Spring 2017 Semi-Annual Groundwater Monitoring Report

Hesperia Sub-Regional Reclamation Facility

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Prepared for

Victor Valley Wastewater Reclamation Authority

Prepared by

LUHDORFF & SCALMANINI CONSULTING ENGINEERS

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Hesperia Sub-Regional Reclamation Facility

The material and data in this report were prepared under the supervision and direction of the undersigned.

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1 INTRODUCTION

This spring 2017 Semi-Annual Groundwater Monitoring Report has been prepared by Luhdorff and Scalmanini, Consulting Engineers (LSCE) on behalf of the Victor Valley Wastewater Reclamation Authority (VVWRA) to satisfy requirements to monitor the impact of discharge to groundwater outlined in the Monitoring and Reporting Program (MRP) included in the Waste Discharge Requirements (WDR), California Regional Water Quality Control Board (RWQCB), Lahontan Region, Board Order No. R6V-2013-0005 for the Hesperia Sub-regional Reclamation Plant (Lahontan RWQCB, 2013). These Orders required VVWRA to "install detection groundwater monitoring wells at sufficient locations and depths to evaluate changes in groundwater quality in the uppermost aquifer beneath the land discharge site". A "Monitoring Well Completion and Installation Report" (LSCE, 2016) was prepared to document completion of the well installation project described in the "Draft Work Plan, Groundwater Monitoring Well Installation, Hesperia Sub-Regional Reclamation Plant, Hesperia, California" (LSCE, May 2014). A "Background Groundwater Quality Report, Hesperia Sub-Regional Reclamation Facility, VVWRA" (LSCE, January 2017) was prepared to satisfy requirements for the establishment of background groundwater quality. This report addresses groundwater monitoring that occurred in April 2017 and provides the historical and complete groundwater record overview for the property. The initiation of discharge (originally expected to be April/May 2017) triggers site reporting requirements; however, the discharge date has been delayed possibly until summer 2018. Groundwater monitoring (due semi-annually April and October) and reporting (due the first working day in August and February) will continue in the interim until and after the initiation of discharge.

The VVWRA Hesperia Sub-Regional Reclamation Plant (Sub-Regional Plant) is a municipal wastewater treatment facility that produces disinfected tertiary recycled water (effluent) to be used for landscape irrigation and industrial process uses. Effluent produced in excess of the recycled water demand will be discharged to one or more percolation ponds at the land discharge site. **Figure 1-1** shows the site location in Hesperia as well as the discharge ponds and the monitoring well locations. The two constituents that may cause degradation of the existing groundwater quality are total dissolved solids (TDS) and nitrate as nitrogen (Lahontan RWQCB, 2013). The objective of monitoring is to evaluate whether wastewater constituents degrade groundwater quality.

1.1 Background

VVWRA installed two disposal ponds in the town of Hesperia and adjacent to the Hesperia Treatment Plant (**Figure 1-1**). The groundwater monitoring sites were drilled immediately adjacent to these disposal features between December 14, 2015 and January 29, 2016. The monitoring well network consists of three nested monitoring well sites (three separate boreholes). The three nested monitoring wells have multiple completions (**Table 1-1**) for targeting the "uppermost aquifer beneath the land discharge site" (Lahontan RWQCB, 2013). The first completion captures this uppermost aquifer. The second completion in all three monitoring sites captures this uppermost aquifer and accounts for the

possibility of the first completion going dry due to regional groundwater level decline. The third completion (HSP1-745) provides some understanding of vertical variation of background water quality.

The site geology is based on the three monitoring wells geophysical logs and lithology and is described in *Background Groundwater Quality Report* (LSCE, 2017) Chapter 2. The upper 270 to 340 feet is sand and gravel underlain by 120 to 270 feet of olive grey clay to silty clay. The upper sand and gravel may be alluvial fan deposits and the green clay may be lacustrine or marshland deposits. The lithologies at the monitoring sites generally exhibited silty clay below depths of 270 to 340 feet below ground surface (bgs) with the exception of a thin sand with gravel lens at about 550 feet bgs and a sand and gravel lens of about 20 feet thick from 720 to 740 feet bgs in HSP1-745.

The first completion monitoring wells (HSP1-580, HSP2-570 and HSP3-575) represent the uppermost aquifer for water quality purposes. These three wells are laterally connected and will also be used to create groundwater elevation contour maps. Although the second completion monitoring wells (HSP1-635, HSP2-625 and HSP3-630) are considered to represent the upper aquifer, groundwater quality will only be collected and reported for these wells if water levels decline below the first completed monitoring wells. HSP1-745 is not considered to represent the uppermost aquifer and therefore, water quality will not be collected from this well.

1.2 Report Organization

This report is intended to describe groundwater results for spring 2017 and groundwater conditions (including groundwater levels and quality) around the sub-regional facility. The semi-annual groundwater monitoring reports, due the 1st working day in February and August, are required to include the following information as required by the MRP:

Requirement in MRP Section (2013)	Description	Location in this Report
I.E.1	Collect grab samples for the constituents listed in Table 2-1 at the given frequency.	Appendix B
I.E.2	Report the final field parameters at the time of sample collection shall be recorded in a table and reported with laboratory analytical data.	Table 3-2 and Appendix D
I.E.3	Detection groundwater monitoring wells will be purged in accordance with USEPA.	Appendix C

Requirement in MRP Section (2013)	Description	Location in this Report
I.E.4	SIP[1] Constituents: samples shall be analyzed for volatile, semi-volatile, and inorganic constituents listed.	Tables 3-5 and 3-6
I.E.5	Record well measurement information (depth to water) for each monitoring well sampling event.	Table 3-1
I.E.6	Monitoring reports shall include: 1. a map showing well locations, 2. groundwater elevation contours 3. Tables summarizing a. final field data b. laboratory analytical data	1. Figure 1-1 2. Figure 3-2 3.a. Table 3-2 3.b. Tables 3-4, 3-5, 3-6, and Appendix D
II.A.2	Groundwater monitoring is required in accordance with the monitoring schedule regardless of the sub-regional plant operating status	Done
II.A.4	Arrange all reported data in tabular format. Data shall be summarized to clearly illustrate whether the Facility is operating in compliance with this monitoring and reporting program	Done
II.B.2.a	Frequency of semi-annual groundwater monitoring reports will be submitted to the Water Board by the 1st working day in February and August.	Done
II.B.2.b	Sample results and field parameters will be provided in each report	Tables 3-2, 3-4, 3-5, and 3-6
II.B.2.c	Results discussion-Groundwater monitoring reports shall include a discussion of monitoring results	
	i. Spatial and temporal trends in nitrate and TDS concentrations	Section 3.2
	ii. Detection or increase in any monitored constituent that may indicate the Producer/Discharger's activities have caused additional impacts to groundwater	Section 3.2
	iii. Pertinent well construction details including: top of well casing, top and bottom elevation of each screen section, All values shall be present to the nearest 0.1 feet above mean sea level.	Table 1-1 and 3-1

[1] SIP = California State Water Resources Control Board, 2005, Policy for implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

2 MONITORING PROGRAM

2.1 Groundwater Level and Quality Monitoring Schedule

The groundwater level monitoring program as outlined in the WDRs consists of water levels measured biannually in April and October by VVWRA. **Table 3-1** lists the groundwater elevation monitoring data collected for spring 2017; the well locations are shown on **Figure 1-1**. The groundwater quality monitoring schedule is listed in **Table 2-1.** HSP1-580, HSP2-570 and HSP3-575 are considered to represent the "uppermost aquifer" at this site for water quality purposes. As described above, groundwater quality data are not required to be collected for the second completion wells (HSP1-635, HSP2-625 or HSP3-630) and the lower zone well (HSP1-745) since they do not represent first water. **Table 2-2** lists the general mineral and metal constituents and **Table 2-3** lists the volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) required by the WDR. Seven constituents (including TDS, nitrate as nitrogen, and others) are to be sampled biannually (April and October), and the remaining constituents (VOCs, SVOCs, and 15 inorganic constituents) are to be sampled biennially (e.g., April 2017 and April 2019).

2.2 Background Concentrations and Water Quality Objectives

Water quality results for constituents listed in **Tables 2-2 and 2-3** will be compared with naturally occurring background groundwater quality (Background Concentration) and the water quality objectives (WQO) outlined in the WDR (page 16). Background Concentrations were established after the collection and analysis of one-year of monitoring data (LSCE, 2017) prior to the initiation of effluent discharge using the upper aquifer wells water quality data (HSP1-580, HSP1-635, HSP2-570, HSP2-625, HSP3-575, and HSP3-630). However, because effluent discharge has been delayed, these April 2017 water quality results are considered additional background data. One spring 2017 result is higher than the calculated Background Concentration prompting a new "maximum concentration prior to discharge" value that will be considered when evaluating future results. WQOs are the receiving water limitations for the Upper Mojave River Valley Groundwater Basin (WDR page 6) and are either the maximum contaminant level (MCL) for drinking water or a secondary MCL (SMCL), if one is available. Below, these concentrations are listed for the major constituents of concern and **Table 2-2** and **2-3** lists the Background Concentration and WQO for all constituents, if available.

Constituent	Units	Background Concentration	Water Quality Objective
NO3-N	mg/L	4.2	10
TDS	mg/L	745	500/1,000/1,500

3 GROUNDWATER CONDITIONS

Groundwater data collection started at the Hesperia site in February 2016 after completion of the site monitoring wells. This section discusses groundwater levels and quality.

3.1 Groundwater Levels

Groundwater levels in all wells have been stable over the short period of record and have not noticeably responded to seasonal variation. Water levels in HSP1-635, both HSP2 and both HSP3 wells have fluctuated about 3-6 feet from March 2016 through spring 2017. Water levels in HSP1-580 increased approximately 11-feet from February 2016 through June 2016 and have remained stable since that time through spring 2017. HSP1-745 has had the most fluctuation of all wells at the Hesperia site with an overall difference in water levels of almost 20-feet, although there seems to be no seasonal correlation (**Figure 3-1**).

Monitoring well HSP1-580, HSP2-570 and HSP3-575 are used to prepare contours of equal groundwater elevation for the uppermost portion of the groundwater system. These wells have similar lithology as explained in Section 2.1. Contours of equal groundwater elevation show that the prevailing direction of flow is to the west/northwest beneath the ponds in spring 2017 (**Figure 3-2**), which is consistent with historical contours starting in February 2016. **Appendix A** includes contours of equal groundwater elevation at the site and direction of groundwater flow for February 2016 through November 2016. The hydraulic gradient ranged from 0.02 to 0.05 in spring 2017.

3.2 Groundwater Quality

Three wells at the Hesperia site are monitored for groundwater quality; the list of analytes and sampling frequency are shown in **Tables 2-1, 2-2 and 2-3**. **Table 3-2** presents the summary of field parameters at the time of sample collection for the three groundwater network wells and **Table 3-3** presents the instrument calibration for the equipment used to measure field parameters. Spring 2017 water quality results are summarized in **Table 3-4** (TDS, nitrate as nitrogen and general minerals), **Table 3-5** (inorganic constituents), and **Table 3-6** (detections of VOCs and SVOCs). **Appendix B** contains historical groundwater quality results, and **Figures 3-3 and 3-4** show time series graphs of TDS and nitrate as nitrogen, respectively. The spring 2017 sampling event field data sheets are in **Appendix C,** and the laboratory water quality results are in **Appendix D**. Note that every second year, the WDR (2013) requires the three network wells to be sampled for inorganics, VOCs, and SVOCs. The comprehensive water quality monitoring was completed in April 2017 and these analyses will be conducted again in April 2019. A complete review of background groundwater quality for all constituents is included in the Background Groundwater Quality Report (2017). Results from the spring 2017 monitoring event will be compared with the constituent WQO and the Background Concentration. However, since effluent discharge has not begun, these springs 2017 results are still considered background and if results exceed

the calculated Background Concentration, a "maximum concentration prior to discharge" will be identified and used to compare future results.

3.2.1 Total Dissolved Solids

Spring 2017 water quality concentrations in the three sampled network wells ranged from 180 to 200 mg/L which met the WQO (SMCL (500/1,000/1,500 mg/L) and the Background Concentration of 745 mg/L (**Figure 3-3** and **Table 3-4**). From February 2016 to April 2017, TDS concentrations for first completion monitoring wells (HSP1-580, HSP2-570 and HSP3-575) have been relatively stable and have ranged from about 120 to 280 mg/L. The only exception to this were TDS concentrations in HSP3-575 that ranged from 310 to 380 mg/L during the initial sampling events (February through April 2016). This is likely due to a high turbidity groundwater sample from the newly developed well; TDS concentrations have steadily decreased and have since stabilized to between 200 to 250 mg/L; similar to the other uppermost aquifer wells. The WDRs report that tertiary disinfected wastewater discharged to the onsite ponds is projected to have a TDS concentration of about 370 mg/L, which would slightly degrade TDS in groundwater at the Hesperia site. But even with some potential degradation, the water quality will still meet the TDS water quality objective (SMCL Recommended Limit, 500 mg/L).

3.2.2 Nitrate as Nitrogen

Spring 2017 water quality concentrations in all three sampled network wells ranged from 3.5 to 3.8 which met the WQO for nitrate as nitrogen to not exceed 10 mg/L and the Background Concentration of 4.2 mg/L (**Figure 3-4** and **Table 3-4**). Nitrate as nitrogen concentrations in the first completion monitoring wells (HSP1-580, HSP2-570 and HSP3-575) have ranged from 2.2 to 3.8 mg/L since February 2016. Although nitrate as nitrogen concentrations in these three wells appears to be slightly increasing, the concentrations are all still below the Background Concentration and WQOs. The WDRs report that tertiary disinfected wastewater discharged to the onsite ponds is projected to have nitrate as nitrogen concentration of about 8 mg/L which will degrade groundwater at the Hesperia facility but will still meet the WQO (10 mg/L nitrate as nitrogen).

3.2.3 General Minerals, Metals, and VOCs/SVOCs

General minerals, including ammonia-nitrogen, total Kjeldahl nitrogen (TKN), MBAS, chloride, and sulfate, are also sampled semi-annually in network wells (**Table 3-4**); these met the WQOs (when present) and the Background Concentrations for water quality in spring 2017.

Every second year, the WDR (2013) requires that the three network wells are sampled for metals and other inorganics and VOCs/SVOCs, and this initial sampling occurred in April 2017. Metal concentrations for wells sampled in spring 2017 (**Table 3-5**) were low and mostly not detected. Similar to results from 2016, hexavalent chromium and arsenic were the only metals consistently detected, but concentrations

have been below the Background Concentration (27 and 16.9 ug/L respectively) and WQO (both 10 ug/L). Selenium in HSP1-580 was detected at 5.1 ug/L which is slightly greater than the Background Concentration (5.0 ug/L) but is far below the WQO (50 ug/L). Since effluent discharge has not begun, this selenium value is still considered background and is the "maximum concentration prior to discharge". Chromium (20 ug/L, HSP2-570) and zinc (5.5-J ug/L, HSP3-575) were detected, but at concentrations that did not exceed Background Concentrations or WQOs.

Out of the 88 VOC and SVOCs constituents tested, only benzene, chloroform and toluene were detected (**Table 3-6**); however, the one benzene and three toluene detections are flagged as "J"[2]. All detections were below the respective Background Concentration and WQO (when applicable). Benzene was detected in HSP3-575 at 0.070 ug/L; below the Background Concentration of <0.14 ug/L (set at the detection limit) and below the WQO/MCL (1 ug/L). Chloroform was detected in HSP1-580 and HSP3-575 at 1.1 and 0.64 ug/L respectively; below the Background Concentration (23.9 ug/L). Toluene was detected in all three wells below the Background Concentration (1.8 ug/L) and well below the WQO/MCL (150 ug/L).

As mentioned previously, regular water quality monitoring is only required for the uppermost aquifer wells and not for the second completion monitoring wells (HSP1-635, HSP2-625 and HSP3-630) or the lower zone well (HSP1-745). However, these wells were sampled two or three times prior to effluent discharge and results are discussed here. These wells have a similar composition to the uppermost aquifer wells (**Appendix B**). Detections occurred occasionally in HSP2-625 and HSP3-630 for various general mineral constituents that were above the Background Concentrations but below the WQO (when applicable). TDS and MBAS were the only constituents detected above the Background Concentration and WQO. TDS was detected at 840 mg/L in HSP2-625; above the Background Concentration (745 mg/L) and WQO Recommended Limit (500 mg/L) but below the Upper and Short Term WQO (1,000 ug/L and 1,500 ug/L). TDS was detected at 1,300 mg/L in HSP3-630, above the Background Concentration, Recommended and Upper Limits of the WQO but still below the Short Term WQO. MBAS was detected at 1.2 ug/L in HSP3-630, above both the Background Concentration (0.21 mg/L) and the WQO (0.5 mg/L).

Antimony, beryllium, cadmium, chromium, hexavalent chromium, copper, cyanide, mercury, nickel, selenium, silver and thallium were not detected or had concentrations near the reporting limit in all wells. Concentrations for iron, lead, manganese, and zinc were generally not detected but infrequent detections (above the Background Concentration but significantly below the WQO when applicable) were reported in these wells. Arsenic was detected in HSP2-625 (12 to 23 ug/L) and HSP3-630 (15 and

[2] J-flag is an estimated concentration above the sample-specific method detection limit (MDL) and below the method reporting limit (MRL).

16 ug/L) which exceeded the WQO (10ug/L) and in some cases exceeded the Background Concentration (16.9 ug/L).

VOCs detected in these second completion and lower zone wells included chloroform, chloromethane, ethylbenzene and toluene which are all also detected in the uppermost wells of the upper aquifer.

4 FINDINGS and COMPLIANCE

4.1 Groundwater Conditions

Groundwater levels in HSP1-635, both HSP2, and both HSP3 wells, as reflected in the groundwater elevation time series plot (**Figure 3-1**), have remained stable (3 to 6 feet of groundwater elevation fluctuation) from March 2016 to April 2017). Water levels in HSP1-580 have increased approximately 11 ft from February 2016 through June 2016 and has remained stable since that time. HSP1-745 has the most fluctuation in water levels (approximately 20-feet) with no apparent seasonal influence. The spring 2017 contours of equal groundwater elevation (**Figure 3-2**) are consistent with historical groundwater elevations (**Appendix A**) with a prevailing direction of flow to the west/northwest.

As shown in **Table 3-4**, **Figure 3-3**, and **Appendix B**, TDS results from spring 2017 range from 180 to 200 mg/L for wells required to be monitored by the MRP. The MRP requires that the TDS results are compared to both the TDS Background Concentration (745 mg/L) established prior to the Hesperia site discharge and the WQO of 500/1,000/1,500 mg/L (**Table 2-2**). All three wells had concentrations below the Background Concentration and below the WQO Recommended, Upper and Short Term Level. TDS concentrations in all three network wells is expected to increase as effluent water is discharged with an expected TDS concentration of 370 mg/L.

As shown in **Table 3-4**, **Figure 3-4**, and **Appendix B**, nitrate as nitrogen concentrations range from 3.5 to 3.8 mg/L in spring 2017 for the three wells required to be monitored by the MRP. The MRP required that the nitrate as nitrogen values are compared to both the nitrate as nitrogen Background Concentration (4.2 mg/L) established prior to VVWRA discharge and the WQO of 10 mg/L (**Table 2-2**). All three wells sampled in spring 2017 had nitrate as nitrogen concentrations that were below the Background Concentration and the WQO. It is expected that nitrate as nitrogen concentrations will increase in these three wells as effluent water is discharged with an expected 8 mg/L nitrate as nitrogen concentration.

General mineral (ammonia-nitrogen, TKN, MBAS, chloride and sulfate) concentrations were below the Background Concentration and WQO in all three sampled wells. All wells at the Hesperia site met SMCLs for metals; most were non-detect or slightly above the detection limit. Arsenic and hexavalent chromium were the only metals that were consistently detected at the Hesperia site but results are below the Background Concentration and WQO. Selenium was detected in spring 2017 ((HSP1-580 at 5.1 ug/L), slightly above the Background Concentration (5.0 ug/L) but well below the WQO (50ug/L). However, since effluent discharge has not begun, this result is still considered background and is the “maximum concentration prior to discharge”.

Out of the 88 VOC and SVOCs constituents tested, only benzene, chloroform and toluene were detected, benzene and toluene were at J-flagged[2] concentrations. All detections were below the respective Background Concentration and WQO (when applicable).

4.2 Compliance with Receiving Water Limitations

Because discharge has not been initiated at the Hesperia Sub-Regional Facility (i.e., groundwater has not been impacted by effluent), the spring 2017 sampling results are considered additional background groundwater quality data but are compared with the WQO (receiving water limitation). All three network wells sampled in spring 2017 had TDS, nitrate as nitrogen, general minerals, metals, VOC and SVOCs concentrations below the WQO for the site.

4.3 Recommendation

It is recommended that after initiation of effluent discharge at the Hesperia Sub-Regional Facility the site Background Concentrations are recalculated to include all groundwater quality data acquired prior to effluent discharge. The original site Background Concentrations were calculated based on data acquired only in 2016 because discharge was expected to begin in April 2017. However, effluent discharge was delayed and additional background groundwater quality data has been collected that can be used to calculate more accurate Background Concentrations.

5 REFERENCES

Lahontan Region, California Regional Water Quality Control Board. 2013. Waste Discharge Requirements and Water Recycling Requirements for the Town of Hesperia and Victor Valley Wastewater Reclamation Authority, Hesperia Sub-Regional Reclamation Plant, General Order No. R6V-2013-0005. January 17, 2013.

Luhdorff & Scalmanini Consulting Engineers. 2014. Draft Work Plan, Groundwater Monitoring Well Installation, Hesperia Subregional Reclamation Plant. May 19, 2014.

Luhdorff & Scalmanini Consulting Engineers. 2016. Detection Groundwater Monitoring Well Completion and Installation Report, Hesperia Subregional Reclamation Facility. Prepared for Victor Valley Wastewater Reclamation Authority. June 2016.

Luhdorff & Scalmanini, Consulting Engineers. 2017. Background Groundwater Quality Report, Hesperia Subregional Reclamation Facility. Prepared for VVWRA. January 2017.

TABLES

Table 1-1
Well Construction Details

Location	Well Name	Well Type	Northing	Easting	TOC Elev. (ft msl)	Casing Diameter (inches)	Screen Interval (feet below TOC)	Top of Screen Elev. (ft msl)	Bottom of Screen Elev. (ft msl)	Screen Length	Well Depth (ft bgs)	Total Drilled Depth (ft bgs)	Bore-hole Size (inch)	Date Installed
Hesperia	HSP1-580	MW	1983696.596	6756861.475	3346.50	2	545-575	2801.50	2771.50	30	580	800	12.25	12/14/2015
	HSP1-635	MW	1983696.596	6756861.475	3346.50	2	600-630	2746.50	2716.50	30	635	800	12.25	12/14/2015
	HSP1-745	MW	1983696.596	6756861.475	3346.50	2	720-740	2826.50	2606.50	20	745	800	12.25	12/14/2015
	HSP2-570	MW	1984259.177	6757063.931	3334.64	2	535-565	2799.64	2769.64	30	570	640	11	1/12/2016
	HSP2-625	MW	1984259.177	6757063.931	3334.64	2	590-620	2744.64	2714.64	30	625	640	11	1/12/2016
	HSP3-575	MW	1984278.660	6756687.546	3339.64	2	540-570	2799.64	2769.64	30	575	640	11	12/18/2015
	HSP3-630	MW	1984278.660	6756687.546	3339.64	2	595-625	2744.64	2714.64	30	630	640	11	12/18/2015

Abbreviations: TOC= top of casing; ft= feet; msl= mean sea level; Elev.= elevation; bgs= below ground surface; MW= monitoring well.

Table 2-1
Groundwater Network Wells and Monitoring Schedule

Owner	Well Name	Water Level		Water Qualilty		
		Frequency	Spring 2017 Data	Biannually April & Oct	Biennial April[2]	Spring 2017 Data
VVWRA	HSP1-580	April & Oct	Y	Nitrate-N/TDS[1]	VOCs, SVOC, Inorganics[2]	Y
	HSP1-635	April & Oct	Y	Not Required		
	HSP1-745	April & Oct	Y	Not Required		
	HSP2-570	April & Oct	Y	Nitrate-N/TDS[1]	VOCs, SVOC, Inorganics[2]	Y
	HSP2-625	April & Oct	Y	Not Required		
	HSP3-575	April & Oct	Y	Nitrate-N/TDS[1]	VOCs, SVOC, Inorganics[2]	Y
	HSP3-630	April & Oct	Y	Not Required		

1. Biannually: April and October of each year. Includes nitrate-N, total dissolved solids (TDS), sulfate, chloride, ammonia-N, total Kjeldahl nitrogen, and MBAS.
2. Every second year, beginning with the April 2017 sampling event (e.g., April 2017, April 2019). Includes: volatile organic compounds (VOCs), semi-volaile organic compounds (SVOCs), and inorganic constituents (antimony, arsenic, beryllium, cadmium, total chromium, chromium 6, copper, cyanide, lead, mercury, nickel, selenium, silver, thallium, zinc.

Table 2-2
General Mineral and Metal Constituents, Background Concentration, and Water Quality Objectives
VVWRA Hesperia Sub-Regional Facilities

Analyte[1]	Units	Method	Back-ground Concen-tration[2]	Water Quality Objectives (WDR, pg 16)					
				Report-ing Limit	MCL[3]	SMCL[3]			
							Ranges		
						Consumer Acceptance	Recom-mended	Upper	Short Term
FIELD PARAMETERS									
Electrical Conductivity	uS/cm						900	1,600	2,200
pH (Field)	pH units								
Temperature	deg C								
Dissolved Oxygen	mg/L								
Turbidity	NTU					5			
Color	units					15			
OTHER									
Total Dissolved Solids (TDS)	mg/L	SM 2540C	745	10	-		500	1,000	1,500
MBAS (detects detergents)	mg/L	SM 5540C	0.21	0.05		.5			
GENERAL MINERALS									
Chloride	mg/L	EPA 300.0	69	1	-		250	500	600
Nitrate (as N)	mg/L	EPA 300.0	4.2	0.20	10				
Ammonia (as N)	mg/L	SM4500 NH3H	0.31	0.10	-				
Total Kjeldahl Nitrogen (TKN)	mg/L	EPA 351.2	1.2	0.10					
Sulfate (as SO4)	mg/L	EPA 300.0	21.4	0.5	-		250	500	600
METALS AND OTHER INORGANICS									
Antimony	µg/L	EPA 6020	<3.0[4]	6	6				
Arsenic	µg/L	EPA 6020	16.9	2	10				
Beryllium	µg/L	EPA 6020	<0.57[4]	1	4				
Cadmium	µg/L	EPA 6020	<0.57[4]	1	5				
Chromium (total)	µg/L	EPA 200.8	29	0.5	50				
Chromium VI	µg/L	EPA 218.6	27	1	10				
Copper	µg/L	EPA 6020	<5.0[4]	10		1,000			
Cyanide	mg/L	SM4500 CN E	<0.005[4]	0.005	150				
Lead	µg/L	EPA 6020	<5.0	5.0	15				
Mercury	µg/L	EPA 7470A	<0.10[4]	0.20	2				
Nickel	µg/L	EPA 6020	<5.0[4]	10	100				
Selenium	µg/L	EPA 6020	<2.5[4]	5	50				
Silver	µg/L	EPA 6020	<5.0[4]	10		100			
Thallium	µg/L	EPA 6020	<0.50[4]	1	2				
Zinc	µg/L	EPA 6020	40.1	10	-	5,000			

Note: Type of sample for groundwater monitoring is "grab sample" from the detection groundwater monitoring wells.

1. MRP lists constituents required for ongoing monitoring (MRP pg. 4) after the initiation of discharge.
2. Background Concentration calculated from the one year initial groundwater sampling and reported in "Background Groundwater Quality Report, Hesperia Subregional Reclamation Facility", LSCE, January 2017.
3. MCL=Maximum Contaminant Limit, SMCL=Secondary Maximum Contaminant Limit. MCL and SMCL are from WDRs (pg. 16)**:** California Code of Regulation Title 22; Inorganic Chemicals, Section 64431 Table 64431-A; organic chemicals, Section 64444 Table 64444-A; Secondary Maximum Contaminant Levels, Section 64449 Table 64449-A and 64449-B.
4. Background Concentration= laboratory detection limit at the time the Background Concentration was determined (LSCE, January 2017)

Table 2-3
Volatile and Semi-Volatile Constituents,
Background Concentration, and Water Quality Objectives
VVWRA Hesperia Sub-Regional Facilities

VOLATILE SUBSTANCES[1]	Method	Reporting Limit (ug/L)	Background Concentration (um/L)	WQO/ MCL[2] (ug/L)
1,1 Dichloroethane	EPA 624	0.5	<0.098	5
1,1 Dichloroethene	EPA 624	0.5	<0.12	6
1,1,1 Trichloroethane	EPA 624	0.5	<0.12	200
1,1,2 Trichloroethane	EPA 624	0.5	<0.31	5
1,1,2,2 Tetrachloroethane	EPA 624	0.5	<0.29	1
1,2 Dichlorobenzene (volatile)	EPA 624	0.5	<0.20	600
1,2 Dichloroethane	EPA 624	0.5	<0.21	0.5
1,2 Dichloropropane	EPA 624	0.5	<0.19	5
1,3 Dichlorobenzene (volatile)	EPA 624	0.5	<0.15	-
1,3 Dichloropropene (volatile)	EPA 624	0.5	<0.30	0.5
1,4 Dichlorobenzene (volatile)	EPA 624	0.5	<0.072	5
Acrolein	EPA 624	2	<1.1	-
Acrylonitrile	EPA 624	2	<1.2	-
Benzene	EPA 624	0.5	<0.14	1
Bromoform	EPA 624	0.5	<0.50	-
Bromomethane	EPA 624	0.5	<0.48	-
Carbon Tetrachloride	EPA 624	0.5	<0.15	0.5
Chlorobenzene	EPA 624	0.5	<0.23	-
Chlorodibromo-methane (same as dibromochloromethane)	EPA 624	0.5	<0.37	-
Chloroethane	EPA 624	0.5	<0.35	-
Chloroform	EPA 624	0.5	23.9	-
Chloromethane	EPA 624	0.5	<0.36	-
Dichlorobromo-methane (same as bromodichloromethane)	EPA 624	0.5	1.5	-
Dichloromethane (same as methylene chloride)	EPA 624	0.5	1.3	5
Ethylbenzene	EPA 624	0.5	<0.26	300
Tetrachloroethene	EPA 624	0.5	<0.23	5
Toluene	EPA 624	0.5	1.8	150
trans-1,2 Dichloroethylene	EPA 624	0.5	<0.10	10
Trichloroethene	EPA 624	0.5	<0.25	5
Vinyl Chloride	EPA 624	0.5	<0.13	0.5

SEMI-VOLATILE SUBSTANCES[1]	Method	Reporting Limit (ug/L)	Background Concentration (um/L)	WQO/ MCL[2] (ug/L)
1,2 Benzanthracene (same as Benzo(a)anthracene)	EPA 625 SIM	0.05	<0.05	-
1,2 Dichlorobenzene (semivolatile)	EPA 624	0.50	<0.20	-
1,2 Diphenylhydrazine	EPA 625	1	<1.0	-
1,2,4 Trichlorobenzene	EPA 625	1	<1.0	5
1,3 Dichlorobenzene (semivolatile)	EPA 624	0.50	<0.15	-
1,4 Dichlorobenzene (semivolatile)	EPA 624	0.50	<0.072	-
2 Chlorophenol	EPA 625	2	<1.8	-
2,4 Dichlorophenol	EPA 625	1	<1.0	-
2,4 Dimethylphenol	EPA 625	1	<1.0	-
2,4 Dinitrophenol	EPA 625	5	<1.6	-
2,4 Dinitrotoluene	EPA 625	5	<1.8	-
2,4,6 Trichlorophenol	EPA 625	10	<1.9	-
2,6 Dinitrotoluene	EPA 625	5	<1.9	-
2- Nitrophenol	EPA 625	10	<2.1	-
2-Chloroethyl vinyl ether	EPA 625	5	<2.5	-

Table 2-3 (continued)
Volatile and Semi-Volatile Constituents,
Background Concentration, and Water Quality Objectives
VVWRA Hesperia Sub-Regional Facilities

SEMI-VOLATILE SUBSTANCES[1]	Method	Reporting Limit (ug/L)	Background Concentration (um/L)	WQO/ MCL[2] (ug/L)
2-Chloronaphthalene	EPA 625	10	<1.8	-
3,3' Dichlorobenzidine	EPA 625	5	<2.1	-
3,4 Benzofluoranthene (same as Benzo(b)fluoranthene)	EPA 625 SIM	0.05	<0.05	-
4 Chloro-3-methylphenol	EPA 625	1	<1.0	-
4,6 Dinitro-2-methylphenol	EPA 625	5	<1.8	-
4- Nitrophenol	EPA 625	5	<1.1	-
4-Bromophenyl phenyl ether	EPA 625	5	<1.6	-
4-Chlorophenyl phenyl ether	EPA 625	5	<1.8	-
Acenaphthene	EPA 625 SIM	0.05	<0.05	-
Acenaphthylene	EPA 625 SIM	0.05	<0.05	-
Anthracene	EPA 625 SIM	0.05	<0.05	-
Benzidine	EPA 625	5	<5.0	-
Benzo(a) pyrene(3,4 Benzopyrene)	EPA 625 SIM	0.05	<0.05	0.2
Benzo(g,h,i)perylene	EPA 625 SIM	0.05	<0.05	-
Benzo(k)fluoranthene	EPA 625 SIM	0.05	<0.05	-
bis 2-(1-Chloroethoxyl) methane	EPA 625	5	<1.8	-
bis(2-chloroethyl) ether	EPA 625	1	<1.0	-
bis(2-Chloroisopropyl) ether	EPA 625	2	<1.9	-
bis(2-Ethylhexyl) phthalate	EPA 625	5	<5.0	-
Butyl benzyl phthalate	EPA 625	10	<1.6	-
Chrysene	EPA 625 SIM	0.05	<0.05	-
di-n-Butyl phthalate	EPA 625	10	<1.9	-
di-n-Octyl phthalate	EPA 625	10	<2.6	-
Dibenzo(a,h)-anthracene	EPA 625 SIM	0.05	<0.05	-
Diethyl phthalate	EPA 625	2	<1.8	-
Dimethyl phthalate	EPA 625	2	<1.7	-
Fluoranthene	EPA 625 SIM	0.05	<0.05	-
Fluorene	EPA 625 SIM	0.05	<0.05	-
Hexachloro-cyclopentadiene	EPA 625	5	<1.7	-
Hexachlorobenzene	EPA 625	1	<1.0	1
Hexachlorobutadiene	EPA 625	1	<1.0	-
Hexachloroethane	EPA 625	1	<1.0	-
Indeno(1,2,3,cd)-pyrene	EPA 625 SIM	0.05	<0.05	-
Isophorone	EPA 625	1	<1.0	-
N-Nitroso diphenyl amine	EPA 625	1	<1.0	-
N-Nitroso-dimethyl amine	EPA 625	5	<1.4	-
N-Nitroso -di n-propyl amine	EPA 625	5	<1.7	-
Naphthalene	EPA 625 SIM	0.05	<0.05	-
Nitrobenzene	EPA 625	1	<1.0	-
Pentachlorophenol	EPA 625	1	<1.0	1
Phenanthrene	EPA 625 SIM	0.05	<0.05	-
Phenol	EPA 625	1	<1.0	-
Pyrene	EPA 625 SIM	0.05	<0.05	-

1. List of constituents required by MRP pg. 4: State Water Resource Control Board, 2005, Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Appendix 4, Table 2a, 2b, and 2c.

2. MCL=maximum contaminant level. Source of MCL: WDRs (pg. 16): California Code of Regulation Title 22; Inorganic Chemicals, Section 64431 Table 64431-A; organic chemicals, Section 64444 Table 64444-A.

WQO= Water Quality Objective

Table 3-1
Groundwater Elevation Monitoring Data, Spring 2017

Well Name	Source	Date Measured	Top of Casing Elev. (ft msl)	Depth to Ground-water (ft from TOC)	Ground-water Elev. (ft msl)	Top of Screen Elev. (ft msl)	Bottom of Screen Elev. (ft msl)
HSP1-580	VVWRA	4/25/2017	3346.50	510.43	2836.07	2801.50	2771.50
HSP1-635	VVWRA	4/25/2017	3346.50	534.31	2812.19	2746.50	2716.50
HSP1-745	VVWRA	4/25/2017	3346.50	593.77	2752.73	2626.50	2606.50
HSP2-570	VVWRA	4/25/2017	3334.64	495.43	2839.21	2799.64	2769.64
HSP2-625	VVWRA	4/25/2017	3334.64	495.96	2838.68	2744.64	2714.64
HSP3-575	VVWRA	4/25/2017	3339.64	517.52	2822.12	2799.64	2769.64
HSP3-630	VVWRA	4/25/2017	3339.64	518.84	2820.80	2744.64	2714.64

Abbreviations: ft= feet; msl= mean sea level; Elev.= elevation; TOC= top of casing.

Table 3-2
Final Field Parameters[1], Spring 2017

Well Name	Date	Depth to Water (ft bTOC)	TOC Elev.	Ground-water Elev. (ft msl)	Purge Time (min)	Volume Pumped (gal)	Temp (c)	pH	EC (uS/cm)	Turb-idity (NTU)	DO (mg/L)	ORP (mV)
HSP1-580	4/28/2017	510.43	3346.50	2836.07	0:45	1.19	17.10	7.54	351	5	2.3	5.1
HSP2-570	4/27/2017	495.43	3334.64	2839.21	0:29	0.77	18.52	7.58	386	82	4.29	-70.1
HSP3-575	4/26/2017	517.52	3339.64	2822.12	0:39	1.29	20.82	7.79	370	7	3.84	-55.5

Abbreviations: bTOC= below top of casing; ft= feet; TOC= top of casing; msl= mean sea level; Elev.= elevation; min= minute; gal= gallon; c= degrees celcius; us/cm= microSiemens per centimeter; NTU= turbidity units; mg/L= milligrams per litre; mV= millivolt

1. The WDR (2013) requires final field parameters (collected after well purging and before the well groundwater quality sampling) to be included in this report.

Table 3-3
Equipment Calibration, Spring 2017

Equip. Name	Equip. Number	Date of Test	Time of Test	Standards Used	Equipment Reading	Calibrated to/or within 10%	Temp. (C)	Calibration Performed By:
YSI 556	10A101420	4/26/2017	7:00	DO 100% pH 7,10,4 Cond: 3.900 mS/cm ORP: 237.5 mv	DO: 103.1% pH: 7.12, 10.09, 4.06 Cond: 3.917 ms/cm ORP: 240.1 mv	yes	17.18 17.31	Blaine Tech Services, SC
YSI 556	10A101420	4/27/2017	7:00	DO 100% pH 7,10,4 Cond: 3.900 mS/cm ORP: 237.5 mv	DO: 113.8% pH: 7.04, 10.16, 4.00 Cond: 3.981 ms/cm ORP: 236.1 mv	yes	18.46 18.43	Blaine Tech Services, SC
YSI 556	10A101420	4/28/2017	7:00	DO 100% pH 7,10,4 Cond: 3.9 mS/cm ORP: 237.5 mv	DO: 103.2% pH: 7.03, 9.89, 4.10 Cond: 3.878 ms/cm ORP: 240.9 mv	yes	17.96 17.94	Blaine Tech Services, SC

Table 3-4
TDS, Nitrate, and General Mineral Results in Groundwater
Spring 2017

Well ID	Date	Total Dissolved Solids	Nitrate as N	Ammonia-Nitrogen	Total Kjeldahl Nitrogen	MBAS	Chloride	Sulfate
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Background Concentration		745	4.2	0.31	1.2	0.21	69	21.4
Water Quality Objective (mg/L) [1]		*500/1,000 /1,500*	*10*	*N/A*	*N/A*	*0.5*	*250/500 /600*	*250/500/ 600*
HSP1-580	4/28/2017	200	3.8	<0.10	0.12	<0.08	12	7.7
HSP2-570	4/27/2017	180	3.5	<0.10	<0.10	<0.08	11	6.4
HSP3-575	4/26/2017	200	3.6	<0.10	<0.10	0.07 J	13	8.2

Note: The WDRs (2013) require the three monitoring wells to be sampled annually (April and October) and groundwater analyzed for the seven parameters listed in this table.

Bold value: indicates a value that exceeds the Water Quality Objective or Background Concentration.

J= Concentration is below the laboratory reporting limit and above the laboratory detection limit.

N/A= not available

1. Maximum Contaminant Level (MCL), Secondary MCL (SMCL), or Consumer Acceptance (See Table 2-2).

Table 3-5
Metals Results in Groundwater
Spring 2017

Well	Date Sampled	Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Chromium VI	Copper	Cyanide	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Background Concentration		<3.0[2]	16.9	<0.57[2]	<0.57[2]	29	27	<5.0[2]	<0.005[2]	<5.0	<0.10[2]	<5.0[2]	<5.0[2]	<5.0[2]	<0.50[2]	40.1
Water Quality Objective[1]		*6*	*10*	*4*	*5*	*50*	*10*	*1,000*	*150*	*15*	*2*	*100*	*50*	*100*	*2*	*5,000*
HSP1-580	4/28/2017	<6.0	4.1	<1.0	<1.0	<10	0.19 J	<10	<0.005	<5.0	<0.20	<10	**5.1**	<10	<1.0	<10
HSP2-570	4/27/2017	<6.0	2.6	<1.0	<1.0	20	1.3	<10	<0.005	<5.0	<0.20	<10	<5.0	<10	<1.0	<10
HSP3-575	4/26/2017	<6.0	3.4	<1.0	<1.0	<10	0.2 J	<10	<0.005	<5.0	<0.20	<10	<5.0	<10	<1.0	5.5 J

Note: The WDRs (2013) required that every second year the above constituents are reported, beginning with the April 2017 sampling event (e.g., April 2017, April 2019).

Bold value: indicates a value that exceeds the Background Concentration and/or WQO.

J= Concentration is below the laboratory reporting limit and above the laboratory detection limit.

<= Concentration is below the laboratory reporting limit.

1. Maximum Contaminant Level (MCL), Secondary MCL (SMCL), or Consumer Acceptance (See Table 2-2).

2. Background Concentration= laboratory detection limit at the time the Background Concentration was determined (LSCE, January 2017)

Table 3-6
Volatile and Semi-Volatile Organic Compound Detections[1] in Groundwater
Spring 2017

Well	Date Sampled	Benzene	Chloroform	Toluene	Other VOC's
		ug/L	ug/L	ug/L	ug/L
Background Concentration		*<0.14 [2]*	*23.9*	*1.8*	*<DL [2]*
WQO/MCL		*1*	*-*	*150*	*Varies*
HSP1-580	4/28/2017	<0.50	1.1	0.19 J	<0.05 - <5.0
HSP2-570	4/27/2017	<0.50	<0.50	0.27 J	<0.05 - <5.0
HSP3-575	4/26/2017	0.070 J	0.64	0.28 J	<0.05 - <5.0

Note: The WDRs (2013) required that every second year the above constituents are reported, beginning with the April 2017 sampling event (e.g., April 2017, April 2019).

1. See Appendix D-3 for full list of VOCs detected historically.
2. Background Concentration= laboratory detection limit at the time the Background Concentration was determined (LSCE, January 2017)

DL= Detection Limit.

Bold value: indicates a value that exceeds the Background Concentration or Water Quality Objective (WQO)/Maximum Contaminant Level (MCL).

J= Concentration is below the laboratory reporting limit and above the laboratory detection limit.

<= Concentration is below the laboratory reporting limit.

FIGURES

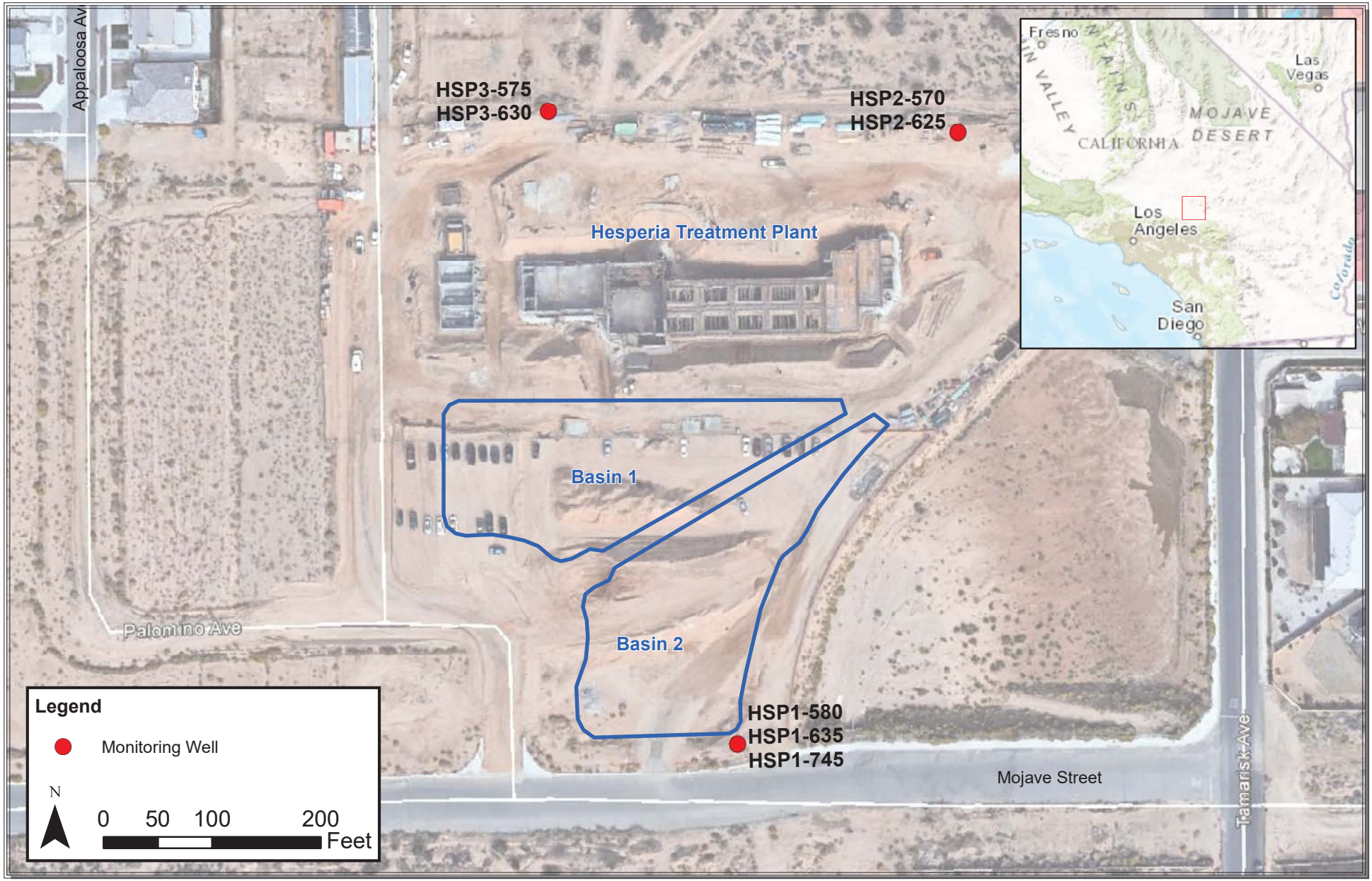

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FIGURE 1-1

Groundwater Monitoring Well Location Map

Victor Valley Wastewater Reclamation Authority
Hesperia Sub-Regional Reclamation Facility, California
Spring 2017 Semi-Annual Groundwater Monitoring Results

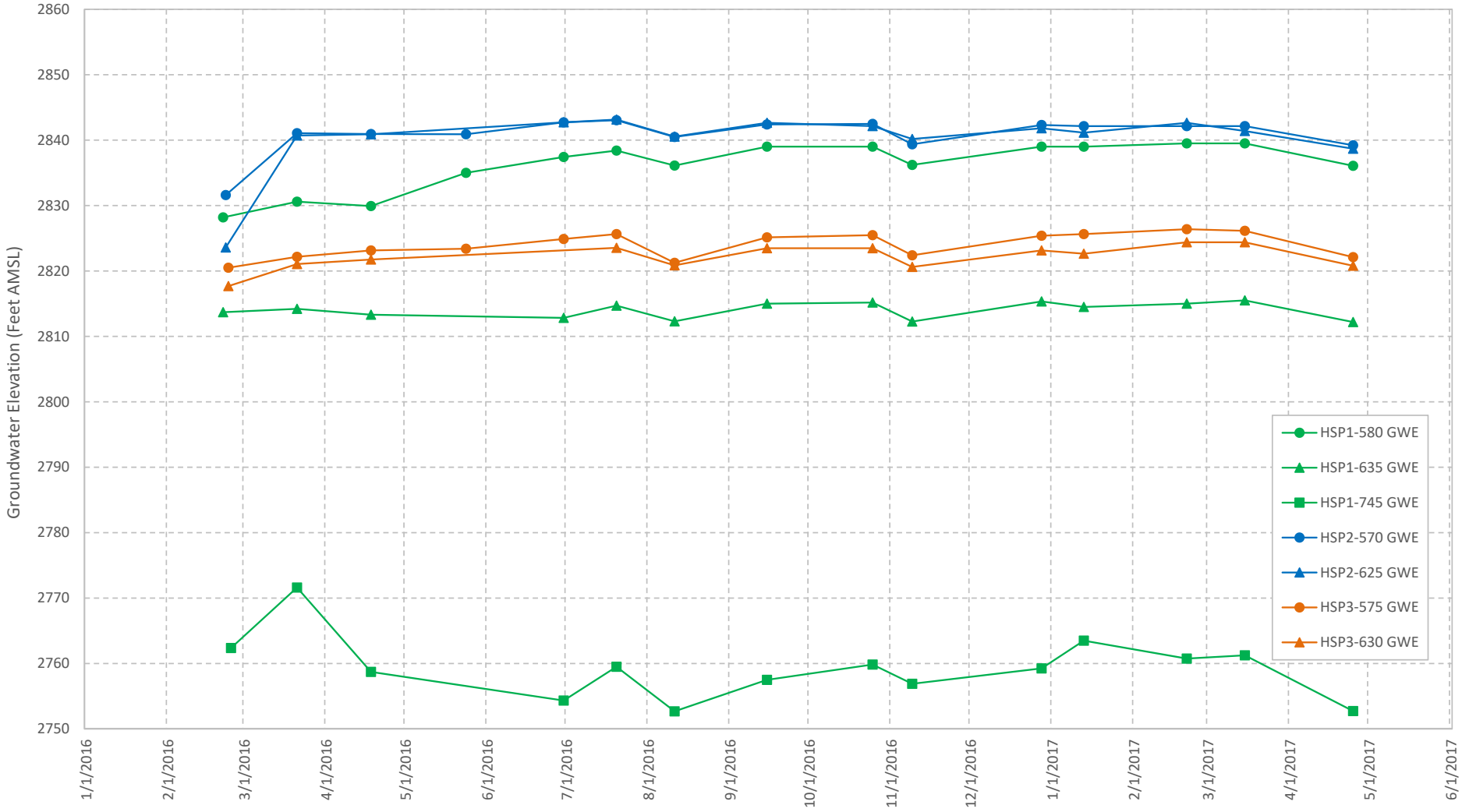

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FIGURE 3-1

Groundwater Elevation Time Series Plot

Victor Valley Wastewater Reclamation Authority
Hesperia Sub-Regional Reclamation Facility, California
Spring 2017 Semi-Annual Groundwater Monitoring Results

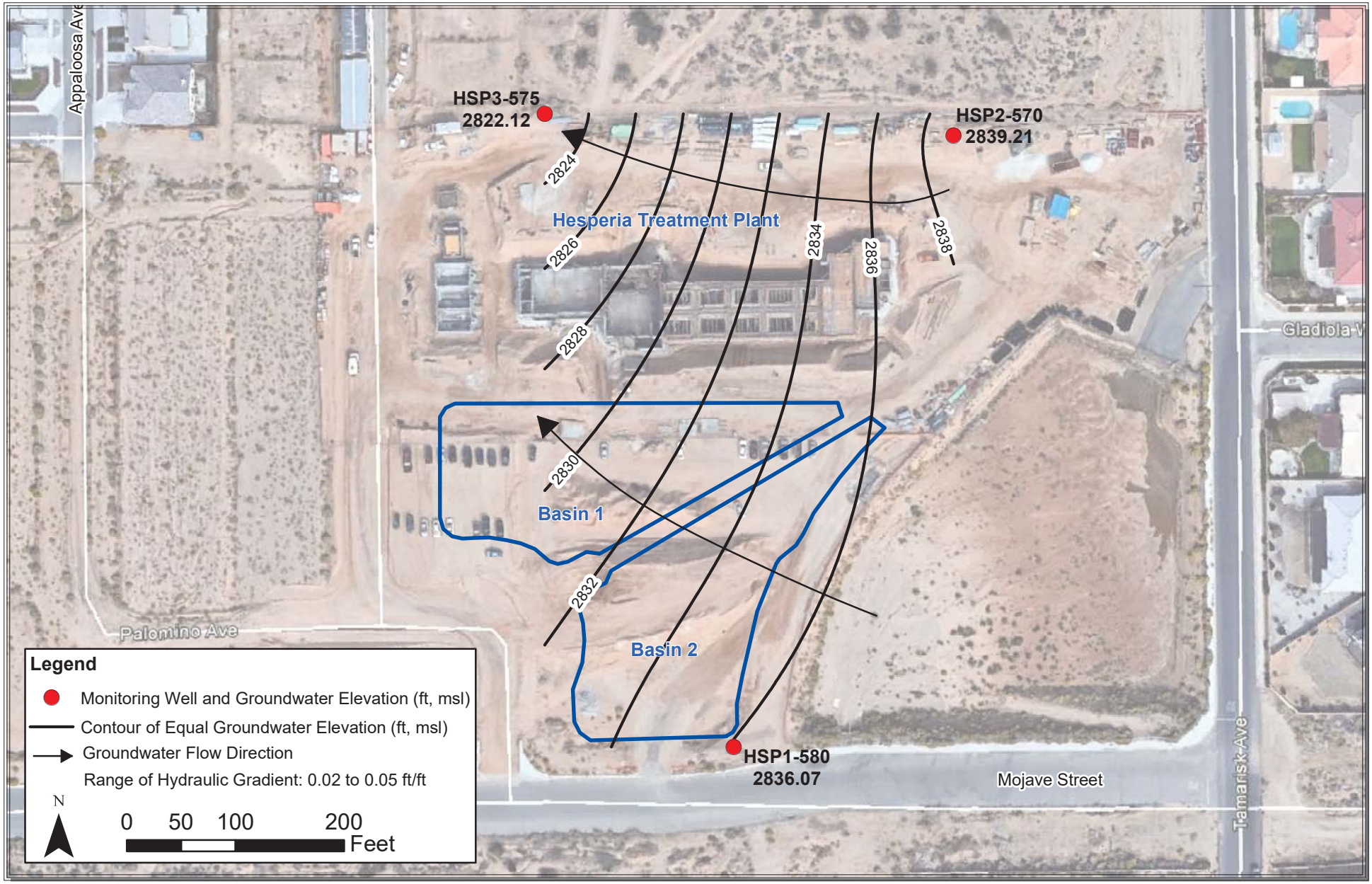

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FIGURE 3-2

Contours of Equal Groundwater Elevation, Spring 2017

Victor Valley Wastewater Reclamation Authority
Hesperia Sub-Regional Reclamation Facility, California
Spring 2017 Semi-Annual Groundwater Monitoring Results

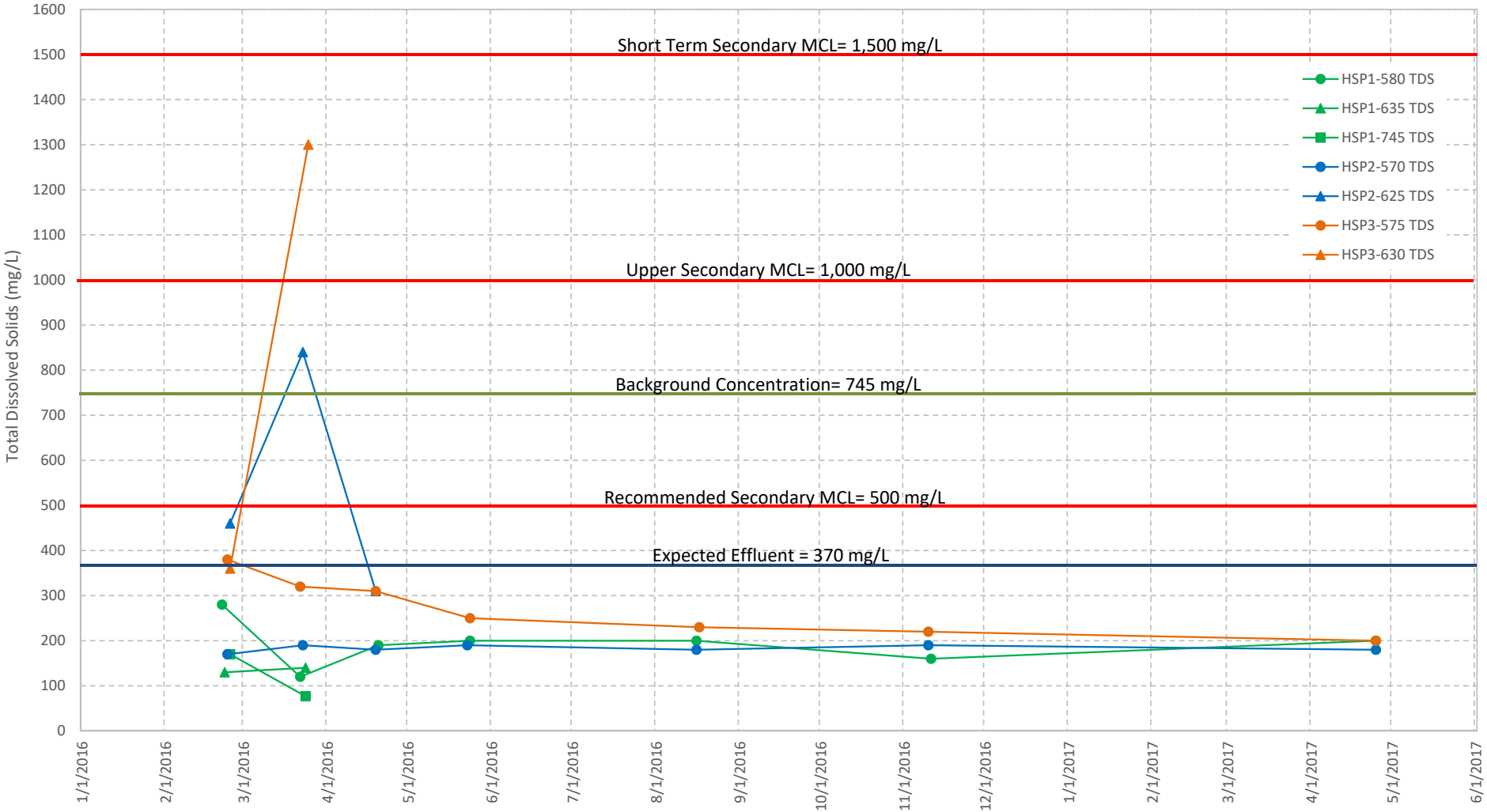

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FIGURE 3-3

TDS Concentrations Time Series Plot

Victor Valley Wastewater Reclamation Authority
Hesperia Sub-Regional Reclamation Facility, California
Spring 2017 Semi-Annual Groundwater Monitoring Results

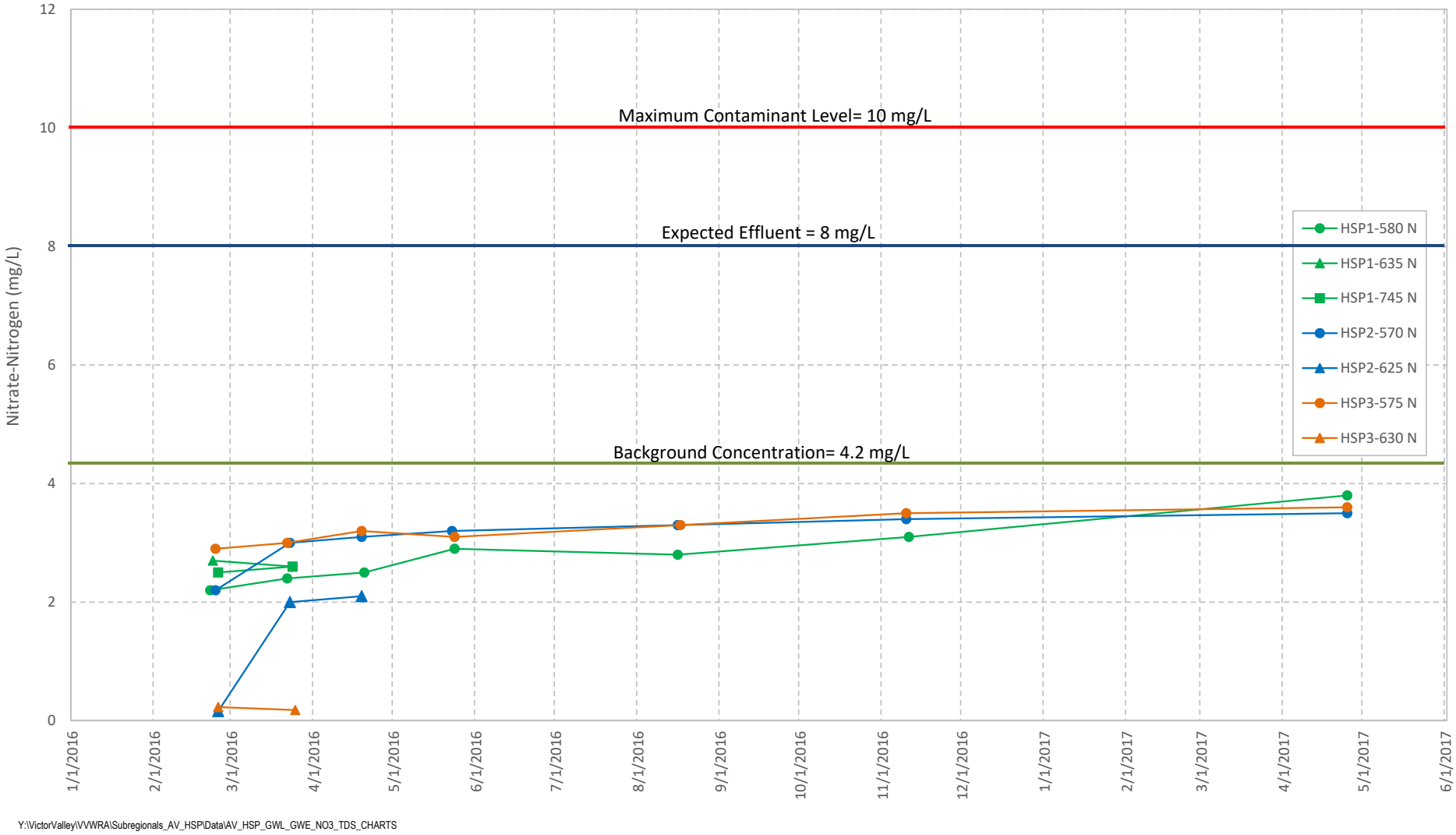

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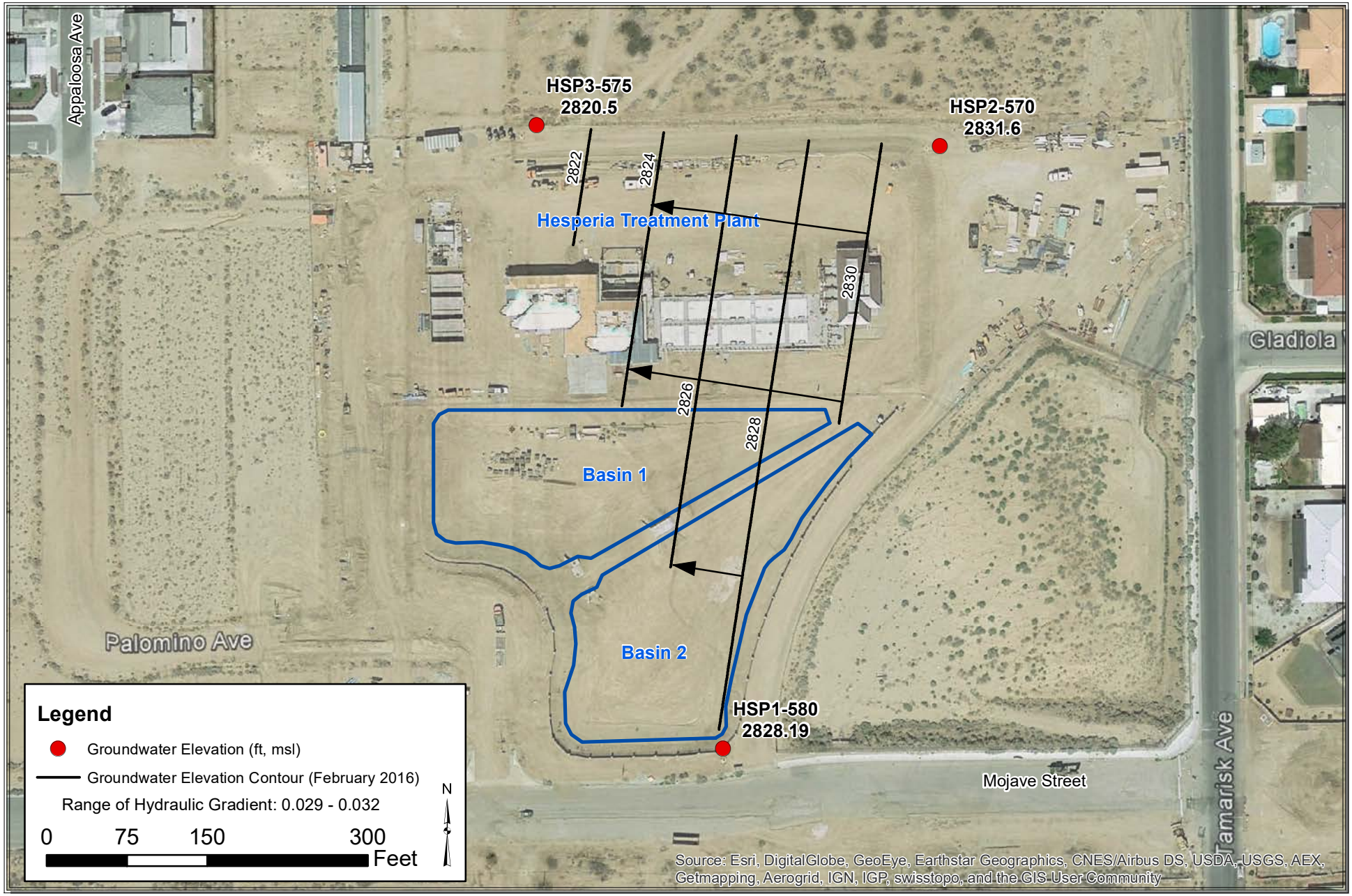
FIGURE 3-4

Nitrate as Nitrogen Concentrations Time Series Plot

Victor Valley Wastewater Reclamation Authority
Hesperia Sub-Regional Reclamation Facility, California
Spring 2017 Semi-Annual Groundwater Monitoring Results

APPENDIX A



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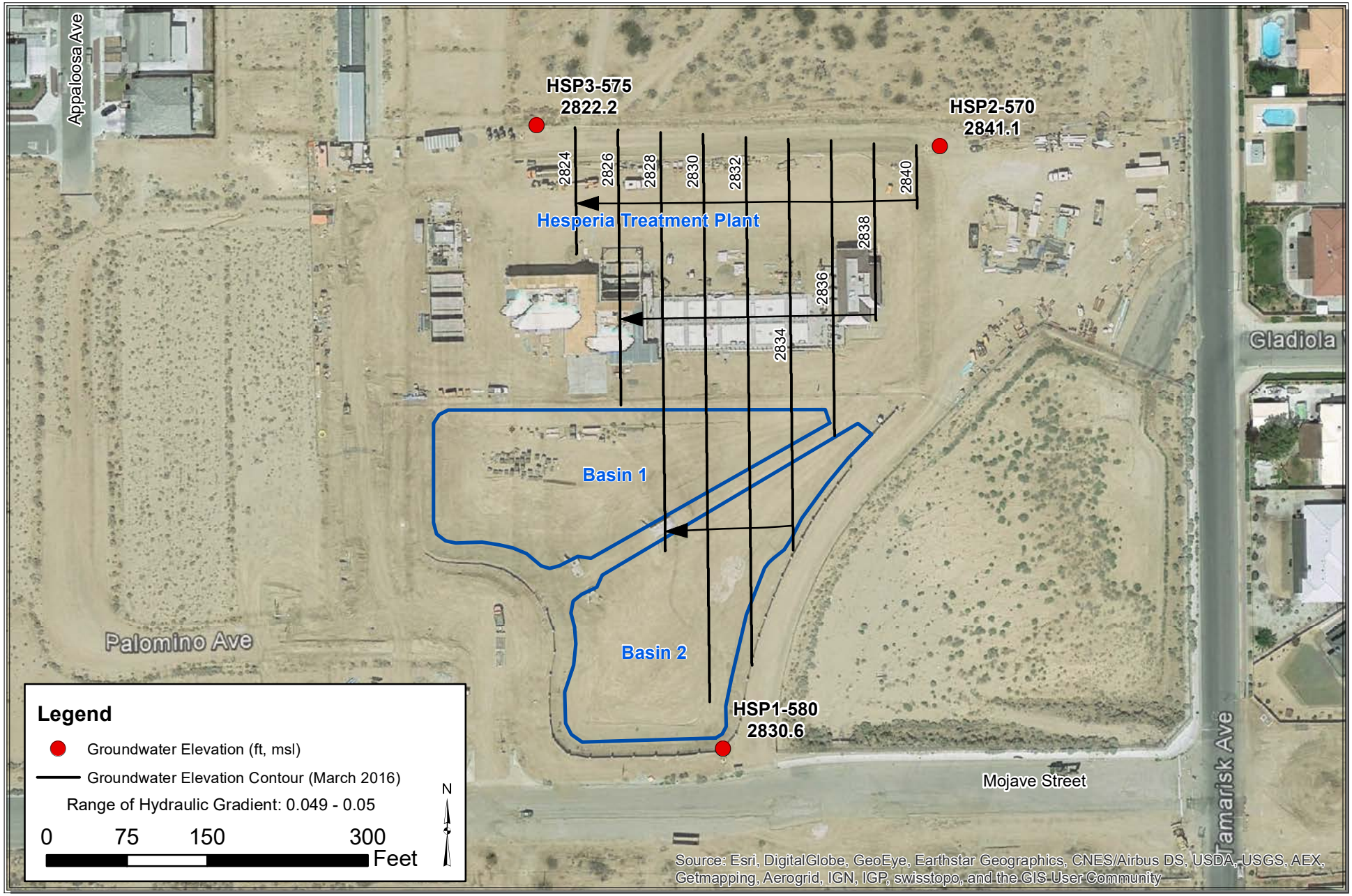
Appendix B
Contours of Equal Groundwater Elevation, February 2016
Hesperia Subregional Reclamation Facility, VVWRA



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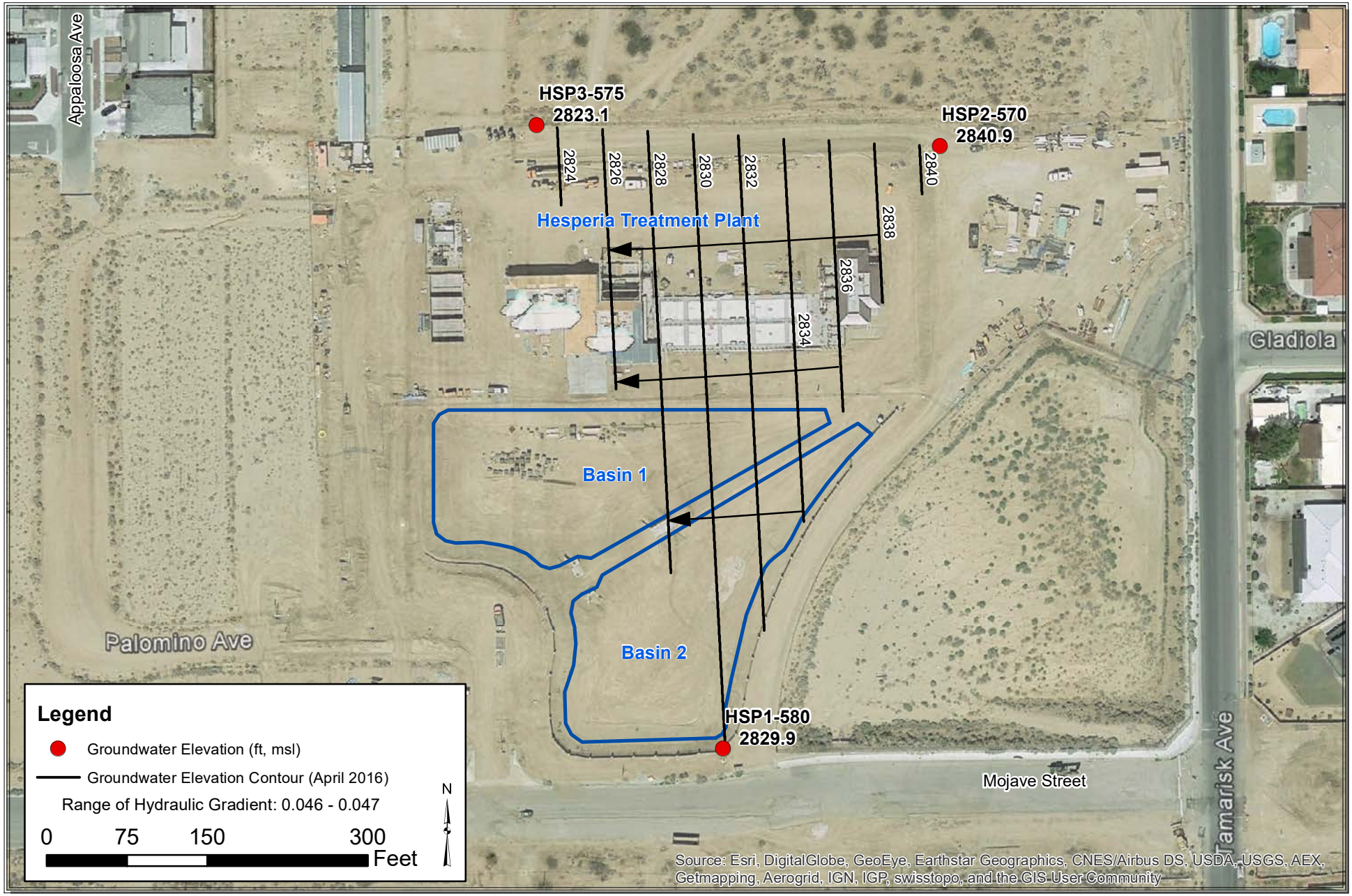
Appendix B
Contours of Equal Groundwater Elevation, March 2016
Hesperia Subregional Reclamation Facility, VVWRA



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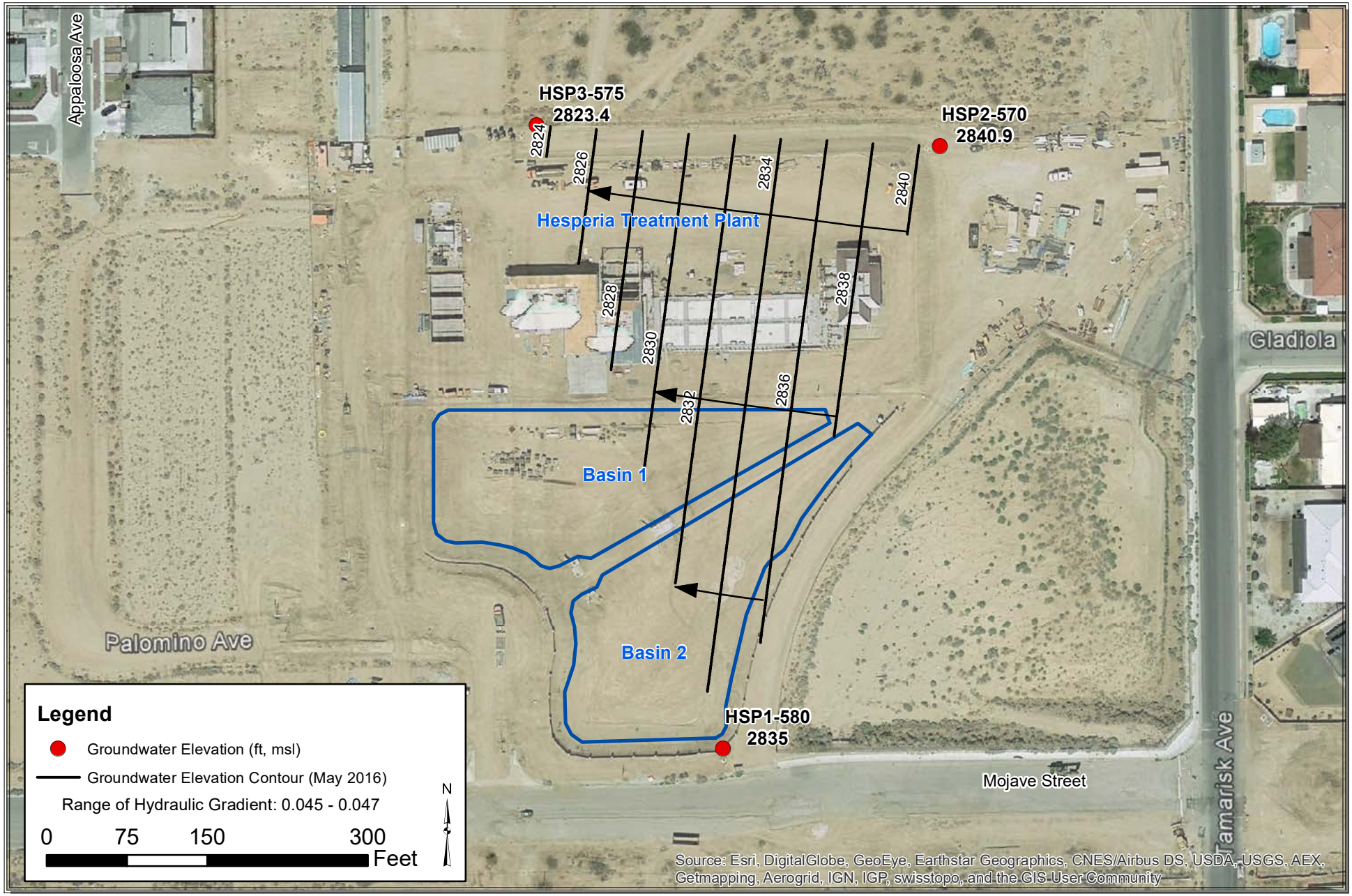
Appendix B
Contours of Equal Groundwater Elevation, April 2016
Hesperia Subregional Reclamation Facility, VVWRA



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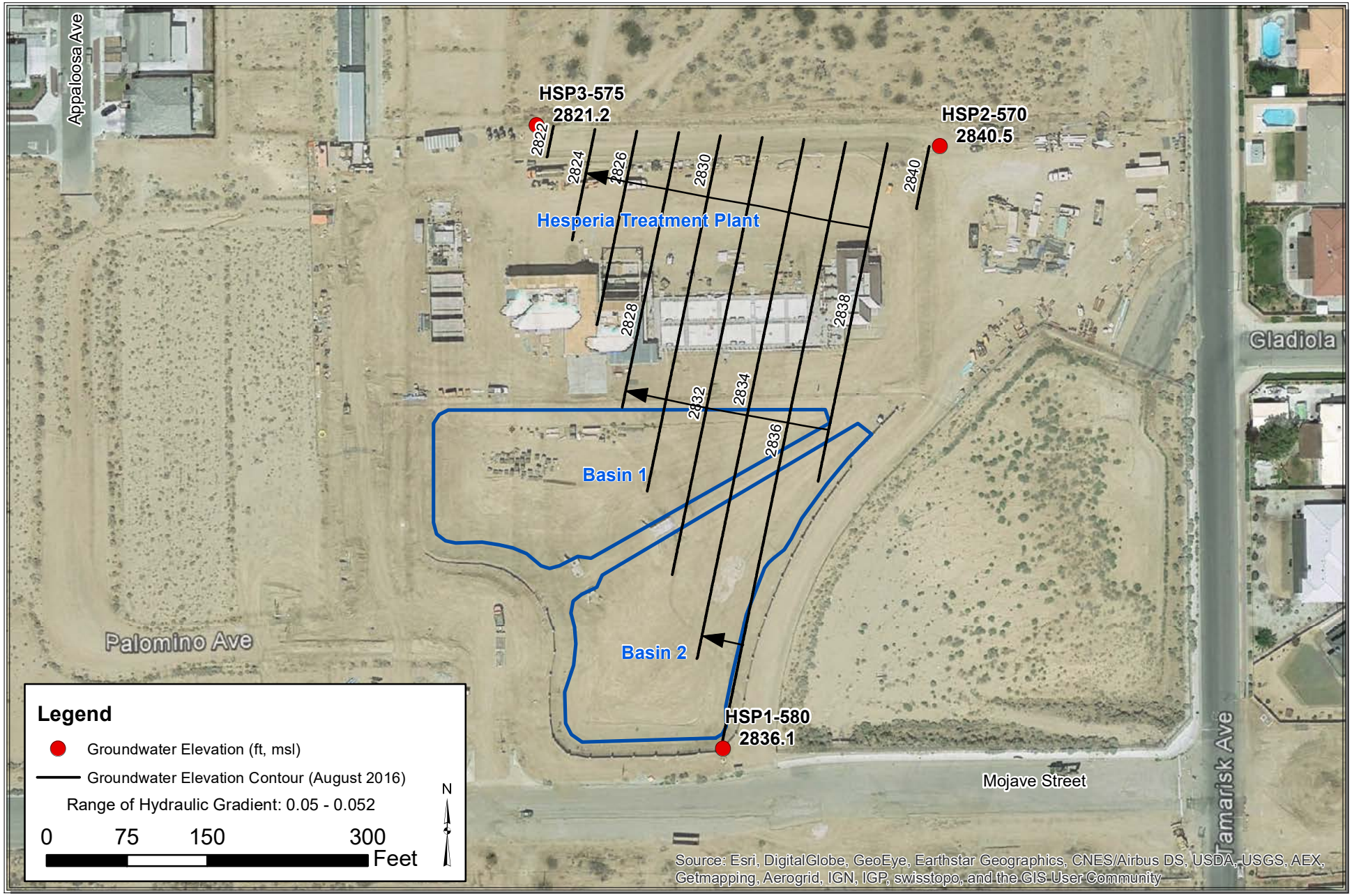
Appendix B
Contours of Equal Groundwater Elevation, May 2016
Hesperia Subregional Reclamation Facility, VVWRA



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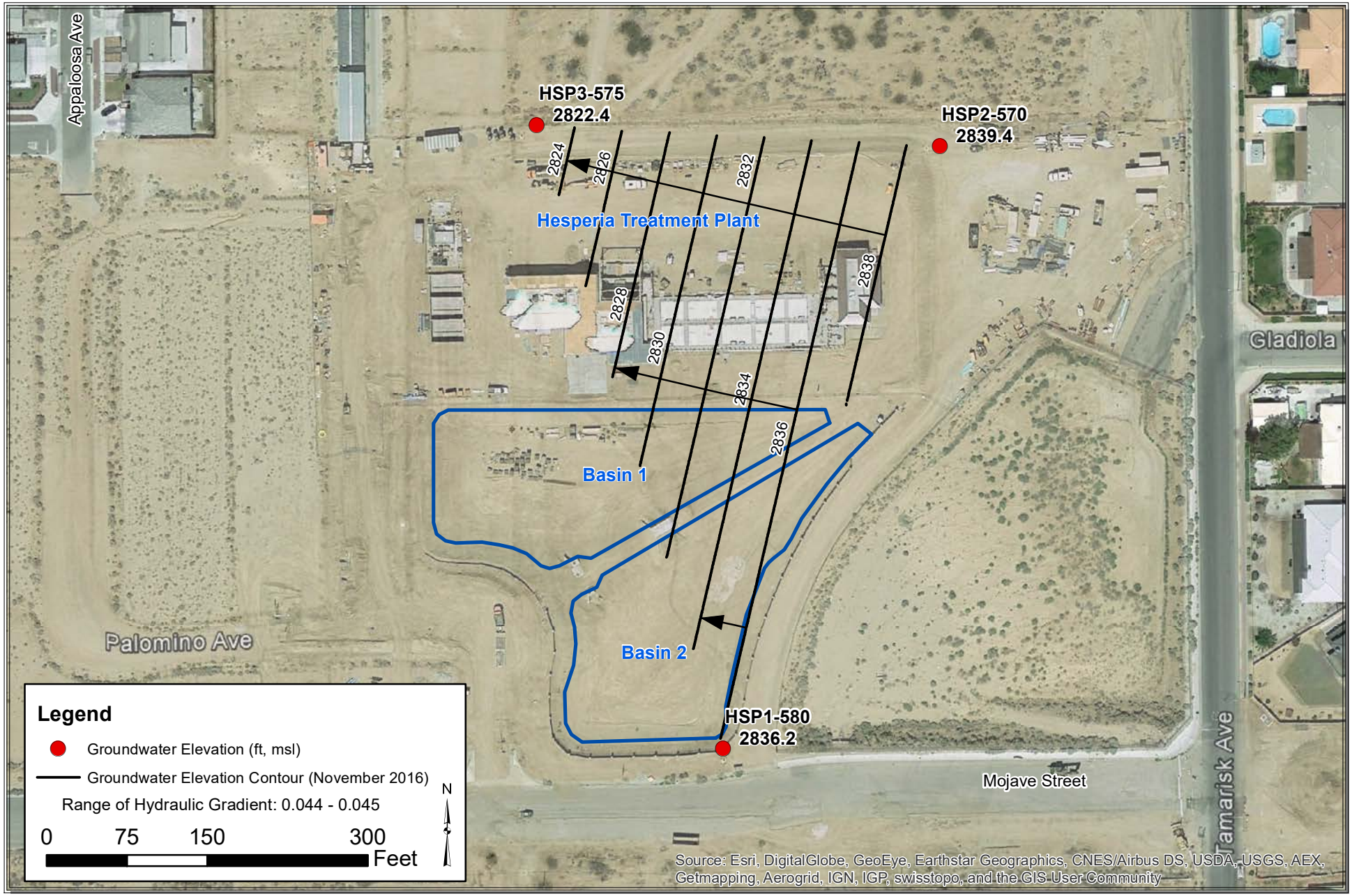
Appendix B
Contours of Equal Groundwater Elevation, August 2016
Hesperia Subregional Reclamation Facility, VVWRA



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Appendix B
Contours of Equal Groundwater Elevation, November 2016
Hesperia Subregional Reclamation Facility, VVWRA

APPENDIX B

Appendix B-1

Groundwater Quality—General Minerals, VVWRA Hesperia Sub-Regional Facilities

									Cations				Anions						
Well Name	**Date**	**TDS**	**Per-chlorate** [6]	**MBAS**	**Total Alkalinity** [5]	**TKN**	**Total Hardness** [5]	**NH3-N**	**Ca** [5]	**Na** [5]	**Mg** [5]	**K** [5]	**Cl**	**HCO3** [1, 5]	**CO3** [1, 5]	**OH** [1, 5]	**NO3-N**	**NO2-N** [6]	**SO4**
	Units	**(mg/L)**	**(ug/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**
Water Quality Objective		**500/1,000/ 1,500** [4]	**6** [2]	**0.5** [3]	-	-	-	-	-	-	-	-	**250/500/ 600** [4]	-	-	-	**10** [2]	**1** [2]	**250/500/ 600** [4]
Background Concentration		**745**	**-**	**0.21**	**194**	**1.2**	**81**	**0.31**	**21**	**126**	**7**	**4**	**69**	**225**	**13**	**<1.7**	**4.2**	**-**	**21.4**
HSP1-580	2/22/2016	280	0.77 J	<0.08	140	<0.10	42	<0.10	12	81	2.8	2.4	33	170	2.4 J	<3.0	2.2	<0.10	13
HSP1-580	3/21/2016	120	1.8 J	<0.08	130	0.20	42	<0.10	12	69	2.9	2.7	22	160	<3.0	<3.0	2.4	0.060 J	12
HSP1-580	4/19/2016	190	1.8 J	<0.08	130	<0.20	42	<0.10	12	68	2.9	2.8	19	160	<3.0	<3.0	2.5	<0.10	11
HSP1-580	5/24/2016	200	-	<0.08	120	<0.20	43	<0.10	12	60	3.1	2.6	18	140	<3.0	<3.0	2.9	<0.10	12
HSP1-580	8/16/2016	200	<4.0	<0.08	120	<0.10	50	<0.10	14	54	3.6	2.8	14	140	<3.0	<3.0	2.8	<0.10	9.1
HSP1-580	11/11/2016	160	<4.0	<0.08	120	<0.10	52	<0.10	14	49	3.7	2.7	13	140	<3.0	<3.0	3.1	<0.10	9.0
HSP1-580	4/28/2017	200	-	<0.08	-	0.12	-	<0.10	-	-	-	-	12	-	-	-	3.8	-	7.7
HSP1-635	2/23/2016	130	<4.0	<0.08	89	<0.10	33	<0.10	10	40	1.7	2.1	12	110	<3.0	<3.0	2.7	<0.10	6.0
HSP1-635	3/23/2016	140	<4.0	<0.08	91	<0.10	34	<0.10	11	41	1.8	2.3	11	110	<3.0	<3.0	2.6	<0.10	5.8
HSP1-635	4/20/2016	-	<4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSP1-745	2/25/2016	170	0.88 J	<0.08	110	0.19	34	0.28	10	41	1.9	2.2	13	120	2.4 J	<3.0	2.5	<0.10	7.1
HSP1-745	3/24/2016	77	0.92 J	<0.08	91	<0.10	34	<0.10	11	40	1.8	2.2	12	110	<3.0	<3.0	2.6	<0.10	6.4
HSP1-745	4/20/2016	-	<4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSP2-570	2/23/2016	170	<4.0	0.08	130	0.21	58	<0.10	15	65	4.7	3.8	26	150	<3.0	<3.0	2.2	0.25	9.0
HSP2-570	3/23/2016	190	<4.0	<0.08	120	<0.10	57	<0.10	15	45	4.7	3.2	13	150	<3.0	<3.0	3.0	0.050 J	7.1
HSP2-570	4/18/2016	180	<4.0	<0.08	120	<0.10	70	<0.10	18	45	5.8	3.5	13	140	<3.0	<3.0	3.1	0.11	7.2
HSP2-570	5/23/2016	190	-	<0.08	120	<0.20	62	<0.10	16	45	5.1	3.1	13	140	<3.0	<3.0	3.2	<0.10	8.3
HSP2-570	8/15/2016	180	<4.0	<0.08	120	0.13	67	<0.10	18	43	5.5	3.1	12	140	<3.0	<3.0	3.3	<0.10	6.2
HSP2-570	11/9/2016	190	<4.0	<0.08	120	<0.10	70	<0.10	19	42	5.5	2.9	12	140	<3.0	<3.0	3.4	<0.10	6.1
HSP2-570	4/27/2017	180	-	<0.08	-	<0.10	-	<0.10	-	-	-	-	11	-	-	-	3.5	-	6.4
HSP2-625	2/25/2016	460	<4.0	<0.08	21	1.2	18	0.16	5.6	**160**	<1.0	2.1	**75**	**230**	**14**	<3.0	0.16 J	1.3	**22**
HSP2-625	3/23/2016	**840**	1.6 J	<0.08	180	0.94	7.8	0.29	2.4	120	<1.0	1.9	40	200	12	<3.0	2.0	0.19	21
HSP2-625	4/18/2016	310	<4.0	<0.08	140	0.11	21	<0.10	5.0	93	2.1	2.8	23	170	<3.0	<3.0	2.1	0.29	**30**
HSP2-625	4/19/2016	-	<4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSP3-575	2/24/2016	380	14	<0.08	150	0.22	44	0.30	11	**140**	3.8	4.0	**110**	190	<12	<12	2.9	0.060 J	15
HSP3-575	3/22/2016	320	11	0.21	130	0.28	55	<0.10	14	90	4.8	3.7	58	160	<3.0	<3.0	3.0	<0.10	11

Appendix B-1

Groundwater Quality—General Minerals, VVWRA Hesperia Sub-Regional Facilities

									Cations				Anions						
Well Name	**Date**	**TDS**	**Per-chlorate** [6]	**MBAS**	**Total Alkalinity** [5]	**TKN**	**Total Hardness** [5]	**NH3-N**	**Ca** [5]	**Na** [5]	**Mg** [5]	**K** [5]	**Cl**	**HCO3** [1, 5]	**CO3** [1, 5]	**OH** [1, 5]	**NO3-N**	**NO2-N** [6]	**SO4**
	Units	**(mg/L)**	**(ug/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**	**(mg/L)**
Water Quality Objective		**500/1,000/ 1,500** [4]	**6** [2]	**0.5** [3]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**250/500/ 600** [4]	**-**	**-**	**-**	**10** [2]	**1** [2]	**250/500/ 600** [4]
Background Concentration		**745**	**-**	**0.21**	**194**	**1.2**	**81**	**0.31**	**21**	**126**	**7**	**4**	**69**	**225**	**13**	**<1.7**	**4.2**	**-**	**21.4**
HSP3-575	4/19/2016	310	3.5 J	<0.08	130	0.13	58	<0.10	15	70	5.0	3.4	39	160	<3.0	<3.0	3.2	<0.10	11
HSP3-575	5/23/2016	250	-	<0.08	130	0.88	70	<0.10	18	73	6.0	**4.1**	34	160	<3.0	<3.0	3.1	0.070 J	12
HSP3-575	8/17/2016	230	<4.0	<0.08	130	<0.10	65	<0.10	17	51	5.5	3.1	17	160	<3.0	<3.0	3.3	0.060 J	9.1
HSP3-575	11/10/2016	220	<4.0	<0.08	120	<0.10	72	0.069 J	19	48	5.9	3.3	14	150	<3.0	<3.0	3.5	<0.10	8.9
HSP3-575	4/26/2017	200	-	0.07 J	-	<0.10	-	<0.10	-	-	-	-	13	-	-	-	3.6	-	8.2
HSP3-630	2/24/2016	360	7.1	0.09	**240**	1.2	15	0.31	4.4	90	<1.0	2.7	45	**280**	9.6	<3.0	0.23	0.35	14
HSP3-630	3/25/2016	**1,300**	4.3	**1.2**	180	0.48	16	**0.34**	4.6	92	1.1	2.5	5.1	200	13	<3.0	0.18 J	<0.10	4.3
HSP3-630	4/19/2016	-	<4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1. HCO3 , CO3 and OH reported as HCO3, CO3 and OH respectively.
2. MCL= Maximum Contaminant Level
3. Secondary Maximum Contaminant Limit- Consumer Acceptance
4. Secondary Maximum Contaminant Limit- Recommended/Upper/Short Term Range
5. Constituent only required for initial baseline monitoring (MRP pg.9), not ongoing monitoring (after initiation of discharge, MRP pg. 4).
6. Constituent not required by MRP, for determination of initial conditions only.

Non Detect Result Reported as < Reporting Limit

J= Concentration is below the laboratory reporting limit and above the laboratory detection limit.

Bold indicates a concentration that exceeds the Water Quality Objective or Background Concentration.

Note: February and March 2016, all wells analyzed for general minerals, metals, VOCs and SVOCs, perchlorate and nitrite..
April 2016, all wells analyzed for general minerals and metals except AV4-265 analyzed for VOCs (not SVOCS) to confirm previous hits.
May 2016, all upper wells (not AV4-265) analyxed for general minerals and metals.
After May 2016, perchlorate and nitrite analysis and lower completion well AV4-265 sampling (installed to be used if water levels drop below upper completion well (AV4-225)) were discontinued. They were analyzed to determine background concentration and are not required by the MRP.

Appendix B-2

Groundwater Quality—Metals and Other Inorganics, VVWRA Hesperia Sub-Regional Facilities

Well Name	Date Units	Antimony (ug/L)	Arsenic (ug/L)	Beryllium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Hexavalent Chromium (ug/L)	Copper (ug/L)	Cyanide (ug/L)	Iron [3] (ug/L)	Lead (ug/L)	Manganese [3] (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Silver (ug/L)	Thallium (ug/L)	Zinc (ug/L)
Water Quality Objective		**6** [1]	**10** [1]	**4** [1]	**5** [1]	**50** [1]	**10** [1]	**1,000** [2]	**0.15** [1]				**2** [1]	**100** [1]	**50** [1]	**100** [2]	**2** [1]	**5,000** [2]
Background Concentration		**<3.0**	**16.9**	**<0.57**	**<0.57**	**29**	**27**	**<5.0**	**<0.005**	**60.1**	**<5.0**	**45.5**	**<0.10**	**<5.0**	**<2.5**	**<5.0**	**<0.50**	**40.1**
HSP1-580	2/22/2016	<6.0	3.9	<1.0	<1.0	26	**29**	<10	<0.005	<20	<5.0	<10	<0.20	<10	<5.0	<10	<1.0	17
HSP1-580	3/21/2016	<6.0	5.4	<1.0	<1.0	11	**11**	<10	<0.005	**310**	<5.0	8.8 J	<0.20	<10	<5.0	<10	<1.0	34
HSP1-580	4/19/2016	<6.0	4.4	<1.0	<1.0	6.1 J	4.7 J	<10	<0.005	**340**	<5.0	37	<0.20	<10	<5.0	<10	<1.0	**62**
HSP1-580	5/24/2016	<6.0	3.3	<1.0	<1.0	4.2 J	3.4	<10	<0.005	<20	<5.0	5.5 J	<0.20	<10	<5.0	<10	<1.0	<10
HSP1-580	8/16/2016	<6.0	3.7	<1.0	<1.0	<10	1.2	<10	<0.005	47	<5.0	8.4 J	<0.20	<10	<5.0	<10	<1.0	8.8 J
HSP1-580	11/11/2016	<6.0	3.7	<1.0	<1.0	<10	0.43 J	<10	<0.005	15 J	<5.0	9.2 J	<0.20	<10	<5.0	<10	<1.0	5.8 J
HSP1-580	4/28/2017	<6.0	4.1	<1.0	<1.0	<10	0.19 J	<10	<0.005	-	<5.0	-	<0.20	<10	**5.1**	<10	<1.0	<10
HSP1-635	2/23/2016	<6.0	3.4	<1.0	<1.0	<10	0.96 J	<10	<0.005	<20	<5.0	15	<0.20	<10	<5.0	<10	<1.0	<10
HSP1-635	3/23/2016	<6.0	3.7	<1.0	<1.0	<10	1.1	<10	<0.005	**250**	<5.0	17	<0.20	<10	<5.0	<10	<1.0	28
HSP1-745	2/25/2016	<12	3.5 J	<2.0	<2.0	<20	0.64 J	<20	<0.005	53	**11**	**190**	<0.40	<20	<10	<20	<2.0	<20
HSP1-745	3/24/2016	<6.0	3.7	<1.0	<1.0	<10	0.92 J	<10	<0.005	<20	<5.0	11	<0.20	<10	<5.0	<10	<1.0	<10
HSP2-570	2/23/2016	<6.0	4.3	<1.0	<1.0	<10	1.3	<10	<0.005	<20	<5.0	6.7 J	<0.20	<10	<5.0	<10	<1.0	10
HSP2-570	3/23/2016	<6.0	3.5	<1.0	<1.0	<10	1.0	<10	<0.005	<20	<5.0	8.4 J	<0.20	<10	<5.0	<10	<1.0	<10
HSP2-570	4/18/2016	<6.0	3.7	<1.0	<1.0	4.5 J	1.0	<10	<0.005	**2,200**	<5.0	43	<0.20	<10	<5.0	<10	<1.0	**150**
HSP2-570	5/23/2016	<6.0	5.0	<1.0	<1.0	<10	0.48 J	<10	<0.005	46	<5.0	16	<0.20	<10	<5.0	<10	<1.0	6.3 J
HSP2-570	8/15/2016	<6.0	3.2	<1.0	<1.0	<10	1.0	<10	<0.005	<20	<5.0	21	<0.20	<10	<5.0	<10	<1.0	5.4 J
HSP2-570	11/9/2016	<6.0	2.9	<1.0	<1.0	<10	1.4	<10	<0.005	42	<5.0	20	<0.20	<10	<5.0	<10	<1.0	18
HSP2-570	4/27/2017	<6.0	2.6	<1.0	<1.0	20	1.3	<10	<0.005	-	<5.0	-	<0.20	<10	<5.0	<10	<1.0	<10
HSP2-625	2/25/2016	<12	**23**	<2.0	<2.0	<20	1.2	<20	**0.012**	**120**	**12**	20	<0.40	<20	<10	<20	<2.0	<20
HSP2-625	3/23/2016	<6.0	**21**	<1.0	<1.0	<10	<1.0	<10	<0.005	**160**	<5.0	9.9 J	<0.20	<10	<5.0	<10	<1.0	11
HSP2-625	4/18/2016	<6.0	**12**	<1.0	<1.0	20	<1.0	**5.8 J**	<0.005	**4,500**	3.1 J	**78**	<0.20	**6.3 J**	<5.0	<10	<1.0	**130**
HSP3-575	2/24/2016	<6.0	6.3	<2.0	<2.0	**43**	**42**	<10	<0.005	<20	<5.0	15	<0.40	<10	<5.0	<10	<1.0	11
HSP3-575	3/22/2016	<6.0	4.7	<1.0	<1.0	29	**31**	<10	<0.005	<20	<5.0	5.1 J	<0.20	<10	<5.0	<10	**0.72 J**	<10

Appendix B-2

Groundwater Quality—Metals and Other Inorganics, VVWRA Hesperia Sub-Regional Facilities

Well Name	Date / Units	Antimony (ug/L)	Arsenic (ug/L)	Beryllium (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Hexavalent Chromium (ug/L)	Copper (ug/L)	Cyanide (ug/L)	Iron [3] (ug/L)	Lead (ug/L)	Manganese [3] (ug/L)	Mercury (ug/L)	Nickel (ug/L)	Selenium (ug/L)	Silver (ug/L)	Thallium (ug/L)	Zinc (ug/L)
Water Quality Objective		**6 [1]**	**10 [1]**	**4 [1]**	**5 [1]**	**50 [1]**	**10 [1]**	**1,000 [2]**	**0.15 [1]**				**2 [1]**	**100 [1]**	**50 [1]**	**100 [2]**	**2 [1]**	**5,000 [2]**
Background Concentration		**<3.0**	**16.9**	**<0.57**	**<0.57**	**29**	**27**	**<5.0**	**<0.005**	**60.1**	**<5.0**	**45.5**	**<0.10**	**<5.0**	**<2.5**	**<5.0**	**<0.50**	**40.1**
HSP3-575	4/19/2016	<6.0	4.1	<1.0	<1.0	18	**23**	<10	<0.005	<20	<5.0	<10	<0.20	<10	<5.0	<10	<1.0	7.9 J
HSP3-575	5/23/2016	<6.0	7.0	<1.0	<1.0	13	10	<10	<0.005	31	<5.0	6.1 J	<0.20	<10	<5.0	<10	<1.0	5.9 J
HSP3-575	8/17/2016	<6.0	3.7	<1.0	<1.0	<10	0.33 J	<10	<0.005	<20	<5.0	<10	<0.20	<10	<5.0	<10	<1.0	<10
HSP3-575	11/10/2016	<6.0	4.1	<1.0	<1.0	<10	0.49 J	<10	<0.005	**500**	<5.0	9.7 J	<0.20	<10	<5.0	<10	<1.0	28
HSP3-575	4/26/2017	<6.0	3.4	<1.0	<1.0	<10	0.20 J	<10	<0.005	-	<5.0	-	<0.20	<10	<5.0	<10	<1.0	5.5 J
HSP3-630	2/24/2016	<6.0	**15**	<2.0	<2.0	<10	1.0	<10	<0.005	**240**	<5.0	20	**0.38 J**	<10	<5.0	<10	<1.0	17
HSP3-630	3/25/2016	<6.0	**16**	<1.0	<1.0	<10	0.66 J	<10	<0.005	**130**	3.0 J	32	**0.11 J**	<10	<5.0	<10	<1.0	36

1. MCL= Maximum Contaminant Level

2. Secondary Maximum Contaminant Limit- Consumer Acceptance

3. Constituent only required for initial baseline monitoring (MRP pg.9), not ongoing monitoring (after initiation of discharge, MRP pg. 4).

ND = Reported as < Reporting Limit

J= Concentration is below the laboratory reporting limit and above the laboratory detection limit.

Bold indicates a concentration that exceeds Water Quality Objective or Background Concentration.

Note: February and March 2016, all wells analyzed for general minerals, metals, VOCs and SVOCs, perchlorate and nitrite..

Apr. 2016, all wells analyzed for general minerals and metals except AV4-265 analyzed for VOCs (not SVOCS) to confirm previous hits.

May 2016, all upper wells (not AV4-265) analyzed for general minerals and metals.

After May 2016, perchlorate and nitrite analysis and lower completion well AV4-265 sampling (installed to be used if water levels drop below upper completion well (AV4-225)) were discontinued. They were analyzed to determine background concentration and are not required by MRP.

Appendix B-3

Groundwater Quality—Volatile and Semi-Volatile Organic Compound Detections
VVWRA Hesperia Sub-Regional Facility

Well Name	Date	Constituent	Result (ug/L)	Background Concentration (ug/L)	Water Quality [1] Objective (ug/L)
HSP1-580	2/22/2016	Chloroform	**78**	23.9	-
HSP1-580	3/21/2016	Chloroform	**25**	23.9	-
HSP1-580	3/21/2016	Toluene	0.44 J	1.8	150
HSP1-580	8/16/2016	Chloroform	4.4	23.9	-
HSP1-580	8/16/2016	Toluene	0.28 J	1.8	150
HSP1-580	11/11/2016	Chloroform	1.4	23.9	-
HSP1-580	11/11/2016	Toluene	**5.4**	1.8	150
HSP1-580	4/28/2017	Chloroform	1.1	23.9	-
HSP1-580	4/28/2017	Toluene	0.19 J	1.8	150
HSP1-635	3/23/2016	Chloroform	0.53	23.9	-
HSP1-635	3/23/2016	Toluene	0.51	1.8	150
HSP1-635	4/20/2016	Toluene	0.30 J	1.8	150
HSP1-745	3/24/2016	Chloroform	1.7	23.9	-
HSP1-745	3/24/2016	Toluene	0.30 J	1.8	150
HSP1-745	4/20/2016	Chloroform	0.71	23.9	-
HSP1-745	4/20/2016	Toluene	0.26 J	1.8	150
HSP2-570	2/23/2016	Chloroform	**57**	23.9	-
HSP2-570	3/23/2016	Chloroform	7.4	23.9	-
HSP2-570	3/23/2016	Toluene	0.48 J	1.8	150
HSP2-570	8/15/2016	Toluene	1.1	1.8	150
HSP2-570	11/9/2016	Toluene	0.83	1.8	150
HSP2-570	4/27/2017	Toluene	0.27 J	1.8	150
HSP2-625	2/25/2016	Chloroform	**360**	23.9	-
HSP2-625	2/25/2016	Chloromethane	**0.87**	<0.36	-
HSP2-625	3/23/2016	Chloroform	**85**	23.9	-
HSP2-625	3/23/2016	Toluene	0.46 J	1.8	150
HSP2-625	4/19/2016	Chloroform	16	23.9	-
HSP3-575	2/24/2016	Chloroform	**300**	23.9	-
HSP3-575	2/24/2016	Chloromethane	**0.69**	<0.36	-
HSP3-575	2/24/2016	Diethyl phthalate	**2.3**	<1.8	-

Appendix B-3

Groundwater Quality—Volatile and Semi-Volatile Organic Compound Detections
VVWRA Hesperia Sub-Regional Facility

Well Name	Date	Constituent	Result (ug/L)	Background Concentration (ug/L)	Water Quality [1] Objective (ug/L)
HSP3-575	2/24/2016	Naphthalene	**0.06**	<0.05	-
HSP3-575	3/22/2016	Chloroform	**150**	23.9	-
HSP3-575	3/22/2016	Toluene	0.48 J	1.8	150
HSP3-575	4/19/2016	Chloroform	**38**	23.9	-
HSP3-575	4/19/2016	Ethylbenzene	**0.89**	<0.26	300
HSP3-575	4/19/2016	Toluene	0.22 J	1.8	150
HSP3-575	8/17/2016	Chloroform	10	23.9	-
HSP3-575	8/17/2016	Toluene	0.27 J	1.8	150
HSP3-575	11/10/2016	Chloroform	3.1	23.9	-
HSP3-575	11/10/2016	Toluene	**5.9**	1.8	150
HSP3-575	4/26/2017	Benzene	0.070 J	<0.14	1
HSP3-575	4/26/2017	Chloroform	0.64	23.9	-
HSP3-575	4/26/2017	Toluene	0.28 J	1.8	150
HSP3-630	2/24/2016	Chloroform	**58**	23.9	-
HSP3-630	3/25/2016	Chloroform	**69**	23.9	-
HSP3-630	4/19/2016	Chloroform	12	23.9	-
HSP3-630	4/19/2016	Ethylbenzene	**0.37 J**	<0.26	300
HSP3-630	4/19/2016	Toluene	0.24 J	1.8	150

1. MCL= Maximum Contaminant Level

Bold indicates a concentration that exceeds Water Quality Objective or Background Concentration.

J= Concentration is below the laboratory reporting limit and above the laboratory detection limit.

Note: All other VOC/SVOC constituents analyzed by EPA methods 624, 625 and 625 SIM were not detected and not reported on this table.

Feb. and Mar. 2016, all wells sampled for general minerals, metals, VOCs and SVOCs, perchlorate and nitrite..

Apr. 2016, all wells analyzed for general minerals and metals except AV4-265 analyzed for VOCs (not SVOCS) to confirm previous hits.

May 2016, all upper wells (not AV4-265) analyxed for general minerals and metals. One exception was AV2-220 sampled for perchlorate.

After May 2016, perchlorate and nitrite analysis and lower completrion well AV4-265 sampling (installed to be used if water levels drop below upper completion well (AV4-225)) were discontinued. They were analyzed to determine background concentrations and are not required by the MRP.

APPENDIX C

WELL GAUGING DATA

Project # 170425.BM1 Date 4.25.17 Client VVWRA

Site Mojave St, Tamarisk Ave, Hesperia

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
HSP1-580	1440	2					510.43	-		
HSP1-635	1448	2					534.31	-		
HSP1-745	1455	2					593.77	-		
HSP2-625	1510	2					495.96	-		
HSP2-570	1516	2					495.43	-		
HSP3-575	0845	2					517.52	-		
HSP3-630	0852	2					518.84	-		

LOW FLOW WELL MONITORING DATA SHEET

Project #: 170425.BM1	Client: VVW 12A
Sampler: BM	Gauging Date: 4.25.17
Well I.D.: HSP1-580	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): —	Depth to Water (ft.): 510.43
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | Peristaltic Pump | (Bladder Pump)
Sampling Method: Dedicated Tubing | (New Tubing) | Other ___

Start Purge Time: ~~0755~~ 0757 Flow Rate: 100 ml/min Pump Depth: 560

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
		System volume = 3300 mL						
0830	17.03	7.55	350	8	3.21	10.4	3,300	510.44
0833	17.14	7.55	348	7	2.33	4.2	3,600	510.44
0836	17.10	7.54	347	5	2.31	4.0	3,900	510.44
0839	17.10	7.54	350	5	2.33	5.2	4,200	510.44
0842	17.10	7.54	351	5	2.30	5.1	4,500	510.44

Did well dewater? Yes (No) Amount actually evacuated: 4,500 mL

Sampling Time: 0843 Sampling Date: 4.28.17

Sample I.D.: HSP1-580 Laboratory: Babcock

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 170425.BN1	Client: VUWRA
Sampler: BN	Gauging Date: 4.25.17
Well I.D.: HSP2.570	Well Diameter (in.): (2) 3 4 6 8 ___
Total Well Depth (ft.): -	Depth to Water (ft.): 495.43
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ___

Start Purge Time: ~~0955~~ 0955 Flow Rate: 100 mL/min Pump Depth: 550

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
	System volume = 1,331 mL							
1009	18.40	7.47	375	116	4.42	-20.2	1,400	495.46
1012	18.46	7.52	377	94	4.40	-27.3	1,700	495.46
1015	18.50	7.55	381	90	4.38	-56.1	2,000	495.46
1018	18.51	7.57	383	87	4.31	-68.3	2,300	495.46
1021	18.51	7.57	383	85	4.26	-69.4	2,600	495.46
1024	18.52	7.58	386	82	4.29	-70.1	2,900	495.46

Did well dewater? Yes (No) Amount actually evacuated: 2,900 mL

Sampling Time: 1025 Sampling Date: 4.27.17

Sample I.D.: HSP2.570 Laboratory: Babcock

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 170425-BM1	Client: VWPA
Sampler: BM	Gauging Date: 4.26.17
Well I.D.: HSP3-575	Well Diameter (in.): (2) 3 4 6 8 ____
Total Well Depth (ft.): -	Depth to Water (ft.): 517.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type:

Purge Method: 2" Grundfos Pump | Peristaltic Pump | (Bladder Pump)
Sampling Method: Dedicated Tubing | (New Tubing) | Other

Start Purge Time: 1045 Flow Rate: 125 ml/min Pump Depth: 555

Time	Temp. (°C or °F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water (ft.)
		System volume = 3.2			75 mL			
1112	21.20	7.84	371	14	4.19	-36.0	3,375	517.55
1115	21.21	7.86	371	8	3.87	-43.3	3,750	517.55
1118	20.98	7.81	373	7	3.93	-52.7	4,125	517.55
1121	20.96	7.81	370	7	3.84	-53.5	4,500	517.55
1124	20.82	7.79	370	7	3.84	-55.5	4,875	517.55

Did well dewater? Yes (No) Amount actually evacuated: 4,875 ml

Sampling Time: 1125 Sampling Date: 4.26.17

Sample I.D.: HSP3-575 Laboratory: Babcock

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.: HSP-Dup @1130

WELLHEAD INSPECTION CHECKLIST

Client VVWRA Date 4.25.17

Site Address Mojave St Tamarisk Ave, Hesperia

Job Number 170425-BM1 Technician BM

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
HSP1.580	Y	X	Y							
HSP1.635	Y	Y	X							
HSP1-745	Y	Y	Y							
HSP2.570	X	X	Y							
HSP2.625	X	Y	Y							
HSP3.575	X	Y	Y							
HSP3.630	Y	Y	Y							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME VVWRA Hesperia				PROJECT NUMBER 170425-13			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI 556	10A101420	4.26.17 0700	pH 7.00 ✓ 4.00 ✓ 10.00	7.12 4.06 10.09	✓ ✓ ✓	17.18°C	BN
↓	↓	↓	3900µS 237.5mV 100.0%	3917 240.1mV 103.1%	✓ ✓	17.31°C	BN
YSI 556	10A101420	4.27.17 0700	pH 7.00 ✓ 4.00 ✓ 10.00	7.04 4.00 10.16	✓ ✓ ✓	18.46°C	BN
↓	↓	↓	3900µS 237.5mV 100.0%	3981 236.1mV 113.8%	✓ ✓ ✓	18.93°C ~~18.43°C~~	BN
YSI 556	10A101420	4.28.17 0700	pH 7.00 ✓ 4.00 ✓ 10.00	7.03 4.10 9.89	✓ ✓ ✓	17.96°C	BN
↓	↓	↓	3900µS 237.5mV 100.0%	3878µS 240.9mV 103.1%	✓ ✓ ✓	17.94°C	BN

APPENDIX D

BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

Lab Sample #	Client Sample ID	Matrix	Date Sampled	By	Date Submitted	By
B7D2316-01	HSP3-575 Grab	Liquid	04/26/17 12:25	Ben Stevens	04/26/17 17:20	Courier (Hector N.)-DE
B7D2316-02	HSP-DUP Grab	Liquid	04/26/17 11:30	Ben Stevens	04/26/17 17:20	Courier (Hector N.)-DE
B7D2316-03	HS-Field Blank Grab	Liquid	04/26/17 7:10	Ben Stevens	04/26/17 17:20	Courier (Hector N.)-DE
B7D2316-04	HS-Field Blank Grab	Liquid	04/26/17 7:10	Ben Stevens	04/26/17 17:20	Courier (Hector N.)-DE
B7D2316-05	HS-Equipment Blank Grab	Liquid	04/26/17 7:20	Ben Stevens	04/26/17 17:20	Courier (Hector N.)-DE
B7D2316-06	HS-Trip Blank Grab	Liquid	04/26/17 7:00	Ben Stevens	04/26/17 17:20	Courier (Hector N.)-DE

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP3-575	Liquid	04/26/17 12:25	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Anions								
Chloride	13	1.0	0.56	mg/L	EPA 300.0	04/26/17 23:36	mel	
Sulfate	8.2	0.50	0.23	mg/L	EPA 300.0	04/26/17 23:36	mel	Nconf
Nitrate as N	3.6	0.20	0.055	mg/L	EPA 300.0	04/26/17 23:36	mel	
Solids								
Total Dissolved Solids	200	20	12	mg/L	SM 2540C	05/01/17 17:40	jma	
Surfactants								
MBAS	0.07	0.08	0.05	mg/L	SM 5540C	04/26/17 18:39	kbs	J
General Inorganics								
Cyanide	ND	0.005	0.004	mg/L	SM 4500CN E	05/01/17 12:34	sll	
Nutrients								
Ammonia-Nitrogen	ND	0.10	0.048	mg/L	SM4500NH3H	04/28/17 10:41	sll	
Kjeldahl Nitrogen	ND	0.10	0.063	mg/L	EPA 351.2	05/05/17 12:36	jma	
Metals and Metalloids								
Hexavalent Chromium	0.20	5.0	0.12	ug/L	EPA 218.6	04/28/17 08:52	mel	J
Mercury	ND	0.20	0.10	ug/L	EPA 200.8	04/27/17 17:07	ap	
Metals and Metalloids; EPA SW846 Series								
Antimony	ND	6.0	3.0	ug/L	EPA 6020	04/27/17 17:07	ap	
Arsenic	3.4	2.0	1.2	ug/L	EPA 6020	04/27/17 17:07	ap	
Beryllium	ND	1.0	0.57	ug/L	EPA 6020	04/27/17 17:07	ap	
Cadmium	ND	1.0	0.57	ug/L	EPA 6020	04/27/17 17:07	ap	
Total Chromium	ND	10	4.2	ug/L	EPA 6020	04/27/17 17:07	ap	
Copper	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:07	ap	
Lead	ND	5.0	2.5	ug/L	EPA 6020	04/27/17 17:07	ap	
Nickel	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:07	ap	
Selenium	ND	5.0	2.5	ug/L	EPA 6020	04/27/17 17:07	ap	
Silver	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:07	ap	
Thallium	ND	1.0	0.50	ug/L	EPA 6020	04/27/17 17:07	ap	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP3-575	Liquid	04/26/17 12:25	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Metals and Metalloids; EPA SW846 Series								
Zinc	5.5	10	5.0	ug/L	EPA 6020	04/27/17 17:07	ap	J
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	04/27/17 20:03	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	04/27/17 20:03	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	04/27/17 20:03	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 20:03	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 20:03	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	04/27/17 20:03	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 20:03	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	04/27/17 20:03	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	04/27/17 20:03	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	04/27/17 20:03	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	04/27/17 20:03	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	04/27/17 20:03	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	04/27/17 20:03	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	04/27/17 20:03	eec	
Benzene	0.070	0.50	0.067	ug/L	EPA 624	04/27/17 20:03	eec	J
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	04/27/17 20:03	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	04/27/17 20:03	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	04/27/17 20:03	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	04/27/17 20:03	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	04/27/17 20:03	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	04/27/17 20:03	eec	
Chloroform	0.64	0.50	0.44	ug/L	EPA 624	04/27/17 20:03	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	04/27/17 20:03	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	04/27/17 20:03	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 20:03	eec	
Methylene Chloride	ND	0.50	0.25	ug/L	EPA 624	04/27/17 20:03	eec	
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 20:03	eec	
Toluene	0.28	0.50	0.093	ug/L	EPA 624	04/27/17 20:03	eec	J
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 20:03	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP3-575	Liquid	04/26/17 12:25	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Trichloroethene	ND		0.50	0.18	ug/L	EPA 624	04/27/17 20:03	eec	
Vinyl Chloride	ND		0.50	0.081	ug/L	EPA 624	04/27/17 20:03	eec	
Surrogate: 1,2-Dichloroethane-d4	106	%	80-120			EPA 624	04/27/17 20:03	eec	
Surrogate: Bromofluorobenzene	103	%	80-120			EPA 624	04/27/17 20:03	eec	
Surrogate: Toluene-d8	95.6	%	80-120			EPA 624	04/27/17 20:03	eec	
Semivolatile Organic Compounds by EPA 625									
1,2-Diphenylhydrazine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
1,2,4-Trichlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
2-Chlorophenol	ND		2.0	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
2,4-Dichlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
2,4-Dimethylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
2,4-Dinitrophenol	ND		5.0	1.6	ug/L	EPA 625	05/05/17 01:32	JHR	
2,4-Dinitrotoluene	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
2,4,6-Trichlorophenol	ND		10	1.9	ug/L	EPA 625	05/05/17 01:32	JHR	
2,6-Dinitrotoluene	ND		5.0	1.9	ug/L	EPA 625	05/05/17 01:32	JHR	
2-Nitrophenol	ND		10	2.1	ug/L	EPA 625	05/05/17 01:32	JHR	
2-Chloronaphthalene	ND		10	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
3,3'-Dichlorobenzidine	ND		5.0	2.1	ug/L	EPA 625	05/05/17 01:32	JHR	
4-Chloro-3-methylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
2-Methyl-4,6-Dinitrophenol	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
4-Nitrophenol	ND		5.0	1.1	ug/L	EPA 625	05/05/17 01:32	JHR	
4-Bromophenyl phenyl ether	ND		5.0	1.6	ug/L	EPA 625	05/05/17 01:32	JHR	
4-Chlorophenyl phenyl ether	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
Benzidine	ND		5.0	5.0	ug/L	EPA 625	05/05/17 10:50	JHR	NCALhND
Bis(2-chloroethoxy)methane	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
Bis(2-Chloroethyl)ether	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Bis(2-chloroisopropyl)Ether	ND		2.0	1.9	ug/L	EPA 625	05/05/17 01:32	JHR	NCALhND
Bis(2-ethylhexyl)phthalate	ND		5.0	2.3	ug/L	EPA 625	05/05/17 01:32	JHR	
Butyl benzyl phthalate	ND		10	1.6	ug/L	EPA 625	05/05/17 01:32	JHR	
Di-n-butylphthalate	ND		10	1.9	ug/L	EPA 625	05/05/17 01:32	JHR	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP3-575	Liquid	04/26/17 12:25	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625									
Di-n-octylphthalate	ND		10	2.6	ug/L	EPA 625	05/05/17 01:32	JHR	
Diethyl phthalate	ND		2.0	1.8	ug/L	EPA 625	05/05/17 01:32	JHR	
Dimethyl phthalate	ND		2.0	1.7	ug/L	EPA 625	05/05/17 01:32	JHR	
Hexachlorocyclopentadiene	ND		5.0	1.7	ug/L	EPA 625	05/05/17 01:32	JHR	
Hexachlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Hexachlorobutadiene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Hexachloroethane	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Isophorone	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
N-Nitrosodiphenylamine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
N-Nitrosodimethylamine	ND		5.0	1.4	ug/L	EPA 625	05/05/17 01:32	JHR	
n-Nitrosodi-n-propylamine	ND		5.0	1.7	ug/L	EPA 625	05/05/17 01:32	JHR	
Nitrobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Pentachlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Phenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:32	JHR	
Surrogate: 2,4,6-Tribromophenol	49.6	%	27-122			EPA 625	05/05/17 01:32	JHR	
Surrogate: 2-Fluorobiphenyl	47.4	%	30-110			EPA 625	05/05/17 01:32	JHR	
Surrogate: 2-Fluorophenol	36.4	%	10-63			EPA 625	05/05/17 01:32	JHR	
Surrogate: 4-Terphenyl-d14	56.4	%	34-125			EPA 625	05/05/17 01:32	JHR	
Surrogate: Nitrobenzene-d5	40.6	%	24-112			EPA 625	05/05/17 01:32	JHR	
Surrogate: Phenol-d6	21.7	%	10-47			EPA 625	05/05/17 01:32	JHR	
Semivolatile Organic Compounds by EPA 625 SIM									
Benzo(a)anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Benzo(b)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Acenaphthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Acenaphthylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Benzo(a)pyrene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Benzo(ghi)perylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	NMint
Benzo(k)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Chrysene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP3-575	Liquid	04/26/17 12:25	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625 SIM								
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	NMint
Fluoranthene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Fluorene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	NMint
Naphthalene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Phenanthrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 00:57	JHR	
Surrogate: Anthracene-d10	58.8	% 24-110			EPA625 SIM	05/02/17 00:57	JHR	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-02

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP-DUP	Liquid	04/26/17 11:30	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Anions								
Chloride	13	1.0	0.56	mg/L	EPA 300.0	04/27/17 00:37	mel	
Sulfate	9.9	0.50	0.23	mg/L	EPA 300.0	04/27/17 00:37	mel	Nconf
Nitrate as N	3.6	0.20	0.055	mg/L	EPA 300.0	04/27/17 00:37	mel	
Solids								
Total Dissolved Solids	200	20	12	mg/L	SM 2540C	05/01/17 17:40	jma	
Surfactants								
MBAS	0.08	0.08	0.05	mg/L	SM 5540C	04/26/17 18:39	kbs	
General Inorganics								
Cyanide	ND	0.005	0.004	mg/L	SM 4500CN E	05/01/17 12:35	sll	
Nutrients								
Ammonia-Nitrogen	ND	0.10	0.048	mg/L	SM4500NH3H	04/28/17 10:43	sll	
Kjeldahl Nitrogen	ND	0.10	0.063	mg/L	EPA 351.2	05/05/17 12:37	jma	
Metals and Metalloids								
Hexavalent Chromium	0.19	5.0	0.12	ug/L	EPA 218.6	04/28/17 09:05	mel	J
Mercury	ND	0.20	0.10	ug/L	EPA 200.8	04/27/17 17:09	ap	
Metals and Metalloids; EPA SW846 Series								
Antimony	ND	6.0	3.0	ug/L	EPA 6020	04/27/17 17:09	ap	
Arsenic	3.4	2.0	1.2	ug/L	EPA 6020	04/27/17 17:09	ap	
Beryllium	ND	1.0	0.57	ug/L	EPA 6020	04/27/17 17:09	ap	
Cadmium	ND	1.0	0.57	ug/L	EPA 6020	04/27/17 17:09	ap	
Total Chromium	ND	10	4.2	ug/L	EPA 6020	04/27/17 17:09	ap	
Copper	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:09	ap	
Lead	ND	5.0	2.5	ug/L	EPA 6020	04/27/17 17:09	ap	
Nickel	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:09	ap	
Selenium	ND	5.0	2.5	ug/L	EPA 6020	04/27/17 17:09	ap	
Silver	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:09	ap	
Thallium	ND	1.0	0.50	ug/L	EPA 6020	04/27/17 17:09	ap	

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-02

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP-DUP	Liquid	04/26/17 11:30	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Metals and Metalloids; EPA SW846 Series								
Zinc	ND	10	5.0	ug/L	EPA 6020	04/27/17 17:09	ap	
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	04/27/17 21:09	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	04/27/17 21:09	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	04/27/17 21:09	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 21:09	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 21:09	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	04/27/17 21:09	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 21:09	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	04/27/17 21:09	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	04/27/17 21:09	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	04/27/17 21:09	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	04/27/17 21:09	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	04/27/17 21:09	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	04/27/17 21:09	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	04/27/17 21:09	eec	
Benzene	ND	0.50	0.067	ug/L	EPA 624	04/27/17 21:09	eec	
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	04/27/17 21:09	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	04/27/17 21:09	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	04/27/17 21:09	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	04/27/17 21:09	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	04/27/17 21:09	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	04/27/17 21:09	eec	
Chloroform	1.8	0.50	0.44	ug/L	EPA 624	04/27/17 21:09	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	04/27/17 21:09	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	04/27/17 21:09	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 21:09	eec	
Methylene Chloride	ND	0.50	0.25	ug/L	EPA 624	04/27/17 21:09	eec	
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 21:09	eec	
Toluene	0.20	0.50	0.093	ug/L	EPA 624	04/27/17 21:09	eec	J
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 21:09	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-02

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP-DUP	Liquid	04/26/17 11:30	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Trichloroethene	ND		0.50	0.18	ug/L	EPA 624	04/27/17 21:09	eec	
Vinyl Chloride	ND		0.50	0.081	ug/L	EPA 624	04/27/17 21:09	eec	
Surrogate: 1,2-Dichloroethane-d4	106	%	80-120			EPA 624	04/27/17 21:09	eec	
Surrogate: Bromofluorobenzene	103	%	80-120			EPA 624	04/27/17 21:09	eec	
Surrogate: Toluene-d8	94.8	%	80-120			EPA 624	04/27/17 21:09	eec	
Semivolatile Organic Compounds by EPA 625									
1,2-Diphenylhydrazine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
1,2,4-Trichlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
2-Chlorophenol	ND		2.0	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
2,4-Dichlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
2,4-Dimethylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
2,4-Dinitrophenol	ND		5.0	1.6	ug/L	EPA 625	05/05/17 01:00	JHR	
2,4-Dinitrotoluene	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
2,4,6-Trichlorophenol	ND		10	1.9	ug/L	EPA 625	05/05/17 01:00	JHR	
2,6-Dinitrotoluene	ND		5.0	1.9	ug/L	EPA 625	05/05/17 01:00	JHR	
2-Nitrophenol	ND		10	2.1	ug/L	EPA 625	05/05/17 01:00	JHR	
2-Chloronaphthalene	ND		10	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
3,3'-Dichlorobenzidine	ND		5.0	2.1	ug/L	EPA 625	05/05/17 01:00	JHR	
4-Chloro-3-methylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
2-Methyl-4,6-Dinitrophenol	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
4-Nitrophenol	ND		5.0	1.1	ug/L	EPA 625	05/05/17 01:00	JHR	
4-Bromophenyl phenyl ether	ND		5.0	1.6	ug/L	EPA 625	05/05/17 01:00	JHR	
4-Chlorophenyl phenyl ether	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
Benzidine	ND		5.0	5.0	ug/L	EPA 625	05/05/17 10:19	JHR	NCALhND
Bis(2-chloroethoxy)methane	ND		5.0	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
Bis(2-Chloroethyl)ether	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Bis(2-chloroisopropyl)Ether	ND		2.0	1.9	ug/L	EPA 625	05/05/17 01:00	JHR	NCALhND
Bis(2-ethylhexyl)phthalate	ND		5.0	2.3	ug/L	EPA 625	05/05/17 01:00	JHR	
Butyl benzyl phthalate	ND		10	1.6	ug/L	EPA 625	05/05/17 01:00	JHR	
Di-n-butylphthalate	ND		10	1.9	ug/L	EPA 625	05/05/17 01:00	JHR	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-02

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP-DUP	Liquid	04/26/17 11:30	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625									
Di-n-octylphthalate	ND		10	2.6	ug/L	EPA 625	05/05/17 01:00	JHR	
Diethyl phthalate	ND		2.0	1.8	ug/L	EPA 625	05/05/17 01:00	JHR	
Dimethyl phthalate	ND		2.0	1.7	ug/L	EPA 625	05/05/17 01:00	JHR	
Hexachlorocyclopentadiene	ND		5.0	1.7	ug/L	EPA 625	05/05/17 01:00	JHR	
Hexachlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Hexachlorobutadiene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Hexachloroethane	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Isophorone	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
N-Nitrosodiphenylamine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
N-Nitrosodimethylamine	ND		5.0	1.4	ug/L	EPA 625	05/05/17 01:00	JHR	
n-Nitrosodi-n-propylamine	ND		5.0	1.7	ug/L	EPA 625	05/05/17 01:00	JHR	
Nitrobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Pentachlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Phenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 01:00	JHR	
Surrogate: 2,4,6-Tribromophenol	60.8	%	27-122			EPA 625	05/05/17 01:00	JHR	
Surrogate: 2-Fluorobiphenyl	58.1	%	30-110			EPA 625	05/05/17 01:00	JHR	
Surrogate: 2-Fluorophenol	38.1	%	10-63			EPA 625	05/05/17 01:00	JHR	
Surrogate: 4-Terphenyl-d14	65.4	%	34-125			EPA 625	05/05/17 01:00	JHR	
Surrogate: Nitrobenzene-d5	51.5	%	24-112			EPA 625	05/05/17 01:00	JHR	
Surrogate: Phenol-d6	24.7	%	10-47			EPA 625	05/05/17 01:00	JHR	
Semivolatile Organic Compounds by EPA 625 SIM									
Benzo(a)anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Benzo(b)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Acenaphthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Acenaphthylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Benzo(a)pyrene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Benzo(ghi)perylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Benzo(k)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Chrysene	ND		0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-02

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP-DUP	Liquid	04/26/17 11:30	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625 SIM								
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Fluoranthene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Fluorene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Naphthalene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Phenanthrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/02/17 01:23	JHR	
Surrogate: Anthracene-d10	55.9	% 24-110			EPA625 SIM	05/02/17 01:23	JHR	

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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-03

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Field Blank	Liquid	04/26/17 07:10	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Anions								
Nitrate as N	ND	0.20	0.055	mg/L	EPA 300.0	04/27/17 00:52	mel	
Solids								
Total Dissolved Solids	ND	10	5.8	mg/L	SM 2540C	05/01/17 17:40	jma	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-04

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Field Blank	Liquid	04/26/17 07:10	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	04/27/17 16:12	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	04/27/17 16:12	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	04/27/17 16:12	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 16:12	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 16:12	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	04/27/17 16:12	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 16:12	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	04/27/17 16:12	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	04/27/17 16:12	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	04/27/17 16:12	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	04/27/17 16:12	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	04/27/17 16:12	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	04/27/17 16:12	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	04/27/17 16:12	eec	
Benzene	0.080	0.50	0.067	ug/L	EPA 624	04/27/17 16:12	eec	J
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	04/27/17 16:12	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	04/27/17 16:12	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	04/27/17 16:12	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	04/27/17 16:12	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	04/27/17 16:12	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	04/27/17 16:12	eec	
Chloroform	ND	0.50	0.44	ug/L	EPA 624	04/27/17 16:12	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	04/27/17 16:12	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	04/27/17 16:12	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 16:12	eec	
Methylene Chloride	0.91	0.50	0.25	ug/L	EPA 624	04/27/17 16:12	eec	Nconf
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 16:12	eec	
Toluene	ND	0.50	0.093	ug/L	EPA 624	04/27/17 16:12	eec	
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 16:12	eec	
Trichloroethene	ND	0.50	0.18	ug/L	EPA 624	04/27/17 16:12	eec	
Vinyl Chloride	ND	0.50	0.081	ug/L	EPA 624	04/27/17 16:12	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-04

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Field Blank	Liquid	04/26/17 07:10	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Surrogate: 1,2-Dichloroethane-d4	103	%	80-120			EPA 624	04/27/17 16:12	eec	
Surrogate: Bromofluorobenzene	104	%	80-120			EPA 624	04/27/17 16:12	eec	
Surrogate: Toluene-d8	95.7	%	80-120			EPA 624	04/27/17 16:12	eec	

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-05

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Equipment Blank	Liquid	04/26/17 07:20	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	04/27/17 17:18	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	04/27/17 17:18	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	04/27/17 17:18	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 17:18	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 17:18	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	04/27/17 17:18	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 17:18	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	04/27/17 17:18	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	04/27/17 17:18	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	04/27/17 17:18	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	04/27/17 17:18	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	04/27/17 17:18	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	04/27/17 17:18	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	04/27/17 17:18	eec	
Benzene	0.070	0.50	0.067	ug/L	EPA 624	04/27/17 17:18	eec	J
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	04/27/17 17:18	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	04/27/17 17:18	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	04/27/17 17:18	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	04/27/17 17:18	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	04/27/17 17:18	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	04/27/17 17:18	eec	
Chloroform	ND	0.50	0.44	ug/L	EPA 624	04/27/17 17:18	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	04/27/17 17:18	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	04/27/17 17:18	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 17:18	eec	
Methylene Chloride	0.92	0.50	0.25	ug/L	EPA 624	04/27/17 17:18	eec	Nconf
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 17:18	eec	
Toluene	ND	0.50	0.093	ug/L	EPA 624	04/27/17 17:18	eec	
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 17:18	eec	
Trichloroethene	ND	0.50	0.18	ug/L	EPA 624	04/27/17 17:18	eec	
Vinyl Chloride	ND	0.50	0.081	ug/L	EPA 624	04/27/17 17:18	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-05

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Equipment Blank	Liquid	04/26/17 07:20	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Surrogate: 1,2-Dichloroethane-d4	104	%	80-120			EPA 624	04/27/17 17:18	eec	
Surrogate: Bromofluorobenzene	103	%	80-120			EPA 624	04/27/17 17:18	eec	
Surrogate: Toluene-d8	95.0	%	80-120			EPA 624	04/27/17 17:18	eec	

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-06

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Trip Blank	Liquid	04/26/17 07:00	04/26/17 17:20

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	04/27/17 15:06	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	04/27/17 15:06	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	04/27/17 15:06	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 15:06	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 15:06	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	04/27/17 15:06	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/27/17 15:06	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	04/27/17 15:06	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	04/27/17 15:06	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	04/27/17 15:06	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	04/27/17 15:06	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	04/27/17 15:06	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	04/27/17 15:06	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	04/27/17 15:06	eec	
Benzene	ND	0.50	0.067	ug/L	EPA 624	04/27/17 15:06	eec	
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	04/27/17 15:06	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	04/27/17 15:06	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	04/27/17 15:06	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	04/27/17 15:06	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	04/27/17 15:06	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	04/27/17 15:06	eec	
Chloroform	ND	0.50	0.44	ug/L	EPA 624	04/27/17 15:06	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	04/27/17 15:06	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	04/27/17 15:06	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 15:06	eec	
Methylene Chloride	0.27	0.50	0.25	ug/L	EPA 624	04/27/17 15:06	eec	J
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	04/27/17 15:06	eec	
Toluene	ND	0.50	0.093	ug/L	EPA 624	04/27/17 15:06	eec	
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	04/27/17 15:06	eec	
Trichloroethene	ND	0.50	0.18	ug/L	EPA 624	04/27/17 15:06	eec	
Vinyl Chloride	ND	0.50	0.081	ug/L	EPA 624	04/27/17 15:06	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2316-06

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HS-Trip Blank	Liquid	04/26/17 07:00	04/26/17 17:20

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Surrogate: 1,2-Dichloroethane-d4	105	%	80-120			EPA 624	04/27/17 15:06	eec	
Surrogate: Bromofluorobenzene	104	%	80-120			EPA 624	04/27/17 15:06	eec	
Surrogate: Toluene-d8	94.7	%	80-120			EPA 624	04/27/17 15:06	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 09-May-2017

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D26144 - Filter if turbid.-IC											
Blank (7D26144-BLK1)					Prepared & Analyzed: 04/26/17						
Sulfate	ND	0.50	0.23	mg/L							
Chloride	ND	1.0	0.56	mg/L							
Nitrate as N	ND	0.20	0.055	mg/L							
LCS (7D26144-BS1)					Prepared & Analyzed: 04/26/17						
Sulfate	50.7	0.50	0.23	mg/L	50.0		101	90-110			
Chloride	50.4	1.0	0.56	mg/L	50.0		101	90-110			
Nitrate as N	11.4	0.20	0.055	mg/L	11.3		101	90-110			
Matrix Spike (7D26144-MS1)		**Source: B7D2310-04**			Prepared & Analyzed: 04/26/17						
Sulfate	183	0.50	0.23	mg/L	50.0	123	120	75-128			
Chloride	233	1.0	0.56	mg/L	50.0	175	116	84-129			
Nitrate as N	12.3	0.20	0.055	mg/L	4.52	7.09	117	75-131			
Matrix Spike Dup (7D26144-MSD1)		**Source: B7D2310-04**			Prepared & Analyzed: 04/26/17						
Sulfate	184	0.50	0.23	mg/L	50.0	123	121	75-128	0.418	20	
Chloride	232	1.0	0.56	mg/L	50.0	175	115	84-129	0.206	20	
Nitrate as N	12.4	0.20	0.055	mg/L	4.52	7.09	117	75-131	0.337	20	

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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01109 - Analyzed as received											
Blank (7E01109-BLK1)					Prepared & Analyzed: 05/01/17						
Total Dissolved Solids	ND	10	5.8	mg/L							
LCS (7E01109-BS1)					Prepared & Analyzed: 05/01/17						
Total Dissolved Solids	747	20	12	mg/L	746		100	90-110			
Duplicate (7E01109-DUP1)		**Source: B7D2251-03**			Prepared & Analyzed: 05/01/17						
Total Dissolved Solids	8.00	10	5.8	mg/L		ND				20	J
Duplicate (7E01109-DUP2)		**Source: B7D2346-01**			Prepared & Analyzed: 05/01/17						
Total Dissolved Solids	349	20	12	mg/L		357			2.27	20	

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Surfactants - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D26105 - Solvent Extraction.											
Blank (7D26105-BLK1)					Prepared & Analyzed: 04/26/17						
MBAS	ND	0.08	0.05	mg/L							
LCS (7D26105-BS1)					Prepared & Analyzed: 04/26/17						
MBAS	0.368	0.08	0.05	mg/L	0.320		115	52-141			
Matrix Spike (7D26105-MS1)		**Source: B7D2226-01**			Prepared & Analyzed: 04/26/17						
MBAS	0.510	0.20	0.13	mg/L	0.400	0.0560	114	35-142			
Matrix Spike Dup (7D26105-MSD1)		**Source: B7D2226-01**			Prepared & Analyzed: 04/26/17						
MBAS	0.465	0.20	0.13	mg/L	0.400	0.0560	102	35-142	9.23	20	

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

General Inorganics - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01083 - Distillation											
Blank (7E01083-BLK1)					Prepared & Analyzed: 05/01/17						
Cyanide	ND	0.005	0.004	mg/L							
LCS (7E01083-BS1)					Prepared & Analyzed: 05/01/17						
Cyanide	0.0940	0.005	0.004	mg/L	0.101		93.1	61-120			
Matrix Spike (7E01083-MS1)		**Source: B7D2469-01**			Prepared & Analyzed: 05/01/17						
Cyanide	0.0978	0.005	0.004	mg/L	0.101	ND	96.9	53-125			
Matrix Spike Dup (7E01083-MSD1)		**Source: B7D2469-01**			Prepared & Analyzed: 05/01/17						
Cyanide	0.0962	0.005	0.004	mg/L	0.101	ND	95.2	53-125	1.75	30	

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Nutrients - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28004 - Analyzed as received											
Blank (7D28004-BLK1)					Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	ND	0.10	0.048	mg/L							
LCS (7D28004-BS1)					Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	0.718	0.10	0.048	mg/L	0.780		92.0	90-110			
Matrix Spike (7D28004-MS1)		**Source: B7D2267-01**			Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	133	10	4.8	mg/L	78.0	55.0	100	80-120			
Matrix Spike Dup (7D28004-MSD1)		**Source: B7D2267-01**			Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	131	10	4.8	mg/L	78.0	55.0	97.7	80-120	1.47	20	
Batch 7E04099 - Acid Digest											
Blank (7E04099-BLK1)					Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	ND	0.10	0.063	mg/L							
LCS (7E04099-BS1)					Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	1.19	0.10	0.063	mg/L	1.00		119	80-120			
Matrix Spike (7E04099-MS1)		**Source: B7D2310-03**			Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	20.2	1.0	0.63	mg/L	10.0	12.5	77.5	42-149			
Matrix Spike (7E04099-MS2)		**Source: B7D2360-02**			Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	3.08	0.10	0.063	mg/L	1.00	1.53	155	42-149			QFpas, QMout

Client Name: Victor Valley Reclamation Authority
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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D26142 - EPA 200.2 SOP M02C											
Blank (7D26142-BLK1)					Prepared & Analyzed: 04/27/17						
Mercury	ND	0.20	0.10	ug/L							
LCS (7D26142-BS1)					Prepared & Analyzed: 04/27/17						
Mercury	2.36	0.20	0.10	ug/L	2.78		85.0	85-115			
Matrix Spike (7D26142-MS1)		**Source: B7D2230-01**			Prepared & Analyzed: 04/27/17						
Mercury	2.28	0.20	0.10	ug/L	2.78	ND	82.1	75-125			
Matrix Spike Dup (7D26142-MSD1)		**Source: B7D2230-01**			Prepared & Analyzed: 04/27/17						
Mercury	2.34	0.20	0.10	ug/L	2.78	ND	83.9	75-125	2.21	20	
Batch 7D27074 - Filter if turbid.-IC											
Blank (7D27074-BLK1)					Prepared & Analyzed: 04/27/17						
Hexavalent Chromium	ND	1.0	0.024	ug/L							
Blank (7D27074-BLK2)					Prepared & Analyzed: 04/28/17						
Hexavalent Chromium	ND	1.0	0.024	ug/L							
LCS (7D27074-BS1)					Prepared & Analyzed: 04/27/17						
Hexavalent Chromium	5.05	1.0	0.024	ug/L	5.00		101	90-110			
Duplicate (7D27074-DUP1)		**Source: B7D2030-01**			Prepared & Analyzed: 04/27/17						
Hexavalent Chromium	8.99	5.0	0.12	ug/L		18.2			67.6	20	QRPDI
Matrix Spike (7D27074-MS1)		**Source: B7D2028-02**			Prepared & Analyzed: 04/27/17						
Hexavalent Chromium	35.5	5.0	0.12	ug/L	25.0	10.4	100	82-121			

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27074 - Filter if turbid.-IC											
Matrix Spike Dup (7D27074-MSD1)		**Source: B7D2028-02**			Prepared & Analyzed: 04/27/17						
Hexavalent Chromium	38.3	5.0	0.12	ug/L	25.0	10.4	112	82-121	7.69	20	

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D26142 - EPA 200.2 SOP M02C											
Blank (7D26142-BLK1)				Prepared & Analyzed: 04/27/17							
Antimony	ND	6.0	3.0	ug/L							
Arsenic	ND	2.0	1.2	ug/L							
Beryllium	ND	1.0	0.57	ug/L							
Cadmium	ND	1.0	0.57	ug/L							
Total Chromium	ND	10	4.2	ug/L							
Copper	ND	10	5.0	ug/L							
Lead	ND	5.0	2.5	ug/L							
Nickel	ND	10	5.0	ug/L							
Selenium	ND	5.0	2.5	ug/L							
Silver	ND	10	5.0	ug/L							
Thallium	ND	1.0	0.50	ug/L							
Zinc	ND	10	5.0	ug/L							
LCS (7D26142-BS1)				Prepared & Analyzed: 04/27/17							
Antimony	327	6.0	3.0	ug/L	334		98.1	85-115			
Arsenic	352	2.0	1.2	ug/L	334		105	85-115			
Beryllium	319	1.0	0.57	ug/L	334		95.7	85-115			
Cadmium	321	1.0	0.57	ug/L	334		96.4	85-115			
Total Chromium	318	10	4.2	ug/L	334		95.4	85-115			
Copper	314	10	5.0	ug/L	334		94.0	85-115			
Lead	326	5.0	2.5	ug/L	334		97.8	85-115			
Nickel	319	10	5.0	ug/L	334		95.8	85-115			
Selenium	348	5.0	2.5	ug/L	334		104	85-115			
Silver	310	10	5.0	ug/L	334		92.9	85-115			
Thallium	328	1.0	0.50	ug/L	334		98.3	85-115			
Zinc	340	10	5.0	ug/L	334		102	85-115			
Matrix Spike (7D26142-MS1)		**Source: B7D2230-01**		Prepared & Analyzed: 04/27/17							
Antimony	354	6.0	3.0	ug/L	334	ND	106	75-125			
Arsenic	381	2.0	1.2	ug/L	334	6.13	113	75-125			
Beryllium	302	1.0	0.57	ug/L	334	ND	90.4	75-125			
Cadmium	328	1.0	0.57	ug/L	334	ND	98.2	75-125			
Total Chromium	343	10	4.2	ug/L	334	ND	103	75-125			
Copper	315	10	5.0	ug/L	334	5.02	92.8	75-125			
Lead	323	5.0	2.5	ug/L	334	ND	96.9	75-125			
Nickel	335	10	5.0	ug/L	334	ND	101	75-125			

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D26142 - EPA 200.2 SOP M02C											
Matrix Spike (7D26142-MS1)		**Source: B7D2230-01**		Prepared & Analyzed: 04/27/17							
Selenium	357	5.0	2.5	ug/L	334	2.65	106	75-125			
Silver	309	10	5.0	ug/L	334	ND	92.7	75-125			
Thallium	323	1.0	0.50	ug/L	334	ND	97.0	75-125			
Zinc	324	10	5.0	ug/L	334	ND	97.2	75-125			
Matrix Spike Dup (7D26142-MSD1)		**Source: B7D2230-01**		Prepared & Analyzed: 04/27/17							
Antimony	353	6.0	3.0	ug/L	334	ND	106	75-125	0.328	20	
Arsenic	396	2.0	1.2	ug/L	334	6.13	117	75-125	3.80	20	
Beryllium	301	1.0	0.57	ug/L	334	ND	90.3	75-125	0.147	20	
Cadmium	326	1.0	0.57	ug/L	334	ND	97.6	75-125	0.604	20	
Total Chromium	356	10	4.2	ug/L	334	ND	107	75-125	3.86	20	
Copper	328	10	5.0	ug/L	334	5.02	96.9	75-125	4.18	20	
Lead	329	5.0	2.5	ug/L	334	ND	98.7	75-125	1.83	20	
Nickel	345	10	5.0	ug/L	334	ND	104	75-125	2.98	20	
Selenium	372	5.0	2.5	ug/L	334	2.65	111	75-125	3.98	20	
Silver	309	10	5.0	ug/L	334	ND	92.8	75-125	0.0944	20	
Thallium	329	1.0	0.50	ug/L	334	ND	98.6	75-125	1.69	20	
Zinc	336	10	5.0	ug/L	334	ND	101	75-125	3.62	20	

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27068 - Purge and Trap											
Blank (7D27068-BLK1)				Prepared & Analyzed: 04/27/17							
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L							
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L							
1,1-Dichloroethane	ND	0.50	0.12	ug/L							
1,1-Dichloroethene	ND	0.50	0.12	ug/L							
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L							
1,2-Dichloroethane	ND	0.50	0.12	ug/L							
1,2-Dichloropropane	ND	0.50	0.13	ug/L							
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L							
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L							
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L							
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L							QCEVE
Acrolein	ND	2.0	1.1	ug/L							
Acrylonitrile	ND	2.0	0.59	ug/L							
Benzene	ND	0.50	0.067	ug/L							
Bromodichloromethane	ND	0.50	0.24	ug/L							
Bromoform	ND	0.50	0.34	ug/L							
Bromomethane	ND	0.50	0.15	ug/L							
Carbon Tetrachloride	ND	0.50	0.20	ug/L							
Chlorobenzene	ND	0.50	0.071	ug/L							
Chloroethane	ND	0.50	0.19	ug/L							
Chloroform	ND	0.50	0.44	ug/L							
Chloromethane	ND	0.50	0.097	ug/L							
Dibromochloromethane	ND	0.50	0.18	ug/L							
Ethylbenzene	ND	0.50	0.11	ug/L							
Methylene Chloride	ND	0.50	0.25	ug/L							
Tetrachloroethene	ND	0.50	0.12	ug/L							
Toluene	ND	0.50	0.093	ug/L							
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L							
Trichloroethene	ND	0.50	0.18	ug/L							
Vinyl Chloride	ND	0.50	0.081	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*10*			ug/L	*10.0*		*104*	*80-120*			
Surrogate: Bromofluorobenzene	*11*			ug/L	*10.0*		*106*	*80-120*			

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27068 - Purge and Trap											
Blank (7D27068-BLK1)					Prepared & Analyzed: 04/27/17						
Surrogate: Toluene-d8	*9.6*			ug/L	*10.0*		*95.7*	*80-120*			
LCS (7D27068-BS1)					Prepared & Analyzed: 04/27/17						
1,1-Dichloroethane	24.3	0.50	0.12	ug/L	25.0		97.1	70-130			
1,1-Dichloroethene	21.8	0.50	0.12	ug/L	25.0		87.3	70-130			
1,4-Dichlorobenzene	22.9	0.50	0.098	ug/L	25.0		91.4	70-130			
Benzene	23.9	0.50	0.067	ug/L	25.0		95.6	70-135			
Bromodichloromethane	23.2	0.50	0.24	ug/L	25.0		92.6	70-130			
Bromoform	23.8	0.50	0.34	ug/L	25.0		95.4	70-130			
Chloroform	24.5	0.50	0.44	ug/L	25.0		98.0	70-130			
Dibromochloromethane	22.6	0.50	0.18	ug/L	25.0		90.2	70-131			
Ethylbenzene	24.1	0.50	0.11	ug/L	25.0		96.3	70-130			
Tetrachloroethene	23.6	0.50	0.12	ug/L	25.0		94.6	70-130			
Toluene	23.1	0.50	0.093	ug/L	25.0		92.2	70-130			
Trichloroethene	23.3	0.50	0.18	ug/L	25.0		93.2	70-130			
Vinyl Chloride	24.3	0.50	0.081	ug/L	25.0		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*9.9*			ug/L	*10.0*		*98.6*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*99.5*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*99.7*	*80-120*			
LCS Dup (7D27068-BSD1)					Prepared & Analyzed: 04/27/17						
1,1-Dichloroethane	24.5	0.50	0.12	ug/L	25.0		98.1	70-130	1.02	20	
1,1-Dichloroethene	22.3	0.50	0.12	ug/L	25.0		89.2	70-130	2.17	20	
1,4-Dichlorobenzene	23.2	0.50	0.098	ug/L	25.0		92.9	70-130	1.56	20	
Benzene	24.0	0.50	0.067	ug/L	25.0		96.2	70-135	0.626	20	
Bromodichloromethane	23.5	0.50	0.24	ug/L	25.0		94.2	70-130	1.67	20	
Bromoform	24.7	0.50	0.34	ug/L	25.0		98.8	70-130	3.58	20	
Chloroform	24.6	0.50	0.44	ug/L	25.0		98.5	70-130	0.448	20	
Dibromochloromethane	23.2	0.50	0.18	ug/L	25.0		92.6	70-131	2.58	20	
Ethylbenzene	24.3	0.50	0.11	ug/L	25.0		97.2	70-130	0.951	20	
Tetrachloroethene	23.8	0.50	0.12	ug/L	25.0		95.2	70-130	0.632	20	
Toluene	23.3	0.50	0.093	ug/L	25.0		93.3	70-130	1.16	20	
Trichloroethene	23.6	0.50	0.18	ug/L	25.0		94.4	70-130	1.36	20	
Vinyl Chloride	24.6	0.50	0.081	ug/L	25.0		98.5	70-130	1.27	20	

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27068 - Purge and Trap											
LCS Dup (7D27068-BSD1)					Prepared & Analyzed: 04/27/17						
Surrogate: 1,2-Dichloroethane-d4	*9.8*			ug/L	*10.0*		*98.4*	*80-120*			
Surrogate: Bromofluorobenzene	*9.9*			ug/L	*10.0*		*98.7*	*80-120*			
Surrogate: Toluene-d8	*9.9*			ug/L	*10.0*		*99.4*	*80-120*			
Duplicate (7D27068-DUP1)		**Source: B7D2316-01**			Prepared & Analyzed: 04/27/17						
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L		ND				40	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L		ND				40	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L		ND				40	
1,1-Dichloroethane	ND	0.50	0.12	ug/L		ND				20	
1,1-Dichloroethene	ND	0.50	0.12	ug/L		ND				20	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L		ND				40	
1,2-Dichloroethane	ND	0.50	0.12	ug/L		ND				40	
1,2-Dichloropropane	ND	0.50	0.13	ug/L		ND				40	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L		ND				40	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L		ND				200	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L		ND				20	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L		ND				40	QCEVE
Acrolein	ND	2.0	1.1	ug/L		ND				40	
Acrylonitrile	ND	2.0	0.59	ug/L		ND				40	
Benzene	ND	0.50	0.067	ug/L		0.0700				20	
Bromodichloromethane	ND	0.50	0.24	ug/L		ND				20	
Bromoform	ND	0.50	0.34	ug/L		ND				20	
Bromomethane	ND	0.50	0.15	ug/L		ND				40	
Carbon Tetrachloride	ND	0.50	0.20	ug/L		ND				40	
Chlorobenzene	ND	0.50	0.071	ug/L		ND				40	
Chloroethane	ND	0.50	0.19	ug/L		ND				40	
Chloroform	0.650	0.50	0.44	ug/L		0.640			1.55	20	
Chloromethane	ND	0.50	0.097	ug/L		ND				40	
Dibromochloromethane	ND	0.50	0.18	ug/L		ND				20	
Ethylbenzene	ND	0.50	0.11	ug/L		ND				20	
Methylene Chloride	ND	0.50	0.25	ug/L		ND				40	
Tetrachloroethene	ND	0.50	0.12	ug/L		ND				20	
Toluene	0.300	0.50	0.093	ug/L		0.280			6.90	20	J
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L		ND				40	

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 09-May-2017

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27068 - Purge and Trap											
Duplicate (7D27068-DUP1)		**Source: B7D2316-01**			Prepared & Analyzed: 04/27/17						
Trichloroethene	ND	0.50	0.18	ug/L		ND				20	
Vinyl Chloride	ND	0.50	0.081	ug/L		ND				20	
Surrogate: 1,2-Dichloroethane-d4	*11*			ug/L	*10.0*		*106*	*80-120*			
Surrogate: Bromofluorobenzene	*11*			ug/L	*10.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*9.4*			ug/L	*10.0*		*94.3*	*80-120*			
Matrix Spike (7D27068-MS1)		**Source: B7D2226-01**			Prepared & Analyzed: 04/27/17						
1,1-Dichloroethane	24.0	0.50	0.12	ug/L	25.0	ND	96.1	66.1-134			
1,1-Dichloroethene	21.8	0.50	0.12	ug/L	25.0	ND	87.3	66.6-130			
1,4-Dichlorobenzene	22.9	0.50	0.098	ug/L	25.0	ND	91.6	70-130			
Benzene	23.3	0.50	0.067	ug/L	25.0	ND	93.2	70-135			
Bromodichloromethane	22.9	0.50	0.24	ug/L	25.0	ND	91.6	70-130			
Bromoform	23.0	0.50	0.34	ug/L	25.0	ND	91.9	66.5-130			
Chloroform	24.7	0.50	0.44	ug/L	25.0	0.790	95.7	70-134			
Dibromochloromethane	22.0	0.50	0.18	ug/L	25.0	ND	87.8	70-136			
Ethylbenzene	24.0	0.50	0.11	ug/L	25.0	ND	96.2	70-134			
Tetrachloroethene	23.8	0.50	0.12	ug/L	25.0	ND	95.1	70-130			
Toluene	22.8	0.50	0.093	ug/L	25.0	ND	91.3	70-130			
Trichloroethene	23.4	0.50	0.18	ug/L	25.0	ND	93.8	70-132			
Vinyl Chloride	26.0	0.50	0.081	ug/L	25.0	ND	104	70-137			
Surrogate: 1,2-Dichloroethane-d4	*9.7*			ug/L	*10.0*		*96.9*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*9.8*			ug/L	*10.0*		*98.5*	*80-120*			

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 09-May-2017

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Blank (7E02091-BLK2)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2-Diphenylhydrazine	ND	1.0	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	1.0	ug/L							
2-Chlorophenol	ND	2.0	1.8	ug/L							
2,4-Dichlorophenol	ND	1.0	1.0	ug/L							
2,4-Dimethylphenol	ND	1.0	1.0	ug/L							
2,4-Dinitrophenol	ND	5.0	1.6	ug/L							
2,4-Dinitrotoluene	ND	5.0	1.8	ug/L							
2,4,6-Trichlorophenol	ND	10	1.9	ug/L							
2,6-Dinitrotoluene	ND	5.0	1.9	ug/L							
2-Nitrophenol	ND	10	2.1	ug/L							
2-Chloronaphthalene	ND	10	1.8	ug/L							
3,3'-Dichlorobenzidine	ND	5.0	2.1	ug/L							
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							
2-Methyl-4,6-Dinitrophenol	ND	5.0	1.8	ug/L							
4-Nitrophenol	ND	5.0	1.1	ug/L							
4-Bromophenyl phenyl ether	ND	5.0	1.6	ug/L							
4-Chlorophenyl phenyl ether	ND	5.0	1.8	ug/L							
Benzidine	ND	5.0	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	5.0	1.8	ug/L							
Bis(2-Chloroethyl)ether	ND	1.0	1.0	ug/L							
Bis(2-chloroisopropyl)Ether	ND	2.0	1.9	ug/L							
Bis(2-ethylhexyl)phthalate	ND	5.0	2.3	ug/L							
Butyl benzyl phthalate	ND	10	1.6	ug/L							
Di-n-butylphthalate	ND	10	1.9	ug/L							
Di-n-octylphthalate	ND	10	2.6	ug/L							
Diethyl phthalate	ND	2.0	1.8	ug/L							
Dimethyl phthalate	ND	2.0	1.7	ug/L							
Hexachlorocyclopentadiene	ND	5.0	1.7	ug/L							
Hexachlorobenzene	ND	1.0	1.0	ug/L							
Hexachlorobutadiene	ND	1.0	1.0	ug/L							
Hexachloroethane	ND	1.0	1.0	ug/L							
Isophorone	ND	1.0	1.0	ug/L							
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L							
N-Nitrosodimethylamine	ND	5.0	1.4	ug/L							
n-Nitrosodi-n-propylamine	ND	5.0	1.7	ug/L							

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Blank (7E02091-BLK2)					Prepared: 05/02/17 Analyzed: 05/04/17						
Nitrobenzene	ND	1.0	1.0	ug/L							
Pentachlorophenol	ND	1.0	1.0	ug/L							
Phenol	ND	1.0	1.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*22*			ug/L	*37.5*		*58.3*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*15*			ug/L	*25.0*		*58.5*	*30-110*			
Surrogate: 2-Fluorophenol	*15*			ug/L	*37.5*		*41.2*	*10-63*			
Surrogate: 4-Terphenyl-d14	*18*			ug/L	*25.0*		*70.1*	*34-125*			
Surrogate: Nitrobenzene-d5	*13*			ug/L	*25.0*		*52.1*	*24-112*			
Surrogate: Phenol-d6	*9.6*			ug/L	*37.5*		*25.6*	*10-47*			
LCS (7E02091-BS1)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	26.5	2.0	2.0	ug/L	50.0		53.1	44-142			
2-Chlorophenol	46.4	4.0	3.6	ug/L	75.0		61.8	23-134			
2,4-Dichlorophenol	45.5	2.0	2.0	ug/L	75.0		60.6	39-135			
2,4-Dimethylphenol	48.5	2.0	2.0	ug/L	75.0		64.6	32-119			
2,4-Dinitrotoluene	24.8	10	3.7	ug/L	50.0		49.5	39-139			
4-Chloro-3-methylphenol	45.6	2.0	2.0	ug/L	75.0		60.8	22-147			
4-Nitrophenol	19.4	10	2.3	ug/L	75.0		25.8	5-132			
Butyl benzyl phthalate	32.5	20	3.3	ug/L	50.0		65.0	5-152			
Isophorone	29.4	2.0	2.0	ug/L	50.0		58.8	21-196			
n-Nitrosodi-n-propylamine	27.0	10	3.4	ug/L	50.0		53.9	10-230			
Pentachlorophenol	38.4	2.0	2.0	ug/L	75.0		51.1	14-176			
Phenol	23.3	2.0	2.0	ug/L	75.0		31.1	5-112			
Surrogate: 2,4,6-Tribromophenol	*48*			ug/L	*75.0*		*63.5*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*31*			ug/L	*50.0*		*61.6*	*30-110*			
Surrogate: 2-Fluorophenol	*34*			ug/L	*75.0*		*45.7*	*10-63*			
Surrogate: 4-Terphenyl-d14	*36*			ug/L	*50.0*		*72.4*	*34-125*			
Surrogate: Nitrobenzene-d5	*27*			ug/L	*50.0*		*54.8*	*24-112*			
Surrogate: Phenol-d6	*23*			ug/L	*75.0*		*30.1*	*10-47*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 09-May-2017

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
LCS Dup (7E02091-BSD1)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	25.7	2.0	2.0	ug/L	50.0		51.5	44-142	3.10	40	
2-Chlorophenol	44.4	4.0	3.6	ug/L	75.0		59.3	23-134	4.27	40	
2,4-Dichlorophenol	44.7	2.0	2.0	ug/L	75.0		59.6	39-135	1.73	40	
2,4-Dimethylphenol	47.4	2.0	2.0	ug/L	75.0		63.1	32-119	2.32	40	
2,4-Dinitrotoluene	23.1	10	3.7	ug/L	50.0		46.2	39-139	6.98	40	
4-Chloro-3-methylphenol	45.4	2.0	2.0	ug/L	75.0		60.5	22-147	0.506	40	
4-Nitrophenol	17.9	10	2.3	ug/L	75.0		23.9	5-132	7.67	40	
Butyl benzyl phthalate	30.5	20	3.3	ug/L	50.0		61.1	5-152	6.28	40	
Isophorone	28.9	2.0	2.0	ug/L	50.0		57.7	21-196	1.89	40	
n-Nitrosodi-n-propylamine	26.1	10	3.4	ug/L	50.0		52.2	10-230	3.17	40	
Pentachlorophenol	35.2	2.0	2.0	ug/L	75.0		46.9	14-176	8.59	40	
Phenol	21.5	2.0	2.0	ug/L	75.0		28.7	5-112	7.89	40	
Surrogate: 2,4,6-Tribromophenol	*45*			ug/L	*75.0*		*59.4*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*29*			ug/L	*50.0*		*58.6*	*30-110*			
Surrogate: 2-Fluorophenol	*32*			ug/L	*75.0*		*42.1*	*10-63*			
Surrogate: 4-Terphenyl-d14	*34*			ug/L	*50.0*		*67.4*	*34-125*			
Surrogate: Nitrobenzene-d5	*27*			ug/L	*50.0*		*53.3*	*24-112*			
Surrogate: Phenol-d6	*20*			ug/L	*75.0*		*27.3*	*10-47*			
Matrix Spike (7E02091-MS1)		**Source: B7D2316-02**			Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	11.4	1.0	1.0	ug/L	24.0	ND	47.3	44-142			
2-Chlorophenol	19.0	2.0	1.8	ug/L	36.1	ND	52.8	23-134			
2,4-Dichlorophenol	18.8	1.0	1.0	ug/L	36.1	ND	52.1	39-135			
2,4-Dimethylphenol	18.7	1.0	1.0	ug/L	36.1	ND	51.8	32-119			
2,4-Dinitrotoluene	11.2	5.0	1.8	ug/L	24.0	ND	46.5	39-139			
4-Chloro-3-methylphenol	20.3	1.0	1.0	ug/L	36.1	ND	56.2	22-147			
4-Nitrophenol	7.52	5.0	1.1	ug/L	36.1	ND	20.9	5-132			
Butyl benzyl phthalate	14.2	10	1.6	ug/L	24.0	ND	58.9	5-152			
Isophorone	12.8	1.0	1.0	ug/L	24.0	ND	53.1	21-196			
n-Nitrosodi-n-propylamine	11.5	5.0	1.7	ug/L	24.0	ND	48.0	5-230			
Pentachlorophenol	18.5	1.0	1.0	ug/L	36.1	ND	51.2	14-176			
Phenol	8.82	1.0	1.0	ug/L	36.1	ND	24.5	5-112			
Surrogate: 2,4,6-Tribromophenol	*22*			ug/L	*36.1*		*60.9*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*13*			ug/L	*24.0*		*54.5*	*30-110*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Matrix Spike (7E02091-MS1)		**Source: B7D2316-02**			Prepared: 05/02/17	Analyzed: 05/04/17					
Surrogate: 2-Fluorophenol	*13*			ug/L	*36.1*		*37.1*	*10-63*			
Surrogate: 4-Terphenyl-d14	*14*			ug/L	*24.0*		*58.9*	*34-125*			
Surrogate: Nitrobenzene-d5	*12*			ug/L	*24.0*		*48.7*	*24-112*			
Surrogate: Phenol-d6	*8.4*			ug/L	*36.1*		*23.3*	*10-47*			
Matrix Spike Dup (7E02091-MSD1)		**Source: B7D2316-02**			Prepared: 05/02/17	Analyzed: 05/05/17					
1,2,4-Trichlorobenzene	12.7	1.0	1.0	ug/L	24.0	ND	52.8	44-142	11.1	40	
2-Chlorophenol	21.4	2.0	1.8	ug/L	36.1	ND	59.2	23-134	11.5	40	
2,4-Dichlorophenol	21.2	1.0	1.0	ug/L	36.1	ND	58.9	39-135	12.2	40	
2,4-Dimethylphenol	20.7	1.0	1.0	ug/L	36.1	ND	57.4	32-119	10.2	40	
2,4-Dinitrotoluene	11.6	5.0	1.8	ug/L	24.0	ND	48.3	39-139	3.84	40	
4-Chloro-3-methylphenol	21.8	1.0	1.0	ug/L	36.1	ND	60.4	22-147	7.09	40	
4-Nitrophenol	10.1	5.0	1.1	ug/L	36.1	ND	28.0	5-132	29.1	40	
Butyl benzyl phthalate	14.9	10	1.6	ug/L	24.0	ND	62.0	5-152	5.03	40	
Isophorone	13.7	1.0	1.0	ug/L	24.0	ND	57.0	21-196	7.12	40	
n-Nitrosodi-n-propylamine	12.8	5.0	1.7	ug/L	24.0	ND	53.2	5-230	10.2	40	
Pentachlorophenol	20.0	1.0	1.0	ug/L	36.1	ND	55.3	14-176	7.76	40	
Phenol	10.2	1.0	1.0	ug/L	36.1	ND	28.2	5-112	14.2	40	
Surrogate: 2,4,6-Tribromophenol	*23*			ug/L	*36.1*		*63.3*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*14*			ug/L	*24.0*		*59.5*	*30-110*			
Surrogate: 2-Fluorophenol	*15*			ug/L	*36.1*		*41.3*	*10-63*			
Surrogate: 4-Terphenyl-d14	*16*			ug/L	*24.0*		*65.0*	*34-125*			
Surrogate: Nitrobenzene-d5	*13*			ug/L	*24.0*		*52.2*	*24-112*			
Surrogate: Phenol-d6	*9.5*			ug/L	*36.1*		*26.2*	*10-47*			

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27079 - EPA 3510C											
Blank (7D27079-BLK1)					Prepared: 04/27/17 Analyzed: 05/01/17						
Benzo(a)anthracene	ND	0.05	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	0.05	ug/L							
Acenaphthene	ND	0.05	0.05	ug/L							
Acenaphthylene	ND	0.05	0.05	ug/L							
Anthracene	ND	0.05	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	0.05	ug/L							
Benzo(ghi)perylene	ND	0.05	0.05	ug/L							
Benzo(k)fluoranthene	ND	0.05	0.05	ug/L							
Chrysene	ND	0.05	0.05	ug/L							
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L							
Fluoranthene	ND	0.05	0.05	ug/L							
Fluorene	ND	0.05	0.05	ug/L							
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L							
Naphthalene	ND	0.05	0.05	ug/L							
Phenanthrene	ND	0.05	0.05	ug/L							
Pyrene	ND	0.05	0.05	ug/L							
Surrogate: Anthracene-d10	*0.039*			ug/L	*0.0500*		*77.0*	*24-110*			
LCS (7D27079-BS1)					Prepared: 04/27/17 Analyzed: 05/01/17						
Benzo(a)anthracene	0.369	0.05	0.05	ug/L	0.500		73.7	46-103			
Benzo(b)fluoranthene	0.361	0.05	0.05	ug/L	0.500		72.1	49-110			
Acenaphthene	0.294	0.05	0.05	ug/L	0.500		58.9	42-91			
Acenaphthylene	0.300	0.05	0.05	ug/L	0.500		59.9	36-96			
Anthracene	0.335	0.05	0.05	ug/L	0.500		67.0	29-110			
Benzo(a)pyrene	0.344	0.05	0.05	ug/L	0.500		68.8	43-116			
Benzo(ghi)perylene	0.337	0.05	0.05	ug/L	0.500		67.4	37-128			
Benzo(k)fluoranthene	0.353	0.05	0.05	ug/L	0.500		70.6	38-127			
Chrysene	0.341	0.05	0.05	ug/L	0.500		68.1	45-107			
Dibenzo(a,h)anthracene	0.366	0.05	0.05	ug/L	0.500		73.2	43-129			
Fluoranthene	0.355	0.05	0.05	ug/L	0.500		71.0	38-113			
Fluorene	0.328	0.05	0.05	ug/L	0.500		65.6	42-99			
Indeno(1,2,3-cd)pyrene	0.341	0.05	0.05	ug/L	0.500		68.3	35-145			
Naphthalene	0.270	0.05	0.05	ug/L	0.500		54.1	36-90			
Phenanthrene	0.325	0.05	0.05	ug/L	0.500		65.1	33-104			
Pyrene	0.351	0.05	0.05	ug/L	0.500		70.3	42-113			

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27079 - EPA 3510C											
LCS (7D27079-BS1)					Prepared: 04/27/17 Analyzed: 05/01/17						
Surrogate: Anthracene-d10	*0.044*			ug/L	*0.0500*		*87.0*	*24-110*			
LCS Dup (7D27079-BSD1)					Prepared: 04/27/17 Analyzed: 05/01/17						
Benzo(a)anthracene	0.361	0.05	0.05	ug/L	0.500		72.2	46-103	2.13	40	
Benzo(b)fluoranthene	0.356	0.05	0.05	ug/L	0.500		71.1	49-110	1.40	40	
Acenaphthene	0.308	0.05	0.05	ug/L	0.500		61.7	42-91	4.64	40	
Acenaphthylene	0.313	0.05	0.05	ug/L	0.500		62.7	36-96	4.45	40	
Anthracene	0.333	0.05	0.05	ug/L	0.500		66.6	29-110	0.663	40	
Benzo(a)pyrene	0.319	0.05	0.05	ug/L	0.500		63.8	43-116	7.54	40	
Benzo(ghi)perylene	0.327	0.05	0.05	ug/L	0.500		65.3	37-128	3.22	40	
Benzo(k)fluoranthene	0.343	0.05	0.05	ug/L	0.500		68.6	38-127	2.89	40	
Chrysene	0.335	0.05	0.05	ug/L	0.500		67.1	45-107	1.55	40	
Dibenzo(a,h)anthracene	0.349	0.05	0.05	ug/L	0.500		69.8	43-129	4.79	40	
Fluoranthene	0.355	0.05	0.05	ug/L	0.500		71.0	38-113	0.0141	40	
Fluorene	0.342	0.05	0.05	ug/L	0.500		68.3	42-99	4.12	40	
Indeno(1,2,3-cd)pyrene	0.332	0.05	0.05	ug/L	0.500		66.4	35-145	2.75	40	
Naphthalene	0.290	0.05	0.05	ug/L	0.500		57.9	36-90	6.87	40	
Phenanthrene	0.329	0.05	0.05	ug/L	0.500		65.7	33-104	0.991	40	
Pyrene	0.371	0.05	0.05	ug/L	0.500		74.3	42-113	5.58	40	
Surrogate: Anthracene-d10	*0.045*			ug/L	*0.0500*		*89.1*	*24-110*			
Matrix Spike (7D27079-MS1)		**Source: B7D2316-01**			Prepared: 04/27/17 Analyzed: 05/01/17						
Benzo(a)anthracene	0.0999	0.05	0.05	ug/L	0.476	ND	21.0	10-108			
Benzo(b)fluoranthene	0.0629	0.05	0.05	ug/L	0.476	ND	13.2	10-103			
Acenaphthene	0.267	0.05	0.05	ug/L	0.476	ND	56.1	12-106			
Acenaphthylene	0.297	0.05	0.05	ug/L	0.476	ND	62.5	14-98			
Anthracene	0.226	0.05	0.05	ug/L	0.476	ND	47.5	10-108			
Benzo(a)pyrene	0.0645	0.05	0.05	ug/L	0.476	ND	13.5	10-100			
Benzo(ghi)perylene	ND	0.05	0.05	ug/L	0.476	ND	NR	10-70			QMint
Benzo(k)fluoranthene	0.0611	0.05	0.05	ug/L	0.476	ND	12.8	10-114			
Chrysene	0.0890	0.05	0.05	ug/L	0.476	ND	18.7	10-100			
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L	0.476	ND	NR	10-75			QMint
Fluoranthene	0.168	0.05	0.05	ug/L	0.476	ND	35.3	10-111			
Fluorene	0.279	0.05	0.05	ug/L	0.476	ND	58.6	12-107			
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L	0.476	ND	NR	10-96			QMint
Naphthalene	0.284	0.05	0.05	ug/L	0.476	ND	59.6	12-103			

Client Name: Victor Valley Reclamation Authority
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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27079 - EPA 3510C											
Matrix Spike (7D27079-MS1)		**Source: B7D2316-01**			Prepared: 04/27/17		Analyzed: 05/01/17				
Phenanthrene	0.226	0.05	0.05	ug/L	0.476	ND	47.4	12-108			
Pyrene	0.168	0.05	0.05	ug/L	0.476	ND	35.2	10-107			
Surrogate: Anthracene-d10	*0.031*			ug/L	*0.0476*		*64.1*	*24-110*			
Matrix Spike Dup (7D27079-MSD1)		**Source: B7D2316-01**			Prepared: 04/27/17		Analyzed: 05/01/17				
Benzo(a)anthracene	0.0911	0.05	0.05	ug/L	0.472	ND	19.3	10-108	9.24	40	
Benzo(b)fluoranthene	ND	0.05	0.05	ug/L	0.472	ND	NR	10-103		40	Qraw
Acenaphthene	0.251	0.05	0.05	ug/L	0.472	ND	53.3	12-106	6.08	40	
Acenaphthylene	0.276	0.05	0.05	ug/L	0.472	ND	58.4	14-98	7.66	40	
Anthracene	0.238	0.05	0.05	ug/L	0.472	ND	50.5	10-108	5.16	40	
Benzo(a)pyrene	0.0515	0.05	0.05	ug/L	0.472	ND	10.9	10-100	22.3	40	
Benzo(ghi)perylene	ND	0.05	0.05	ug/L	0.472	ND	NR	10-70		40	QMint
Benzo(k)fluoranthene	ND	0.05	0.05	ug/L	0.472	ND	NR	10-114		40	QMSD
Chrysene	0.0815	0.05	0.05	ug/L	0.472	ND	17.3	10-100	8.79	40	
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L	0.472	ND	NR	10-75		40	QMint
Fluoranthene	0.175	0.05	0.05	ug/L	0.472	ND	37.1	10-111	4.10	40	
Fluorene	0.264	0.05	0.05	ug/L	0.472	ND	56.0	12-107	5.54	40	
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L	0.472	ND	NR	10-96		40	QMint
Naphthalene	0.253	0.05	0.05	ug/L	0.472	ND	53.7	12-103	11.4	40	
Phenanthrene	0.233	0.05	0.05	ug/L	0.472	ND	49.3	12-108	3.00	40	
Pyrene	0.170	0.05	0.05	ug/L	0.472	ND	36.0	10-107	1.17	40	
Surrogate: Anthracene-d10	*0.031*			ug/L	*0.0472*		*66.3*	*24-110*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Notes and Definitions

Cr+6:	Regulatory 15 minute holding time for sample filtration and preservation exceeded	B7D2316-01
Cr+6:	Regulatory 15 minute holding time for sample filtration and preservation exceeded	B7D2316-02

J	Estimated value
NCALhNl	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, therefore data not impacted.
NCEVE	In an acidified sample, this compound degrades and is not detectable as 2-Chloroethylvinyl ether. Its degradation product is 2-Chloroethanol, which is not an analyte of this method.
Nconf	Result(s) confirmed by re-analysis.
NMint	Due to matrix interference, the matrix spike and/or matrix spike duplicate performed on this sample did not meet laboratory acceptance criteria.
QCEVE	In an acidified sample, this compound degrades and is not detectable as 2-Chloroethylvinyl ether. Its degradation product is 2-Chloroethanol, which is not an analyte of this method.
QFpas	Follow-up result within laboratory acceptance criteria.
QMint	Due to matrix interference, the MS and/or MSD did not meet laboratory acceptance criteria.
QMout	MS and/or MSD recovery did not meet laboratory acceptance criteria.
QMSD	The MS recovery and MS/MSD RPD met laboratory acceptance criteria. MSD recovery was not within range. MSD performed to assess precision data only.
Qraw	Based on raw data excluding numerical rounding, QC recovery was within laboratory acceptance criteria.
QRPDl	Analyte concentration was below range for valid RPD determination.
ND:	Analyte NOT DETECTED at or above the Method Detection Limit **(if MDL is reported)**, otherwise at or above the Reportable Detection Limit (RDL)
NR:	Not Reported
RDL:	Reportable Detection Limit
MDL:	Method Detection Limit

* / (Non-NELAP): NELAP does not offer accreditation for this analyte/method/matrix combination

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Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

Cindy A. Waddell

cc:

e-Standard_No Alias.rpt

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P.O Box 432
Riverside, CA 92502-0432

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NELAP No. OR4035
LACSD No. 10119

BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

CONTRACT LABORATORYCHAIN OF CUSTODY AND ANALYSIS REQUESTRECORD

Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Plant Address: 20111 Shay Road · Victorville, CA92394 · TEL: (760) 246-8638 FAX: (760) 246-5440

Website: www.vvwra.com E-mail: edavis@vvwra.com

Project Name: Hesperia Groundwater Monitoring Wells
Project Contact: Eugene Davis (760) 246-8638 ext. 287
Sampler Name: Ben Stevens
Sampler Signature:

VVWRAID #	Sample Location/Description	Sample Date	Sample Time	Sample Type: Grab	Sample Type: Composite	Sample Matrix (WW, DW, GW, SG)	Laboratory Analyses Requested: Ammonia-N	TKN	MBAS	Nitrate - N	Chloride & Sulfate	T. Dissolved Solids	Cyanide	ewCr-6 (218.6)	Metals	EPA 624-ML	EPA 625-ML	EPA 625 -SIM-ML	Total # of Containers	Sample Preservation Methods: Refrigeration	H_2SO_4 pH<2	HNO_3 pH<2	NaOH	HCL	Buffer(Na2CO3/Na 2HCO3/ (NH4)2SO4)	TAT / Container Type
	HSP-DUP	4.26.17	1130	X		GW	X	X											1		1					Pint poly.
	HSP-DUP		1130	X		GW			X	X	X	X							1	1						Quart poly.
	HSP-DUP		1130	X		GW							X						1				1			Pint poly.
	HSP-DUP		1130	X		GW								X					1						1	125 mL poly.
	HSP-DUP		1130	X		GW									X				1			1				Pint poly.
	HSP-DUP		1130	X		GW										X			4					2		40mL glass amber vial
	HSP-DUP		1130	X		GW											X		3	3						1-Liter glass amber
	HSP-DUP		1130	X		GW												X	3	3						1-Liter glass amber

TAT: ____ 24 hr ____ 48 hr ____ 72 hr _X_ Standard

Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print: Ben Stevens	4.26.17 1700	Print: Hector Nanez	Print: Hector Nanez	4/26/17 1720	Print: NEREIDA
Company: BS		Company: DE	Company: DE		Company: BSK
Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print:		Print:	Print:		Print:
Company:		Company:	Company:		Company:

Sample Condition Upon Receipt by Laboratory:
Samples Received on Ice? (Yes) No Temperature
Samples Received Intact? (Yes) No °C 4

Laboratory Notes
*Metals to include: Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

Samples sent via courier to: Babcock Laboratories, Inc.
Lab # B7D2316

Please Fax a copy of the completed Chain of Custody document to: Eugene Davis, VVWRA at (760) 954-5006 01-54-520-7170

APR 26 2017 AB

BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name:	Victor Valley Reclamation Authority	Analytical Report:	Page 42 of 43
Contact:	Eugene Davis	Project Name:	VVWRA-Hesperia Groundwater
Address:	20111 Shay Road Victorville, CA 92394	Project Number:	01-54-520-7170
Report Date:	09-May-2017	**Work Order Number:**	**B7D2316**

Received on Ice (Y/N): Yes Temp: 4 °C

CONTRACT LABORATORYCHAIN OF CUSTODY AND ANALYSIS REQUESTRECORD

Victor Valley Wastewater Reclamation Authority

A Joint Powers Authority and Public Agency of the State of California

Plant Address: 20111 Shay Road · Victorville, CA92394 · TEL: (760) 246-8638 FAX: (760) 246-5440

Website: www.vvwra.com E-mail: edavis@vvwra.com

Project Name: Hesperia Groundwater Monitoring Wells

Project Contact: Eugene Davis (760) 246-8638 ext. 287

Sampler Name: Ben Stevens

Sampler Signature:

TAT: __ 24 hr, __ 48 hr, __ 72 hr, _X_ Standard

VVWRAID #	Sample Location/Description	Sample Date	Sample Time	Grab	Composite	Sample Matrix (WW, DW, GW, SG)	Nitrate - N	T. Dissolved Solids	Volatile Organic Constituents EPA 624	Total # of Containers	Refrigeration	H_2SO_4 pH<2	HNO_3 pH<2	HCl	Container Type
	HS-Field Blank	4-26-17	0710	X		LQ	X	X		1	1				Quart poly.
	HS-Field Blank		0710	X		LQ			X	2				2	40mL glass amber vial
	HS-Equipment Blank		0720	X		LQ			X	2				2	40mL glass amber vial
	HS-Trip Blank		0700	X		LQ			X	2				2	40mL glass amber vial

Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/ Time:	Received By (Sign):
Print: Ben Stevens Company: BJS	4-26-17 1100	Print: Hector Naranjo Company: DS	Print: Hector Naranjo Company: DS	4/26/17 1720	Print: NG Company: ESB
Print: Company:		Print: Company:	Print: Company:		Print: Company:

Sample Condition Upon Receipt by Laboratory:
Samples Received on Ice? (Yes) No Temperature °C 4
Samples Received Intact? (Yes) No

Laboratory Notes

Samples sent via courier to: Babcock Laboratories, Inc.
Lab # B7D2316

Please Fax a copy of the completed Chain of Custody document to: Eugene Davis, VVWRA at (760) 954-5006 01-54-520-7170 APR 26 2017

BABCOCK Laboratories, Inc.
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Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2316
Received on Ice (Y/N): Yes Temp: 4 °C

CONTRACT LABORATORYCHAIN OF CUSTODY AND ANALYSIS REQUESTRECORD

Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Plant Address: 20111 Shay Road · Victorville, CA92394 · TEL: (760) 246-8638 FAX: (760) 246-5440

Website: www.vvwra.com E-mail: cdavis@vvwra.com

Project Name: Hesperia Groundwater Monitoring Wells
Project Contact: Eugene Davis (760) 246-8638 ext. 287
Sampler Name: Ben Stevens
Sampler Signature:

VVWRAID #	Sample Location/Description	Sample Date	Sample Time	Sample Type: Grab	Sample Type: Composite	Laboratory Analyses Requested: Sample Matrix (WW, DW, GW, SG)	Nitrate - N	T. Dissolved Solids	Volatile Organic Constituents EPA 624	Total # of Containers	Sample Preservation Methods: Refrigeration	H_2SO_4 pH<2	HNO_3 pH<2	HCl	Container Type
	HS-Field Blank	4.26.17	0710	X		LQ	X	X		1	1				Quart poly.
	HS-Field Blank		0710	X		LQ			X	2				2	40mL glass amber vial
	HS-Equipment Blank		0720	X		LQ			X	2				2	40mL glass amber vial
	HS-Trip Blank		0700	X		LQ			X	2				2	40mL glass amber vial
			07:20 on vial Labels (AD) 4/26/17												

TAT: ____ 24 hr ____ 48 hr ____ 72 hr X Standard

Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print: Ben Stevens	4.26.17 1100	Print: Hector Naranjo	Print: Hector Naranjo	4/26/17 1720	Print:
Company: BJS		Company: DE	Company: DE		Company: ESB
Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print:		Print:	Print:		Print:
Company:		Company:	Company:		Company:

Sample Condition Upon Receipt by Laboratory:
Samples Received on Ice? (Yes) No Temperature °C 4
Samples Received Intact? (Yes) No

Laboratory Notes

Samples sent via courier to: Babcock Laboratories, Inc.
Lab # B7D2316

Please Fax a copy of the completed Chain of Custody document to: Eugene Davis, VVWRA at (760) 954-5006 01-54-520-7170 APR 26 2017 AD

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EPA No. CA00102
NELAP No. OR4035
LACSD No. 10119

BABCOCK Laboratories, Inc.
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Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

Lab Sample #	Client Sample ID	Matrix	Date Sampled	By	Date Submitted	By
B7D2403-01	HSP2-570 Grab	Liquid	04/27/17 10:25	Ben Stevens	04/27/17 15:50	Courier (Hector N.)-DE

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2403-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP2-570	Liquid	04/27/17 10:25	04/27/17 15:50

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Anions								
Chloride	11	1.0	0.56	mg/L	EPA 300.0	04/28/17 05:44	IBR	
Sulfate	6.4	0.50	0.23	mg/L	EPA 300.0	04/28/17 20:01	IBR	
Nitrate as N	3.5	0.20	0.055	mg/L	EPA 300.0	04/28/17 05:44	IBR	
Solids								
Total Dissolved Solids	180	20	12	mg/L	SM 2540C	05/03/17 18:05	kbs	
Surfactants								
MBAS	ND	0.08	0.05	mg/L	SM 5540C	04/27/17 20:15	kbs	
General Inorganics								
Cyanide	ND	0.005	0.004	mg/L	SM 4500CN E	05/01/17 12:39	sll	
Nutrients								
Ammonia-Nitrogen	ND	0.10	0.048	mg/L	SM4500NH3H	04/28/17 11:33	sll	
Kjeldahl Nitrogen	ND	0.10	0.063	mg/L	EPA 351.2	05/05/17 12:45	jma	
Metals and Metalloids								
Hexavalent Chromium	1.3	1.0	0.024	ug/L	EPA 218.6	05/02/17 17:25	mel	
Mercury	ND	0.20	0.10	ug/L	EPA 200.8	05/01/17 17:40	MEL	
Metals and Metalloids; EPA SW846 Series								
Antimony	ND	6.0	3.0	ug/L	EPA 6020	05/01/17 17:40	MEL	
Arsenic	2.6	2.0	1.2	ug/L	EPA 6020	05/01/17 17:40	MEL	
Beryllium	ND	1.0	0.57	ug/L	EPA 6020	05/01/17 17:40	MEL	
Cadmium	ND	1.0	0.57	ug/L	EPA 6020	05/01/17 17:40	MEL	
Total Chromium	20	10	4.2	ug/L	EPA 6020	05/01/17 17:40	MEL	
Copper	ND	10	5.0	ug/L	EPA 6020	05/01/17 17:40	MEL	
Lead	ND	5.0	2.5	ug/L	EPA 6020	05/01/17 17:40	MEL	
Nickel	ND	10	5.0	ug/L	EPA 6020	05/01/17 17:40	MEL	
Selenium	ND	5.0	2.5	ug/L	EPA 6020	05/01/17 17:40	MEL	
Silver	ND	10	5.0	ug/L	EPA 6020	05/01/17 17:40	MEL	
Thallium	ND	1.0	0.50	ug/L	EPA 6020	05/01/17 17:40	MEL	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2403-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP2-570	Liquid	04/27/17 10:25	04/27/17 15:50

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Metals and Metalloids; EPA SW846 Series								
Zinc	ND	10	5.0	ug/L	EPA 6020	05/01/17 17:40	MEL	
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	04/28/17 23:21	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	04/28/17 23:21	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	04/28/17 23:21	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/28/17 23:21	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	04/28/17 23:21	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	04/28/17 23:21	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	04/28/17 23:21	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	04/28/17 23:21	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	04/28/17 23:21	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	04/28/17 23:21	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	04/28/17 23:21	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	04/28/17 23:21	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	04/28/17 23:21	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	04/28/17 23:21	eec	
Benzene	ND	0.50	0.067	ug/L	EPA 624	04/28/17 23:21	eec	
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	04/28/17 23:21	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	04/28/17 23:21	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	04/28/17 23:21	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	04/28/17 23:21	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	04/28/17 23:21	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	04/28/17 23:21	eec	
Chloroform	ND	0.50	0.44	ug/L	EPA 624	04/28/17 23:21	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	04/28/17 23:21	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	04/28/17 23:21	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	04/28/17 23:21	eec	
Methylene Chloride	ND	0.50	0.25	ug/L	EPA 624	04/28/17 23:21	eec	
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	04/28/17 23:21	eec	
Toluene	0.27	0.50	0.093	ug/L	EPA 624	04/28/17 23:21	eec	J
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	04/28/17 23:21	eec	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2403-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP2-570	Liquid	04/27/17 10:25	04/27/17 15:50

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Trichloroethene	ND		0.50	0.18	ug/L	EPA 624	04/28/17 23:21	eec	
Vinyl Chloride	ND		0.50	0.081	ug/L	EPA 624	04/28/17 23:21	eec	
Surrogate: 1,2-Dichloroethane-d4	106	%	80-120			EPA 624	04/28/17 23:21	eec	
Surrogate: Bromofluorobenzene	103	%	80-120			EPA 624	04/28/17 23:21	eec	
Surrogate: Toluene-d8	99.2	%	80-120			EPA 624	04/28/17 23:21	eec	
Semivolatile Organic Compounds by EPA 625									
1,2-Diphenylhydrazine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
1,2,4-Trichlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
2-Chlorophenol	ND		2.0	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
2,4-Dichlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
2,4-Dimethylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
2,4-Dinitrophenol	ND		5.0	1.6	ug/L	EPA 625	05/05/17 02:34	JHR	
2,4-Dinitrotoluene	ND		5.0	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
2,4,6-Trichlorophenol	ND		10	1.9	ug/L	EPA 625	05/05/17 02:34	JHR	
2,6-Dinitrotoluene	ND		5.0	1.9	ug/L	EPA 625	05/05/17 02:34	JHR	
2-Nitrophenol	ND		10	2.1	ug/L	EPA 625	05/05/17 02:34	JHR	
2-Chloronaphthalene	ND		10	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
3,3'-Dichlorobenzidine	ND		5.0	2.1	ug/L	EPA 625	05/05/17 02:34	JHR	
4-Chloro-3-methylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
2-Methyl-4,6-Dinitrophenol	ND		5.0	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
4-Nitrophenol	ND		5.0	1.1	ug/L	EPA 625	05/05/17 02:34	JHR	
4-Bromophenyl phenyl ether	ND		5.0	1.6	ug/L	EPA 625	05/05/17 02:34	JHR	
4-Chlorophenyl phenyl ether	ND		5.0	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
Benzidine	ND		5.0	5.0	ug/L	EPA 625	05/05/17 11:50	JHR	NCALhND
Bis(2-chloroethoxy)methane	ND		5.0	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
Bis(2-Chloroethyl)ether	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Bis(2-chloroisopropyl)Ether	ND		2.0	1.9	ug/L	EPA 625	05/05/17 02:34	JHR	NCALhND
Bis(2-ethylhexyl)phthalate	ND		5.0	2.3	ug/L	EPA 625	05/05/17 02:34	JHR	
Butyl benzyl phthalate	ND		10	1.6	ug/L	EPA 625	05/05/17 02:34	JHR	
Di-n-butylphthalate	ND		10	1.9	ug/L	EPA 625	05/05/17 02:34	JHR	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2403-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP2-570	Liquid	04/27/17 10:25	04/27/17 15:50

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625									
Di-n-octylphthalate	ND		10	2.6	ug/L	EPA 625	05/05/17 02:34	JHR	
Diethyl phthalate	ND		2.0	1.8	ug/L	EPA 625	05/05/17 02:34	JHR	
Dimethyl phthalate	ND		2.0	1.7	ug/L	EPA 625	05/05/17 02:34	JHR	
Hexachlorocyclopentadiene	ND		5.0	1.7	ug/L	EPA 625	05/05/17 02:34	JHR	
Hexachlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Hexachlorobutadiene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Hexachloroethane	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Isophorone	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
N-Nitrosodiphenylamine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
N-Nitrosodimethylamine	ND		5.0	1.4	ug/L	EPA 625	05/05/17 02:34	JHR	
n-Nitrosodi-n-propylamine	ND		5.0	1.7	ug/L	EPA 625	05/05/17 02:34	JHR	
Nitrobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Pentachlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Phenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 02:34	JHR	
Surrogate: 2,4,6-Tribromophenol	50.4	%	27-122			EPA 625	05/05/17 02:34	JHR	
Surrogate: 2-Fluorobiphenyl	50.4	%	30-110			EPA 625	05/05/17 02:34	JHR	
Surrogate: 2-Fluorophenol	35.4	%	10-63			EPA 625	05/05/17 02:34	JHR	
Surrogate: 4-Terphenyl-d14	62.1	%	34-125			EPA 625	05/05/17 02:34	JHR	
Surrogate: Nitrobenzene-d5	47.6	%	24-112			EPA 625	05/05/17 02:34	JHR	
Surrogate: Phenol-d6	23.0	%	10-47			EPA 625	05/05/17 02:34	JHR	
Semivolatile Organic Compounds by EPA 625 SIM									
Benzo(a)anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Benzo(b)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Acenaphthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Acenaphthylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Benzo(a)pyrene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Benzo(ghi)perylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Benzo(k)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Chrysene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Laboratory Reference Number
B7D2403-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP2-570	Liquid	04/27/17 10:25	04/27/17 15:50

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625 SIM								
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Fluoranthene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Fluorene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Naphthalene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Phenanthrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:30	JHR	
Surrogate: Anthracene-d10	78.4	% 24-110			EPA625 SIM	05/03/17 13:30	JHR	

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27118 - Filter if turbid.-IC											
Blank (7D27118-BLK1)					Prepared & Analyzed: 04/28/17						
Chloride	ND	1.0	0.56	mg/L							
Nitrate as N	ND	0.20	0.055	mg/L							
LCS (7D27118-BS1)					Prepared & Analyzed: 04/28/17						
Chloride	48.4	1.0	0.56	mg/L	50.0		96.8	90-110			
Nitrate as N	10.2	0.20	0.055	mg/L	11.3		90.6	90-110			
Matrix Spike (7D27118-MS1)		**Source: B7D2403-01**			Prepared & Analyzed: 04/28/17						
Chloride	69.4	1.0	0.56	mg/L	50.0	11.5	116	84-129			
Nitrate as N	8.21	0.20	0.055	mg/L	4.52	3.47	105	75-131			
Matrix Spike Dup (7D27118-MSD1)		**Source: B7D2403-01**			Prepared & Analyzed: 04/28/17						
Chloride	69.7	1.0	0.56	mg/L	50.0	11.5	116	84-129	0.361	20	
Nitrate as N	8.22	0.20	0.055	mg/L	4.52	3.47	105	75-131	0.169	20	
Batch 7D28029 - Analyzed as Received IC											
Blank (7D28029-BLK1)					Prepared & Analyzed: 04/28/17						
Sulfate	0.366	0.50	0.23	mg/L							J
LCS (7D28029-BS1)					Prepared & Analyzed: 04/28/17						
Sulfate	48.5	0.50	0.23	mg/L	50.0		97.0	90-110			
Matrix Spike (7D28029-MS1)		**Source: B7D2437-01**			Prepared & Analyzed: 04/28/17						
Sulfate	287	0.50	0.23	mg/L	50.0	227	121	75-128			QOcal
Matrix Spike (7D28029-MS2)		**Source: B7D2469-01**			Prepared & Analyzed: 04/29/17						
Sulfate	65.5	0.50	0.23	mg/L	50.0	7.66	116	75-128			

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Anions - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28029 - Analyzed as Received IC											
Matrix Spike Dup (7D28029-MSD1)		**Source: B7D2437-01**		Prepared & Analyzed: 04/28/17							
Sulfate	287	0.50	0.23	mg/L	50.0	227	119	75-128	0.203	20	QOcal

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Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E03121 - Analyzed as received											
Blank (7E03121-BLK1)				Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	ND	10	5.8	mg/L							
LCS (7E03121-BS1)				Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	734	20	12	mg/L	746		98.4	90-110			
Duplicate (7E03121-DUP1)		**Source: B7D2418-01**		Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	660	20	12	mg/L		641			2.92	20	
Duplicate (7E03121-DUP2)		**Source: B7D2510-01**		Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	237	20	12	mg/L		247			4.13	20	

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Surfactants - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D27135 - Solvent Extraction.											
Blank (7D27135-BLK1)					Prepared & Analyzed: 04/27/17						
MBAS	ND	0.08	0.05	mg/L							
LCS (7D27135-BS1)					Prepared & Analyzed: 04/27/17						
MBAS	0.368	0.08	0.05	mg/L	0.320		115	52-141			
Matrix Spike (7D27135-MS1)		**Source: B7D2367-02**			Prepared & Analyzed: 04/27/17						
MBAS	0.525	0.20	0.13	mg/L	0.400	ND	131	35-142			
Matrix Spike Dup (7D27135-MSD1)		**Source: B7D2367-02**			Prepared & Analyzed: 04/27/17						
MBAS	0.505	0.20	0.13	mg/L	0.400	ND	126	35-142	3.88	20	

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Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

General Inorganics - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01083 - Distillation											
Blank (7E01083-BLK1)					Prepared & Analyzed: 05/01/17						
Cyanide	ND	0.005	0.004	mg/L							
LCS (7E01083-BS1)					Prepared & Analyzed: 05/01/17						
Cyanide	0.0940	0.005	0.004	mg/L	0.101		93.1	61-120			
Matrix Spike (7E01083-MS1)		**Source: B7D2469-01**			Prepared & Analyzed: 05/01/17						
Cyanide	0.0978	0.005	0.004	mg/L	0.101	ND	96.9	53-125			
Matrix Spike Dup (7E01083-MSD1)		**Source: B7D2469-01**			Prepared & Analyzed: 05/01/17						
Cyanide	0.0962	0.005	0.004	mg/L	0.101	ND	95.2	53-125	1.75	30	

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Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Nutrients - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28006 - Analyzed as received											
Blank (7D28006-BLK1)					Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	ND	0.10	0.048	mg/L							
LCS (7D28006-BS1)					Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	0.799	0.10	0.048	mg/L	0.780		102	90-110			
Matrix Spike (7D28006-MS1)		**Source: B7D2226-01**			Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	0.793	0.10	0.048	mg/L	0.780	ND	102	80-120			
Matrix Spike Dup (7D28006-MSD1)		**Source: B7D2226-01**			Prepared & Analyzed: 04/28/17						
Ammonia-Nitrogen	0.738	0.10	0.048	mg/L	0.780	ND	94.6	80-120	7.23	20	
Batch 7E04099 - Acid Digest											
Blank (7E04099-BLK1)					Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	ND	0.10	0.063	mg/L							
LCS (7E04099-BS1)					Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	1.19	0.10	0.063	mg/L	1.00		119	80-120			
Matrix Spike (7E04099-MS1)		**Source: B7D2310-03**			Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	20.2	1.0	0.63	mg/L	10.0	12.5	77.5	42-149			
Matrix Spike (7E04099-MS2)		**Source: B7D2360-02**			Prepared: 05/04/17 Analyzed: 05/05/17						
Kjeldahl Nitrogen	3.08	0.10	0.063	mg/L	1.00	1.53	155	42-149			QFpas, QMout

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28033 - EPA 200.2 SOP M02C											
Blank (7D28033-BLK1)					Prepared & Analyzed: 05/01/17						
Mercury	ND	0.20	0.10	ug/L							
Blank (7D28033-BLK2)					Prepared & Analyzed: 05/01/17						
Mercury	ND	0.20	0.10	ug/L							QBfil
LCS (7D28033-BS1)					Prepared & Analyzed: 05/01/17						
Mercury	2.59	0.20	0.10	ug/L	2.78		93.0	85-115			
Matrix Spike (7D28033-MS1)		**Source: B7D2355-11**			Prepared & Analyzed: 05/01/17						
Mercury	2.54	0.20	0.10	ug/L	2.78	ND	91.4	75-125			
Matrix Spike Dup (7D28033-MSD1)		**Source: B7D2355-11**			Prepared & Analyzed: 05/01/17						
Mercury	2.61	0.20	0.10	ug/L	2.78	ND	93.9	75-125	2.60	20	
Batch 7E02131 - Filter if turbid.-IC											
Blank (7E02131-BLK1)					Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	ND	1.0	0.024	ug/L							
LCS (7E02131-BS1)					Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	5.21	1.0	0.024	ug/L	5.00		104	90-110			
Duplicate (7E02131-DUP1)		**Source: B7E0136-13**			Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	0.640	5.0	0.12	ug/L		0.622			2.93	20	J
Matrix Spike (7E02131-MS1)		**Source: B7E0136-14**			Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	0.719	5.0	0.12	ug/L	25.0	0.600	0.474	82-121			QFinP, QMout, J

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02131 - Filter if turbid.-IC											
Matrix Spike Dup (7E02131-MSD1)		**Source: B7E0136-14**		Prepared & Analyzed: 05/02/17							
Hexavalent Chromium	0.738	5.0	0.12	ug/L	25.0	0.600	0.550	82-121	2.61	20	QFinP, QMout, J

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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28033 - EPA 200.2 SOP M02C											
Blank (7D28033-BLK1)				Prepared & Analyzed: 05/01/17							
Antimony	ND	6.0	3.0	ug/L							
Arsenic	ND	2.0	1.2	ug/L							
Beryllium	ND	1.0	0.57	ug/L							
Cadmium	ND	1.0	0.57	ug/L							
Total Chromium	ND	10	4.2	ug/L							
Copper	ND	10	5.0	ug/L							
Lead	ND	5.0	2.5	ug/L							
Nickel	ND	10	5.0	ug/L							
Selenium	ND	5.0	2.5	ug/L							
Silver	ND	10	5.0	ug/L							
Thallium	ND	1.0	0.50	ug/L							
Zinc	ND	10	5.0	ug/L							
Blank (7D28033-BLK2)				Prepared & Analyzed: 05/01/17							
Antimony	ND	6.0	3.0	ug/L							QBfil
Arsenic	ND	2.0	1.2	ug/L							QBfil
Beryllium	ND	1.0	0.57	ug/L							QBfil
Cadmium	ND	1.0	0.57	ug/L							QBfil
Total Chromium	ND	10	4.2	ug/L							QBfil
Copper	ND	10	5.0	ug/L							QBfil
Lead	ND	5.0	2.5	ug/L							QBfil
Nickel	ND	10	5.0	ug/L							QBfil
Selenium	ND	5.0	2.5	ug/L							QBfil
Silver	ND	10	5.0	ug/L							QBfil
Thallium	ND	1.0	0.50	ug/L							QBfil
Zinc	ND	10	5.0	ug/L							QBfil
LCS (7D28033-BS1)				Prepared & Analyzed: 05/01/17							
Antimony	331	6.0	3.0	ug/L	334		99.3	85-115			
Arsenic	333	2.0	1.2	ug/L	334		100	85-115			
Beryllium	322	1.0	0.57	ug/L	334		96.6	85-115			
Cadmium	326	1.0	0.57	ug/L	334		97.9	85-115			
Total Chromium	317	10	4.2	ug/L	334		95.1	85-115			
Copper	322	10	5.0	ug/L	334		96.7	85-115			
Lead	331	5.0	2.5	ug/L	334		99.3	85-115			
Nickel	321	10	5.0	ug/L	334		96.2	85-115			

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28033 - EPA 200.2 SOP M02C											
LCS (7D28033-BS1)					Prepared & Analyzed: 05/01/17						
Selenium	329	5.0	2.5	ug/L	334		98.6	85-115			
Silver	318	10	5.0	ug/L	334		95.2	85-115			
Thallium	332	1.0	0.50	ug/L	334		99.6	85-115			
Zinc	312	10	5.0	ug/L	334		93.6	85-115			
Matrix Spike (7D28033-MS1)		**Source: B7D2355-11**			Prepared & Analyzed: 05/01/17						
Antimony	329	6.0	3.0	ug/L	334	ND	98.7	75-125			
Arsenic	371	2.0	1.2	ug/L	334	22.4	104	75-125			
Beryllium	319	1.0	0.57	ug/L	334	ND	95.6	75-125			
Cadmium	316	1.0	0.57	ug/L	334	ND	94.8	75-125			
Total Chromium	328	10	4.2	ug/L	334	ND	98.4	75-125			
Copper	323	10	5.0	ug/L	334	ND	96.9	75-125			
Lead	317	5.0	2.5	ug/L	334	ND	95.0	75-125			
Nickel	327	10	5.0	ug/L	334	ND	98.1	75-125			
Selenium	340	5.0	2.5	ug/L	334	ND	102	75-125			
Silver	302	10	5.0	ug/L	334	ND	90.5	75-125			
Thallium	314	1.0	0.50	ug/L	334	ND	94.3	75-125			
Zinc	312	10	5.0	ug/L	334	ND	93.6	75-125			
Matrix Spike Dup (7D28033-MSD1)		**Source: B7D2355-11**			Prepared & Analyzed: 05/01/17						
Antimony	347	6.0	3.0	ug/L	334	ND	104	75-125	5.39	20	
Arsenic	364	2.0	1.2	ug/L	334	22.4	102	75-125	1.94	20	
Beryllium	320	1.0	0.57	ug/L	334	ND	96.0	75-125	0.403	20	
Cadmium	335	1.0	0.57	ug/L	334	ND	101	75-125	5.86	20	
Total Chromium	329	10	4.2	ug/L	334	ND	98.5	75-125	0.0770	20	
Copper	325	10	5.0	ug/L	334	ND	97.3	75-125	0.495	20	
Lead	332	5.0	2.5	ug/L	334	ND	99.7	75-125	4.80	20	
Nickel	329	10	5.0	ug/L	334	ND	98.6	75-125	0.507	20	
Selenium	337	5.0	2.5	ug/L	334	ND	101	75-125	0.905	20	
Silver	317	10	5.0	ug/L	334	ND	95.0	75-125	4.85	20	
Thallium	333	1.0	0.50	ug/L	334	ND	99.7	75-125	5.64	20	
Zinc	312	10	5.0	ug/L	334	ND	93.5	75-125	0.107	20	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28003 - Purge and Trap											
Blank (7D28003-BLK1)				Prepared & Analyzed: 04/28/17							
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L							
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L							
1,1-Dichloroethane	ND	0.50	0.12	ug/L							
1,1-Dichloroethene	ND	0.50	0.12	ug/L							
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L							
1,2-Dichloroethane	ND	0.50	0.12	ug/L							
1,2-Dichloropropane	ND	0.50	0.13	ug/L							
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L							
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L							
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L							
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L							QCEVE
Acrolein	ND	2.0	1.1	ug/L							
Acrylonitrile	ND	2.0	0.59	ug/L							
Benzene	ND	0.50	0.067	ug/L							
Bromodichloromethane	ND	0.50	0.24	ug/L							
Bromoform	ND	0.50	0.34	ug/L							
Bromomethane	ND	0.50	0.15	ug/L							
Carbon Tetrachloride	ND	0.50	0.20	ug/L							
Chlorobenzene	ND	0.50	0.071	ug/L							
Chloroethane	ND	0.50	0.19	ug/L							
Chloroform	ND	0.50	0.44	ug/L							
Chloromethane	ND	0.50	0.097	ug/L							
Dibromochloromethane	ND	0.50	0.18	ug/L							
Ethylbenzene	ND	0.50	0.11	ug/L							
Methylene Chloride	ND	0.50	0.25	ug/L							
Tetrachloroethene	ND	0.50	0.12	ug/L							
Toluene	ND	0.50	0.093	ug/L							
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L							
Trichloroethene	ND	0.50	0.18	ug/L							
Vinyl Chloride	ND	0.50	0.081	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*10*			ug/L	*10.0*		*105*	*80-120*			
Surrogate: Bromofluorobenzene	*11*			ug/L	*10.0*		*108*	*80-120*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28003 - Purge and Trap											
Blank (7D28003-BLK1)					Prepared & Analyzed: 04/28/17						
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*99.9*	*80-120*			
LCS (7D28003-BS1)					Prepared & Analyzed: 04/28/17						
1,1-Dichloroethane	23.8	0.50	0.12	ug/L	25.0		95.1	70-130			
1,1-Dichloroethene	23.2	0.50	0.12	ug/L	25.0		93.0	70-130			
1,4-Dichlorobenzene	23.2	0.50	0.098	ug/L	25.0		92.8	70-130			
Benzene	23.1	0.50	0.067	ug/L	25.0		92.6	70-135			
Bromodichloromethane	22.9	0.50	0.24	ug/L	25.0		91.4	70-130			
Bromoform	22.7	0.50	0.34	ug/L	25.0		90.9	70-130			
Chloroform	23.6	0.50	0.44	ug/L	25.0		94.4	70-130			
Dibromochloromethane	21.8	0.50	0.18	ug/L	25.0		87.4	70-131			
Ethylbenzene	24.5	0.50	0.11	ug/L	25.0		98.1	70-130			
Tetrachloroethene	24.0	0.50	0.12	ug/L	25.0		95.8	70-130			
Toluene	23.5	0.50	0.093	ug/L	25.0		93.8	70-130			
Trichloroethene	23.8	0.50	0.18	ug/L	25.0		95.0	70-130			
Vinyl Chloride	21.6	0.50	0.081	ug/L	25.0		86.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*10*			ug/L	*10.0*		*101*	*80-120*			
Surrogate: Bromofluorobenzene	*9.8*			ug/L	*10.0*		*98.0*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*103*	*80-120*			
LCS Dup (7D28003-BSD1)					Prepared & Analyzed: 04/28/17						
1,1-Dichloroethane	23.3	0.50	0.12	ug/L	25.0		93.1	70-130	2.17	20	
1,1-Dichloroethene	22.4	0.50	0.12	ug/L	25.0		89.7	70-130	3.59	20	
1,4-Dichlorobenzene	22.9	0.50	0.098	ug/L	25.0		91.6	70-130	1.39	20	
Benzene	22.2	0.50	0.067	ug/L	25.0		88.9	70-135	4.01	20	
Bromodichloromethane	22.6	0.50	0.24	ug/L	25.0		90.3	70-130	1.28	20	
Bromoform	23.6	0.50	0.34	ug/L	25.0		94.4	70-130	3.76	20	
Chloroform	22.5	0.50	0.44	ug/L	25.0		89.9	70-130	4.90	20	
Dibromochloromethane	21.7	0.50	0.18	ug/L	25.0		86.8	70-131	0.735	20	
Ethylbenzene	23.3	0.50	0.11	ug/L	25.0		93.1	70-130	5.27	20	
Tetrachloroethene	22.8	0.50	0.12	ug/L	25.0		91.2	70-130	4.96	20	
Toluene	22.5	0.50	0.093	ug/L	25.0		90.0	70-130	4.13	20	
Trichloroethene	22.6	0.50	0.18	ug/L	25.0		90.2	70-130	5.14	20	
Vinyl Chloride	21.3	0.50	0.081	ug/L	25.0		85.2	70-130	1.26	20	

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28003 - Purge and Trap											
LCS Dup (7D28003-BSD1)					Prepared & Analyzed: 04/28/17						
Surrogate: 1,2-Dichloroethane-d4	*9.9*			ug/L	*10.0*		*99.2*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*101*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*103*	*80-120*			
Duplicate (7D28003-DUP1)		**Source: B7D2355-03**			Prepared & Analyzed: 04/28/17						
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L		ND				40	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L		ND				40	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L		ND				40	
1,1-Dichloroethane	ND	0.50	0.12	ug/L		ND				20	
1,1-Dichloroethene	ND	0.50	0.12	ug/L		ND				20	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L		ND				40	
1,2-Dichloroethane	ND	0.50	0.12	ug/L		ND				40	
1,2-Dichloropropane	ND	0.50	0.13	ug/L		ND				40	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L		ND				40	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L		ND				200	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L		ND				20	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L		ND				40	QCEVE
Acrolein	ND	2.0	1.1	ug/L		ND				40	
Acrylonitrile	ND	2.0	0.59	ug/L		ND				40	
Benzene	ND	0.50	0.067	ug/L		ND				20	
Bromodichloromethane	ND	0.50	0.24	ug/L		ND				20	
Bromoform	ND	0.50	0.34	ug/L		ND				20	
Bromomethane	ND	0.50	0.15	ug/L		ND				40	
Carbon Tetrachloride	ND	0.50	0.20	ug/L		ND				40	
Chlorobenzene	ND	0.50	0.071	ug/L		ND				40	
Chloroethane	ND	0.50	0.19	ug/L		ND				40	
Chloroform	ND	0.50	0.44	ug/L		ND				20	
Chloromethane	ND	0.50	0.097	ug/L		ND				40	
Dibromochloromethane	ND	0.50	0.18	ug/L		ND				20	
Ethylbenzene	ND	0.50	0.11	ug/L		ND				20	
Methylene Chloride	ND	0.50	0.25	ug/L		ND				40	
Tetrachloroethene	ND	0.50	0.12	ug/L		ND				20	
Toluene	ND	0.50	0.093	ug/L		ND				20	
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L		ND				40	

Client Name: Victor Valley Reclamation Authority
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Victorville, CA 92394

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 09-May-2017

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28003 - Purge and Trap											
Duplicate (7D28003-DUP1)		**Source: B7D2355-03**		Prepared & Analyzed: 04/28/17							
Trichloroethene	ND	0.50	0.18	ug/L		ND				20	
Vinyl Chloride	ND	0.50	0.081	ug/L		ND				20	
Surrogate: 1,2-Dichloroethane-d4	*11*			ug/L	*10.0*		*105*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*100*	*80-120*			
Matrix Spike (7D28003-MS1)		**Source: B7D2355-07**		Prepared & Analyzed: 04/28/17							
1,1-Dichloroethane	24.2	0.50	0.12	ug/L	25.0	ND	96.7	66.1-134			
1,1-Dichloroethene	23.6	0.50	0.12	ug/L	25.0	ND	94.4	66.6-130			
1,4-Dichlorobenzene	23.7	0.50	0.098	ug/L	25.0	ND	94.9	70-130			
Benzene	23.2	0.50	0.067	ug/L	25.0	ND	92.8	70-135			
Bromodichloromethane	23.7	0.50	0.24	ug/L	25.0	ND	94.9	70-130			
Bromoform	23.8	0.50	0.34	ug/L	25.0	ND	95.1	66.5-130			
Chloroform	23.6	0.50	0.44	ug/L	25.0	ND	94.6	70-134			
Dibromochloromethane	22.6	0.50	0.18	ug/L	25.0	ND	90.4	70-136			
Ethylbenzene	25.2	0.50	0.11	ug/L	25.0	ND	101	70-134			
Tetrachloroethene	25.0	0.50	0.12	ug/L	25.0	ND	100	70-130			
Toluene	24.0	0.50	0.093	ug/L	25.0	ND	96.2	70-130			
Trichloroethene	24.8	0.50	0.18	ug/L	25.0	ND	99.3	70-132			
Vinyl Chloride	21.6	0.50	0.081	ug/L	25.0	ND	86.4	70-137			
Surrogate: 1,2-Dichloroethane-d4	*9.7*			ug/L	*10.0*		*96.9*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*99.5*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*104*	*80-120*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
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Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Blank (7E02091-BLK2)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2-Diphenylhydrazine	ND	1.0	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	1.0	ug/L							
2-Chlorophenol	ND	2.0	1.8	ug/L							
2,4-Dichlorophenol	ND	1.0	1.0	ug/L							
2,4-Dimethylphenol	ND	1.0	1.0	ug/L							
2,4-Dinitrophenol	ND	5.0	1.6	ug/L							
2,4-Dinitrotoluene	ND	5.0	1.8	ug/L							
2,4,6-Trichlorophenol	ND	10	1.9	ug/L							
2,6-Dinitrotoluene	ND	5.0	1.9	ug/L							
2-Nitrophenol	ND	10	2.1	ug/L							
2-Chloronaphthalene	ND	10	1.8	ug/L							
3,3'-Dichlorobenzidine	ND	5.0	2.1	ug/L							
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							
2-Methyl-4,6-Dinitrophenol	ND	5.0	1.8	ug/L							
4-Nitrophenol	ND	5.0	1.1	ug/L							
4-Bromophenyl phenyl ether	ND	5.0	1.6	ug/L							
4-Chlorophenyl phenyl ether	ND	5.0	1.8	ug/L							
Benzidine	ND	5.0	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	5.0	1.8	ug/L							
Bis(2-Chloroethyl)ether	ND	1.0	1.0	ug/L							
Bis(2-chloroisopropyl)Ether	ND	2.0	1.9	ug/L							
Bis(2-ethylhexyl)phthalate	ND	5.0	2.3	ug/L							
Butyl benzyl phthalate	ND	10	1.6	ug/L							
Di-n-butylphthalate	ND	10	1.9	ug/L							
Di-n-octylphthalate	ND	10	2.6	ug/L							
Diethyl phthalate	ND	2.0	1.8	ug/L							
Dimethyl phthalate	ND	2.0	1.7	ug/L							
Hexachlorocyclopentadiene	ND	5.0	1.7	ug/L							
Hexachlorobenzene	ND	1.0	1.0	ug/L							
Hexachlorobutadiene	ND	1.0	1.0	ug/L							
Hexachloroethane	ND	1.0	1.0	ug/L							
Isophorone	ND	1.0	1.0	ug/L							
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L							
N-Nitrosodimethylamine	ND	5.0	1.4	ug/L							
n-Nitrosodi-n-propylamine	ND	5.0	1.7	ug/L							

Client Name: Victor Valley Reclamation Authority
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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Blank (7E02091-BLK2)					Prepared: 05/02/17 Analyzed: 05/04/17						
Nitrobenzene	ND	1.0	1.0	ug/L							
Pentachlorophenol	ND	1.0	1.0	ug/L							
Phenol	ND	1.0	1.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*22*			ug/L	*37.5*		*58.3*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*15*			ug/L	*25.0*		*58.5*	*30-110*			
Surrogate: 2-Fluorophenol	*15*			ug/L	*37.5*		*41.2*	*10-63*			
Surrogate: 4-Terphenyl-d14	*18*			ug/L	*25.0*		*70.1*	*34-125*			
Surrogate: Nitrobenzene-d5	*13*			ug/L	*25.0*		*52.1*	*24-112*			
Surrogate: Phenol-d6	*9.6*			ug/L	*37.5*		*25.6*	*10-47*			
LCS (7E02091-BS1)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	26.5	2.0	2.0	ug/L	50.0		53.1	44-142			
2-Chlorophenol	46.4	4.0	3.6	ug/L	75.0		61.8	23-134			
2,4-Dichlorophenol	45.5	2.0	2.0	ug/L	75.0		60.6	39-135			
2,4-Dimethylphenol	48.5	2.0	2.0	ug/L	75.0		64.6	32-119			
2,4-Dinitrotoluene	24.8	10	3.7	ug/L	50.0		49.5	39-139			
4-Chloro-3-methylphenol	45.6	2.0	2.0	ug/L	75.0		60.8	22-147			
4-Nitrophenol	19.4	10	2.3	ug/L	75.0		25.8	5-132			
Butyl benzyl phthalate	32.5	20	3.3	ug/L	50.0		65.0	5-152			
Isophorone	29.4	2.0	2.0	ug/L	50.0		58.8	21-196			
n-Nitrosodi-n-propylamine	27.0	10	3.4	ug/L	50.0		53.9	10-230			
Pentachlorophenol	38.4	2.0	2.0	ug/L	75.0		51.1	14-176			
Phenol	23.3	2.0	2.0	ug/L	75.0		31.1	5-112			
Surrogate: 2,4,6-Tribromophenol	*48*			ug/L	*75.0*		*63.5*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*31*			ug/L	*50.0*		*61.6*	*30-110*			
Surrogate: 2-Fluorophenol	*34*			ug/L	*75.0*		*45.7*	*10-63*			
Surrogate: 4-Terphenyl-d14	*36*			ug/L	*50.0*		*72.4*	*34-125*			
Surrogate: Nitrobenzene-d5	*27*			ug/L	*50.0*		*54.8*	*24-112*			
Surrogate: Phenol-d6	*23*			ug/L	*75.0*		*30.1*	*10-47*			

Client Name: Victor Valley Reclamation Authority
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Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
LCS Dup (7E02091-BSD1)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	25.7	2.0	2.0	ug/L	50.0		51.5	44-142	3.10	40	
2-Chlorophenol	44.4	4.0	3.6	ug/L	75.0		59.3	23-134	4.27	40	
2,4-Dichlorophenol	44.7	2.0	2.0	ug/L	75.0		59.6	39-135	1.73	40	
2,4-Dimethylphenol	47.4	2.0	2.0	ug/L	75.0		63.1	32-119	2.32	40	
2,4-Dinitrotoluene	23.1	10	3.7	ug/L	50.0		46.2	39-139	6.98	40	
4-Chloro-3-methylphenol	45.4	2.0	2.0	ug/L	75.0		60.5	22-147	0.506	40	
4-Nitrophenol	17.9	10	2.3	ug/L	75.0		23.9	5-132	7.67	40	
Butyl benzyl phthalate	30.5	20	3.3	ug/L	50.0		61.1	5-152	6.28	40	
Isophorone	28.9	2.0	2.0	ug/L	50.0		57.7	21-196	1.89	40	
n-Nitrosodi-n-propylamine	26.1	10	3.4	ug/L	50.0		52.2	10-230	3.17	40	
Pentachlorophenol	35.2	2.0	2.0	ug/L	75.0		46.9	14-176	8.59	40	
Phenol	21.5	2.0	2.0	ug/L	75.0		28.7	5-112	7.89	40	
Surrogate: 2,4,6-Tribromophenol	*45*			ug/L	*75.0*		*59.4*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*29*			ug/L	*50.0*		*58.6*	*30-110*			
Surrogate: 2-Fluorophenol	*32*			ug/L	*75.0*		*42.1*	*10-63*			
Surrogate: 4-Terphenyl-d14	*34*			ug/L	*50.0*		*67.4*	*34-125*			
Surrogate: Nitrobenzene-d5	*27*			ug/L	*50.0*		*53.3*	*24-112*			
Surrogate: Phenol-d6	*20*			ug/L	*75.0*		*27.3*	*10-47*			
Matrix Spike (7E02091-MS1)		**Source: B7D2316-02**			Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	11.4	1.0	1.0	ug/L	24.0	ND	47.3	44-142			
2-Chlorophenol	19.0	2.0	1.8	ug/L	36.1	ND	52.8	23-134			
2,4-Dichlorophenol	18.8	1.0	1.0	ug/L	36.1	ND	52.1	39-135			
2,4-Dimethylphenol	18.7	1.0	1.0	ug/L	36.1	ND	51.8	32-119			
2,4-Dinitrotoluene	11.2	5.0	1.8	ug/L	24.0	ND	46.5	39-139			
4-Chloro-3-methylphenol	20.3	1.0	1.0	ug/L	36.1	ND	56.2	22-147			
4-Nitrophenol	7.52	5.0	1.1	ug/L	36.1	ND	20.9	5-132			
Butyl benzyl phthalate	14.2	10	1.6	ug/L	24.0	ND	58.9	5-152			
Isophorone	12.8	1.0	1.0	ug/L	24.0	ND	53.1	21-196			
n-Nitrosodi-n-propylamine	11.5	5.0	1.7	ug/L	24.0	ND	48.0	5-230			
Pentachlorophenol	18.5	1.0	1.0	ug/L	36.1	ND	51.2	14-176			
Phenol	8.82	1.0	1.0	ug/L	36.1	ND	24.5	5-112			
Surrogate: 2,4,6-Tribromophenol	*22*			ug/L	*36.1*		*60.9*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*13*			ug/L	*24.0*		*54.5*	*30-110*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Matrix Spike (7E02091-MS1)		**Source: B7D2316-02**			Prepared: 05/02/17	Analyzed: 05/04/17					
Surrogate: 2-Fluorophenol	*13*			ug/L	*36.1*		*37.1*	*10-63*			
Surrogate: 4-Terphenyl-d14	*14*			ug/L	*24.0*		*58.9*	*34-125*			
Surrogate: Nitrobenzene-d5	*12*			ug/L	*24.0*		*48.7*	*24-112*			
Surrogate: Phenol-d6	*8.4*			ug/L	*36.1*		*23.3*	*10-47*			
Matrix Spike Dup (7E02091-MSD1)		**Source: B7D2316-02**			Prepared: 05/02/17	Analyzed: 05/05/17					
1,2,4-Trichlorobenzene	12.7	1.0	1.0	ug/L	24.0	ND	52.8	44-142	11.1	40	
2-Chlorophenol	21.4	2.0	1.8	ug/L	36.1	ND	59.2	23-134	11.5	40	
2,4-Dichlorophenol	21.2	1.0	1.0	ug/L	36.1	ND	58.9	39-135	12.2	40	
2,4-Dimethylphenol	20.7	1.0	1.0	ug/L	36.1	ND	57.4	32-119	10.2	40	
2,4-Dinitrotoluene	11.6	5.0	1.8	ug/L	24.0	ND	48.3	39-139	3.84	40	
4-Chloro-3-methylphenol	21.8	1.0	1.0	ug/L	36.1	ND	60.4	22-147	7.09	40	
4-Nitrophenol	10.1	5.0	1.1	ug/L	36.1	ND	28.0	5-132	29.1	40	
Butyl benzyl phthalate	14.9	10	1.6	ug/L	24.0	ND	62.0	5-152	5.03	40	
Isophorone	13.7	1.0	1.0	ug/L	24.0	ND	57.0	21-196	7.12	40	
n-Nitrosodi-n-propylamine	12.8	5.0	1.7	ug/L	24.0	ND	53.2	5-230	10.2	40	
Pentachlorophenol	20.0	1.0	1.0	ug/L	36.1	ND	55.3	14-176	7.76	40	
Phenol	10.2	1.0	1.0	ug/L	36.1	ND	28.2	5-112	14.2	40	
Surrogate: 2,4,6-Tribromophenol	*23*			ug/L	*36.1*		*63.3*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*14*			ug/L	*24.0*		*59.5*	*30-110*			
Surrogate: 2-Fluorophenol	*15*			ug/L	*36.1*		*41.3*	*10-63*			
Surrogate: 4-Terphenyl-d14	*16*			ug/L	*24.0*		*65.0*	*34-125*			
Surrogate: Nitrobenzene-d5	*13*			ug/L	*24.0*		*52.2*	*24-112*			
Surrogate: Phenol-d6	*9.5*			ug/L	*36.1*		*26.2*	*10-47*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01114 - EPA 3510C											
Blank (7E01114-BLK1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	ND	0.05	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	0.05	ug/L							
Acenaphthene	ND	0.05	0.05	ug/L							
Acenaphthylene	ND	0.05	0.05	ug/L							
Anthracene	ND	0.05	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	0.05	ug/L							
Benzo(ghi)perylene	ND	0.05	0.05	ug/L							
Benzo(k)fluoranthene	ND	0.05	0.05	ug/L							
Chrysene	ND	0.05	0.05	ug/L							
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L							
Fluoranthene	ND	0.05	0.05	ug/L							
Fluorene	ND	0.05	0.05	ug/L							
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L							
Naphthalene	ND	0.05	0.05	ug/L							
Phenanthrene	ND	0.05	0.05	ug/L							
Pyrene	ND	0.05	0.05	ug/L							
Surrogate: Anthracene-d10	*0.043*			ug/L	*0.0500*		*86.4*	*24-110*			
LCS (7E01114-BS1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	0.391	0.05	0.05	ug/L	0.500		78.2	46-103			
Benzo(b)fluoranthene	0.362	0.05	0.05	ug/L	0.500		72.3	49-110			
Acenaphthene	0.302	0.05	0.05	ug/L	0.500		60.5	42-91			
Acenaphthylene	0.326	0.05	0.05	ug/L	0.500		65.3	36-96			
Anthracene	0.354	0.05	0.05	ug/L	0.500		70.7	29-110			
Benzo(a)pyrene	0.368	0.05	0.05	ug/L	0.500		73.6	43-116			
Benzo(ghi)perylene	0.344	0.05	0.05	ug/L	0.500		68.9	37-128			
Benzo(k)fluoranthene	0.354	0.05	0.05	ug/L	0.500		70.7	38-127			
Chrysene	0.342	0.05	0.05	ug/L	0.500		68.4	45-107			
Dibenzo(a,h)anthracene	0.372	0.05	0.05	ug/L	0.500		74.5	43-129			
Fluoranthene	0.361	0.05	0.05	ug/L	0.500		72.2	38-113			
Fluorene	0.336	0.05	0.05	ug/L	0.500		67.2	42-99			
Indeno(1,2,3-cd)pyrene	0.358	0.05	0.05	ug/L	0.500		71.5	35-145			
Naphthalene	0.299	0.05	0.05	ug/L	0.500		59.9	36-90			
Phenanthrene	0.323	0.05	0.05	ug/L	0.500		64.5	33-104			
Pyrene	0.355	0.05	0.05	ug/L	0.500		71.1	42-113			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01114 - EPA 3510C											
LCS (7E01114-BS1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Surrogate: Anthracene-d10	*0.048*			ug/L	*0.0500*		*95.5*	*24-110*			
LCS Dup (7E01114-BSD1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	0.415	0.05	0.05	ug/L	0.500		82.9	46-103	5.88	40	
Benzo(b)fluoranthene	0.384	0.05	0.05	ug/L	0.500		76.9	49-110	6.11	40	
Acenaphthene	0.342	0.05	0.05	ug/L	0.500		68.4	42-91	12.3	40	
Acenaphthylene	0.368	0.05	0.05	ug/L	0.500		73.6	36-96	12.0	40	
Anthracene	0.381	0.05	0.05	ug/L	0.500		76.1	29-110	7.31	40	
Benzo(a)pyrene	0.370	0.05	0.05	ug/L	0.500		74.0	43-116	0.565	40	
Benzo(ghi)perylene	0.366	0.05	0.05	ug/L	0.500		73.1	37-128	6.01	40	
Benzo(k)fluoranthene	0.380	0.05	0.05	ug/L	0.500		76.0	38-127	7.27	40	
Chrysene	0.360	0.05	0.05	ug/L	0.500		72.1	45-107	5.25	40	
Dibenzo(a,h)anthracene	0.394	0.05	0.05	ug/L	0.500		78.7	43-129	5.53	40	
Fluoranthene	0.388	0.05	0.05	ug/L	0.500		77.6	38-113	7.11	40	
Fluorene	0.377	0.05	0.05	ug/L	0.500		75.5	42-99	11.7	40	
Indeno(1,2,3-cd)pyrene	0.377	0.05	0.05	ug/L	0.500		75.3	35-145	5.18	40	
Naphthalene	0.334	0.05	0.05	ug/L	0.500		66.9	36-90	11.1	40	
Phenanthrene	0.354	0.05	0.05	ug/L	0.500		70.9	33-104	9.40	40	
Pyrene	0.391	0.05	0.05	ug/L	0.500		78.3	42-113	9.69	40	
Surrogate: Anthracene-d10	*0.050*			ug/L	*0.0500*		*100*	*24-110*			
Matrix Spike (7E01114-MS1)		**Source: B7D2403-01**			Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	0.350	0.05	0.05	ug/L	0.472	ND	74.2	10-108			
Benzo(b)fluoranthene	0.175	0.05	0.05	ug/L	0.472	ND	37.0	10-103			
Acenaphthene	0.294	0.05	0.05	ug/L	0.472	ND	62.3	12-106			
Acenaphthylene	0.331	0.05	0.05	ug/L	0.472	ND	70.1	14-98			
Anthracene	0.349	0.05	0.05	ug/L	0.472	ND	74.0	10-108			
Benzo(a)pyrene	0.180	0.05	0.05	ug/L	0.472	ND	38.1	10-100			
Benzo(ghi)perylene	0.0613	0.05	0.05	ug/L	0.472	ND	13.0	10-70			
Benzo(k)fluoranthene	0.165	0.05	0.05	ug/L	0.472	ND	35.0	10-114			
Chrysene	0.302	0.05	0.05	ug/L	0.472	ND	64.0	10-100			
Dibenzo(a,h)anthracene	0.0631	0.05	0.05	ug/L	0.472	ND	13.4	10-75			
Fluoranthene	0.380	0.05	0.05	ug/L	0.472	ND	80.5	10-111			
Fluorene	0.328	0.05	0.05	ug/L	0.472	ND	69.4	12-107			
Indeno(1,2,3-cd)pyrene	0.0645	0.05	0.05	ug/L	0.472	ND	13.7	10-96			
Naphthalene	0.285	0.05	0.05	ug/L	0.472	ND	60.4	12-103			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 09-May-2017

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01114 - EPA 3510C											
Matrix Spike (7E01114-MS1)		**Source: B7D2403-01**			Prepared: 05/01/17		Analyzed: 05/03/17				
Phenanthrene	0.318	0.05	0.05	ug/L	0.472	ND	67.3	12-108			
Pyrene	0.363	0.05	0.05	ug/L	0.472	ND	76.9	10-107			
Surrogate: Anthracene-d10	*0.047*			ug/L	*0.0472*		*99.3*	*24-110*			
Matrix Spike Dup (7E01114-MSD1)		**Source: B7D2403-01**			Prepared: 05/01/17		Analyzed: 05/03/17				
Benzo(a)anthracene	0.291	0.05	0.05	ug/L	0.472	ND	61.7	10-108	18.4	40	
Benzo(b)fluoranthene	0.145	0.05	0.05	ug/L	0.472	ND	30.8	10-103	18.2	40	
Acenaphthene	0.314	0.05	0.05	ug/L	0.472	ND	66.5	12-106	6.56	40	
Acenaphthylene	0.364	0.05	0.05	ug/L	0.472	ND	77.3	14-98	9.67	40	
Anthracene	0.370	0.05	0.05	ug/L	0.472	ND	78.4	10-108	5.66	40	
Benzo(a)pyrene	0.152	0.05	0.05	ug/L	0.472	ND	32.1	10-100	17.1	40	
Benzo(ghi)perylene	0.0642	0.05	0.05	ug/L	0.472	ND	13.6	10-70	4.62	40	
Benzo(k)fluoranthene	0.129	0.05	0.05	ug/L	0.472	ND	27.4	10-114	24.4	40	
Chrysene	0.242	0.05	0.05	ug/L	0.472	ND	51.2	10-100	22.2	40	
Dibenzo(a,h)anthracene	0.0689	0.05	0.05	ug/L	0.472	ND	14.6	10-75	8.84	40	
Fluoranthene	0.358	0.05	0.05	ug/L	0.472	ND	75.8	10-111	5.95	40	
Fluorene	0.355	0.05	0.05	ug/L	0.472	ND	75.2	12-107	7.92	40	
Indeno(1,2,3-cd)pyrene	0.0702	0.05	0.05	ug/L	0.472	ND	14.9	10-96	8.36	40	
Naphthalene	0.321	0.05	0.05	ug/L	0.472	ND	68.0	12-103	11.8	40	
Phenanthrene	0.330	0.05	0.05	ug/L	0.472	ND	70.0	12-108	3.93	40	
Pyrene	0.340	0.05	0.05	ug/L	0.472	ND	72.1	10-107	6.37	40	
Surrogate: Anthracene-d10	*0.049*			ug/L	*0.0472*		*105*	*24-110*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Notes and Definitions

Cr+6: Regulatory 15 minute holding time for sample filtration and preservation exceeded B7D2403-01

J	Estimated value
NCALhNI	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, therefore data not impacted.
NCEVE	In an acidified sample, this compound degrades and is not detectable as 2-Chloroethylvinyl ether. Its degradation product is 2-Chloroethanol, which is not an analyte of this method.
QBfil	Method blank was filtered prior to processing.
QCEVE	In an acidified sample, this compound degrades and is not detectable as 2-Chloroethylvinyl ether. Its degradation product is 2-Chloroethanol, which is not an analyte of this method.
QFinP	Follow-up in progress.
QFpas	Follow-up result within laboratory acceptance criteria.
QMout	MS and/or MSD recovery did not meet laboratory acceptance criteria.
QOcal	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
ND:	Analyte NOT DETECTED at or above the Method Detection Limit **(if MDL is reported)**, otherwise at or above the Reportable Detection Limit (RDL)
NR:	Not Reported
RDL:	Reportable Detection Limit
MDL:	Method Detection Limit

* / (Non-NELAP): NELAP does not offer accreditation for this analyte/method/matrix combination

BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

Cindy A. Waddell

cc:

e-Standard_No Alias.rpt

BABCOCK Laboratories, Inc.
The Standard of Excellence for Over 100 Years

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 09-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2403
Received on Ice (Y/N): Yes Temp: 4 °C

CONTRACT LABORATORYCHAIN OF CUSTODY AND ANALYSIS REQUESTRECORD

Victor Valley Wastewater Reclamation Authority

A Joint Powers Authority and Public Agency of the State of California

Plant Address: 20111 Shay Road · Victorville, CA92394 · TEL: (760) 246-8638 FAX: (760) 246-5440

Website: www.vvwra.com E-mail: edavis@vvwra.com

Project Name: Hesperia Groundwater Monitoring Wells
Project Contact: Eugene Davis (760) 246-8638 ext. 287
Sampler Name: Ben Stevens
Sampler Signature:

VVWRAID #	Sample Location/Description	Sample Date	Sample Time	Sample Type: Grab	Sample Type: Composite	Sample Matrix (WW, DW, GW, SG)	Laboratory Analyses Requested: Ammonia-N	TKN	MBAS	Nitrate - N	Chloride & Sulfate	T. Dissolved Solids	Cyanide	ewCr-6 (218.6)	Metals	EPA 624-ML	EPA 625-ML	EPA 625 -SIM-ML	Total # of Containers	Sample Preservation Methods: Refrigeration	H_2SO_4 pH<2	HNO_3 pH<2	NaOH HCL	Buffer(Na2CO3/Na 2HCO3/ (NH4)2SO4)	Container Type
	HSP2-570	4-27-16	1025	X		GW	X	X											1		1				Pint poly.
	HSP2-570		1025	X		GW			X	X	X	X							1	1					Quart poly.
	HSP2-570		1025	X		GW							X						1				1		Pint poly.
	HSP2-570		1025	X		GW								X					1					1	125 mL poly.
	HSP2-570		1025	X		GW									X				1			1			Pint poly.
	HSP2-570		1025	X		GW										X			4				2		40mL glass amber vial
	HSP2-570		1025	X		GW											X		3	3					1-Liter glass amber
	HSP2-570		1025	X		GW												X	3	3					1-Liter glass amber

TAT: ____ 24 hr ____ 48 hr ____ 72 hr _X_ Standard

Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print: Ben Stevens	4-27-17	Print: Hector Marenco	Print: Hector Marenco	4-27-17	Print: Angie Brown
Company: DS	22°	Company: DS	Company: DS	1550	Company: ESS
Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print:		Print:	Print:		Print:
Company:		Company:	Company:		Company:

Sample Condition Upon Receipt by Laboratory:
Samples Received on Ice? (Yes) No Temperature
Samples Received Intact? (Yes) No 4 °C

Laboratory Notes
*Metals to include: Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

Samples sent via courier to: Babcock Laboratories, Inc.
Lab # B7D2403

Please Fax a copy of the completed Chain of Custody document to: Eugene Davis, VVWRA at (760) 954-5006 01-54-520-7170

AB

APR 27 2017

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Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

Sample Identification

Lab Sample #	Client Sample ID	Matrix	Date Sampled	By	Date Submitted	By
B7D2469-01	HSP1-580 Grab	Liquid	04/28/17 8:43	Ben Stevens	04/28/17 13:08	Courier (Hector N.)-DE

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Laboratory Reference Number
B7D2469-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP1-580	Liquid	04/28/17 08:43	04/28/17 13:08

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Anions								
Chloride	12	1.0	0.56	mg/L	EPA 300.0	04/29/17 01:40	IBR	
Sulfate	7.7	0.50	0.23	mg/L	EPA 300.0	04/29/17 01:40	IBR	
Nitrate as N	3.8	0.20	0.055	mg/L	EPA 300.0	04/29/17 01:40	IBR	
Solids								
Total Dissolved Solids	200	20	12	mg/L	SM 2540C	05/03/17 18:05	kbs	
Surfactants								
MBAS	ND	0.08	0.05	mg/L	SM 5540C	04/28/17 20:05	kbs	
General Inorganics								
Cyanide	ND	0.005	0.004	mg/L	SM 4500CN E	05/01/17 12:42	sll	
Nutrients								
Ammonia-Nitrogen	ND	0.10	0.048	mg/L	SM4500NH3H	04/30/17 14:58	sll	
Kjeldahl Nitrogen	0.12	0.10	0.063	mg/L	EPA 351.2	05/09/17 10:08	jma	
Metals and Metalloids								
Hexavalent Chromium	0.19	1.0	0.024	ug/L	EPA 218.6	05/03/17 12:25	mel	J
Mercury	ND	0.20	0.10	ug/L	EPA 200.8	05/04/17 15:01	ap	
Metals and Metalloids; EPA SW846 Series								
Antimony	ND	6.0	3.0	ug/L	EPA 6020	05/04/17 15:01	ap	
Arsenic	4.1	2.0	1.2	ug/L	EPA 6020	05/04/17 15:01	ap	
Beryllium	ND	1.0	0.57	ug/L	EPA 6020	05/04/17 15:01	ap	
Cadmium	ND	1.0	0.57	ug/L	EPA 6020	05/04/17 15:01	ap	
Total Chromium	ND	10	4.2	ug/L	EPA 6020	05/04/17 15:01	ap	
Copper	ND	10	5.0	ug/L	EPA 6020	05/04/17 15:01	ap	
Lead	ND	5.0	2.5	ug/L	EPA 6020	05/04/17 15:01	ap	
Nickel	ND	10	5.0	ug/L	EPA 6020	05/04/17 15:01	ap	
Selenium	5.1	5.0	2.5	ug/L	EPA 6020	05/04/17 15:01	ap	
Silver	ND	10	5.0	ug/L	EPA 6020	05/04/17 15:01	ap	
Thallium	ND	1.0	0.50	ug/L	EPA 6020	05/04/17 15:01	ap	

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Laboratory Reference Number
B7D2469-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP1-580	Liquid	04/28/17 08:43	04/28/17 13:08

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Metals and Metalloids; EPA SW846 Series								
Zinc	ND	10	5.0	ug/L	EPA 6020	05/04/17 15:01	ap	
Volatile Organic Compounds by EPA 624								
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L	EPA 624	05/02/17 19:27	eec	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L	EPA 624	05/02/17 19:27	eec	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L	EPA 624	05/02/17 19:27	eec	
1,1-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	05/02/17 19:27	eec	
1,1-Dichloroethene	ND	0.50	0.12	ug/L	EPA 624	05/02/17 19:27	eec	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L	EPA 624	05/02/17 19:27	eec	
1,2-Dichloroethane	ND	0.50	0.12	ug/L	EPA 624	05/02/17 19:27	eec	
1,2-Dichloropropane	ND	0.50	0.13	ug/L	EPA 624	05/02/17 19:27	eec	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L	EPA 624	05/02/17 19:27	eec	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L	EPA 624	05/02/17 19:27	eec	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L	EPA 624	05/02/17 19:27	eec	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L	EPA 624	05/02/17 19:27	eec	NCEVE
Acrolein	ND	2.0	1.1	ug/L	EPA 624	05/02/17 19:27	eec	
Acrylonitrile	ND	2.0	0.59	ug/L	EPA 624	05/02/17 19:27	eec	
Benzene	ND	0.50	0.067	ug/L	EPA 624	05/02/17 19:27	eec	
Bromodichloromethane	ND	0.50	0.24	ug/L	EPA 624	05/02/17 19:27	eec	
Bromoform	ND	0.50	0.34	ug/L	EPA 624	05/02/17 19:27	eec	
Bromomethane	ND	0.50	0.15	ug/L	EPA 624	05/02/17 19:27	eec	
Carbon Tetrachloride	ND	0.50	0.20	ug/L	EPA 624	05/02/17 19:27	eec	
Chlorobenzene	ND	0.50	0.071	ug/L	EPA 624	05/02/17 19:27	eec	
Chloroethane	ND	0.50	0.19	ug/L	EPA 624	05/02/17 19:27	eec	
Chloroform	1.1	0.50	0.44	ug/L	EPA 624	05/02/17 19:27	eec	
Chloromethane	ND	0.50	0.097	ug/L	EPA 624	05/02/17 19:27	eec	
Dibromochloromethane	ND	0.50	0.18	ug/L	EPA 624	05/02/17 19:27	eec	
Ethylbenzene	ND	0.50	0.11	ug/L	EPA 624	05/02/17 19:27	eec	
Methylene Chloride	ND	0.50	0.25	ug/L	EPA 624	05/02/17 19:27	eec	
Tetrachloroethene	ND	0.50	0.12	ug/L	EPA 624	05/02/17 19:27	eec	
Toluene	0.19	0.50	0.093	ug/L	EPA 624	05/02/17 19:27	eec	J
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L	EPA 624	05/02/17 19:27	eec	

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Laboratory Reference Number
B7D2469-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP1-580	Liquid	04/28/17 08:43	04/28/17 13:08

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Volatile Organic Compounds by EPA 624									
Trichloroethene	ND		0.50	0.18	ug/L	EPA 624	05/02/17 19:27	eec	
Vinyl Chloride	ND		0.50	0.081	ug/L	EPA 624	05/02/17 19:27	eec	
Surrogate: 1,2-Dichloroethane-d4	108	%	80-120			EPA 624	05/02/17 19:27	eec	
Surrogate: Bromofluorobenzene	102	%	80-120			EPA 624	05/02/17 19:27	eec	
Surrogate: Toluene-d8	98.0	%	80-120			EPA 624	05/02/17 19:27	eec	
Semivolatile Organic Compounds by EPA 625									
1,2-Diphenylhydrazine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
1,2,4-Trichlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
2-Chlorophenol	ND		2.0	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
2,4-Dichlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
2,4-Dimethylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
2,4-Dinitrophenol	ND		5.0	1.6	ug/L	EPA 625	05/05/17 03:05	JHR	
2,4-Dinitrotoluene	ND		5.0	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
2,4,6-Trichlorophenol	ND		10	1.9	ug/L	EPA 625	05/05/17 03:05	JHR	
2,6-Dinitrotoluene	ND		5.0	1.9	ug/L	EPA 625	05/05/17 03:05	JHR	
2-Nitrophenol	ND		10	2.1	ug/L	EPA 625	05/05/17 03:05	JHR	
2-Chloronaphthalene	ND		10	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
3,3'-Dichlorobenzidine	ND		5.0	2.1	ug/L	EPA 625	05/05/17 03:05	JHR	
4-Chloro-3-methylphenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
2-Methyl-4,6-Dinitrophenol	ND		5.0	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
4-Nitrophenol	ND		5.0	1.1	ug/L	EPA 625	05/05/17 03:05	JHR	
4-Bromophenyl phenyl ether	ND		5.0	1.6	ug/L	EPA 625	05/05/17 03:05	JHR	
4-Chlorophenyl phenyl ether	ND		5.0	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
Benzidine	ND		5.0	5.0	ug/L	EPA 625	05/05/17 12:20	JHR	NCALhND
Bis(2-chloroethoxy)methane	ND		5.0	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
Bis(2-Chloroethyl)ether	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Bis(2-chloroisopropyl)Ether	ND		2.0	1.9	ug/L	EPA 625	05/05/17 03:05	JHR	NCALhND
Bis(2-ethylhexyl)phthalate	ND		5.0	2.3	ug/L	EPA 625	05/05/17 03:05	JHR	
Butyl benzyl phthalate	ND		10	1.6	ug/L	EPA 625	05/05/17 03:05	JHR	
Di-n-butylphthalate	ND		10	1.9	ug/L	EPA 625	05/05/17 03:05	JHR	

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Laboratory Reference Number
B7D2469-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP1-580	Liquid	04/28/17 08:43	04/28/17 13:08

Analyte(s)	Result		RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625									
Di-n-octylphthalate	ND		10	2.6	ug/L	EPA 625	05/05/17 03:05	JHR	
Diethyl phthalate	ND		2.0	1.8	ug/L	EPA 625	05/05/17 03:05	JHR	
Dimethyl phthalate	ND		2.0	1.7	ug/L	EPA 625	05/05/17 03:05	JHR	
Hexachlorocyclopentadiene	ND		5.0	1.7	ug/L	EPA 625	05/05/17 03:05	JHR	
Hexachlorobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Hexachlorobutadiene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Hexachloroethane	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Isophorone	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
N-Nitrosodiphenylamine	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
N-Nitrosodimethylamine	ND		5.0	1.4	ug/L	EPA 625	05/05/17 03:05	JHR	
n-Nitrosodi-n-propylamine	ND		5.0	1.7	ug/L	EPA 625	05/05/17 03:05	JHR	
Nitrobenzene	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Pentachlorophenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Phenol	ND		1.0	1.0	ug/L	EPA 625	05/05/17 03:05	JHR	
Surrogate: 2,4,6-Tribromophenol	45.8	%	27-122			EPA 625	05/05/17 03:05	JHR	
Surrogate: 2-Fluorobiphenyl	46.6	%	30-110			EPA 625	05/05/17 03:05	JHR	
Surrogate: 2-Fluorophenol	34.8	%	10-63			EPA 625	05/05/17 03:05	JHR	
Surrogate: 4-Terphenyl-d14	57.2	%	34-125			EPA 625	05/05/17 03:05	JHR	
Surrogate: Nitrobenzene-d5	41.0	%	24-112			EPA 625	05/05/17 03:05	JHR	
Surrogate: Phenol-d6	20.5	%	10-47			EPA 625	05/05/17 03:05	JHR	
Semivolatile Organic Compounds by EPA 625 SIM									
Benzo(a)anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Benzo(b)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Acenaphthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Acenaphthylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Anthracene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Benzo(a)pyrene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Benzo(ghi)perylene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Benzo(k)fluoranthene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Chrysene	ND		0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	

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Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Laboratory Reference Number
B7D2469-01

Sample Description	Matrix	Sampled Date/Time	Received Date/Time
HSP1-580	Liquid	04/28/17 08:43	04/28/17 13:08

Analyte(s)	Result	RDL	MDL	Units	Method	Analysis Date	Analyst	Flag
Semivolatile Organic Compounds by EPA 625 SIM								
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Fluoranthene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Fluorene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Naphthalene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Phenanthrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Pyrene	ND	0.05	0.05	ug/L	EPA625 SIM	05/03/17 13:56	JHR	
Surrogate: Anthracene-d10	98.4	% 24-110			EPA625 SIM	05/03/17 13:56	JHR	

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Work Order Number: B7D2469
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Anions - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28029 - Analyzed as Received IC											
Blank (7D28029-BLK1)				Prepared & Analyzed: 04/28/17							
Sulfate	0.366	0.50	0.23	mg/L							J
Chloride	ND	1.0	0.56	mg/L							
Nitrate as N	ND	0.20	0.055	mg/L							
LCS (7D28029-BS1)				Prepared & Analyzed: 04/28/17							
Sulfate	48.5	0.50	0.23	mg/L	50.0		97.0	90-110			
Chloride	49.5	1.0	0.56	mg/L	50.0		99.1	90-110			
Nitrate as N	11.0	0.20	0.055	mg/L	11.3		97.6	90-110			
Matrix Spike (7D28029-MS1)		**Source: B7D2437-01**		Prepared & Analyzed: 04/28/17							
Sulfate	287	0.50	0.23	mg/L	50.0	227	121	75-128			QOcal
Chloride	107	1.0	0.56	mg/L	50.0	46.7	121	84-129			
Nitrate as N	21.5	0.20	0.055	mg/L	4.52	16.0	123	75-131			
Matrix Spike (7D28029-MS2)		**Source: B7D2469-01**		Prepared & Analyzed: 04/29/17							
Sulfate	65.5	0.50	0.23	mg/L	50.0	7.66	116	75-128			
Chloride	72.3	1.0	0.56	mg/L	50.0	11.9	121	84-129			
Nitrate as N	9.13	0.20	0.055	mg/L	4.52	3.77	119	75-131			
Matrix Spike Dup (7D28029-MSD1)		**Source: B7D2437-01**		Prepared & Analyzed: 04/28/17							
Sulfate	287	0.50	0.23	mg/L	50.0	227	119	75-128	0.203	20	QOcal
Chloride	107	1.0	0.56	mg/L	50.0	46.7	121	84-129	0.134	20	
Nitrate as N	21.5	0.20	0.055	mg/L	4.52	16.0	123	75-131	0.0376	20	

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Received on Ice (Y/N): Yes Temp: 9 °C

Solids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E03121 - Analyzed as received											
Blank (7E03121-BLK1)				Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	ND	10	5.8	mg/L							
LCS (7E03121-BS1)				Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	734	20	12	mg/L	746		98.4	90-110			
Duplicate (7E03121-DUP1)		**Source: B7D2418-01**		Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	660	20	12	mg/L		641			2.92	20	
Duplicate (7E03121-DUP2)		**Source: B7D2510-01**		Prepared & Analyzed: 05/03/17							
Total Dissolved Solids	237	20	12	mg/L		247			4.13	20	

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Surfactants - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D28063 - Solvent Extraction.											
Blank (7D28063-BLK1)					Prepared & Analyzed: 04/28/17						
MBAS	ND	0.08	0.05	mg/L							
LCS (7D28063-BS1)					Prepared & Analyzed: 04/28/17						
MBAS	0.342	0.08	0.05	mg/L	0.320		107	52-141			
Matrix Spike (7D28063-MS1)		**Source: B7D2468-01**			Prepared & Analyzed: 04/28/17						
MBAS	0.335	0.20	0.13	mg/L	0.400	ND	83.8	35-142			
Matrix Spike Dup (7D28063-MSD1)		**Source: B7D2468-01**			Prepared & Analyzed: 04/28/17						
MBAS	0.398	0.20	0.13	mg/L	0.400	ND	99.4	35-142	17.1	20	

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General Inorganics - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01083 - Distillation											
Blank (7E01083-BLK1)					Prepared & Analyzed: 05/01/17						
Cyanide	ND	0.005	0.004	mg/L							
LCS (7E01083-BS1)					Prepared & Analyzed: 05/01/17						
Cyanide	0.0940	0.005	0.004	mg/L	0.101		93.1	61-120			
Matrix Spike (7E01083-MS1)		**Source: B7D2469-01**			Prepared & Analyzed: 05/01/17						
Cyanide	0.0978	0.005	0.004	mg/L	0.101	ND	96.9	53-125			
Matrix Spike Dup (7E01083-MSD1)		**Source: B7D2469-01**			Prepared & Analyzed: 05/01/17						
Cyanide	0.0962	0.005	0.004	mg/L	0.101	ND	95.2	53-125	1.75	30	

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Received on Ice (Y/N): Yes Temp: 9 °C

Nutrients - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7D30076 - Analyzed as received											
Blank (7D30076-BLK1)					Prepared & Analyzed: 04/30/17						
Ammonia-Nitrogen	ND	0.10	0.048	mg/L							
LCS (7D30076-BS1)					Prepared & Analyzed: 04/30/17						
Ammonia-Nitrogen	0.770	0.10	0.048	mg/L	0.780		98.7	90-110			
Matrix Spike (7D30076-MS1)		**Source: B7D2466-01**			Prepared & Analyzed: 04/30/17						
Ammonia-Nitrogen	0.788	0.10	0.048	mg/L	0.780	ND	101	80-120			
Matrix Spike Dup (7D30076-MSD1)		**Source: B7D2466-01**			Prepared & Analyzed: 04/30/17						
Ammonia-Nitrogen	0.768	0.10	0.048	mg/L	0.780	ND	98.4	80-120	2.67	20	
Batch 7E08141 - Acid Digest											
Blank (7E08141-BLK1)					Prepared: 05/08/17 Analyzed: 05/09/17						
Kjeldahl Nitrogen	0.0780	0.10	0.063	mg/L							J
LCS (7E08141-BS1)					Prepared: 05/08/17 Analyzed: 05/09/17						
Kjeldahl Nitrogen	0.936	0.10	0.063	mg/L	1.00		93.6	80-120			
Matrix Spike (7E08141-MS1)		**Source: B7D2267-01**			Prepared: 05/08/17 Analyzed: 05/09/17						
Kjeldahl Nitrogen	156	8.0	5.0	mg/L	80.0	78.2	97.8	42-149			
Matrix Spike (7E08141-MS2)		**Source: B7D2333-01**			Prepared: 05/08/17 Analyzed: 05/09/17						
Kjeldahl Nitrogen	5.98	0.20	0.13	mg/L	2.00	3.75	111	42-149			

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Metals and Metalloids - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02131 - Filter if turbid.-IC											
Blank (7E02131-BLK1)					Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	ND	1.0	0.024	ug/L							
LCS (7E02131-BS1)					Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	5.21	1.0	0.024	ug/L	5.00		104	90-110			
Duplicate (7E02131-DUP1)		**Source: B7E0136-13**			Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	0.640	5.0	0.12	ug/L		0.622			2.93	20	J
Matrix Spike (7E02131-MS1)		**Source: B7E0136-14**			Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	0.719	5.0	0.12	ug/L	25.0	0.600	0.474	82-121			QFpas, QMout, J
Matrix Spike Dup (7E02131-MSD1)		**Source: B7E0136-14**			Prepared & Analyzed: 05/02/17						
Hexavalent Chromium	0.738	5.0	0.12	ug/L	25.0	0.600	0.550	82-121	2.61	20	QFpas, QMout, J
Batch 7E03131 - EPA 200.2 SOP M02C											
Blank (7E03131-BLK1)					Prepared & Analyzed: 05/04/17						
Mercury	ND	0.20	0.10	ug/L							
LCS (7E03131-BS1)					Prepared & Analyzed: 05/04/17						
Mercury	2.68	0.20	0.10	ug/L	2.78		96.2	85-115			
Matrix Spike (7E03131-MS1)		**Source: B7E0008-02**			Prepared & Analyzed: 05/04/17						
Mercury	2.61	0.20	0.10	ug/L	2.78	ND	93.8	75-125			
Matrix Spike Dup (7E03131-MSD1)		**Source: B7E0008-02**			Prepared & Analyzed: 05/04/17						
Mercury	2.56	0.20	0.10	ug/L	2.78	ND	92.1	75-125	1.86	20	

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Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E03131 - EPA 200.2 SOP M02C											
Blank (7E03131-BLK1)				Prepared & Analyzed: 05/04/17							
Antimony	ND	6.0	3.0	ug/L							
Arsenic	ND	2.0	1.2	ug/L							
Beryllium	ND	1.0	0.57	ug/L							
Cadmium	ND	1.0	0.57	ug/L							
Total Chromium	ND	10	4.2	ug/L							
Copper	ND	10	5.0	ug/L							
Lead	ND	5.0	2.5	ug/L							
Nickel	ND	10	5.0	ug/L							
Selenium	ND	5.0	2.5	ug/L							
Silver	ND	10	5.0	ug/L							
Thallium	ND	1.0	0.50	ug/L							
Zinc	ND	10	5.0	ug/L							
LCS (7E03131-BS1)				Prepared & Analyzed: 05/04/17							
Antimony	315	6.0	3.0	ug/L	334		94.4	85-115			
Arsenic	344	2.0	1.2	ug/L	334		103	85-115			
Beryllium	342	1.0	0.57	ug/L	334		102	85-115			
Cadmium	319	1.0	0.57	ug/L	334		95.8	85-115			
Total Chromium	329	10	4.2	ug/L	334		98.7	85-115			
Copper	314	10	5.0	ug/L	334		94.1	85-115			
Lead	315	5.0	2.5	ug/L	334		94.3	85-115			
Nickel	322	10	5.0	ug/L	334		96.5	85-115			
Selenium	336	5.0	2.5	ug/L	334		101	85-115			
Silver	306	10	5.0	ug/L	334		91.6	85-115			
Thallium	306	1.0	0.50	ug/L	334		91.9	85-115			
Zinc	334	10	5.0	ug/L	334		100	85-115			
Matrix Spike (7E03131-MS1)		**Source: B7E0008-02**		Prepared & Analyzed: 05/04/17							
Antimony	353	6.0	3.0	ug/L	334	ND	106	75-125			
Arsenic	392	2.0	1.2	ug/L	334	32.3	108	75-125			
Beryllium	308	1.0	0.57	ug/L	334	ND	92.3	75-125			
Cadmium	314	1.0	0.57	ug/L	334	ND	94.3	75-125			
Total Chromium	352	10	4.2	ug/L	334	ND	105	75-125			
Copper	313	10	5.0	ug/L	334	9.10	91.1	75-125			
Lead	305	5.0	2.5	ug/L	334	ND	91.3	75-125			
Nickel	329	10	5.0	ug/L	334	6.12	96.8	75-125			

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Metals and Metalloids; EPA SW846 Series - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E03131 - EPA 200.2 SOP M02C											
Matrix Spike (7E03131-MS1)		**Source: B7E0008-02**		Prepared & Analyzed: 05/04/17							
Selenium	340	5.0	2.5	ug/L	334	2.55	101	75-125			
Silver	303	10	5.0	ug/L	334	ND	90.8	75-125			
Thallium	297	1.0	0.50	ug/L	334	ND	89.0	75-125			
Zinc	313	10	5.0	ug/L	334	ND	93.8	75-125			
Matrix Spike Dup (7E03131-MSD1)		**Source: B7E0008-02**		Prepared & Analyzed: 05/04/17							
Antimony	341	6.0	3.0	ug/L	334	ND	102	75-125	3.39	20	
Arsenic	386	2.0	1.2	ug/L	334	32.3	106	75-125	1.43	20	
Beryllium	304	1.0	0.57	ug/L	334	ND	91.1	75-125	1.26	20	
Cadmium	308	1.0	0.57	ug/L	334	ND	92.2	75-125	2.17	20	
Total Chromium	345	10	4.2	ug/L	334	ND	104	75-125	1.86	20	
Copper	308	10	5.0	ug/L	334	9.10	89.6	75-125	1.60	20	
Lead	299	5.0	2.5	ug/L	334	ND	89.7	75-125	1.82	20	
Nickel	325	10	5.0	ug/L	334	6.12	95.5	75-125	1.34	20	
Selenium	337	5.0	2.5	ug/L	334	2.55	100	75-125	0.887	20	
Silver	296	10	5.0	ug/L	334	ND	88.6	75-125	2.48	20	
Thallium	292	1.0	0.50	ug/L	334	ND	87.7	75-125	1.47	20	
Zinc	308	10	5.0	ug/L	334	ND	92.5	75-125	1.44	20	

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02108 - Purge and Trap											
Blank (7E02108-BLK1)					Prepared & Analyzed: 05/02/17						
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L							
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L							
1,1-Dichloroethane	ND	0.50	0.12	ug/L							
1,1-Dichloroethene	ND	0.50	0.12	ug/L							
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L							
1,2-Dichloroethane	ND	0.50	0.12	ug/L							
1,2-Dichloropropane	ND	0.50	0.13	ug/L							
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L							
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L							
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L							
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L							QCEVE
Acrolein	ND	2.0	1.1	ug/L							
Acrylonitrile	ND	2.0	0.59	ug/L							
Benzene	ND	0.50	0.067	ug/L							
Bromodichloromethane	ND	0.50	0.24	ug/L							
Bromoform	ND	0.50	0.34	ug/L							
Bromomethane	ND	0.50	0.15	ug/L							
Carbon Tetrachloride	ND	0.50	0.20	ug/L							
Chlorobenzene	ND	0.50	0.071	ug/L							
Chloroethane	ND	0.50	0.19	ug/L							
Chloroform	ND	0.50	0.44	ug/L							
Chloromethane	ND	0.50	0.097	ug/L							
Dibromochloromethane	ND	0.50	0.18	ug/L							
Ethylbenzene	ND	0.50	0.11	ug/L							
Methylene Chloride	ND	0.50	0.25	ug/L							
Tetrachloroethene	ND	0.50	0.12	ug/L							
Toluene	ND	0.50	0.093	ug/L							
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L							
Trichloroethene	ND	0.50	0.18	ug/L							
Vinyl Chloride	ND	0.50	0.081	ug/L							
Surrogate: 1,2-Dichloroethane-d4	*11*			ug/L	*10.0*		*105*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*104*	*80-120*			

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02108 - Purge and Trap											
Blank (7E02108-BLK1)					Prepared & Analyzed: 05/02/17						
Surrogate: Toluene-d8	*9.9*			ug/L	*10.0*		*99.1*	*80-120*			
LCS (7E02108-BS1)					Prepared & Analyzed: 05/02/17						
1,1-Dichloroethane	24.1	0.50	0.12	ug/L	25.0		96.5	70-130			
1,1-Dichloroethene	22.9	0.50	0.12	ug/L	25.0		91.5	70-130			
1,4-Dichlorobenzene	23.2	0.50	0.098	ug/L	25.0		92.9	70-130			
Benzene	23.4	0.50	0.067	ug/L	25.0		93.5	70-135			
Bromodichloromethane	23.8	0.50	0.24	ug/L	25.0		95.1	70-130			
Bromoform	24.5	0.50	0.34	ug/L	25.0		98.0	70-130			
Chloroform	23.8	0.50	0.44	ug/L	25.0		95.2	70-130			
Dibromochloromethane	22.9	0.50	0.18	ug/L	25.0		91.7	70-131			
Ethylbenzene	24.5	0.50	0.11	ug/L	25.0		98.1	70-130			
Tetrachloroethene	24.4	0.50	0.12	ug/L	25.0		97.7	70-130			
Toluene	23.6	0.50	0.093	ug/L	25.0		94.2	70-130			
Trichloroethene	24.2	0.50	0.18	ug/L	25.0		96.8	70-130			
Vinyl Chloride	24.0	0.50	0.081	ug/L	25.0		96.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	*10*			ug/L	*10.0*		*99.8*	*80-120*			
Surrogate: Bromofluorobenzene	*9.8*			ug/L	*10.0*		*97.6*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*104*	*80-120*			
LCS Dup (7E02108-BSD1)					Prepared & Analyzed: 05/02/17						
1,1-Dichloroethane	23.4	0.50	0.12	ug/L	25.0		93.6	70-130	3.03	20	
1,1-Dichloroethene	22.4	0.50	0.12	ug/L	25.0		89.6	70-130	2.03	20	
1,4-Dichlorobenzene	23.6	0.50	0.098	ug/L	25.0		94.2	70-130	1.41	20	
Benzene	22.7	0.50	0.067	ug/L	25.0		90.8	70-135	2.86	20	
Bromodichloromethane	23.5	0.50	0.24	ug/L	25.0		94.1	70-130	1.10	20	
Bromoform	25.7	0.50	0.34	ug/L	25.0		103	70-130	4.63	20	
Chloroform	23.2	0.50	0.44	ug/L	25.0		92.8	70-130	2.64	20	
Dibromochloromethane	23.2	0.50	0.18	ug/L	25.0		92.8	70-131	1.17	20	
Ethylbenzene	24.2	0.50	0.11	ug/L	25.0		96.6	70-130	1.52	20	
Tetrachloroethene	24.0	0.50	0.12	ug/L	25.0		96.1	70-130	1.65	20	
Toluene	23.1	0.50	0.093	ug/L	25.0		92.4	70-130	1.97	20	
Trichloroethene	23.8	0.50	0.18	ug/L	25.0		95.2	70-130	1.67	20	
Vinyl Chloride	23.6	0.50	0.081	ug/L	25.0		94.3	70-130	1.85	20	

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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 11-May-2017

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02108 - Purge and Trap											
LCS Dup (7E02108-BSD1)					Prepared & Analyzed: 05/02/17						
Surrogate: 1,2-Dichloroethane-d4	*9.8*			ug/L	*10.0*		*98.1*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*99.6*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*103*	*80-120*			
Duplicate (7E02108-DUP1)		**Source: B7D2468-07**			Prepared & Analyzed: 05/02/17						
1,1,1-Trichloroethane	ND	0.50	0.088	ug/L		ND				40	
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	ug/L		ND				40	
1,1,2-Trichloroethane	ND	0.50	0.14	ug/L		ND				40	
1,1-Dichloroethane	ND	0.50	0.12	ug/L		ND				20	
1,1-Dichloroethene	ND	0.50	0.12	ug/L		ND				20	
1,2-Dichlorobenzene	ND	0.50	0.17	ug/L		ND				40	
1,2-Dichloroethane	ND	0.50	0.12	ug/L		ND				40	
1,2-Dichloropropane	ND	0.50	0.13	ug/L		ND				40	
1,3-Dichlorobenzene	ND	0.50	0.099	ug/L		ND				40	
1,3-Dichloropropene (total)	ND	0.50	0.072	ug/L		ND				200	
1,4-Dichlorobenzene	ND	0.50	0.098	ug/L		ND				20	
2-Chloroethylvinyl ether	ND	5.0	1.3	ug/L		ND				40	QCEVE
Acrolein	ND	2.0	1.1	ug/L		ND				40	
Acrylonitrile	ND	2.0	0.59	ug/L		ND				40	
Benzene	ND	0.50	0.067	ug/L		ND				20	
Bromodichloromethane	ND	0.50	0.24	ug/L		ND				20	
Bromoform	ND	0.50	0.34	ug/L		ND				20	
Bromomethane	ND	0.50	0.15	ug/L		ND				40	
Carbon Tetrachloride	ND	0.50	0.20	ug/L		ND				40	
Chlorobenzene	ND	0.50	0.071	ug/L		ND				40	
Chloroethane	ND	0.50	0.19	ug/L		ND				40	
Chloroform	ND	0.50	0.44	ug/L		ND				20	
Chloromethane	ND	0.50	0.097	ug/L		ND				40	
Dibromochloromethane	ND	0.50	0.18	ug/L		ND				20	
Ethylbenzene	ND	0.50	0.11	ug/L		ND				20	
Methylene Chloride	ND	0.50	0.25	ug/L		ND				40	
Tetrachloroethene	ND	0.50	0.12	ug/L		ND				20	
Toluene	ND	0.50	0.093	ug/L		ND				20	
trans-1,2-Dichloroethene	ND	0.50	0.11	ug/L		ND				40	

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Report Date: 11-May-2017

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Volatile Organic Compounds by EPA 624 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02108 - Purge and Trap											
Duplicate (7E02108-DUP1)		**Source: B7D2468-07**			Prepared & Analyzed: 05/02/17						
Trichloroethene	ND	0.50	0.18	ug/L		ND				20	
Vinyl Chloride	ND	0.50	0.081	ug/L		ND				20	
Surrogate: 1,2-Dichloroethane-d4	*11*			ug/L	*10.0*		*107*	*80-120*			
Surrogate: Bromofluorobenzene	*10*			ug/L	*10.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*99.5*	*80-120*			
Matrix Spike (7E02108-MS1)		**Source: B7D2468-11**			Prepared & Analyzed: 05/02/17						
1,1-Dichloroethane	22.6	0.50	0.12	ug/L	25.0	ND	90.6	66.1-134			
1,1-Dichloroethene	22.3	0.50	0.12	ug/L	25.0	ND	89.1	66.6-130			
1,4-Dichlorobenzene	22.2	0.50	0.098	ug/L	25.0	ND	88.8	70-130			
Benzene	21.8	0.50	0.067	ug/L	25.0	ND	87.2	70-135			
Bromodichloromethane	22.3	0.50	0.24	ug/L	25.0	ND	89.4	70-130			
Bromoform	22.6	0.50	0.34	ug/L	25.0	ND	90.4	66.5-130			
Chloroform	22.1	0.50	0.44	ug/L	25.0	ND	88.5	70-134			
Dibromochloromethane	21.3	0.50	0.18	ug/L	25.0	ND	85.4	70-136			
Ethylbenzene	23.2	0.50	0.11	ug/L	25.0	ND	92.7	70-134			
Tetrachloroethene	23.3	0.50	0.12	ug/L	25.0	ND	93.3	70-130			
Toluene	22.2	0.50	0.093	ug/L	25.0	ND	88.9	70-130			
Trichloroethene	23.2	0.50	0.18	ug/L	25.0	ND	92.9	70-132			
Vinyl Chloride	24.2	0.50	0.081	ug/L	25.0	ND	97.0	70-137			
Surrogate: 1,2-Dichloroethane-d4	*9.6*			ug/L	*10.0*		*96.2*	*80-120*			
Surrogate: Bromofluorobenzene	*9.8*			ug/L	*10.0*		*97.6*	*80-120*			
Surrogate: Toluene-d8	*10*			ug/L	*10.0*		*104*	*80-120*			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Blank (7E02091-BLK2)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2-Diphenylhydrazine	ND	1.0	1.0	ug/L							
1,2,4-Trichlorobenzene	ND	1.0	1.0	ug/L							
2-Chlorophenol	ND	2.0	1.8	ug/L							
2,4-Dichlorophenol	ND	1.0	1.0	ug/L							
2,4-Dimethylphenol	ND	1.0	1.0	ug/L							
2,4-Dinitrophenol	ND	5.0	1.6	ug/L							
2,4-Dinitrotoluene	ND	5.0	1.8	ug/L							
2,4,6-Trichlorophenol	ND	10	1.9	ug/L							
2,6-Dinitrotoluene	ND	5.0	1.9	ug/L							
2-Nitrophenol	ND	10	2.1	ug/L							
2-Chloronaphthalene	ND	10	1.8	ug/L							
3,3'-Dichlorobenzidine	ND	5.0	2.1	ug/L							
4-Chloro-3-methylphenol	ND	1.0	1.0	ug/L							
2-Methyl-4,6-Dinitrophenol	ND	5.0	1.8	ug/L							
4-Nitrophenol	ND	5.0	1.1	ug/L							
4-Bromophenyl phenyl ether	ND	5.0	1.6	ug/L							
4-Chlorophenyl phenyl ether	ND	5.0	1.8	ug/L							
Benzidine	ND	5.0	5.0	ug/L							
Bis(2-chloroethoxy)methane	ND	5.0	1.8	ug/L							
Bis(2-Chloroethyl)ether	ND	1.0	1.0	ug/L							
Bis(2-chloroisopropyl)Ether	ND	2.0	1.9	ug/L							
Bis(2-ethylhexyl)phthalate	ND	5.0	2.3	ug/L							
Butyl benzyl phthalate	ND	10	1.6	ug/L							
Di-n-butylphthalate	ND	10	1.9	ug/L							
Di-n-octylphthalate	ND	10	2.6	ug/L							
Diethyl phthalate	ND	2.0	1.8	ug/L							
Dimethyl phthalate	ND	2.0	1.7	ug/L							
Hexachlorocyclopentadiene	ND	5.0	1.7	ug/L							
Hexachlorobenzene	ND	1.0	1.0	ug/L							
Hexachlorobutadiene	ND	1.0	1.0	ug/L							
Hexachloroethane	ND	1.0	1.0	ug/L							
Isophorone	ND	1.0	1.0	ug/L							
N-Nitrosodiphenylamine	ND	1.0	1.0	ug/L							
N-Nitrosodimethylamine	ND	5.0	1.4	ug/L							
n-Nitrosodi-n-propylamine	ND	5.0	1.7	ug/L							

Client Name: Victor Valley Reclamation Authority
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Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 11-May-2017

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Blank (7E02091-BLK2)					Prepared: 05/02/17 Analyzed: 05/04/17						
Nitrobenzene	ND	1.0	1.0	ug/L							
Pentachlorophenol	ND	1.0	1.0	ug/L							
Phenol	ND	1.0	1.0	ug/L							
Surrogate: 2,4,6-Tribromophenol	*22*			ug/L	*37.5*		*58.3*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*15*			ug/L	*25.0*		*58.5*	*30-110*			
Surrogate: 2-Fluorophenol	*15*			ug/L	*37.5*		*41.2*	*10-63*			
Surrogate: 4-Terphenyl-d14	*18*			ug/L	*25.0*		*70.1*	*34-125*			
Surrogate: Nitrobenzene-d5	*13*			ug/L	*25.0*		*52.1*	*24-112*			
Surrogate: Phenol-d6	*9.6*			ug/L	*37.5*		*25.6*	*10-47*			
LCS (7E02091-BS1)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	26.5	2.0	2.0	ug/L	50.0		53.1	44-142			
2-Chlorophenol	46.4	4.0	3.6	ug/L	75.0		61.8	23-134			
2,4-Dichlorophenol	45.5	2.0	2.0	ug/L	75.0		60.6	39-135			
2,4-Dimethylphenol	48.5	2.0	2.0	ug/L	75.0		64.6	32-119			
2,4-Dinitrotoluene	24.8	10	3.7	ug/L	50.0		49.5	39-139			
4-Chloro-3-methylphenol	45.6	2.0	2.0	ug/L	75.0		60.8	22-147			
4-Nitrophenol	19.4	10	2.3	ug/L	75.0		25.8	5-132			
Butyl benzyl phthalate	32.5	20	3.3	ug/L	50.0		65.0	5-152			
Isophorone	29.4	2.0	2.0	ug/L	50.0		58.8	21-196			
n-Nitrosodi-n-propylamine	27.0	10	3.4	ug/L	50.0		53.9	10-230			
Pentachlorophenol	38.4	2.0	2.0	ug/L	75.0		51.1	14-176			
Phenol	23.3	2.0	2.0	ug/L	75.0		31.1	5-112			
Surrogate: 2,4,6-Tribromophenol	*48*			ug/L	*75.0*		*63.5*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*31*			ug/L	*50.0*		*61.6*	*30-110*			
Surrogate: 2-Fluorophenol	*34*			ug/L	*75.0*		*45.7*	*10-63*			
Surrogate: 4-Terphenyl-d14	*36*			ug/L	*50.0*		*72.4*	*34-125*			
Surrogate: Nitrobenzene-d5	*27*			ug/L	*50.0*		*54.8*	*24-112*			
Surrogate: Phenol-d6	*23*			ug/L	*75.0*		*30.1*	*10-47*			

Client Name: Victor Valley Reclamation Authority
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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
LCS Dup (7E02091-BSD1)					Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	25.7	2.0	2.0	ug/L	50.0		51.5	44-142	3.10	40	
2-Chlorophenol	44.4	4.0	3.6	ug/L	75.0		59.3	23-134	4.27	40	
2,4-Dichlorophenol	44.7	2.0	2.0	ug/L	75.0		59.6	39-135	1.73	40	
2,4-Dimethylphenol	47.4	2.0	2.0	ug/L	75.0		63.1	32-119	2.32	40	
2,4-Dinitrotoluene	23.1	10	3.7	ug/L	50.0		46.2	39-139	6.98	40	
4-Chloro-3-methylphenol	45.4	2.0	2.0	ug/L	75.0		60.5	22-147	0.506	40	
4-Nitrophenol	17.9	10	2.3	ug/L	75.0		23.9	5-132	7.67	40	
Butyl benzyl phthalate	30.5	20	3.3	ug/L	50.0		61.1	5-152	6.28	40	
Isophorone	28.9	2.0	2.0	ug/L	50.0		57.7	21-196	1.89	40	
n-Nitrosodi-n-propylamine	26.1	10	3.4	ug/L	50.0		52.2	10-230	3.17	40	
Pentachlorophenol	35.2	2.0	2.0	ug/L	75.0		46.9	14-176	8.59	40	
Phenol	21.5	2.0	2.0	ug/L	75.0		28.7	5-112	7.89	40	
Surrogate: 2,4,6-Tribromophenol	*45*			ug/L	*75.0*		*59.4*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*29*			ug/L	*50.0*		*58.6*	*30-110*			
Surrogate: 2-Fluorophenol	*32*			ug/L	*75.0*		*42.1*	*10-63*			
Surrogate: 4-Terphenyl-d14	*34*			ug/L	*50.0*		*67.4*	*34-125*			
Surrogate: Nitrobenzene-d5	*27*			ug/L	*50.0*		*53.3*	*24-112*			
Surrogate: Phenol-d6	*20*			ug/L	*75.0*		*27.3*	*10-47*			
Matrix Spike (7E02091-MS1)		**Source: B7D2316-02**			Prepared: 05/02/17 Analyzed: 05/04/17						
1,2,4-Trichlorobenzene	11.4	1.0	1.0	ug/L	24.0	ND	47.3	44-142			
2-Chlorophenol	19.0	2.0	1.8	ug/L	36.1	ND	52.8	23-134			
2,4-Dichlorophenol	18.8	1.0	1.0	ug/L	36.1	ND	52.1	39-135			
2,4-Dimethylphenol	18.7	1.0	1.0	ug/L	36.1	ND	51.8	32-119			
2,4-Dinitrotoluene	11.2	5.0	1.8	ug/L	24.0	ND	46.5	39-139			
4-Chloro-3-methylphenol	20.3	1.0	1.0	ug/L	36.1	ND	56.2	22-147			
4-Nitrophenol	7.52	5.0	1.1	ug/L	36.1	ND	20.9	5-132			
Butyl benzyl phthalate	14.2	10	1.6	ug/L	24.0	ND	58.9	5-152			
Isophorone	12.8	1.0	1.0	ug/L	24.0	ND	53.1	21-196			
n-Nitrosodi-n-propylamine	11.5	5.0	1.7	ug/L	24.0	ND	48.0	5-230			
Pentachlorophenol	18.5	1.0	1.0	ug/L	36.1	ND	51.2	14-176			
Phenol	8.82	1.0	1.0	ug/L	36.1	ND	24.5	5-112			
Surrogate: 2,4,6-Tribromophenol	*22*			ug/L	*36.1*		*60.9*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*13*			ug/L	*24.0*		*54.5*	*30-110*			

Client Name: Victor Valley Reclamation Authority
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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E02091 - EPA 3510C											
Matrix Spike (7E02091-MS1)		**Source: B7D2316-02**			Prepared: 05/02/17 Analyzed: 05/04/17						
Surrogate: 2-Fluorophenol	*13*			ug/L	*36.1*		*37.1*	*10-63*			
Surrogate: 4-Terphenyl-d14	*14*			ug/L	*24.0*		*58.9*	*34-125*			
Surrogate: Nitrobenzene-d5	*12*			ug/L	*24.0*		*48.7*	*24-112*			
Surrogate: Phenol-d6	*8.4*			ug/L	*36.1*		*23.3*	*10-47*			
Matrix Spike Dup (7E02091-MSD1)		**Source: B7D2316-02**			Prepared: 05/02/17 Analyzed: 05/05/17						
1,2,4-Trichlorobenzene	12.7	1.0	1.0	ug/L	24.0	ND	52.8	44-142	11.1	40	
2-Chlorophenol	21.4	2.0	1.8	ug/L	36.1	ND	59.2	23-134	11.5	40	
2,4-Dichlorophenol	21.2	1.0	1.0	ug/L	36.1	ND	58.9	39-135	12.2	40	
2,4-Dimethylphenol	20.7	1.0	1.0	ug/L	36.1	ND	57.4	32-119	10.2	40	
2,4-Dinitrotoluene	11.6	5.0	1.8	ug/L	24.0	ND	48.3	39-139	3.84	40	
4-Chloro-3-methylphenol	21.8	1.0	1.0	ug/L	36.1	ND	60.4	22-147	7.09	40	
4-Nitrophenol	10.1	5.0	1.1	ug/L	36.1	ND	28.0	5-132	29.1	40	
Butyl benzyl phthalate	14.9	10	1.6	ug/L	24.0	ND	62.0	5-152	5.03	40	
Isophorone	13.7	1.0	1.0	ug/L	24.0	ND	57.0	21-196	7.12	40	
n-Nitrosodi-n-propylamine	12.8	5.0	1.7	ug/L	24.0	ND	53.2	5-230	10.2	40	
Pentachlorophenol	20.0	1.0	1.0	ug/L	36.1	ND	55.3	14-176	7.76	40	
Phenol	10.2	1.0	1.0	ug/L	36.1	ND	28.2	5-112	14.2	40	
Surrogate: 2,4,6-Tribromophenol	*23*			ug/L	*36.1*		*63.3*	*27-122*			
Surrogate: 2-Fluorobiphenyl	*14*			ug/L	*24.0*		*59.5*	*30-110*			
Surrogate: 2-Fluorophenol	*15*			ug/L	*36.1*		*41.3*	*10-63*			
Surrogate: 4-Terphenyl-d14	*16*			ug/L	*24.0*		*65.0*	*34-125*			
Surrogate: Nitrobenzene-d5	*13*			ug/L	*24.0*		*52.2*	*24-112*			
Surrogate: Phenol-d6	*9.5*			ug/L	*36.1*		*26.2*	*10-47*			

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01114 - EPA 3510C											
Blank (7E01114-BLK1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	ND	0.05	0.05	ug/L							
Benzo(b)fluoranthene	ND	0.05	0.05	ug/L							
Acenaphthene	ND	0.05	0.05	ug/L							
Acenaphthylene	ND	0.05	0.05	ug/L							
Anthracene	ND	0.05	0.05	ug/L							
Benzo(a)pyrene	ND	0.05	0.05	ug/L							
Benzo(ghi)perylene	ND	0.05	0.05	ug/L							
Benzo(k)fluoranthene	ND	0.05	0.05	ug/L							
Chrysene	ND	0.05	0.05	ug/L							
Dibenzo(a,h)anthracene	ND	0.05	0.05	ug/L							
Fluoranthene	ND	0.05	0.05	ug/L							
Fluorene	ND	0.05	0.05	ug/L							
Indeno(1,2,3-cd)pyrene	ND	0.05	0.05	ug/L							
Naphthalene	ND	0.05	0.05	ug/L							
Phenanthrene	ND	0.05	0.05	ug/L							
Pyrene	ND	0.05	0.05	ug/L							
Surrogate: Anthracene-d10	*0.043*			ug/L	*0.0500*		*86.4*	*24-110*			
LCS (7E01114-BS1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	0.391	0.05	0.05	ug/L	0.500		78.2	46-103			
Benzo(b)fluoranthene	0.362	0.05	0.05	ug/L	0.500		72.3	49-110			
Acenaphthene	0.302	0.05	0.05	ug/L	0.500		60.5	42-91			
Acenaphthylene	0.326	0.05	0.05	ug/L	0.500		65.3	36-96			
Anthracene	0.354	0.05	0.05	ug/L	0.500		70.7	29-110			
Benzo(a)pyrene	0.368	0.05	0.05	ug/L	0.500		73.6	43-116			
Benzo(ghi)perylene	0.344	0.05	0.05	ug/L	0.500		68.9	37-128			
Benzo(k)fluoranthene	0.354	0.05	0.05	ug/L	0.500		70.7	38-127			
Chrysene	0.342	0.05	0.05	ug/L	0.500		68.4	45-107			
Dibenzo(a,h)anthracene	0.372	0.05	0.05	ug/L	0.500		74.5	43-129			
Fluoranthene	0.361	0.05	0.05	ug/L	0.500		72.2	38-113			
Fluorene	0.336	0.05	0.05	ug/L	0.500		67.2	42-99			
Indeno(1,2,3-cd)pyrene	0.358	0.05	0.05	ug/L	0.500		71.5	35-145			
Naphthalene	0.299	0.05	0.05	ug/L	0.500		59.9	36-90			
Phenanthrene	0.323	0.05	0.05	ug/L	0.500		64.5	33-104			
Pyrene	0.355	0.05	0.05	ug/L	0.500		71.1	42-113			

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Report Date: 11-May-2017

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01114 - EPA 3510C											
LCS (7E01114-BS1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Surrogate: Anthracene-d10	*0.048*			ug/L	*0.0500*		*95.5*	*24-110*			
LCS Dup (7E01114-BSD1)					Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	0.415	0.05	0.05	ug/L	0.500		82.9	46-103	5.88	40	
Benzo(b)fluoranthene	0.384	0.05	0.05	ug/L	0.500		76.9	49-110	6.11	40	
Acenaphthene	0.342	0.05	0.05	ug/L	0.500		68.4	42-91	12.3	40	
Acenaphthylene	0.368	0.05	0.05	ug/L	0.500		73.6	36-96	12.0	40	
Anthracene	0.381	0.05	0.05	ug/L	0.500		76.1	29-110	7.31	40	
Benzo(a)pyrene	0.370	0.05	0.05	ug/L	0.500		74.0	43-116	0.565	40	
Benzo(ghi)perylene	0.366	0.05	0.05	ug/L	0.500		73.1	37-128	6.01	40	
Benzo(k)fluoranthene	0.380	0.05	0.05	ug/L	0.500		76.0	38-127	7.27	40	
Chrysene	0.360	0.05	0.05	ug/L	0.500		72.1	45-107	5.25	40	
Dibenzo(a,h)anthracene	0.394	0.05	0.05	ug/L	0.500		78.7	43-129	5.53	40	
Fluoranthene	0.388	0.05	0.05	ug/L	0.500		77.6	38-113	7.11	40	
Fluorene	0.377	0.05	0.05	ug/L	0.500		75.5	42-99	11.7	40	
Indeno(1,2,3-cd)pyrene	0.377	0.05	0.05	ug/L	0.500		75.3	35-145	5.18	40	
Naphthalene	0.334	0.05	0.05	ug/L	0.500		66.9	36-90	11.1	40	
Phenanthrene	0.354	0.05	0.05	ug/L	0.500		70.9	33-104	9.40	40	
Pyrene	0.391	0.05	0.05	ug/L	0.500		78.3	42-113	9.69	40	
Surrogate: Anthracene-d10	*0.050*			ug/L	*0.0500*		*100*	*24-110*			
Matrix Spike (7E01114-MS1)		**Source: B7D2403-01**			Prepared: 05/01/17 Analyzed: 05/03/17						
Benzo(a)anthracene	0.350	0.05	0.05	ug/L	0.472	ND	74.2	10-108			
Benzo(b)fluoranthene	0.175	0.05	0.05	ug/L	0.472	ND	37.0	10-103			
Acenaphthene	0.294	0.05	0.05	ug/L	0.472	ND	62.3	12-106			
Acenaphthylene	0.331	0.05	0.05	ug/L	0.472	ND	70.1	14-98			
Anthracene	0.349	0.05	0.05	ug/L	0.472	ND	74.0	10-108			
Benzo(a)pyrene	0.180	0.05	0.05	ug/L	0.472	ND	38.1	10-100			
Benzo(ghi)perylene	0.0613	0.05	0.05	ug/L	0.472	ND	13.0	10-70			
Benzo(k)fluoranthene	0.165	0.05	0.05	ug/L	0.472	ND	35.0	10-114			
Chrysene	0.302	0.05	0.05	ug/L	0.472	ND	64.0	10-100			
Dibenzo(a,h)anthracene	0.0631	0.05	0.05	ug/L	0.472	ND	13.4	10-75			
Fluoranthene	0.380	0.05	0.05	ug/L	0.472	ND	80.5	10-111			
Fluorene	0.328	0.05	0.05	ug/L	0.472	ND	69.4	12-107			
Indeno(1,2,3-cd)pyrene	0.0645	0.05	0.05	ug/L	0.472	ND	13.7	10-96			
Naphthalene	0.285	0.05	0.05	ug/L	0.472	ND	60.4	12-103			

Client Name: Victor Valley Reclamation Authority
Contact: Eugene Davis
Address: 20111 Shay Road
Victorville, CA 92394

Project Name: VVWRA-Hesperia Groundwater
Project Number: 01-54-520-7170

Report Date: 11-May-2017

Work Order Number: B7D2469
Received on Ice (Y/N): Yes Temp: 9 °C

Semivolatile Organic Compounds by EPA 625 SIM - Batch Quality Control

Analyte(s)	Result	RDL		Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 7E01114 - EPA 3510C											
Matrix Spike (7E01114-MS1)		**Source: B7D2403-01**			Prepared: 05/01/17		Analyzed: 05/03/17				
Phenanthrene	0.318	0.05	0.05	ug/L	0.472	ND	67.3	12-108			
Pyrene	0.363	0.05	0.05	ug/L	0.472	ND	76.9	10-107			
Surrogate: Anthracene-d10	*0.047*			ug/L	*0.0472*		*99.3*	*24-110*			
Matrix Spike Dup (7E01114-MSD1)		**Source: B7D2403-01**			Prepared: 05/01/17		Analyzed: 05/03/17				
Benzo(a)anthracene	0.291	0.05	0.05	ug/L	0.472	ND	61.7	10-108	18.4	40	
Benzo(b)fluoranthene	0.145	0.05	0.05	ug/L	0.472	ND	30.8	10-103	18.2	40	
Acenaphthene	0.314	0.05	0.05	ug/L	0.472	ND	66.5	12-106	6.56	40	
Acenaphthylene	0.364	0.05	0.05	ug/L	0.472	ND	77.3	14-98	9.67	40	
Anthracene	0.370	0.05	0.05	ug/L	0.472	ND	78.4	10-108	5.66	40	
Benzo(a)pyrene	0.152	0.05	0.05	ug/L	0.472	ND	32.1	10-100	17.1	40	
Benzo(ghi)perylene	0.0642	0.05	0.05	ug/L	0.472	ND	13.6	10-70	4.62	40	
Benzo(k)fluoranthene	0.129	0.05	0.05	ug/L	0.472	ND	27.4	10-114	24.4	40	
Chrysene	0.242	0.05	0.05	ug/L	0.472	ND	51.2	10-100	22.2	40	
Dibenzo(a,h)anthracene	0.0689	0.05	0.05	ug/L	0.472	ND	14.6	10-75	8.84	40	
Fluoranthene	0.358	0.05	0.05	ug/L	0.472	ND	75.8	10-111	5.95	40	
Fluorene	0.355	0.05	0.05	ug/L	0.472	ND	75.2	12-107	7.92	40	
Indeno(1,2,3-cd)pyrene	0.0702	0.05	0.05	ug/L	0.472	ND	14.9	10-96	8.36	40	
Naphthalene	0.321	0.05	0.05	ug/L	0.472	ND	68.0	12-103	11.8	40	
Phenanthrene	0.330	0.05	0.05	ug/L	0.472	ND	70.0	12-108	3.93	40	
Pyrene	0.340	0.05	0.05	ug/L	0.472	ND	72.1	10-107	6.37	40	
Surrogate: Anthracene-d10	*0.049*			ug/L	*0.0472*		*105*	*24-110*			

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Notes and Definitions

Cr+6: Regulatory 15 minute holding time for sample filtration and preservation exceeded B7D2469-01RE1

J	Estimated value
NCALhNI	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, therefore data not impacted.
NCEVE	In an acidified sample, this compound degrades and is not detectable as 2-Chloroethylvinyl ether. Its degradation product is 2-Chloroethanol, which is not an analyte of this method.
QCEVE	
QFpas	Follow-up result within laboratory acceptance criteria.
QMout	MS and/or MSD recovery did not meet laboratory acceptance criteria.
QOcal	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
ND:	Analyte NOT DETECTED at or above the Method Detection Limit **(if MDL is reported)**, otherwise at or above the Reportable Detection Limit (RDL)
NR:	Not Reported
RDL:	Reportable Detection Limit
MDL:	Method Detection Limit

* / (Non-NELAP): NELAP does not offer accreditation for this analyte/method/matrix combination

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Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

Cindy A. Waddell

cc:

e-Standard_No Alias.rpt

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CONTRACT LABORATORYCHAIN OF CUSTODY AND ANALYSIS REQUESTRECORD

Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California
Plant Address: 20111 Shay Road · Victorville, CA92394 · TEL: (760) 246-8638 FAX: (760) 246-5440

Website: www.vvwra.com E-mail: edavis@vvwra.com

Project Name: Hesperia Groundwater Monitoring Wells
Project Contact: Eugene Davis (760) 246-8638 ext. 287
Sampler Name: Ben Stevens
Sampler Signature:

VVWRAID #	Sample Location/Description	Sample Date	Sample Time	Sample Type: Grab	Sample Type: Composite	Sample Matrix (WW, DW, GW, SG)	Laboratory Analyses Requested	Total # of Containers	Sample Preservation Methods: Refrigeration	H_2SO_4 pH<2	HNO_3 pH<2	NaOH	HCL	Buffer(Na2CO3/NaHCO3/(NH4)2SO4)	TAT	Container Type
	HSP1-580	4.28.17	0843	X		GW	Ammonia-N, TKN	1		1					24 hr / 48 hr / 72 hr / X Standard	Pint poly.
	HSP1-580		0843	X		GW	MBAS, Nitrate - N, Chloride & Sulfate, T. Dissolved Solids	1	1							Quart poly.
	HSP1-580		0843	X		GW	Cyanide	1				1				Pint poly.
	HSP1-580		0843	X		GW	ewCr-6 (218.6)	1						1		125 mL poly.
	HSP1-580		0843	X		GW	Metals	1			1					Pint poly.
	HSP1-580		0843	X		GW	EPA 624-ML	4					2			40mL glass amber vial
	HSP1-580		0843	X		GW	EPA 625-ML	3	3							1-Liter glass amber
	HSP1-580		0843	X		GW	EPA 625 -SIM-ML	3	3							1-Liter glass amber

Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print: Ben Stevens Company: BTI	4-28-17 1200	Print: Company:	Print: Company:	4-28-17 4/28/17 1308	Print: Company:
Relinquished By (Sign):	Date/Time:	Received By (Sign):	Relinquished By (Sign):	Date/Time:	Received By (Sign):
Print: Company:		Print: Company:	Print: Company:	4/	Print: Company:

Sample Condition Upon Receipt by Laboratory:
Samples Received on Ice? (Yes) No Temperature
Samples Received Intact? (Yes) No 9 °C

Laboratory Notes
*Metals to include: Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

Samples sent via courier to: Babcock Laboratories, Inc.
Lab # B7D2469

Please Fax a copy of the completed Chain of Custody document to: Eugene Davis, VVWRA at (760) 954-5006 01-54-520-7170

APR 28 2017 AB

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