50	-44.44	-54.44	-49.44	31.91	36.82	3.59	0.10
	22-Oct-08	-7.62	-17.62	-12.62	35.34	-44.44	-54.44	-49.44	31.74	36.82	3.60	0.10
	12-Nov-08	-7.62	-17.62	-12.62	35.26	-44.44	-54.44	-49.44	31.73	36.82	3.53	0.10
	16-Dec-08	-7.62	-17.62	-12.62	34.98	-44.44	-54.44	-49.44	31.51	36.82	3.47	0.09
	13-Jan-09	-7.62	-17.62	-12.62	34.85	-44.44	-54.44	-49.44	31.44	36.82	3.41	0.09
	18-Feb-09	-7.62	-17.62	-12.62	34.77	-44.44	-54.44	-49.44	31.41	36.82	3.36	0.09
	19-May-09	-7.62	-17.62	-12.62	34.17	-44.44	-54.44	-49.44	30.90	36.82	3.27	0.09
	25-Aug-09	-7.62	-17.62	-12.62	33.42	-44.44	-54.44	-49.44	29.93	36.82	3.49	0.09
	19-Nov-09	-7.62	-17.62	-12.62	33.22	-44.44	-54.44	-49.44	30.31	36.82	2.91	0.08
	17-Mar-10	-7.62	-17.62	-12.62	34.23	-44.44	-54.44	-49.44	31.69	36.82	2.54	0.07
	8-Jun-10	-7.62	-17.62	-12.62	34.50	-44.44	-54.44	-49.44	31.79	36.82	2.71	0.07
	18-Oct-10	-7.62	-17.62	-12.62	35.40	-44.44	-54.44	-49.44	32.61	36.82	2.79	0.08

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 5 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-09U/L (Upper Shallow/Deep)	25-Oct-07	27.91	17.91	22.91	27.47	-32.14	-42.14	-37.14	27.81	60.05	-0.34	-0.01
	17-Nov-07	27.91	17.91	22.91	27.87	-32.14	-42.14	-37.14	28.09	60.05	-0.22	0.00
	18-Dec-07	27.91	17.91	22.91	28.41	-32.14	-42.14	-37.14	28.18	60.05	0.23	0.00
	30-Jan-08	27.91	17.91	22.91	27.93	-32.14	-42.14	-37.14	28.03	60.05	-0.10	0.00
	18-Feb-08	27.91	17.91	22.91	27.78	-32.14	-42.14	-37.14	27.87	60.05	-0.09	0.00
	31-Mar-08	27.91	17.91	22.91	27.92	-32.14	-42.14	-37.14	27.90	60.05	0.02	0.00
	28-Apr-08	27.91	17.91	22.91	27.53	-32.14	-42.14	-37.14	32.26	60.05	-5.73	-0.10
	23-May-08	27.91	17.91	22.91	27.47	-32.14	-42.14	-37.14	27.42	60.05	0.05	0.00
	17-Jun-08	27.91	17.91	22.91	27.31	-32.14	-42.14	-37.14	27.25	60.05	0.06	0.00
	15-Jul-08	27.91	17.91	22.91	27.17	-32.14	-42.14	-37.14	27.09	60.05	0.08	0.00
	11-Aug-08	27.91	17.91	22.91	27.22	-32.14	-42.14	-37.14	26.89	60.05	0.33	0.01
	24-Sep-08	27.91	17.91	22.91	26.71	-32.14	-42.14	-37.14	26.59	60.05	0.12	0.00
	22-Oct-08	27.91	17.91	22.91	26.65	-32.14	-42.14	-37.14	26.49	60.05	0.16	0.00
	12-Nov-08	27.91	17.91	22.91	26.48	-32.14	-42.14	-37.14	26.32	60.05	0.16	0.00
	16-Dec-08	27.91	17.91	22.91	26.11	-32.14	-42.14	-37.14	25.98	60.05	0.13	0.00
	13-Jan-09	27.91	17.91	22.91	25.61	-32.14	-42.14	-37.14	25.73	60.05	0.08	0.00
	18-Feb-09	27.91	17.91	22.91	25.88	-32.14	-42.14	-37.14	25.75	60.05	0.13	0.00
	19-May-09	27.91	17.91	22.91	25.25	-32.14	-42.14	-37.14	25.15	60.05	0.10	0.00
	25-Aug-09	27.91	17.91	22.91	24.68	-32.14	-42.14	-37.14	24.51	60.05	0.17	0.00
	19-Nov-09	27.91	17.91	22.91	24.08	-32.14	-42.14	-37.14	24.17	60.05	0.12	0.00
	17-Mar-10	27.91	17.91	22.91	23.65	-32.14	-42.14	-37.14	24.11	60.05	-0.18	0.00
	8-Jun-10	27.91	17.91	22.91	24.10	-32.14	-42.14	-37.14	24.30	60.05	-0.18	0.00
	18-Oct-10	27.91	17.91	22.91	24.74	-32.14	-42.14	-37.14	24.96	60.05	-0.22	0.00
OW-10U/L (Upper Shallow/Deep)	25-Oct-07	30.09	20.09	25.09	22.29	-48.93	-58.93	-53.93	25.36	79.02	-3.07	-0.04
	17-Nov-07	30.09	20.09	25.09	22.49	-48.93	-58.93	-53.93	25.12	79.02	-2.63	-0.03
	18-Dec-07	30.09	20.09	25.09	22.61	-48.93	-58.93	-53.93	25.07	79.02	-2.46	-0.03
	30-Jan-08	30.09	20.09	25.09	22.53	-48.93	-58.93	-53.93	25.08	79.02	-2.55	-0.03
	18-Feb-08	30.09	20.09	25.09	22.49	-48.93	-58.93	-53.93	24.90	79.02	-2.41	-0.03
	31-Mar-08	30.09	20.09	25.09	22.70	-48.93	-58.93	-53.93	24.73	79.02	-2.03	-0.03
	28-Apr-08	30.09	20.09	25.09	22.62	-48.93	-58.93	-53.93	26.27	79.02	-3.65	-0.05
	23-May-08	30.09	20.09	25.09	22.63	-48.93	-58.93	-53.93	23.88	79.02	-1.25	-0.02
	17-Jun-08	30.09	20.09	25.09	22.58	-48.93	-58.93	-53.93	23.34	79.02	-0.76	-0.01
	15-Jul-08	30.09	20.09	25.09	22.52	-48.93	-58.93	-53.93	23.04	79.02	-0.52	-0.01
	11-Aug-08	30.09	20.09	25.09	22.44	-48.93	-58.93	-53.93	22.54	79.02	-0.10	0.00
	24-Sep-08	30.09	20.09	25.09	22.24	-48.93	-58.93	-53.93	22.53	79.02	-0.29	0.00
	22-Oct-08	30.09	20.09	25.09	22.24	-48.93	-58.93	-53.93	22.32	79.02	-0.08	0.00
	12-Nov-08	30.09	20.09	25.09	22.17	-48.93	-58.93	-53.93	22.36	79.02	-0.19	0.00
	16-Dec-08	30.09	20.09	25.09	22.00	-48.93	-58.93	-53.93	22.37	79.02	-0.37	0.00
	13-Jan-09	30.09	20.09	25.09	21.76	-48.93	-58.93	-53.93	22.46	79.02	-0.66	-0.01
	18-Feb-09	30.09	20.09	25.09	21.88	-48.93	-58.93	-53.93	22.50	79.02	-0.62	-0.01
	19-May-09	30.09	20.09	25.09	21.61	-48.93	-58.93	-53.93	21.81	79.02	-0.20	0.00
	25-Aug-09	30.09	20.09	25.09	21.34	-48.93	-58.93	-53.93	20.36	79.02	0.98	0.01
	19-Nov-09	30.09	20.09	25.09	21.10	-48.93	-58.93	-53.93	21.71	79.02	-0.61	-0.01
	17-Mar-10	30.09	20.09	25.09	20.83	-48.93	-58.93	-53.93	23.24	79.02	-2.41	-0.03
	8-Jun-10	30.09	20.09	25.09	20.81	-48.93	-58.93	-53.93	23.24	79.02	-2.43	-0.03
	18-Oct-10	30.09	20.09	25.09	21.16	-48.93	-58.93	-53.93	23.50	79.02	-2.34	-0.03

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 6 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2150U/L (Upper Shallow/Deep)	30-Jan-08	25.91	15.91	20.91	46.29	-59.13	-69.13	-64.13	34.44	85.04	11.85	0.14
	18-Feb-08	25.91	15.91	20.91	46.08	-59.13	-69.13	-64.13	34.55	85.04	11.53	0.14
	31-Mar-08	25.91	15.91	20.91	46.27	-59.13	-69.13	-64.13	34.58	85.04	11.69	0.14
	26-Apr-08	25.91	15.91	20.91	46.05	-59.13	-69.13	-64.13	34.34	85.04	11.71	0.14
	23-May-08	25.91	15.91	20.91	45.86	-59.13	-69.13	-64.13	34.16	85.04	11.69	0.14
	17-Jun-08	25.91	15.91	20.91	45.61	-59.13	-69.13	-64.13	33.84	85.04	11.77	0.14
	15-Jul-08	25.91	15.91	20.91	45.35	-59.13	-69.13	-64.13	33.60	85.04	11.75	0.14
	11-Aug-08	25.91	15.91	20.91	45.12	-59.13	-69.13	-64.13	33.24	85.04	11.88	0.14
	24-Sep-08	25.91	15.91	20.91	44.78	-59.13	-69.13	-64.13	32.90	85.04	11.79	0.14
	22-Oct-08	25.91	15.91	20.91	44.66	-59.13	-69.13	-64.13	32.74	85.04	11.92	0.14
	12-Nov-08	25.91	15.91	20.91	44.40	-59.13	-69.13	-64.13	32.61	85.04	11.79	0.14
	16-Dec-08	25.91	15.91	20.91	44.20	-59.13	-69.13	-64.13	32.50	85.04	11.70	0.14
	13-Jan-09	25.91	15.91	20.91	43.97	-59.13	-69.13	-64.13	32.45	85.04	11.52	0.14
	18-Feb-09	25.91	15.91	20.91	43.91	-59.13	-69.13	-64.13	32.36	85.04	11.55	0.14
	19-May-09	25.91	15.91	20.91	42.99	-59.13	-69.13	-64.13	32.01	85.04	10.97	0.13
	25-Aug-09	25.91	15.91	20.91	42.02	-59.13	-69.13	-64.13	31.15	85.04	10.67	0.13
	19-Nov-09	25.91	15.91	20.91	42.57	-59.13	-69.13	-64.13	31.11	85.04	10.48	0.12
	17-Mar-10	25.91	15.91	20.91	42.40	-59.13	-69.13	-64.13	30.95	85.04	10.58	0.12
	8-Jun-10	25.91	15.91	20.91	42.50	-59.13	-69.13	-64.13	30.51	85.04	10.09	0.12
	19-Oct-10	25.91	15.91	20.91	42.36	-59.13	-69.13	-64.13	30.43	85.04	10.93	0.13
OW-2169U/L (Upper Shallow/Lower Shallow)	30-Jan-08	25.11	15.11	20.11	43.48	-9.96	-19.96	-14.96	37.14	35.07	6.34	0.18
	18-Feb-08	25.11	15.11	20.11	43.18	-9.96	-19.96	-14.96	36.96	35.07	6.22	0.18
	31-Mar-08	25.11	15.11	20.11	43.37	-9.96	-19.96	-14.96	36.81	35.07	6.56	0.19
	26-Apr-08	25.11	15.11	20.11	43.06	-9.96	-19.96	-14.96	36.57	35.07	6.49	0.19
	23-May-08	25.11	15.11	20.11	42.95	-9.96	-19.96	-14.96	36.32	35.07	6.63	0.19
	17-Jun-08	25.11	15.11	20.11	42.68	-9.96	-19.96	-14.96	36.00	35.07	6.58	0.19
	15-Jul-08	25.11	15.11	20.11	42.39	-9.96	-19.96	-14.96	35.81	35.07	6.58	0.19
	11-Aug-08	25.11	15.11	20.11	42.15	-9.96	-19.96	-14.96	35.49	35.07	6.66	0.19
	24-Sep-08	25.11	15.11	20.11	41.76	-9.96	-19.96	-14.96	35.23	35.07	6.55	0.19
	22-Oct-08	25.11	15.11	20.11	41.69	-9.96	-19.96	-14.96	35.07	35.07	6.62	0.19
	12-Nov-08	25.11	15.11	20.11	41.62	-9.96	-19.96	-14.96	35.00	35.07	6.62	0.19
	16-Dec-08	25.11	15.11	20.11	41.22	-9.96	-19.96	-14.96	34.71	35.07	6.51	0.19
	13-Jan-09	25.11	15.11	20.11	40.96	-9.96	-19.96	-14.96	34.59	35.07	6.36	0.18
	18-Feb-09	25.11	15.11	20.11	41.01	-9.96	-19.96	-14.96	34.49	35.07	6.52	0.19
	19-May-09	25.11	15.11	20.11	40.09	-9.96	-19.96	-14.96	33.88	35.07	6.21	0.18
	25-Aug-09	25.11	15.11	20.11	39.21	-9.96	-19.96	-14.96	33.15	35.07	6.06	0.17
	19-Nov-09	25.11	15.11	20.11	39.94	-9.96	-19.96	-14.96	32.84	35.07	5.90	0.17
	17-Mar-10	25.11	15.11	20.11	39.56	-9.96	-19.96	-14.96	33.74	35.07	5.81	0.17
	8-Jun-10	25.11	15.11	20.11	39.71	-9.96	-19.96	-14.96	33.98	35.07	5.73	0.16
	19-Oct-10	25.11	15.11	20.11	41.30	-9.96	-19.96	-14.96	35.16	35.07	6.14	0.18

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 7 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2181U/L (Upper Shallow/Lower Shallow)	30-Jan-08	40.01	30.01	35.01	43.24	-10.12	-20.12	-15.12	36.45	50.13	6.79	0.14
	18-Feb-08	40.01	30.01	35.01	42.85	-10.12	-20.12	-15.12	36.58	50.13	6.27	0.13
	31-Mar-08	40.01	30.01	35.01	43.04	-10.12	-20.12	-15.12	36.54	50.13	6.50	0.13
	26-Apr-08	40.01	30.01	35.01	42.71	-10.12	-20.12	-15.12	36.46	50.13	6.25	0.12
	23-May-08	40.01	30.01	35.01	42.64	-10.12	-20.12	-15.12	36.41	50.13	6.23	0.12
	17-Jun-08	40.01	30.01	35.01	42.26	-10.12	-20.12	-15.12	36.26	50.13	6.00	0.12
	15-Jul-08	40.01	30.01	35.01	42.06	-10.12	-20.12	-15.12	36.12	50.13	5.96	0.12
	11-Aug-08	40.01	30.01	35.01	41.83	-10.12	-20.12	-15.12	35.91	50.13	5.92	0.12
	24-Sep-08	40.01	30.01	35.01	41.48	-10.12	-20.12	-15.12	35.64	50.13	5.92	0.12
	22-Oct-08	40.01	30.01	35.01	41.40	-10.12	-20.12	-15.12	35.46	50.13	5.94	0.12
	12-Nov-08	40.01	30.01	35.01	41.33	-10.12	-20.12	-15.12	35.29	50.13	6.04	0.12
	16-Dec-08	40.01	30.01	35.01	40.90	-10.12	-20.12	-15.12	35.09	50.13	5.81	0.12
	13-Jan-09	40.01	30.01	35.01	40.61	-10.12	-20.12	-15.12	34.96	50.13	5.65	0.11
	18-Feb-09	40.01	30.01	35.01	40.74	-10.12	-20.12	-15.12	34.78	50.13	5.96	0.12
	19-May-09	40.01	30.01	35.01	39.81	-10.12	-20.12	-15.12	34.42	50.13	5.39	0.11
	25-Aug-09	40.01	30.01	35.01	38.96	-10.12	-20.12	-15.12	33.79	50.13	5.19	0.10
	19-Nov-09	40.01	30.01	35.01	38.63	-10.12	-20.12	-15.12	33.59	50.13	5.30	0.11
	17-Mar-10	40.01	30.01	35.01	38.58	-10.12	-20.12	-15.12	33.49	50.13	5.60	0.12
	8-Jun-10	40.01	30.01	35.01	40.38	-10.12	-20.12	-15.12	33.62	50.13	7.78	0.15
	18-Oct-10	40.01	30.01	35.01	40.98	-10.12	-20.12	-15.12	34.71	50.13	6.67	0.13
OW-2185U/L (Upper Shallow/Lower Shallow)	30-Jan-08	14.89	4.89	9.89	39.91	-10.24	-20.24	-15.24	35.82	25.13	3.99	0.16
	18-Feb-08	14.89	4.89	9.89	39.69	-10.24	-20.24	-15.24	35.64	25.13	4.05	0.16
	31-Mar-08	14.89	4.89	9.89	39.68	-10.24	-20.24	-15.24	35.46	25.13	4.20	0.17
	26-Apr-08	14.89	4.89	9.89	39.49	-10.24	-20.24	-15.24	35.29	25.13	4.26	0.17
	23-May-08	14.89	4.89	9.89	39.26	-10.24	-20.24	-15.24	34.98	25.13	4.28	0.17
	17-Jun-08	14.89	4.89	9.89	38.91	-10.24	-20.24	-15.24	34.67	25.13	4.24	0.17
	15-Jul-08	14.89	4.89	9.89	38.72	-10.24	-20.24	-15.24	34.49	25.13	4.23	0.17
	11-Aug-08	14.89	4.89	9.89	38.44	-10.24	-20.24	-15.24	34.18	25.13	4.26	0.17
	24-Sep-08	14.89	4.89	9.89	38.13	-10.24	-20.24	-15.24	33.91	25.13	4.22	0.17
	22-Oct-08	14.89	4.89	9.89	37.98	-10.24	-20.24	-15.24	33.75	25.13	4.23	0.17
	12-Nov-08	14.89	4.89	9.89	37.92	-10.24	-20.24	-15.24	33.67	25.13	4.25	0.17
	16-Dec-08	14.89	4.89	9.89	37.58	-10.24	-20.24	-15.24	33.37	25.13	4.21	0.17
	13-Jan-09	14.89	4.89	9.89	37.42	-10.24	-20.24	-15.24	33.24	25.13	4.18	0.17
	18-Feb-09	14.89	4.89	9.89	37.33	-10.24	-20.24	-15.24	33.14	25.13	4.19	0.17
	19-May-09	14.89	4.89	9.89	36.64	-10.24	-20.24	-15.24	32.57	25.13	4.07	0.16
	25-Aug-09	14.89	4.89	9.89	35.86	-10.24	-20.24	-15.24	31.82	25.13	4.04	0.16
	19-Nov-09	14.89	4.89	9.89	35.58	-10.24	-20.24	-15.24	31.63	25.13	3.93	0.16
	17-Mar-10	14.89	4.89	9.89	36.05	-10.24	-20.24	-15.24	32.31	25.13	3.74	0.15
	8-Jun-10	14.89	4.89	9.89	36.27	-10.24	-20.24	-15.24	32.52	25.13	3.70	0.15
	18-Oct-10	14.89	4.89	9.89	37.47	-10.24	-20.24	-15.24	33.66	25.13	3.81	0.15

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 6 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2253U/L (Upper Shallow/Deep)	30-Jan-08	26.18	16.18	21.18	48.31	-53.83	-63.83	-58.83	33.59	80.01	14.72	0.18
	18-Feb-08	26.18	16.18	21.18	47.84	-53.83	-63.83	-58.83	33.43	80.01	14.41	0.18
	31-Mar-08	26.18	16.18	21.18	48.18	-53.83	-63.83	-58.83	33.30	80.01	14.88	0.19
	26-Apr-08	26.18	16.18	21.18	48.01	-53.83	-63.83	-58.83	33.00	80.01	15.01	0.19
	23-May-08	26.18	16.18	21.18	46.98	-53.83	-63.83	-58.83	32.72	80.01	14.26	0.18
	17-Jun-08	26.18	16.18	21.16	46.52	-53.83	-63.83	-58.83	32.31	80.01	14.21	0.18
	15-Jul-08	26.18	16.18	21.18	46.07	-53.83	-63.83	-58.83	32.12	80.01	13.95	0.17
	11-Aug-08	26.18	16.16	21.18	45.65	-53.83	-63.83	-58.83	31.74	80.01	13.91	0.17
	24-Sep-08	26.18	16.18	21.18	45.05	-53.83	-63.83	-58.83	31.58	80.01	13.47	0.17
	22-Oct-08	26.18	16.18	21.18	44.71	-53.83	-63.83	-58.83	31.39	80.01	13.32	0.17
	12-Nov-08	26.18	16.18	21.18	44.42	-53.83	-63.83	-58.83	31.38	80.01	13.04	0.16
	16-Dec-08	26.18	16.18	21.18	43.99	-53.83	-63.83	-58.83	31.17	80.01	12.82	0.16
	13-Jan-09	26.18	16.18	21.18	43.61	-53.83	-63.83	-58.83	31.11	80.01	12.50	0.16
	18-Feb-09	26.18	16.18	21.18	43.32	-53.83	-63.83	-58.83	31.06	80.01	12.26	0.15
	19-May-09	26.18	16.18	21.18	42.34	-53.83	-63.83	-58.83	30.55	80.01	11.79	0.15
	25-Aug-09	26.18	16.18	21.18	41.39	-53.83	-63.83	-58.83	29.62	80.01	11.77	0.15
	19-Nov-09	26.18	16.18	21.18	49.73	-53.83	-63.83	-58.83	29.90	80.01	10.79	0.13
	17-Mar-10	26.18	16.18	21.18	48.72	-53.83	-63.83	-58.83	31.13	80.01	12.58	0.16
	8-Jun-10	26.18	16.18	21.18	48.09	-53.83	-63.83	-58.83	31.97	80.01	12.82	0.16
	18-Oct-10	26.18	16.18	21.18	47.44	-53.83	-63.83	-58.83	32.14	80.01	15.30	0.19
OW-2269U/L (Lower Shallow/Deep)	30-Jan-08	0.75	-9.25	-4.25	35.73	-49.11	-59.11	-54.11	33.68	49.86	2.05	0.04
	18-Feb-08	0.75	-9.25	-4.25	35.55	-49.11	-59.11	-54.11	33.56	49.86	1.99	0.04
	31-Mar-08	0.75	-9.25	-4.25	35.41	-49.11	-59.11	-54.11	33.43	49.86	1.98	0.04
	26-Apr-08	0.75	-9.25	-4.25	35.18	-49.11	-59.11	-54.11	33.13	49.86	2.05	0.04
	23-May-08	0.75	-9.25	-4.25	34.88	-49.11	-59.11	-54.11	32.85	49.86	2.03	0.04
	17-Jun-08	0.75	-9.25	-4.25	34.59	-49.11	-59.11	-54.11	32.48	49.86	2.11	0.04
	15-Jul-08	0.75	-9.25	-4.25	34.40	-49.11	-59.11	-54.11	32.29	49.86	2.11	0.04
	11-Aug-08	0.75	-9.25	-4.25	34.06	-49.11	-59.11	-54.11	31.91	49.86	2.15	0.04
	25-Sep-08	0.75	-9.25	-4.25	33.81	-49.11	-59.11	-54.11	31.74	49.86	2.07	0.04
	22-Oct-08	0.75	-9.25	-4.25	33.65	-49.11	-59.11	-54.11	31.55	49.86	2.10	0.04
	12-Nov-08	0.75	-9.25	-4.25	33.57	-49.11	-59.11	-54.11	31.55	49.86	2.02	0.04
	16-Dec-08	0.75	-9.25	-4.25	33.27	-49.11	-59.11	-54.11	31.34	49.86	1.93	0.04
	13-Jan-09	0.75	-9.25	-4.25	33.15	-49.11	-59.11	-54.11	31.27	49.86	1.88	0.04
	18-Feb-09	0.75	-9.25	-4.25	33.05	-49.11	-59.11	-54.11	31.24	49.86	1.81	0.04
	19-May-09	0.75	-9.25	-4.25	32.46	-49.11	-59.11	-54.11	30.70	49.86	1.76	0.04
	25-Aug-09	0.75	-9.25	-4.25	31.71	-49.11	-59.11	-54.11	29.79	49.86	1.93	0.04
	19-Nov-09	0.75	-9.25	-4.25	31.51	-49.11	-59.11	-54.11	30.10	49.86	1.41	0.03
	17-Mar-10	0.75	-9.25	-4.25	32.20	-49.11	-59.11	-54.11	31.25	49.86	0.95	0.02
	8-Jun-10	0.75	-9.25	-4.25	32.42	-49.11	-59.11	-54.11	31.38	49.86	1.04	0.02
	18-Oct-10	0.75	-9.25	-4.25	33.52	-49.11	-59.11	-54.11	32.28	49.86	1.24	0.02

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 9 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2294U/L (Upper Shallow/Lower Shallow)	30-Jan-08	15.97	5.97	10.97	44.49	-19.02	-29.02	-24.02	35.34	34.99	9.15	0.26
	18-Feb-08	15.97	5.97	10.97	44.30	-19.02	-29.02	-24.02	35.16	34.99	9.14	0.26
	31-Mar-08	15.97	5.97	10.97	44.44	-19.02	-29.02	-24.02	35.01	34.99	9.43	0.27
	26-Apr-08	15.97	5.97	10.97	44.41	-19.02	-29.02	-24.02	34.78	34.99	9.63	0.28
	23-May-08	15.97	5.97	10.97	44.00	-19.02	-29.02	-24.02	34.42	34.99	9.58	0.27
	17-Jun-08	15.97	5.97	10.97	43.68	-19.02	-29.02	-24.02	34.19	34.99	9.49	0.27
	15-Jul-08	15.97	5.97	10.97	43.36	-19.02	-29.02	-24.02	33.99	34.99	9.37	0.27
	11-Aug-08	15.97	5.97	10.97	43.07	-19.02	-29.02	-24.02	33.69	34.99	9.38	0.27
	25-Sep-08	15.97	5.97	10.97	42.64	-19.02	-29.02	-24.02	33.42	34.99	9.22	0.26
	22-Oct-08	15.97	5.97	10.97	42.40	-19.02	-29.02	-24.02	33.26	34.99	9.14	0.26
	12-Nov-08	15.97	5.97	10.97	42.16	-19.02	-29.02	-24.02	33.17	34.99	9.01	0.26
	16-Dec-08	15.97	5.97	10.97	41.85	-19.02	-29.02	-24.02	32.86	34.99	8.99	0.26
	13-Jan-09	15.97	5.97	10.97	41.57	-19.02	-29.02	-24.02	32.74	34.99	8.83	0.25
	18-Feb-09	15.97	5.97	10.97	41.43	-19.02	-29.02	-24.02	32.64	34.99	8.79	0.25
	19-May-09	15.97	5.97	10.97	40.56	-19.02	-29.02	-24.02	32.07	34.99	8.49	0.24
	25-Aug-09	15.97	5.97	10.97	39.60	-19.02	-29.02	-24.02	31.32	34.99	8.28	0.24
	19-Nov-09	15.97	5.97	10.97	39.01	-19.02	-29.02	-24.02	31.11	34.99	7.90	0.23
	17-Mar-10	15.97	5.97	10.97	39.53	-19.02	-29.02	-24.02	31.78	34.99	7.76	0.22
	8-Jun-10	15.97	5.97	10.97	39.93	-19.02	-29.02	-24.02	32.00	34.99	7.93	0.23
	18-Oct-10	15.97	5.97	10.97	41.90	-19.02	-29.02	-24.02	33.04	34.99	8.86	0.24
OW-2301U/L (Upper Shallow/Deep)	18-Feb-08	31.77	21.77	26.77	50.24	-48.11	-58.11	-53.11	38.35	79.88	11.89	0.15
	31-Mar-08	31.77	21.77	26.77	50.52	-48.11	-58.11	-53.11	38.22	79.88	12.30	0.15
	26-Apr-08	31.77	21.77	26.77	50.20	-48.11	-58.11	-53.11	37.98	79.88	12.24	0.15
	23-May-08	31.77	21.77	26.77	50.00	-48.11	-58.11	-53.11	37.68	79.88	12.32	0.15
	17-Jun-08	31.77	21.77	26.77	49.67	-48.11	-58.11	-53.11	37.31	79.88	12.36	0.15
	15-Jul-08	31.77	21.77	26.77	49.53	-48.11	-58.11	-53.11	37.14	79.88	12.39	0.16
	11-Aug-08	31.77	21.77	26.77	49.38	-48.11	-58.11	-53.11	36.74	79.88	12.64	0.16
	24-Sep-08	31.77	21.77	26.77	49.19	-48.11	-58.11	-53.11	36.59	79.88	12.60	0.16
	22-Oct-08	31.77	21.77	26.77	49.16	-48.11	-58.11	-53.11	36.42	79.88	12.74	0.16
	12-Nov-08	31.77	21.77	26.77	49.03	-48.11	-58.11	-53.11	36.44	79.88	12.59	0.16
	16-Dec-08	31.77	21.77	26.77	48.79	-48.11	-58.11	-53.11	36.19	79.88	12.60	0.16
	13-Jan-09	31.77	21.77	26.77	48.60	-48.11	-58.11	-53.11	36.08	79.88	12.52	0.16
	18-Feb-09	31.77	21.77	26.77	48.64	-48.11	-58.11	-53.11	36.00	79.88	12.64	0.16
	19-May-09	31.77	21.77	26.77	48.12	-48.11	-58.11	-53.11	35.51	79.88	12.61	0.16
	25-Aug-09	31.77	21.77	26.77	47.66	-48.11	-58.11	-53.11	34.69	79.88	12.97	0.16
	19-Nov-09	31.77	21.77	26.77	47.73	-48.11	-58.11	-53.11	34.83	79.88	12.90	0.16
	17-Mar-10	31.77	21.77	26.77	48.58	-48.11	-58.11	-53.11	36.08	79.88	12.48	0.16
	8-Jun-10	31.77	21.77	26.77	48.85	-48.11	-58.11	-53.11	36.29	79.88	12.56	0.16
	18-Oct-10	31.77	21.77	26.77	51.05	-48.11	-58.11	-53.11	37.36	79.88	13.69	0.17

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 10 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2302U/L (Lower Shallow/Deep)	18-Feb-08	-4.48	-14.48	-9.48	38.89	-59.54	-69.54	-64.54	37.01	55.06	1.88	0.03
	31-Mar-08	-4.48	-14.48	-9.48	38.77	-59.54	-69.54	-64.54	36.93	55.06	1.84	0.03
	28-Apr-08	-4.48	-14.48	-9.48	38.50	-59.54	-69.54	-64.54	36.68	55.06	1.82	0.03
	23-May-08	-4.48	-14.48	-9.48	38.29	-59.54	-69.54	-64.54	36.47	55.06	1.82	0.03
	17-Jun-08	-4.48	-14.48	-9.48	37.87	-59.54	-69.54	-64.54	36.07	55.06	1.80	0.03
	15-Jul-08	-4.48	-14.48	-9.48	37.78	-59.54	-69.54	-64.54	35.98	55.06	1.78	0.03
	11-Aug-08	-4.48	-14.48	-9.48	37.42	-59.54	-69.54	-64.54	35.64	55.06	1.78	0.03
	24-Sep-08	-4.48	-14.48	-9.48	37.20	-59.54	-69.54	-64.54	35.44	55.06	1.76	0.03
	22-Oct-08	-4.48	-14.48	-9.48	37.03	-59.54	-69.54	-64.54	35.30	55.06	1.73	0.03
	12-Nov-08	-4.48	-14.48	-9.48	36.97	-59.54	-69.54	-64.54	35.27	55.06	1.70	0.03
	16-Dec-08	-4.48	-14.48	-9.48	36.70	-59.54	-69.54	-64.54	34.99	55.06	1.71	0.03
	13-Jan-09	-4.48	-14.48	-9.48	36.57	-59.54	-69.54	-64.54	34.87	55.06	1.70	0.03
	18-Feb-09	-4.48	-14.48	-9.48	36.48	-59.54	-69.54	-64.54	34.81	55.06	1.67	0.03
	19-May-09	-4.48	-14.48	-9.48	35.95	-59.54	-69.54	-64.54	34.33	55.06	1.62	0.03
	25-Aug-09	-4.48	-14.48	-9.48	35.17	-59.54	-69.54	-64.54	33.56	55.06	1.61	0.03
	19-Nov-09	-4.48	-14.48	-9.48	35.09	-59.54	-69.54	-64.54	33.57	55.06	1.52	0.03
	17-Mar-10	-4.48	-14.48	-9.48	36.98	-59.54	-69.54	-64.54	34.69	55.06	1.59	0.03
	8-Jun-10	-4.48	-14.48	-9.48	36.88	-59.54	-69.54	-64.54	34.77	55.06	1.71	0.03
	18-Oct-10	-4.48	-14.48	-9.48	37.08	-59.54	-69.54	-64.54	35.89	55.06	2.11	0.04
OW-2304U/L (Upper Shallow/Lower Shallow)	18-Feb-08	28.80	18.80	23.80	36.14	-16.12	-26.12	-21.12	27.47	44.92	8.67	0.19
	31-Mar-08	28.80	18.80	23.80	35.93	-16.12	-26.12	-21.12	27.42	44.92	8.51	0.19
	28-Apr-08	28.80	18.80	23.80	35.73	-16.12	-26.12	-21.12	27.32	44.92	8.41	0.19
	23-May-08	28.80	18.80	23.80	35.53	-16.12	-26.12	-21.12	26.89	44.92	8.64	0.19
	17-Jun-08	28.80	18.80	23.80	35.26	-16.12	-26.12	-21.12	26.79	44.92	8.47	0.19
	15-Jul-08	28.80	18.80	23.80	34.94	-16.12	-26.12	-21.12	26.61	44.92	8.33	0.19
	11-Aug-08	28.80	18.80	23.80	34.60	-16.12	-26.12	-21.12	26.26	44.92	8.32	0.19
	24-Sep-08	28.80	18.80	23.80	34.10	-16.12	-26.12	-21.12	26.08	44.92	8.02	0.18
	22-Oct-08	28.80	18.80	23.80	33.80	-16.12	-26.12	-21.12	25.94	44.92	7.86	0.17
	12-Nov-08	28.80	18.80	23.80	33.58	-16.12	-26.12	-21.12	25.91	44.92	7.67	0.17
	16-Dec-08	28.80	18.80	23.80	33.29	-16.12	-26.12	-21.12	25.69	44.92	7.60	0.17
	13-Jan-09	28.80	18.80	23.80	33.07	-16.12	-26.12	-21.12	25.58	44.92	7.49	0.17
	18-Feb-09	28.80	18.80	23.80	32.82	-16.12	-26.12	-21.12	25.53	44.92	7.29	0.16
	19-May-09	28.80	18.80	23.80	32.11	-16.12	-26.12	-21.12	25.07	44.92	7.04	0.16
	25-Aug-09	28.80	18.80	23.80	30.96	-16.12	-26.12	-21.12	24.32	44.92	6.64	0.15
	19-Nov-09	28.80	18.80	23.80	30.80	-16.12	-26.12	-21.12	24.22	44.92	6.18	0.14
	17-Mar-10	28.80	18.80	23.80	30.88	-16.12	-26.12	-21.12	25.08	44.92	5.80	0.13
	8-Jun-10	28.80	18.80	23.80	31.04	-16.12	-26.12	-21.12	25.13	44.92	5.91	0.13
	18-Oct-10	28.80	18.80	23.80	31.05	-16.12	-26.12	-21.12	25.51	44.92	5.34	0.12

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 11 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2307U/L (Upper Shallow/Lower Shallow)	30-Jan-08	22.07	12.07	17.07	32.62	-23.09	-33.09	-28.09	27.02	45.16	5.60	0.13
	18-Feb-08	22.07	12.07	17.07	32.68	-23.09	-33.09	-28.09	26.81	45.16	5.87	0.13
	31-Mar-08	22.07	12.07	17.07	32.50	-23.09	-33.09	-28.09	26.64	45.16	5.86	0.13
	26-Apr-08	22.07	12.07	17.07	32.27	-23.09	-33.09	-28.09	26.21	45.16	6.06	0.13
	23-May-08	22.07	12.07	17.07	32.14	-23.09	-33.09	-28.09	26.03	45.16	6.11	0.14
	17-Jun-08	22.07	12.07	17.07	32.00	-23.09	-33.09	-28.09	25.10	45.16	6.90	0.15
	15-Jul-08	22.07	12.07	17.07	31.86	-23.09	-33.09	-28.09	24.67	45.16	7.19	0.16
	11-Aug-08	22.07	12.07	17.07	31.67	-23.09	-33.09	-28.09	24.10	45.16	7.57	0.17
	24-Sep-08	22.07	12.07	17.07	31.38	-23.09	-33.09	-28.09	24.06	45.16	7.32	0.16
	22-Oct-08	22.07	12.07	17.07	31.22	-23.09	-33.09	-28.09	23.73	45.16	7.49	0.17
	12-Nov-08	22.07	12.07	17.07	31.07	-23.09	-33.09	-28.09	23.69	45.16	7.38	0.16
	16-Dec-08	22.07	12.07	17.07	30.80	-23.09	-33.09	-28.09	23.69	45.16	7.11	0.16
	13-Jan-09	22.07	12.07	17.07	30.57	-23.09	-33.09	-28.09	23.67	45.16	6.90	0.15
	18-Feb-09	22.07	12.07	17.07	30.41	-23.09	-33.09	-28.09	23.66	45.16	6.75	0.15
	19-May-09	22.07	12.07	17.07	29.78	-23.09	-33.09	-28.09	22.74	45.16	7.04	0.16
	25-Aug-09	22.07	12.07	17.07	29.05	-23.09	-33.09	-28.09	21.24	45.16	7.81	0.17
	19-Nov-09	22.07	12.07	17.07	28.48	-23.09	-33.09	-28.09	22.17	45.16	6.32	0.14
	17-Mar-10	22.07	12.07	17.07	29.81	-23.09	-33.09	-28.09	29.51	45.16	3.10	0.07
	9-Jun-10	22.07	12.07	17.07	29.69	-23.09	-33.09	-28.09	29.45	45.16	3.15	0.07
	18-Oct-10	22.07	12.07	17.07	29.07	-23.09	-33.09	-28.09	25.14	45.16	3.93	0.08
OW-2319U/L/(Lower Shallow/Deep)	30-Jan-08	-10.67	-20.67	-15.67	35.35	-70.32	-80.32	-75.32	33.68	59.65	1.67	0.03
	18-Feb-08	-10.67	-20.67	-15.67	35.23	-70.32	-80.32	-75.32	34.51	59.65	0.72	0.01
	31-Mar-08	-10.67	-20.67	-15.67	35.13	-70.32	-80.32	-75.32	33.74	59.65	1.39	0.02
	26-Apr-08	-10.67	-20.67	-15.67	34.95	-70.32	-80.32	-75.32	38.61	59.65	-3.66	-0.06
	23-May-08	-10.67	-20.67	-15.67	34.74	-70.32	-80.32	-75.32	33.34	59.65	1.40	0.02
	17-Jun-08	-10.67	-20.67	-15.67	34.34	-70.32	-80.32	-75.32	32.86	59.65	1.48	0.02
	15-Jul-08	-10.67	-20.67	-15.67	34.30	-70.32	-80.32	-75.32	32.88	59.65	1.42	0.02
	11-Aug-08	-10.67	-20.67	-15.67	34.03	-70.32	-80.32	-75.32	32.58	59.65	1.45	0.02
	24-Sep-08	-10.67	-20.67	-15.67	33.77	-70.32	-80.32	-75.32	32.34	59.65	1.43	0.02
	22-Oct-08	-10.67	-20.67	-15.67	33.64	-70.32	-80.32	-75.32	32.23	59.65	1.41	0.02
	12-Nov-08	-10.67	-20.67	-15.67	33.57	-70.32	-80.32	-75.32	32.18	59.65	1.39	0.02
	16-Dec-08	-10.67	-20.67	-15.67	33.30	-70.32	-80.32	-75.32	31.90	59.65	1.40	0.02
	13-Jan-09	-10.67	-20.67	-15.67	33.18	-70.32	-80.32	-75.32	31.76	59.65	1.42	0.02
	18-Feb-09	-10.67	-20.67	-15.67	33.11	-70.32	-80.32	-75.32	31.62	59.65	1.49	0.02
	19-May-09	-10.67	-20.67	-15.67	32.63	-70.32	-80.32	-75.32	31.21	59.65	1.42	0.02
	25-Aug-09	-10.67	-20.67	-15.67	31.91	-70.32	-80.32	-75.32	30.48	59.65	1.43	0.02
	19-Nov-09	-10.67	-20.67	-15.67	31.77	-70.32	-80.32	-75.32	30.36	59.65	1.41	0.02
	17-Mar-10	-10.67	-20.67	-15.67	32.44	-70.32	-80.32	-75.32	31.04	59.65	1.40	0.02
	9-Jun-10	-10.67	-20.67	-15.67	32.58	-70.32	-80.32	-75.32	31.15	59.65	1.43	0.02
	18-Oct-10	-10.67	-20.67	-15.67	33.64	-70.32	-80.32	-75.32	32.08	59.65	1.56	0.03

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 12 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2320U/L (Lower Shallow/Deep)	30-Jan-08	-28.20	-38.20	-33.20	28.91	-68.24	-78.24	-73.24	30.17	40.04	-1.26	-0.03
	18-Feb-08	-28.20	-38.20	-33.20	28.81	-68.24	-78.24	-73.24	30.05	40.04	-1.24	-0.03
	31-Mar-08	-28.20	-38.20	-33.20	28.80	-68.24	-78.24	-73.24	29.95	40.04	-1.15	-0.03
	28-Apr-08	-28.20	-38.20	-33.20	28.64	-68.24	-78.24	-73.24	29.68	40.04	-1.04	-0.03
	23-May-08	-28.20	-38.20	-33.20	28.48	-68.24	-78.24	-73.24	29.51	40.04	-1.03	-0.03
	17-Jun-08	-28.20	-38.20	-33.20	28.62	-68.24	-78.24	-73.24	29.12	40.04	-0.50	-0.01
	15-Jul-08	-28.20	-38.20	-33.20	28.12	-68.24	-78.24	-73.24	29.05	40.04	-0.93	-0.02
	11-Aug-08	-28.20	-38.20	-33.20	27.96	-68.24	-78.24	-73.24	28.77	40.04	-0.81	-0.02
	24-Sep-08	-28.20	-38.20	-33.20	27.66	-68.24	-78.24	-73.24	28.52	40.04	-0.86	-0.02
	22-Oct-08	-28.20	-38.20	-33.20	27.54	-68.24	-78.24	-73.24	28.38	40.04	-0.84	-0.02
	12-Nov-08	-28.20	-38.20	-33.20	27.43	-68.24	-78.24	-73.24	28.35	40.04	-0.92	-0.02
	16-Dec-08	-28.20	-38.20	-33.20	27.19	-68.24	-78.24	-73.24	28.08	40.04	-0.89	-0.02
	13-Jan-09	-28.20	-38.20	-33.20	27.03	-68.24	-78.24	-73.24	27.97	40.04	-0.94	-0.02
	18-Feb-09	-28.20	-38.20	-33.20	26.93	-68.24	-78.24	-73.24	27.90	40.04	-0.97	-0.02
	19-May-09	-28.20	-38.20	-33.20	26.41	-68.24	-78.24	-73.24	27.48	40.04	-1.07	-0.03
	25-Aug-09	-28.20	-38.20	-33.20	25.79	-68.24	-78.24	-73.24	26.72	40.04	-0.93	-0.02
	19-Nov-09	-28.20	-38.20	-33.20	25.49	-68.24	-78.24	-73.24	26.78	40.04	-1.33	-0.03
	17-Mar-10	-28.20	-38.20	-33.20	25.49	-68.24	-78.24	-73.24	27.48	40.04	-1.99	-0.05
	8-Jun-10	-28.20	-38.20	-33.20	25.61	-68.24	-78.24	-73.24	27.62	40.04	-2.01	-0.05
	18-Oct-10	-28.20	-38.20	-33.20	25.26	-68.24	-78.24	-73.24	28.05	40.04	-2.66	-0.07
OW-2321U/L (Lower Shallow/Deep)	18-Feb-08	-28.21	-38.21	-33.21	21.57	-68.01	-78.01	-73.01	21.88	39.80	-0.29	-0.01
	31-Mar-08	-28.21	-38.21	-33.21	21.57	-68.01	-78.01	-73.01	21.75	39.80	-0.18	0.00
	28-Apr-08	-28.21	-38.21	-33.21	21.41	-68.01	-78.01	-73.01	21.52	39.80	-0.11	0.00
	23-May-08	-28.21	-38.21	-33.21	21.26	-68.01	-78.01	-73.01	21.26	39.80	0.00	0.00
	17-Jun-08	-28.21	-38.21	-33.21	21.10	-68.01	-78.01	-73.01	20.86	39.80	0.24	0.01
	15-Jul-08	-28.21	-38.21	-33.21	20.98	-68.01	-78.01	-73.01	20.63	39.80	0.33	0.01
	11-Aug-08	-28.21	-38.21	-33.21	20.79	-68.01	-78.01	-73.01	20.26	39.80	0.53	0.01
	24-Sep-08	-28.21	-38.21	-33.21	20.45	-68.01	-78.01	-73.01	19.99	39.80	0.46	0.01
	22-Oct-08	-28.21	-38.21	-33.21	20.28	-68.01	-78.01	-73.01	19.78	39.80	0.50	0.01
	12-Nov-08	-28.21	-38.21	-33.21	20.13	-68.01	-78.01	-73.01	19.70	39.80	0.43	0.01
	16-Dec-08	-28.21	-38.21	-33.21	19.86	-68.01	-78.01	-73.01	19.53	39.80	0.33	0.01
	13-Jan-09	-28.21	-38.21	-33.21	19.65	-68.01	-78.01	-73.01	19.47	39.80	0.18	0.00
	18-Feb-09	-28.21	-38.21	-33.21	19.49	-68.01	-78.01	-73.01	19.43	39.80	0.06	0.00
	19-May-09	-28.21	-38.21	-33.21	19.02	-68.01	-78.01	-73.01	19.23	39.80	-0.21	-0.01
	25-Aug-09	-28.21	-38.21	-33.21	18.50	-68.01	-78.01	-73.01	18.14	39.80	0.36	0.01
	19-Nov-09	-28.21	-38.21	-33.21	18.19	-68.01	-78.01	-73.01	18.91	39.80	-0.72	-0.02
	17-Mar-10	-28.21	-38.21	-33.21	18.84	-68.01	-78.01	-73.01	19.85	39.80	-1.30	-0.03
	8-Jun-10	-28.21	-38.21	-33.21	18.78	-68.01	-78.01	-73.01	20.05	39.80	-1.30	-0.03
	18-Oct-10	-28.21	-38.21	-33.21	18.23	-68.01	-78.01	-73.01	20.44	39.80	-1.21	-0.03

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 13 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
OW-2324U/L (Lower Shallow/Deep)	18-Feb-08	-10.33	-20.33	-15.33	14.89	-90.15	-100.15	-95.15	14.48	79.82	0.41	0.01
	31-Mar-08	-10.33	-20.33	-15.33	14.79	-90.15	-100.15	-95.15	14.28	79.82	0.51	0.01
	26-Apr-08	-10.33	-20.33	-15.33	14.63	-90.15	-100.15	-95.15	14.14	79.82	0.49	0.01
	23-May-08	-10.33	-20.33	-15.33	13.73	-90.15	-100.15	-95.15	13.19	79.82	0.54	0.01
	17-Jun-08	-10.33	-20.33	-15.33	12.91	-90.15	-100.15	-95.15	12.43	79.82	0.48	0.01
	15-Jul-08	-10.33	-20.33	-15.33	12.48	-90.15	-100.15	-95.15	11.98	79.82	0.50	0.01
	11-Aug-08	-10.33	-20.33	-15.33	11.79	-90.15	-100.15	-95.15	11.36	79.82	0.43	0.01
	24-Sep-08	-10.33	-20.33	-15.33	11.98	-90.15	-100.15	-95.15	11.41	79.82	0.57	0.01
	22-Oct-08	-10.33	-20.33	-15.33	11.72	-90.15	-100.15	-95.15	11.20	79.82	0.52	0.01
	12-Nov-08	-10.33	-20.33	-15.33	12.03	-90.15	-100.15	-95.15	11.34	79.82	0.69	0.01
	16-Dec-08	-10.33	-20.33	-15.33	12.43	-90.15	-100.15	-95.15	11.90	79.82	0.53	0.01
	13-Jan-09	-10.33	-20.33	-15.33	12.46	-90.15	-100.15	-95.15	12.13	79.82	0.33	0.00
	18-Feb-09	-10.33	-20.33	-15.33	12.70	-90.15	-100.15	-95.15	12.28	79.82	0.42	0.01
	19-May-09	-10.33	-20.33	-15.33	12.53	-90.15	-100.15	-95.15	12.40	79.82	0.13	0.00
	25-Aug-09	-10.33	-20.33	-15.33	10.07	-90.15	-100.15	-95.15	9.61	79.82	0.46	0.01
	19-Nov-09	-10.33	-20.33	-15.33	10.45	-90.15	-100.15	-95.15	13.48	79.82	-3.03	0.00
	17-Mar-10	-10.33	-20.33	-15.33	14.68	-90.15	-100.15	-95.15	14.40	79.82	0.15	0.00
	8-Jun-10	-10.33	-20.33	-15.33	14.57	-90.15	-100.15	-95.15	14.53	79.82	0.04	0.00
	18-Oct-10	-10.33	-20.33	-15.33	14.92	-90.15	-100.15	-95.15	13.91	79.82	0.39	0.00
OW-2348U/L (Lower Shallow/Deep)	18-Feb-08	-19.44	-29.44	-24.44	13.06	-82.79	-92.79	-87.79	13.17	63.35	-0.11	0.00
	31-Mar-08	-19.44	-29.44	-24.44	12.95	-82.79	-92.79	-87.79	12.97	63.35	-0.02	0.00
	26-Apr-08	-19.44	-29.44	-24.44	13.00	-82.79	-92.79	-87.79	13.39	63.35	-0.39	-0.01
	23-May-08	-19.44	-29.44	-24.44	12.05	-82.79	-92.79	-87.79	12.04	63.35	0.01	0.00
	17-Jun-08	-19.44	-29.44	-24.44	11.49	-82.79	-92.79	-87.79	11.50	63.35	-0.01	0.00
	15-Jul-08	-19.44	-29.44	-24.44	10.97	-82.79	-92.79	-87.79	11.09	63.35	-0.12	0.00
	11-Aug-08	-19.44	-29.44	-24.44	10.37	-82.79	-92.79	-87.79	10.54	63.35	-0.17	0.00
	25-Sep-08	-19.44	-29.44	-24.44	10.31	-82.79	-92.79	-87.79	10.47	63.35	-0.16	0.00
	22-Oct-08	-19.44	-29.44	-24.44	10.01	-82.79	-92.79	-87.79	10.21	63.35	-0.20	0.00
	12-Nov-08	-19.44	-29.44	-24.44	10.12	-82.79	-92.79	-87.79	10.25	63.35	-0.13	0.00
	16-Dec-08	-19.44	-29.44	-24.44	10.27	-82.79	-92.79	-87.79	10.30	63.35	-0.03	0.00
	13-Jan-09	-19.44	-29.44	-24.44	8.36	-82.79	-92.79	-87.79	10.35	63.35	-1.99	-0.03
	18-Feb-09	-19.44	-29.44	-24.44	10.41	-82.79	-92.79	-87.79	10.41	63.35	0.00	0.00
	19-May-09	-19.44	-29.44	-24.44	11.56	-82.79	-92.79	-87.79	11.45	63.35	0.11	0.00
	25-Aug-09	-19.44	-29.44	-24.44	8.78	-82.79	-92.79	-87.79	9.02	63.35	-0.24	0.00
	19-Nov-09	-19.44	-29.44	-24.44	12.56	-82.79	-92.79	-87.79	12.61	63.35	-0.05	0.00
	17-Mar-10	-19.44	-29.44	-24.44	13.78	-82.79	-92.79	-87.79	13.51	63.35	0.27	0.00
	8-Jun-10	-19.44	-29.44	-24.44	13.87	-82.79	-92.79	-87.79	13.64	63.35	0.23	0.00
	18-Oct-10	-19.44	-29.44	-24.44	13.15	-82.79	-92.79	-87.79	12.80	63.35	0.35	0.01

Table 2.4.12-7: Vertical Hydraulic Gradient Calculations (Sheet 14 of 14)

Well Pair	Date	Upper Zone				Lower Zone				Δx	Δh	i_v
		Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)	Top of screen (NAVD88)	Bottom of screen (NAVD88)	Midpoint (NAVD88)	Elevation of Water (NAVD88)			
W-2352U/L (Upper Shallow/Lower Shallow)	18-Feb-08	18.17	8.17	13.17	19.38	-16.67	-26.67	-21.67	19.43	34.84	-0.05	0.00
	31-Mar-08	18.17	8.17	13.17	19.47	-16.67	-26.67	-21.67	19.51	34.84	-0.04	0.00
	28-Apr-08	18.17	8.17	13.17	19.39	-16.67	-26.67	-21.67	19.41	34.84	-0.02	0.00
	23-May-08	18.17	8.17	13.17	19.34	-16.67	-26.67	-21.67	19.39	34.84	-0.05	0.00
	17-Jun-08	18.17	8.17	13.17	19.20	-16.67	-26.67	-21.67	19.24	34.84	-0.04	0.00
	15-Jul-08	18.17	8.17	13.17	19.09	-16.67	-26.67	-21.67	19.13	34.84	-0.04	0.00
	11-Aug-08	18.17	8.17	13.17	19.00	-16.67	-26.67	-21.67	19.04	34.84	-0.04	0.00
	25-Sep-08	18.17	8.17	13.17	18.81	-16.67	-26.67	-21.67	18.86	34.84	-0.05	0.00
	22-Oct-08	18.17	8.17	13.17	18.77	-16.67	-26.67	-21.67	18.81	34.84	-0.04	0.00
	12-Nov-08	18.17	8.17	13.17	18.66	-16.67	-26.67	-21.67	18.71	34.84	-0.05	0.00
	16-Dec-08	18.17	8.17	13.17	18.59	-16.67	-26.67	-21.67	18.62	34.84	-0.03	0.00
	13-Jan-09	18.17	8.17	13.17	18.51	-16.67	-26.67	-21.67	18.54	34.84	-0.03	0.00
	18-Feb-09	18.17	8.17	13.17	18.41	-16.67	-26.67	-21.67	18.44	34.84	-0.03	0.00
	19-May-09	18.17	8.17	13.17	18.09	-16.67	-26.67	-21.67	18.12	34.84	-0.03	0.00
	25-Aug-09	18.17	8.17	13.17	17.68	-16.67	-26.67	-21.67	17.72	34.84	-0.04	0.00
	19-Nov-09	18.17	8.17	13.17	17.52	-16.67	-26.67	-21.67	17.63	34.84	-0.09	0.00
	17-Mar-10	18.17	8.17	13.17	17.50	-16.67	-26.67	-21.67	17.58	34.84	-0.08	0.00
	8-Jun-10	18.17	8.17	13.17	17.53	-16.67	-26.67	-21.67	17.58	34.84	-0.05	0.00
	18-Oct-10	18.17	8.17	13.17	17.61	-16.67	-26.67	-21.67	17.68	34.84	-0.07	0.00
OW-2359U1/L1 (Upper Shallow/Deep)	18-Feb-08	-7.34	-17.34	-12.34	24.28	-76.92	-96.92	-86.92	24.82	74.58	-0.54	-0.01
	31-Mar-08	-7.34	-17.34	-12.34	24.20	-76.92	-96.92	-86.92	24.64	74.58	-0.44	-0.01
	28-Apr-08	-7.34	-17.34	-12.34	24.00	-76.92	-96.92	-86.92	25.64	74.58	-1.64	-0.02
	23-May-08	-7.34	-17.34	-12.34	23.84	-76.92	-96.92	-86.92	23.84	74.58	0.00	0.00
	17-Jun-08	-7.34	-17.34	-12.34	23.62	-76.92	-96.92	-86.92	23.34	74.58	0.28	0.00
	15-Jul-08	-7.34	-17.34	-12.34	23.42	-76.92	-96.92	-86.92	23.09	74.58	0.39	0.01
	11-Aug-08	-7.34	-17.34	-12.34	23.22	-76.92	-96.92	-86.92	22.54	74.58	0.68	0.01
	24-Sep-08	-7.34	-17.34	-12.34	22.87	-76.92	-96.92	-86.92	22.51	74.58	0.36	0.00
	22-Oct-08	-7.34	-17.34	-12.34	22.69	-76.92	-96.92	-86.92	22.28	74.58	0.41	0.01
	12-Nov-08	-7.34	-17.34	-12.34	22.86	-76.92	-96.92	-86.92	22.32	74.58	0.54	0.01
	16-Dec-08	-7.34	-17.34	-12.34	22.31	-76.92	-96.92	-86.92	22.28	74.58	0.03	0.00
	13-Jan-09	-7.34	-17.34	-12.34	22.13	-76.92	-96.92	-86.92	22.35	74.58	-0.22	0.00
	18-Feb-09	-7.34	-17.34	-12.34	22.05	-76.92	-96.92	-86.92	22.39	74.58	-0.34	0.00
	19-May-09	-7.34	-17.34	-12.34	21.63	-76.92	-96.92	-86.92	21.77	74.58	-0.14	0.00
	25-Aug-09	-7.34	-17.34	-12.34	20.92	-76.92	-96.92	-86.92	20.39	74.58	0.53	0.01
	19-Nov-09	-7.34	-17.34	-12.34	20.58	-76.92	-96.92	-86.92	21.84	74.58	-0.96	-0.01
	17-Mar-10	-7.34	-17.34	-12.34	21.16	-76.92	-96.92	-86.92	23.05	74.58	-1.89	-0.03
	8-Jun-10	-7.34	-17.34	-12.34	21.36	-76.92	-96.92	-86.92	23.08	74.58	-1.72	-0.02
	18-Oct-10	-7.34	-17.34	-12.34	21.76	-76.92	-96.92	-86.92	23.43	74.58	-1.68	-0.02

Notes: All Screen elevations are in ft NAVD 88.
Purple shaded areas indicate an anomaly or suspect measurement.
Blue shaded areas: Wells OW-2253U/L were field mislabeled. Shaded areas indicate data corrected to reflect the true well identities.
A positive i_v represents a downward hydraulic gradient.
A negative i_v represents an upwards hydraulic gradient.