Semi-Annual Remedial Performance Report for Chromium and Perchlorate

Nevada Environmental Response Trust Site; Henderson, Nevada
July – December 2013

Prepared for:
Nevada Environmental Response Trust

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Date:
February 28, 2014

Project Number:
21-34800H

ENVIRON

Semi-Annual Remedial Performance Report for Chromium and Perchlorate

Nevada Environmental Response Trust
(Former Tronox LLC Site)
Henderson, Nevada

Nevada Environmental Response Trust (Trust) Representative Certification

I certify that this document and all attachments submitted to the Division were prepared at the request of, or under the direction or supervision of the Trust. Based on my own involvement and/or my inquiry of the person or persons who manage the system(s) or those directly responsible for gathering the information or preparing the document, or the immediate supervisor of such person(s), the information submitted and provided herein is, to the best of my knowledge and belief, true, accurate, and complete in all material respects.

Office of the Nevada Environmental Response Trust

Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

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Date: 2/28/14

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Responsible Certified Environmental Manager (CEM) for this project

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable federal, state and local statutes, regulations and ordinances.

February 28, 2014

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Acronyms and Abbreviations

AMPAC	American Pacific Corporation
AWF	Athens Road Well Field
bgs	below ground surface
BMI	Black Mountain Industrial
CD	compact disc
COH	City of Henderson
DVSR	Data Validation Summary Report
EDD	Electronic Data Deliverable
Envirogen	Envirogen Technologies, Inc.
ENVIRON	ENVIRON International Corporation
FBR	fluidized bed reactors
ft	feet/foot
gpm	gallons per minute
GWETS	Groundwater Extraction and Treatment System
GWTP	Groundwater Treatment Plant
ITRC	Interstate Technology & Regulatory Council
IWF	Interceptor Well Field
kWh	kilowatt hours
lbs	pounds
lbs/day	pounds per day
mg/L	milligrams per liter
Northgate	Northgate Environmental Management, Inc.
NDEP	Nevada Division of Environmental Protection
OSSM	Olin Chlor-Alkali/Stauffer/Syngenta/Montrose
Qal	Quaternary alluvium
RI/FS	Remedial Investigation and Feasibility Study
RIB	Rapid Infiltration Basin
Site	Nevada Environmental Response Trust Site
SWF	Seep Well Field
TDS	total dissolved solids

TestAmerica	TestAmerica Laboratories, Inc.
Tronox	Tronox LLC
Trust	Nevada Environmental Response Trust
TSS	total suspended solids
UMCf	Upper Muddy Creek Formation
USEPA	United States Environmental Protection Agency
Veolia	Veolia Water North America
WBZ	water-bearing zones
WRF	Water Reclamation Facility
yr	year

1 Introduction

In accordance with the Interim Consent Agreement between the Nevada Environmental Response Trust (the Trust) and the Nevada Division of Environmental Protection (NDEP), ENVIRON International Corporation (ENVIRON) submits this performance report to NDEP on behalf of the Trust for the Nevada Environmental Response Trust Site (the Site). The Site comprises approximately 346[1] acres located within the Black Mountain Industrial (BMI) Complex in unincorporated Clark County and is surrounded by the City of Henderson, Nevada.

Tronox LLC (Tronox) formerly owned and operated the Site. In conjunction with the settlement of Tronox's bankruptcy proceeding, the Trust took title to the Site and the groundwater extraction and treatment system (GWETS).[2] The effective date of the property transfer to the Trust and the Interim Consent Agreement between the Trust and NDEP was February 14, 2011. The Tronox facility remains on a portion of the Site leased from the Trust in order to continue manufacturing operations.

Veolia Water North America (Veolia)[3] operated the GWETS system on behalf of Tronox beginning in 2003 and, after the Trust took title to the Site, continued to serve as the GWETS operator through the beginning of the current reporting period. As of July 24, 2013, Envirogen Technologies, Inc. (Envirogen) took over GWETS operation and maintenance duties on behalf of the Trust. Additionally, a new analytical laboratory, TestAmerica Laboratories, Inc. (TestAmerica), has acted as the Site's primary analytical testing laboratory since April 1, 2013. Prior to April 1, 2013, Eaton Analytical[4] served as the Site's primary analytical testing laboratory.

This report is a mid-period report for chromium and perchlorate, covering the period July 2013 through December 2013, and summarizes performance data for both the chromium and perchlorate removal programs based on sampling performed during this period. A detailed evaluation and presentation of data will be described in the Annual Remedial Performance Report for Chromium and Perchlorate (the "Annual Performance Report") due to the NDEP in August 2014. Specifically, this report describes:

- Regional groundwater conditions based on July through December 2013 groundwater levels;
- The hexavalent chromium remediation system (consisting of the on-site Interceptor Well Field [IWF], the off-site Athens Road Well Field [AWF],[5] and the related treatment systems) and its performance in carrying out the extraction and treatment of chromium;

[1] Prior to the sale of Parcels A and B in December 2013 to TRECO, LLC, the Site comprised approximately 410 acres.

[2] Herein "GWETS" will be used to refer to the entirety of all systems and components of the groundwater extraction and treatment systems owned by the Trust, both on-site and off-site, including extraction well fields, treatment facilities, and groundwater conveyance systems.

[3] Formerly known as US Filter Operating Services.

[4] Formerly known as MWH Laboratories.

[5] Although Athens Road has been renamed Galleria Drive, the Athens Road designation has been retained for the well field to maintain consistency with past reports.

- The perchlorate remediation system (consisting of the on-site IWF, the off-site AWF, the off-site Seep Well Field [SWF], the off-site seep capture sump, and related treatment systems) and its performance in carrying out the extraction and treatment of perchlorate;
- The distribution of total dissolved solids (TDS) concentrations at the Site;
- The evaluation of performance metrics to be used during the optimization of the IWF, AWF, and SWF;
- Revisions to the Site's groundwater flow model, as described in Attachment A; and
- Proposed future activities.

This report is provided in both hard copy and electronic forms. Where electronic files are referenced or information is stated as provided on compact disc (CD), this information is contained on the CD attached to the hard copy report. Appendix A contains Table A-1 (as hard copy and on the report CD), which has five quarters of groundwater elevation and analytical data from the Site. The analytical lab reports for the third and fourth quarter 2013 groundwater monitoring events are also included in Appendix A (on the report CD). Appendix B contains the field records from July to December 2013 (on the report CD). Appendix C contains the Data Validation Summary Report (DVSR) (on the report CD). Appendix D contains the Electronic Data Deliverable (EDD). The EDD includes an Access© compatible data file (on the report CD) containing the analytical results from the period July to December 2013, and an Access© compatible data file (on the report CD) containing water level monitoring data from the period July to December 2013. Attachment A describes the updates made to the groundwater flow model.

2 Groundwater Conditions

The locations of the groundwater extraction well fields are shown on Figure 1, a location map covering the area between the Site and Las Vegas Wash. This section provides a discussion of the performance of each of the well fields, starting with the on-site extraction well field and proceeding to the successively northward (downgradient) extraction well fields. Plate 1 shows the locations of all former and current wells in the vicinity.

Ground surface elevations across the Site range from 1,677 to 1,873 feet above mean sea level. The ground surface across the Site generally slopes downward to the north at a gradient of approximately 0.02 feet per foot (ft/ft). Off site to the north, the topographic surface continues at the same gradient to approximately Sunset Road, at which point it flattens to a gradient of 0.01 ft/ft to the Las Vegas Wash. The shallow groundwater gradient generally mimics the surface topography.

The NDEP has defined three water-bearing zones (WBZs) that are of interest in the vicinity of the Site, including the Shallow, Middle, and Deep Zones.[6] The Shallow WBZ, which extends to approximately 90 feet below ground surface (bgs), is unconfined to partially confined, and is considered the water table aquifer. Unless otherwise stated, discussions of groundwater in this report refer to the Shallow Zone, which contains the saturated portions of the Quaternary alluvium (Qal) and the uppermost portion of the Upper Muddy Creek Formation (UMCf).

Investigations of the Middle WBZ at the Site and surrounding sites indicate, with a few exceptions, a vertical upward gradient between the Middle and Shallow WBZs that generally increases with depth. Wells screened in the Middle WBZ were not sampled during this performance period but previous measurements in the vicinity of the IWF have found vertical upward gradients between the Middle and Shallow WBZ wells ranging from three to ten feet (ENVIRON 2013c). Vertical gradients measured near the AWF were +3 to -1.4 feet during the same period. Consistent vertical gradients have not been observed near the SWF due to a lack of wells screened below the Qal.

During the current reporting period, shallow groundwater is generally encountered in on-site wells between 20 and 50 feet bgs and is generally deepest in the southernmost portion of the Site. North of the Site, beyond Boulder Highway, shallow groundwater is generally encountered between four and 30 feet bgs, becoming shallower as it approaches the Las Vegas Wash. As discussed in the report entitled *Annual Remedial Performance Report for Chromium and Perchlorate, Nevada Environmental Response Trust Site; Henderson, Nevada; July 2012 – June 2013 dated August 30, 2013* (ENVIRON 2013d), the groundwater flow direction is generally north to northwesterly; whereas north of the Site, the direction changes slightly to the north-northeast. This generally uniform flow pattern may be modified locally by subsurface alluvial channels cut into the underlying UMCf; the on-site bentonite-slurry groundwater barrier wall (the "barrier wall"); localized areas of recharge on-site from storm water retention basins; off-site recharge from the ponds at the City of Henderson (COH) Bird Viewing Preserve (Bird Viewing Ponds); groundwater extraction from the IWF, AWF, and SWP; and nearby

[6] NDEP guidance for the water-bearing zones can be viewed at http://ndep.nv.gov/bmi/docs/090106_hydro_litho.pdf

groundwater extraction conducted by Olin Chlor-Alkali/Stauffer/Syngenta/Montrose (OSSM) and American Pacific Corporation (AMPAC). Historically, on- and off-site artificial groundwater highs or "mounds" were observed around the on-site recharge trenches[7] and the COH Water Reclamation Facility (WRF) Rapid Infiltration Basins (RIBs)[8]; however, both of these have ceased operation.

During the 2011 interim soil removal action, the Site was graded such that storm water would be retained on-site. Two main designated retention basins and a drainage channel were constructed: the Central Retention Basin located approximately 800 feet south (upgradient) of the IWF and the Northern Retention Basin located approximately 300 feet north (downgradient) of the IWF. Surface runoff from off-site areas and water collected in the majority of the storm sewer network within the Tronox-leased area is directed to the Central Retention Basin. Storm water also enters the Site from the west through surface flow, which is collected in an on-site conveyance trench that flows into the Central Retention Basin. Surface runoff from north of the former Beta Ditch is directed to the Northern Retention Basin. This basin also accepts overflow from the Central Retention Basin during major storm events through a channel constructed along the eastern side of the Site. The design capacities of the Central and Northern Retention Basins are approximately 1,295,470 and 1,219,680 cubic feet, respectively (RCI Engineering 2010). Following a series of storm events between August and October 2012, storm water collected in the Central Retention Basin, which appeared to likely altering local infiltration pathways and influencing downgradient groundwater conditions at the IWF, the effects of which are still observable as described below.

During the current reporting period ending December 2013, groundwater levels at the Site were relatively consistent with previous years, although groundwater levels remain elevated in the vicinity of the barrier wall. As discussed in the 2012 Semi-Annual (ENVIRON 2013a) and 2012-2013 Annual Performance Reports (ENVIRON 2013d), groundwater levels in most of the active IWF pumping wells (I-series wells) and nearby monitoring wells were elevated during portions of 2012 and 2013. Groundwater elevations in many of the IWF pumping wells and monitoring wells in the vicinity of the barrier wall remained elevated through December 2013. Water level measurements collected in monitoring wells just south (upgradient) of the barrier wall (e.g. wells I-Y, M-55, M-56, M-60, M-64, M-65, M-66, M-67, and M-68) were generally one to four feet higher during the current reporting period than those collected in the four quarters prior to November 2012. These changes in groundwater elevation were generally greater in upgradient areas near the western and central portions of the barrier wall and less in upgradient areas near the eastern portion of the barrier wall. Similarly, groundwater elevations to the north (downgradient) of the barrier wall (e.g. wells M-69, M-70, M-71, M-72, M-73) remained elevated by approximately two feet through the end of the reporting period. The continued presence of elevated water levels near the IWF is likely related to heavy rainfall between August and

[7] Reinjection of stabilized Lake Mead water ceased in September 2010 as the recharge trenches were removed to accommodate soil excavation and remediation activities at the Site. They have not been replaced.

[8] Since the completion of the COH WRF in 2008, discharge of treated effluent to the Pabco Road RIBs has ceased; however, groundwater mounding events, although lessening in intensity, continued to be observed into late 2011. The most recent mounding events are likely attributable to the operation of the COH Bird Viewing Ponds located west of the RIBs.

October of 2012 and the resulting infiltration, which was likely intensified in the area upgradient of the IWF due to the collection of storm water in the Central Retention Basin.

2.1 Interceptor Well Field Area

The location of the IWF area is shown on Figure 1. A bentonite-slurry wall was constructed as a physical barrier across the higher concentration portion of the perchlorate/chromium plume on the Site in 2001. The barrier wall is approximately 1,600 feet in length and 60 feet deep and constructed to tie into approximately 30 feet of UMCf. The IWF consists of a series of 23 active groundwater extraction wells that are situated south (upgradient) of the barrier wall. Seven additional extraction wells (I-W, I-X, I-Y, I-AA, I-AB, I-AC, and I-AD) were installed and connected to the well field in 2010-2011; however, extraction from these wells has not commenced. We understand that these additional extraction wells were installed in response to Data Gap #3 identified in the March 2010 Interim Groundwater Capture Evaluation and Vertical Delineation Report prepared by Northgate Environmental Management, Inc. (Northgate) on behalf of Tronox (Northgate 2010a).

An initial analysis of groundwater capture at the IWF, completed as part of the 2011-2012 Annual Performance Report (ENVIRON 2012), led to recommendations to turn on I-W, I-X, I-Y, I-AA, I-AB, I-AC and I-AD. The 2013 GWETS Optimization Project Work Plan was prepared to describe the steps necessary to activate these wells (in addition to two wells at the AWF), perform well testing to set preliminary extraction rates, update and refine the groundwater model, and develop performance metrics for evaluation of the GWETS (ENVIRON 2013e). ENVIRON is currently implementing the 2013 GWETS Optimization Project Work Plan with the objective of turning on these additional wells by April 14, 2014.

The average discharge rate for each IWF well active during July through December 2013 is shown in Table 1, along with the annual average discharge rates from the previous four years. The combined discharge of the IWF averaged 67.1 gallons per minute (gpm) from July to December 2013, which is generally consistent with previous years. Over the last four and a half years of operation, the combined discharge of the IWF averaged 68.2 gpm. For comparison, in June 2001, prior to the installation of the barrier wall, the 22 wells comprising the IWF at that time averaged a combined discharge of 24.7 gpm.

Groundwater recharge trenches located north (downgradient) of the barrier wall were originally installed to receive extracted and treated groundwater, but were used in the more recent past to inject stabilized Lake Mead water into the subsurface to replace water extracted by the IWF. Reinjection ceased in September 2010 when the recharge trenches were removed to accommodate soil excavation and remediation activities at the Site.

Figures 2a through 2d present historical (May 2006 to December 2013) water elevations for selected pairs of monitoring wells located on opposite sides of the barrier wall. As shown on the figures, between July and December 2013, water levels in wells directly downgradient (north) of the barrier wall (wells M-69 through M-72) were generally five to ten feet lower than water elevations in corresponding wells upgradient (south) of the wall (wells I-Y, M-55, M-56, and M-58). The large drop in measured groundwater elevations across the barrier wall indicates that the wall is generally an effective barrier to shallow groundwater flow. However, concentrations

of perchlorate and chromium observed in wells immediately downgradient of the wall suggest that there may be some flow past the wall. The performance of the barrier wall, including what effects the operation of the former recharge trenches may have had, is being evaluated and it is anticipated that this evaluation will be discussed in the 2013-2014 Annual Performance Report.

Figures 2a through 2d show that starting in May 2006 water levels in downgradient wells showed a continual decline until February 2008 when refurbishment of the recharge trench was completed allowing increased recharge rates and a corresponding rise in water levels. Peaks in water levels in downgradient wells around July 2008 and May 2010 observed on Figures 2a through 2c (and to a lesser extent on Figure 2d) are in response to increased recharge rates during those times. These figures also show a significant decline in water elevations in the downgradient wells beginning around September 2010, when the recharge trenches were shut down and groundwater mounding associated with the recharge began to dissipate.

As seen on Figures 2a through 2d, groundwater elevations downgradient of the barrier wall remained elevated during the current reporting period, the continuation of a trend that began in September 2012. Beginning in November 2012, water elevations in upgradient wells were approximately two to six feet higher than typical and remained elevated by a similar amount throughout the current reporting period.

2.2 Athens Road Well Field Area

Figure 1 shows the location of the AWF, which is approximately 8,200 feet north (downgradient) of the barrier wall and the IWF. The AWF was constructed as a series of 14 groundwater extraction wells screened in the Qal at seven paired well locations that span approximately 1,200 feet across two alluvial paleochannels located on either side of an UMCf ridge. The AWF was completed in March 2002 and continuous pumping began in mid-October of that year. The well pairs act in concert with one well pumping while the adjacent well is used to measure water levels and monitor the effect of pumping on the aquifer. In September 2006, a fifteenth standalone well, ART-9, began full-time operation replacing ART-6A after groundwater elevations at the AWF dropped below a level where ART-6/6A could be effective.

The average discharge rate for each AWF pumping well from July to December 2013 is shown on Table 2, along with the average annual discharge rates for the previous four years. The combined discharge rate of the AWF averaged 278.2 gpm from July to December 2013, which is generally consistent with the previous four years. Over the last four and a half years of operation, the combined discharge of the AWF averaged 269.3 gpm.

Groundwater levels are currently much lower than they were in 2002 before pumping began, and the Qal overlying the UMCf ridge has been partially dewatered. Historical groundwater level trends for selected wells are shown on Figure 3. In general, the water elevations in the AWF are consistent with water elevations from one year ago.

In June/July 2010, additional groundwater wells were installed in the AWF including seven monitoring wells (PC-141 through PC-147) and four large diameter monitoring wells (ART-7B, PC-148, PC-149, and PC-150) that could be used as additional extraction wells. The new eight-inch diameter well, ART-7B, is co-located with the ART-7/ART-7A extraction well pair, but with a

screened interval extending deeper, down to the Qal/UMCf interface and to the reported bottom of the eastern alluvial channel. Two new six-inch diameter wells, PC-148 and PC-149, are standalone wells that are situated across the top of the UMCf ridge with screened intervals almost entirely within the UMCf. Another new six-inch diameter well, PC-150, is a standalone well located west of the UMCf ridge in the western channel and is screened entirely within the Qal.

As with the new IWF wells discussed in Section 2.1, an initial evaluation of these new wells and the performance of the AWF in general was included as part of the 2011-2012 Annual Performance Report (ENVIRON 2012). As a result of that evaluation, a potential gap was identified in the capture zone of the AWF in the vicinity of well PC-150, which is located immediately west of the UMCf ridge. This potential gap is believed to be the reason for elevated concentrations in MW-K4, which is located downgradient of PC-150. The initial capture zone analysis suggested that starting to extract from wells ART-7B and PC-150 could improve capture efficiency of shallow groundwater on either side of the UMCf ridge (ENVIRON 2012). These proposed changes have been evaluated as part of the 2013 GWETS Optimization Project and ENVIRON is currently in the process of activating wells ART-7B and PC-150.

2.3 Seep Well Field Area

The SWF and the seep capture sump, located approximately 4,500 feet north (downgradient) of the AWF near the Las Vegas Wash, are shown on Figure 1. When pumping began in July 2002, the SWF consisted of three recovery wells (PC-99R2/R3, PC-115R, and PC-116R) situated over the deepest part of the alluvial channel and a seep capture sump for an intermittent surface seep. Five additional wells (PC-117, PC-118, PC-119, PC-120, and PC-121) were completed in February 2003 and an additional well (PC-133) was completed in December 2004, all in the SWF area. Presently, the SWF consists of 10 extraction wells—two of which (PC-99R2 and PC-99R3) are connected and operate as one combined well. The wells comprising the SWF are screened across the full thickness of the Qal and across the deepest portion of an alluvial channel. The SWF has been effective in lowering groundwater levels in this vicinity, such that the surface seep has not flowed since April 2007.

The average discharge rate for each SWF pumping well during July through December 2013 is shown in Table 3, along with the discharge rates for the previous four years. The combined discharge rate of the SWF averaged 514.3 gpm over the last six months (July – December 2013). While this average discharge rate was less than during the previous reporting period, flows in the SWF were generally consistent with combined pumping rates between July 2010 and June 2012. As discussed in the 2012-2013 Annual Performance Report, higher groundwater levels near the SWF may have contributed to higher extraction rates during the July 2012 to June 2013 reporting period. Envirogen, the GWETS operator, reports that no significant operational adjustments were made to the SWF pumping rates during the current performance period. Over the last four and a half years of operation, the combined discharge of the SWF averaged 550.3 gpm.

2.4 Groundwater Treatment Overview

Treatment of chromium-contaminated groundwater (primarily from the IWF) occurs via the on-site Groundwater Treatment Plant (GWTP),[9] which chemically reduces hexavalent chromium and removes total chromium via chemical precipitation. A small ferrous sulfate drip system is located at the AWF lift station (Lift Station #3) to treat chromium present (at lower concentrations) in groundwater extracted by the AWF. Treatment of perchlorate-contaminated groundwater from all well fields occurs via the on-site fluidized bed reactors (FBRs), which biologically remove perchlorate as well as chlorate, nitrate, and trace concentrations of residual chromium. A simplified process flow diagram is presented on Figure 4. Monthly extraction rates for individual IWF, AWF, and SWF wells are presented in Table 4.[10] Routine maintenance is completed as needed at the GWTP and FBRs. The performances of the chromium and perchlorate treatment systems are described in Sections 3.2 and 4.2, respectively.

[9] By convention, the "GWTP" consists of only the on-site hexavalent chromium treatment plant. The name pre-dates the installation of any of the perchlorate treatment systems and related components.

[10] The average total influent reported in Table 4 differs from the average total effluent of the GWETS. The discrepancy is the result of flow into and out of GW-11 as well as additions of stabilized Lake Mead water, which is used to maintain the mechanical pump seals. Perchlorate removal calculations are based on the extraction rates at each individual extraction well for the AWF and the SWF. For the IWF, the influent flow rates prior to entering the GWTP are used for perchlorate removal calculations.

3 Chromium Capture and Treatment

The components of the chromium capture system consist of the IWF, the barrier wall, and the AWF. As discussed previously, recharge trenches located downgradient of the barrier wall were formerly part of the chromium capture system. The locations of these components are shown on Figure 1. For the 6-month period lasting from July to December 2013, a total of approximately 1,500 pounds of chromium were captured and removed from groundwater. The treatment of chromium-contaminated groundwater is discussed in Section 3.2.

3.1 Chromium Plume Configuration

A chromium plume map is not included in this mid-period report. Plume maps are included as part of the detailed evaluation and presentation of data contained in the Annual Performance Report submitted in August of each year. This section presents data to supplement the 2012-2013 Annual Performance Report and the plume maps contained therein.

Table A-1 in Appendix A contains analytical and groundwater elevation data for the last five quarters. Based on November 2013 total chromium analytical results, the portion of the chromium plume with the highest concentrations remains south (upgradient) of the barrier wall where it is captured by the IWF. During November 2013, the highest chromium concentrations continued to be centered near well I-T (28 milligrams per liter, or mg/L). North of the barrier wall, the highest total chromium concentration was 9.2 mg/L in well M-73, located north of wells I-I and I-Z. This is a decrease from 10 mg/L measured in November 2012. North of the former recharge trenches, the highest total chromium concentration detected was 3.2 mg/L in well PC-136, located at the AWF and screened within an alluvial sub-channel east of the UMCf ridge. This concentration is an increase from 1.7 mg/L measured in November 2012, but it does not appear that this increase is part of a general upward trend. Concentrations in well M-12A, located on the trailing edge of the main plume, have been generally declining. In November 2013, the concentration in M-12A was 8.0 mg/L compared with 25 mg/L in May 2002.

Total chromium concentrations in wells immediately downgradient of the barrier wall (M-70, M-71, M-72, M-73 and M-74) have increased slightly over the previous year, except in wells M-70 and M-73 where the concentration decreased slightly or were very similar to concentrations from the previous year.

The overall lower concentrations observed in on-site wells located downgradient of the barrier wall compared with those upgradient indicate that the IWF is generally an effective barrier to migration of the main portion of the chromium plume. However, concentrations of chromium observed in wells immediately downgradient of the wall, suggest that there could be some flow past the wall.

3.1.1 On-Site Interceptor Well Field Area

The IWF captures the highest concentrations and the main portion of the groundwater plume located downgradient of the on-site source area. Figure 5 shows the concentrations of total chromium in the 23 active IWF pumping wells over the last five quarters. Five additional I-series wells (I-AA, I-AB, I-W, I-X, and I-Y), which are not currently operated as pumping wells, were regularly sampled beginning in June 2013 and are also included in Figure 5. Chromium

concentrations during November 2013 were generally similar to previous quarters with the exception of wells I-T and I-U, adjacent wells near the center of the IWF. As shown on Figure 5, chromium concentrations were lower in these wells in November 2012, May 2013, and August 2013. The variability in chromium concentration in wells I-T and I-U do not appear to be related to any specific events.

Chromium concentration data from select wells (M-11, M-23, M-36, M-72, and M-86)[11] over time are presented in Figure 6. In monitoring well M-11, located immediately downgradient of the former primary source area (Units 4 and 5), concentrations have remained relatively stable over the last nine years with a concentration of 1.7 mg/L reported in November 2013. Total chromium concentrations measured in well M-36,[12] located upgradient of the IWF, declined over the reporting period (to 22 mg/L), a continuation of a trend dating back to 2004 when the concentration was 43 mg/L. Concentrations in well M-72, located between the barrier wall and former recharge trenches, have increased slightly during the reporting period to a concentration of 7.7 mg/L in the November 2013 sampling event from 6.6 mg/L in November 2012. Concentrations in well M-72 and surrounding wells have been gradually increasing since approximately November 2010, following the shutdown of recharge trenches in September 2010 suggesting that the former recharge trenches either diluted concentrations in these wells or mitigated the flow past the barrier wall by reducing the gradient across the wall. The performance of the barrier wall, including what effects the operation of the former recharge trenches may have had, is being evaluated and it is anticipated that this evaluation will be discussed in the 2013-2014 Annual Performance Report.

3.1.2 Athens Road Well Field / Seep Well Field Areas

The AWF is designed to intercept residual chromium in groundwater downgradient of the IWF and the Site. Based on total chromium concentrations in groundwater downgradient of the AWF, the system is operating effectively; however, capture gaps identified in the 2011-2012 Annual Performance Report indicate that chromium capture could be further improved by activating certain currently idle extraction wells, namely ART-7B and PC-150. Activation of these wells is being performed as part of the 2013 GWETS Optimization Project. Downgradient of the AWF in the Athens Road Piezometer of "ARP" well line, the highest measured concentration of total chromium during the November 2013 sampling event was 0.27 mg/L in well ARP-6B, identical to the sampling result from November 2012. Chromium concentrations in MW-K4, located further west, are typically equal or greater to the concentrations in ARP-6B.

Figure 7 shows the concentrations of total chromium across the seven AWF pumping wells in addition to monitoring wells PC-18, PC-55, PC-122, PC-148, PC-149, and PC-150 over the last five quarters, where data are available. As mentioned previously, PC-148 and PC-149 are monitoring wells that are situated across the top of the UMCf ridge with screened intervals primarily within the UMCf. As shown on Figure 7, chromium concentrations in the western sub-channel (represented by wells west of PC-149) have been low relative to those in the eastern

[11] These wells were selected because they are the five "Consent Order Appendix J Wells" that were historically presented for evaluating performance of the chromium mitigation program.

[12] M-36 was damaged in June 2013 and is currently inaccessible for sampling. Data collected from nearby well M-38 will be presented in Figure 6 until M-36 is repaired.

sub-channel (represented by wells east of PC-148). An additional extraction well, ART-9, was installed in this area in 2006 to capture this narrow channel of chromium-impacted groundwater. Total chromium concentrations in well PC-122 have remained relatively low since the start-up of ART-9. Well PC-122 contained a total chromium concentration of 0.21 mg/L in November 2013. Total chromium present in groundwater collected in this area continues to be treated at Lift Station #3 where metered ferrous sulfate is added before the water is sent to the on-site perchlorate treatment system.

Wells in the SWF continue to generally contain less than 0.01 mg/L total chromium. Total chromium concentrations in wells to the east of the SWF are slightly higher, but remained generally constant over the reporting period. For example, in November 2013 concentrations of total chromium in extraction well PC-133, located in the easternmost portion of the well field, and monitoring well PC-94, located east of the well field, were measured at 0.038 mg/L and 0.030 mg/L, respectively.

3.2 Chromium Treatment System

The operation and maintenance of the chromium treatment system, as well as the rest of the GWETS, was contracted to Veolia between 2003 until July 24, 2013. As discussed in Section 1, following that date, Envirogen took over operation and maintenance duties at the Site.

Table 5 contains the July to December 2013 process treatment data from the on-site GWTP. The treated groundwater from the GWTP is pumped to the equalization tanks, where it is combined with water from the off-site groundwater collection systems. From the equalization tanks, the blended water flows through activated carbon beds before being pumped to the FBRs for treatment to remove perchlorate, chlorate, and nitrate.

As shown in Table 5, the total chromium inflow concentration to the GWTP has been relatively stable in the range of 8.6 to 10.6 mg/L, which is similar to the range of 8.7 to 10.5 mg/L from one year ago. The chemical reduction of hexavalent chromium and removal of total chromium via the GWTP during the reporting period has been consistently effective. The average monthly total chromium outflow concentrations for the last six months ranged from 0.176 to 0.563 mg/L. The average monthly hexavalent chromium outflow concentration during the reporting period ranged from non-detectable (<0.00025) to 0.0004 mg/L. As seen in Table 5, for the period between July and December 2013, approximately 1,460 pounds of chromium were removed from groundwater by the GWTP.

A trace amount of chromium is also removed in the FBRs. Results of total chromium analysis from weekly FBR influent and effluent samples are presented in Table 6. Based on an average influent total chromium concentration of 0.028 mg/L and an average flow rate of 904 gpm[13], the FBRs were receiving about 0.31 pounds of chromium per day from the equalization tanks. This

[13] This flow rate is measured at the effluent totalizer and measures the throughput at the FBRs. This flow is not the same as the cumulative groundwater extraction rate as measured by the extraction well totalizers, since these readings do not account for flow into and out of GW-11 as well as additions of stabilized Lake Mead water, which is used to maintain the mechanical pump seals.

total includes chromium captured in the AWF and reductively treated with ferrous sulfate drip at Lift Station #3.

The FBRs discharge treated water to the Las Vegas Wash just upgradient of the Pabco Road erosion control structure under authority of National Pollution Discharge Elimination System (NPDES) Permit NV0023060. Results of discharge monitoring performed between July and December 2013 are presented in Table 6. Effluent hexavalent chromium concentrations have been between non-detect (<0.00025 mg/L) and 0.00056 mg/L – well below the effluent discharge limitation of 0.01 mg/L (7-day average). Total chromium was detected in effluent samples at concentrations ranging from non-detect (<0.0020 mg/L) to 0.045 mg/L and at an average concentration of 0.01 mg/L – well below the effluent discharge limitation of 0.1 mg/L (7-day average).

The FBR system removed approximately 40 pounds of additional chromium over the 6-month period. The sum of the chromium captured and removed from groundwater between July and December 2013 by the GWETS and FBRs totaled approximately 1,500 pounds.

4 Perchlorate Capture and Treatment

The components of the perchlorate capture system consist of the IWF, the barrier wall, the AWF, the SWF, and the seep capture sump. As discussed previously, recharge trenches located downgradient of the barrier wall were formerly part of the GWETS. The locations of these components are shown on Figure 1. The daily average mass of perchlorate removed by the IWF, AWF, and SWF is presented in Table 7. Figure 8 presents the monthly perchlorate recovery totals and the relative contribution of the IWF, AWF, and SWF.

During the period July through December 2013, a total of approximately 272,430 pounds of perchlorate (approximately 1,480 pounds per day [lbs/day]) have been captured and removed from groundwater by the GWETS. Of this total, approximately 163,960 pounds (approximately 890 lbs/day) were captured by the IWF; approximately 98,900 pounds (approximately 540 lbs/day) were captured by the AWF; and approximately 9,580 pounds (approximately 50 lbs/day) were captured by the SWF.

The quantity of perchlorate removed during the current reporting period represents a gradual return to conditions as they existed prior to late 2012. Starting in September 2012 there was a significant increase in the quantity of perchlorate captured and removed from groundwater at the Site.[14] As described below, perchlorate concentrations generally decreased over the current reporting period, particularly in the IWF.

4.1 Perchlorate Plume Configuration

A perchlorate plume map is not included in this mid-period report. Plume maps are included as part of the detailed evaluation and presentation of data contained in the Annual Performance Report submitted in August of each year. This section presents data to supplement the 2012-2013 Annual Performance Report and the plume maps contained therein.

Table A-1 in Appendix A contains analytical and groundwater elevation data for the last five quarters. Based on November 2013 perchlorate analytical results, the highest perchlorate concentration south (upgradient) of the barrier wall occurred in well I-AR (1,900 mg/L). As seen in Figure 9, perchlorate concentrations at the IWF were highly variable between November 2012 and November 2013. Recent changes in perchlorate concentrations within the IWF are further discussed in Section 4.1.1.

North of the barrier wall, the highest perchlorate concentration was detected in well M-71 (1,400 mg/L) in November 2013. This is an increase from 690 mg/L in November 2012. While year-over-year perchlorate concentrations fell in wells M-72 and M-73, perchlorate concentrations were greater in most wells immediately north of the barrier wall (M-69, M-70, M-71 and M-74). As previously discussed in relation to chromium, the observed increases in perchlorate concentration downgradient of the barrier wall suggest that there may be some flow past the wall. The performance of the barrier wall, including what effects the operation of the former

[14] Perchlorate captured and removed by the three wells fields rapidly increased from approximately 1,300 lbs/day in August 2012 to 1,730 lbs/day in September 2012. In October 2012, perchlorate removal reached a peak of approximately 1,980 lbs/day.

recharge trenches may have had, is being evaluated and it is anticipated that this evaluation will be discussed in the 2013-2014 Annual Performance Report.

North of the former recharge trenches, the highest perchlorate concentration was 590 mg/L in well M-44, located between Warm Springs Road and Boulder Highway. North of the AWF, at the ARP well line, the highest concentration was 190 mg/L in well MW-K4 in November 2013. The highest perchlorate concentration reported at the SWF was 16 mg/L in well PC-99R2/R3.

4.1.1 Interceptor Well Field Area

The IWF targets the highest concentrations of perchlorate at the Site. In general, perchlorate concentrations in groundwater downgradient of the IWF and barrier wall (up to 2,300 mg/L in well M-25) are below concentrations observed in groundwater upgradient of the IWF and barrier wall (up to 1,900 mg/L in well M-71). Figure 9 represents a west-east transect through the IWF showing perchlorate concentrations for the 23 active IWF wells in May 2002 compared to the last five quarters. As previously mentioned, five additional I-series wells (I-AA, I-AB, I-W, I-X, and I-Y), which are not currently operated as pumping wells, were first regularly sampled in June 2013 and are included in Figure 9.

Since November 2012, there has been significant variability in the perchlorate concentrations in the IWF wells. However, perchlorate concentrations in well I-N have gradually decreased to 1,100 mg/L, consistent with historical levels prior to November 2012. West of I-N, wells between I-S and I-E increased in February and May 2013, but have decreased in concentration more recently. A broad area of higher concentrations centered at I-V also moderated during August and November 2013.

A combination of factors is likely responsible for the observed increase and subsequent decrease in perchlorate concentrations within many of the IWF wells during the previous five quarters. These factors include high levels of precipitation during late 2012, the alteration of Site drainage patterns resulting from recent Site excavation and grading, and the potential mobilization of soil-bound perchlorate from infiltration at the recently constructed Central Retention Basin. The decrease in measured perchlorate concentration across the IWF during this period of performance indicates that the Site is gradually returning to pre-November 2012 conditions. Figure 10 charts perchlorate concentrations for select wells at the IWF over time and, while there is insufficient historical data regarding well operation and Site conditions to determine the root cause of historical perchlorate cycles, the graph shows generally decreasing trends since sampling for perchlorate began in 2002. Figure 10a charts perchlorate concentrations at the IWF over the last five quarters showing again that concentrations have generally been stable or decreasing since November 2012. The changes in perchlorate concentrations within the IWF during November 2012 (as discussed above in relation to Figure 9) coincide with groundwater elevations which were often significantly higher in IWF and nearby monitoring wells than during the previous four quarters. It is likely that additional perchlorate mass was mobilized via infiltration of storm water following the large rain events in the fall of 2012 and the effects on the IWF are still being observed, though as noted previously the effects are diminishing.

Figure 11 is a west-east transect through the IWF which charts total dissolved solids (TDS) concentrations over the last five quarters. A comparison of Figure 9 and Figure 11, which show perchlorate and TDS, respectively, in each of the IWF wells, indicates that a broad zone of high TDS in the central part of the IWF remains present and coincides with the eastern area of elevated perchlorate concentrations. Starting in November 2012, TDS concentrations in some IWF wells were significantly different than during previous quarters. TDS concentrations were higher than typical in the central portion of the IWF (centered at well I-N) and lower than typical in well I-T and I-U. Increases in TDS were also noted in certain western (I-L and I-S), to a lesser extent, in and eastern (centered at well I-V) wells. Wells with higher than normal concentrations of TDS generally align with the higher perchlorate results discussed above with the notable exception of wells I-U and I-T. As with perchlorate, concentrations of TDS generally returned to pre-November 2012 levels across the IWF during the current performance period.

As shown on Figure 12, the monthly average perchlorate concentrations captured at the IWF generally decreased from a high of about 1,890 mg/L in October 2002 to 732 mg/L in June 2012, the lowest recorded average concentration. The IWF's monthly average perchlorate concentration then doubled to 1,491 mg/L in December 2012. The calculated perchlorate mass removal has generally followed a similar trend, from a high of about 45,000 pounds removed in the month of January 2003 to a low of approximately 20,300 pounds removed during the month of August 2012. By December 2012, the calculated perchlorate mass removal increased to approximately 40,300 pounds, the highest estimated monthly mass removal since January 2003. By June 2013, the calculated perchlorate mass removal decreased to 26,600 pounds and by December 2013 the mass removal was 24,800 pounds. As reported previously, it is likely that additional perchlorate mass was mobilized via infiltration of storm water following the large rain events in the fall of 2012 leading to the historically high perchlorate concentrations and mass removals at the IWF. Barring additional events, it is expected that the elevated perchlorate concentrations and mass removals will continue to decrease to levels similar to those prior to December 2012.

Figure 13 charts perchlorate concentration and water elevation trends in monitoring wells M-100 and M-23, located approximately 700 and 1,300 feet north (downgradient) of the former recharge trenches, respectively. Figure 13 indicates a sharp decrease in perchlorate concentrations in both wells beginning in early 2002, shortly after the barrier wall was installed at the IWF. Water level trends reflect infiltration and mounding of water recharged to the subsurface through the former recharge trenches. Clogging of the trenches and reduced infiltration are reflected in the decreasing water levels beginning about May 2007. The trenches were subsequently refurbished in February 2008 and June 2009 with water levels in well M-100 quickly rebounding and water levels in well M-23 rebounding somewhat slower. Due to conflicts with the soil excavation program at the Site, operation of the trenches was suspended in September 2010, which corresponds with decreases in water levels in both wells M-100 and M-23. Well M-100 has been dry since December 2010. The water level in well M-23 has decreased approximately seven feet since the trenches were shut down. Perchlorate concentrations in well M-100 remained relatively stable from 2008 through 2010. Perchlorate concentrations in well M-23 have remained relatively stable since July 2006.

4.1.2 Athens Road Well Field Area

The AWF captures perchlorate in groundwater at concentrations generally less than 500 mg/L. A west-east transect through the AWF which charts perchlorate concentrations for the last five quarters is shown on Figure 14. Perchlorate concentrations in the AWF's seven pumping wells are shown, in addition to monitoring wells PC-18, PC-55, PC-122, PC-148, PC-149, and PC-150. As shown on the figure, the plume is stable and perchlorate concentrations on the western (PC-55 and ART-1) and eastern (PC-122) edges of the well field continue to remain relatively low.

The perchlorate concentration trends of the pumping wells in the AWF are shown on Figures 15 and 15a. Figure 15 shows that overall perchlorate concentrations in the AWF have generally been declining since 2002. Concentrations in individual wells fluctuate with each sampling event, but for most wells these fluctuations have moderated with time. Figure 15a, an expanded view of the last five quarters of Figure 15, indicates that recent concentrations in the AWF pumping wells have remained relatively stable with some variation in May 2013, particularly in ART-4 and ART-9. The reason for the variability in the perchlorate concentrations in these wells in May 2013 is not immediately apparent. As shown on Figure 16, the perchlorate concentration measured in the AWF is currently at the low-end of its historical range. The estimated perchlorate mass removed from the AWF was approximately 13,970 pounds in December 2013.

Starting in August 2006, TDS data have been collected from the AWF. Figure 17 is a west-east transect through the AWF which charts TDS concentrations for the last five quarters. The figure shows that two zones of higher TDS exist at the AWF: one centered on wells PC-18/ART-8 on the west side of the AWF (both 10,000 mg/L in November 2013) and one at well PC-122 on the east end of the AWF (8,600 mg/L in November 2013).

Approximately 250 feet north of the AWF, eight wells comprise the Athens Road Piezometer or "ARP" well line. Perchlorate concentrations across the ARP well line are presented on Figure 18, and perchlorate concentrations in these wells over time are shown on Figures 19 and 19a. Figure 19 contains concentration-time plots beginning in late 2001, and Figure 19a shows an expanded view of the last five quarters.

As shown on Figure 18, perchlorate concentrations in the western side of the well line (represented by ARP-1, ARP-2/2A, and ARP-3/3A) and the eastern side of the well line (represented by ARP-4/4A, ARP-5/5A, ARP-6/6A/6B and ARP-7) have significantly decreased since 2002. This indicates that the AWF has been effective in capturing perchlorate contaminated groundwater in these sections of the plume. Perchlorate concentrations in the center of the ARP well line at MW-K4 are significantly lower than in 2002, but remain elevated relative to the other sections of the plume. As shown on Figures 19 and 19a, with the exception of wells MW-K4 and ART-6/6A/6B, concentration trends in the ARP well line appear relatively stable. Concentrations in well MW-K4 initially declined with the onset of AWF operation in 2002 and dropped further when ART-9 began pumping in September 2006. Perchlorate concentrations in MW-K4 generally declined between January 2010 (300 mg/L) and December 2011 (150 mg/L), but rebounded from January 2012 to September 2012, once again reaching 300 mg/L. During the last three months of 2012, perchlorate levels in MW-K4 declined to 210 mg/L before increasing during the first four months of 2013, reaching 280 mg/L in April 2013.

No groundwater samples were collected in well MW-K4 during May and June 2013 due to an obstruction in the well. Perchlorate concentrations in MW-K4 generally declined during the current reporting period to a low of 160 mg/L during December 2013. These increases and decreases in perchlorate concentration in MW-K4 do not appear related to changes in water elevation. The higher and more variable perchlorate concentrations in well MW-K4 may be influenced by the well's location with respect to subsurface alluvial channels within the UMCf. Analysis first presented in Appendix E of the 2011-2012 Annual Performance Report indicated that there could be a gap in the capture zone that may be responsible for the elevated concentrations in MW-K4 (ENVIRON 2012). That analysis recommended activating PC-150 as an extraction well to address this gap. As part of the 2013 GWETS Optimization Project, PC-150 will be activated with a proposed start date of April 14, 2014.

Between the ARP well line and the SWF are the COH WRF and the Lower Ponds monitoring well lines. Perchlorate concentration in the COH WRF wells on a west-east transect are shown on Figure 20. Figures 21 and 21a present perchlorate concentration trends for these same wells over time. As shown in the figures, current perchlorate concentrations are well below levels measured in the same wells in May 2002, especially in the center of the well line as shown on Figure 20. As shown on Figure 21, perchlorate concentrations at the COH WRF well line have been stable since mid-2007.

Figure 22 shows historical water elevations at the COH WRF well line. This figure indicates that many of the historical low-concentration events in the wells appear to be associated with a rapid increase in the water levels, likely the result of increased infiltration from the COH WRF surface ponds. The significant groundwater "mounding events" since 2008 (when the operation of the COH RIBs ceased) are not as pronounced as previous ones and are presumed to be related to operation of the COH Bird Viewing Ponds. However, no significant mounding events have occurred since late-2011.

The Lower Ponds well line is approximately 2,200 feet north of the COH WRF well line. Figures 23, 24, and 24a, the perchlorate west-east transect and trend graphs for the Lower Ponds well line, show that current perchlorate concentrations are well below levels measured in the same wells in May 2002, especially at well PC-56 (Figure 23). Figure 24 shows that perchlorate concentrations present in the Lower Ponds well line are generally low and, with the exception of well PC-56, have been relatively stable since 2007. As shown on Figures 24 and 24a, perchlorate concentrations in well PC-56 historically have been more variable than in other wells on the Lower Ponds well line. Concentrations in well PC-56 were 3.3 mg/L in January 2011, 12 mg/L in February 2011, 7 mg/L in June 2011, and 23 mg/L in September 2012. At the end of the current reporting period, the concentrations had decreased to 17 mg/L. The higher and more variable perchlorate concentrations in well PC-56 may be influenced by the well's location with respect to a mapped subsurface alluvial channel that runs north-south back towards the AWF. According to boring logs for these wells, the UMCf was encountered 12 to 20 feet deeper in PC-56 compared to nearby wells PC-58 and PC-60 indicating it is within a narrow alluvial channel incised within the UMCf.

4.1.3 Seep Well Field Area

At present, the SWF consists of 10 extraction wells – two of which (PC-99R2 and PC-99R3) are connected and operate as one – positioned over the deepest part of the alluvium channel that contains the highest concentrations of perchlorate (relative to other SWF wells). The well field is located approximately 600 feet upgradient of the seep capture sump; however, the seep has not flowed since April 2007. The original three recovery wells in the SWF commenced pumping in August 2002. In February 2003, five additional wells (PC-117, PC-118, PC-119, PC-120, and PC-121), and in December 2004, one additional well (PC-133), were completed in the SWF. Wells PC-120 and PC-121, located at the west end of the SWF line and away from the deepest portion of the subsurface alluvial channel, have not been continuously pumped since 2005 due to their low perchlorate removal efficiencies when compared with the remainder of SWF wells. Wells PC-120 and PC-121 are turned on for sampling and are actively pumped when other SWF wells are not operating due to malfunction or maintenance.

The SWF contributes the highest flows (an average flow rate of 514 gpm between July and December 2013) compared with the IWF (an average flow rate of 67 gpm) and the AWF (an average flow rate of 278 gpm) to the GWETS, but captures significantly lower concentrations of perchlorate (generally less than 20 mg/L). Because of the low concentrations captured at the SWF, the perchlorate mass removed from the environment via the SWF is substantially less than that removed via the IWF or AWF (see Figure 8 and Table 7).

Figure 25 shows perchlorate concentrations for the last five quarters along with concentrations for each well during its first month of operation. Figure 26 shows that perchlorate concentrations have significantly decreased in the original pumping wells since 2002. As seen on Figures 26 and 26a, concentrations in wells PC-99R2/R3, PC-115R, and PC-116R are markedly lower during November 2012 than during the months directly preceding and following. Figure 26a shows that SWF wells with low concentrations of perchlorate (PC-119, PC-120, PC-121) have been relatively stable over the last year with the exception of PC-133, which steadily increased from 0.63 mg/L in May 2012 to a high of 16.0 mg/L in February 2013. However, starting in March 2013, perchlorate concentrations in PC-133 have decreased to a low of 2.7 mg/L in December 2013. Based on our review of lithologic logs, water levels, nearby concentrations, and flow rates at the SWF, a definitive cause for the observed increase and subsequent decrease in perchlorate concentrations in PC-133 has not been identified. It is noted that PC-133 is on the eastern edge of the alluvial channel away from the other SWF pumping wells, which pump at significantly higher rates compared to PC-133. It is further noted that PC-133 was rehabilitated on September 30, 2013 to remove roots from the well in an effort to increase its extraction rate; however, the work, which included swabbing and pumping the well and replacing the pump and motor with higher capacity units, did not result in significant increases in the extraction rate.

TDS concentrations in the SWF wells for the last five quarters are plotted on Figure 27. The highest TDS concentration (4,500 mg/L) in November 2013 was measured in well PC-99R2/R3, which corresponds with the highest perchlorate concentration in the SWF. Higher TDS concentrations generally corresponded with higher perchlorate concentrations in SWF wells over the previous year.

As shown on Figure 28, the monthly average perchlorate concentrations captured at the SWF generally decreased from a high of approximately 82 mg/L in March 2003 to an average of approximately 8.4 mg/L between July 2013 and December 2013. The calculated perchlorate mass removal has generally followed a similar trend, from a high of about 19,900 pounds removed in the month of April 2003 to an average of approximately 1,600 pounds removed per month between July 2013 and December 2013. The total amount of perchlorate removed by the SWF during the current reporting period (9,580 pounds) is approximately 1,100 pounds less than the same period in 2012.

4.2 Perchlorate Treatment System

Throughout the reporting period, groundwater was captured both on-site and off-site, conveyed to the on-site treatment facilities, and treated biologically in the FBRs to remove perchlorate, chlorate and nitrate. Effluent from the FBRs has been discharged into Las Vegas Wash within the limits specified in the NPDES NV0023060 discharge permit, except as discussed below. As shown on Table 8, between July and December 2013, the perchlorate influent to the FBRs ranged from 93 mg/L to 140 mg/L. Perchlorate was generally not detected at concentrations exceeding the laboratory sample quantitation limit (SQL) (<0.00095, <0.0025, or <0.0048mg/L) with the notable exception of effluent samples from the first week and last week of July 2013.

As reported in a memo to NDEP's Bureau of Water Pollution Control on August 29, 2013 (ENVIRON 2013c), a number of events occurred during the weeks of June 30 to July 9, 2013 (first week of July) and July 28 to August 3, 2013 (last week of July) that interfered with treatment operations at the Site. The perchlorate results for the effluent composite results from these two weeks were 74 micrograms per liter (μg/L) and 15 μg/L, respectively. The 30-day average perchlorate effluent concentration for July 2013 was 18.5 μg/L, slightly above the Site's NPDES permit limitation of 18 μg/L. Following the 30-day average exceedance in July, GWETS operations have stabilized and effluent samples have not exceeded the Site's permit limits.

5 Performance Evaluation

This section provides an evaluation of the performance of the GWETS against a set of performance metrics developed in coordination with NDEP. These metrics are intended to establish a consistent framework for evaluating performance of the GWETS, including evaluating the effectiveness of current and future optimization efforts.

5.1 Performance Metrics

A set of performance metrics was developed as part of the 2013 GWETS Optimization Work Plan (ENVIRON 2013e), approved by NDEP on December 3, 2013 (NDEP 2013d). The metrics include those identified in the October 10, 2013 letter from NDEP (NDEP 2013b) commenting on the 2012-2013 Annual Performance Report and additional metrics identified by ENVIRON. The approved performance metrics are outlined below:

1. Monthly perchlorate and chromium mass removal rates from the IWF, AWF, and SWF;

2. Perchlorate and chromium plume mass estimates;

3. The concentrations at which the Site is achieving 90% and 99% capture of perchlorate and chromium;

4. Perchlorate and chromium capture efficiency of the IWF, AWF, and SWF;

5. Mass loading of perchlorate and chromium in the Las Vegas Wash at Northshore Road;

6. The fraction of mass loading in Las Vegas Wash at Northshore Road that originates from the Site;

7. The amount of surface water from Las Vegas Wash and the COH Bird Viewing Ponds that is being extracted by the SWF; and

8. The environmental footprint of the GWETS with a focus on energy use.

The numbering of the metrics presented above was done only for clarity and does not reflect a hierarchy. The metrics are discrete measures of performance that will be used to understand and adjust GWETS performance over time.

5.2 Groundwater Model

A key tool for developing and implementing the performance metrics is the groundwater model. A groundwater model for the Site was originally developed by Northgate and documented in the Capture Zone Evaluation Report (Northgate 2010b). The model was approved on April 4, 2013 by NDEP (NDEP 2013a). As part of the 2013 GWETS Optimization Project, the existing model was refined and updated to recent steady-state conditions. The modeling work follows the 2013 GWETS Optimization Study Work Plan submitted by ENVIRON to NDEP (ENVIRON 2013e). The updated model, “ENVIRON Phase I Model,” is described in Attachment A of this report. The model has been updated with October 2013 pumping rates for evaluations presented in this

report, as shown on Tables 1 through 3. The third and fourth quarter 2013 pumping rates for OSSM and AMPAC wells were provided by both companies.

The performance metrics are focused mainly on perchlorate because the perchlorate plume is the most spatially extensive (i.e., the spatial extent of the chromium plume is contained within the perchlorate plume) and perchlorate represents the more immediate threat to off-site receptors due to its potential impacts on Las Vegas Wash. This is consistent with the focus of previous capture zone evaluations at the Site. The evaluation of GWETS performance using the metrics is consistent with United States Environmental Protection Agency (USEPA) guidance on evaluating capture zones for groundwater pump and treat systems (USEPA 2008).

5.3 Performance Evaluation Approach and Organization

An overall approach for evaluating metrics was established in the 2013 GWETS Optimization Study Work Plan (ENVIRON 2013e) as follows:

- In order to calculate several of the metrics, study area boundaries had to be defined. For this purpose, the plume mass estimate boundaries first presented in Attachment 1 of the 2012-2013 Annual Performance Report are being used (ENVIRON 2013d).
- Target capture zones are graphically compared to the actual capture zones achieved by well fields as estimated by the groundwater model.
- The total mass flux being transported by groundwater flow across hypothetical east-west lines passing through the IWF, AWF, and SWF is estimated using measured mass flux at extraction wells and modeled groundwater flow rates and interpolated concentrations.
- The fraction of the total mass flux being captured by the IWF, AWF, and SWF is estimated using capture zones from the groundwater model. Capture efficiency is the ratio of captured mass flux to total mass flux.
- Estimates of perchlorate and chromium plume mass follow a similar approach to that used in the 2012-2013 Annual Performance Report (ENVIRON 2013d).
- Mass loading at Northshore Road and other locations in the Las Vegas Wash is calculated as the product of the flow rate at the stream gage and perchlorate concentrations measured in Las Vegas Wash near the stream gage.

Because some of the metrics (as listed in Section 5.1) are closely related or share certain calculations, the discussion of the metrics is organized to acknowledge this and clarify the presentation as follows:

- Metrics 1 and 2 are discussed in Section 5.4.1 *Mass Removal and Remaining Plume Mass*;
- Metrics 3 and 4 are discussed in Section 5.4.2 *Capture Zone Evaluation and Estimated Mass Flux*;
- Metrics 5 and 6 are discussed in Section 5.4.3 *Perchlorate Mass Loading to Las Vegas Wash;*
- Metric 7 is discussed in Section 5.4.4 *Surface Water Effects on the SWF*; and

- Metric 8 is discussed in Section 5.4.5 *Environmental Footprint*.

5.4 Evaluation of Performance

In this section, the performance of the GWETS is discussed in relation to the metrics described in Section 5.1. The methodologies used for these evaluations are also described.

5.4.1 Mass Removal and Remaining Plume Mass

During the period July through December 2013, approximately 272,430 pounds of perchlorate (approximately 1,480 lbs/day) were captured and removed from groundwater by the GWETS as shown in Table 7. Of this total, approximately 163,960 pounds (approximately 890 lbs/day) were captured by the IWF; approximately 98,900 (approximately 540 lbs/day) were captured by the AWF; and approximately 9,580 pounds (approximately 50 lbs/day) were captured by the SWF.

Estimates of remaining chromium and perchlorate plume mass were presented in the 2012-2013 Annual Performance Report, Attachment 1 and will be updated as part of the 2013-2014 Annual Performance Report. Tables 9 and 10 present plume mass estimates for perchlorate and total chromium based on three interpolation methods (e.g., kriging, spline, and contour) (ENVIRON 2013d). The mass estimates for the three methods are generally in agreement. The results demonstrate decreasing concentrations of perchlorate and chromium for both on-site and off-site areas of the plume over the course of the study period. The total plume masses as of 2012 were estimated to be between 2,950 and 4,110 tons[15] for perchlorate and between 25 and 27 tons for chromium.

5.4.2 Capture Zone Evaluation and Estimated Mass Flux

Capture zones for each of the well fields were estimated in the alluvium and UMCf using forward particle tracking, calculated using MODPATH (Pollock 1994) and the updated steady-state groundwater model. Particles were released in the center of each model cell in model layer 1 (representing the alluvium) and layer 2 (representing the vertical extent of UMCf impacted by perchlorate). Capture zones for each well field were defined using an analysis of the particle tracking endpoints.

Based on pumping rates from October 2013, simulated capture zones in the alluvium and UMCf are shown in Figure 29a and Figure 29b, respectively. In order to evaluate the capture zones for this performance metric, the simulated capture zones are compared to a target capture zone, which was defined as the combination of the Site and Downgradient Plume Areas, as outlined on the figures. Comparing the target capture zone to the simulated capture zones indicates that the combination of the IWF, AWF and SWF almost completely capture the target area, except for a small area between SWF and Las Vegas Wash, where the perchlorate concentrations are generally less than 10 mg/L. These simulated capture zones may change once the groundwater model is revised as part of the Phase II model update of the 2013 GWETS Optimization Project.

[15] The plume mass estimates for perchlorate and chromium were originally reported in the 2012-2013 Annual Performance Report, Attachment 1 in metric tons. For ease of comparison as a performance metric, the plume masses are presented herein as short tons (2,000 pounds/ton).

To further evaluate the performance of each well field in more detail, perchlorate mass flux at the IWF, AWF and SWF within the study area boundary was estimated at three transects, located just upgradient of the respective well fields. The locations of the transects are shown on Figure 30a. The transect lines were drawn perpendicular to the groundwater flow direction with mass flux calculated using the methods described by the Interstate Technology and Regulatory Council (ITRC) guidance (ITRC 2010). The distributions of perchlorate mass flux at the IWF, AWF, and SWF along the transects are shown in Figures 30b, Figure 30c, and Figure 30d, respectively.

Perchlorate mass flux across each transect was calculated differently depending on whether that portion of the transect was inside or outside of the simulated capture zone. The perchlorate mass flux within the capture zone was estimated by averaging the mass loading at each extraction well in the AWF and SWF for the period July to December 2013, as reported in GWETS operations spreadsheets provided by Envirogen. For the IWF, the perchlorate loading at individual extraction wells is not recorded in the GWETS operations spreadsheet. Hence, the mass loading at each IWF well was determined using the average pumping rate over July through December 2013 and the perchlorate concentration measured in each well in November 2013.

The estimates of perchlorate mass flux outside of the capture zone at each transect were calculated from modeled flow rates and interpolated concentrations. For each model cell on the transect, the flux was calculated as the product of the average perchlorate concentration for July through December 2013, modeled groundwater flow rate, model cell width, and saturated thickness of the alluvium. For calculating the mass flux in UMCf, it was assumed that perchlorate is present throughout model layer 2 only. Further, it was assumed that perchlorate has not reached the UMCf in the vicinity of the SWF. At IWF and AWF, the mass fluxes in the UMCf were estimated based on the thickness of layer 2 which is the estimated saturated thickness of perchlorate-impacted UMCf.

The overall capture efficiency of each well field was calculated as the ratio of the total captured mass flux to the total mass flux across the transect. The capture efficiencies of the IWF, AWF, and SWF were calculated as 97%, 95%, and 93%, respectively. The results show that during the period of July through December 2013, an estimated average of 3.6 lbs/day of perchlorate discharged into Las Vegas Wash from the study area. Based on an evaluation of concentration trends in observation wells downgradient from the well fields, the capture efficiency may be overestimated for the IWF and AWF. As described in Section 2.1, the concentrations of perchlorate and chromium observed in wells immediately downgradient of the IWF barrier wall suggest that there may be some flow past the wall. The performance of the barrier wall is currently being evaluated. Similarly, as described in Section 2.2, the elevated perchlorate concentrations observed in well MW-K4 may indicate a gap in capture at the AWF immediately west of the UMCf ridge. To address this gap in capture at the AWF, ENVIRON is in the process of activating the currently idle wells ART-7B and PC-150 as part of the 2013 GWETS Optimization Project. Due to the inconsistencies between the measured concentrations and the model outputs at the IWF and AWF, the groundwater model in the vicinity of the well fields is also being evaluated and refined as part of the 2013 GWETS Optimization Project.

5.4.3 Perchlorate Mass Loading to Las Vegas Wash

The water in the Las Vegas Wash is sampled for perchlorate monthly or quarterly at various locations by the GWETS operator (for compliance with the site's NPDES permit) and by Southern Nevada Water Agency (SNWA). Based on the measured perchlorate concentrations in stream water and corresponding stream flow, perchlorate mass loading at the following three locations was estimated: Las Vegas Wasteway (LW8.85), Pabco Road (LW 6.05), and Northshore Road (LW0.55). These sampling stations are co-located with USGS gauging stations and are shown on Figure 31a.

Currently, perchlorate concentration and mass loading to Las Vegas Wash is reported to NDEP using data from Northshore Road, which is located approximately six river miles downstream of the Site and just upstream from Lake Mead. For the purpose of this performance evaluation, it is useful to also calculate mass loading at Pabco Road to evaluate what portion of the perchlorate mass loading at Northshore Road is coming from upstream of Pabco Road versus downstream of Pabco Road. In order to estimate background levels of perchlorate, mass loading was also calculated at the Las Vegas Wasteway stream gauging station, located about 2.8 river miles upstream of the SWF.

When reporting perchlorate mass loading at Northshore Road in the past, the established procedure is to multiply the measured perchlorate concentration by the 15-minute average flow rate corresponding to the time period closest to the sample collection time. Flow rates in the Las Vegas Wash exhibit a strong diurnal pattern due to the dominance of wastewater flows. The perchlorate samples at Northshore Road are collected during the morning near the low flow point of the diurnal cycle. Thus, this instantaneous mass loading calculation method yields lower mass loading estimates than methods using a longer flow averaging time.

Surface water samples have been collected at various time intervals in the past, but at a minimum samples were collected quarterly. In order to compare mass loading estimates at the three stations, mass loading at Northshore Road has been recalculated using quarterly average flow rates and quarterly average concentrations. A comparison of mass loading rates using the quarterly averaging method and the instantaneous method is shown on Figure 31b. The mass loading rates using the different methods are similar, but the quarterly average method tends to yield slightly higher values.

Quarterly perchlorate mass loading at the three stations (Northshore Road, Pabco Road and Las Vegas Wasteway) are shown on Figure 31c. Over the period from fourth quarter 2007 to fourth quarter 2013, the average perchlorate mass loading was 2 lbs/day at Las Vegas Wasteway, 22 lbs/day at Pabco Road, and 91 lbs/day at Northshore Road. Thus, this analysis indicates that approximately 22% of the mass loading measured at Northshore Road can be attributed to mass flux entering the Las Vegas Wash between the Las Vegas Wasteway and Pabco Road stations, while 76% can be attributed to mass flux entering Las Vegas Wash between the Pabco Road and Northshore Road stations.

5.4.4 Surface Water and Groundwater Interaction Near the SWF

Because the SWF is located near two surface water bodies (Las Vegas Wash and the COH Bird Viewing Ponds), pumping at the SWF likely induces surface water flow into the SWF extraction

wells. The surface water from both Las Vegas Wash and the COH Bird Viewing Ponds is comprised primarily of treated municipal wastewater effluent. It is inefficient for the SWF to extract any more surface water from these sources than necessary. One of the goals of this (and future) performance evaluations is to better characterize surface water interactions in the vicinity of the SWF.

The USGS stream gage at the Pabco Road weir (USGS # 09419700) is located approximately 1,000 feet downgradient of the SWF. Daily historical gauge height (i.e., stream stage) data from the Pabco Road weir is available from the USGS for this station starting October 1, 2000. A comparison of stream gauging height with groundwater elevations measured in nearby shallow monitoring wells is shown on Figure 32. The hydrographs show that by 2007, the groundwater elevations in monitoring wells near the SWF were below the stream gauging height, with the exception of well PC-97. This data suggests that in the area of the SWF, surface water from the Las Vegas Wash is being pulled into the SWF. As described in the Remedial Investigation and Feasibility Study (RI/FS) Work Plan (ENVIRON 2014), additional monitoring wells and data collection in planned in this area to better characterize stream-aquifer interactions.

Along with surface water from the Las Vegas Wash, the SWF appears to also be pulling a significant quantity of water directly from the COH Bird Viewing Ponds. This is indicated by the TDS plume in shallow groundwater from second quarter 2012, which is shown on Figure 33. A region of low TDS concentration (<2,500 mg/L) originating at the Bird Viewing Ponds appears to be captured by the SWF. Treated effluent from the COH WRF is being discharged into the Bird Viewing Ponds at an average rate of approximately 1.2 million gallons per day (850 gpm). Discharge into the Bird Viewing Ponds began on May 2, 2008.

In an effort to better understand the potential surface water inputs to groundwater near the SWF, additional samples will be collected from three wells in the western portion of the SWF area (PC-117, PC-118, and PC-121), two wells in the eastern portion of the SWF area (PC-91 and PC-133), three wells at the AWF (MW-K4, ART-4, and ART-9), and two wells likely influenced by the COH Bird Viewing Ponds (PC-62 and PC-103). The samples will be analyzed for analytes not typically monitored as part of the annual sampling program (e.g., dissolved cations, total suspended solids [TSS], chloride, fluoride, sulfate, ortho-phosphate, ammonia, nitrate, nitrite, total alkalinity) and compared with samples collected from Las Vegas Wash by the United States Department of the Interior's Bureau of Reclamation (Bureau of Reclamation 2012). The samples are being collected during the first quarter 2014 sampling event and results will be discussed in the 2013-2014 Annual Performance Report.

As part of the 2013 GWETS Optimization Project, the portion of SWF extraction that originates from the Bird Viewing Ponds and Las Vegas Wash will be further quantified using the updated groundwater model.

5.4.5 Environmental Footprint

A footprint analysis of Site operations was submitted to NDEP on August 8, 2013 (ENVIRON 2013b). The report documents energy and materials used at the Site, as well as wastes generated for activities and services conducted. Based on information compiled for the footprint analysis, the GWETS used approximately 4.6 million kilowatt hours per year (kWh/yr) and the

wells and pump stations used approximately 1.4 million kWh/yr. Monthly energy use by the GWETS varied from 352,092 to 404,540 kWh between July 2011 and June 2012. Monthly use by the wells and lift stations varied from 109,870 to 129,270 kWh during the same period. Given that Site operations have not undergone any major alterations since this data was compiled, energy use at the Site should be substantially the same during the current performance period.

5.5 Summary of GWETS Performance Evaluation

A summary of the performance metrics is shown in Table 11. As described in the 2013 GWETS Optimization Project Work Plan, the performance metrics for GWETS described above will be used to adjust the operation of the GWETS to more effectively and efficiently meet the performance objectives. Currently, the system is effective at capturing more than 90% of the perchlorate mass flux migrating from the Site area to the Las Vegas Wash. As part of the 2013 GWETS Optimization Project, additional currently idle extraction wells are being activated and a set of recommendations for optimizing the performance will be proposed.

6 Conclusions

The GWETS consists of three groundwater capture well fields: the IWF, the AWF, and the SWF. The IWF coupled with the barrier wall provides capture of the highest concentrations of perchlorate and chromium at the Site and significantly reduces the amount of perchlorate and chromium in downgradient groundwater. The off-site AWF, located approximately 8,200 feet downgradient of the IWF, has been in continuous operation since October 2002. The AWF captures significantly lower concentrations of both perchlorate and chromium; however due to its higher extraction rates compared with the IWF, it significantly contributes to the overall mass of perchlorate removed from the environment and mitigates its migration in groundwater. The SWF, located over the main part of the alluvium channel in close proximity to Las Vegas Wash, contributes the highest flows (average of 514 gpm between July and December 2013) compared with the IWF (67 gpm) and the AWF (278 gpm) to the GWETS, but captures significantly lower concentrations than the other well fields. The surface seep has not flowed since April 2007.

Treatment of chromium-contaminated groundwater (primarily from the IWF) occurs via the on-site GWTP, which chemically reduces hexavalent chromium and removes total chromium. A small ferrous sulfate drip system also treats lower concentrations of chromium from the AWF. Treatment of perchlorate-contaminated groundwater from all well fields occurs via the on-site FBRs, which biologically remove perchlorate as well as chlorate, nitrate, and residual chromium.

For the 6-month period ending in December 2013, the capture of perchlorate-contaminated groundwater from all three well fields, and biological treatment in the on-site FBRs, has removed a total of approximately 272,430 pounds of perchlorate from the environment. This was a decrease from 311,200 pounds of perchlorate removed during 6-month period ending in December 2012, but represented a return to Site conditions as they were prior to late 2012.

For the same 6-month period, the capture of chromium-contaminated groundwater at the IWF and AWF, and treatment at the on-site GWTP, has removed approximately 1,460 pounds of chromium. Adding the 40 pounds of chromium removed by the FBRs for the same period, a total of 1,500 pounds of chromium were removed from groundwater between July and December 2013.

As reported in a memo to NDEP's Bureau of Water Pollution Control on August 29, 2013 (ENVIRON 2013c), a number of events occurred during the weeks of June 30 to July 9, 2013 and July 28 to August 3, 2013 that interfered with treatment operations at the Site. As discussed in Section 4.2 herein, this resulted in a 30-day average perchlorate effluent concentration for July of 18.5 µg/L, slightly above the Site's NPDES permit limitation of 18 µg/L. Following this exceedance, GWETS operations have stabilized and effluent samples have not exceeded the Site's permit limits.

During the current reporting period, groundwater elevations remained elevated in areas adjacent to the barrier wall. Within the IWF itself, the significant increases in perchlorate concentration that were first observed in November 2012 have gradually decreased. As first discussed in the 2012-2013 Annual Performance Report, the above average rainfall in the fall of 2012 and the infiltration of storm water within the Central Retention Basin have likely resulted in

mobilization of additional soil-bound perchlorate upgradient of the IWF. The historically high perchlorate mass removal rates at the IWF between November 2012 and May 2013 support this conclusion. Monitoring of Site groundwater during the current performance period has shown that conditions at the IWF are returning to what they were before November 2012.

Performance metrics have been developed for the GWETS and have been presented for the first time in this report as part of the routine performance reporting. A summary of the performance metrics is presented in Table 11. These metrics form the basis for evaluating the performance of the GWETS on a comparative basis moving forward.

7 Proposed Future Activities

As part of the 2011-2012 Annual Groundwater Monitoring report, a preliminary analysis of current groundwater capture was performed that recommended both adjusting extraction rates of individual wells and bringing idle extraction wells online to improve capture efficiency and maximize mass removal. These recommendations are being implemented as part of the 2013 GWETS Optimization Project, which is described in a November 22, 2013 work plan (ENVIRON 2013d) approved by NDEP on December 3, 2013. The scope of work for the 2013 GWETS Optimization Project includes making operational adjustments to the extraction wells in the IWF and AWF, including initiating extraction in seven currently idle wells in the IWF (I-W, I-X, I-Y, I-AA, I-AB, I-AC, and I-AD) and two wells in the AWF (ART-7B and PC-150). This work will include well testing, construction related to connecting ART-7B and PC-150 to the GWETS, well startup, updating the groundwater model, data evaluation and modeling, and reporting of results.

The updates to the NDEP-approved groundwater model will provide a better understanding of projected groundwater extraction rates at the IWF, AWF, and SWF. For the purpose of initial optimization, the model will continue to be used in steady-state mode; however, ENVIRON anticipates that a transient model will be developed, as requested by NDEP, to evaluate the changes in capture zones over time resulting from time-varying pumping rates. The task of developing the transient model is anticipated to be performed as part of the RI/FS for the Site and is therefore not included in the 2013 GWETS Optimization Project.

In an effort to better understand the potential surface water inputs to groundwater near the SWF, additional analyses will be performed on groundwater samples collected from three wells in the western portion of the SWF area (PC-117, PC-118, and PC-121), two wells in the eastern portion of the SWF area (PC-91 and PC-133), three wells at the AWF (MW-K4, ART-4, and ART-9), and two wells likely influenced by the COH Bird Viewing Ponds (PC-62 and PC-103). The samples will be analyzed for analytes not typically monitored as part of the annual sampling program (e.g., dissolved cations, total suspended solids [TSS], chloride, fluoride, sulfate, ortho-phosphate, ammonia, nitrate, nitrite, total alkalinity) for comparison to sampling results from Las Vegas Wash performed by the Bureau of Reclamation. The samples are being collected during the first quarter 2014 sampling event. In addition, the performance of the barrier wall, including what effects the operation of the former recharge trenches may have had, is currently being evaluated. It is anticipated that the results of both of these efforts will be discussed in the 2013-2014 Annual Performance Report.

Other proposed future activities include commencement of aspects of the scope of work outlined in the RI/FS Work Plan, Revision 1 which was submitted to NDEP on January 10, 2014 (ENVIRON 2014). The proposed activities relating to the RI/FS are contingent on the NDEP approval of the RI/FS Work Plan and associated budgets.

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Tables

TABLE 1: INTERCEPTOR WELL FIELD DISCHARGE RATES

Nevada Environmental Response Trust Site
Henderson, Nevada

WELL ID	July 2009 - June 2010 (gpm)	July 2010 - June 2011 (gpm)	July 2011 - June 2012 (gpm)	July 2012- June 2013 (gpm)	July - Decmber 2013 (gpm)	Well Screened In
I-AR	1.1	0.8	1.1	1.4	1.0	Qal/UMCf
I-B	2.3	2.5	1.5	1.6	1.4	Qal/UMCf
I-C	5.3	4.1	5.9	5.1	5.0	Qal/UMCf
I-D	3.1	4.2	1.3	1.7	1.7	Qal/UMCf
I-E	1.5	1.5	1.3	2.1	2.8	Qal/UMCf
I-F	6.3	4.1	5.7	4.4	4.7	Qal/UMCf
I-G	0.2	0.3	0.1	0.5	1.0	Qal/UMCf
I-H	0.9	0.9	0.9	1.0	0.8	Qal/UMCf
I-I	5.0	5.1	5.0	4.7	4.9	Qal/UMCf
I-J	7.4	7.3	6.3	6.0	6.7	Qal/UMCf
I-K	4.2	4.0	3.9	3.3	3.9	Qal/UMCf
I-L	1.6	1.5	1.9	1.9	1.3	Qal/UMCf
I-M	2.7	2.2	2.6	4.0	2.1	Qal/UMCf
I-N	3.7	3.7	3.1	2.7	1.1	Qal/UMCf
I-O	2.8	2.8	1.7	2.7	1.4	Qal/UMCf
I-P	3.8	3.4	2.1	3.7	5.6	Qal/UMCf
I-Q	0.4	0.6	0.3	0.2	0.4	Qal/UMCf
I-R	1.3	1.2	2.5	2.9	2.8	Qal/UMCf
I-S	5.9	6.1	5.2	4.0	3.9	Qal/UMCf
I-T	0.5	0.4	0.4	0.4	0.4	Qal/UMCf
I-U	0.9	0.8	0.7	0.8	1.0	Qal/UMCf
I-V	4.3	4.0	4.8	5.4	5.6	Qal/UMCf
I-Z	7.5	7.3	6.7	8.0	7.8	Qal/UMCf
TOTAL	**72.8**	**68.9**	**65.1**	**68.6**	**67.1**	

Notes:
gpm = gallons per minute
Qal = Quaternary Alluvium
UMCf = Upper Muddy Creek Formation (first fine-grained unit)

TABLE 2: ATHENS ROAD WELL FIELD DISCHARGE RATES

Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	July 2009 - June 2010 (gpm)	July 2010 - June 2011 (gpm)	July 2011 - June 2012 (gpm)	July 2012 - June 2013 (gpm)	July - December 2013 (gpm)	Well Screened In
ART-1/1A	6.3	16.5	14.1	22.0	23.5	Qal
ART-2/2A	64.0	62.2	62.4	62.2	61.5	Qal
ART-3/3A	39.2	46.8	46.8	45.8	47.8	Qal
ART-4/4A	5.6	7.9	8.5	8.3	9.5	Qal
ART-7/7A	24.9	31.2	31.2	31.1	30.8	Qal
ART-8/8A	60.3	61.7	62.7	62.2	57.8	Qal
ART-9/ART-6[1]	45.6	46.8	46.5e[2]	49.1	47.4	Qal
TOTAL	**245.9**	**273.1**	**272.2**	**280.7**	**278.2**	

Notes:

ART-1, 2, 3, 4, 7 and 8 have adjacent recovery wells - "Buddy Wells" - designated by the letter "A".

[1] Starting in September 2006, ART-9 replaced the pumping of ART-6/6A due to the low water levels in that well pair. The electrical and plumbing system from ART-6A was removed and is being used in ART-9.

[2] The flow meter for well ART-9 malfunctioned for several days in April and May 2012. For these days, an average flow rate for well ART-9 was used to calculate the annual average (from July 2011 to June 2012).

e = estimate; due to a malfunctioning flow meter, the flow rate for this well was manually adjusted to calculate an average flow rate.

gpm = gallons per minute

Qal = Quaternary Alluvium

TABLE 3: SEEP WELL FIELD DISCHARGE RATES
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	July 2009 - June 2010 (gpm)	July 2010 - June 2011 (gpm)	July 2011 - June 2012 (gpm)	July 2012 - June 2013 (gpm)	July - December 2013 (gpm)	Well Screened In
PC-116R	183.6	132.4	124.8	124.5	123.7	Qal
PC-99R2/R3[1]	89.8	63.9	61.6	54.4	60.0	Qal
PC-115R	70.3	82.8	91.4	95.7	86.6	Qal
PC-117	81.1	99.0	92.5	124.6	101.3	Qal
PC-118	71.0	70.7	76.3	93.3	72.0	Qal
PC-119	54.0	62.8	65.1	87.6	65.5	Qal
PC-120[2]	2.0	3.2	0.0	0.1	0.9	Qal
PC-121[2]	2.6	1.0	0.0	0.1	0.0	Qal
PC-133	6.2	5.0	3.1	4.3e	4.3	Qal
TOTAL	**560.5**	**520.9**	**514.7**	**584.6**	**514.3**	

Notes:

[1] Wells PC-99R2 and PC-99R3 are connected and operate as a single pumping well.

[2] Wells PC-120 and PC-121 have not been continuously pumped since October 2005 due to their low perchlorate removal efficiencies and because they are located at the end of the well line in the shallowest portion of the subsurface alluvial channel.

gpm = gallons per minute

Qal = Quaternary Alluvium

e = estimate; due to a malfunctioning flow meter, the flow rate for this well was manually adjusted to calculate an average flow rate.

TABLE 4: MONTHLY WELL FIELD EXTRACTION RATES, JULY - DECEMBER 2013

Nevada Environmental Response Trust Site
Henderson, Nevada

Well	July 2013[2] (gpm)	August 2013[2] (gpm)	September 2013 (gpm)	October 2013 (gpm)	November 2013[3] (gpm)	December 2013 (gpm)
Interceptor Well Field (IWF)						
I-A-R	0.9	0.8	0.6	0.4	1.6	1.6
I-B	1.4	1.5	1.7	1.7	0.8	1.6
I-C	4.4	3.4	5.3	5.6	5.4	5.9
I-D	1.8	1.7	1.6	1.6	1.4	1.9
I-E	2.6	2.7	2.8	2.8	2.7	2.8
I-F	4.7	4.7	4.7	4.7	4.5	4.7
I-G	0.9	0.8	0.9	1.1	1.1	0.9
I-H	1.0	1.0	0.8	0.6	0.6	0.6
I-I	4.8	4.9	4.9	4.9	4.8	4.9
I-J	6.5	6.5	6.6	6.8	6.7	6.9
I-K	3.9	3.8	4.0	4.0	3.9	4.0
I-L	1.4	1.4	1.3	1.4	1.3	1.2
I-M	2.2	2.2	2.2	2.1	2.0	2.1
I-N	1.2	1.1	1.1	1.2	1.0	1.0
I-O	2.9	2.8	1.1	0.4	0.5	0.6
I-P	5.1	4.8	5.5	6.2	6.0	6.1
I-Q	0.2	0.2	0.2	0.1	0.8	1.1
I-R	2.5	2.6	2.7	2.2	2.8	3.7
I-S	3.8	3.9	3.9	3.9	3.8	4.3
I-T	0.3	0.5	0.4	0.3	0.2	0.5
I-U	0.6	1.0	1.0	1.1	1.1	1.1
I-V	5.6	5.6	5.6	5.6	5.5	5.7
I-Z	7.6	7.7	7.9	8.0	7.8	7.9
Total for IWF:	**66.2**	**65.6**	**66.7**	**66.7**	**66.2**	**71.3**
Athens Road Well Field (AWF)						
ART-1/1A	23.5	23.5	23.4	23.6	23.2	23.4
ART-2/2A	60.8	61.9	62.4	61.7	59.7	62.3
ART-3/3A	45.9	47.6	48.0	48.6	47.5	49.2
ART-4/4A	7.8	8.3	9.2	9.9e	10.3e	11.6e
ART-7/7A	30.5	31.0	53.0	30.9	29.9	45.3
ART-8/8A	60.8	56.6	31.2	60.8	59.7	31.1
ART-9/ART-6	45.5	48.2	46.8	48.3	43.9	62.3
Total for AWF:	**274.8**	**277.1**	**274.0**	**283.8**	**274.2**	**285.3**
Seep Well Field (SWF)						
PC-116R	123.2	124.7	124.9	124.4	120.7	124.6
PC-99R2/R3	55.9	57.2	62.4	62.1	60.3	62.1
PC-115R	96.0	89.9	96.2	94.8	76.9[4]	65.9[4]
PC-117	123.3	113.6	93.7	93.3	90.6	93.5
PC-118	92.7	84.3	65.0	61.3	63.6	64.9
PC-119	74.7	70.8	62.5	62.2	60.3	62.3
PC-120[1]	0.0	0.0	0.0	5.0	0.0	0.0
PC-121[1]	0.0	0.0	0.0	0.0	0.0	0.0
PC-133	4.4	4.7	4.2	4.3	4.2	4.2
Total for SWF:	**570.2**	**545.1**	**508.9**	**507.4**	**476.6**	**477.6**

Notes:

gpm = gallons per minute

e = estimate; due to malfunctioning flow meter or other issues, the flow rate for this well was manually adjusted to calculate an average flow rate based on field observations.

[1] Wells PC-120 and PC-121 have not been continuously pumped since October 2005 due to their low perchlorate removal efficiencies and because they are located at the end of the well line in the shallowest portion of the subsurface alluvial channel.

TABLE 4: MONTHLY WELL FIELD EXTRACTION RATES, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

[2] Flow rates at the SWF and AWF were estimated by site personnel during portions of July and August 2013 after a communications line was damaged during an electrical storm.

[3] A scheduled plant shutdown for approximately two days in November 2013 reduced average flow rates at the IWF, AWF, and SWF by approximately 3.5% durning this month.

[4] PC-115R began cycling on and off in November 2013. The issue was resolved by increasing the flow between Lift Station 1 and Lift Station 2.

TABLE 5: CHROMIUM TREATMENT DATA FOR GWTP, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Month	Average Flow to GWTP (gpm)	Average Flow to GWTP (MM Gals)	Average Total Cr Inflow[1] (mg/L)	Average Total Cr Outflow[2] (mg/L)	Average Cr VI Outflow[2] (mg/L)	Average Total Cr Removed (lbs/day)	Total Cr Removed (lbs/month)
July 2013	66.2	2.96	10.2	0.176	0.0002	8.10	251
August 2013	65.6	2.93	10.6	0.128	0.0001	8.33	258
September 2013	66.7	2.88	9.7	0.125	0.0002	7.81	234
October 2013	66.7	2.98	8.6	0.234	0.0004	6.90	214
November 2013	66.2	2.86	10.2	0.563	0.0002	8.14	244
December 2013	71.3	3.18	9.6	0.553	0.0001	8.24	255
						Estimated Chromium Removed by GTWP:	**1,460**
						Estimated Chromium Removed by FBRs:	**40**
						EstimatedTotal Chromium Removed:	**1,500**

Notes:

Estimated removal rates are rounded to the nearest 10 pounds.

[1] Hexavalent chromium is used as a surrogate for total chromium in inflow calculations.

[2] Treated Outflow is directed to Bioplant Equalization Area and Carbon Treatment before being fed to the Fluidized Bed Reactors (FBRs).

Cr = chromium
Cr VI = hexavalent chromium
FBR = fluidized bed reactor
GWTP = groundwater treatment plant
gpm = gallons per minute
lbs = pounds
mg/L = milligrams per liter
MM gals = million gallons

TABLE 6: WEEKLY CHROMIUM IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Sample Date	Influent/ Effluent	Total Chromium EPA 200.7 (mg/L)	Total Chromium SQL (mg/L)	Hexavalent Chromium EPA 218.6 (mg/L)	Hexavalent Chromium SQL (mg/L)
7/5/2013	INFLUENT	0.15	0.002	0.047	0.00025
7/5/2013	EFFLUENT	0.0077	0.002	<0.00025	0.00025
7/11/2013	INFLUENT	0.014	0.002	0.008	0.00025
7/11/2013	EFFLUENT	0.012	0.002	<0.00025	0.00025
7/15/2013	INFLUENT	0.025 B	0.002	0.022	0.00025
7/15/2013	EFFLUENT	0.0095 B	0.002	<0.00025	0.00025
7/22/2013	INFLUENT	0.045	0.002	0.039	0.00025
7/22/2013	EFFLUENT	0.0083	0.002	0.00056 J	0.00025
7/30/2013	INFLUENT	0.074	0.002	0.076	0.00025
7/30/2013	EFFLUENT	0.045	0.002	<0.00025	0.00025
8/5/2013	INFLUENT	0.0035 J	0.002	0.00068 J	0.00025
8/5/2013	EFFLUENT	0.007	0.002	<0.0025	0.0025
8/12/2013	INFLUENT	0.064	0.004	0.063	0.00025
8/12/2013	EFFLUENT	0.011	0.002	<0.0025	0.0025
8/19/2013	INFLUENT	0.013	0.002	0.0074	0.00025
8/19/2013	EFFLUENT	0.014	0.002	--	--
8/21/2013	EFFLUENT	--	--	<0.00025	0.00025
8/26/2013	INFLUENT	0.061	0.002	0.01	0.00025
8/26/2013	EFFLUENT	0.013	0.002	<0.00025	0.00025
9/3/2013	INFLUENT	0.012	0.002	0.0082	0.00025
9/3/2013	EFFLUENT	0.016	0.002	<0.00025	0.00025
9/9/2013	INFLUENT	0.0096	0.002	0.0048	0.00025
9/9/2013	EFFLUENT	0.013	0.002	<0.00025	0.00025
9/19/2013	INFLUENT	0.012	0.002	0.0088	0.00025
9/19/2013	EFFLUENT	0.0054	0.002	<0.00025	0.00025
9/24/2013	INFLUENT	0.0092	0.002	0.0061	0.00025
9/24/2013	EFFLUENT	0.0065	0.002	<0.00025	0.00025
9/30/2013	INFLUENT	0.0089	0.002	0.0056	0.00025
9/30/2013	EFFLUENT	0.01	0.002	<0.00025	0.00025
10/7/2013	INFLUENT	0.011	0.002	0.0085	0.00025
10/7/2013	EFFLUENT	0.0038 J	0.002	<0.00025	0.00025
10/14/2013	INFLUENT	0.014	0.002	0.0046	0.00025
10/14/2013	EFFLUENT	0.0062	0.002	<0.00025	0.00025
10/21/2013	INFLUENT	0.016	0.002	0.0086	0.00025
10/21/2013	EFFLUENT	0.0064	0.002	<0.00025	0.00025
10/28/2013	INFLUENT	0.012	0.002	0.0081	0.00025
10/28/2013	EFFLUENT	0.0058	0.002	<0.00025	0.00025
11/4/2013	INFLUENT	0.005	0.002	0.0007 J	0.00025
11/4/2013	EFFLUENT	0.0043 J	0.002	<0.00025	0.00025
11/11/2013	INFLUENT	0.010 J	0.01	0.0069	0.00025
11/11/2013	EFFLUENT	0.010 J	0.01	<0.00025	0.00025
11/18/2013	INFLUENT	0.0022 J	0.002	0.00087 J	0.00025
11/18/2013	EFFLUENT	<0.0020	0.002	<0.00025	0.00025
11/25/2013	INFLUENT	0.02	0.002	0.019	0.00025
11/25/2013	EFFLUENT	0.011	0.002	<0.00025	0.00025
12/2/2013	INFLUENT	<0.0020	0.002	0.00092 J	0.00025
12/2/2013	EFFLUENT	0.0031 J	0.002	<0.00025	0.00025

TABLE 6: WEEKLY CHROMIUM IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Sample Date	Influent/ Effluent	Total Chromium EPA 200.7 (mg/L)	Total Chromium SQL (mg/L)	Hexavalent Chromium EPA 218.6 (mg/L)	Hexavalent Chromium SQL (mg/L)
12/9/2013	INFLUENT	0.084	0.002	0.074	0.00025
12/9/2013	EFFLUENT	0.014	0.002	<0.00025	0.00025
12/16/2013	INFLUENT	0.096	0.002	0.077	0.00025
12/16/2013	EFFLUENT	0.014	0.002	<0.00025	0.00025
12/23/2013	INFLUENT	0.028	0.002	0.028	0.00025
12/23/2013	EFFLUENT	0.01	0.002	<0.00025	0.00025
12/30/2013	INFLUENT	0.0033 J	0.002	0.0015	0.00025
12/30/2013	EFFLUENT	0.0075	0.002	<0.00025	0.00025

Notes:
-- = No Sample
B = Compound was found in the blank and sample.
FBR = Fluidized Bed Reactor
J = Estimated Concentration
NA = Not analyzed
mg/L = milligrams per liter
SQL = Sample Quantitation Limit

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT

Nevada Environmental Response Trust Site
Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
OCT 2002[1]	495	331	1,402	2,228	34.5
NOV 2002	422	1,001	1,146	2,569	38.5
DEC 2002	208	1,164	1,292	2,664	41.3
JAN 2003	408	1,077	1,467	2,952	45.7
FEB 2003	482	785	1,060	2,327	32.6
MAR 2003[2]	576	806	1,067	2,449	38.0
APR 2003	664	708	1,033	2,405	36.1
MAY 2003	640	728	1,148	2,517	39.0
JUN 2003	628	909	1,098	2,634	39.5
JUL 2003	550	764	1,034	2,348	36.4
AUG 2003	431e	742	999	2,172e	33.7e
SEP 2003	415	769	937	2,121	31.8
OCT 2003	370	767	1,003	2,140	33.2
NOV 2003	337	714	949	2,000	30.0
DEC 2003	318	734	932	1,984	30.8
JAN 2004	306	690	938	1,934	30.0
FEB 2004	322	652	881	1,856	26.9
MAR 2004	221	742	917	1,879	29.1
APR 2004	151	735	854	1,740	26.1
MAY 2004	122	741	890	1,753	27.2
JUN 2004	157	753	978	1,888	28.3
JUL 2004	195	758	985	1,938	30.0
AUG 2004	201	803	941	1,945	30.2
SEP 2004	169	835	970	1,973	29.6
OCT 2004	262	799	1,038	2,099	32.5
NOV 2004	168	814	1,016	1,997	30.0
DEC 2004	122	811	917	1,850	28.7
JAN 2005	142	776	993	1,910	29.6
FEB 2005	139e	762e	942	1,843e	25.8e
MAR 2005	158	781	964	1,902	29.5
APR 2005	145	787	971	1,904	28.6
MAY 2005	152	756	966	1,875	29.1
JUN 2005[3]	151	792	970	1,913	28.7
JUL 2005	154	769	1,060	1,983	30.7
AUG 2005	135	800	1,092	2,028	31.4
SEP 2005	85	806	1,122	2,013	30.2
OCT 2005	99	797	1,060	1,957	30.3
NOV 2005	111	773	1,072	1,956	29.3
DEC 2005	121	726	1,123	1,971	30.5
JAN 2006	141	750	984	1,875	29.1
FEB 2006	120	778	978	1,876	26.3
MAR 2006	107	736	967	1,810	28.1
APR 2006	129	755	1,011	1,895	28.4

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT
Nevada Environmental Response Trust Site
Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
MAY 2006	131	713	945	1,789	27.7
JUN 2006	135	753	874	1,762	26.4
JUL 2006	123	647	920	1,690	26.2
AUG 2006	141	652	918	1,710	26.5
SEP 2006[4]	142	762	1,045	1,949	29.2
OCT 2006	134	778	1,018	1,930	29.9
NOV 2006	101	714	867	1,682	25.2
DEC 2006	121	745	870	1,736	26.9
JAN 2007	100	786	948	1,833	28.4
FEB 2007	89	736	871	1,695	23.7
MAR 2007	88	689	915	1,693	26.2
APR 2007	89	689	896	1,675	25.1
MAY 2007	102	699	890	1,690	26.2
JUN 2007	91	642	832	1,565	23.5
JUL 2007	67	659	912	1,638	25.4
AUG 2007	55	632	840	1,527	23.7
SEP 2007	53	631	842	1,526	22.9
OCT 2007	53	686	841	1,580	24.5
NOV 2007	55	682	762	1,500	22.5
DEC 2007	59	664	742	1,465	22.7
JAN 2008	58	633	873	1,565	24.3
FEB 2008	63	656	861	1,580	22.9
MAR 2008	60	666	865	1,591	24.7
APR 2008	54	656	851	1,561	23.4
MAY 2008	46	627	721	1,394	21.6
JUN 2008	44	637	732	1,413	21.2
JUL 2008	54	673	817	1,544	23.9
AUG 2008	59	691	945	1,695	26.3
SEP 2008	56	639	798	1,493	22.4
OCT 2008	51	626	801	1,477	22.9
NOV 2008	48	643	807	1,497	22.5
DEC 2008	58	678	809	1,544	23.9
JAN 2009	44	659	864	1,567	24.3
FEB 2009	32	622	796	1,450	20.3
MAR 2009	36	723	865	1,624	25.2
APR 2009	32	685	833	1,550	23.2
MAY 2009	35	655	835	1,525	23.6
JUN 2009	36	611	866	1,512	22.7
JUL 2009	40	571e	833	1,444e	22.4e
AUG 2009	43	652	859	1,554	24.1
SEP 2009	48	671	938	1,657	24.9
OCT 2009	44	625	847	1,516	23.5
NOV 2009	47	613	894	1,554	23.3

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT

Nevada Environmental Response Trust Site
Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
DEC 2009	49	635	891	1,575	24.4
JAN 2010	55	661	912	1,629e	25.2e
FEB 2010	53	675	853	1,581e	22.1e
MAR 2010	49	629	949	1,626e	25.2e
APR 2010	50	630	926	1,607	24.1
MAY 2010	53	758	983	1,794	27.8
JUN 2010	53	733	942	1,728	25.9
JUL 2010	46	652	838	1,535	23.8
AUG 2010	44	658	846	1,548	24.0
SEP 2010	42	728	833	1,602	24.0
OCT 2010	50	634	794	1,478	22.9
NOV 2010	50	635	761	1,446	21.7
DEC 2010	42	636	690	1,368	21.2
JAN 2011	32	598	735	1,364	21.1
FEB 2011	40	588	709	1,336	18.7
MAR 2011	43	634	733	1,410	21.8
APR 2011	48	616	791	1,455	21.8
MAY 2011	57	632	734	1,423	22.1
JUN 2011	46	639	754	1,438	21.6
JULY 2011	41	646	756	1,443	22.4
AUG 2011	39	630	768	1,438	22.3
SEP 2011	41	619	751	1,410	21.2
OCT 2011	41	585	691	1,317	20.4
NOV 2011	41	570	696	1,307	19.6
DEC 2011	38	567	659	1,263	19.6
JAN 2012	41	606	694	1,341	20.8
FEB 2012	44	669	726	1,439	20.9
MAR 2012	46	623	720	1,389	21.5
APR 2012	44e	607e	686	1,337e	20.0e
MAY 2012	47e	665e	687	1,399e	21.7e
JUN 2012	48e	641	541	1,229e	18.4e
JULY 2012	52e	635	661	1,348e	20.9e
AUG 2012	48e	601	655	1,304e	20.2e
SEP 2012	61e	626	1,042	1,728e	25.9e
OCT 2012	65e	621	1,294	1,980e	30.7e
NOV 2012	63e	609	1,145	1,817e	27.2e
DEC 2012	58e	619	1,301	1,978e	30.7e
JAN 2013	58	642	1,292	1,992	30.9
FEB 2013	52	615	1,194	1,862	26.1
MAR 2013	51	610	1,070	1,732	26.8
APR 2013	63	629	1,141	1,833	27.5
MAY 2013	62	639	1,086	1,787	27.7
JUN 2013	47	544	886	1,477	22.2

TABLE 7: PERCHLORATE REMOVED FROM THE ENVIRONMENT
Nevada Environmental Response Trust Site
Henderson, Nevada

Date	Seep Wells and Seep (lbs/day)	Athens Road Well Field (lbs/day)	Interceptor Well Field (lbs/day)	Total (lbs/day)	Total Tons Removed (per month)
JULY 2013	53	523	942	1,518	23.5
AUG 2013	59	569	929	1,557	24.1
SEP 2013	44	576	956	1,576	23.6
OCT 2013	55	593	937	1,586	24.6
NOV 2013	54	514	782	1,350	20.3
DEC 2013	46	451	799	1,295	20.1

Notes:

[1] Athens Rd recovery wells began full time operation on 10/22/02.

[2] Five new Seep Area recovery wells began operation on 3/24/03.

[3] One new Seep Area recovery well began operation on 6/21/05.

[4] One new Athens Rd recovery well began full time operation on 9/8/06.

lbs/day = pounds per day

e = estimate; due to malfunctioning flow meter or other issues, the flow rate for this well was manually adjusted to calculate an average flow rate based on field observations.

In some cases, the monthly perchlorate mass removal numbers in this table differ slightly from those presented in previous reports due to minor corrections made in the historical calculations. These adjustments did not substantively affect the mass removal numbers.

TABLE 8: WEEKLY PERCHLORATE IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013

Nevada Environmental Response Trust Site
Henderson, Nevada

Sample Date	Influent/Effluent Weekly Composite	Perchlorate EPA 314 (mg/L)	Perchlorate SQL (mg/L)
7/6/2013	INFLUENT-COMP	100	9.5
7/6/2013	EFFLUENT-COMP	0.074	0.0048
7/13/2013	INFLUENT-COMP	120	9.5
7/13/2013	EFFLUENT-COMP	0.00094 H	0.0005
7/20/2013	INFLUENT-COMP	120	9.5
7/20/2013	EFFLUENT-COMP	0.0011	0.0005
7/27/2013	INFLUENT-COMP	110	9.5
7/27/2013	EFFLUENT-COMP	0.0011	0.0005
8/3/2013	INFLUENT-COMP	130	9.5
8/3/2013	EFFLUENT-COMP	0.015	0.0048
8/10/2013	INFLUENT-COMP	110	9.5
8/10/2013	EFFLUENT-COMP	<0.0048	0.0048
8/17/2013	INFLUENT-COMP	130	9.5
8/17/2013	EFFLUENT-COMP	<0.0048	0.0048
8/24/2013	INFLUENT-COMP	120	9.5
8/24/2013	EFFLUENT-COMP	<0.0048	0.0048
8/31/2013	INFLUENT-COMP	130	9.5
8/31/2013	EFFLUENT-COMP	<0.0048	0.0048
9/7/2013	INFLUENT-COMP	110	9.5
9/7/2013	EFFLUENT-COMP	<0.0048	0.0048
9/14/2013	INFLUENT-COMP	120	9.5
9/14/2013	EFFLUENT-COMP	<0.0048	0.0048
9/21/2013	INFLUENT-COMP	120	9.5
9/21/2013	EFFLUENT-COMP	<0.0048	0.0048
9/28/2013	INFLUENT-COMP	130	9.5
9/28/2013	EFFLUENT-COMP	<0.0048	0.0048
10/5/2013	INFLUENT-COMP	140	4.0
10/5/2013	EFFLUENT-COMP	<0.0041	0.0041
10/12/2013	INFLUENT-COMP	110	0.0025
10/12/2013	EFFLUENT-COMP	0.0064*	See note*
10/19/2013	INFLUENT-COMP	110	5.0
10/19/2013	EFFLUENT-COMP	<0.0025	0.0025
10/26/2013	INFLUENT-COMP	100	5.0
10/26/2013	EFFLUENT-COMP	<0.0025	0.0025
11/2/2013	INFLUENT-COMP	120	5.0
11/2/2013	EFFLUENT-COMP	<0.0025	0.0025
11/9/2013	INFLUENT-COMP	120	5.0
11/9/2013	EFFLUENT-COMP	<0.0025	0.0025
11/16/2013	INFLUENT-COMP	110	5.0
11/16/2013	EFFLUENT-COMP	<0.0025	0.0025
11/23/2013	INFLUENT-COMP	100	5.0
11/23/2013	EFFLUENT-COMP	<0.0025	0.0025
11/30/2013	INFLUENT-COMP	110	5.0
11/30/2013	EFFLUENT-COMP	<0.0025	0.0025

TABLE 8: WEEKLY PERCHLORATE IN FBR INFLUENT AND EFFLUENT, JULY - DECEMBER 2013

Nevada Environmental Response Trust Site
Henderson, Nevada

Sample Date	Influent/Effluent Weekly Composite	Perchlorate EPA 314 (mg/L)	Perchlorate SQL (mg/L)
12/7/2013	INFLUENT-COMP	99	5.0
12/7/2013	EFFLUENT-COMP	<0.0025	0.0025
12/14/2013	INFLUENT-COMP	110	5.0
12/14/2013	EFFLUENT-COMP	<0.0025	0.0025
12/21/2013	INFLUENT-COMP	100	5.0
12/21/2013	EFFLUENT-COMP	<0.0025	0.0025
12/28/2013	INFLUENT-COMP	93	5.0
12/28/2013	EFFLUENT-COMP	<0.0025	0.0025

Notes:

The influent and effluent composite results above are the same as those used in the Discharge Monitoring Reports (DMRs) associated with the Site's National Pollution Discharge Elimination System (NPDES) Permit NV0023060.

FBR = Fluidized Bed Reactor

J = Estimated Concentration

H = Sample prepped or analyzed beyond specified holding time

mg/L = milligrams per liter

SQL = Sample Quantitation Limit

* Perchlorate analysis of the original effluent composite sample was subcontracted to Calscience Environmental Laboratories, Inc. (CalScience) due to instrument issues at TestAmerica Laboratories (TestAmerica); the result was 19 micrograms per liter (µg/L). Subsequently, Envirogen requested reanalysis from Eurofins Eaton Analytical (Eurofins), Advanced Technology Laboratories (ATL), and TestAmerica. In all three reanalyses, the result was below the sample quantitation limit (SQL; Eurofins: <1.0 µg/L, ATL: <10 µg/L, TestAmerica: <2.5 µg/L). The result shown here is an average of the 19 µg/L result, and half the detection limits for the three reanalyses.

TABLE 9: PERCHLORATE MASS ESTIMATES

Nevada Environmental Response Trust Site

Henderson, Nevada

	On-site		Off-site to AWF		AWF to Wash		Entire Area
	Alluvium	UMCf	Alluvium	UMCf	Alluvium	UMCf	
Kriging							
2002	18	3,680	680	1,604	95	0	6,078
2006	12	2,321	538	1,223	11	0	4,105
2012	9	1,724	384	817	14	0	2,947
Spline							
2002	16	4,393	952	2,120	115	0	7,598
2006	12	2,476	667	1,457	17	0	4,629
2012	11	1,955	460	933	15	0	3,374
Contour							
2002	24	4,305	954	1,972	179	0	7,433
2006	12	2,404	576	1,225	18	0	4,236
2012	18	2,530	500	1,043	18	0	4,109

Notes:

Mass values are presented in tons.

AWF = Athens Road Well Field

UMCf = Upper Muddy Creek Formation

TABLE 10: CHROMIUM MASS ESTIMATES

Nevada Environmental Response Trust Site

Henderson, Nevada

	On-site		Off-site to AWF		AWF to Wash		Entire Area
	Alluvium	UMCf	Alluvium	UMCf	Alluvium	UMCf	
Kriging							
2006	0.06	31.74	1.79	4.61	0.12	0.00	38.32
2012	0.04	20.15	1.20	3.01	0.04	0.00	24.44
Spline							
2006	0.07	34.17	2.06	5.24	0.13	0.00	41.67
2012	0.05	22.09	1.31	3.18	0.05	0.00	26.69
Contour							
2006	0.05	37.04	1.59	3.78	0.57	0.00	43.04
2012	0.05	21.30	1.45	3.60	0.10	0.00	26.50

Notes:

Mass values are presented in tons.

AWF = Athens Road Well Field

UMCf = Upper Muddy Creek Formation

TABLE 11: GWETS PERFORMANCE METRICS SUMMARY

Nevada Environmental Response Trust Site

Henderson, Nevada

Performance Metric	Method of Evaluation	Location	Value
Mass Removal and Remaining Plume Mass (Section 5.4.1)			
Perchlorate Mass Remaining in Groundwater (tons)	Interpolation of concentrations using kriging (2012 estimate shown)	On-site	1,733
		Off-site to AWF	1,201
		AWF to the Wash	14
		Total	2,947
Perchlorate Mass Removal Rate[1] (tons/year)	Calculated from extraction rates and concentrations in extraction wells	IWF	164
		AWF	99
		SWF	10
		Total	273
Chromium Mass Remaining in Groundwater (tons)	Interpolation of concentrations using kriging (2012 estimate shown)	On-site	20.2
		Off-site to AWF	4.2
		AWF to the Wash	0.04
		Total	24.44
Chromium Mass Removal Rate[2] (tons/year)	Calculated from extraction rates and concentrations in extraction wells	IWF[3]	1.5
		AFW/SWF[4]	0.06
		Total	1.56
Capture Zone Evaluation and Estimated Mass Flux (Section 5.4.2)			
Well Field Capture Zones	Estimated capture zones from particle tracking compared to target capture zone. See Figures 29a and 29b.	Study Area	Target area captured except for small area near SWF
Capture Efficiency at Well Fields (percent)	Calculated from groundwater modeling, measured concentrations, and extraction rates	IWF[5]	97%
		AWF[5]	95%
		SWF	93%

TABLE 11: GWETS PERFORMANCE METRICS SUMMARY

Nevada Environmental Response Trust Site

Henderson, Nevada

Performance Metric	Method of Evaluation	Location	Value
Perchlorate Mass Loading to Las Vegas Wash (Section 5.4.3)			
Perchlorate Mass Loading in Las Vegas Wash (lbs/day)	Based on quarterly average sampling results and flow rates. Average over 2008-2013 shown.	Northshore Rd	91
		Pabco Rd	22
		LV Wasteway	2
Contribution to Northshore Road Mass Loading by Reach (percent)	Apportionment of mass loading at Northshore Road to stream reaches. Average over 2008-2013 shown.	Pabco Rd to Northshore Rd	76%
		Wasteway to Pabco Rd	22%
		Upstream of Wasteway	2%
Surface Water-Groundwater Interaction Near the SWF (Section 5.4.4)			
Las Vegas Wash Flow Captured at SWF	Comparison of surface water level at Pabco Road gauge to nearby groundwater levels	SWF	Flow direction is from Las Vegas Wash to SWF
COH Birding Pond Flow Captured at SWF	Low TDS plume used as tracer	SWF	Flow direction is from Birding Ponds to SWF
Environmental Footprint (Section 5.4.5)			
Energy Use (GW-hr/yr)	Summarized from utility bills (2012 estimate shown)	Entire system	6.0

Notes:

[1] Average mass removal rate at each well field between July and December 2013. Monthly removal rates are shown on Table 7.

[2] Average mass removal rate at the GWTP and FBR between July and December 2013. Monthly removal rates at the GTWP are shown on Table 5.

[3] The average mass removal rate is calculated using influent and effluent hexavalent chromium concentration data at the GWTP and average monthly flow to the GWTP. Flows to the GWTP

[4] The average mass removal rate is calculated using influent and effluent total chromium concentration data at the FBRs and average monthly FBR flow data.

[5] Capture efficiency may be overestimated at the IWF and AWF. Elevated perchlorate concentrations in wells downgradient of the IWF and AWF indicate potential gaps in capture.

IWF = Interceptor Well Field

AWF = Athens Road Well Field

SWF = Seep Well Field

lbs/day = pounds per day

GW-hr/yr = gigawatt hours per year

Figures

N
W E
S

1:24,000

1 inch = 2,000 feet

0 1,200 2,400
Feet

INSET B

ARP-1 ARP-2A ARP-3A MW-K4 ARP-4A ARP-5A ARP-6B ARP-7
PC-144 PC-137 PC-136
ART-1A ART-1 PC-135A PC-101R PC-150 PC-149 PC-148 ART-6 ART-7B PC-122
ART-2 ART-4 ART-4A ART-9 ART-7A ART-7
PC-55 ART-8 ART-2A ART-8A ART-3 ART-3A PC-18

0 300 600
Feet

INSET C

PC-97
PC-117
PC-121 PC-86 PC-119 PC-90 PC-116R PC-133
PC-120 PC-118 PC-99R2/R3 PC-91
PC-115R

0 300 600
Feet

INSET A

0 300 600
Feet

Former Recharge Trenches

M-83 M-81A M-80 M-79 M-74 M-73 M-72 M-71 M-70 M-69
I-AB I-R I-Y I-S I-B I-L I-C I-D I-M I-E I-N I-X I-F I-Q I-G I-T I-U I-H I-P I-O I-V I-W I-I I-Z I-J I-K I-AC I-AD I-AR
M-168 M-166 M-167 M-169 M-170 M-64 M-55 M-78 M-172 M-56 M-60 M-173 M-58 M-174 M-175 M-176 M-177 M-68 M-67 M-66 M-65 M-25 M-38 M-36 M-22A M-37
Barrier Wall

Las Vegas Wash

Inset C
PC-68 PC-62 PC-94 PC-59 PC-60 PC-56 PC-58
Seep Well Field

Former City of Henderson Northern Rapid Infiltration Basins (RIBs)

City of Henderson Bird Viewing Preserve

PC-98R MW-K5 PC-103 PC-53

City of Henderson Water Reclamation Facility

Athens Road Well Field

Pittman Lateral

Inset B

PC-123 PC-128 PC-130 PC-132 PC-131 PC-129 PC-127 PC-125 PC-124 PC-126

BMI Common Areas (Eastside)

SUNSET RD

BOULDER HWY

PABCO RD

Former TIMET

Parcel 4B

PC-73 PC-71 M-95 PC-72 M-44 M-96 PC-37 PC-54

PARCEL OWNED BY MULTIPLE ENTITIES

NERT

M-23 M-48A H-28A M-6A M-7B M-99 M-100 M-101

Former COH Southern RIBs

Inset A

Interceptor Well Field

Parcel 4A

BMI (CAMU)

M-5A M-135 M-131 M-57A I-AA M-14A M-19 M-35 M-76 M-115 M-75 M-31A M-52 M-77 M-97 M-93 M-92 M-12A M-11 M-10

TIMET

Olin

AMPAC (Former Pepcon)

TIMET

LAKE MEAD DR

Lhoist

WAPA

1 2 3 4 5 6 7 8 10 11 12 13 14 15 22 23 24 31 32 36

LEGEND

- Sampled / Measured Well
- Seep Surface-Flow Capture Sump (no longer operating)
- Nevada Environmental Response Trust Property Boundary

LAND OWNERSHIP

- City of Henderson
- Timet
- BMI
- Lhoist
- Former Pepcon
- Parcel Owned by Multiple Entities
- Olin
- WAPA

Figure **1**

Project No.: 21-34800H

LOCATION MAP

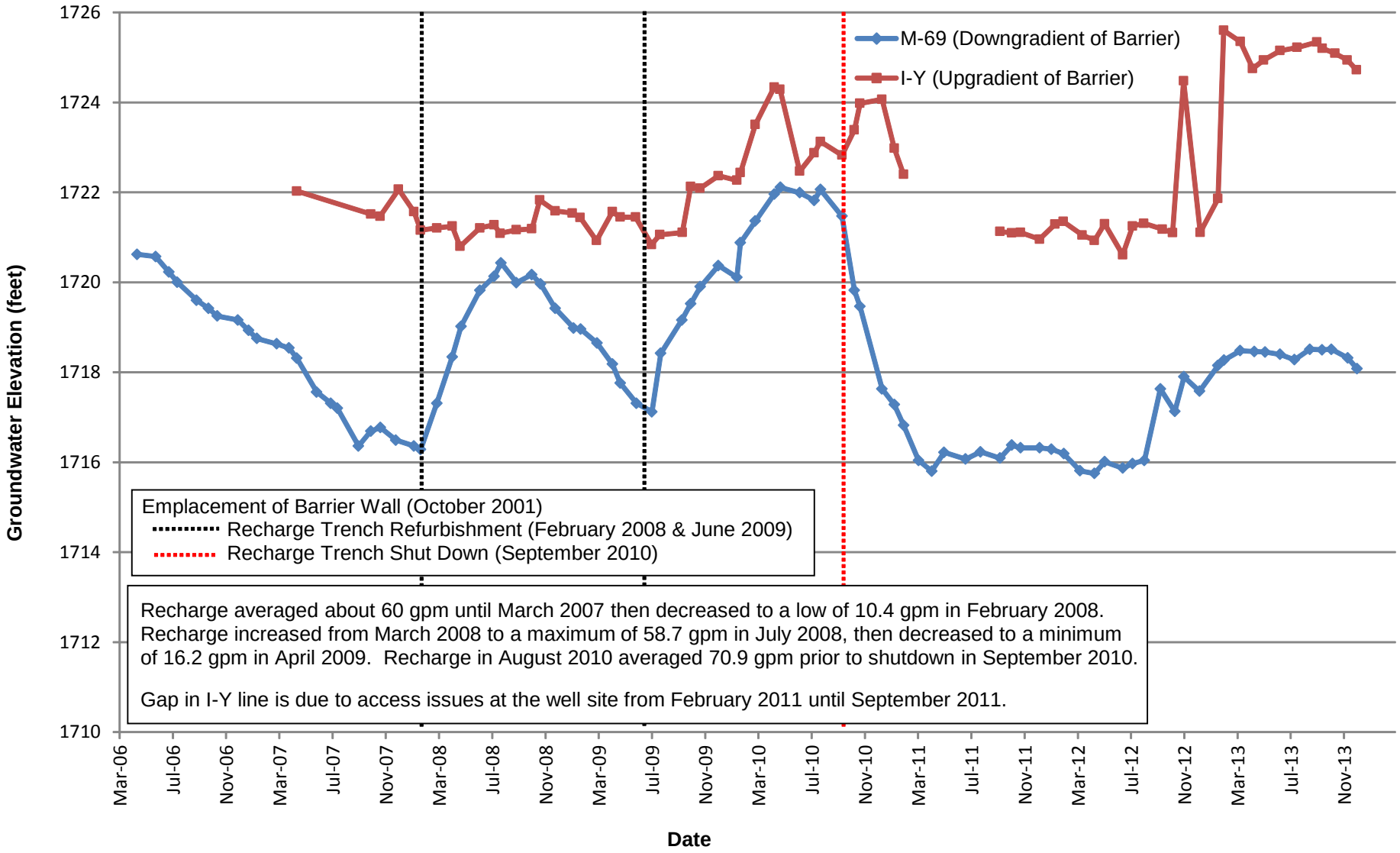
Semi-Annual Remedial Performance Report
Nevada Environmental Response Trust Site
Henderson, Nevada

DESIGNED BY:	REVISIONS			
EJK	No.	DESCRIPTION:	DATE:	BY:
DRAWN BY:	0	GENERATE APPROVED MAP	2/28/2014	RS
RS				
CHECKED BY:				
CJR				
APPROVED BY:				
CJR/KPL				

ENVIRON

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG1.mxd

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG2A.mxd



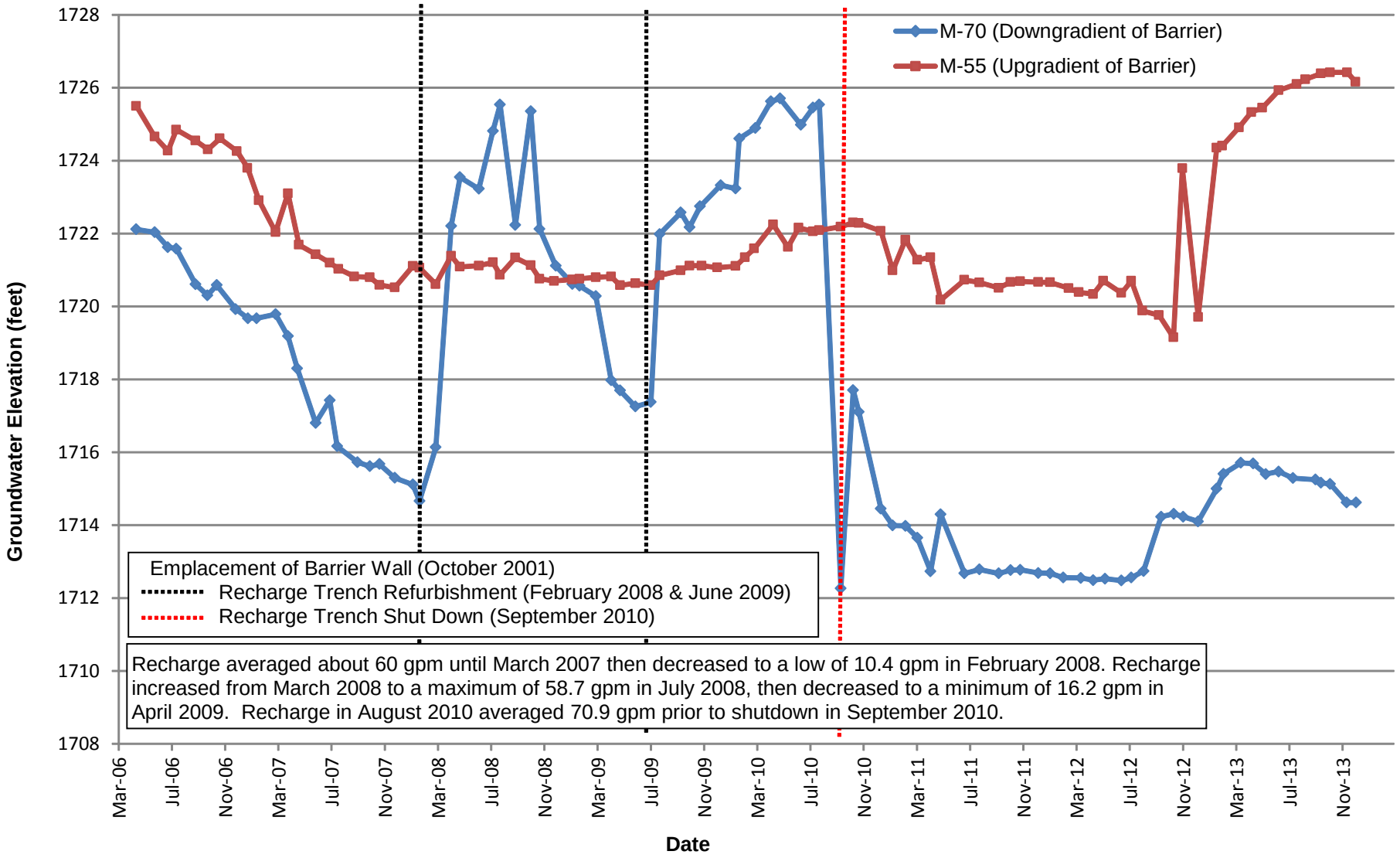
ENVIRON

Hydrograph Pair Across the Barrier Wall - M-69 and I-Y
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
2a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG2B.mxd



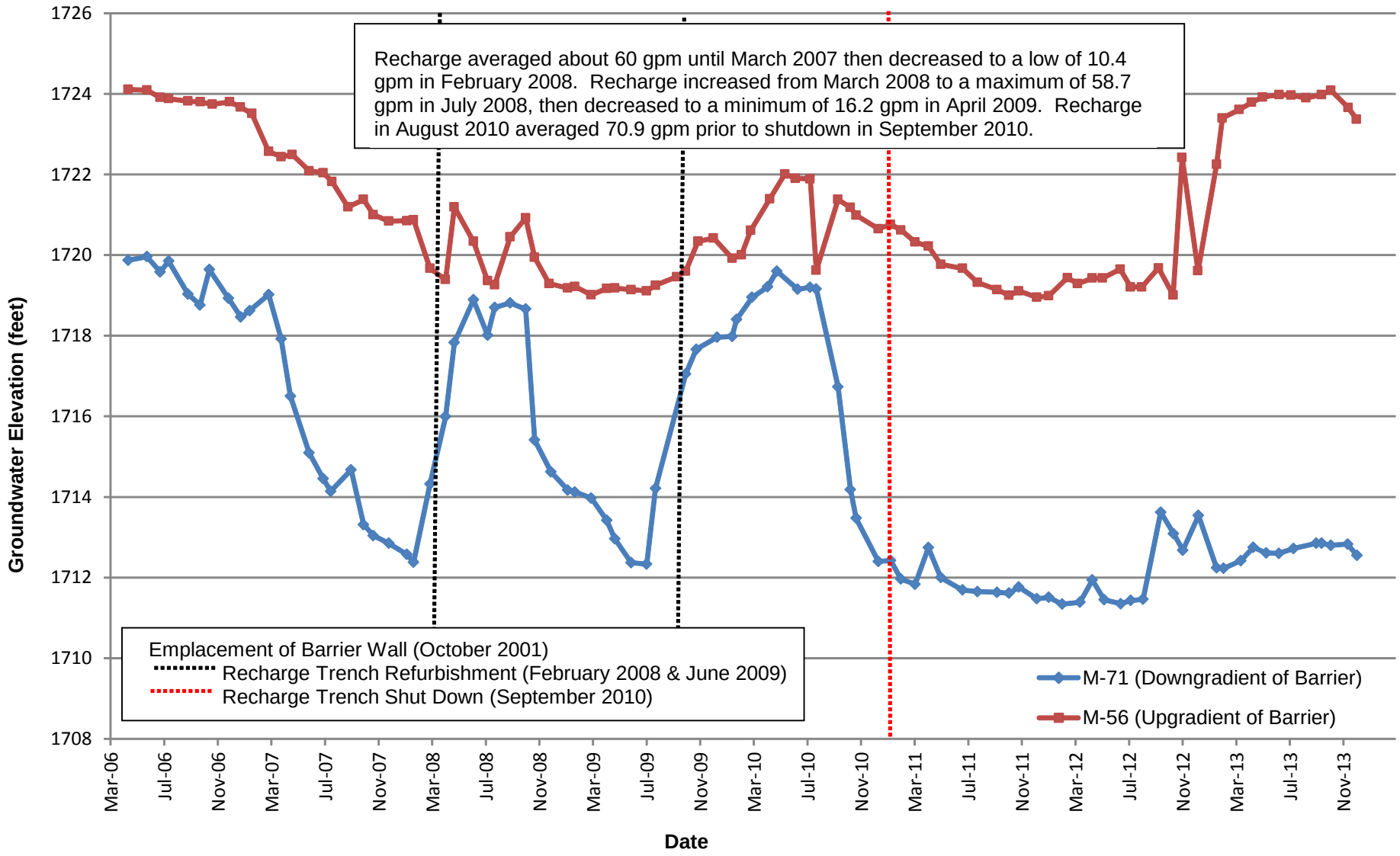
ENVIRON

Hydrograph Pair Across the Barrier Wall - M-70 and M-55
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
2b

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG2C.mxd



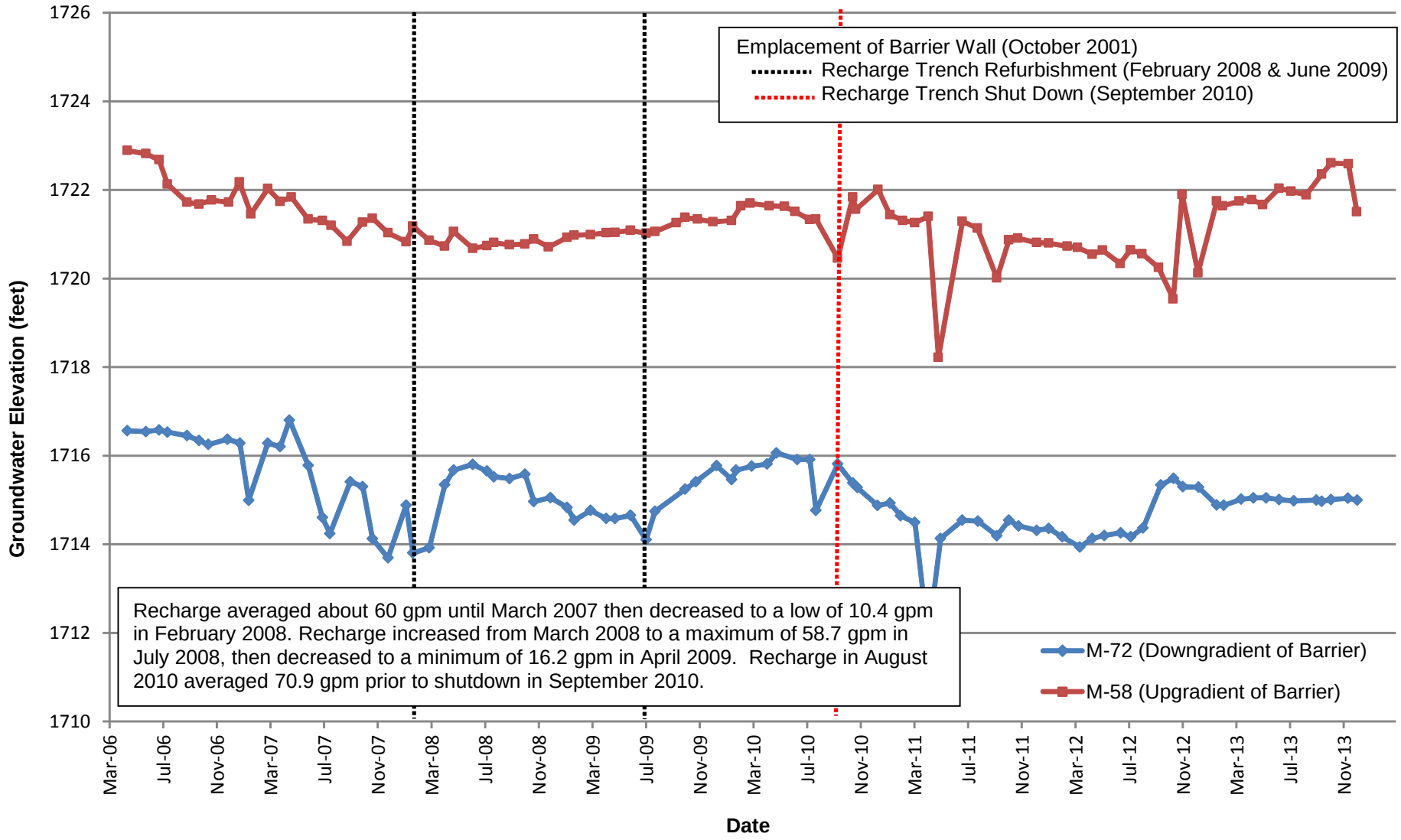
ENVIRON

Hydrograph Pair Across the Barrier Wall - M-71 and M-56
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
2c

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG2D.mxd



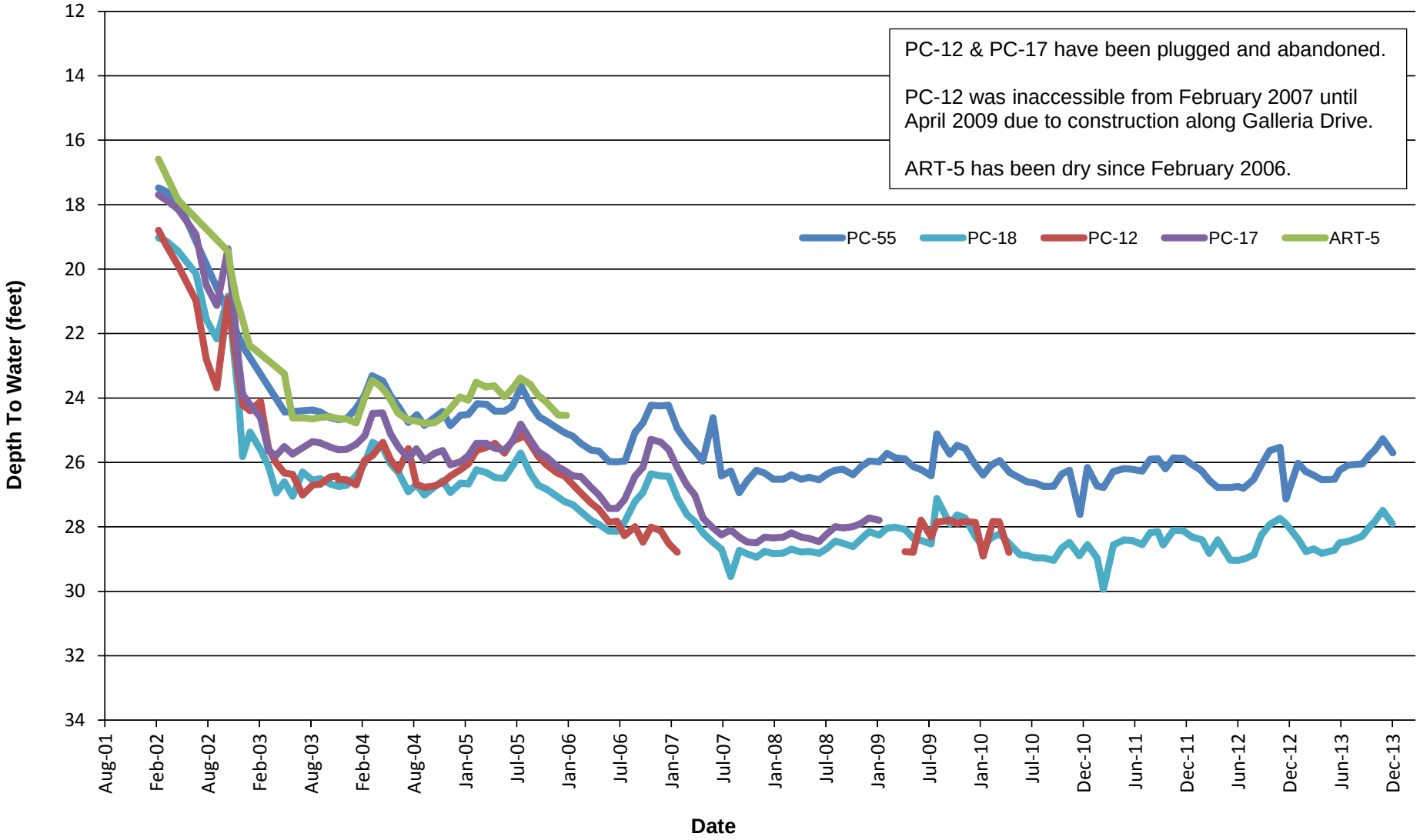
ENVIRON

Hydrograph Pair Across the Barrier Wall - M-72 and M-58
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
2d

Drafter: RS | Date: 02/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG3.mxd



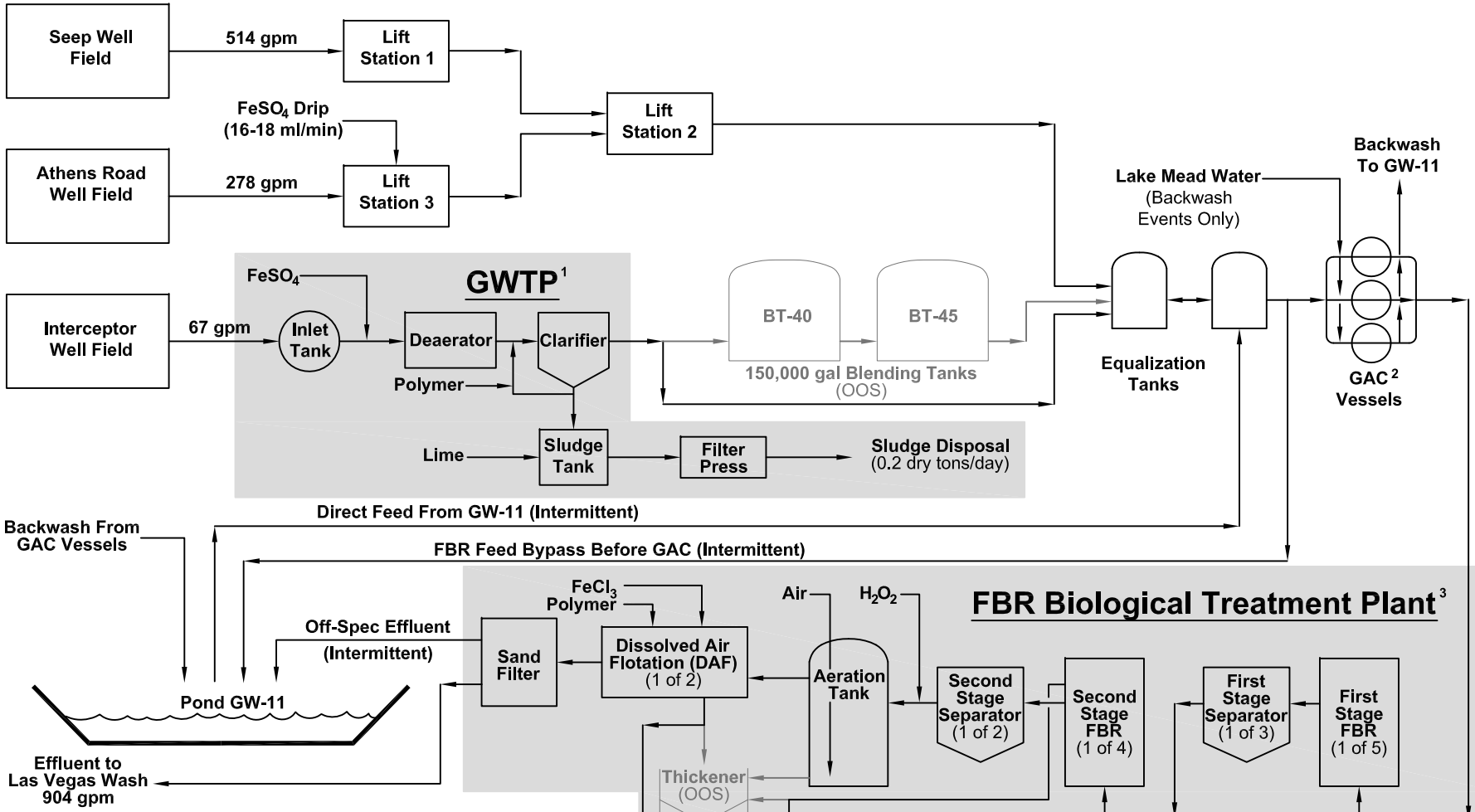
ENVIRON

Athens Road Well Field Drawdown
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
3

Drafter: RS | Date: 2/6/2014 | Contract Number: 21-34800H | Approved: | Revised:

H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 Annual\Figures\Process Flow Diagram-Dec2013.dwg – Fri, 28 Feb 2014 – 3:47pm



NOTES:

The process flows shown are average flow rates from July 2013 through December 2013.
gpm = gallons per minute
ml/min = milliliters per minute
OOS = Out of Service

1) Groundwater Treatment Plant (GWTP) for hexavalent chromium removal. Ferrous sulfate ($FeSO_4$) added to chemically reduce hexavalent chromium. Clarifier settles solids. Sludge is removed and landfilled.
2) Carbon treatment to remove organic compounds consists of three 20,000-pound granular activated carbon (GAC) vessels.
3) Fluidized Bed Reactor (FBR) Biological Treatment Plant for removal of perchlorate consists of five 33,000 gallon first-stage FBRs, four 28,800 gallon second-stage FBRs, aeration (air and hydrogen peroxide, H_2O_2), dissolved air flotation (DAF), two plate and frame filter presses, and a sand filter.

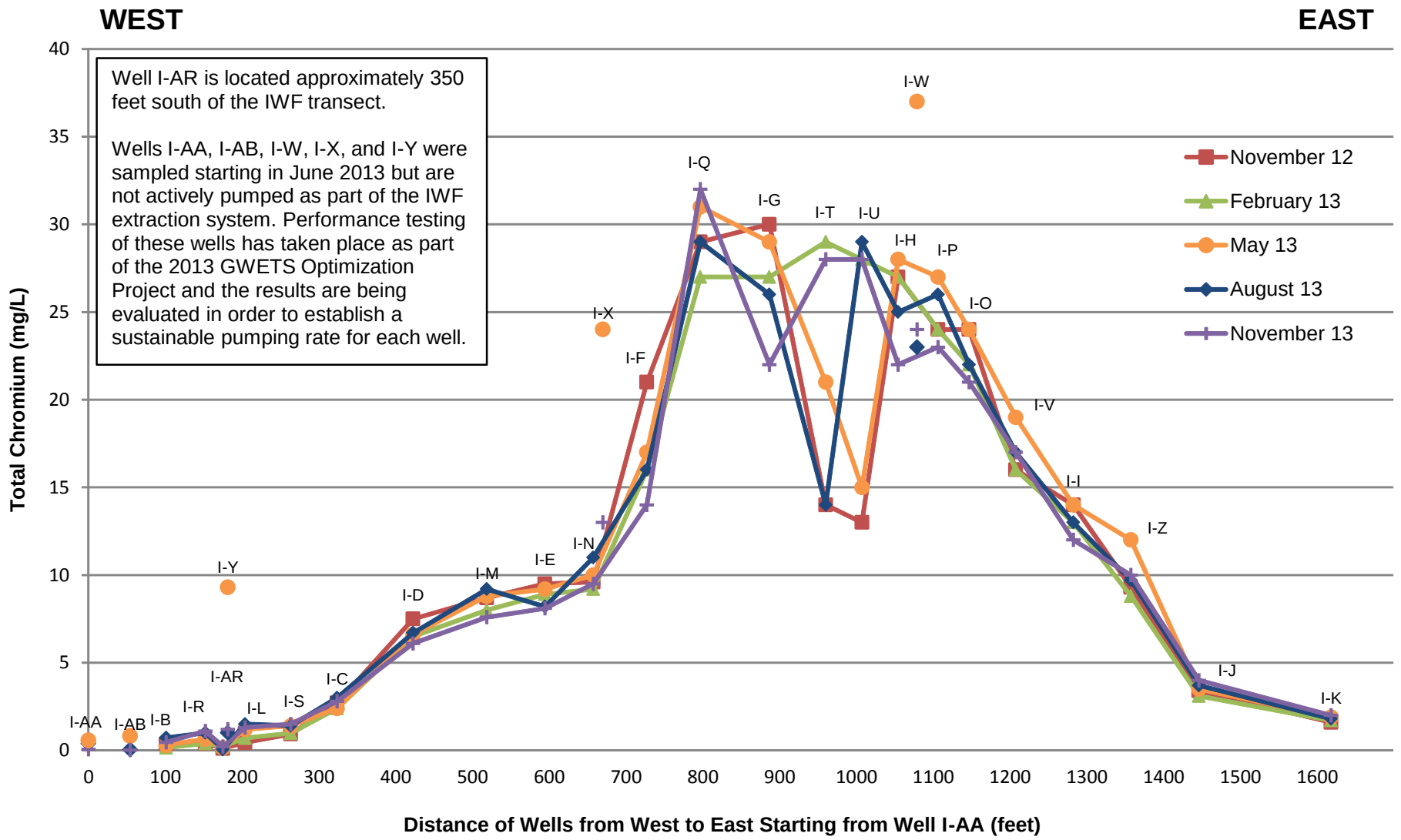
ENVIRON

Groundwater Extraction and Treatment System (GWETS) Flow Diagram
Nevada Environmental Response Trust
Henderson, Nevada

Figure **4**

Drafter: RS | Date: 2/7/14 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG5.mxd



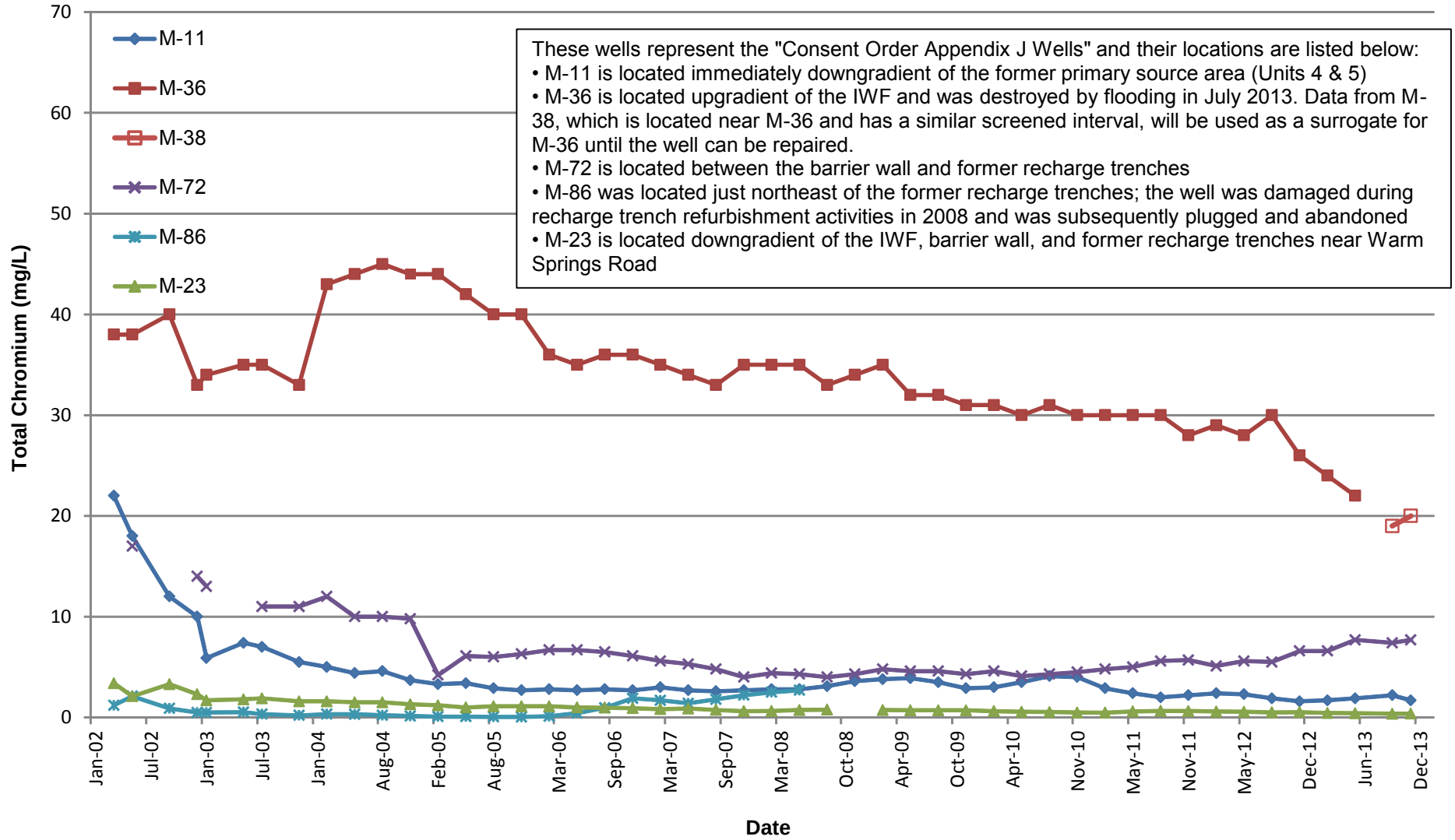
ENVIRON

Interceptor Well Field Total Chromium Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
5

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG6.mxd



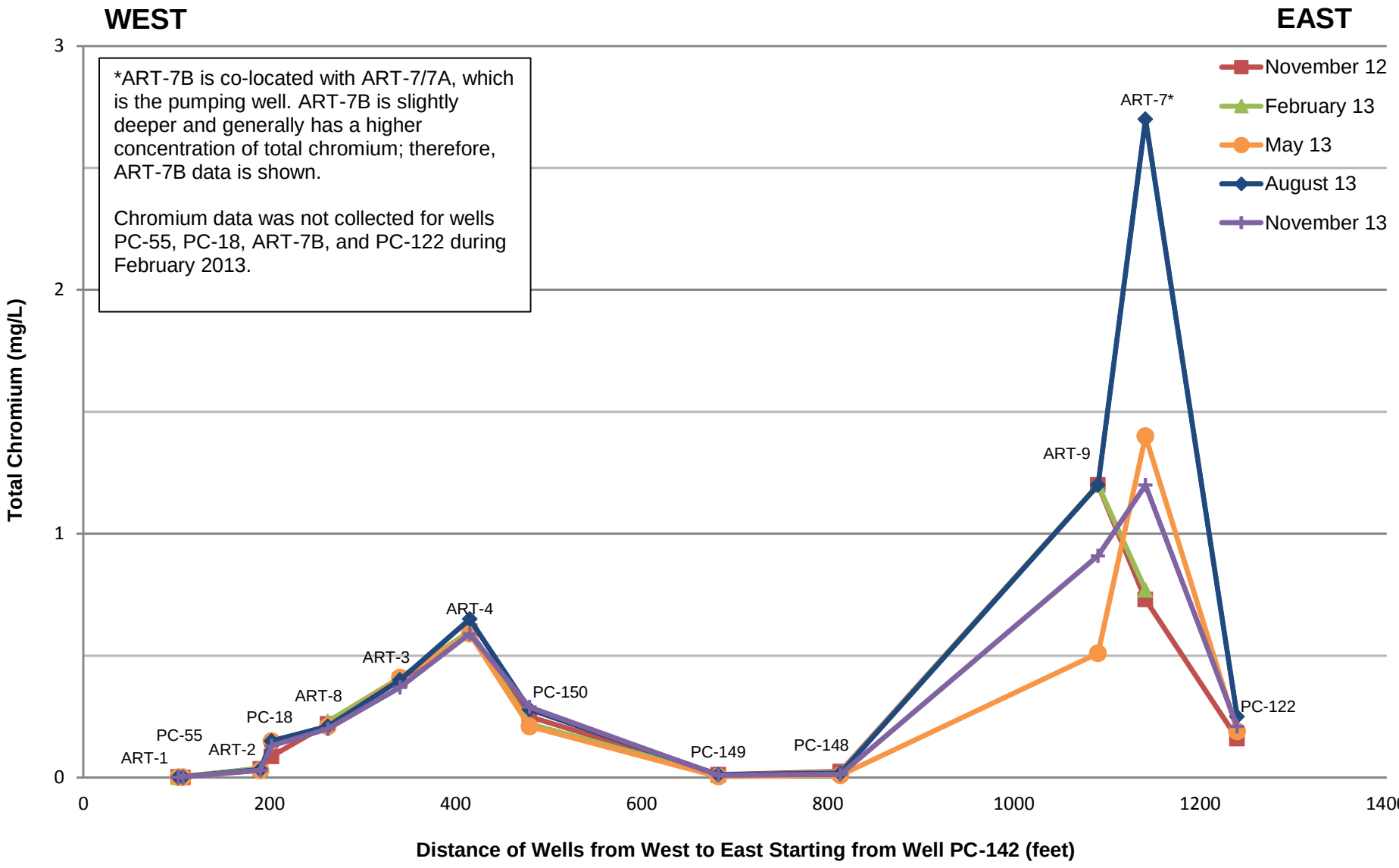
ENVIRON

Total Chromium Concentration Trends in Select Wells
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
6

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG7.mxd



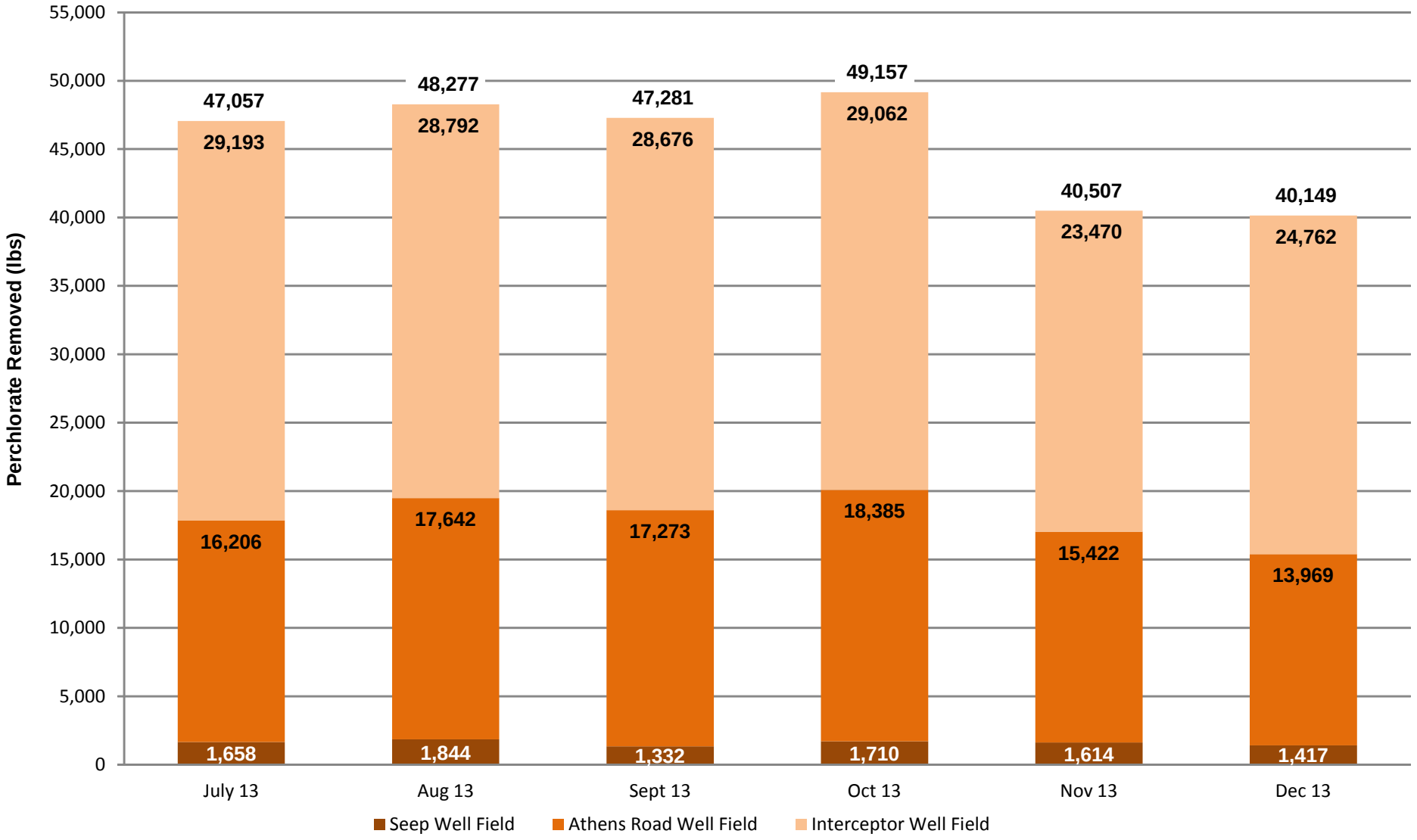
ENVIRON

Athens Road Well Field Total Chromium Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
7

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG8.mxd



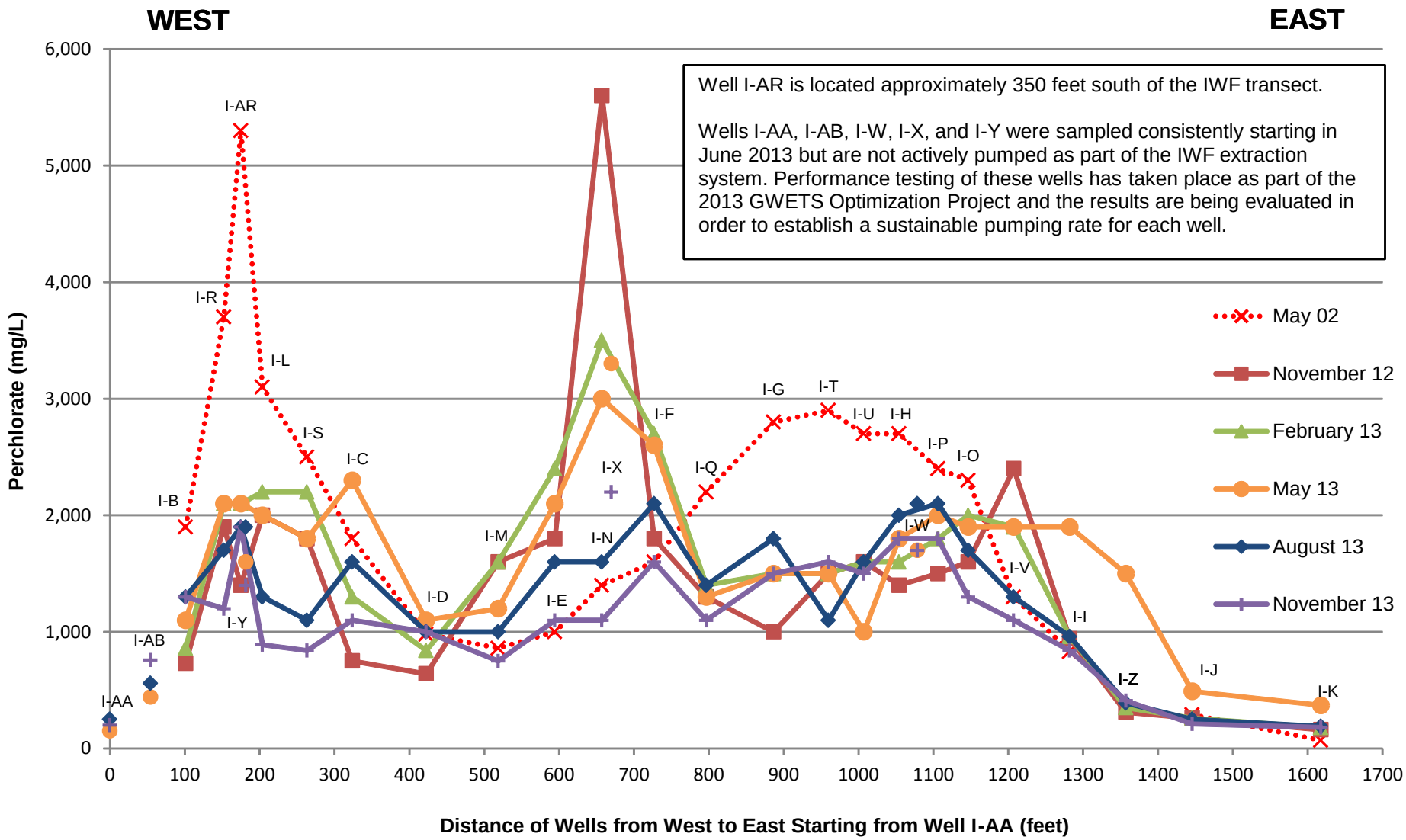
ENVIRON

Perchlorate Removed from the Environment July - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
8

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG9.mxd



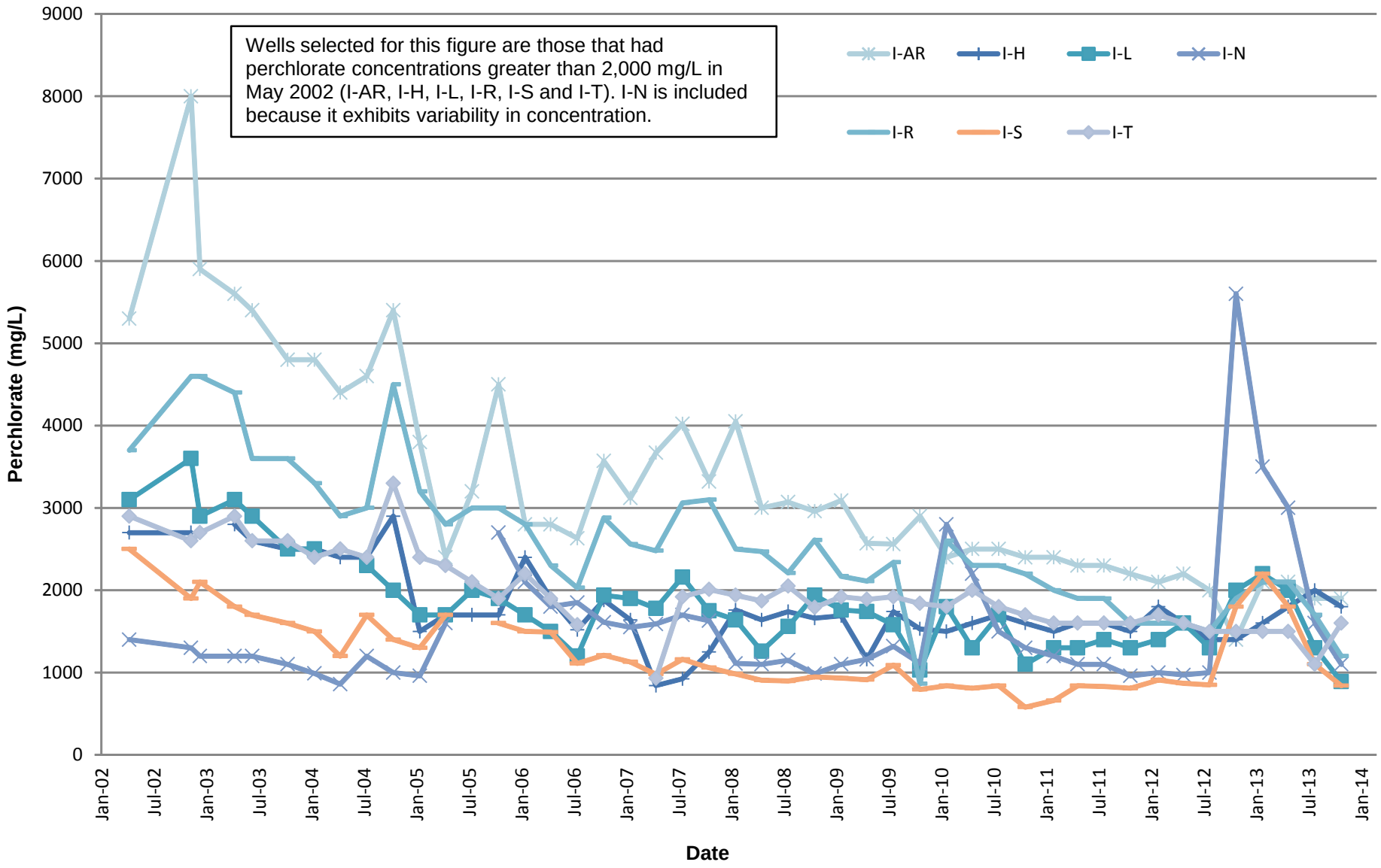
ENVIRON

Interceptor Well Field Perchlorate Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
9

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG10.mxd



ENVIRON

Interceptor Well Field Perchlorate Concentration Trends for Select Wells
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
10

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

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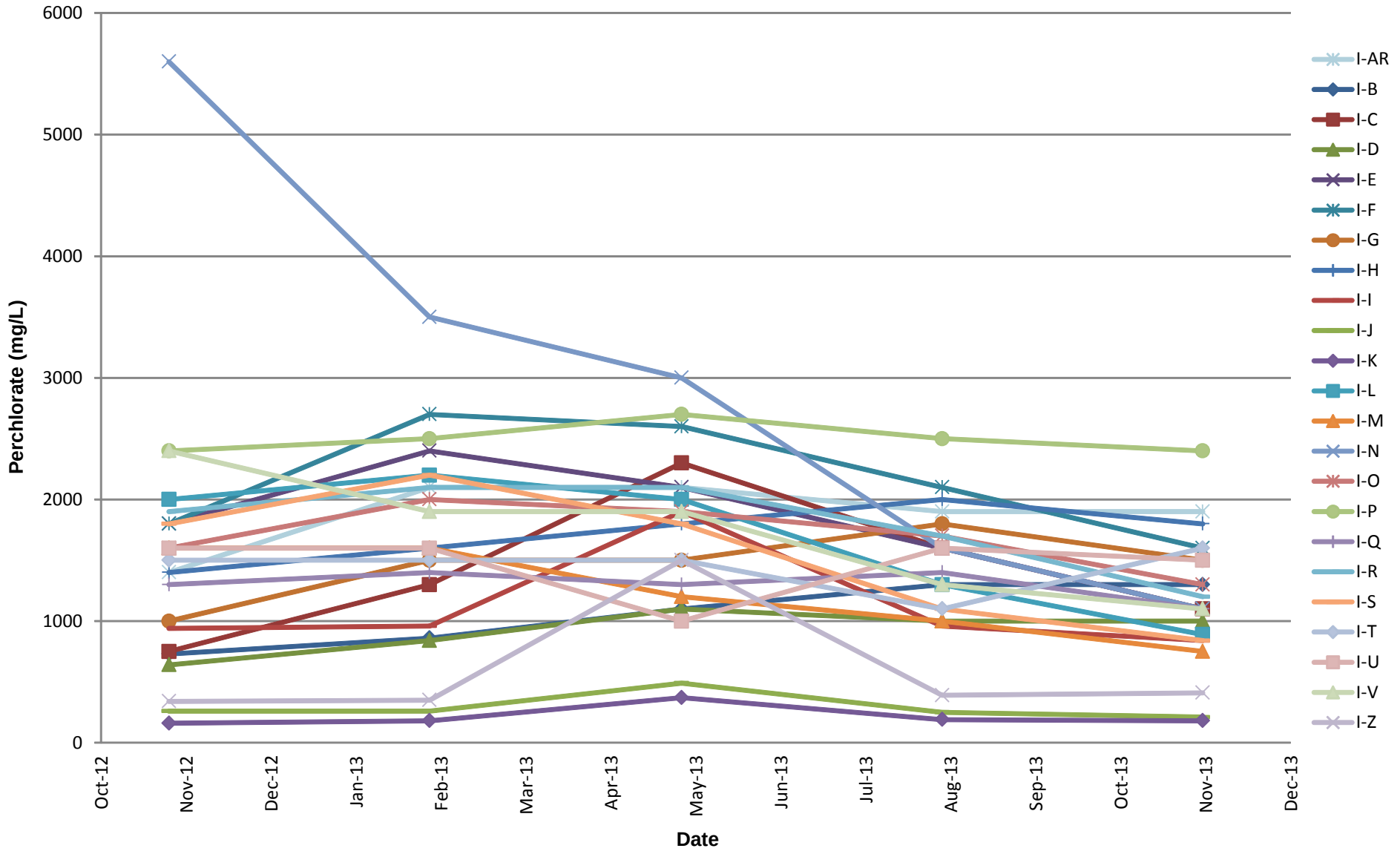


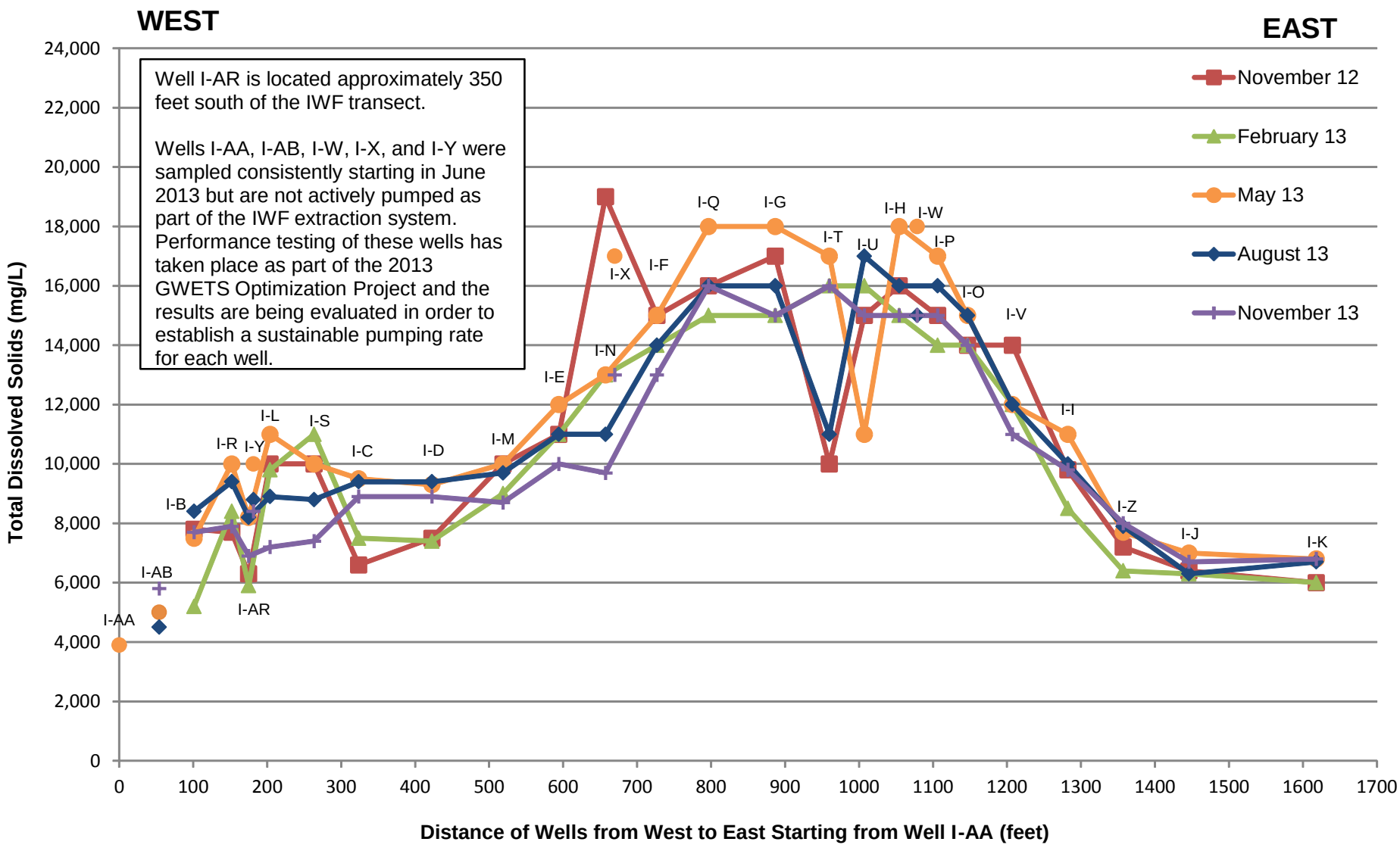
ENVIRON

Interceptor Well Field Perchlorate Concentration Trends, November 2012 - November 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
10a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG11.mxd



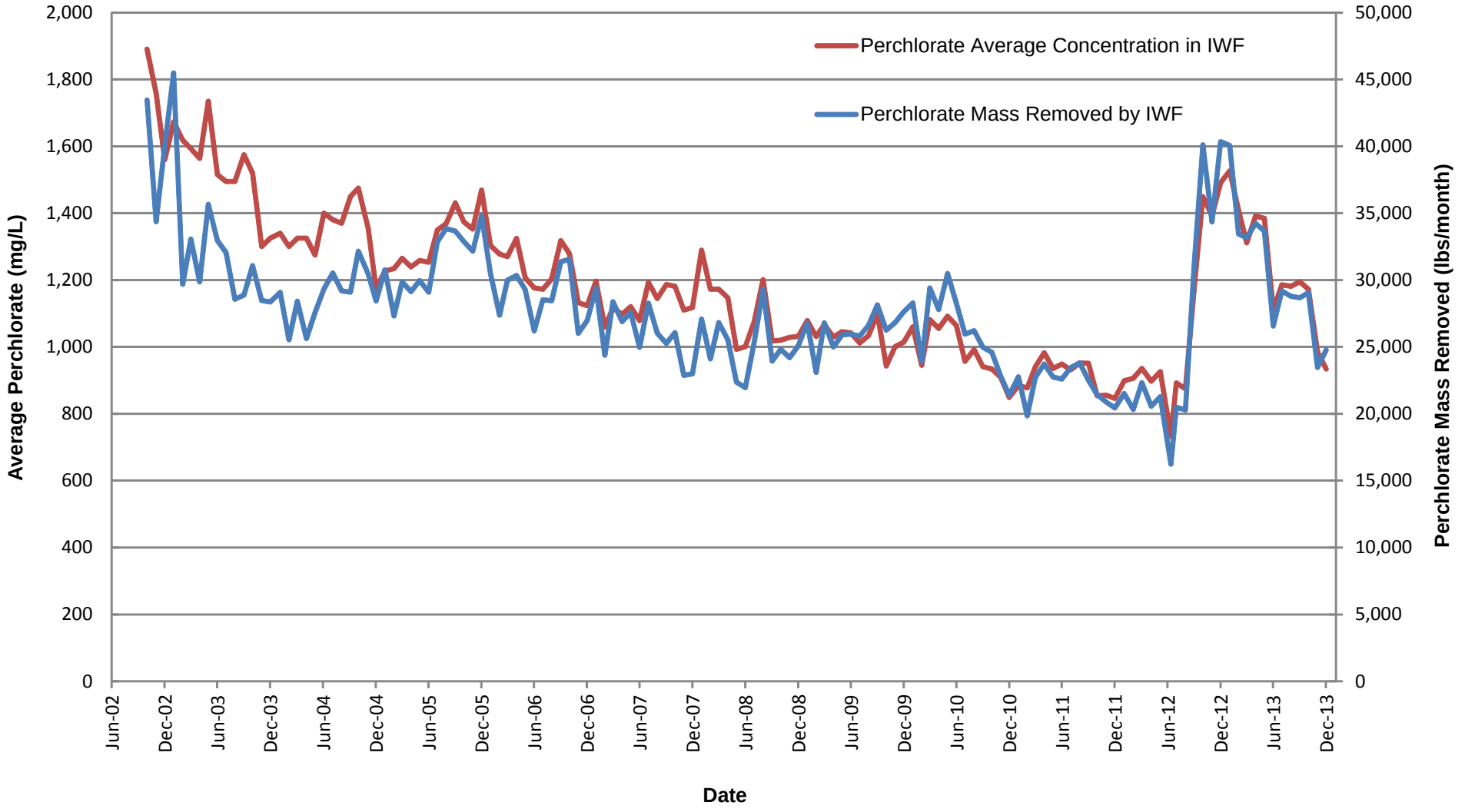
ENVIRON

Interceptor Well Field Total Dissolved Solids Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
11

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG12.mxd



ENVIRON

Interceptor Well Field Average Perchlorate Concentration and Mass Removed
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
12

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

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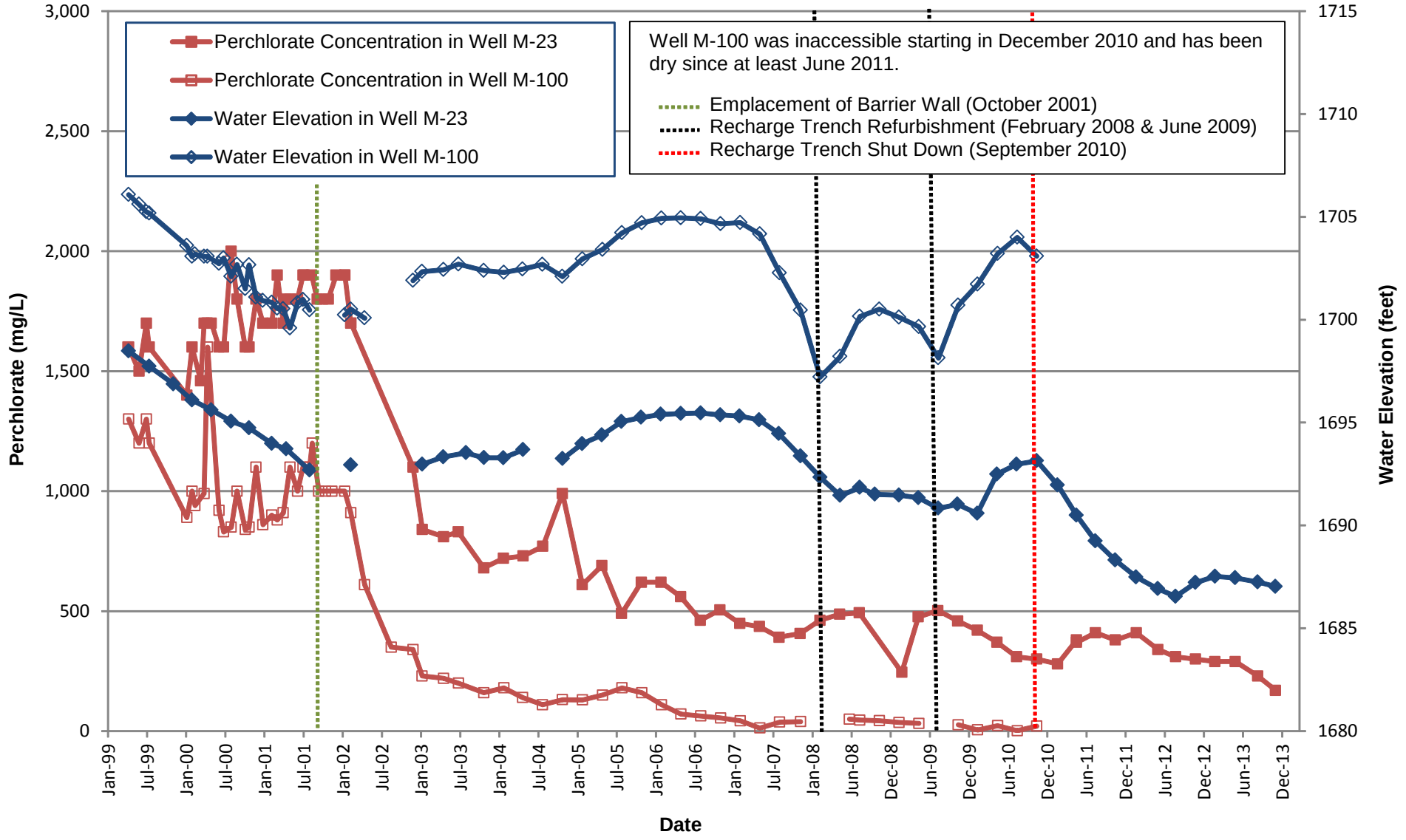

ENVIRON

Wells M-23 and M-100 Perchlorate Concentration vs. Water Elevation Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
13

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

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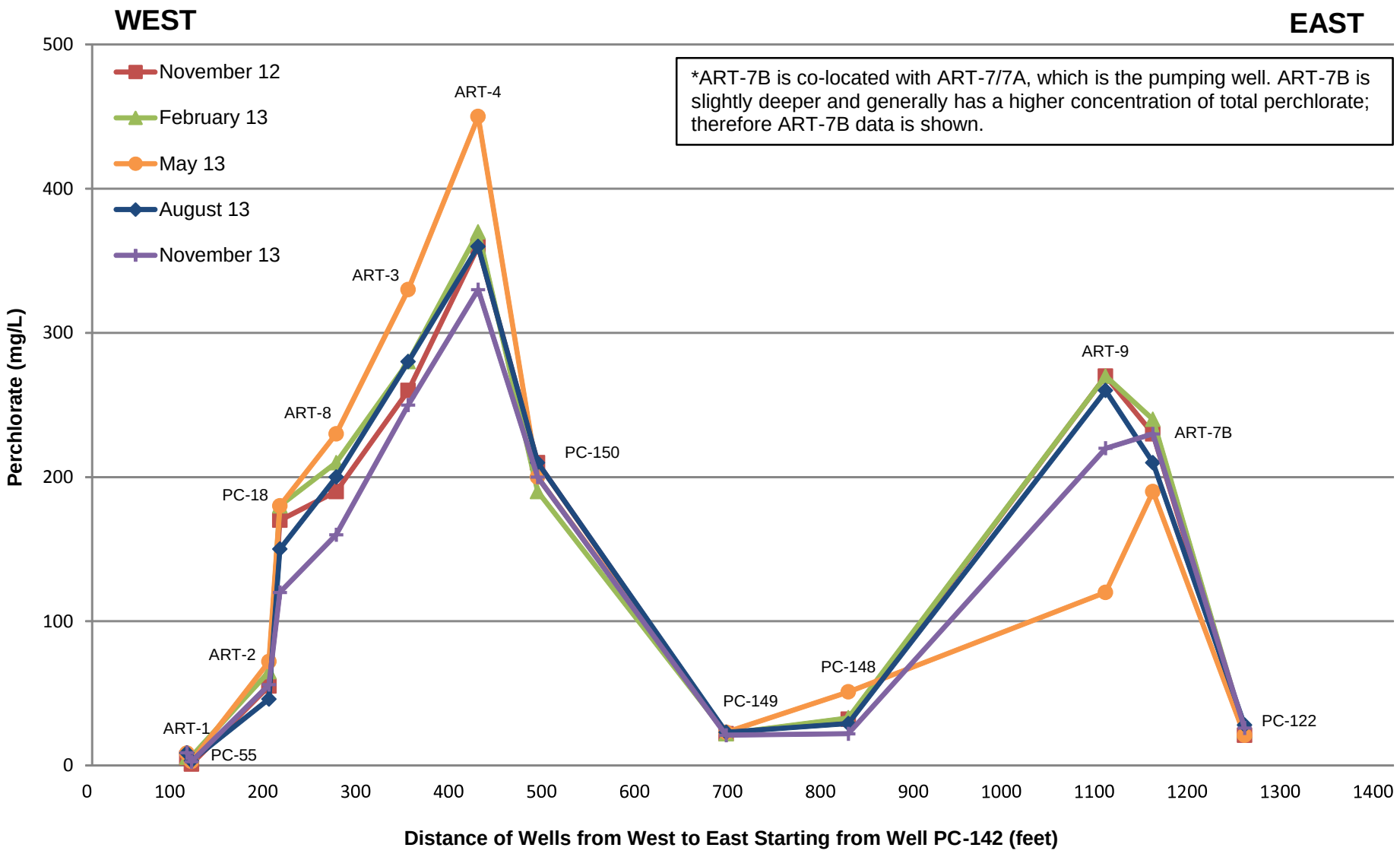


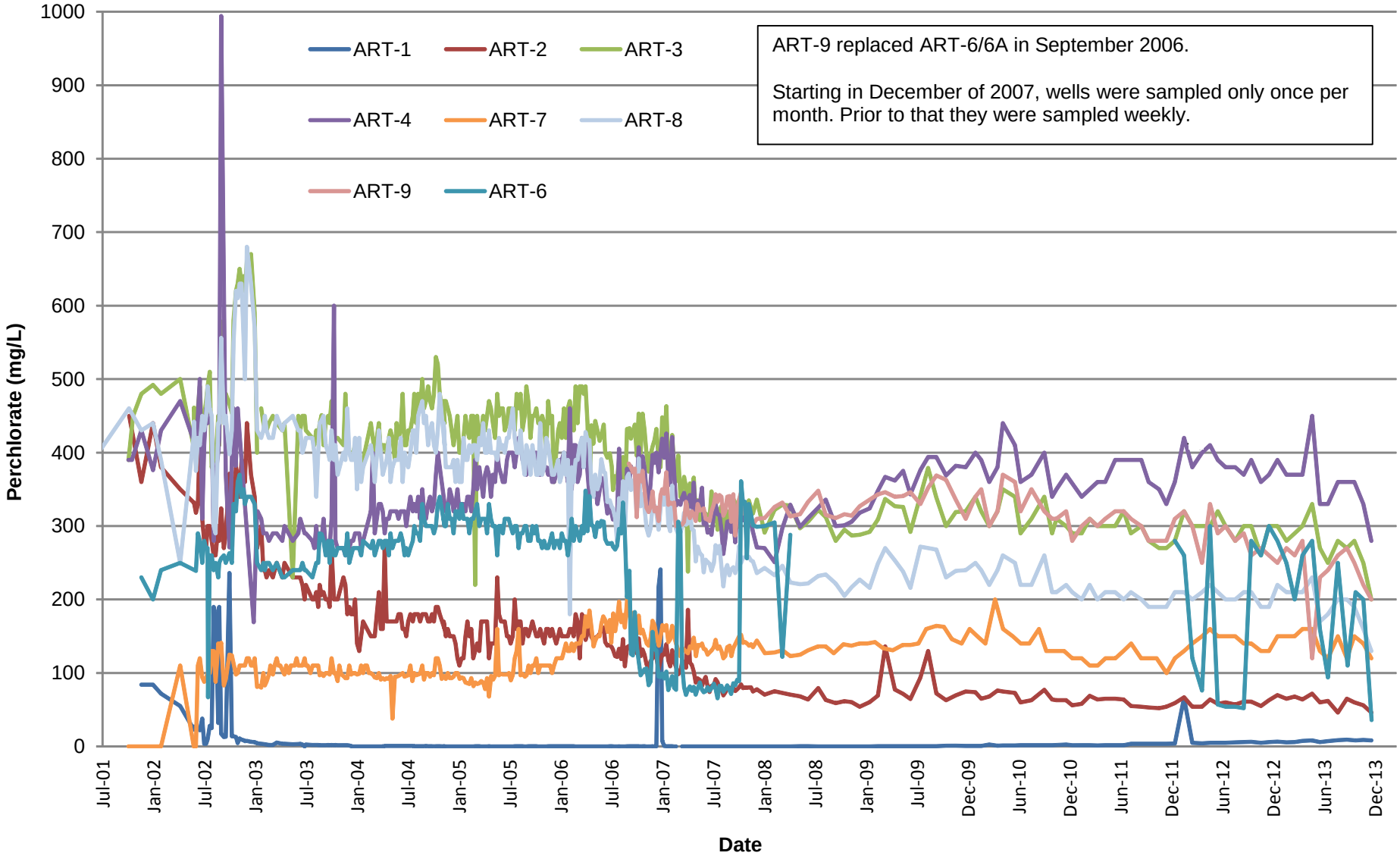
ENVIRON

Athens Road Well Field Perchlorate Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
14

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG15.mxd



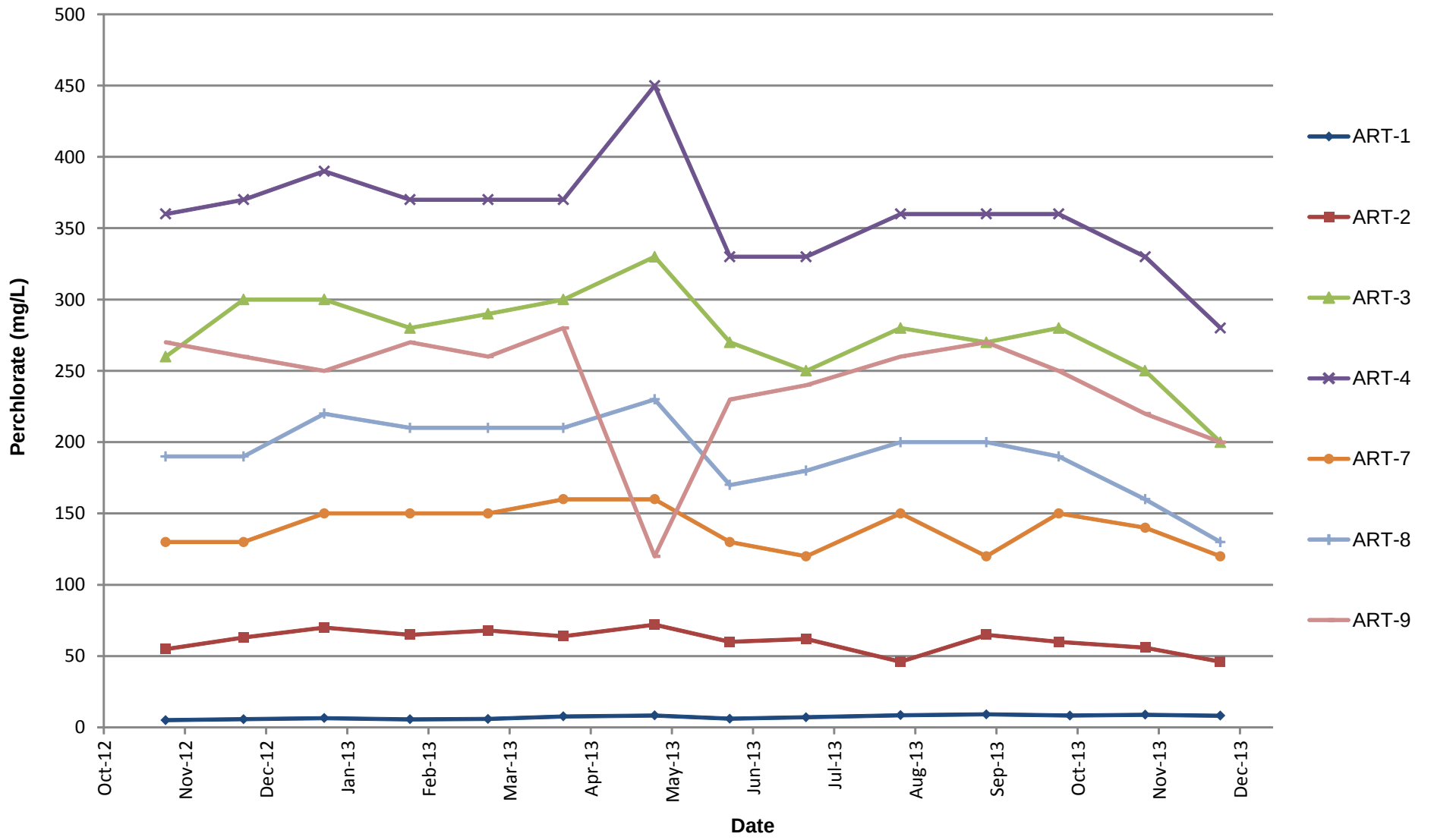
ENVIRON

Athens Road Well Field Perchlorate Concentration Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
15

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG15A.mxd



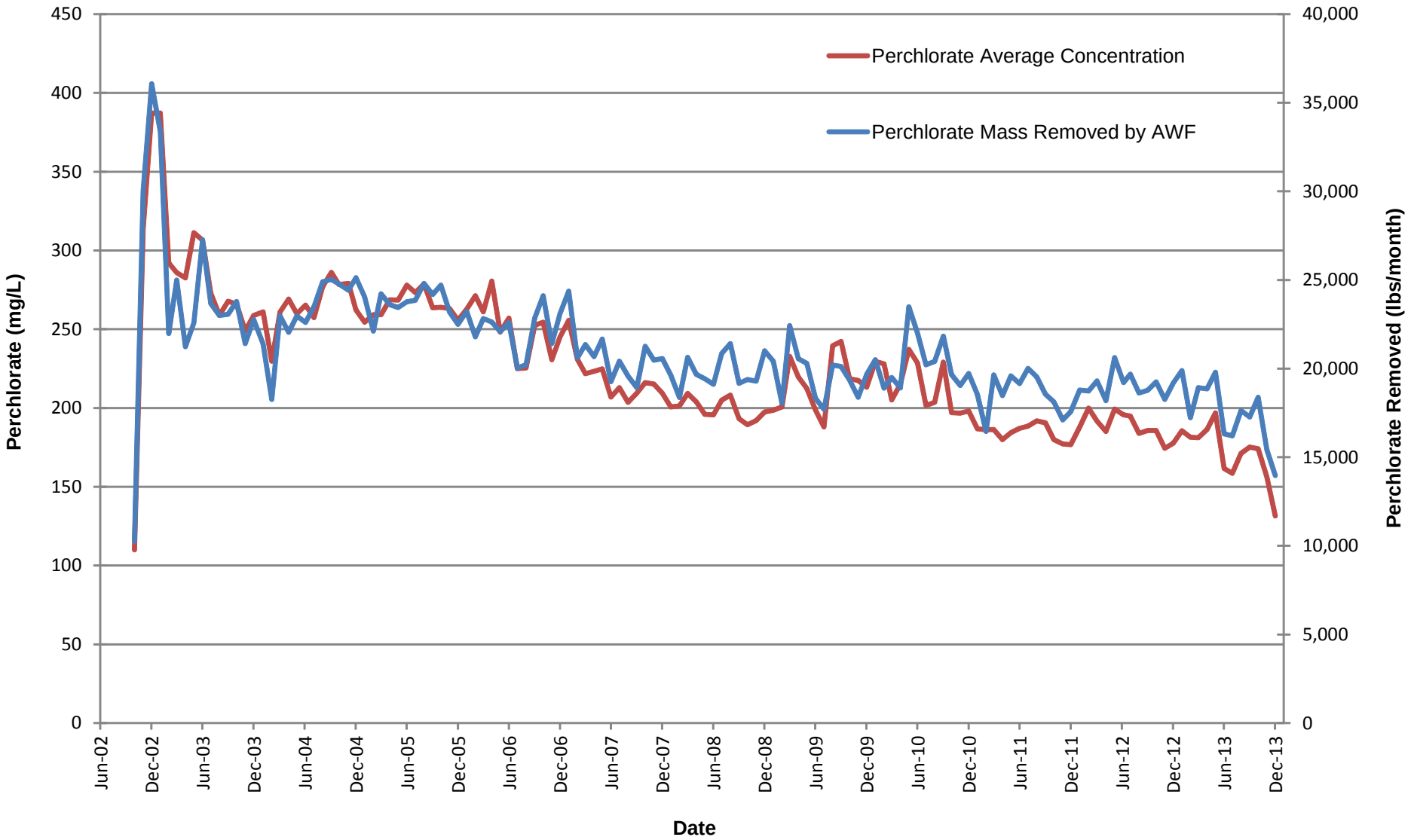
ENVIRON

Athens Road Well Field Perchlorate Concentration Trends, November 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
15a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG16.mxd



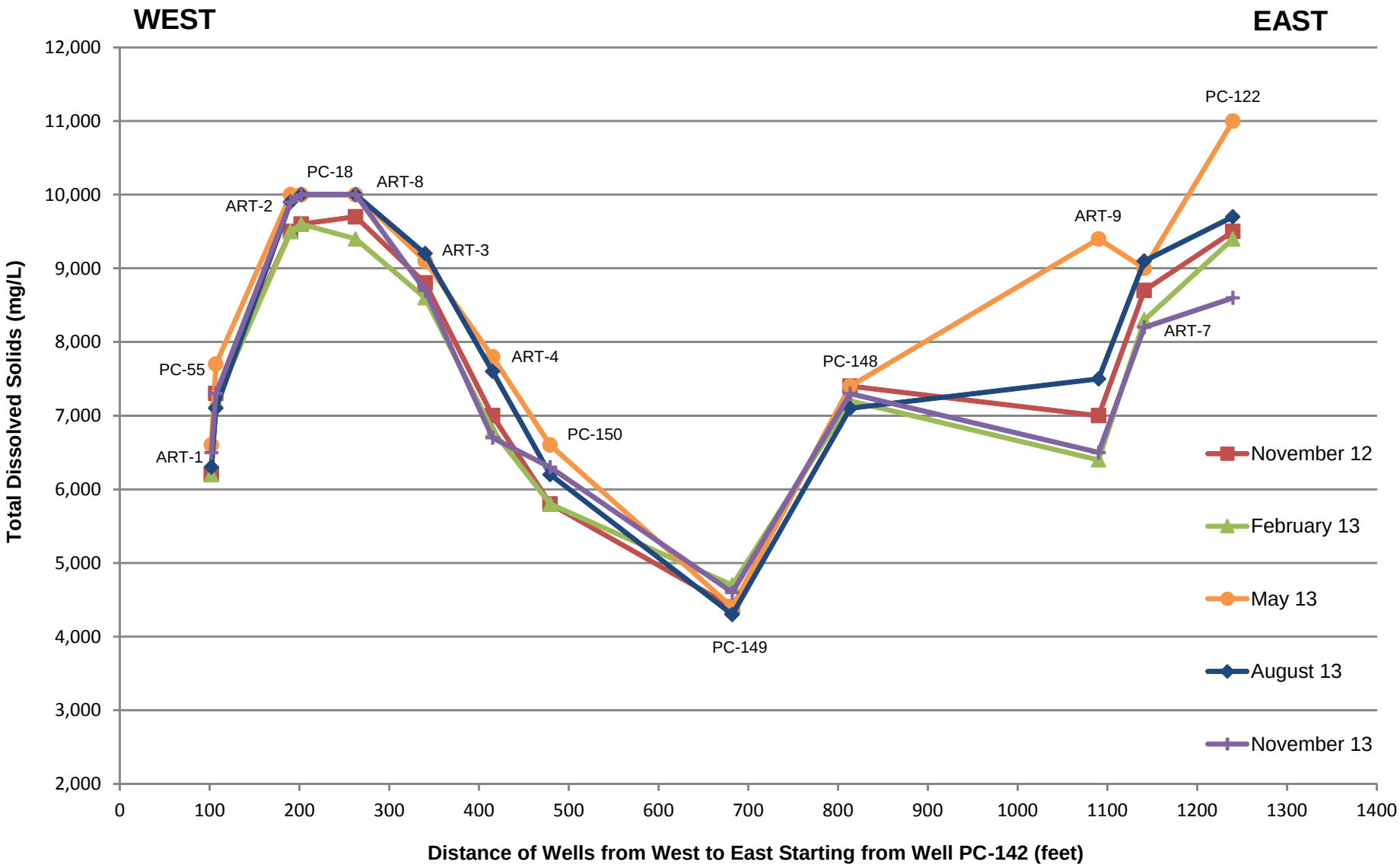
ENVIRON

Athens Road Well Field Average Perchlorate Concentration and Mass Removed
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
16

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG17.mxd



ENVIRON

Athens Road Well Field Total Dissolved Solids Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
17

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

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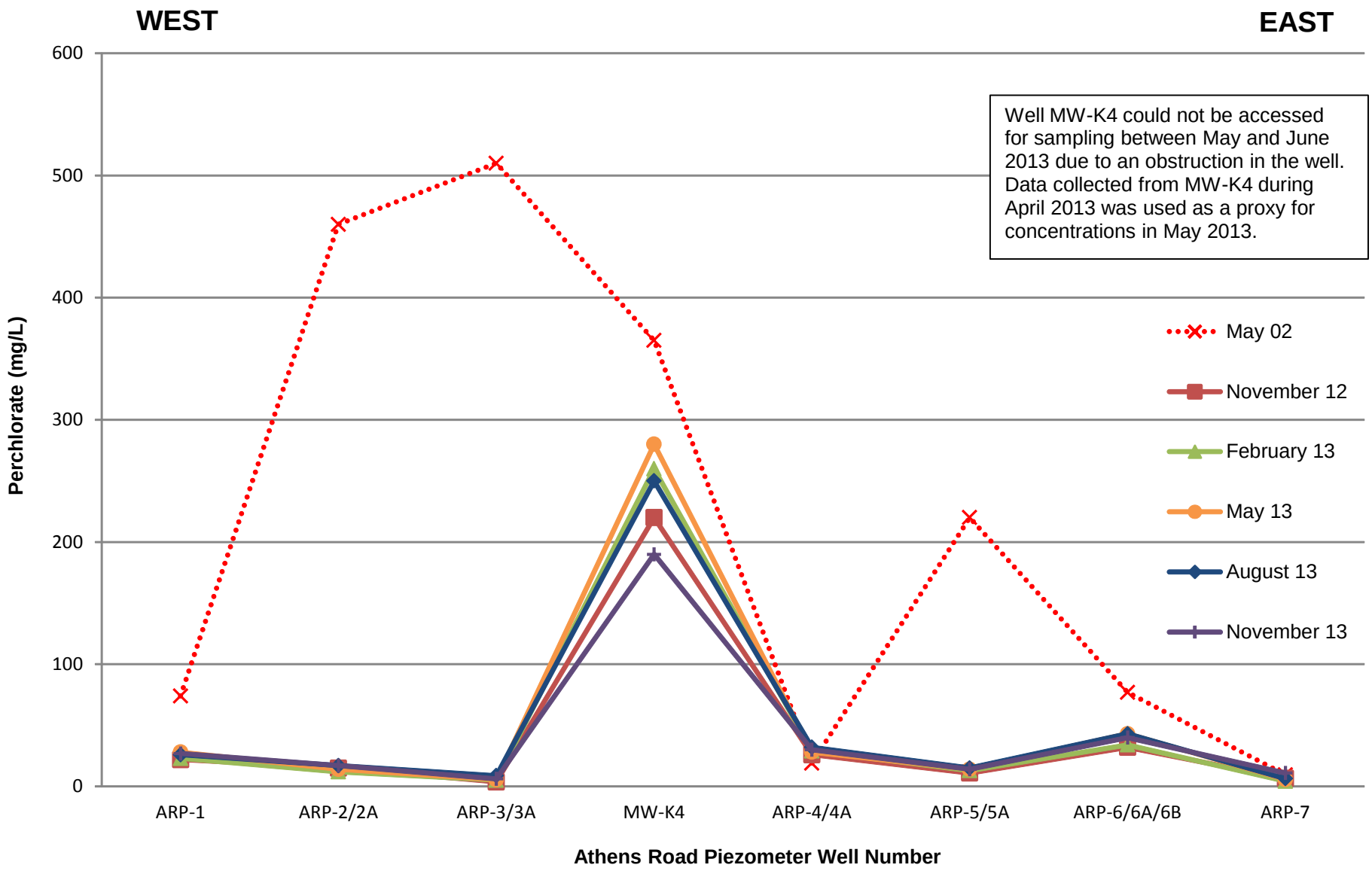


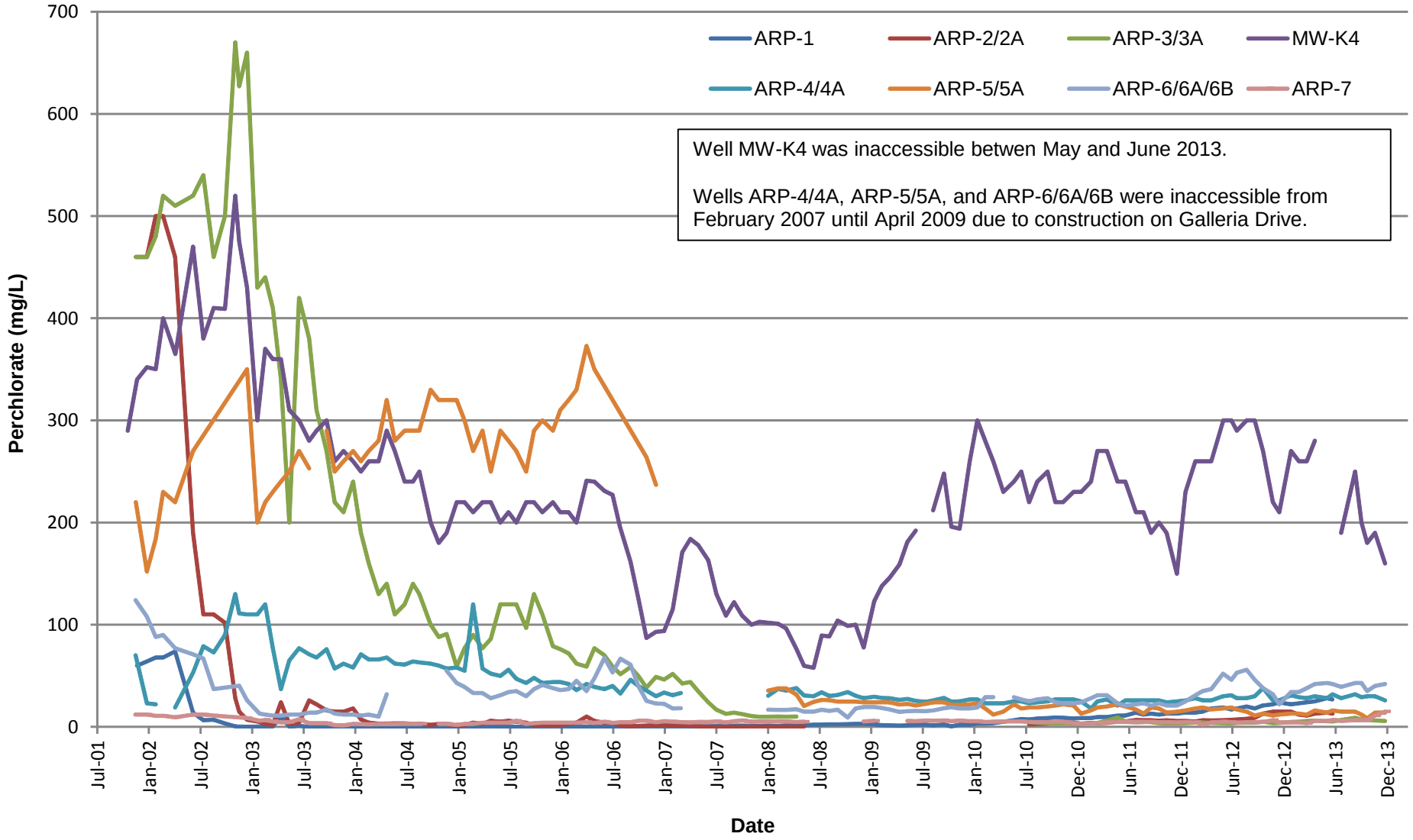
ENVIRON

Athens Road Piezometer Well Line Perchlorate Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
18

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG19.mxd



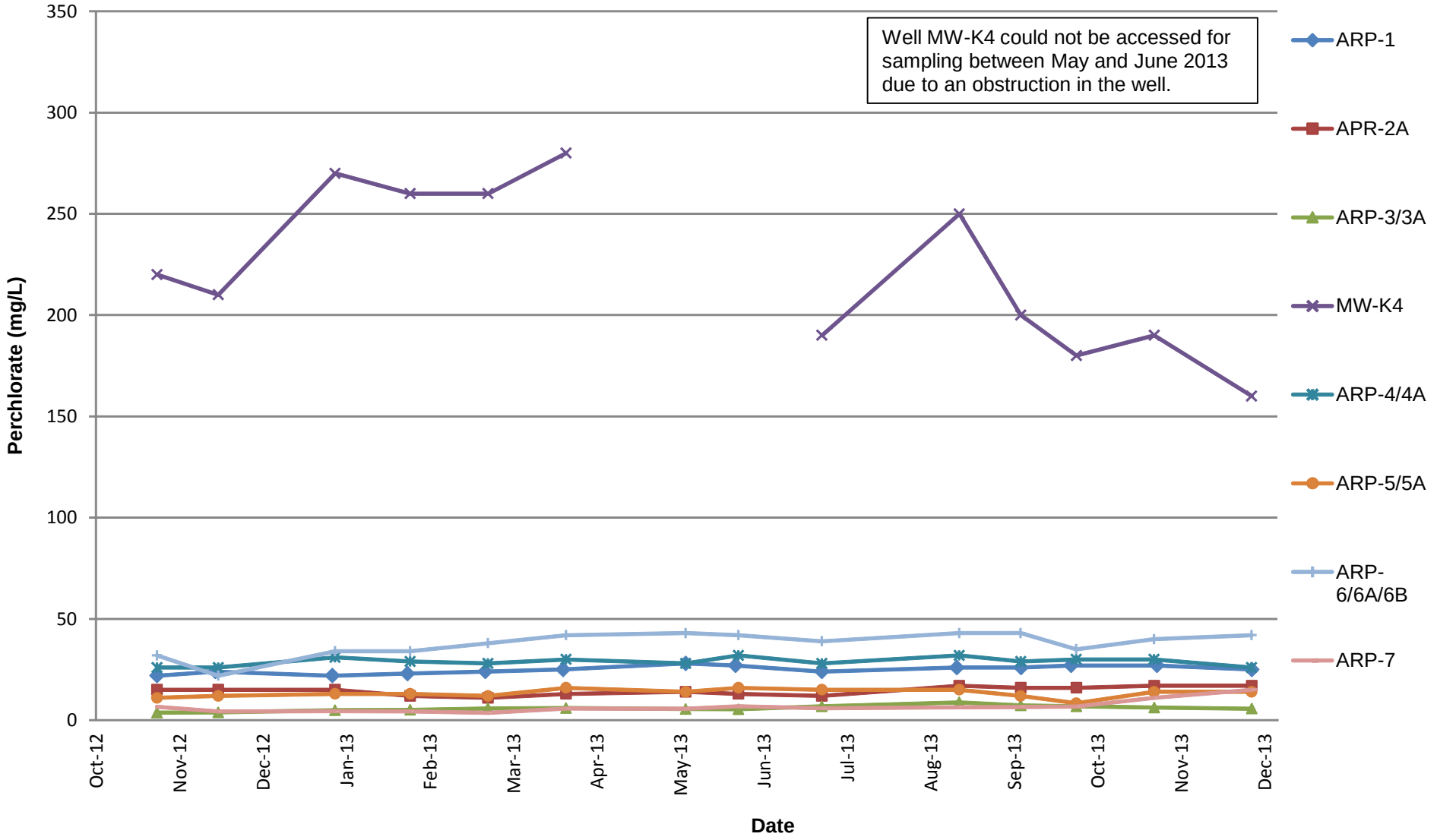
ENVIRON

Athens Road Piezometer Well Line Perchlorate Concentration Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
19

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG19A.mxd



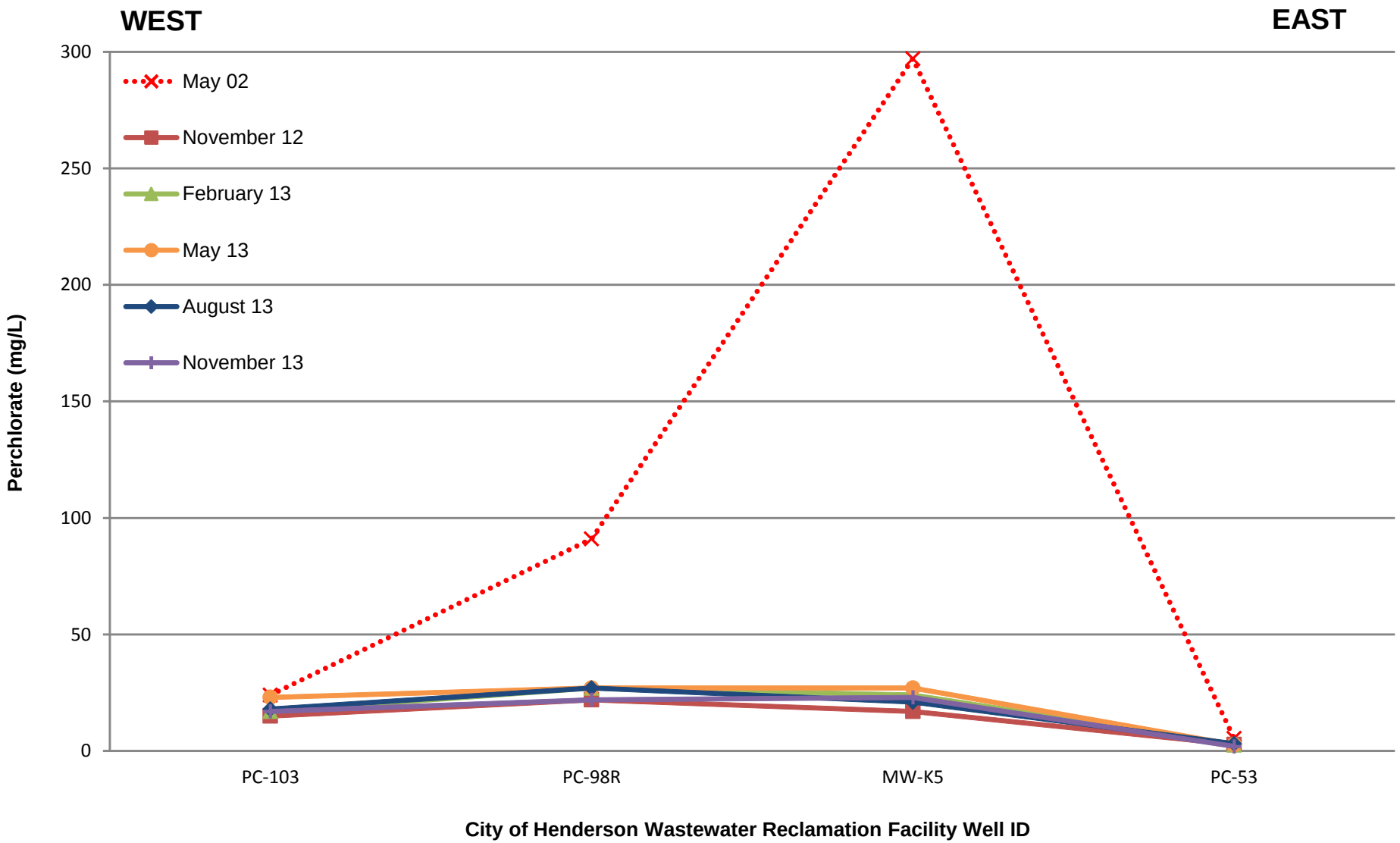
ENVIRON

Athens Road Piezometer Well Line Perchlorate Concentration Trends, Nov 2012 - Dec 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
19a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG20.mxd



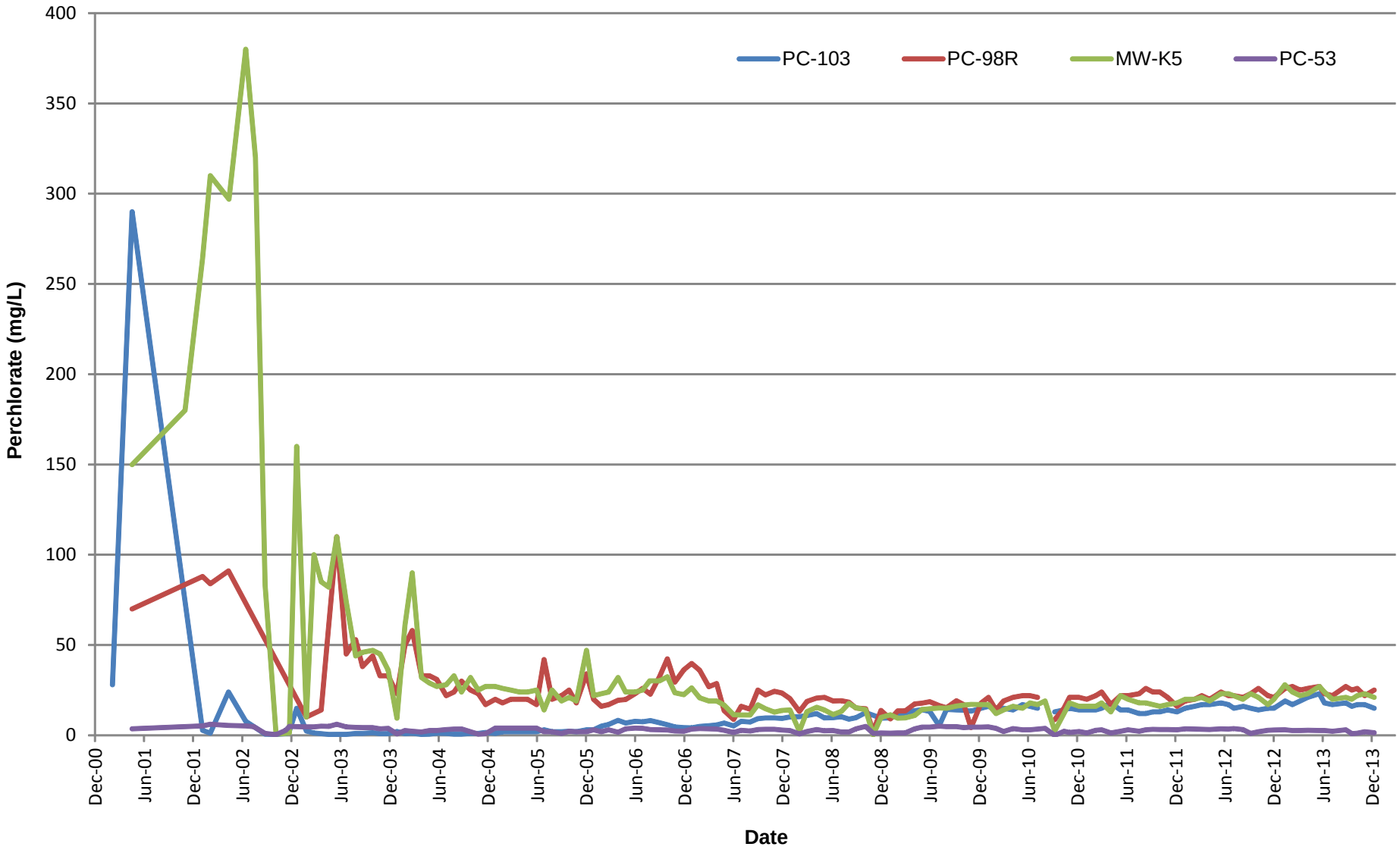
ENVIRON

City of Henderson WRF Well Line Perchlorate Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
20

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG21.mxd



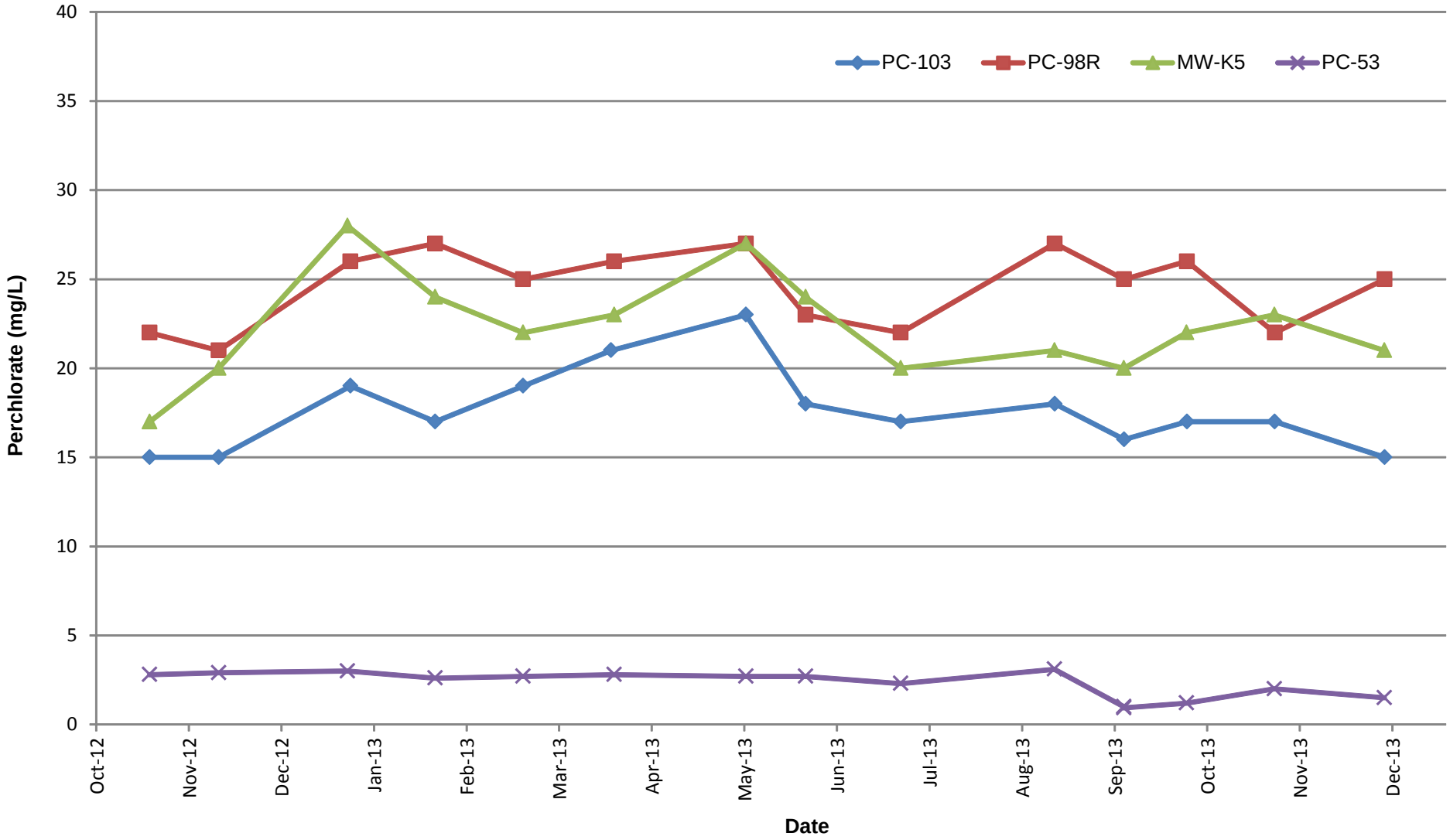
ENVIRON

City of Henderson WRF Well Line Perchlorate Concentration Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
21

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG21A.mxd



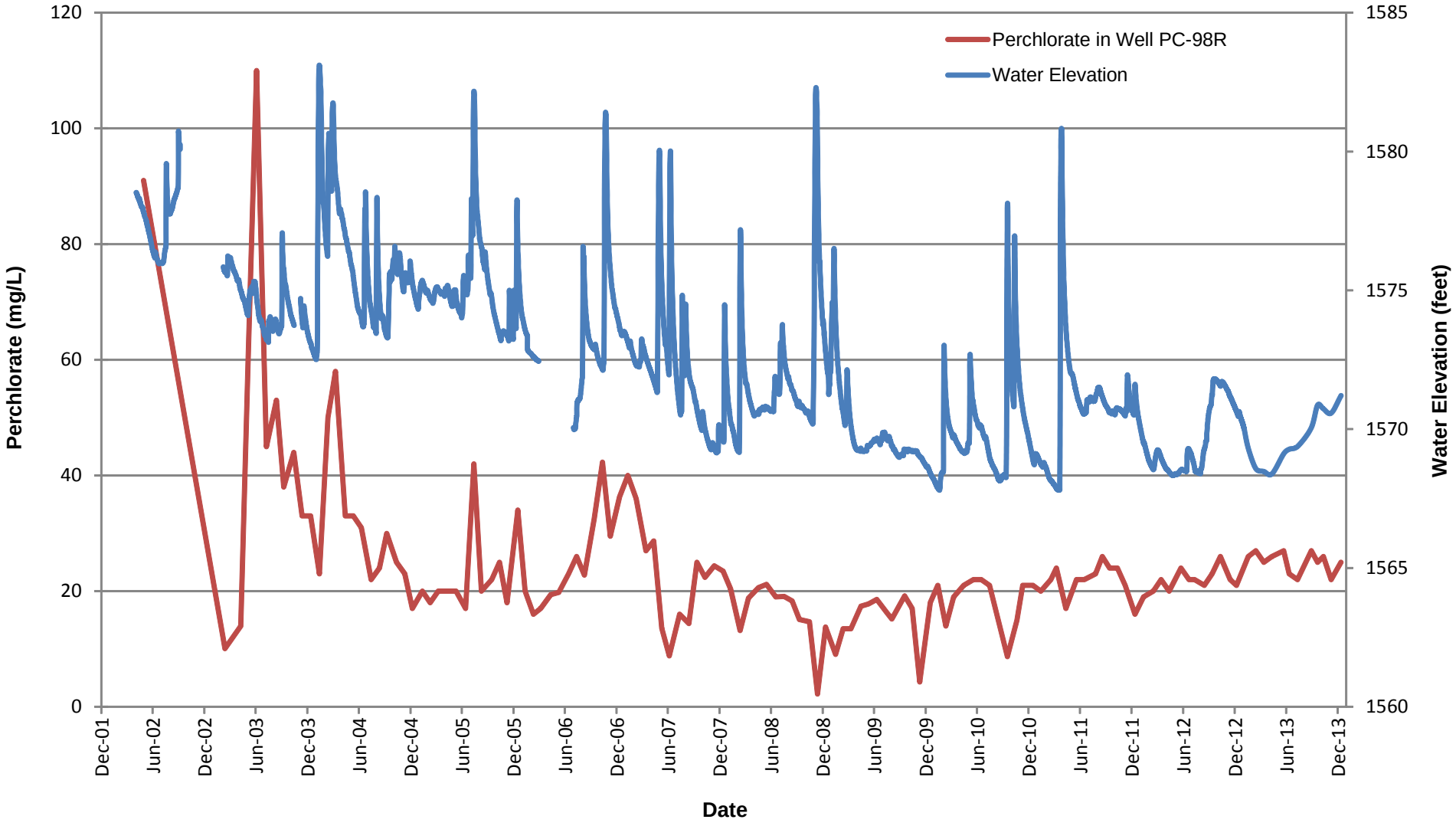
ENVIRON

City of Henderson WRF Well Line Perchlorate Concentration Trends, Nov 2012 - Dec 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
21a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG22.mxd



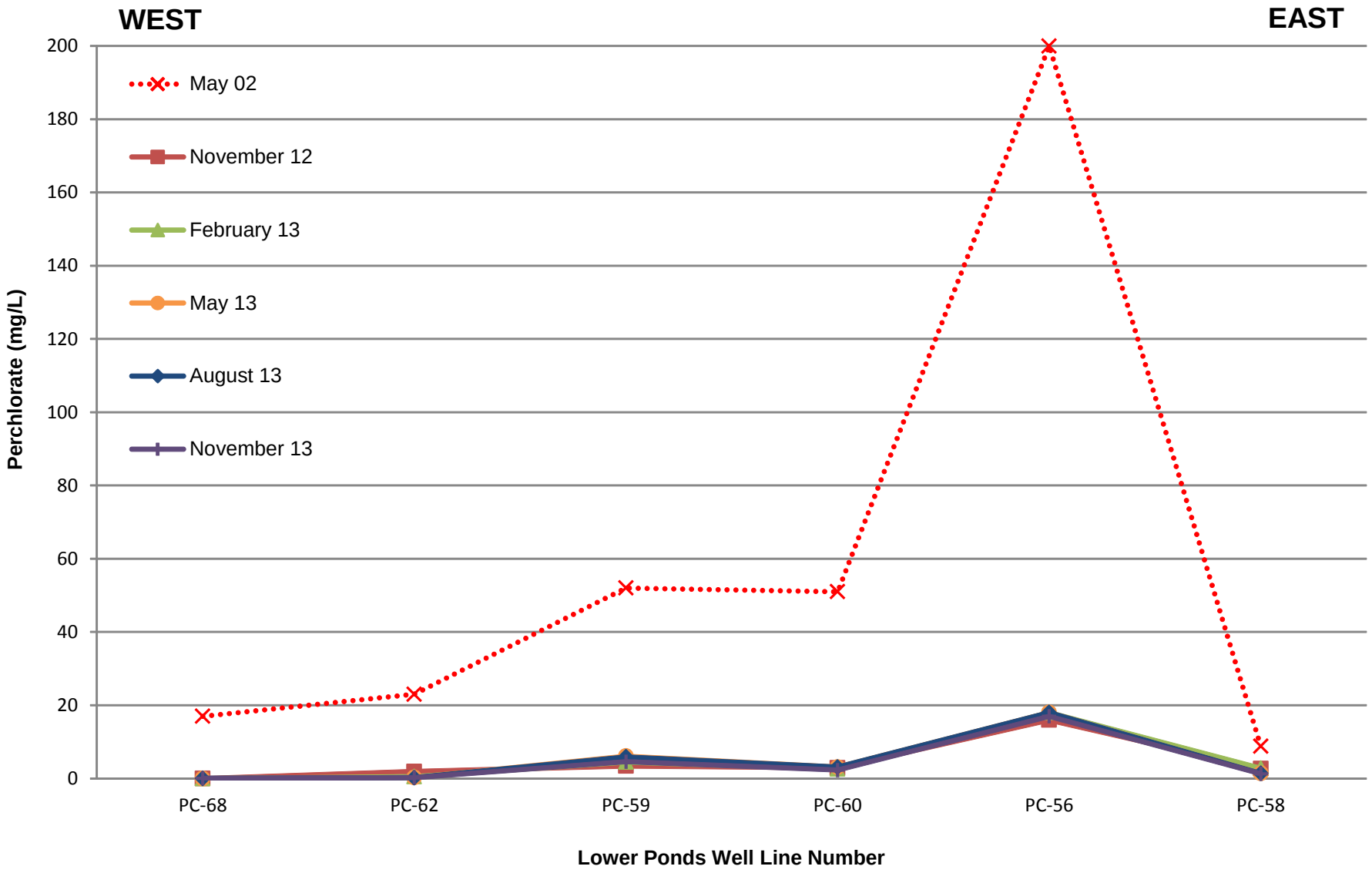
ENVIRON

Well PC-98R Perchlorate Concentration vs. Water Elevation Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
22

Drafter: RS | Date: 2/6/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG23.mxd



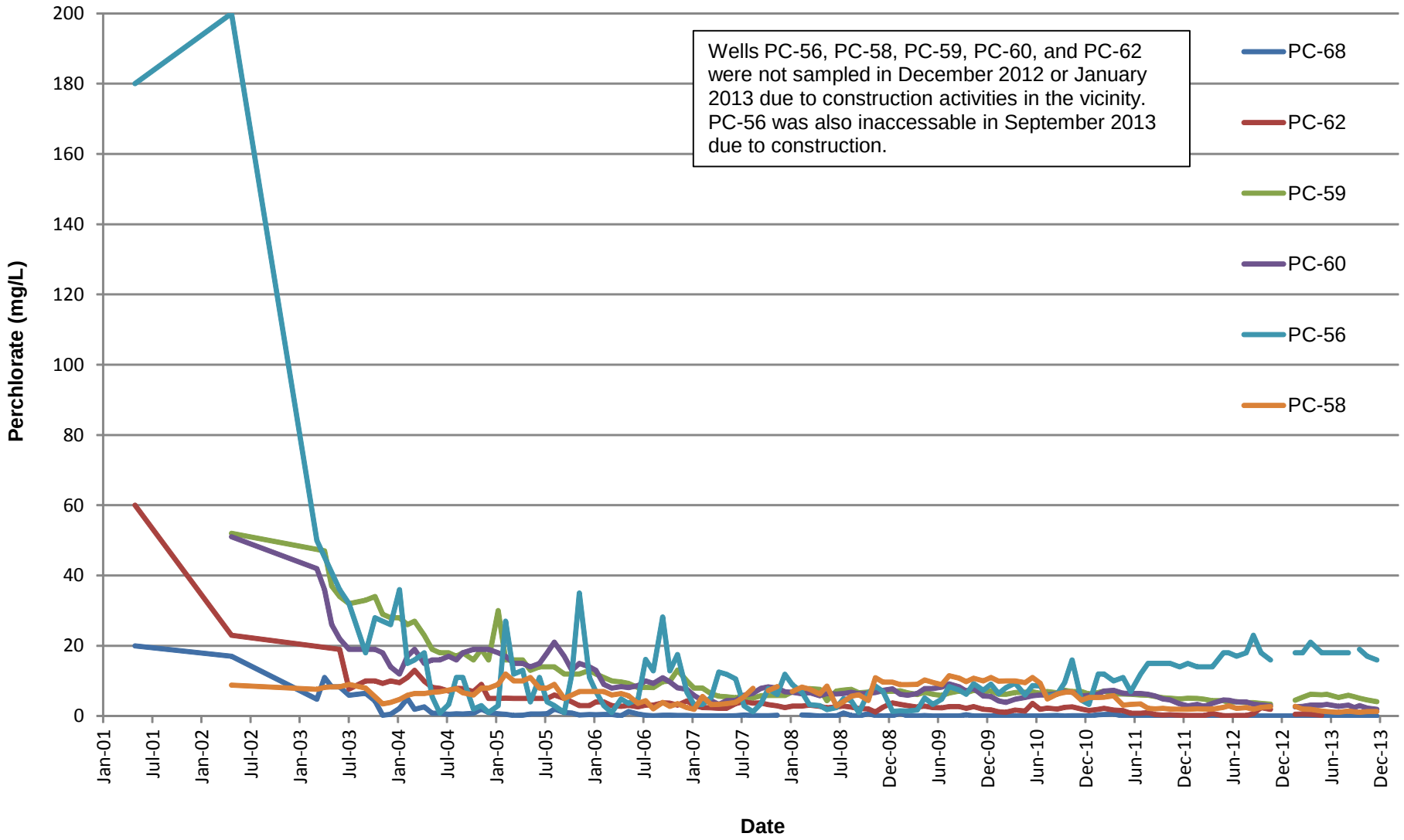
ENVIRON

Lower Ponds Well Line Perchlorate Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
23

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG24.mxd



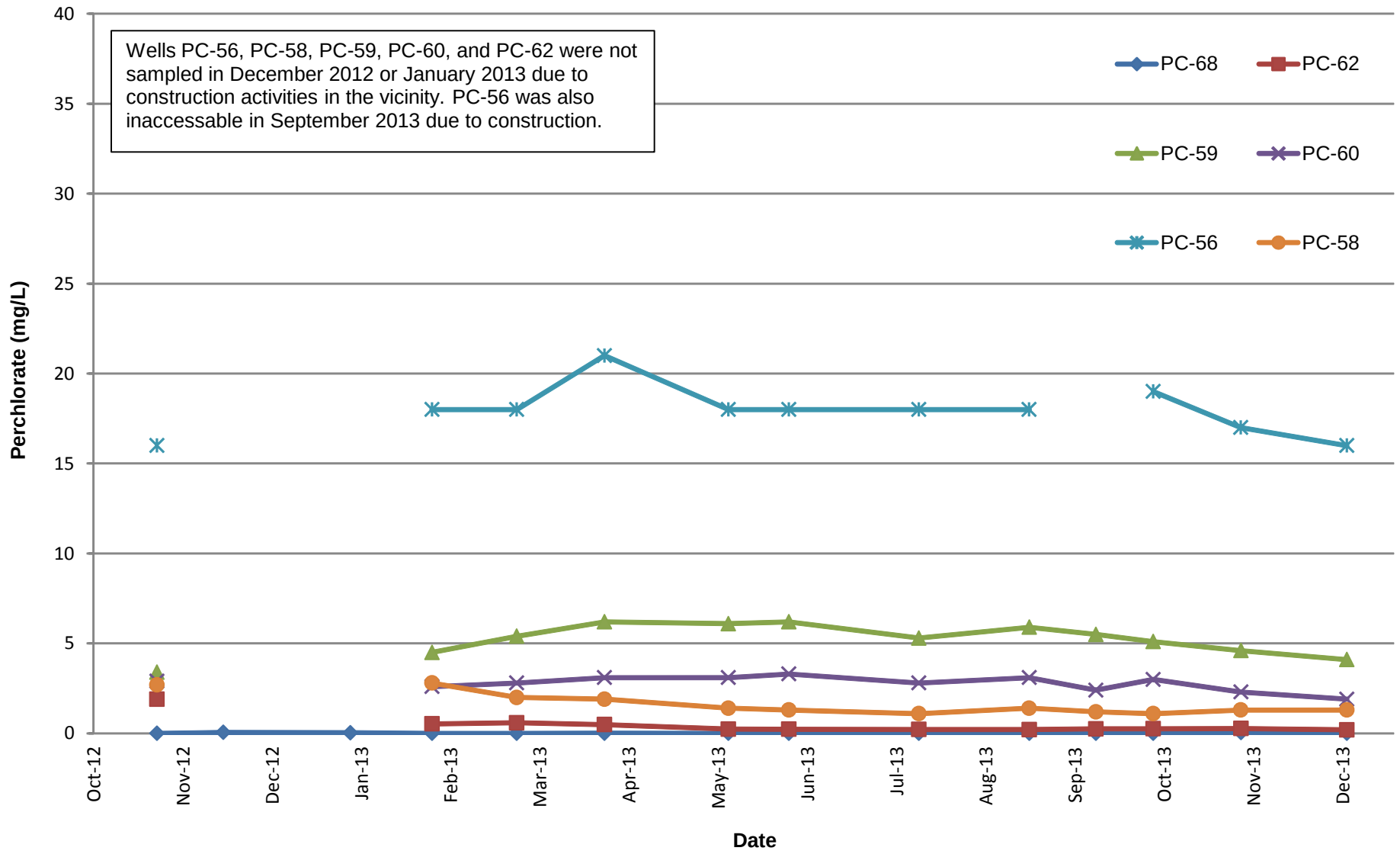
ENVIRON

Lower Ponds Well Line Perchlorate Concentration Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
24

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG24A.mxd



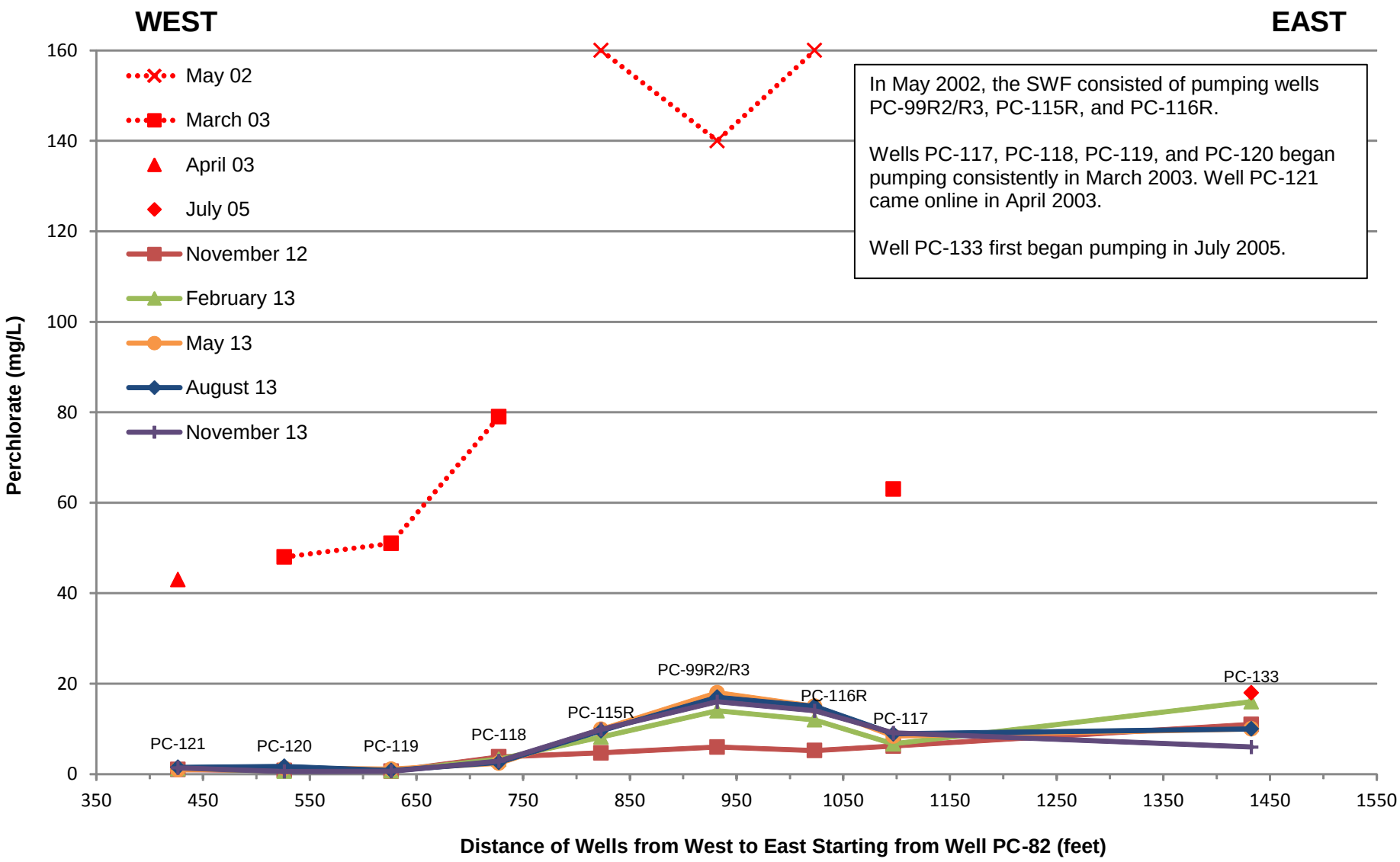
ENVIRON

Lower Ponds Well Line Perchlorate Concentration Trends, Nov 2012 - Dec 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
24a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG25_new.mxd



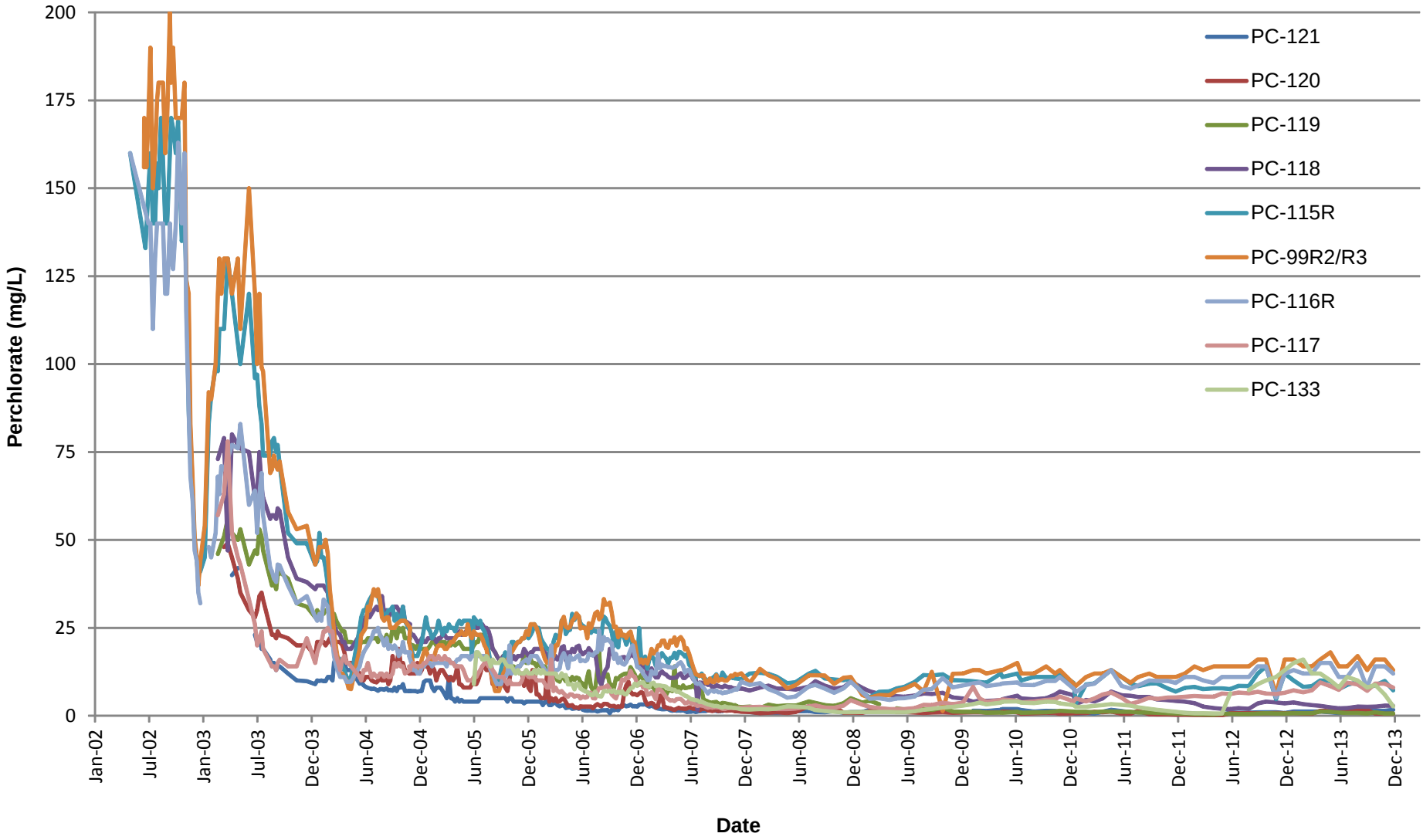
ENVIRON

Seep Well Field Perchlorate Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
25

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG26.mxd



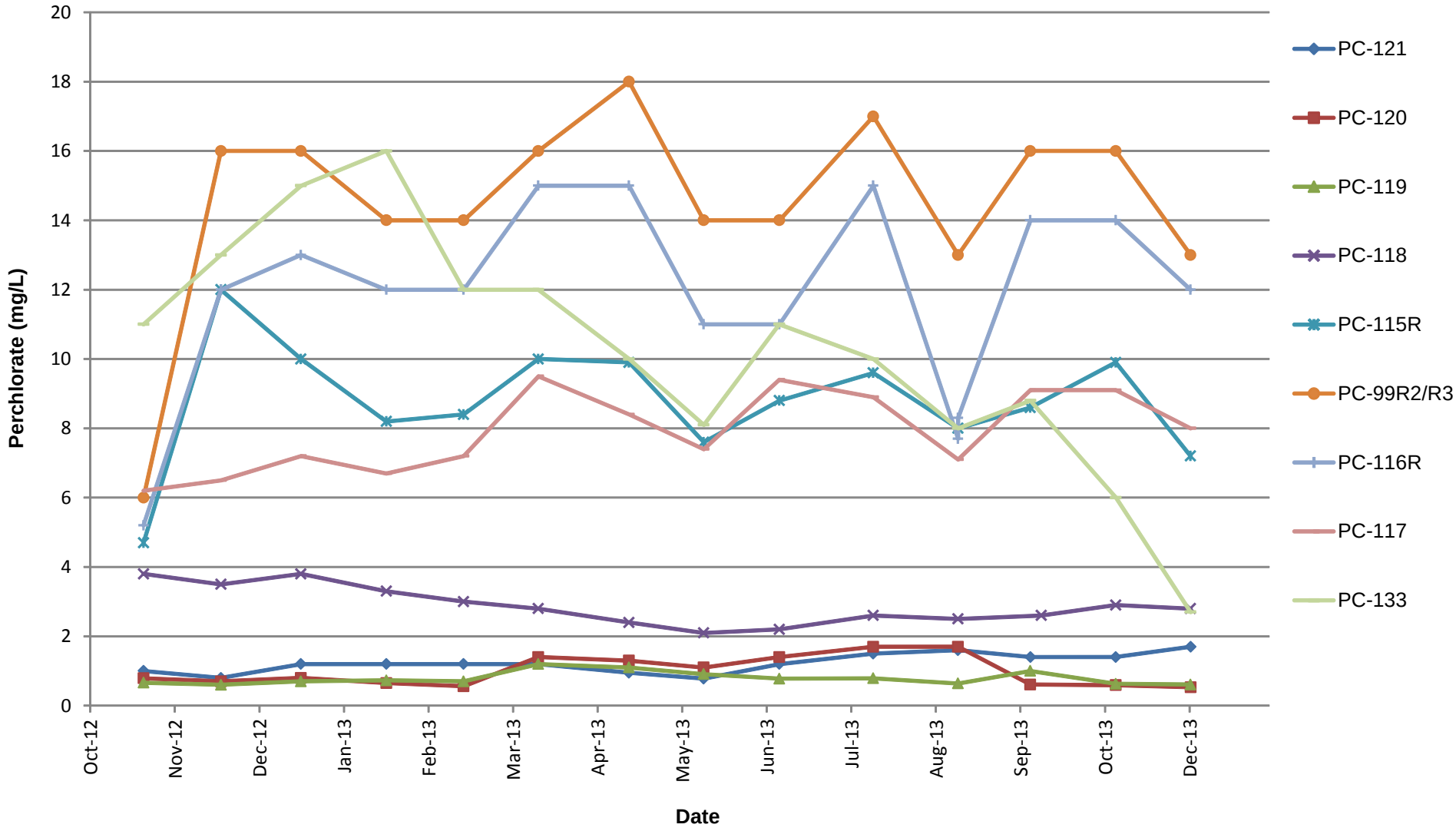
ENVIRON

Seep Well Field Perchlorate Concentration Trends
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
26

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG26A.mxd



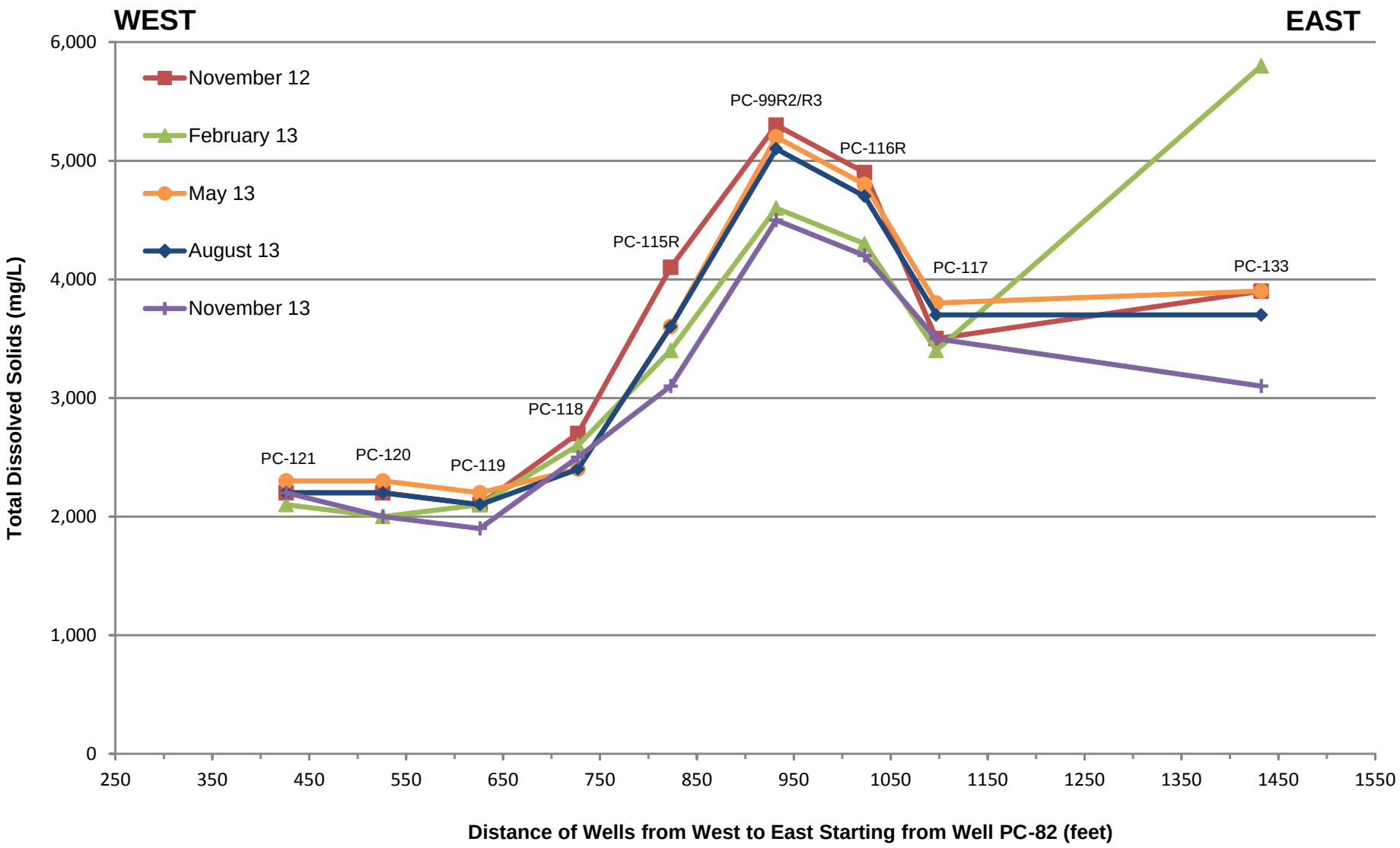
ENVIRON

Seep Well Field Perchlorate Concentration Trends, November 2012- December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
26a

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG27.mxd



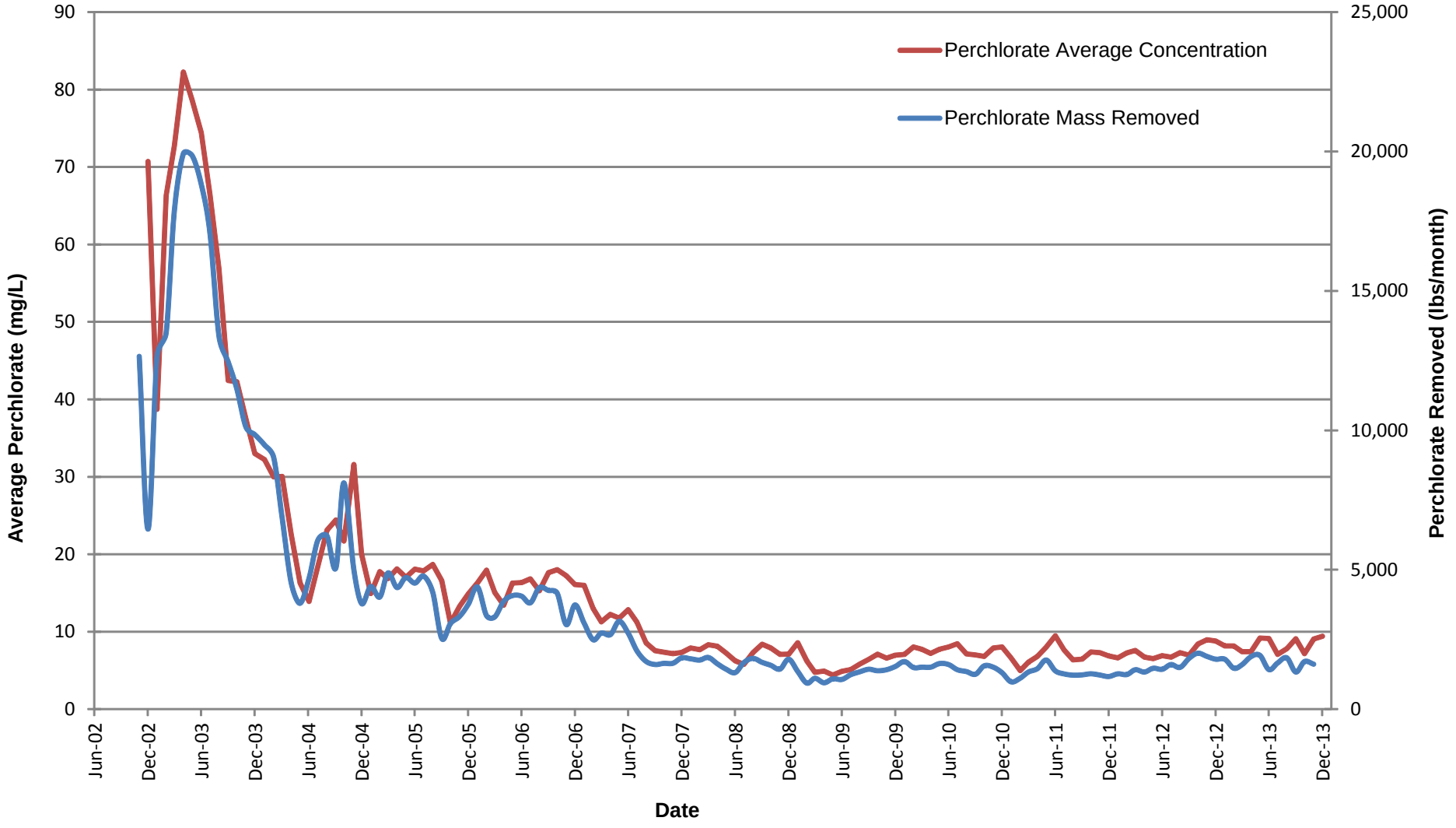
ENVIRON

Seep Well Field Total Dissolved Solids Concentrations
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
27

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\GWM\Annual Performance Reports\2013 semi-Annual\Figures\GIS Files\FIG28.mxd



ENVIRON

Seep Well Field Average Perchlorate Concentration and Mass Removed
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
28

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Las Vegas Wash

AMPAC Injection Wells
(Inactive)

Seep Well Field

City of Henderson
Bird Viewing Preserve

AMPAC Extraction Wells

Athens Road Well Field

OSSM Extraction Wells and
Recharge Trenches

Interceptor Well Field

AMPAC Extraction Wells
(Inactive in the Model)

1520
1540
1560
1580
1600
1620
1640
1660
1680
1700
1720
1740
1760
1780
1800
1820
1840
1860
1880

EXPLANATION

- Extraction Wells
- Simulated heads (ft msl)
- Las Vegas Wash Area
- Dry Zone
- Site Boundary
- Downgradient Plume Area

Capture Zone

- Interceptor Well Field
- Athens Well Field
- Seep Well Field
- OSSM Well Field
- AMPAC Well Field

NERT = Nevada Environmental Response Trust
AMPAC = American Pacific Corporation
OSSM = Olin/Stauffer/Syngenta/Montrose

N
W E
S

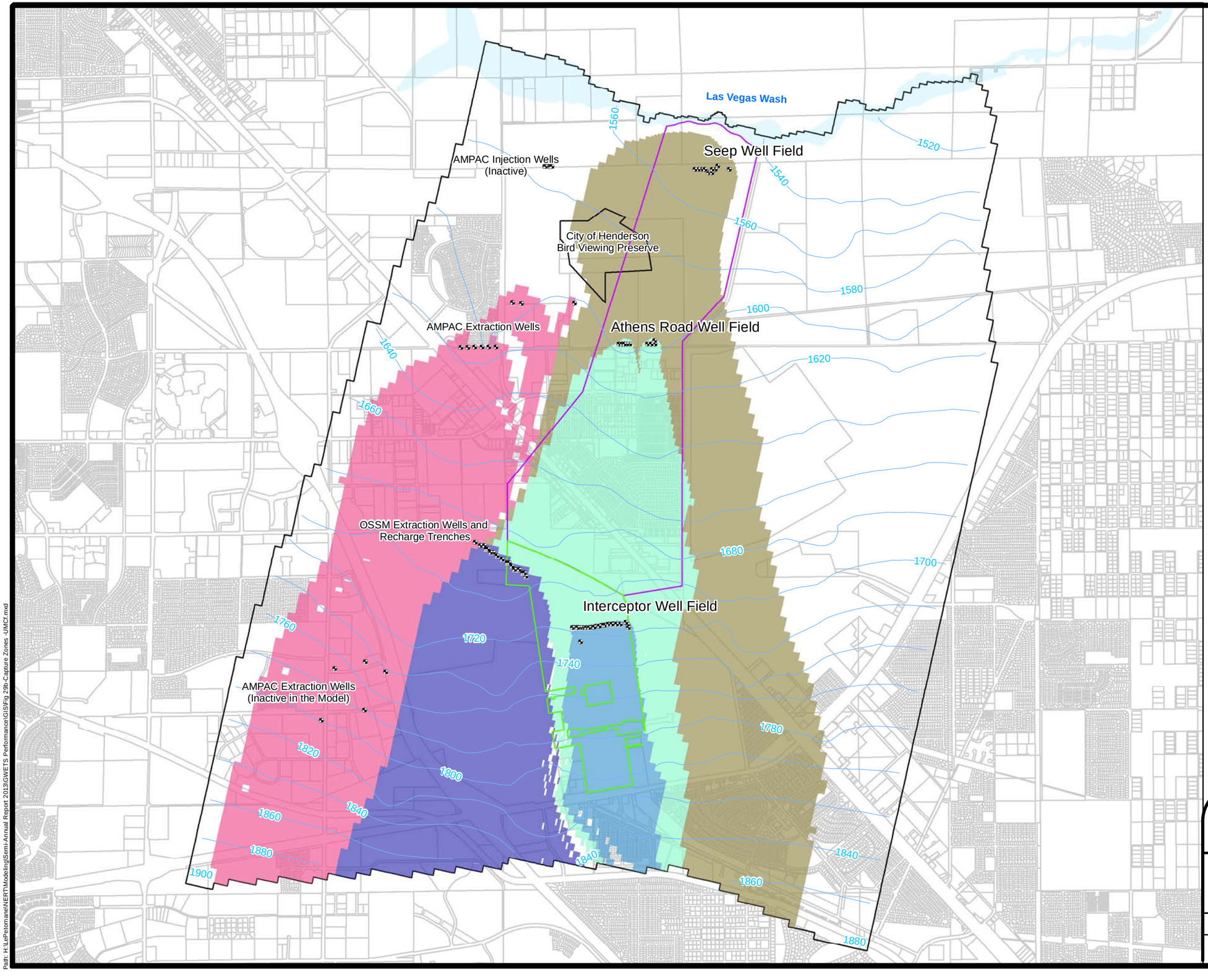
0 0.5 1 Miles

ENVIRON

Capture Zones - Alluvium
Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		29a
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS\Fig 29a-Capture Zones-Alluvium.mxd



EXPLANATION

- Extraction Wells
- Simulated heads (ft msl)
- Las Vegas Wash Area
- Site Boundary
- Downgradient Plume Area

Capture Zone

- Interceptor Well Field
- Athens Well Field
- Seep Well Field
- OSSM Well Field
- AMPAC Well Field
- Model Boundary

NERT = Nevada Environmental Response Trust
AMPAC = American Pacific Corporation
OSSM = Olin/Stauffer/Syngenta/Montrose

N
W E
S

0 0.5 1 Miles

ENVIRON

Capture Zones - UMCf
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2/28/2014	Contract Number: 21-34800H		Figure 29b
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS\Fig 29b-Capture Zones -UMCf.mxd

Las Vegas Wash

AMPAC Injection Wells (Inactive)

Seep Well Field

City of Henderson Bird Viewing Preserve

AMPAC Extraction Wells

Athens Road Well Field

OSSM Extraction Wells and Recharge Trenches

Interceptor Well Field

AMPAC Extraction Wells (Inactive in the Model)

EXPLANATION

- Extraction Wells
- Transect - Interceptor Well Field
- Transect - Athens Road Well Field
- Transect - Seep Well Field
- Model Boundary
- Site Boundary
- Downgradient Plume

N

W E

S

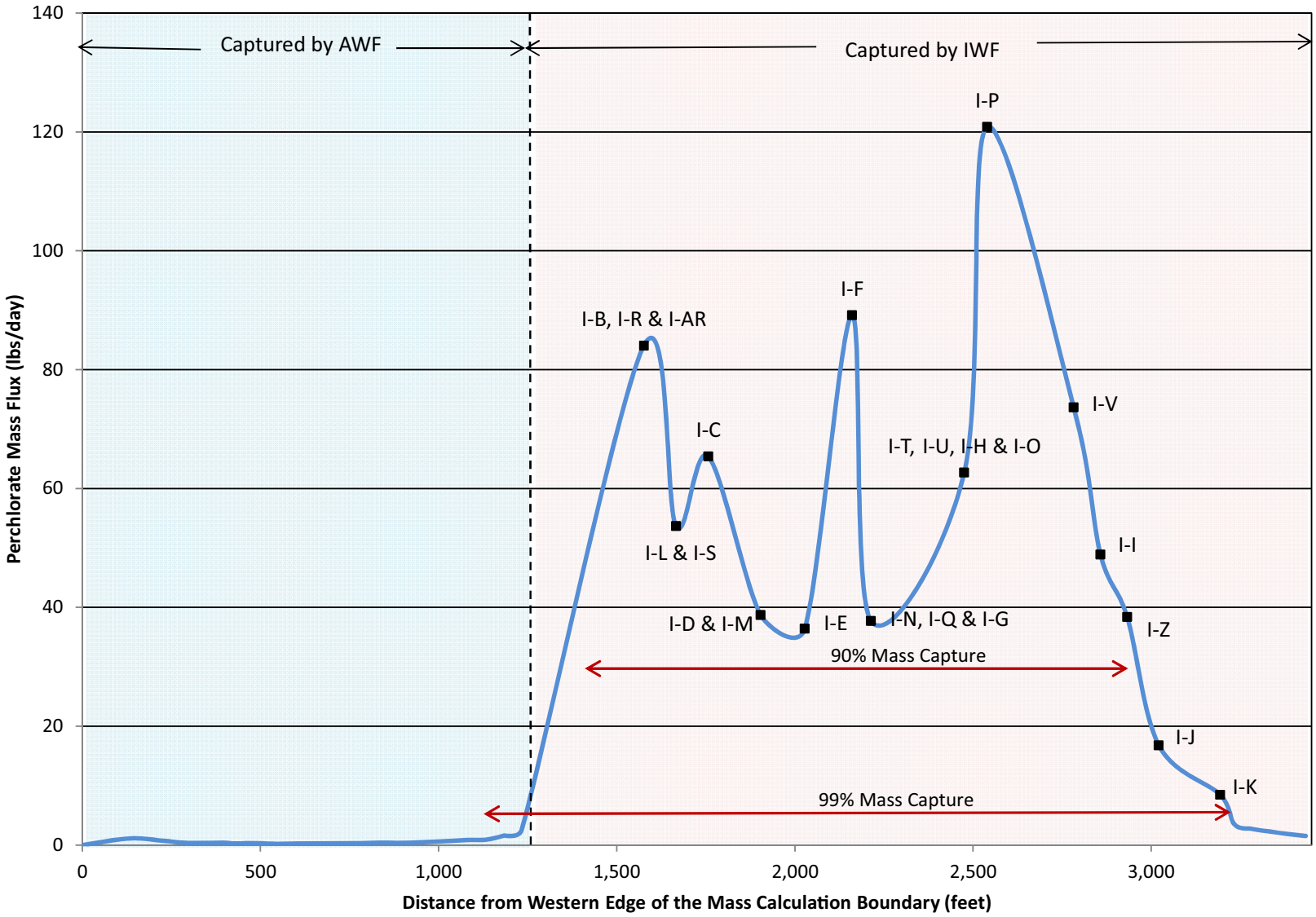
0 0.5 1 Miles

ENVIRON

Mass Flux Transect Location
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2/28/2014	Contract Number: 21-34800H		Figure 30a
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS\Fig 30a-Transect_Location.mxd

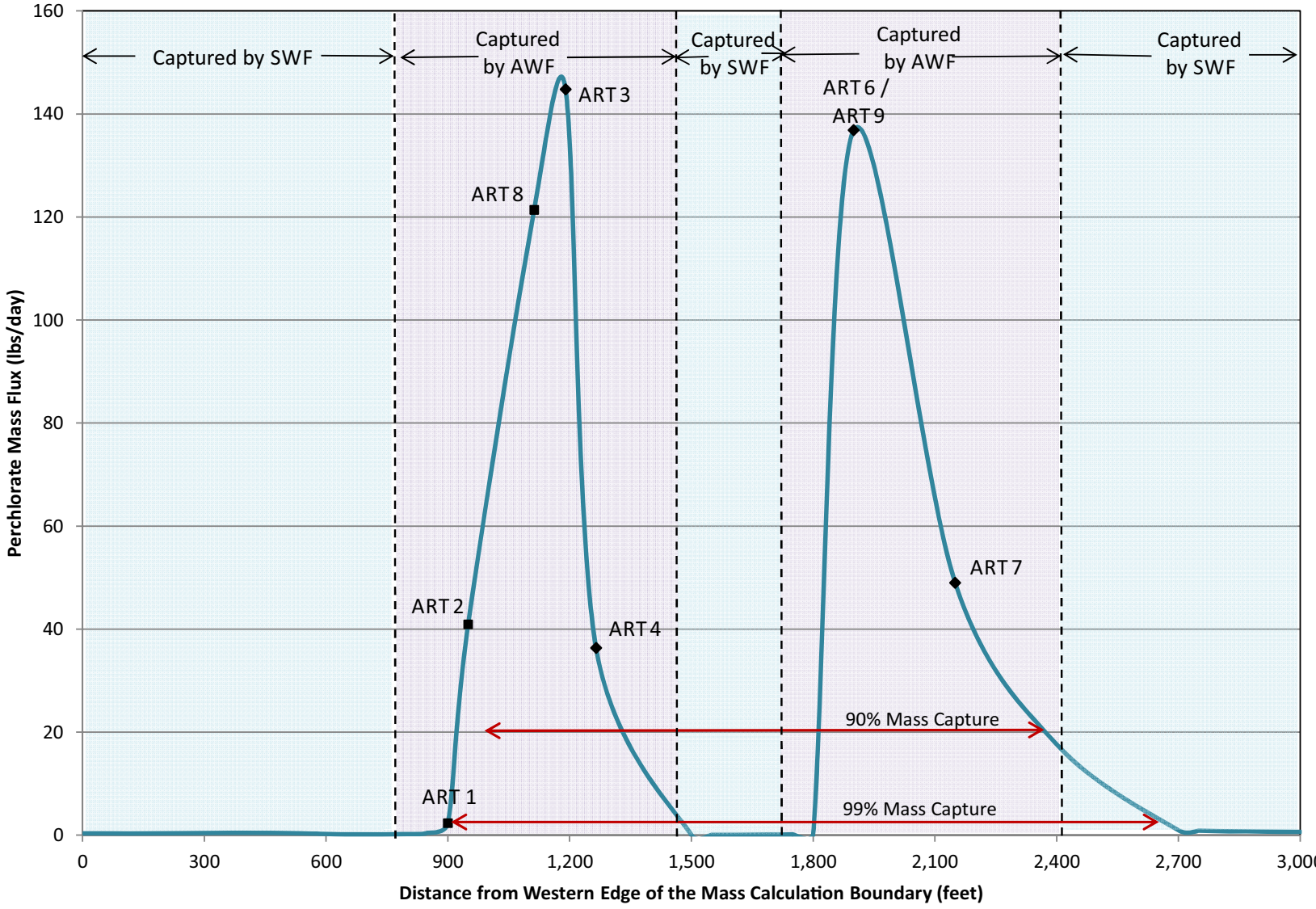


ENVIRON

Perchlorate Mass Flux at Interceptor Well Field
Nevada Environmental Response Trust (NERT) Site
Henderson, Nevada

Figure
30b

Drafter: RS | Date: 2/10/14 | Contract Number: 21-34800H | Approved: | Revised:

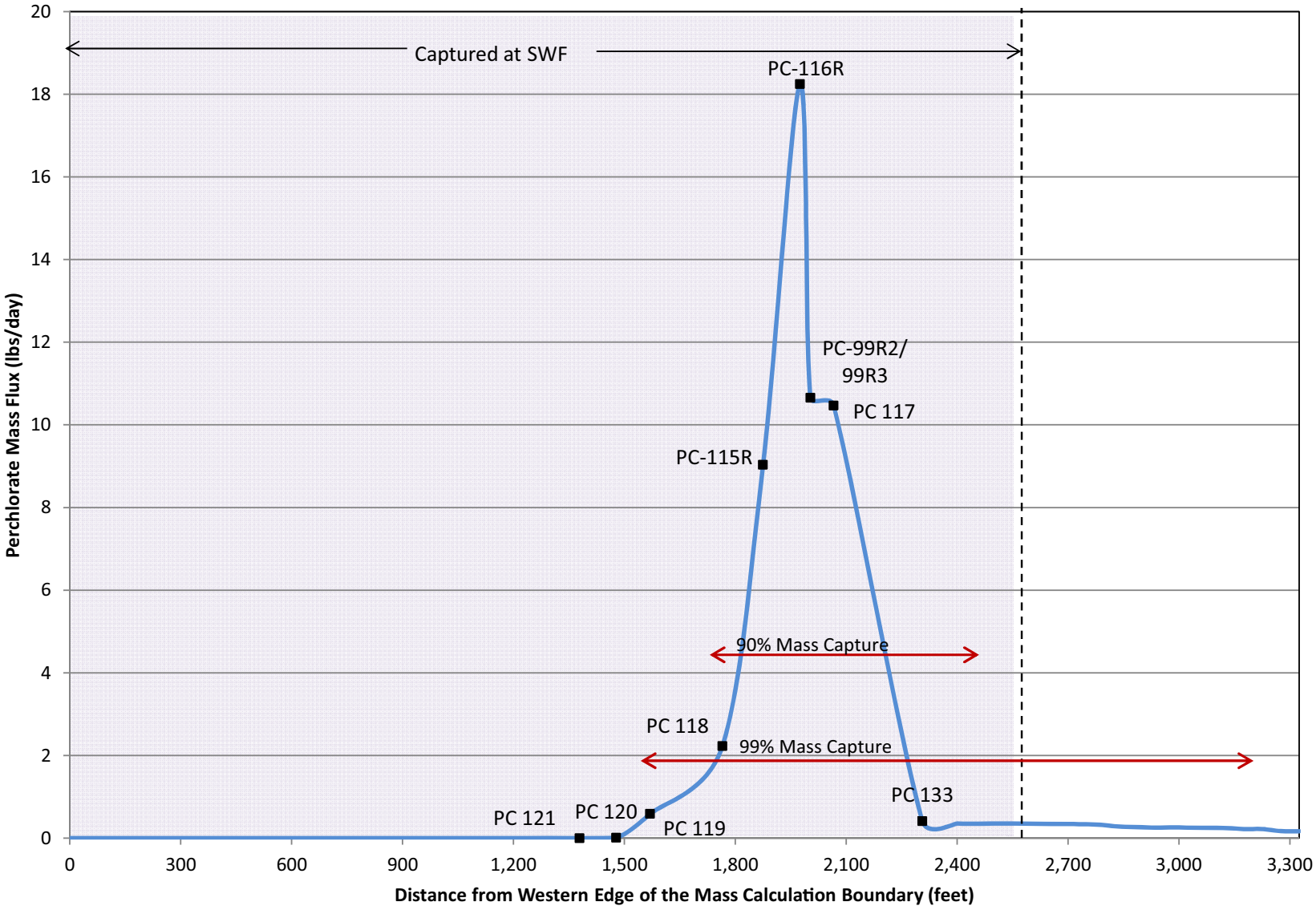


ENVIRON

Perchlorate Mass Flux at Athens Well Field
Nevada Environmental Response Trust (NERT) Site
Henderson, Nevada

Figure
30c

Drafter: RS | Date: 2/10/14 | Contract Number: 21-34800H | Approved: | Revised:

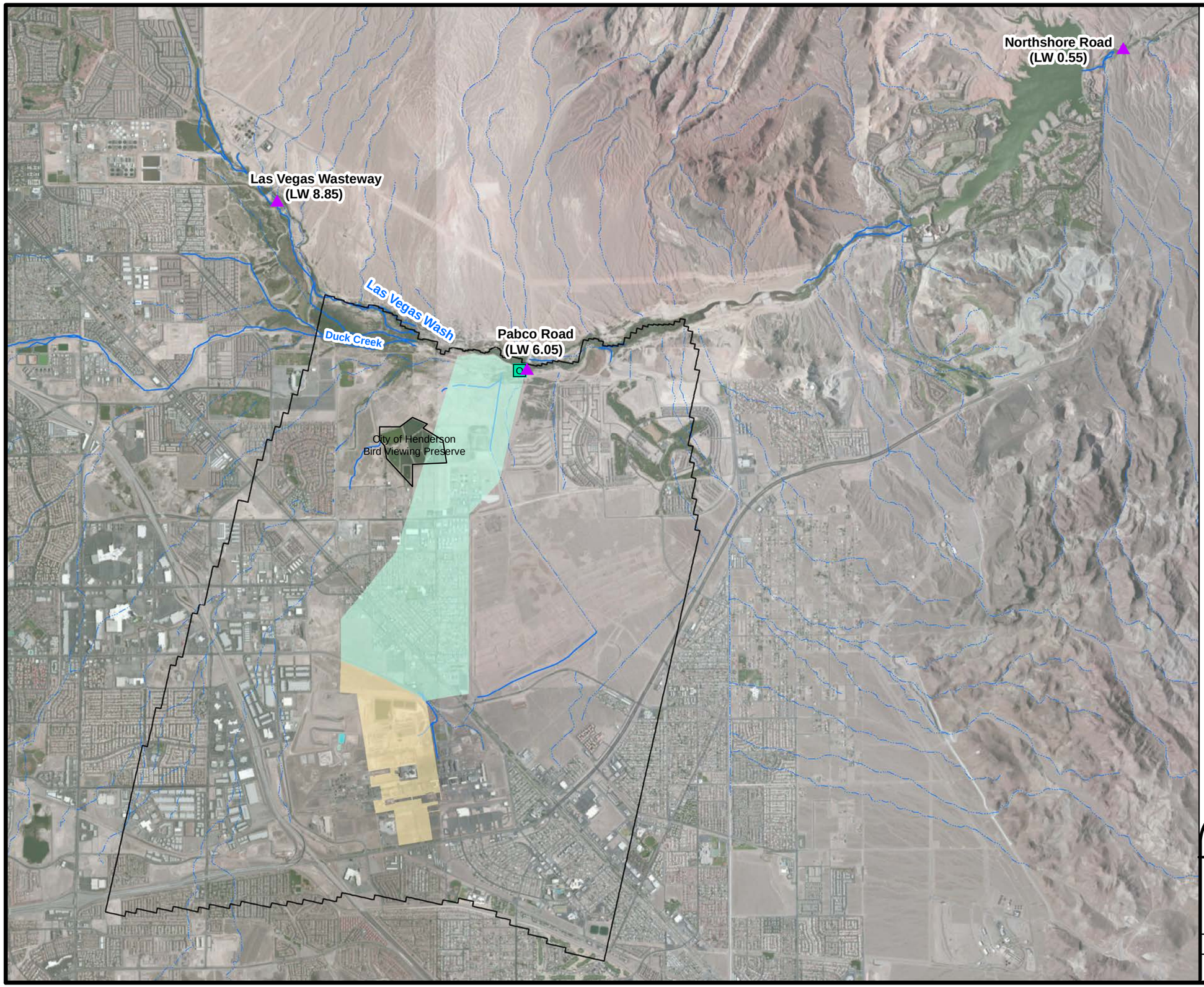


ENVIRON

Perchlorate Mass Flux at Seep Well Field
Nevada Environmental Response Trust (NERT) Site
Henderson, Nevada

Figure
30d

Drafter: RS | Date: 2/10/14 | Contract Number: 21-34800H | Approved: | Revised:



Legend

- USGS Stream Gauge Station
- NERT/AMPAC/TIMET Outfall Location
- Site Boundary
- Downgradient Plume
- Model Boundary

N
W E
S

0 0.25 0.5 1 Miles

ENVIRON

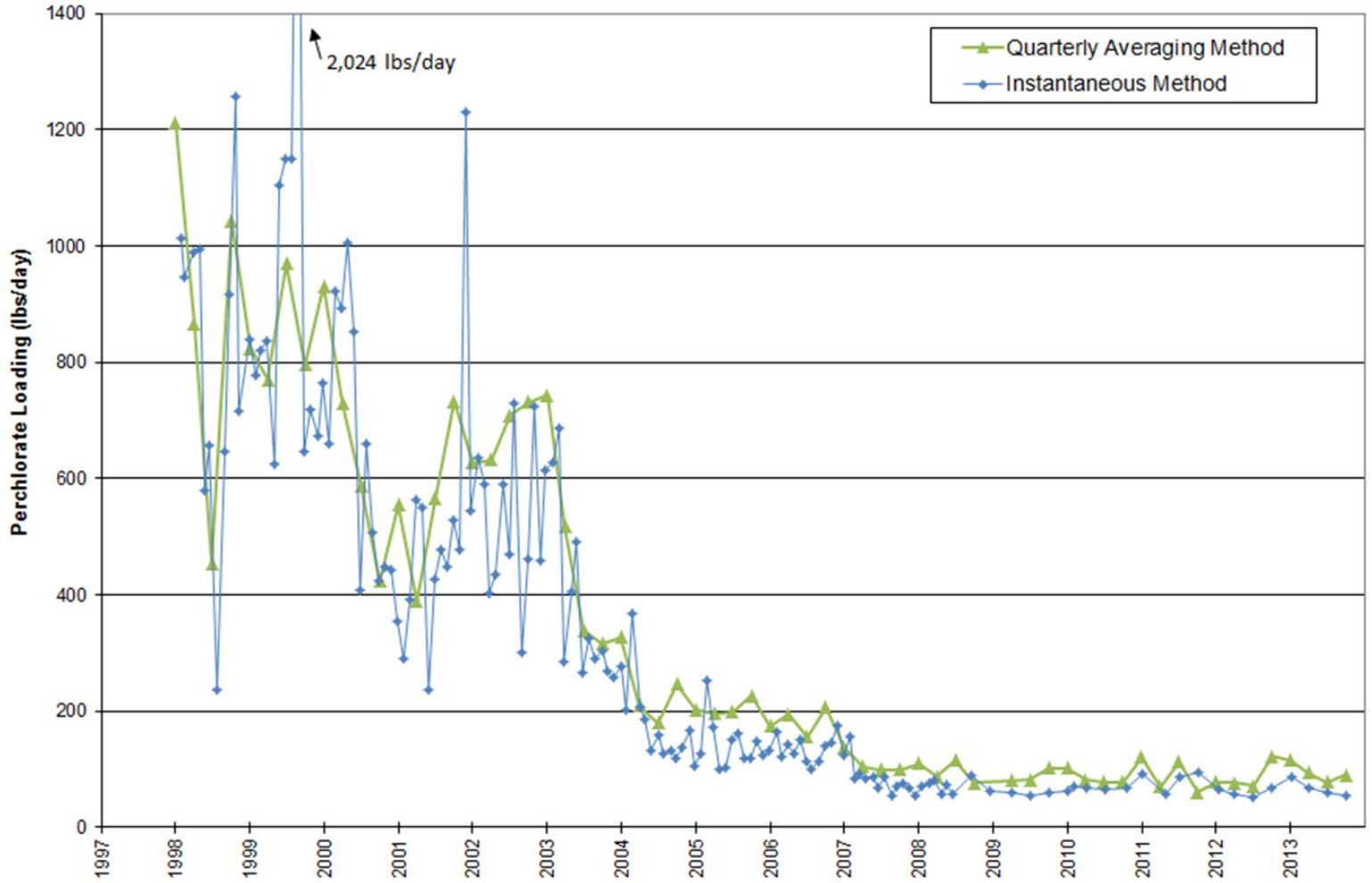
Sampling Locations in Las Vegas Wash

Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		31a
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS\Fig 31a-Las Vegas wash Sampling Location.mxd

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS_Archive\FIG34.mxd



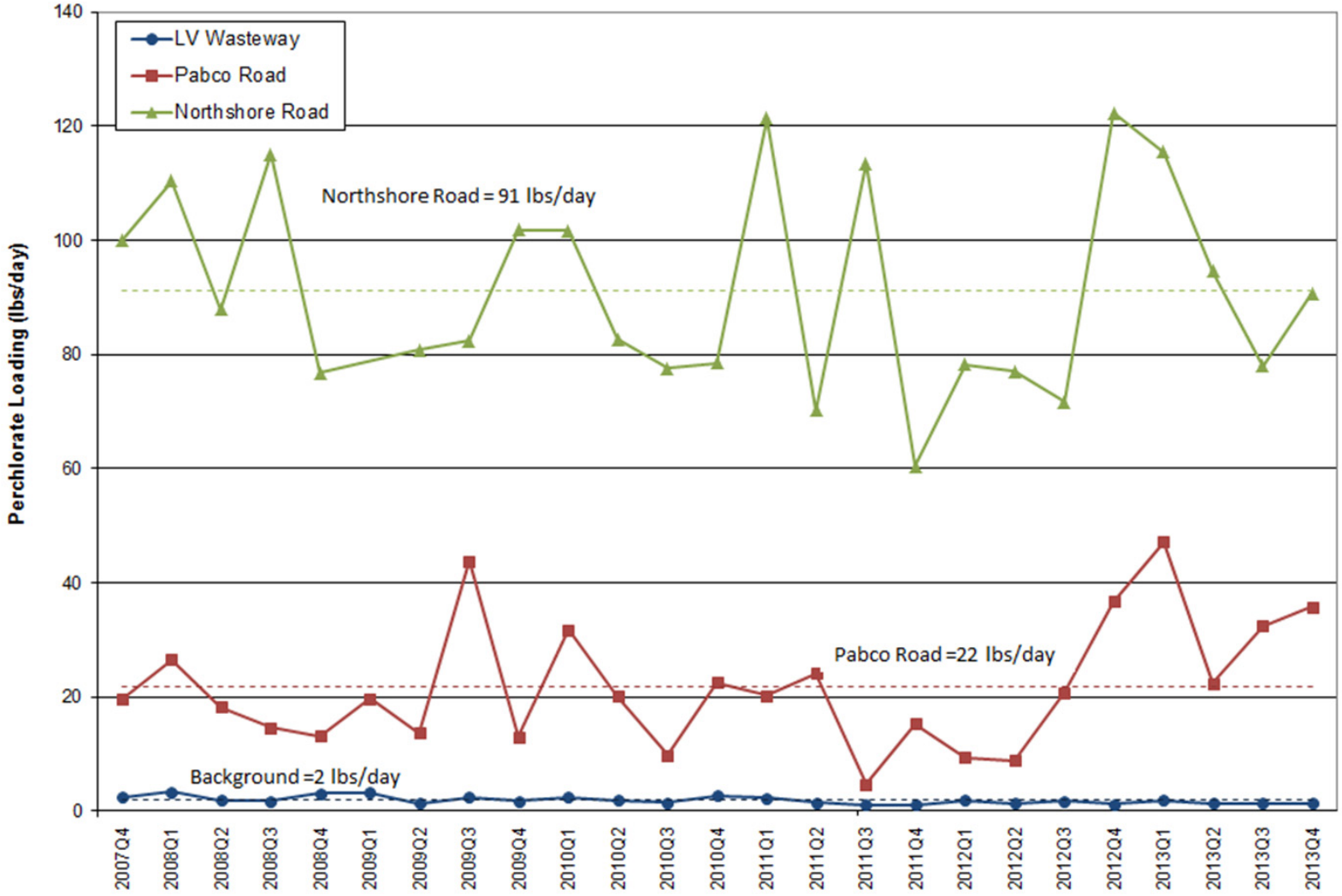
ENVIRON

Historical Perchlorate Loading in the Las Vegas Wash at Northshore Road
Nevada Environmental Response Trust (NERT) Site
Henderson, Nevada

Figure
31b

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS_Archive\FIG34.mxd

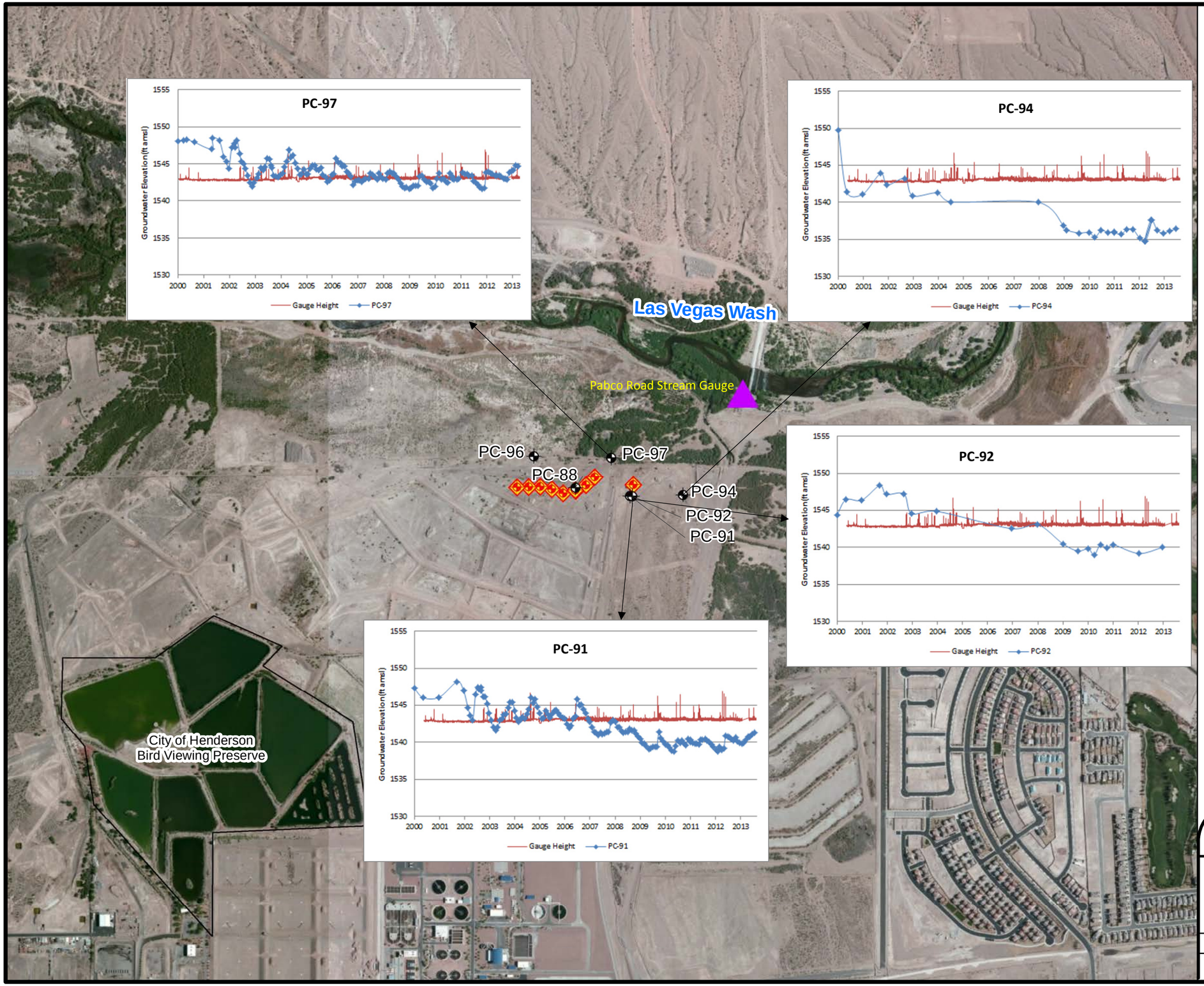


ENVIRON

Recent Quarterly Average Perchlorate Loading in the Las Vegas Wash
Nevada Environmental Response Trust (NERT) Site
Henderson, Nevada

Figure
31c

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:



EXPLANATION

- Groundwater Monitoring Wells
- Seep Well Field Extraction Well
- USGS Stream Gauge Station

N

0 0.1 0.2 0.4 Miles

ENVIRON

Groundwater Levels and Stream Stage at Pabco Road

Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		32
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\GWETS Performance\GIS\Fig 32a-GW Monitoring wells-SWF.mxd

Las Vegas Wash

WMW6.55S

WMW5.58S

WMW-5.7N

WMW-6.15S

PC-74 PC-76

PC-77 PC-78

PC-83

PC-86

PC-96

PC-97

COH2B1 COH2A

UXO–16

UZO - 17

BMI-AA08

PC-80 PC-81

PC-79

PC-82

PC-94

PC-92

PC-91

PC-88

PC-68

PC-87

PC-62

PC-59

PC-60

PC-56

PC-58

MW-T

PC-110

PC-108

HMW-13

HMW-14

City of Henderson
Bird Viewing
Preserve

DBMW-19

HM-2

MW-S

PC-4

PC-98R

MW-K5

PC-53

PC-2

PC-103

BMI-AA10

HMW-15

DBMW-4

APX-5-7

PC-107

APX-4-20

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\Appendix - Modeling Report\Capture_Zones\TDS_Plume.mxd

EXPLANATION

- Seep Well Field Extraction Well
- Shallow Water-Bearing Zone Well

Total Dissolved Solids, mg/L

- 5,000-10,000
- 2,500 - 5,000
- <2,500

N

W E

S

0 0.15 0.3 Miles

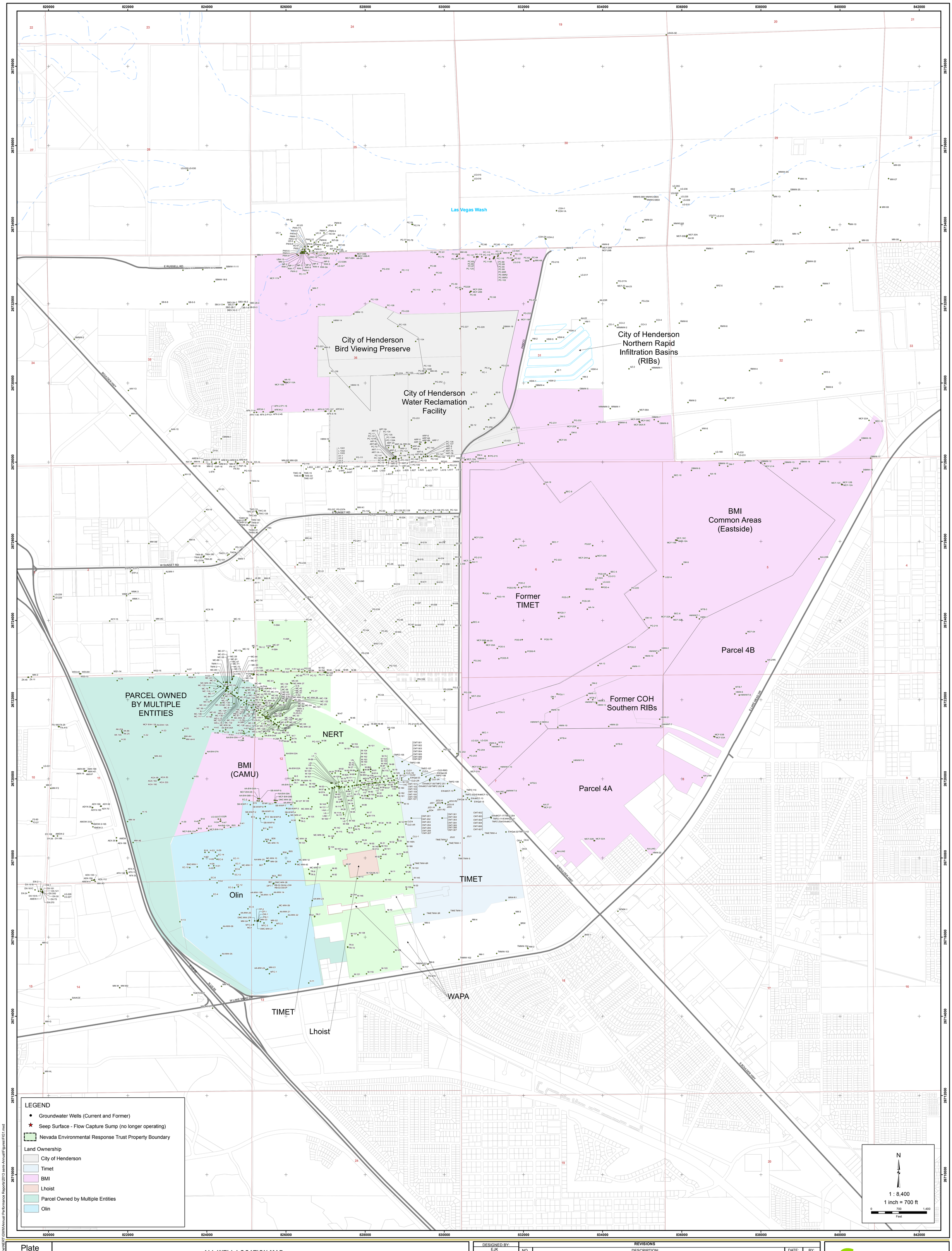
ENVIRON

Total Dissolved Solids in Shallow Groundwater, May - June 2012

Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		33
Drafter: AS	Approved:	Revised:	

Plate



Path: H:\LePetomane\NERT\GW\Annual Performance Reports\2013 semi-Annual\Figures\FIG1.mxd

Plate
1

PROJECT: 21-34800H

ALL WELL LOCATION MAP

Semi-Annual Remedial Performance Report
Nevada Environmental Response Trust (NERT)
Henderson, Nevada

DESIGNED BY:
EJK
DRAWN BY:
EA
CHECKED BY:
KL
APPROVED BY:
CJR/EJK

REVISIONS

NO.	DESCRIPTION:	DATE:	BY:
0	GENERATE APPROVED MAP	1/21/2014	EA

ENVIRON

Appendix A

Groundwater Elevations and Analytical Data

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
AA-01	05/07/13	1709.78					4.7	4,600
AA-11	05/19/13	Dry						
ARP-1	10/09/12						21	5,700
	10/10/12	1589.79						
	11/14/12	1589.97		0.0018 J			22	5,600
	12/05/12	1592.70					24	5,800
	01/16/13	1589.32					22	5,600
	02/12/13	1589.10					23	5,500
	03/12/13	1588.95					24	5,500
	04/09/13	1588.81					25	5,500
	05/23/13	1588.86		<0.0020			28	5,700
	06/10/13						27	5,700
	06/11/13	1589.11						
	07/11/13	1589.25					24	5,800
	08/28/13	1589.33		<0.0020			26	5,700
	09/20/13	1589.63					26	5,500
	10/08/13	1589.77					27	5,500
	11/08/13	1590.13		<0.0020			27	5,600
	12/12/13	1589.80					25	5,500
ARP-2A	10/10/12	1589.11					13	5,800
	11/14/12	1589.28		0.013 J			15	5,700
	12/06/12	1588.99					15	5,700
	01/17/13	1588.66					15	6,000
	02/13/13	1588.35					12	6,000
	03/13/13	1588.53					11	6,100
	04/10/13	1588.05					13	6,300
	05/23/13	1588.24		0.013			14	6,200
	06/11/13	1588.47					13	6,500
	07/11/13	1588.54					12	6,400
	08/29/13	1588.67		0.013			17	6,000
	09/20/13	1588.96					16	5,900
	10/10/13	1589.12					16	5,800
	11/07/13	1589.57		0.013			17	5,900
	12/12/13	1589.11					17	5,600
ARP-3A	10/10/12	1588.18					5	7,800
	11/14/12	1588.31		0.012 J			3.7	7,700
	12/06/12	1588.07					3.8	8,000
	01/17/13	1587.65					4.9	7,700
	02/13/13	1587.43					5.1	7,900
	03/13/13	1587.23					5.8	7,900
	04/10/13	1586.94					6	8,100
	05/23/13	1587.24		0.0040 J			5.5	8,400
	06/11/13	1587.50					5.4	8,400
	07/11/13	1587.58					6.8	8,400
	08/29/13	1587.75		0.011			8.8	8,200

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ARP-3A	09/20/13	1588.03					7.3	8,300
	10/10/13	1588.19					6.8	8,100
	11/07/13	1588.48		0.013			6.2	8,300
	12/12/13	1588.20					5.7	8,000
ARP-4A	10/10/12	1586.99					38	5,200
	11/14/12	1587.12		0.012 J			26	5,200
	12/06/12	1586.97					26	5,400
	01/17/13	1586.47					31	5,400
	02/13/13	1586.27					29	5,300
	03/13/13	1586.07					28	5,100
	04/10/13	1586.09					30	5,000
	05/23/13	1586.04		0.0060			28	5,500
	06/11/13	1586.30					32	5,400
	07/11/13	1586.33					28	5,500
	08/29/13	1586.45		0.0055			32	5,100
	09/20/13	1586.94					29	5,300
	10/10/13	1586.90					30	5,200
	11/07/13	1586.92		0.0058			30	5,200
	12/12/13	1586.98					26	5,000
ARP-5A	10/10/12	1584.00					13	5,300
	11/14/12	1584.25		0.046			11	5,100
	12/06/12	1584.08					12	5,200
	01/17/13	1583.68					13	5,300
	02/13/13	1583.42					13	5,500
	03/13/13	1583.28					12	5,400
	04/10/13	1583.24					16	5,600
	05/23/13	1583.19		0.033			14	6,000
	06/11/13	1583.29					16	6,300
	07/11/13	1583.37					15	6,000
	08/29/13	1583.52		0.029			15	5,700
	09/20/13	1583.86					12	5,300
	10/10/13	1583.99					8.4	4,800
	11/07/13	1584.27		0.033			14	5,400
	12/12/13	1584.42					14	5,100
ARP-6B	10/10/12	1583.95					38	9,100
	11/14/12	1584.16		0.22			32	9,500
	12/06/12	1584.01					22	8,800
	01/17/13	1583.61					34	8,900
	02/13/13	1583.36					34	8,100
	03/13/13	1583.21					38	8,700
	04/10/13	1583.09					42	8,800
	05/23/13	1583.18		0.27			43	10,000
	06/11/13	1583.26					42	9,400
	07/11/13	1583.29					39	9,400
	08/29/13	1583.35		0.33			43	9,100

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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ARP-6B	09/20/13	1583.75					43	8,800
	10/10/13	1583.92					35	8,700
	11/07/13	1584.29		0.27			40	8,600
	12/12/13	1584.39					42	7,900
ARP-7	10/10/12	1583.55					4.8	5,900
	11/14/12	1583.80		0.037			6.6	6,100
	12/06/12	1583.65					4.3	6,000
	01/17/13	1583.22					4.4	5,500
	02/13/13	1583.04					4.3	5,500
	03/13/13	1582.77					3.6	4,500
	04/10/13	1582.55					5.8	6,000
	05/23/13	1582.77		0.042			5.7	6,800
	06/11/13	1582.88					6.8	7,000
	07/11/13	1582.89					5.9	6,800
	08/29/13	1582.94		0.057			6.4	6,900
	09/20/13	1583.35					6.5	6,500
	10/10/13	1583.55					6.7	6,700
	11/07/13	1583.77		0.088			11	7,200
	12/12/13	1583.96					15	7,600
ART-1	10/02/12						6.2	6,300
	10/10/12	1583.97						
	11/05/12	1583.24		0.0029 J			5.1	6,200
	12/04/12						5.8	6,200
	12/10/12	1583.37						
	01/03/13	1584.55		0.0013 J			6.5	6,200
	02/04/13	1588.87		0.0021 J			5.7	6,200
	03/05/13	1584.42					5.9	6,500
	04/02/13						7.7	6,100
	04/15/13	1577.91						
	05/06/13			<0.0020			8.4	6,600
	05/07/13	1578.77						
	06/03/13	1588.43					6.1	6,500
	07/01/13						7.1	6,600
	07/02/13	1580.06						
	08/05/13			<0.0020			8.6	6,300
	08/07/13	1579.44						
	09/06/13						9.2	6,200
	09/09/13	1589.04						
	10/07/13						8.3	6,000
	10/11/13	1589.26						
	11/04/13			<0.0020			8.9	6,500 J-
	11/08/13	1589.20						
	12/02/13						8.2	5,900
	12/03/13	1589.04						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-1A	10/10/12	1589.37						
	11/05/12	1591.00						
	12/10/12	1590.95						
	01/03/13	1590.31						
	02/04/13	1590.22						
	03/05/13	1590.52						
	04/15/13	1589.99						
	05/07/13	1589.85						
	06/03/13	1590.40						
	07/02/13	1590.18						
	08/07/13	1590.34						
	09/09/13	1590.77						
	10/11/13	1590.86						
	11/08/13	1591.25						
	12/03/13	1590.85						
ART-2	10/02/12						61	9,700
	10/10/12	1588.50						
	11/05/12	1590.06		0.036			55	9,500
	12/04/12						63	9,400
	12/10/12	1589.59						
	01/03/13	1589.77		0.039			70	9,500
	02/04/13	1589.30		0.039			65	9,500
	03/05/13	1590.88					68	9,600
	04/02/13						64	9,400
	04/15/13	1588.96						
	05/06/13			0.030			72	10,000
	05/07/13	1588.95						
	06/03/13	1589.33					60	9,800
	07/01/13						62	10,000
	07/02/13	1589.12						
	08/05/13			0.033			46	9,900
	08/07/13	1589.37						
	09/06/13						65	10,000
	09/09/13	1589.73						
	10/03/13						60	9,500
	10/11/13	1590.02						
	11/04/13			0.030			56	9,900 J-
	11/08/13	1590.38						
	12/02/13						46	9,000
	12/03/13	1589.92						
ART-2A	10/10/12	1589.60						
	11/05/12	1590.76						
	12/10/12	1590.91						
	01/03/13	1590.21						
	02/04/13	1590.08						

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Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-2A	03/05/13	1590.14						
	04/15/13	1589.67						
	05/07/13	1589.58						
	06/03/13	1590.08						
	07/02/13	1589.91						
	08/07/13	1590.48						
	09/09/13	1590.50						
	10/11/13	1590.62						
	11/08/13	1590.97						
	12/03/13	1590.57						
ART-3	10/02/12						300	8,600
	10/10/12	1586.66						
	11/05/12	1587.77		0.40			260	8,800
	12/04/12						300	8,500
	12/10/12	1587.57						
	01/03/13	1587.73		0.42			300	8,400
	02/04/13	1587.06		0.41			280	8,600
	03/05/13	1587.54					290	8,400
	04/02/13						300	8,500
	04/15/13	1586.67						
	05/06/13			0.41			330	9,100
	05/07/13	1586.73						
	06/03/13	1587.18					270	9,400
	07/01/13						250	9,700
	07/02/13	1586.92						
	08/05/13			0.40			280	9,200
	08/07/13	1587.20						
	09/06/13						270	9,300
	09/09/13	1587.47						
	10/03/13						280	8,900
	10/11/13	1587.48						
	11/04/13			0.37			250	8,700
	11/08/13	1588.13						
	12/02/13						200	6,800
	12/03/13	1590.04						
ART-3A	10/10/12	1578.38						
	11/05/12	1580.51						
	12/10/12	1580.45						
	01/03/13	1579.81						
	02/04/13	1580.79						
	03/05/13	1580.45						
	04/15/13	1578.11						
	05/07/13	1581.95						
	06/03/13	1581.61						
	07/02/13	1579.68						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-3A	08/07/13	1573.75						
	09/09/13	1581.57						
	10/11/13	1581.36						
	11/08/13	1579.92						
ART-4	10/02/12						390	7,100
	10/10/12	1587.89						
	11/05/12	1589.29		0.60			360	7,000
	12/04/12						370	6,900
	12/10/12	1588.92						
	01/03/13	1588.89		0.60			390	6,200
	02/04/13	1589.24		0.60			370	6,800
	03/05/13	1588.79					370	6,600
	04/02/13						370	6,800
	05/06/13			0.59			450	7,800
	06/03/13						330	7,700
	07/01/13						330	7,900
	08/05/13			0.65			360	7,600
	08/07/13	1588.64						
	09/06/13						360	7,500
	09/09/13	1589.03						
	10/03/13						360	7,100
	10/11/13	1589.07						
	11/04/13			0.59			330	6,700
	11/08/13	1589.16						
	12/02/13						280	6,600
	12/03/13	1589.03						
ART-4A	10/10/12	1575.36						
	11/05/12	1574.44						
	12/10/12	1574.50						
	01/03/13	1574.36						
	02/04/13	1574.50						
	03/05/13	1574.49						
	04/15/13	1575.19						
	05/07/13	1575.27						
	06/03/13	1575.41						
	07/02/13	1574.47						
	08/07/13	1575.19						
	09/09/13	1576.26						
	10/11/13	1576.60						
	11/08/13	1575.47						
	12/03/13	1574.53						
ART-6	10/02/12						280	7,100
	10/10/12	1584.22						
	11/05/12	1580.71		1.4			260	7,200
	12/04/12						300	7,100

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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-6	12/10/12	1580.42						
	01/03/13	1581.04		1.3			280	6,600
	02/04/13	1582.40		1.3			250	6,400
	03/05/13	1583.06					200	6,500
	04/02/13						260	6,600
	04/15/13	1585.06						
	05/06/13			1.1			280	7,600
	05/07/13	1585.13						
	06/03/13	1584.97					160	7,400
	07/01/13	1584.89					94	7,300
	08/05/13	1585.20		1.1			250	7,500
	09/01/13	1585.34						
	09/09/13						110	7,300
	10/07/13						210	6,800
	10/15/13	1585.52						
	11/04/13			0.69			200	6,500
	11/07/13	1586.36						
	12/03/13	1586.12					36	6,900
ART-7	10/02/12						140	8,800
	10/10/12	1583.86						
	11/05/12	1582.04		0.73			130	8,700
	12/04/12						130	8,500
	12/10/12	1581.77						
	01/03/13	1581.47		0.70			150	8,200
	02/04/13	1581.59		0.77			150	8,300
	03/05/13	1584.35					150	8,300
	04/02/13						160	8,200
	04/15/13	1584.18						
	05/06/13			0.75			160	9,000
	05/07/13	1587.04						
	06/03/13	1584.30					130	8,800
	07/01/13						120	9,100
	07/02/13	1584.08						
	08/05/13			0.73			150	9,100
	08/07/13	1584.24						
	09/06/13						120	8,600
	09/09/13	1584.44						
	10/03/13						150	6,800
	10/15/13	1584.29						
	11/04/13			0.75			140	8,200 J-
	11/07/13	1585.58						
	12/02/13						120	7,800
	12/03/13	1585.40						
ART-7A	10/10/12	1583.46						
	11/05/12	1579.38						

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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-7A	12/10/12	1578.88						
	01/03/13	1580.17						
	02/04/13	1580.93						
	03/05/13	1584.18						
	04/15/13	1581.71						
	05/07/13	1585.98						
	06/03/13	1581.65						
	07/02/13	1581.56						
	08/07/13	1581.79						
	09/09/13	1581.92						
	10/15/13	1582.01						
	11/07/13	1583.25						
	12/03/13	1583.06						
ART-7B	10/10/12	1584.42						
	11/14/12	1584.92		0.56			230	8,000
	12/10/12	1585.53						
	01/03/13	1584.90						
	02/13/13	1584.52					240	7,200
	03/13/13	1584.37					240	7,700
	05/22/13	1584.20		1.4			190	8,500
	06/11/13	1584.16						
	07/02/13	1584.14						
	08/29/13	1584.33		2.7			210	7,900
	09/09/13	1584.41						
	10/10/13	1584.83						
	11/07/13	1585.66		1.2			230	7,500
	12/03/13	1585.47						
ART-8	10/02/12						210	10,000
	10/10/12	1584.32						
	11/05/12	1585.87		0.22			190	9,700
	12/04/12						190	9,500
	12/10/12	1586.40						
	01/03/13	1585.83		0.23			220	9,300
	02/04/13	1584.88		0.23			210	9,400
	03/05/13	1585.96					210	9,500
	04/02/13						210	9,300
	04/15/13	1584.08						
	05/06/13			0.21			230	10,000
	05/07/13	1584.13						
	06/03/13	1589.38					170	10,000
	07/01/13						180	10,000
	07/02/13	1586.39						
	08/05/13			0.21			200	10,000
	08/07/13	1589.79						
	09/06/13						200	10,000

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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-8	09/09/13	1587.43						
	10/03/13						190	9,700
	10/11/13	1587.34						
	11/04/13			0.20			160	10,000 J-
	11/08/13	1588.88						
	12/02/13						130	8,900
	12/03/13	1587.28						
ART-8A	10/10/12	1588.81						
	11/05/12	1589.99						
	12/10/12	1590.11						
	01/03/13	1589.35						
	02/04/13	1589.20						
	03/05/13	1589.80						
	04/15/13	1588.88						
	05/07/13	1588.88						
	06/03/13	1587.42						
	07/02/13	1589.23						
	08/07/13	1589.65						
	09/09/13	1589.82						
	10/11/13	1590.01						
	11/08/13	1596.10						
	12/03/13	1581.43						
ART-9	10/02/12						260	7,200
	10/10/12	1574.43						
	11/05/12	1574.03		1.2			270	7,000
	12/04/12						260	7,000
	12/10/12	1574.39						
	01/03/13	1574.87		1.2			250	6,800
	02/04/13	1576.97		1.2			270	6,400
	03/05/13	1578.76					260	6,600
	04/02/13						280	6,600
	04/15/13	1580.95						
	05/06/13			0.51			120	9,400
	05/07/13	1578.95						
	06/03/13	1580.03					230	7,300
	07/01/13						240	7,400
	07/02/13	1579.97						
	08/05/13			1.2			260	7,500
	08/07/13	1582.07						
	09/06/13						270	7,100
	09/09/13	1580.73						
	10/03/13						250	6,700
	10/15/13	1580.61						
	11/04/13			0.91			220	6,500 J-
	11/07/13	1583.91						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
ART-9	12/02/13						200	6,500
	12/03/13	1583.68						
CLD-1R	05/23/13	1713.23		0.61			20	5,800
DM-4	05/09/13	Dry						
DM-5	05/09/13	Dry						
H-11	05/14/13	1795.79					3.7	970
H-28A	05/16/13	1693.38		0.0055 J			16	11,000
	08/21/13	1693.00		0.0073 J			<0.019	13,000
H-48	05/08/13	1660.64		<0.050			18	15,000
H-58A	05/08/13	1665.87		<0.0020			0.083	12,000
HM-2	05/08/13	1561.00					4.4	5,100
HMW-13	05/07/13	1579.01					<0.0048	1,600
HMW-14	05/08/13	1580.98					5.3	2,100
HMW-15	05/08/13	1600.02					0.019	2,900
HMW-16	05/07/13	1612.63					24	6,000
I-AA	10/11/12	1721.53						
	11/05/12	1722.71						
	12/13/12	1721.48						
	01/22/13	1722.48						
	02/04/13	1722.31						
	03/18/13	1722.40						
	04/11/13	1722.33						
	05/06/13	1722.17						
	06/12/13	1722.38						
	06/25/13			0.57			150	3,900
	07/21/13	1722.37						
	09/04/13	1722.37		0.39			250	3,900
	09/16/13	1722.33						
	10/15/13	1722.22						
	11/12/13	1723.49		0.064			200	3,900
	12/03/13	1722.42						
I-AB	10/11/12	1720.48						
	11/05/12	1723.38						
	12/13/12	1720.53						
	01/22/13	1723.34						
	02/04/13	1722.67						
	03/18/13	1722.59						
	04/17/13	1722.77						
	05/06/13	1722.77						
	06/12/13	1722.84						
	06/25/13			0.82			440	5,000
	07/21/13	1722.96						
	09/04/13	1723.06		0.054			560	4,500
	09/16/13	1723.02						
	10/15/13	1723.24						

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Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-AB	11/12/13	1723.13		0.019			760	5,800
	12/03/13	1723.93						
I-AC	10/11/12	1721.75						
	11/07/12	1723.62						
	12/13/12	1722.22						
	01/22/13	1722.19						
	02/06/13	1723.90						
	03/18/13	1723.93						
	04/11/13	1723.53						
	05/13/13	1723.71						
	06/12/13	1723.36						
	07/23/13	1723.19						
	09/04/13	1723.69						
	09/16/13	1723.44						
	10/15/13	1723.36						
	11/15/13	1723.37						
	12/03/13	1723.38						
I-AD	10/11/12	1724.52						
	11/07/12	1725.84						
	12/13/12	1724.29						
	01/22/13	1724.33						
	02/06/13	1726.28						
	03/18/13	1726.24						
	04/11/13	1725.97						
	05/06/13	1726.18						
	06/12/13	1725.44						
	07/23/13	1725.63						
	09/04/13	1726.47						
	09/16/13	1726.36						
	10/15/13	1725.71						
	11/15/13	1727.25						
	12/03/13	1725.76						
I-AR	10/11/12	1720.95						
	11/05/12	1729.47		0.11			1,400	6,300
	12/13/12	1721.23						
	01/22/13	1720.65						
	02/04/13	1722.65		0.22			2,100	5,900 J-
	03/18/13	1722.50						
	04/17/13	1728.13						
	05/06/13	1728.72		0.15			2,100	8,200
	06/12/13	1729.66						
	07/15/13	1729.88						
	08/19/13	1730.72		0.051			1,900	8,200
	09/16/13	1730.76						
	10/07/13	1730.96						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-AR	11/12/13	1715.16		0.22			1,900	6,900
	12/04/13	1715.19						
I-B	10/11/12	1710.03						
	11/05/12	1716.47		0.36			730	7,800
	12/13/12	1710.06						
	01/22/13	1710.87						
	02/04/13	1710.90		0.15			860	5,200
	03/14/13	1712.82						
	04/11/13	1713.34						
	05/06/13	1716.69		0.29			1,100	7,500
	06/13/13	1716.62						
	07/21/13	1716.78						
	08/14/13	1718.83						
	08/19/13			0.72			1,300	8,400
	09/16/13	1721.55						
	10/07/13	1716.04						
	11/12/13	1728.19		0.46			1,300	7,700
	12/04/13	1716.26						
I-C	10/11/12	1711.55						
	11/05/12	1724.27		2.7			750	6,600
	12/13/12	1710.57						
	01/22/13	1711.55						
	02/04/13	1711.97		2.4			1,300	7,500
	03/14/13	1712.41						
	04/17/13	1724.16						
	05/06/13	1724.47		2.4			2,300	9,500
	06/12/13	1724.77						
	07/21/13	1724.93						
	08/14/13	1725.10		3.0			1,600	9,400
	09/16/13	1724.32						
	10/07/13	1724.32						
	11/12/13	1724.20		2.8			1,100	8,900
	12/04/13	1723.85						
I-D	10/11/12	1707.22						
	11/05/12	1723.68		6.4			640	7,500
	12/13/12	1707.22						
	01/22/13	1709.36						
	02/04/13	1709.26		6.5			840	7,400
	03/14/13	1710.77						
	04/17/13	1724.91						
	05/06/13	1725.11		6.6			1,100	9,300
	06/12/13	1725.67						
	07/21/13	1725.56						
	08/14/13	1725.92		6.7			1,000	9,400
	09/16/13	1726.05						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-D	10/07/13	1726.06						
	11/12/13	1726.06		6.1			1,000	8,900
	12/04/13	1725.76						
I-E	10/11/12	1709.11						
	11/05/12	1708.36		9.5			1,800	11,000
	12/13/12	1709.09						
	01/22/13	1709.16						
	02/04/13	1709.31		8.9			2,400	11,000
	03/14/13	1710.20						
	04/11/13	1711.21						
	05/06/13	1708.66		9.2			2,100	12,000
	06/12/13	1707.96						
	07/21/13	1708.67						
	08/14/13	1708.09		8.2			1,600	11,000
	09/16/13	1709.12						
	10/07/13	1709.23						
	11/12/13	1708.43		8.1			1,100	10,000
	12/04/13	1708.43						
I-F	10/11/12	1712.37						
	11/05/12	1722.58		21			1,800	15,000
	12/13/12	1712.60						
	01/22/13	1711.43						
	02/04/13	1708.58		16			2,700	14,000
	03/14/13	1709.52						
	04/17/13	1724.85						
	05/06/13	1724.94		17			2,600	15,000
	06/12/13	1724.88						
	07/21/13	1725.11						
	08/14/13	1725.11		16			2,100	14,000
	09/16/13	1725.33						
	10/07/13	1725.38						
	11/12/13	1725.32		14			1,600	13,000
	12/04/13	1724.99						
I-G	10/11/12	1712.21						
	11/05/12	1714.08		30			1,000	17,000
	12/13/12	1712.32						
	01/22/13	1711.73						
	02/04/13	1712.40		27			1,500	15,000
	03/14/13	1714.89						
	04/11/13	1714.64						
	05/06/13	1712.25		29			1,500	18,000
	06/12/13	1711.17						
	07/21/13	1714.69						
	08/14/13	1714.64		26			1,800	16,000
	09/16/13	1717.38						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-G	10/07/13	1714.59						
	11/12/13	1714.51		22			1,500	15,000
	12/04/13	1715.36						
I-H	10/11/12	1710.15						
	11/05/12	1720.16		27			1,400	16,000
	12/13/12	1710.15						
	01/22/13	1711.09						
	02/04/13	1708.91		27			1,600	15,000
	03/14/13	1709.23						
	04/17/13	1720.24						
	05/06/13	1720.48		28			1,800	18,000
	06/12/13	1720.70						
	07/21/13	1720.59						
	08/14/13	1720.30		25			2,000	16,000
	09/16/13	1721.22						
	10/07/13	1721.34						
	11/12/13	1721.59		22			1,800	15,000
	12/04/13	1721.48						
I-I	10/11/12	1719.60						
	11/07/12	1722.35		14			940	9,800
	12/13/12	1719.90						
	01/22/13	1718.67						
	02/06/13	1722.82		13			960	8,500
	03/14/13	1722.38						
	04/11/13	1722.10						
	05/13/13	1721.88		14			1,900	11,000
	06/12/13	1722.15						
	07/23/13	1722.12						
	08/20/13	1722.03		13			960	10,000
	09/16/13	1722.27						
	10/10/13	1722.29						
	11/13/13	1722.39		12			840	9,800
	12/04/13	1722.29						
I-J	10/11/12	1709.58						
	11/07/12	1719.84		3.4			260	6,400
	12/13/12	1709.62						
	01/22/13	1709.57						
	02/06/13	1721.91		3.1			260	6,300
	03/14/13	1722.13						
	04/17/13	1719.07						
	05/13/13	1713.54		3.5			490	7,000
	06/12/13	1717.13						
	07/23/13	1715.38						
	08/20/13	1717.94		3.7			250	6,300
	09/16/13	1718.24						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-J	10/10/13	1709.08						
	11/13/13	1715.31		4.0			210	6,700
	12/04/13	1715.71						
I-K	10/11/12	1712.14						
	11/07/12	1720.21		1.6			160	6,000
	12/13/12	1712.83						
	01/22/13	1712.45						
	02/06/13	1720.89		1.7			180	6,000
	03/14/13	1720.51						
	04/11/13	1715.04						
	05/13/13	1720.69		1.9			370	6,800
	06/12/13	1714.93						
	07/23/13	1714.73						
	08/20/13	1714.92		1.8			190	6,700
	09/16/13	1710.46						
	10/10/13	1716.67						
	11/13/13	1712.49		2.0			180	6,800
	12/04/13	1713.76						
I-L	10/11/12	1717.35						
	11/05/12	1725.55		0.45			2,000 J-	10,000
	12/13/12	1711.89						
	01/22/13	1720.64						
	02/04/13			0.70			2,200	9,800
	02/06/13	1719.70						
	03/14/13	1720.61						
	04/17/13	1724.53						
	05/06/13	1724.89		1.2			2,000	11,000
	06/13/13	1725.05						
	07/21/13	1725.18						
	08/14/13	1725.36						
	08/19/13			1.5			1,300	8,900
	09/16/13	1725.44						
	10/07/13	1725.47						
	11/12/13	1725.39		1.3			890	7,200
	12/04/13	1724.88						
I-M	10/11/12	1711.55						
	11/05/12	1714.79		8.7			1,600	10,000
	12/13/12	1711.70						
	01/22/13	1713.18						
	02/04/13	1712.78		8.0			1,600	9,000
	03/14/13	1713.00						
	04/17/13	1721.79						
	05/06/13	1722.29		8.8			1,200	10,000
	06/12/13	1724.55						
	07/21/13	1724.91						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-M	08/14/13	1725.01		9.2			1,000	9,700
	09/16/13	1725.22						
	10/07/13	1725.28						
	11/12/13	1725.31		7.6			750	8,700
	12/04/13	1725.02						
I-N	10/11/12	1711.75						
	11/05/12	1721.78		9.6			5,600	19,000
	12/13/12	1711.73						
	01/22/13	1713.34						
	02/04/13	1713.25		9.2			3,500	13,000
	03/14/13	1714.61						
	04/17/13	1724.86						
	05/06/13	1725.12		10			3,000	13,000
	06/12/13	1725.15						
	07/21/13	1725.36						
	08/14/13	1725.44		11			1,600	11,000
	09/16/13	1725.62						
	10/07/13	1725.59						
	11/12/13	1725.62		9.5			1,100	9,700
	12/04/13	1725.36						
I-O	10/11/12	1715.52						
	11/05/12	1721.68		24			1,600	14,000
	12/13/12	1715.19						
	01/22/13	1715.98						
	02/04/13	1717.67		22			2,000	14,000
	03/14/13	1719.19						
	04/17/13	1720.86						
	05/06/13	1720.52		24			1,900	15,000
	06/12/13	1720.89						
	07/21/13	1721.17						
	08/14/13	1720.66		22			1,700	15,000
	09/16/13	1722.13						
	10/07/13	1722.54						
	11/12/13	1722.38		21			1,300	14,000
	12/04/13	1722.21						
I-P	10/11/12	1712.08						
	11/05/12	1712.04		24			1,500	15,000
	12/13/12	1712.56						
	01/22/13	1712.35						
	02/04/13	1710.03		24			1,800	14,000
	03/14/13	1710.76						
	04/17/13	1713.04						
	05/06/13	1710.13		27			2,000	17,000
	06/12/13	1710.88						
	07/21/13	1709.58						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-P	08/14/13	1709.14		26			2,100	16,000
	09/16/13	1711.47						
	10/07/13	1709.62						
	11/12/13	1713.74		23			1,800	15,000
	12/04/13	1711.64						
I-Q	10/11/12	1715.96						
	11/05/12	1723.19		29			1,300	16,000
	12/13/12	1715.11						
	01/22/13	1715.56						
	02/04/13	1724.09		27			1,400	15,000
	03/14/13	1724.53						
	04/11/13	1724.11						
	05/06/13	1724.74		31			1,300	18,000
	06/12/13	1724.89						
	07/21/13	1724.97						
	08/14/13	1724.98		29			1,400	16,000
	09/16/13	1725.26						
	10/07/13	1725.43						
	11/12/13	1720.16		32			1,100	16,000
	12/04/13	1719.75						
I-R	10/11/12	1710.09						
	11/05/12	1710.39		0.39			1,900	7,700
	12/13/12	1710.02						
	01/22/13	1710.30						
	02/04/13	1710.06		0.39			2,100	8,400
	03/14/13	1710.53						
	04/17/13	1720.72						
	05/06/13	1721.15		0.64			2,100	10,000
	06/24/13	1721.18						
	07/21/13	1736.83						
	08/14/13	1737.52						
	08/19/13			1.0			1,700	9,400
	09/16/13	1735.89						
	10/07/13	1736.16						
	11/12/13	1719.00		1.1			1,200	7,900
	12/04/13	1718.74						
I-S	10/11/12	1706.19						
	11/05/12	1725.38		0.93			1,800	10,000
	12/13/12	1705.94						
	01/22/13	1706.02						
	02/04/13	1706.32		0.98			2,200	11,000
	03/14/13	1707.11						
	04/17/13	1724.92						
	05/06/13	1725.09		1.4			1,800	10,000
	06/24/13	1725.02						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-S	07/21/13	1725.42						
	08/14/13	1725.51		1.4 J+			1,100	8,800
	09/16/13	1725.52						
	10/07/13	1725.58						
	11/12/13	1725.45		1.5			840	7,400
	12/04/13	1725.02						
I-T	10/11/12	1712.46						
	11/05/12	1714.16		14			1,500	10,000
	12/13/12	1712.40						
	01/22/13	1714.76						
	02/04/13	1716.93		29			1,500	16,000
	03/14/13	1718.20						
	04/17/13	1722.81						
	05/06/13	1722.98		21			1,500	17,000
	06/12/13	1723.20						
	07/21/13	1708.65						
	08/14/13	1722.73		14			1,100	11,000
	09/16/13	1719.07						
	10/07/13	1722.65						
	11/12/13	1722.18		28			1,600	16,000
	12/04/13	1721.92						
I-U	10/11/12	1714.07						
	11/05/12	1708.59		13			1,600	15,000
	12/13/12	1713.97						
	01/22/13	1714.73						
	02/04/13	1714.58		28			1,600	16,000
	03/14/13	1713.95						
	04/17/13	1707.97						
	05/06/13	1722.86		15			1,000	11,000
	06/12/13	1719.33						
	07/21/13	1707.98						
	08/14/13	1707.76		29			1,600	17,000
	09/16/13	1709.48						
	10/15/13	1709.99						
	11/12/13	1716.33		28			1,500	15,000
	12/04/13	1707.99						
I-V	10/11/12	1717.06						
	11/07/12	1720.48		16			2,400	14,000
	12/13/12	1716.98						
	01/22/13	1716.91						
	02/06/13	1720.62		16			1,900	12,000
	03/14/13	1720.86						
	04/11/13	1720.41						
	05/09/13	1720.44		19			1,900	12,000
	06/12/13	1720.52						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-V	07/23/13	1720.52						
	08/20/13	1720.62		17			1,300	12,000
	09/16/13	1721.12						
	10/10/13	1720.90						
	11/13/13	1721.12		17			1,100	11,000
	12/04/13	1720.89						
I-W	10/11/12	1721.08						
	11/05/12	1722.19						
	12/13/12	1721.48						
	01/22/13	1720.69						
	02/04/13	1720.74						
	03/14/13	1722.78						
	04/11/13	1721.53						
	05/06/13	1721.57						
	06/12/13	1721.95						
	06/25/13			37			1,700	18,000
	07/21/13	1722.04						
	09/04/13	1722.10		23			2,100	15,000
	09/16/13	1721.99						
	10/15/13	1722.02						
	11/12/13	1722.45		24			1,700	15,000
	12/03/13	1722.47						
I-X	10/11/12	1718.10						
	11/05/12	1723.09						
	12/13/12	1717.79						
	01/22/13	1718.49						
	02/04/13	1723.88						
	03/14/13	1724.62						
	04/11/13	1723.10						
	05/06/13	1716.99						
	06/24/13	1726.14						
	06/25/13			24			3,300	17,000
	07/21/13	1725.39						
	09/04/13	1727.53						
	09/16/13	1726.78						
	10/15/13	1727.08						
	11/12/13	1725.54		13			2,200	13,000
	12/03/13	1725.52						
I-Y	10/11/12	1721.10						
	11/05/12	1724.48						
	12/13/12	1721.11						
	01/22/13	1721.86						
	02/04/13	1725.60						
	03/14/13	1725.35						
	04/11/13	1724.75						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
I-Y	05/06/13	1724.94						
	06/12/13	1725.15						
	06/25/13			9.3			1,600	10,000
	07/21/13	1725.22						
	09/04/13	1725.34		1.0			1,900	8,800
	09/16/13	1725.20						
	10/15/13	1725.09						
	11/12/13	1724.94		1.2			1,400	8,400
	12/03/13	1724.72						
I-Z	10/11/12	1711.47						
	11/07/12	1709.45		9.3			340	7,200
	12/13/12	1706.03						
	01/22/13	1711.73						
	02/06/13	1716.73		8.8			350	6,400
	03/14/13	1717.06						
	04/17/13	1710.24						
	05/13/13	1713.53		12			1,500	7,700
	06/12/13	1710.89						
	07/23/13	1710.77						
	08/20/13	1709.00		9.7			390	7,900
	09/16/13	1709.69						
	10/15/13	1709.66						
	11/13/13	1714.80		10			410	8,000
	12/03/13	1717.63						
M-2A	05/13/13	1741.91		18			690	12,000
M-5A	05/16/13	1714.35		<0.0040			3	13,000
	09/04/13	1714.22		<0.0020			2.6	13,000
M-6A	05/16/13	1695.05		0.0072 J			17	8,100
	08/21/13	1694.75		0.0049 J			15	9,900
M-7B	05/16/13	1697.44		<0.0040			32	8,100
	09/04/13	1697.17		<0.0020			29	8,100
M-10	10/16/12	1788.36						
	11/08/12	1789.52		0.62	0.065 J-	1.7	12	2,900
	12/12/12	1789.09						
	01/22/13	1788.61						
	02/06/13	1789.29		0.48	0.042 J-	1.6	9.4	2,700
	03/18/13	1786.49						
	04/15/13	1788.65						
	05/14/13	1788.79	97	0.52	<0.00025	1.3	12	2,800
	(FD)		1,000	0.59	<0.00025	1.4	11	2,700
	06/13/13	1789.03						
	07/23/13	1789.09						
	09/05/13	1789.40	96	0.50	0.045 J-	1.7	11	2,800
	09/16/13	1789.50						
	10/15/13	1789.46						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-10	11/13/13	1789.04	85	0.35	<0.00025	1.2	8.4	2,700
	12/05/13	1788.58						
M-11	10/16/12	1773.25						
	11/08/12	1773.31		1.6	1.7 J-		22	2,600
	12/12/12	1772.99						
	01/22/13	1773.48						
	02/06/13	1773.51		1.7	1.7 J-		25	2,500
	(FD)			1.7	1.4 J-		25	2,500
	03/18/13	1773.40						
	04/15/13	1773.19						
	05/15/13	1773.08	330	1.9	1.9	2.5	27	2,700
	06/13/13	1773.20						
	07/23/13	1773.06						
	09/05/13	1773.15		2.2	1.8		27	2,400
	09/16/13	1773.24						
	10/15/13	1773.26						
	11/13/13	1773.22		1.7	1.5		25	2,500
	12/05/13	1773.09						
M-12A	11/08/12	1772.95		7.8	8.5 J-		170	6,200
	(FD)			7.9	8.2 J-		170	6,100
	02/06/13	1773.13		8.4	8.4 J-		160	6,200
	05/16/13	1772.64	1,700	9.3	8.3	8.2	150	6,600
	09/05/13	1772.67		9.0	7.7		170	6,400
	(FD)			9.0	8.1		190	6,400
	11/13/13	1771.94		8.3	8		160	6,700
	(FD)			8.2	7.9		150	6,800
M-13	05/15/13	1770.24	220	0.64		5.0	17	3,300
	(FD)		230	0.64		4.9	21	3,300
M-14A	10/17/12	1730.25						
	11/08/12	1730.23		0.059			38	3,500
	12/12/12	1728.17						
	01/22/13	1729.60						
	02/07/13	1729.53		0.052			37	3,400
	03/18/13	1729.38						
	04/15/13	1729.38						
	05/13/13	1729.24		0.055			44	3,700
	06/13/13	1729.20						
	07/23/13	1729.05						
	09/04/13	1729.26		0.056			47	3,500
	(FD)			0.049			45	3,500
	09/16/13	1729.39						
	10/07/13	1729.42						
	11/14/13	1729.28		0.066			41	3,400
	12/05/13	1729.29						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-19	10/17/12	1732.50						
	11/07/12	1732.47		0.39			11	5,100
	12/12/12	1730.33						
	01/22/13	1732.72						
	02/04/13	1732.88						
	02/06/13			0.36			11	4,900
	03/18/13	1732.86						
	04/15/13	1732.87						
	05/13/13	1732.94		0.35			13	5,200
	06/12/13	1732.77						
	07/23/13	1732.46						
	08/22/13	1732.34		0.39			12	5,300
	09/16/13	1732.50						
	10/10/13	1732.56						
	11/13/13	1732.45		0.40			13	5,000
	12/05/13	1732.56						
M-21	05/15/13	1751.74		0.48			15	2,800
M-22A	10/17/12	1730.26						
	11/07/12	1730.26		24			1,300	14,000
	12/12/12	1730.16						
	01/22/13	1730.11						
	02/07/13	1730.22		22			1,500	13,000
	03/18/13	1730.16						
	04/15/13	1730.20						
	05/14/13	1730.22		23			2,200	13,000
	06/12/13	1730.16						
	07/23/13	1729.98						
	09/04/13	1729.97		23			1,900	14,000
	09/16/13	1730.05						
	10/10/13	1730.07						
	11/14/13	1730.03		20			1,300	13,000
	(FD)			22			1,300	13,000
	12/05/13	1730.12						
M-23	10/16/12	1686.24						
	11/06/12	1687.22		0.53			300	4,500
	12/11/12	1686.45						
	01/22/13	1687.48						
	02/04/13	1687.52		0.44			290	4,200
	03/14/13	1687.50						
	04/15/13	1687.54						
	05/09/13	1687.45	170	0.42		55	210 J	4,400
	(FD)		170	0.45		55	290 J	4,400
	06/13/13	1687.35						
	07/09/13	1687.26						
	08/20/13	1687.25		0.36			230	4,300

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-23	09/16/13	1687.25						
	10/15/13	1687.07						
	11/11/13	1687.03		0.38 J+			170	4,500
	12/09/13	1686.95						
M-25	10/17/12	1728.95						
	11/06/12	1729.11		8.1			820	8,000
	12/12/12	1728.13						
	01/22/13	1728.83						
	02/05/13	1728.81		7.1			1,200	8,100 J-
	03/18/13	1729.00						
	04/15/13	1729.26						
	05/13/13	1729.23	1,800	6.4		55	1,100	9,400
	06/13/13	1729.33						
	07/15/13	1729.38						
	08/19/13	1729.65		6.5			770	9,000
	09/16/13	1729.65						
	10/07/13	1729.74						
	11/12/13	1729.61		6.7			560	8,000
	12/04/13	1729.38						
M-31A	10/16/12	1751.97						
	11/08/12	1752.02		6.6			880	7,100
	12/12/12	1750.97						
	01/22/13	1753.37						
	02/06/13	1754.19		0.68			84	2,000
	03/18/13	1754.34						
	04/15/13	1754.98						
	05/15/13	1752.97		0.027			1.4	860
	06/13/13	1754.67						
	07/23/13	1754.78						
	09/05/13	1754.74		0.025			2.5	750
	09/16/13	1754.65						
	10/15/13	1754.34						
	11/13/13	1753.92		0.088			4.6	780
	12/05/13	1753.73						
M-35	10/17/12	1741.93						
	11/07/12	1741.96		4.3			150	4,300
	12/12/12	1740.38						
	01/22/13	1741.65						
	02/06/13	1741.89		4.3			160	4,200
	03/18/13	1742.12						
	04/15/13	1742.17						
	05/13/13	1742.38		4.3			180	4,800
	(FD)			4.6			220	5,200
	06/12/13	1742.08						
	07/23/13	1741.75						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-35	08/22/13	1741.69		5.4			170	5,700
	09/16/13	1741.65						
	10/10/13	1741.62						
	11/13/13	1741.55		5.7			170	6,100
	12/05/13	1741.55						
M-36	10/17/12	1729.37						
	11/08/12	1729.21		26	28 J-		1,700	15,000
	12/12/12	1728.22						
	01/22/13	1728.82						
	02/07/13	1728.80		24	25 J-		3,600	17,000
	03/18/13	1728.83						
	04/15/13	1728.97						
	05/14/13	1728.91	4,600	22	23	83	4,500	18,000
	06/12/13	1728.81						
M-37	10/16/12	1729.05						
	11/06/12	1731.37		0.072	0.072 J-		1,300	5,300
	12/12/12	1729.26						
	01/22/13	1730.89						
	02/05/13	1730.79		0.053			1,800	5,600
	02/06/13				<0.0035 R			
	03/18/13	1730.84						
	04/15/13	1730.89						
	05/13/13	1730.93	21	0.042	0.037	120	2,300	7,600
	06/13/13	1730.91						
	07/09/13	1730.89						
	08/19/13	1731.29		0.032	0.03		1,900	7,500
	09/16/13	1731.24						
	10/07/13	1731.34						
	11/12/13	1730.82		0.035	0.032		1,300	6,100
	(FD)			0.054	0.042		1,300	6,400
	12/04/13	1730.79						
M-38	10/17/12	1730.18						
	11/08/12	1730.18		14			4,800	18,000
	12/12/12	1729.56						
	01/22/13	1729.63						
	02/07/13	1728.59		16			2,400	13,000
	03/18/13	1729.70						
	04/15/13	1729.86						
	05/14/13	1729.77		20			1,100	13,000
	05/16/13				18			
	06/12/13	1729.72						
	07/23/13	1729.71						
	09/04/13	1729.82		19	19		990	12,000
	09/16/13	1729.84						
	10/10/13	1729.85						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-38	11/14/13	1729.77		18	16		650	12,000
	(FD)			20	16		700	12,000
	12/05/13	1729.71						
M-44	10/16/12	1675.21						
	11/05/12	1675.43		0.91			750	8,500
	(FD)			0.90	0.92 J-		720	8,400
	11/20/12				0.93			
	12/11/12	1675.11						
	01/22/13	1675.11						
	02/04/13	1675.05		0.93	1.0 J-		790	8,200
	03/14/13	1674.96						
	04/17/13	1674.93						
	05/08/13	1674.91		0.94			820	9,700
	05/16/13				1			
	06/13/13	1674.86						
	07/09/13	1674.80						
	08/21/13	1674.64		0.94	0.92		770	9,100
	(FD)			0.93	0.94		780	9,000
	09/16/13	1674.78						
	10/15/13	1674.69						
	11/11/13	1674.62		1.2 J+	0.91 J-		590	9,700
	12/09/13	1674.62						
M-48A	10/16/12	1688.55						
	11/05/12	1689.97		0.86			86	3,000
	12/11/12	1688.81						
	01/22/13	1690.11						
	02/04/13	1689.94		1.2			150	2,900
	03/14/13	1689.55						
	04/15/13	1689.38						
	05/08/13	1689.18	4,300	1.7		22	150	4,100
	(FD)		4,200	1.7		22	160	4,000
	06/13/13	1688.96						
	07/09/13	1689.22						
	08/20/13	1689.00		0.84			89	2,600
	09/16/13	1688.89						
	10/15/13	1688.84						
	11/11/13	1688.74		1.7			150	4,300
	(FD)			1.8 J+			170	4,400
	12/09/13	1688.74						
M-52	11/08/12	1762.26		2.6			540	5,500
	02/06/13	1762.37		2.6			540	5,500
	05/15/13	1762.49		2.4			1,800	6,100
	11/13/13	1761.68		2.3			2,300	5,600
M-55	10/16/12	1719.15						
	11/05/12	1723.79						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
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Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-55	12/11/12	1719.71						
	01/22/13	1724.35						
	02/04/13	1724.41						
	03/14/13	1724.91						
	04/11/13	1725.33						
	05/06/13	1725.45						
	06/12/13	1725.93						
	07/23/13	1726.10						
	08/12/13	1726.23						
	09/16/13	1726.39						
	10/07/13	1726.42						
	11/15/13	1726.42						
	12/04/13	1726.16						
M-56	10/16/12	1719.01						
	11/05/12	1722.42						
	12/11/12	1719.61						
	01/22/13	1722.25						
	02/04/13	1723.40						
	03/14/13	1723.61						
	04/11/13	1723.79						
	05/06/13	1723.92						
	06/12/13	1723.98						
	07/09/13	1723.97						
	08/12/13	1723.90						
	09/16/13	1723.98						
	10/07/13	1724.09						
	11/15/13	1723.66						
	12/04/13	1723.37						
M-57A	10/16/12	1723.79						
	11/06/12	1725.18		0.061			20	3,100
	12/11/12	1723.78						
	01/22/13	1724.79						
	02/05/13	1724.80		0.062			21	3,000
	03/14/13	1724.77						
	04/11/13	1726.19						
	05/13/13	1724.58		0.071			49	3,200
	06/12/13	1724.54						
	07/15/13	1724.45						
	08/19/13	1724.65		0.063			24	3,600
	09/16/13	1724.56						
	10/07/13	1724.65						
	11/13/13	1724.70		0.061			25	3,100
	12/05/13	1724.57						
M-58	10/16/12	1719.54						
	11/05/12	1721.90						

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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-58	12/11/12	1720.13						
	01/22/13	1721.75						
	02/04/13	1721.64						
	03/14/13	1721.75						
	04/11/13	1721.78						
	05/06/13	1721.67						
	06/12/13	1722.04						
	07/09/13	1721.97						
	08/12/13	1721.89						
	09/16/13	1722.36						
	10/07/13	1722.61						
	11/15/13	1722.59						
	12/04/13	1721.51						
M-60	10/16/12	1718.29						
	11/05/12	1720.03						
	12/11/12	1718.45						
	01/22/13	1721.84						
	02/04/13	1722.04						
	03/14/13	1722.63						
	04/11/13	1722.96						
	05/06/13	1723.20						
	06/12/13	1723.39						
	07/09/13	1723.05						
	08/12/13	1722.18						
	09/16/13	1722.61						
	10/07/13	1723.26						
	11/15/13	1723.12						
	12/04/13	1722.88						
M-64	10/16/12	1720.56						
	11/06/12	1723.21		6.6			780	7,400
	12/11/12	1720.46						
	01/22/13	1723.38						
	02/05/13	1723.31		6.2			850	7,000
	03/14/13	1723.76						
	04/11/13	1723.99						
	05/09/13	1724.16		6.7			1,200	8,900
	06/13/13	1724.42						
	07/23/13	1724.54						
	08/19/13	1724.75		6.0			1,100	9,200
	09/16/13	1724.67						
	10/07/13	1724.94						
	11/12/13	1724.74		6.2			950	8,400
	12/09/13	1724.43						
M-65	10/16/12	1720.91						
	11/06/12	1724.38		27			1,100	15,000

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-65	12/11/12	1721.01						
	01/22/13	1725.13						
	02/05/13	1725.27		26			1,100	13,000
	03/14/13	1725.62						
	04/11/13	1725.91						
	05/09/13	1725.91		24			1,800	15,000
	(FD)			25			1,700	17,000
	06/12/13	1725.99						
	07/09/13	1726.06						
	08/19/13	1726.26		21			1,500	15,000
	09/16/13	1726.29						
	10/07/13	1726.37						
	11/12/13	1726.37		21			1,100	13,000
	12/04/13	1726.03						
M-66	10/16/12	1722.84						
	11/06/12	1724.06		28			1,300	15,000
	12/11/12	1723.10						
	01/22/13	1724.03						
	02/05/13	1724.09		26			1,800	14,000
	(FD)			26			1,800	14,000 J-
	03/14/13	1724.05						
	04/11/13	1724.06						
	05/09/13	1724.14		27			2,600	17,000
	06/12/13	1724.15						
	07/09/13	1724.04						
	08/19/13	1724.22		22			2,400	19,000
	(FD)			24			2,700	17,000
	09/16/13	1724.27						
	10/07/13	1724.32						
	11/12/13	1724.43		24			2,200	16,000
	12/04/13	1724.22						
M-67	10/17/12	1724.29						
	11/07/12	1724.49		6.7			260	5,800
	12/11/12	1723.69						
	01/22/13	1724.66						
	02/06/13	1724.94		6.7			260	5,200
	03/14/13	1724.47						
	04/11/13	1724.46						
	05/14/13	1724.46		7.2			110	6,300
	06/12/13	1724.37						
	07/23/13	1724.32						
	08/20/13	1724.22		6.7			240	6,000
	09/16/13	1724.37						
	10/10/13	1724.33						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-67	11/13/13	1724.40		7.1			210	6,600
	12/04/13	1724.32						
M-68	10/17/12	1724.11						
	11/07/12	1724.32		1.2			120	6,000
	(FD)			1.2			120	5,900
	12/11/12	1723.83						
	01/22/13	1724.68						
	02/04/13	1724.66						
	02/06/13			1.4			150	5,500
	03/14/13	1724.46						
	04/11/13	1724.26						
	05/13/13	1724.45		1.4			150	6,300
	06/12/13	1724.12						
	07/23/13	1723.98						
	08/20/13	1723.92		1.6			170	6,600
	09/16/13	1724.07						
	10/10/13	1724.09						
	11/13/13	1724.05		1.7			170	6,700
	12/04/13	1723.99						
M-69	10/16/12	1717.13						
	11/06/12	1717.90		0.058			150	3,700
	12/11/12	1717.58						
	01/22/13	1718.15						
	02/05/13	1718.27		0.052			160	3,600
	03/14/13	1718.48						
	04/15/13	1718.46						
	05/09/13	1718.45		0.051			320	4,100
	06/12/13	1718.40						
	07/15/13	1718.28						
	08/19/13	1718.51		0.051			370	4,900
	09/16/13	1718.50						
	10/07/13	1718.51						
	11/13/13	1718.32		0.043			430	4,800
	12/04/13	1718.08						
M-70	10/17/12	1714.31						
	11/07/12	1714.23		3.0			380	4,900
	12/11/12	1714.10						
	01/22/13	1715.00						
	02/07/13	1715.41		3.0			440	4,800
	03/18/13	1715.71						
	04/15/13	1715.69						
	05/14/13	1715.40		3.3			1,500	6,000
	06/12/13	1715.47						
	07/15/13	1715.29						
	09/04/13	1715.25		3.4			580	6,100

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-70	09/16/13	1715.16						
	10/07/13	1715.13						
	11/14/13	1714.62		3.4			570	6,000
	12/05/13	1714.62						
M-71	10/17/12	1713.09						
	11/07/12	1712.68		6.0			690	7,500
	12/12/12	1713.54						
	01/22/13	1712.24						
	02/07/13	1712.23		6.6			760	7,400
	03/18/13	1712.42						
	04/15/13	1712.75						
	05/14/13	1712.61		9.1			1,100	11,000
	06/12/13	1712.60						
	07/15/13	1712.72						
	09/04/13	1712.85		8.2			1,600	12,000
	09/16/13	1712.85						
	10/07/13	1712.80						
	11/14/13	1712.83		8.6			1,400	11,000
	12/05/13	1712.55						
M-72	10/17/12	1715.49						
	11/07/12	1715.30		6.6			1,200	11,000
	12/12/12	1715.29						
	01/22/13	1714.89						
	02/07/13	1714.88		6.6			1,100	10,000
	03/18/13	1715.02						
	04/15/13	1715.05						
	05/14/13	1715.05		7.7			1,300	11,000
	06/12/13	1715.01						
	07/15/13	1714.98						
	09/04/13	1715.00		7.4			1,100	11,000
	09/16/13	1714.97						
	10/07/13	1715.01						
	11/14/13	1715.04		7.7			860	11,000
	12/05/13	1715.00						
M-73	10/17/12	1713.04						
	11/07/12	1712.96		10			480	9,200
	12/12/12	1710.99						
	01/22/13	1712.42						
	02/06/13	1712.40		11			510	6,900
	03/14/13	1712.32						
	04/15/13	1712.36						
	05/13/13	1712.24		10			490	9,000
	06/12/13	1712.23						
	07/23/13	1712.18						
	08/22/13	1712.36		12			490	8,800

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-73	09/16/13	1712.23						
	10/10/13	1712.32						
	11/13/13	1712.25		9.2			390	8,300
	12/04/13	1712.31						
M-74	10/17/12	1715.88						
	11/07/12	1716.07		1.0			78	6,100
	12/12/12	1713.89						
	01/22/13	1713.87						
	02/06/13	1715.59		1.0			87	5,400
	03/14/13	1715.75						
	04/15/13	1716.94						
	05/13/13	1715.66		1.2			120	6,100
	06/12/13	1715.50						
	07/23/13	1715.31						
	08/22/13	1715.33		1.4			130	6,500
	09/16/13	1715.49						
	10/10/13	1714.64						
	11/13/13	1714.55		1.3			110	6,300
	12/04/13	1714.55						
M-75	10/17/12	1743.81						
	11/07/12	1743.77						
	12/12/12	1742.47						
	01/22/13	1742.91						
	02/06/13	1742.84						
	03/18/13	1742.91						
	04/15/13	1742.81						
	05/13/13	1742.66		3.0			75	4,700
	06/12/13	1742.48						
	07/23/13	1742.27						
	08/12/13	1742.40						
	09/16/13	1742.27						
	10/10/13	1742.23						
	11/14/13	1742.15						
	12/05/13	1742.18						
M-76	10/17/12	1747.77						
	11/07/12	1747.57						
	12/12/12	1753.26						
	01/22/13	1747.12						
	02/06/13	1746.97						
	03/18/13	1746.80						
	04/15/13	1746.64						
	05/13/13	1746.46		2.4			130	4,800
	06/12/13	1746.31						
	07/23/13	1746.14						
	08/12/13	1746.35						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-76	09/16/13	1746.24						
	10/10/13	1746.20						
	11/14/13	1746.09						
	12/05/13	1746.13						
M-77	10/16/12	1763.66						
	11/08/12	1763.68						
	12/12/12	1762.61						
	01/22/13	1763.53						
	02/06/13	1763.58						
	03/18/13	1763.10						
	04/15/13	1763.49						
	05/13/13	1763.51						
	05/15/13			0.53			220	3,200
	06/13/13	1763.41						
	07/23/13	1763.34						
	09/05/13	1763.35						
	09/16/13	1763.40						
	11/13/13	1761.15						
	12/05/13	1761.13						
M-78	10/16/12	1717.28						
	11/05/12	1721.40						
	12/12/12	1717.50						
	01/22/13	1724.22						
	02/04/13	1724.05						
	03/14/13	1724.86						
	04/15/13	1725.39						
	05/06/13	1725.43						
	06/12/13	1725.52						
	07/23/13	1725.67						
	08/12/13	1725.75						
	09/16/13	1725.92						
	10/07/13	1725.95						
	11/15/13	1725.96						
	12/04/13	1725.65						
M-79	10/16/12	1710.60						
	11/06/12	1712.26		0.46			440	4,300
	11/08/12			0.45			450	4,300
	12/11/12	1711.23						
	01/22/13	1712.97						
	02/05/13	1713.28		0.42			460	4,000
	03/14/13	1713.23						
	04/15/13	1713.50						
	05/09/13	1713.34		0.40			560	4,700
	06/12/13	1713.23						
	07/15/13	1713.09						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-79	08/19/13	1713.08		0.36			430	5,200
	09/16/13	1713.11						
	10/07/13	1713.11						
	11/13/13	1712.65		0.28			390	4,600
	12/04/13	1712.61						
M-80	10/17/12	1710.24						
	11/07/12	1711.20		0.46			83	1,800
	12/11/12	1711.53						
	01/22/13	1708.92						
	02/07/13	1710.48		0.51			110	1,700
	03/14/13	1710.69						
	04/15/13	1710.94						
	05/14/13	1710.85		0.71			140	2,000
	06/12/13	1710.83						
	07/15/13	1710.75						
	09/04/13	1710.76		0.82			180	2,300
	09/16/13	1710.79						
	10/07/13	1710.70						
	11/14/13	1710.62		1.1			180	2,400
	12/04/13	1710.59						
M-81A	10/17/12	1711.68						
	11/07/12	1710.66		3.3			750	6,000
	12/11/12	1710.47						
	01/22/13	1709.03						
	02/07/13	1708.93		3.0			760	4,600
	03/14/13	1708.91						
	04/15/13	1707.96						
	05/14/13	1708.86		2.9			810	5,900
	06/12/13	1708.86						
	07/15/13	1708.82						
	08/22/13	1708.97		3.0			730	5,800
	09/16/13	1708.90						
	10/07/13	1708.92						
	11/14/13	1708.87		2.7			510	5,000
	12/04/13	1708.89						
M-83	10/10/12	1711.49					210	2,500
	11/07/12	1710.87		0.91			200	2,500
	12/06/12	1710.62					270	2,500
	01/17/13	1711.32					230	2,600
	02/07/13	1711.80		0.79			230	2,200
	03/13/13	1711.98					240	2,500
	04/09/13	1712.02					290	2,500
	05/14/13	1711.79		0.89			280	2,700
	06/11/13	1711.70					220	2,800
	07/11/13	1711.66					210	2,900

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-83	08/30/13	1711.61		0.84			240	2,900
	09/24/13	1711.56					220	2,600
	10/11/13	1712.92					220	2,800
	11/14/13	1712.29		1.0			250	3,100
	12/12/13	1712.55					270	3,300
M-92	10/17/12	1764.96						
	11/06/12	1765.20						
	12/12/12	1764.69						
	01/22/13	1765.96						
	02/06/13	1765.73						
	03/18/13	1765.41						
	04/15/13	1765.23						
	05/09/13	1764.96		0.023			66	2,000
	06/13/13	1764.74						
	07/23/13	1764.53						
	08/12/13	1764.49						
	09/16/13	1764.43						
	10/15/13	1764.50						
	11/15/13	1764.53						
	12/05/13	1764.47						
M-93	10/17/12	1761.87						
	11/06/12	1763.05						
	12/12/12	1762.41						
	01/22/13	1763.99						
	02/06/13	1763.40						
	03/18/13	1763.31						
	04/15/13	1762.95						
	05/09/13	1762.71						
	06/13/13	1762.48						
	07/23/13	1762.22						
	08/12/13	1762.22						
	09/16/13	1762.15						
	10/15/13	1762.19						
	11/15/13	1762.18						
	12/05/13	1762.16						
M-95	10/16/12	1678.69						
	11/05/12	1677.69		0.71	0.73 J-		370	6,300
	12/12/12	1678.48						
	01/22/13	1678.94						
	02/04/13	1677.89		0.69	0.68 J-		390	6,100
	(FD)			0.68	0.69 J-		380	6,100
	03/14/13	1677.90						
	04/15/13	1677.87						
	05/08/13	1675.85		0.72			350	6,900
	05/16/13				0.63 J-			

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-95	06/13/13	1677.74						
	07/09/13	1677.66						
	08/20/13	1677.62		0.63	0.65		380	6,200
	09/16/13	1677.67						
	10/15/13	1677.56						
	11/11/13	1677.52		0.75 J+	0.48		330	6,600
	12/09/13	1677.64						
M-96	10/16/12	1677.65						
	11/05/12	1677.72		0.56			140	5,800
	12/12/12	1677.69						
	01/22/13	1678.22						
	02/04/13	1677.42						
	03/14/13	1677.25						
	04/15/13	1677.33						
	05/06/13	Dry						
	06/13/13	Dry						
	07/09/13	1677.36						
	08/20/13	Dry						
	10/15/13	Dry						
	11/11/13	Dry						
M-97	10/17/12	1761.76						
	11/06/12	1761.95		0.063			70	4,100
	12/12/12	1761.05						
	01/22/13	1762.28						
	02/06/13	1762.21		0.064			74	4,200
	03/18/13	1761.87						
	04/15/13	1761.79						
	05/09/13	1761.60		0.073			94	4,800
	06/13/13	1761.42						
	07/23/13	1761.25						
	08/12/13	1761.21						
	09/16/13	1761.14						
	10/15/13	1761.26						
	11/15/13	1761.23						
	12/05/13	1761.16						
M-98	10/16/12	Dry						
	11/06/12	Dry						
	12/11/12	Dry						
	01/22/13	Dry						
	02/05/13	Dry						
	03/14/13	Dry						
	04/15/13	Dry						
	05/16/13	Dry						
	06/01/13	Dry						
	07/23/13	Dry						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-98	08/21/13	Dry						
	09/16/13	Dry						
	10/15/13	Dry						
	11/18/13	Dry						
	12/09/13	Dry						
M-99	10/16/12	Dry						
	11/06/12	Dry						
	12/11/12	Dry						
	01/22/13	Dry						
	02/05/13	Dry						
	03/14/13	Dry						
	04/15/13	1697.70						
	05/13/13	1697.65		0.27			290	3,800
	06/13/13	Dry						
	07/23/13	Dry						
	09/06/13	1697.46		1.3			130	3,700
	09/16/13	1697.73						
	10/07/13	1697.41						
	11/14/13	1697.19		0.36			84	3,400
	12/05/13	1697.65						
M-100	10/16/12	Dry						
	11/06/12	Dry						
	12/11/12	Dry						
	01/22/13	Dry						
	02/05/13	Dry						
	03/14/13	Dry						
	04/15/13	Dry						
	05/13/13	Dry						
	06/13/13	Dry						
	07/23/13	Dry						
	08/12/13	Dry						
	09/16/13	Dry						
	10/10/13	Dry						
	11/15/13	Dry						
	12/04/13	Dry						
M-101	10/16/12	Dry						
	11/06/12	Dry						
	12/11/12	Dry						
	01/22/13	Dry						
	02/05/13	Dry						
	03/14/13	Dry						
	04/15/13	Dry						
	05/13/13	Dry						
	06/13/13	Dry						
	07/23/13	Dry						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-101	08/12/13	Dry						
	09/16/13	Dry						
	10/10/13	Dry						
	11/15/13	Dry						
	12/04/13	Dry						
M-103	05/23/13	1797.22		0.012			0.21	1,800
M-115	10/17/12	1751.82						
	11/07/12	1751.71		0.046			16	2,600
	12/11/12	1752.54						
	01/22/13	1751.32						
	02/06/13	1751.18						
	03/18/13	1750.83						
	04/15/13	1750.63						
	05/13/13	1750.44		0.039			17	2,500
	06/12/13	1750.24						
	07/23/13	1750.05						
	08/12/13	1750.33						
	09/16/13	1750.28						
	10/10/13	1750.19						
	11/14/13	1750.01						
	12/05/13	1750.12						
M-117	05/21/13	1809.20		0.016			<0.00095	750
M-118	05/21/13	1810.72		0.017			<0.00095	810
M-120	05/21/13	1800.84		0.0098			0.055	1,800
M-121	05/21/13	1799.90		0.15			3.4	2,300
M-123	05/14/13	1744.51					0.9	13,000
M-124	05/14/13	1751.58		0.038			2.1	2,900
M-125	05/14/13	1734.02					0.62	13,000
M-126	05/13/13	1724.91		0.011 J			1.7	17,000
M-128	05/14/13	1747.46					8.1	3,100
M-129	05/23/13	1716.78		1.1			97	6,300
M-130	05/23/13	1722.32		1.1			110	6,100
M-131	11/06/12	1722.96		0.084			36	3,200
	02/05/13	1722.61		0.084			38	3,100
	05/13/13	1722.68		0.084			92	3,400
	08/19/13	1722.81		0.082			51	3,500
	11/13/13	1722.82		0.079			41	3,300
M-133	05/14/13	1716.19		0.85			30	5,500
M-134	05/13/13	1719.49		0.16			210	2,800
M-135	11/06/12	1719.05		0.078			36	3,400
	02/05/13	1719.25		0.070			38	3,400
	05/13/13	1719.35		0.067			79	3,700
	08/19/13	1719.42		0.066			40	3,900
	11/11/13	1719.42						
	11/13/13			0.060			31	3,600

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Collection	GW Elevation	Chlorate	Chromium	Chromium VI	Nitrate	Perchlorate	TDS
Units	Date	(ft amsl)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
M-136	05/13/13	1723.16		0.086			170	1,300
M-137	05/16/13	1792.24		0.087			1.4	2,000
M-138	05/16/13	1792.60		0.043			1.6	2,800
M-139	05/15/13	1779.23		0.063			2.1	3,300
M-140	06/25/13			2.0			730	7,300
M-141	05/15/13	1756.70		7.1			490	8,000
M-142	05/14/13	1743.20		0.059			8.5	2,600
M-144	05/16/13	1776.09		0.058			2.6	3,400
	(FD)			0.065			2.5	3,300
M-145	05/15/13	1775.67		0.055			0.83	3,200
M-146	05/16/13	1778.53		0.093			4	4,600
	(FD)			0.11			3.1	4,700
M-147	05/16/13	1743.31		0.31			9.5	4,600
M-148A	05/15/13	1755.05		0.12			4	5,800
M-149	05/23/13	1754.01		2.9			390	3,300
M-150	05/21/13	1737.34		0.033			0.16	510
M-151	05/22/13	1710.33		0.031			0.0041	520
M-152	05/20/13	1673.82		0.033			0.46	620
M-153	05/23/13	1769.82		0.022			0.027 J+	570
M-154	05/21/13	1748.29		0.036			0.002	550
M-155	05/22/13	1730.69		0.022			<0.00095	550
M-156	05/20/13	1685.04		0.025			<0.00095	550
M-161	05/20/13	1730.08		0.022			0.017	550
M-162	05/20/13	1726.91		0.029			12	620
M-163	05/20/13	1722.26		0.029			0.043	560
	(FD)			0.026			0.046	560
M-164	05/20/13	1714.67		3.2			480	4,100
M-165	05/22/13	1718.92		0.027			0.099	540
M-166	11/05/12	1723.53						
	02/04/13	1723.26						
	05/06/13	1723.68						
	08/12/13	1723.88						
	11/15/13	1724.08						
M-167	11/05/12	1724.95						
	02/04/13	1725.35						
	05/06/13	1725.16						
	08/12/13	1725.58						
	11/15/13	1725.61						
M-168	11/05/12	1725.85						
	02/04/13	1725.05						
	05/06/13	1725.85						
	08/12/13	1726.27						
	11/15/13	1726.19						
M-169	11/05/12	1725.32						
	02/04/13	1725.42						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
M-169	05/06/13	1725.68						
	08/12/13	1726.13						
	11/15/13	1725.94						
M-170	11/05/12	1724.18						
	02/04/13	1724.45						
	05/06/13	1725.51						
	08/12/13	1726.23						
	11/15/13	1726.35						
M-172	11/05/12	1722.40						
	02/04/13	1723.88						
	05/06/13	1724.74						
	08/12/13	1724.94						
	11/15/13	1725.09						
M-173	11/05/12	1721.60						
	02/04/13	1721.80						
	05/06/13	1722.05						
	08/12/13	1722.00						
	11/15/13	1722.70						
M-174	11/05/12	1723.82						
	02/04/13	1722.68						
	05/16/13	1722.56						
	08/12/13	1722.33						
	11/15/13	1722.71						
M-175	11/05/12	1722.09						
	02/04/13	1722.87						
	05/16/13	1721.97						
	08/12/13	1721.73						
	11/15/13	1721.97						
M-176	11/05/12	1722.12						
	02/04/13	1722.85						
	05/16/13	1721.75						
	08/12/13	1721.47						
	11/15/13	1721.57						
M-177	11/06/12	1722.39						
	02/04/13	1722.86						
	05/16/13	1721.94						
	08/12/13	1721.52						
	11/15/13	1721.64						
M-181	05/22/13	1733.67		0.051			0.011	530
M-182	05/22/13	1729.13		1.2			8.8	16,000
M-186	05/23/13	1756.85		4.3			190	7,800
	(FD)			4.5			200	7,800
MC-3	05/09/13	1691.84					<0.19	13,000
MC-6	05/09/13	1684.30					<0.019	14,000
MC-7	05/09/13	1691.47					18	5,200

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
MC-29	05/09/13	1687.55					<0.00095	22,000
MC-45	05/09/13	1683.07					<0.019	14,000
MC-50	05/09/13	1684.29					<0.019	15,000
MC-51	05/09/13	1685.48					0.04	14,000
MC-53	05/09/13	1684.26		0.0031 J			4	14,000
MC-65	05/08/13			0.043			42	13,000
	05/09/13	1672.69						
MC-69	05/09/13	1687.31					<0.019	14,000
MC-93	05/09/13	1686.65					28	8,800
MC-97	05/09/13	1683.65					0.0045	14,000
MW-16	05/13/13	1718.94		<0.0040			1.8	13,000
MW-K4	10/10/12	1587.66					270	6,600
	11/14/12	1587.78		0.28			220	6,400
	12/06/12	1587.59					210	6,700
	01/17/13	1587.18					270	6,400
	02/13/13	1586.95					260	6,500
	03/13/13	1586.78					260	6,500
	04/10/13	1586.57					280	6,400
	05/23/13	1585.93						
	06/11/13	1587.07						
	07/11/13	1587.10					190	7,000
	08/29/13	1587.25		0.34			250	7,100
	09/20/13	1587.59					200	7,000
	10/10/13	1587.65					180	7,000
	11/07/13	1587.77		0.26			190	7,100
	12/12/13	1587.66					160	7,100
MW-K5	10/10/12	1569.84					21	6,500
	11/14/12	1569.44		0.024			17	6,600
	12/06/12	1568.92					20	6,700
	01/16/13	1567.84					28	6,800
	02/13/13	1568.22					24	6,500
	03/13/13	1567.04					22	6,500
	04/11/13	1567.12					23	6,500
	05/23/13	1567.28	94	0.072		11	27	7,600
	06/11/13	1567.42					24	7,300
	07/11/13	1567.43					20	7,100
	08/29/13	1567.93		0.037			21	6,800
	09/20/13	1569.01					20	6,600
	10/10/13	1569.00					22	6,600
	11/07/13	1568.85		0.025			23	6,500
	12/12/13	1569.62					21	6,400
PC-1	05/07/13	Dry						
PC-2	05/07/13	1568.91	22	0.012		11	4.5	5,700
PC-4	05/07/13	1565.06	77	0.065		23	8.5	7,200

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-18	10/09/12	1590.44					190	9,600
	11/14/12	1590.62		0.087			170	9,600
	12/05/12	1590.46					160	9,600
	01/16/13	1589.99					180	9,600
	02/12/13						180	9,600
	02/13/13	1589.59						
	03/12/13	1589.68					160	9,700
	04/09/13	1589.54					160	9,800
	05/23/13	1589.64		0.15			180	10,000
	06/10/13	1589.86					140	10,000
	07/11/13	1589.91					120	10,000
	08/28/13	1590.07		0.15			150	10,000
	09/24/13	1588.98					60	9,000
	10/08/13	1590.50					130	9,900
	11/08/13	1590.87		0.13			120	10,000
	12/11/13	1590.46					110	9,600
PC-21A	05/08/13	1693.12	2,800	0.18		17	2.4	10,000
	(FD)		2,900	0.18		18	2.7	11,000
PC-24	05/06/13	1612.67		0.25			41	10,000
PC-28	05/06/13	1639.45		0.88			330	6,800
PC-31	05/06/13	1647.86		0.0046 J			27	5,500
PC-37	10/17/12	1677.95						
	11/05/12	1678.67		0.23			420	7,200
	12/11/12	1677.89						
	01/22/13	1678.52						
	02/04/13	1678.58		0.21			380	7,200
	03/14/13	1678.54						
	04/15/13	1678.51						
	05/08/13	1678.47		0.21			400	8,000
	(FD)			0.18			390	8,200
	06/13/13	1678.37						
	07/09/13	1678.35						
	08/21/13	1678.24		0.20			410	7,500
	09/16/13	1678.21						
	10/15/13	1678.21						
	11/11/13	1678.18		0.22 J+			350	7,600
	12/09/13	1678.10						
PC-40	05/08/13	1658.51		<0.0020			0.29	15,000
PC-50	05/06/13	1621.23		0.084			250	10,000
PC-53	10/10/12	1569.09					2	4,800
	11/14/12	1568.69		0.039			2.8	4,900
	12/06/12	1568.20					2.9	4,800
	01/16/13	1568.22					3	5,000
	02/13/13	1568.35					2.6	4,800
	03/13/13	1566.48					2.7	4,700

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
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Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-53	04/11/13	1566.35					2.8	5,100
	05/23/13	1566.52		0.064			2.7	5,700
	06/11/13	1566.57					2.7	5,500
	07/11/13	1566.30					2.3	5,600
	08/29/13	1566.86		0.095			3.1	5,400
	09/20/13	1588.98					1	4,300
	10/10/13	1567.94					1.2	4,500
	11/07/13	1567.85		0.074			2	5,000
	12/12/13	1568.69					1.5	4,600
PC-54	10/16/12	1681.31						
	11/05/12	1681.83		1.5			200	5,400
	12/11/12	1681.20						
	01/22/13	1681.89						
	02/04/13	1681.92		1.6			240	5,300
	03/14/13	1681.78						
	04/15/13	1681.57						
	05/08/13	1681.72		1.7			220	6,000
	06/13/13	1681.59						
	07/09/13	1681.52						
	08/20/13			1.6			240	5,500
	08/29/13	1681.46						
	09/16/13	1681.50						
	10/15/13	1681.44						
	11/11/13	1681.39		1.8			210	5,600
	12/09/13	1681.35						
PC-55	10/09/12	1591.56					1.8	7,300
	11/14/12	1591.66		<0.00088			1	7,300
	12/05/12	1590.06					1.4	7,200
	01/16/13	1591.16					1.3	7,400
	02/12/13	1590.91					6.2	7,200
	03/12/13	1590.79					12	5,800
	04/09/13	1590.65					1.9	7,500
	05/23/13	1590.67		<0.0020			2.8	7,700
	06/10/13	1590.95					2.3	7,500
	07/10/13	1591.11					1.9	7,500
	08/29/13	1591.15		<0.0020			3.3	7,100
	09/24/13	1591.43					14	5,800
	10/11/13	1591.57					2.1	7,400
	11/08/13	1591.92		<0.0020			2.6	7,300
	12/13/13	1591.49					2.1	7,000
PC-56	10/09/12	1555.81					18	5,600
	11/13/12	1555.50		0.0034 J			16	5,100
	02/12/13	1555.05					18	4,700
	03/12/13	1554.62					18	4,600
	04/10/13	1554.68					21	5,100

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Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-56	05/21/13	1554.31		0.0022 J			18	5,400
	06/10/13	1554.25					18	5,500
	07/10/13	1554.09					18	5,500
	08/28/13	1554.75		<0.0020			18	4,900
	10/08/13	1555.71					19	4,700
	11/06/13	1555.89		0.0027 J			17	4,600
	12/11/13	1556.65					16	4,500
PC-58	10/09/12	1554.34					2.5	6,400
	11/13/12	1553.96		0.041			2.7	7,300
	02/12/13	1554.17					2.8	6,600
	03/12/13	1554.02					2	5,400
	04/10/13	1553.29					1.9	5,100
	05/21/13	1553.55		0.030			1.4	4,300
	06/10/13	1553.52					1.3	4,000
	07/10/13	1553.28					1.1	3,900
	08/28/13	1553.93		0.025			1.4	3,800
	09/19/13	1588.98					1.2	3,100
	10/08/13	1554.86					1.1	2,600
	11/06/13	1554.96		0.021			1.3	2,600
	12/11/13	1555.72					1.3	3,000
PC-59	10/09/12	1556.42					3.6	3,100
	11/13/12	1556.12		<0.00088			3.4	2,900
	02/12/13	1555.65					4.5	3,000
	03/12/13	1555.71					5.4	3,100
	04/10/13	1555.55					6.2	3,300
	05/21/13	1555.36		<0.0020			6.1	3,600
	06/10/13	1555.26					6.2	3,600
	07/10/13	1555.09					5.3	3,500
	08/28/13	1555.74		<0.0020			5.9	3,400
	09/19/13	1556.51					5.5	3,200
	10/08/13	1556.54					5.1	3,100
	11/06/13	1556.55		0.0020 J			4.6	3,100
	12/11/13	1557.36					4.1	3,000
PC-60	10/09/12	1556.17					3.2	2,500
	11/13/12	1555.83		<0.00088			2.9	2,600
	02/12/13	1555.47					2.6	2,400
	03/12/13	1555.07					2.8	2,500
	04/10/13	1554.96					3.1	2,500
	05/21/13	1554.76		<0.0020			3.1	2,500
	06/10/13	1554.71					3.3	2,600
	07/10/13	1546.52					2.8	2,700
	08/28/13	1555.19		<0.0020			3.1	2,600
	09/19/13	1556.16					2.4	2,400
	10/08/13	1556.16					3	2,400

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Nevada Environmental Response Trust Site
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-60	11/06/13	1556.28		<0.0020			2.3	2,400
	12/11/13	1557.09					1.9	2,300
PC-62	10/09/12	1556.91					2.4	3,000
	11/13/12	1556.58		0.0011 J			1.9	2,600
	02/12/13	1555.94					0.53	2,000
	03/12/13	1556.41					0.59	2,200
	04/10/13	1556.36					0.49	1,900
	05/21/13	1556.06		<0.0020			0.24	1,900
	06/10/13	1555.96					0.23	1,900
	07/10/13	1555.79					0.22	1,900
	08/28/13	1556.45		<0.0020			0.21	1,800
	09/19/13	1557.05					0.25	1,800
	10/08/13	1557.11					0.26	1,800
	11/06/13	1557.10		<0.0020			0.27	1,800
	12/11/13	1557.82					0.2	1,900
PC-64	05/06/13	1665.45		1.2			360	7,400
PC-65	05/06/13	1665.51		0.69			180	6,300
PC-66	05/06/13	1660.61		1.6			280	6,900
PC-67	05/06/13	1660.44		0.50			28	13,000
PC-68	10/09/12	1557.42					0.032	2,100
	11/13/12	1557.09		<0.00088			0.003 J	1,900
	12/05/12	1554.70					0.057	1,900
	01/16/13	1554.37					0.036	2,000
	02/12/13	1554.18					0.0026 J	2,000
	03/12/13	1554.47					<0.00025	2,000
	04/10/13	1554.39					<0.0048	2,200
	05/21/13	1556.78		<0.0020			<0.0019	2,300
	06/10/13	1556.64					<0.0019	2,300
	07/10/13	1556.45					<0.0048	2,200
	08/28/13	1556.98		<0.0020			<0.0048	2,000
	09/19/13	1557.75					<0.0048	2,000
	10/08/13	1557.75					<0.0048	1,900
	11/06/13	1557.76		<0.0020			0.039	1,700
	12/11/13	1558.42					<0.0025	1,800
PC-71	10/16/12	1672.68						
	11/05/12	1673.10		0.34			480	7,300
	12/11/12	1672.83						
	01/22/13	1672.98						
	02/04/13	1672.90		0.32			410	7,000
	03/14/13	1672.80						
	04/15/13	1672.80						
	05/08/13	1672.71		0.30			310	7,600
	06/13/13	1672.65						
	07/09/13	1672.52						
	08/21/13			0.35			410	7,500

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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-71	08/28/13	1672.42						
	09/16/13	1672.36						
	10/15/13	1672.28						
	11/11/13	1672.20		0.71 J+			500	8,200
	12/09/13	1672.15						
PC-72	10/16/12	1670.03						
	11/05/12	1671.32		0.19			230	6,700
	(FD)			0.20			240	6,800
	12/11/12	1668.61						
	01/22/13	1671.23						
	02/04/13	1671.23		0.19			230	6,800
	03/14/13	1671.17						
	04/15/13	1671.14						
	05/08/13	1671.04		0.21			230	7,300
	06/13/13	1670.93						
	07/09/13	1670.73						
	08/21/13	1670.64		0.16			210	6,900
	09/16/13	1670.57						
	10/15/13	1670.47						
	11/11/13	1670.37		0.23 J+			220	7,200
	12/09/13	1670.22						
PC-73	10/16/12	1669.57						
	11/05/12	1670.42		0.34			350	6,900
	12/11/12	1670.18						
	01/22/13	1670.17						
	02/04/13	1670.21		0.36			380	7,100
	03/14/13	1670.10						
	04/15/13	1670.14						
	05/08/13	1669.94		0.42			430	7,800
	06/13/13	1669.84						
	07/09/13	1669.63						
	08/21/13	1669.54		0.42			390	7,500
	09/16/13	1669.47						
	10/15/13	1669.33						
	11/11/13	1669.21		0.50 J+			350	7,600
	12/09/13	1669.12						
PC-74	05/15/13	1553.66					0.57	4,900
PC-76	05/15/13	1553.32						
PC-77	05/15/13	1559.21					2.7	4,800
PC-78	05/15/13	1560.00						
PC-79	05/21/13	1555.27		<0.0020			4.6	2,800
PC-80	05/21/13	1555.34						
PC-81	05/21/13	1555.19						
PC-82	05/21/13	1551.67	<0.016			0.19 J	0.48	2,200
PC-83	05/21/13	1552.39						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
	10/09/12	1549.02					1.3	2,200
	11/13/12	1548.70		<0.00088			1.1	2,200
	12/05/12	1547.55					0.86	2,200
	01/16/13	1547.31					1.1	2,200
	02/12/13	1547.23					1.1	2,200
	03/12/13	1547.33					1.1	2,200
	04/09/13	1547.16					1.6	2,200
PC-86	05/21/13	1548.32	0.086	<0.0020		0.31	1.7	2,300
	06/10/13	1548.21					1.7	2,300
	07/10/13	1547.99					1.3	2,200
	08/28/13	1548.98		<0.0020			1	2,100
	09/19/13	1549.45					0.7	2,100
	10/11/13	1549.42					0.73	1,800
	11/06/13	1549.97		<0.0020			0.5	2,000
	12/11/13	1550.36					0.31	2,000
PC-87	05/20/13	1547.95						
PC-88	05/22/13	1544.41						
	10/09/12	1544.41					16	5,400
	11/13/12	1544.21		<0.00088			18	4,900
	12/05/12	1544.11					16	4,600
	01/16/13	1543.78					13	4,100
	02/12/13	1543.74					12	3,900
	03/12/13	1543.82					12	3,800
	04/09/13	1543.85					6.4	3,200
PC-90	05/22/13	1543.74	4.2	<0.0020		2.9	7.7	3,600
	06/10/13	1543.57					6.8	3,300
	07/10/13	1543.35					5.5	3,300
	08/28/13	1544.39		<0.0020			6.4	3,400
	09/19/13	1544.73					5.2	3,100
	10/08/13	1544.75					4.7	2,900
	11/06/13	1545.88		0.0034 J			5.7	3,500
	12/11/13	1545.49					4.8	3,000
	10/09/12	1540.84					4.4	3,300
	11/13/12	1540.80		0.0012 J			5.4	3,700
	12/05/12	1540.65					5	3,700
	01/16/13	1540.45					5.1	3,600
	02/12/13	1540.23					4.8	3,400
	03/12/13	1540.68					4.9	3,400
PC-91	04/09/13	1540.18					4.6	3,300
	05/22/13	1539.91	3.5	<0.0020		2.0	4.6	3,400
	06/10/13	1539.82					4.2	3,200
	07/10/13	1539.93					4	3,200
	08/28/13	1540.39		<0.0020			4.4	3,600
	09/19/13	1540.80					4.6	3,500
	10/08/13	1540.74					5	3,400

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-91	11/06/13	1541.09		0.0025 J			4.6	3,400
	12/11/13						4.8	3,400
	12/15/13	1541.27						
PC-92	11/13/12			<0.00088			4	3,100
	05/22/13	1540.00		<0.0020			4.5	3,300
PC-94	11/13/12	1537.60		0.011 J			12	5,000
	02/13/13	1536.23					12	5,100
	05/22/13	1535.84		0.036			11	6,100
	08/28/13	1536.17		0.031			11	5,800
	11/06/13	1536.40		0.030			13	5,700
PC-96	05/15/13	1545.61					6.4	3,500
PC-97	10/09/12	1543.97					4	2,900
	11/13/12	1543.75		<0.00088			3.7	2,900
	12/05/12	1543.60					3.8	2,900
	01/16/13	1543.43					4.3	2,900
	02/12/13	1543.42					4.1	2,800
	03/12/13	1543.43					4	2,800
	04/09/13	1543.32					4.3	2,600
	05/22/13	1543.04		<0.0020			5.3	3,000
	06/10/13	1543.00					5.2	3,100
	07/10/13	1542.89					4.4	3,300
	08/28/13	1543.82		<0.0020			5.3	3,200
	09/19/13	1544.09					4.9	3,200
	10/08/13	1544.10					4.8	3,000
	11/06/13	1544.77		0.0022 J			3.5	2,800
	12/11/13	1544.70					2.9	2,800
PC-98R	10/10/12	1571.45					26	6,000
	11/14/12	1571.05		0.013 J			22	6,000
	12/06/12	1570.50					21	6,400
	01/17/13	1569.32					26	6,700
	02/13/13	1568.58					27	6,800
	03/13/13	1568.48					25	6,900
	04/11/13	1568.39					26	6,700
	05/23/13	1569.12		0.021 J			27	6,700
	06/11/13	1569.28					23	6,600
	07/11/13	1569.38					22	6,300
	08/28/13	1570.04						
	08/29/13			0.014			27	5,900
	09/20/13	1570.87					25	6,000
	10/10/13	1570.74					26	5,900
	11/07/13	1570.58		0.012			22	6,000
	12/12/13	1571.21					25	5,900
PC-99R2/R3	10/02/12						16	5,500
	10/09/12	1523.16						
	11/05/12	1515.85		0.0027 J			6	5,300

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-99R2/R3	12/04/12						16	5,100
	12/10/12	1515.97						
	01/03/13	1515.37		0.0017 J			16	4,800
	02/04/13	1516.61		0.0016 J			14	4,600
	03/05/13	1516.45					14	4,600
	04/02/13						16	4,300
	04/15/13	1537.30						
	05/06/13	1532.65		<0.0020			18	5,200
	06/03/13	1532.86					14	5,100
	07/01/13						14	5,300
	07/03/13	1529.83						
	08/05/13			<0.0020			17	5,100
	08/07/13	1537.34						
	09/06/13						13	5,000
	09/09/13	1538.59						
	10/03/13						16	4,500
	10/15/13	1539.20						
	11/04/13			<0.0020			16	4,500
	11/14/13	1538.81						
	12/02/13						13	4,400
	12/06/13	1534.11						
PC-101R	10/10/12	1589.29					170	9,800
	11/14/12	1589.39		0.060			150	10,000
	12/06/12	1589.21					150	10,000
	01/16/13	1588.84					170	10,000
	02/13/13	1588.56					160	9,600
	03/12/13						170	10,000
	03/13/13	1588.46						
	04/10/13	1590.28					180	9,900
	05/23/13	1588.38		0.090			150	10,000
	06/11/13	1588.82					90	9,300
	07/11/13	1588.79					110	11,000
	08/29/13	1588.97		0.11			150	10,000
	09/20/13	1589.22					130	10,000
	10/10/13	1589.33					130	9,800
	11/07/13	1590.03		0.12			140	10,000
	12/12/13	1589.37					8.7 J	8,000
PC-103	10/10/12	1577.31					14	4,200
	11/14/12	1576.79		0.00096 J			15	4,500
	12/06/12	1576.16					15	4,400
	01/07/13	1575.32						
	01/17/13						19	5,300
	02/13/13	1575.16					17	5,200
	03/13/13	1574.94					19	5,400
	04/10/13	1575.33					21	5,300

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Henderson, Nevada

Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-103	05/23/13	1576.01		<0.0020			23	5,600
	06/11/13	1575.98					18	5,300
	07/11/13	1576.01					17	5,300
	08/29/13	1576.53		0.0021 J			18	4,600
	09/20/13	1577.11					16	4,500
	10/10/13	1576.78					17	4,300
	11/07/13	1576.47		<0.0020			17	4,300
	12/12/13	1576.82					15	4,200
PC-107	05/08/13	1607.42					65	4,900
PC-108	05/22/13	1573.65					<0.00095	2,400
PC-110	05/22/13	1579.38					1.9	5,100
PC-115R	10/02/12						14	4,400
	10/09/12	1540.04						
	11/05/12	1546.41		<0.00088			4.7	4,100
	12/04/12						12	4,700
	12/10/12	1545.92						
	01/03/13	1546.04		0.0014 J			10	3,600
	02/04/13	1542.30		0.00090 J			8.2	3,400
	03/05/13	1546.00					8.4	3,300
	04/02/13						10	3,300
	04/15/13	1542.03						
	05/06/13	1542.10		<0.0020			9.9	3,600
	06/03/13	1541.75					7.6	3,600
	07/01/13						8.8	3,800
	07/03/13	1541.50						
	08/05/13			<0.0020			9.6	3,600
	08/07/13	1541.87						
	09/06/13						8	3,400
	09/09/13	1543.32						
	10/03/13						8.6	3,200
	10/15/13	1543.28						
	11/04/13			<0.0020			9.9	3,100
	11/14/13	1543.50						
	12/02/13						7.2	3,100
	12/06/13	1544.11						
PC-116R	10/02/12						14	5,100
	10/09/12	1535.12						
	11/05/12	1537.61		0.0016 J			5.2	4,900
	12/04/12						12	4,800
	12/10/12	1537.56						
	01/03/13	1537.79		0.0024 J			13	4,500
	02/04/13	1536.91		<0.00088			12	4,300
	03/05/13	1537.75					12	4,300
	04/02/13						15	4,100
	04/15/13	1536.34						

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-116R	05/06/13	1536.30		<0.0020			15	4,800
	06/03/13	1536.29					11	4,700
	07/01/13						11	4,900
	07/03/13	1536.06						
	08/05/13			<0.0020			15	4,700
	08/07/13	1536.37						
	09/06/13						7.7	3,400
	09/09/13	1539.08						
	10/03/13						14	4,300
	10/15/13	1539.11						
	11/04/13			<0.0020			14	4,200
	11/14/13	1539.43						
	12/02/13						12	4,200
	12/06/13	1540.00						
PC-117	10/02/12						6.3	3,500
	10/09/12	1536.65						
	11/05/12	1539.13		0.0015 J			6.2	3,500
	12/04/12						6.5	3,500
	12/10/12	1539.06						
	01/03/13	1538.24		0.0016 J			7.2	3,400
	02/04/13	1538.66		0.0011 J			6.7	3,400
	03/05/13	1538.09					7.2	3,500
	04/02/13						9.5	3,400
	04/15/13	1538.43						
	05/06/13	1538.43		<0.0020			8.4	3,800
	06/03/13	1538.11					7.4	3,700
	07/01/13						9.4	3,800
	07/03/13	1537.88						
	08/05/13			<0.0020			8.9	3,700
	08/07/13	1538.18						
	09/06/13						7.1	3,700
	09/09/13	1541.32						
	10/03/13						9.1	3,600
	10/15/13	1541.35						
	11/04/13			0.0054			9.1	3,500
	11/14/13	1541.58						
	12/02/13						8	3,400
	12/06/13	1534.00						
PC-118	10/02/12						4	2,700
	10/09/12	1543.17						
	11/05/12	1545.97		0.00090 J			3.8	2,700
	12/04/12						3.5	2,700
	12/10/12	1545.93						
	01/03/13	1546.30		0.0013 J			3.8	2,700
	02/04/13	1544.98		<0.00088			3.3	2,600

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-118	03/05/13	1546.13					3	2,600
	04/02/13	1544.83					2.8	2,400
	05/06/13	1544.60		<0.0020			2.4	2,400
	06/03/13	1544.28					2.1	2,400
	07/01/13						2.2	2,400
	07/03/13	1544.29						
	08/05/13	1544.59		<0.0020			2.6	2,400
	09/06/13						2.5	2,400
	09/09/13	1546.70						
	10/07/13						2.6	2,400
	10/15/13	1546.69						
	11/04/13			<0.0020			2.9	2,500
	11/14/13	1546.85						
	12/02/13						2.8	2,300
	12/06/13	1547.40						
PC-119	10/02/12						0.7	2,100
	10/09/12	1545.59						
	11/05/12	1548.09		<0.00088			0.66	2,100
	12/04/12						0.6	2,100
	12/10/12	1547.98						
	01/03/13	1548.04		0.0015 J			0.7	2,200
	02/04/13	1547.28		<0.00088			0.73	2,100
	03/05/13	1548.16					0.7	2,200
	04/02/13	1547.22					1.2	2,100
	05/06/13			<0.0020			1.1	2,200
	06/03/13	1547.16					0.91	2,200
	07/01/13						0.78	2,200
	07/03/13	1546.87						
	08/05/13			<0.0020			0.79	2,100
	08/07/13	1547.01						
	09/06/13						0.64	2,100
	09/09/13	1548.42						
	10/03/13						1	2,000
	10/15/13	1548.37						
	11/04/13			<0.0020			0.63	1,900
	11/14/13	1548.55						
	12/02/13						0.61	1,900
	12/06/13	1549.09						
PC-120	10/02/12						0.72	2,100
	10/09/12	1547.79						
	11/05/12	1550.10		0.00068 J			0.79	2,200
	12/04/12						0.7	2,100
	12/10/12	1550.33						
	01/03/13	1549.76		0.0010 J			0.8	2,100
	02/04/13	1549.38		<0.00088			0.65	2,000

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-120	03/05/13	1549.71					0.56	2,100
	04/02/13	1549.32					1.4	2,200
	05/06/13			<0.0020			1.3	2,300
	06/03/13	1549.14					1.1	2,200
	07/01/13						1.4	2,300
	07/03/13	1548.75						
	08/05/13			<0.0020			1.7	2,200
	08/07/13	1549.04						
	09/06/13						1.7	2,300
	09/09/13	1550.23						
	10/03/13						0.61	2,000
	10/15/13	1550.19						
	11/04/13			<0.0020			0.59	2,000
	11/14/13	1550.33						
	12/02/13						0.53	1,600
	12/06/13	1551.03						
PC-121	10/02/12						0.98	2,200
	10/09/12	1547.67						
	11/05/12	1549.57		<0.00044			1	2,200
	12/04/12						0.8	2,200
	12/10/12	1549.45						
	01/03/13	1549.05		0.00057 J			1.2	2,300
	02/04/13	1548.94		<0.00088			1.2	2,100
	03/05/13	1549.03					1.2	2,200
	04/02/13	1548.90					1.2	2,100
	05/06/13	1548.78		<0.0020			0.95	2,300
	06/03/13	1548.68					0.78	2,300
	07/01/13						1.2	2,300
	07/03/13	1547.33						
	08/05/13			<0.0020			1.5	2,200
	08/07/13	1548.65						
	09/06/13						1.6	2,300
	09/09/13	1549.71						
	10/03/13						1.4	2,200
	10/15/13	1549.71						
	11/04/13			<0.0020			1.4	2,200
	11/14/13	1549.83						
	12/02/13						1.7	2,200
	12/06/13	1550.51						
PC-122	10/10/12	1585.52					24	9,600
	11/14/12	1585.75		0.16			21	9,500
	12/06/12	1585.70					21	9,000
	01/16/13	1585.50					23	9,100
	02/13/13	1585.31					24	9,400
	03/13/13	1585.18					23	9,100

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
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Nevada Environmental Response Trust Site
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Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-122	04/11/13	1586.10					23	8,700
	05/23/13	1585.03		0.19			21	11,000
	06/11/13	1585.00					22	9,700
	07/11/13	1584.99					19	9,600
	08/29/13	1585.05		0.25			28	9,700
	09/20/13	1585.30					22	9,500
	10/10/13	1585.58					24	9,300
	11/07/13	1586.38		0.21			26	8,600
	12/12/13	1586.24					22	8,600
PC-123	11/05/12	1602.64		1.3			290	6,800
	02/04/13	1603.67		1.2			310	6,600
	05/06/13	1603.60		1.2			270	7,500
	08/21/13	1603.76		1.1			250	6,900
	11/11/13	1601.80		1.3			290	6,900
PC-124	11/05/12	1610.45		0.077			7.8	8,300
	02/04/13	1610.85		0.094			7.9	7,800
	05/06/13	1610.63	160	0.068		24	9	9,500
	08/20/13	1610.55		0.085			8.9	8,900
	11/11/13	1610.86		0.10			8.2	8,500
PC-125	11/05/12	1612.15		0.069			8.6	8,000
	02/04/13	1609.91		0.072			8.6	7,800
	05/06/13	1611.76		0.063			9.1	8,900
	08/20/13	1611.88		0.068			9.1	7,600
	11/11/13	1612.14		0.078			9.3	8,200
PC-126	11/05/12	1612.42		0.22			26	10,000
	02/04/13	1612.33		0.22			27	9,700
	05/06/13	1612.13	280	0.22		33	31	11,000
	08/20/13	1612.34		0.22			29	9,400
	11/11/13	1612.59		0.21			23	8,100
PC-127	11/05/12	1613.91		1.2			320	6,700
	02/04/13	1613.82		1.2			320	6,400
	05/06/13	1613.62		1.1			300	7,300
	08/20/13	1613.92		1.0			280	6,600
	11/11/13	1614.23		1.2			250	6,700
PC-128	11/05/12	1615.18		0.36			270	5,800
	02/04/13	1615.06		0.38			300	5,800
	05/06/13	1614.85	430	0.41		17	300	6,600
	08/21/13	1614.94		0.40			270	6,500
	11/11/13	1614.08		0.49			260	6,200
PC-129	11/05/12	1615.68		1.0			450	7,100
	02/04/13	1615.87		0.99			440	7,000
	05/06/13	1615.45		0.96			260	7,700
	08/22/13	1615.51		1.1			350	7,100
	11/11/13	1615.74		1.0			330	6,900

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-130	11/05/12	1614.06		0.98			470	7,400
	02/04/13	1614.30		0.91			440	7,200
	05/06/13	1614.00	620	0.89		31	530	7,700
	08/21/13	1614.19		0.81			380	7,300
	11/11/13	1614.43		1.0			360	7,100
PC-131	11/05/12	1623.03		0.0014 J			3.6	8,700
	02/04/13	1622.80		0.0020 J			4.3	9,300
	05/06/13	1622.68		<0.0020			4.7	9,600
	08/21/13	1622.66		<0.0020			3.5	9,200
	11/11/13	1618.31		<0.010			3.5	9,400
PC-132	11/05/12	1625.33		0.0029 J			2.4	8,800
	02/04/13	1625.36		0.0036 J			2.5	9,000
	05/06/13	1625.23	1.1	<0.0020		1.7 J	1.7	8,900
	08/21/13	1625.12		<0.0020			1.2	8,700
	11/11/13	1625.19		<0.010			1.2	8,700
PC-133	10/02/12						10	3,900
	11/05/12			0.0014 J			11	3,900
	12/04/12						13	4,100
	01/03/13			0.0020 J			15	5,700
	02/04/13			<0.00088			16	5,800
	03/05/13						12	4,400
	04/02/13						12	4,000
	05/06/13			0.0023 J			10	3,900
	06/03/13						8.1	3,800
	07/01/13						11	3,800
	08/05/13			<0.0020			10	3,700
	09/06/13						8	3,600
	10/03/13						8.8	3,200
	10/15/13	1545.97						
	11/04/13			0.038			6	3,100
	11/14/13	1521.98						
	12/02/13						2.7	2,500
	12/06/13	1520.92						
PC-134A	05/07/13	1589.04		<0.0020			13	7,700
PC-135A	11/06/12	1589.87		0.0093 J			18	8,800
	02/05/13	1589.07		0.012 J			32	8,900
	05/07/13	1588.73		<0.0020			19	8,500
	09/05/13	1589.37		0.051			72	9,500
	11/12/13	1589.77		0.069			95	9,100
PC-136	11/06/12	1584.82		1.7			100	6,800
	02/05/13	1584.38		4.5			51	6,000
	05/07/13	1584.11		5.2			72	6,500
	09/05/13	1584.30		3.8			120	6,100
	11/12/13	1585.32		3.2			110	6,200
PC-137	05/07/13	1582.69		<0.0020			0.29	2,900

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
PC-142	05/07/13	1591.54		<0.0020			21	5,600
PC-143	05/07/13	1588.10		<0.0020			2.7	8,100
PC-144	10/09/12	1588.68						
	11/06/12	1588.88		0.60			330	6,300
	12/06/12	1587.33						
	01/16/13	1588.21						
	02/05/13	1588.04		0.72			320	6,400
	04/10/13	1587.77						
	05/07/13	1587.71		0.52			320	7,100
	06/11/13	1588.07						
	07/11/13	1588.14						
	09/05/13	1588.33		0.82			330	6,500
	(FD)			0.73			350	6,600
	09/20/13	1588.57						
	10/10/13	1588.64						
	11/12/13	1588.80		0.58			260	6,700
	(FD)			0.54			260	6,800
PC-145	05/07/13	1583.81		0.43			74	9,200
PC-147	05/07/13	Dry						
PC-148	11/06/12	1589.93		0.025			32	7,400
	02/05/13	1589.28		0.021			33	7,200
	05/07/13	1588.60		0.0098			51	7,400
	09/06/13	1588.98		0.018 J			27	7,100
	11/12/13	1589.45		0.013 J			22	7,300
PC-149	11/06/12	1590.10		0.012 J			22	4,400
	02/05/13	1589.30		0.0091 J			22	4,700
	05/07/13	1588.98		0.0044 J			23	4,400
	09/06/13	1588.98		0.012 J			23	4,300
	11/12/13	1589.75		<0.010			21	4,600
PC-150	11/06/12	1589.88		0.25			210	5,800
	02/05/13	1589.14		0.22			190	5,800
	(FD)			0.22			200	5,900
	05/07/13	1588.73		0.21			200	6,600
	09/06/13	1588.98		0.28			210	6,200
	11/12/13	1589.85		0.29			200	6,300
TR-1	05/21/13	1752.18		0.015			<0.00095	740
TR-2	05/20/13	1726.64		0.022			<0.00095	570
TR-3	05/21/13	1772.84		0.015			0.0012	700
TR-4	05/21/13	1737.25		0.022			<0.0048	740
TR-5	05/22/13	1800.27		0.017			<0.00095	790
TR-6	05/22/13	1763.84		0.022 J			0.33	22,000
TR-7	05/23/13	1818.10		0.013			<0.0019	810
TR-8	05/23/13	1779.55		0.016			0.095 J+	1,300
TR-9	05/23/13	1817.47		0.011			0.0024 J+	820
TR-10	05/23/13	1794.36		0.13			3.1	2,100

TABLE A-1: Groundwater Elevation and Analytical Data for Five Quarters
October 2012 - December 2013
Nevada Environmental Response Trust Site
Henderson, Nevada

Well ID Units	Collection Date	GW Elevation (ft amsl)	Chlorate (mg/L)	Chromium (mg/L)	Chromium VI (mg/L)	Nitrate (mg/L)	Perchlorate (mg/L)	TDS (mg/L)
TR-11	05/22/13	1716.55		0.015			<0.00095	760
	(FD)			0.015			<0.00095	770
TR-12	05/22/13	1695.47		0.048			<0.00095	550

Notes:

FD = field duplicate

ft amsl = feet above mean sea level

J = Concentration is estimated

J- = Estimated concentration, potential negative bias

J+ = Estimated concentration, potential positive bias

mg/L = milligrams per liter

< = Concentration is less than indicated laboratory method reporting limit

Appendix B

Groundwater Field Records

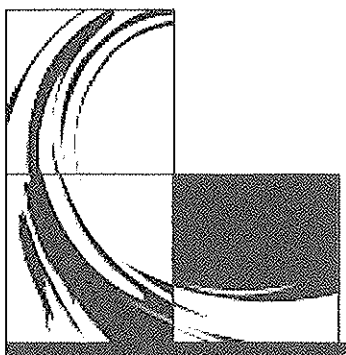
(Provided on CD)

ENVIROGEN
TECHNOLOGIES

Third Quarter Well Monitoring

Nevada Environmental Response Trust Henderson, Nevada

August 5 – September 6, 2013



ENVIROGEN
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Field Data Letter Report

Section

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Letter of Transmittal

Attention: John Pekala
Senior Manager
Environ International Corp.
510 Fourth St.
Henderson, NV 89015

Date: Sept. 25, 2013

Project:

2013 3rd Quarter Groundwater Monitoring

Enclosed:

1 copy of Field Data Letter Report

Remarks:
John,
The enclosed Quarterly Groundwater Monitoring Report with supporting documents is provided for your records.

Signature:

Wendy Prescott

Envirogen Technologies
Two Kingwood Place
700 Rockmead Drive Suite 105
Kingwood, TX 77339

ENVIROGEN
TECHNOLOGIES

Field Data Letter Report

1 INTRODUCTION

Nevada Environmental Response Trust (NERT) contracts with Envirogen Technologies to conduct groundwater sampling and analysis at their Perchlorate Removal Facility, located at 510 Fourth Street, in Henderson, Nevada. The work described herein represents the third quarter groundwater sampling event for 2013. The work was conducted in accordance with the Sampling and Analysis Work plan, submitted to Tronox January 9, 2004.

Envirogen has three staff members trained to assist the quarterly well monitoring events. The Envirogen monitoring team meets once prior to the sampling event to discuss all issues associated with this project, sampling and laboratory equipment needs, time tables and well site schedules. Bottle orders and bottles received are cross checked to ensure that all wells and analysis are represented.

1.1 SCOPE OF SAMPLING EVENT

This sampling effort included the following tasks:

- Soundings of the pumping water levels in 23 interceptor wells.
- Soundings of the water levels in 7 dormant interceptor wells
- Collection of groundwater samples from 27 interceptor wells.
- Soundings of water levels in 114 monitoring wells.
- Collection of groundwater samples from 87 monitoring wells.
- Collection of groundwater samples from 17 pumping wells.
- Soundings of water levels in 6 backup (Buddy) wells.
- Soundings of water levels in 16 pumping wells.

Analysis of samples collected from the interceptor and monitoring wells, range from Perchlorate (CLO4), Total Chromium (Cr), Hexavalent Chromium (CRVI), pH, Specific Conductance (EC), Total Dissolved Solids (TDS), and NPDES list for well M-10, (Up Well). CR, MN, FE, B, Ammonia, TIN, Nitrate-Nitrite as N, and Chloide. RCRA well analysis also included Conductance, TOC, TOX and Total Phenols.

Groundwater samples were shipped daily to TestAmerica (TA) for analysis, in Irvine, California. TA is certified by the State of Nevada.
The scope of this assignment also included compiling the water level and analytical data presented in this report. Data are presented in tabular form.

2 FIELD ACTIVITIES

Envirogen conducted the field activities associated with this quarterly sampling event between Monday August 5th and Friday September 6th, 2013. Activities included the sounding of "pumping water" levels in the interceptor wells, sounding the "static water" level in the monitoring wells and sampling of both the interceptor and monitoring wells. Prior to each quarter, an inventory list was issued to Environ for review and comment. Sampling was conducted according to their specifications.

Wendy Prescott and Michele Brown were responsible for sample collection and recording all pertinent data on sample bottles. Michele Brown supervised the groundwater sampling activities. She is responsible for executing all work elements related to the groundwater sampling program, including laboratory equipment maintenances and calibration, fieldwork, documenting field activities, maintaining field notes and photographs (when applicable), and providing the Operations Manager with information concerning implementation of the sampling plan.

Envirogen maintained records of daily events and pertinent sampling data of each well on a field log sheet and addendum data in a bound log book. Log sheet entries included personnel onsite, weather conditions, water levels, activities conducted, sampling times, pH, EC, temperature and other significant field information.

2.1 Groundwater Level Soundings

Envirogen sounded pumping water levels in 23 interceptor wells. The static water readings were taken in Interceptor wells I-AA, I-AB, I-AD, I-AC, I-W, and I-Y. In addition to the interceptor wells, static water levels in 114 monitoring wells were taken. There were thirty-two (32) wells where only static water levels were taken. The following are the 32 wells:

ART-1A	ART-2A	ART-3A	ART-4	ART-7A	ART-8	M-55	M-56	M-58	M-60	M-75
M-76	M-77	M-78	M-92	M-93	M-97	M-115	M-166	M-167	M-168	M-169
M-170	M-172	M-173	M-174	M-175	M-176	M-177		I-AC	I-AD	I-X

The water levels were sounded to the nearest 0.01 foot using an electronic well sounder.

2.2 Equipment Cleaning Procedures

During the collection of water samples, throughout the day, the equipment was rinsed with 3 to 4 gallons of de-ionized water after use at each well. The rinse water was collected in a polyethylene container and transported to GW-11 for treatment.

3.0 GROUNDWATER SAMPLING

3.1 Sampling Locations

The following presents the identification of wells sampled.

3.1.1 Interceptor Wells

I-AR	I-B	I-C	I-D	I-E	I-F	I-G	I-H	I-I	I-J	I-K
I-L	I-M	I-N	I-O	I-P	I-Q	I-R	I-S	I-T	I-U	I-V
I-W	I-Y	I-Z	I-AA	I-AB						

3.1.2 Pumping Wells

ART-1	ART-2	ART-3	ART-4A	ART-7	ART-8	ART-9	PC-99R2/R3	PC-115R	PC-116R	PC-117
PC-118	PC-119	PC-133								

3.1.3 **Monitoring Wells**

ARP-1	ARP-2A	ARP-3A	ARP-4A	ARP-5A	ARP-6B	ARP-7	ART-7B	M-5A	M-6A	M-7B
M-10	M-11	M-12A	M-14A	M-19	M-22A	M-23	M-25	M-31A	M-35	M-37
M-38	M-44	M-48A	M-57A	M-64	M-65	M-66	M-67	M-68	M-69	M-70
M-71	M-72	M-73	M-74	M-79	M-80	M-81A	M-83	M-95	M-99	M-131
M-135	MW-K4	MW-K5	PC-18	PC-37	PC-53	PC-54	PC-55	PC-56	PC-58	PC-59
PC-60	PC-62	PC-68	PC-71	PC-72	PC-73	PC-86	PC-90	PC-91	PC-94	PC-97
PC-98R	PC-101R	PC-103	PC-122	PC-123	PC-124	PC-125	PC-126	PC-127	PC-128	PC-129
PC-130	PC-131	PC-132	PC-135A	PC-136	PC-144	PC-148	PC-149	PC-150		

4.0 SAMPLING TECHNIQUES

4.1 Interceptor Wells

All interceptor wells were sampled using dedicated sampling ports. At the beginning of sampling each well or line, personnel wore a new pair of clean nitrile or latex gloves.
The sampling port was opened to drain any stagnant water from piping and valves. This water is captured and containerized. All captured water is off-loaded at GW-11 for onsite treatment. Following the purging of the sample port, a "water quality" sample was collected for analysis of Perchlorate, Total Chromium, pH, and TDS. Envirogen also recorded the "*field*" temperature, pH, and conductivity as well as the pumping water level. The "*field*" parameters are provided in Table 1.

4.2 Monitoring Wells

Monitoring wells were purged before sampling to assure that each sample was collected from fresh formation water.

Eighty (80) wells were purged and sampled, using the 12 volt submersible pump. Two wells (2), M-10 and M-11, were purged with the "Ready Flo 2" with variable pump flow control. Three (3) wells M-6A, M-99 and M-38 were sampled with a dedicated bailer. Only M-38 was purged.

Three (3) wells were sampled using a non-dedicated disposable bailer, ART-6, M-7B and H-28A, and were not purged due to location and/or water column level but samples were collected. Hand bailing was done as a result of only needing to purge less than 3 gallons of water, if there was an insufficient amount of water in the well casing to use a pump or due to the location of the well.

Samples for both the interceptor and monitoring wells were collected in appropriate containers supplied by TestAmerica and analyzed for the specific required analysis of the well. The bottles were filled with minimal aeration, using laminar flow.

The samples were labeled, packaged, stored, and transported using the procedures outlined in the work plan for well samples. .

4.3 Problems Encountered

Access to M-7B is limited to golf cart or by foot. The rains have washed out a rut in the road so sampling rig was not able to reach the location.

M-36 and M-52 are destroyed.

M-74 is damaged and DTW and sample collection are fairly difficult.

On 8-22-13 the submersible pump used for purging quit working and another pump had to be strung.

Rains hindered the sampling process this quarter.

4.4 Equipment Cleaning Procedures

The deionized water is changed each morning so the rinsing water is fresh. Non-dedicated sampling equipment has been replaced by disposable bailers. Conductivity/pH meter probe was

thoroughly rinsed with de-ionized water after each sample was analyzed. Pumping equipment was purged with deionized water to flush and clean before leaving to sample at the next location.

5.0 QUALITY CONTROL

Quality control (QC) procedures include collection and analysis of QC duplicate samples, equipment and field blanks. The analytical laboratory is also required to meet specific QA/QC requirements for surrogate recovery, MS/MSD recovery and RPDs, and LCS recoveries. Duplicate SC readings were conducted at one well each day to insure the accuracy of the Hanna field probe.

5.1 QC Duplicate Samples

QC duplicate samples were collected during the sampling event to evaluate the precision and accuracy of analytical data. The QC duplicates were collected, packaged, and transported in the same manner as the primary sample, but assigned a different identification number.
Five (5) duplicates were collected from the wells, representing at least 5 percent of the samples collected. The duplicate samples were collected from the following wells: M-44, PC-144, M-66, M-12A and M-14A. They were analyzed for the same parameters as the primary samples. TestAmerica was not informed of the identity of these "blind" samples.

5.2 Equipment Blanks

Three (3) equipment blanks were taken this quarter. Two of the equipment blanks, for CLO4, TDS, CR, CRVI and pH analysis, were collected on August 19 and September 4, 2013. One equipment blank for CLO4 analysis only was collected on 8-29-13. This is done to evaluate the adequacy of cleaning procedures used by field personnel during this sampling event.

5.3 Field Blanks

No Field Blanks were collected this quarter.

6.0 ANALYTICAL PROCEDURES

The following designates the parameter, analytical method and method reporting limits for groundwater. Some of the following analysis may not have been performed for this reporting period.

PARAMETER	ANALYTICAL METHOD	MRL
CLO4	Method 314.0	4.0 µg/L
Total Chromium	Method 200.7	0.01 mg/L
Hexavalent Chromium (CRVI)	Method 218.6 ORGFM	0.005 mg/L,
pH	Method 150.1	.01 units
TDS	Method 2540C Calcd	10 mg/L

PARAMETER	ANALYTICAL METHOD	MRL
Chloride	Method 300 ORGFM 28D	80.0 mg/L
Iron (ICAP)	Method 200.7	0.005 mg/L
Manganese (ICAP/)	Method 200.7	100 µg/L
Sodium (ICAP)	Method 200.7	5 mg/L
Phenols, Total	Method 420.1, 420	.010 mg/L
Sulfate	Method 300 ORGFM 28D	80 mg/L
Total Organic Carbon, TOC	Method 5310C	unknown
Total Organic Halogen, TOX	Method 9020B - 9020	unknown
Boron	Method 200.7	.10 mg/L
Conductance	Method 2510B - 2510	2 µohms/cm
Ammonia Nitrogen	Method 300 ORGFM	0.050 mg/L
Nitrate Nitrogen	Method 300 ORGFM	2.0 mg/L
Copper	Method 300 ORGFM	2.0 µg/L
Chlorate	Method 300.1B 28D	

6.1 Field Equipment Calibration

Prior to the start of each day's events, field laboratory equipment was calibrated. A Hanna HI 98130 water proof pH, EC/TDS and temperature field probe was calibrated and measurements recorded on daily laboratory calibration maintenance forms, which have been provided. Each day a duplicate EC reading was taken at random wells to ensure the calibration of the meter was holding. The duplicate EC readings were taken from wells I-M, M-131, M-23, H-28A, M-44, M-5A, M-10 and PC-150.

SUMMARY RESULTS

7.1 Groundwater Level Soundings

A summary of water level soundings collected for the interceptor and monitoring wells are presented in Table 1.

Pumping water level in interceptors wells. (Measured in feet from below the top of casing.)

LOW	HIGH
44.41 (I-U)	13.83 (I-T)

Static water level monitoring wells. (Measured in feet from below the top of casing.)

LOW	HIGH
46.81 (M-10)	4.71 (PC-97)

7.2 Summary of Field Activities

7.2.1 Interceptor Wells

Twenty-seven (27) interceptor wells were sampled for analytical sets including CLO4, Cr, TDS and pH.

7.2.2 Monitoring Wells

Eighty-seven (87) monitoring wells were sampled for sets that may have included: pH, TDS, CLO4, CR and CRVI.

7.2.3 QC Duplicate Samples (Measured for the same analyses as the primary samples.)

M-44, PC-144, M-66, M-12A and M-14A.

7.2.4 Equipment Blanks

Two equipment blanks were analyzed for CLO4, Total Cr., Hex Cr., pH, and TDS.

Weather	Hot/ Breezy
Total # of wells visited	172
Total water samples collected	131
Total Wells measured DTW only	32
Total Duplicate Samples (5%)	5
Total Equipment Blanks	3
Total Wells hand bailed	6
Total Wells considered DRY	4
Total Wells not accessible	2
Total Wells damaged	3
Total wells not found	0

ENVIROGEN
TECHNOLOGIES

Table of Well Gauging Data

This Section Contains:

- Field Sign - In Log
- Daily Maintenance & Calibration Log
- Table 1 Well Inventory
- Chain-of-Custody & Bottle Order Forms

ENVIROGEN
TECHNOLOGIES

ENVIROGEN QUARTERLY SAMPLING SIGN IN SHEET

DATE	TIME	COMPANY	SIGNATURE	PRINT NAME
8-12-13	8:00A	Envirogen	Michele Brown	Michele Brown
8-14-13	1000A	Envirogen	Michele Brown	Michele Brown
8-14-13	1000A	Envirogen	Wendy Prescott	WENDY PRESCOTT
8-19-13	630A	Envirogen	Michele Brown	Michele Brown
8-19-13	630A	Envirogen	Wendy Prescott	WENDY PRESCOTT
8-20-13	600A	Envirogen	Michele Brown	Michele Brown
8-20-13	600A	Envirogen		Nathan James
8-21-13	400A	Envirogen	Michele Brown	Michele Brown
8-21-13	400A	Envirogen	Wendy Prescott	WENDY PRESCOTT
8-22-13	400A	Envirogen	Michele Brown	Michele Brown
8-22-13	400A	Envirogen	Wendy Prescott	WENDY PRESCOTT
9-4-13	630A	Envirogen	Michele Brown	Michele Brown
9-4-13	630A	Envirogen	Wendy Prescott	WENDY PRESCOTT
9-5-13	600A	Envirogen	Michele Brown	Michele Brown
9-5-13	600A	Envirogen	Wendy Prescott	WENDY PRESCOTT
9-6-13	600A	Envirogen	Michele Brown	Michele Brown
9-6-13	600A	Envirogen	Wendy Prescott	WENDY PRESCOTT

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 8-14-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.01	2) 8.02	930A / MB
Buffer Temperature	3) 23.8	3) 23.4	
Changed Buffers yes X Please Check			

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2)	
Calibration Value	3) 12.86	925A / MB
Standard Temp.	4) 23.2	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # I-M

1st Reading 2nd Reading

EC 9.26 Temp. 27.6°C EC 9.23 Temp. 27.8°C

mS/cm mS/cm

All equipment was rinsed and purged with Deionized water after each use.

Date 8-14-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 8-19-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.0	2) 7.99	638A/MB
Buffer Temperature	3) 22.7	3) 22.7	
	Changed Buffers yes X Please Check		

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 1264	
Calibration Value	3) 1271	635A/MB
Standard Temp.	4) 23.7	
	Changed Standards yes X Please Check	

Dupliate EC Redaing Well # M-131

1st Reading 2nd Reading

EC 4.46 mS/cm Temp. 25.8 °C EC 4.49 mS/cm Temp. 25.9 °C

All equipment was rinsed and purged with Deionized water after each use.

Date 8-19-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 8-20-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.0	2) 7.99	708A/MB
Buffer Temperature	3) 23.9	3) 23.8	
	Changed Buffers yes X Please Check		

HANNA FIELD EC METER

		TIME/ANALYST
Known Values	1) 1288	
Temp. Comp. Value	2) 1289	705a/MB
Calibration Value	3) 1288	
Standard Temp.	4) 24.6	
	Changed Standards yes X Please Check	

Dupliate EC Redaing Well # M-23

1st Reading

EC 5.39 mS/cm Temp. 25.5°C

2nd Reading

EC 5.42 mS/cm Temp. 25.8°C

All equipment was rinsed and purged with Deionized water after each use.

Date 8-20-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 8-21-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.01	2) 7.98	350A/MB
Buffer Temperature	3) 22.5	3) 22.5	
	Changed Buffers yes X Please Check		

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 1239	340A/MB
Calibration Value	3) 1289	
Standard Temp.	4) 22.8	
	Changed Standards yes X Please Check	

Dupliate EC Redaing Well # H-28A (hand bailed)

1st Reading 2nd Reading

EC 12.90 mS/cm Temp. 26.6°C EC 12.83 mS/cm Temp. 26.9°C

All equipment was rinsed and purged with Deionized water after each use.

Date 8-21-13 Verified M Brown

2 Dup EC's collected

M-44 (elec. pump)

1st 9.67 mS/cm 25.0°C

2nd 9.73 mS/cm 25.0°C

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 8.22-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.0	2) 7.98	400A/MB
Buffer Temperature	3) 24.3	3) 24.8	
Changed Buffers yes X Please Check			

HANNA FIELD EC METER

		TIME/ANALYST
Known Values	1) 1288	
Temp. Comp. Value	2) 1264	355a/MB
Calibration Value	3) 1288	
Standard Temp.	4) 24.4	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # _____

1st Reading 2nd Reading

EC_____ Temp._____ EC_____ Temp._____

All equipment was rinsed and purged with Deionized water after each use.

Date 8.22.13 Verified MB

No Dup reading -
Problems with pump -

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 9-4-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.02	2) 7.98	640A / MB
Buffer Temperature	3) 24.1	3) 24.4	
Changed Buffers yes _____ Please Check			

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 12.64	635A / MB
Calibration Value	3) 1292	
Standard Temp.	4) 24.2	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # M-5A

1st Reading 2nd Reading

EC 12.86 mS/cm Temp. 26.5°C EC 12.79 mS/cm Temp. 26.4°C

All equipment was rinsed and purged with Deionized water after each use.

Date 9-4-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 9-5-13

HANNA FIELD pH METER

			TIME/ANALYST
Known Values	1) 7.0	1) 8.0	555A/MB
Calibration Value	2) 7.02	2) 8.01	
Buffer Temperature	3) 23.2	3) 23.4	
	Changed Buffers yes X Please Check		

HANNA FIELD EC METER

		TIME/ANALYST
Known Values	1) 1288	550AM/MB
Temp. Comp. Value	2) 1264	
Calibration Value	3) 1291	
Standard Temp.	4) 23.8°C	
	Changed Standards yes X Please Check	

Dupliate EC Redaing Well # M-10

1st Reading 2nd Reading

EC 3.49 mS/cm Temp. 27.7°C EC 3.47 mS/cm Temp. 27.9°C

All equipment was rinsed and purged with Deionized water after each use.

Date 9-5-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 9-6-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.02	2) 7.99	630A / MD
Buffer Temperature	3) 22.1°C	3) 22.4°C	
	Changed Buffers yes X Please Check		

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 1239	
Calibration Value	3) 1288	625A / MD
Standard Temp.	4) 23.2°C	
	Changed Standards yes X Please Check	

Dupliate EC Redaing Well # PC-150

1st Reading

EC 7.45 mS/cm Temp. 26.0°C

2nd Reading

EC 7.41 mS/cm Temp. 25.8°C

All equipment was rinsed and purged with Deionized water after each use.

Date 9-6-13 Verified MD

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ARP-1	44.2	1613.32	23.99		1589.33	8.13		8/28/2013	12:54 PM		pH, TDS, Cr, ClO_4
ARP-2A	54	1614.18	25.51		1588.67	7.67		8/29/2013	9:41 AM		pH, TDS, Cr, ClO_4
ARP-3A	41	1614.67	26.92		1587.75	7.8		8/29/2013	9:12 AM		pH, TDS, Cr, ClO_4
ARP-4A	33	1615.47	29.02		1586.45	7.66		8/29/2013	8:26 AM		pH, TDS, Cr, ClO_4
ARP-5A	38	1616.10	32.58		1583.52	7.70		8/29/2013	8:12 AM		pH, TDS, Cr, ClO_4
ARP-6B	43	1615.56	32.21		1583.35	7.38		8/29/2013	7:56 AM		pH, TDS, Cr, ClO_4
ARP-7	39.2	1613.20	30.26		1582.94	7.36		8/29/2013	7:42 AM		pH, TDS, Cr, ClO_4
ART-1	56	1614.47	35.03		1579.44	7.50		8/5/2013	12:01 PM		pH, TDS, Cr, ClO_4
ART-1A	56	1614.40	24.06		1590.34			8/7/2013	10:16Am		DTW Only
ART-2	56	1617.10	27.73		1589.37	7.22		8/5/2013	11:57 AM		pH, TDS, Cr, ClO_4
ART-2A	58	1616.81	26.33		1590.48			8/7/2013	10:13 AM		DTW Only
ART-3	47	1617.93	30.74		1587.19	7.51		8/5/2013	11:48 AM		pH, TDS, Cr, ClO_4
ART-3A	55	1617.60	43.85		1573.75			8/7/2013	10:07AM		DTW Only
ART-4	46	1617.39	28.75		1588.64			8/7/2013	10:02 AM		pH, TDS, Cr, ClO_4
ART-4A	46	1617.46	42.27		1575.19	7.56		8/5/2013	11:44 AM		DTW Only
ART-6	36	1615.19	29.99		1585.20	7.38		8/5/2013	11:30 AM		pH, TDS, Cr, ClO_4
ART-7	38.9	1615.37	31.13		1584.24	7.3		8/5/2013	12:11 PM		DTW Only
ART-7A	40	1614.78	32.99		1581.79			8/7/2013	9:57 AM		DTW Only

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ART-7B	50	1619.62	35.29		1584.33	6.74		8/29/2013	6:19 AM		pH, TDS, Cr, ClO_4
ART-8	50.5	1617.66	27.87		1589.79			8/7/2013	10:09 AM		pH, TDS, Cr, ClO_4
ART-8A	54	1617.10	27.45		1589.65	7.36		8/5/2013	11:52 AM		DTW Only
ART-9	43	1614.90	32.83		1582.07	7.34		8/5/2013	12:14 PM		pH, TDS, Cr, ClO_4
L-635	45.33	1620.94			1620.94					No Access	pH, TDS, Cr, ClO_4
L-637	39.5	1621.60			1621.60					No Access	pH, TDS, Cr, ClO_4
M-2A	47.57	1781.16			1781.16	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-5A	50.00	1751.80	37.58		1714.22	7.14	12.86	9/4/2013	9:50 AM		(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
M-6A	46.00	1733.19	38.44		1694.75	7.45	11.15	8/21/2013	8:28 AM		(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
M-7B	55.00	1732.83	35.66		1697.17	7.52	10.02	9/4/2013	10:53 AM		(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
M-10	69.45	1836.21	46.81		1789.40	7.25	3.49	9/5/2013	12:10 PM		pH / CR6 / Cr / ClO_4 /TDS /+NPDES list
M-11	58.00	1815.53	42.38		1773.15	8.10	3.50	9/5/2013	11:15 AM		pH / TDS / Cr / Cr6 / Cl04
M-12A	50.00	1812.76	40.09		1772.67	7.87	7.87	9/5/2013	11:00 AM		pH / TDS / Cr / Cr6 / Cl04
M-13	54.76	1814.89			1814.89	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-14A	42.40	1760.93	31.67		1729.26	7.71	4.83	9/4/2013	9.12AM		pH, TDS, Cr, ClO_4
M-19	41.20	1766.77	34.43		1732.34	7.39	5.99	8/22/2013	5:34 AM		pH, TDS, Cr, ClO_4
M-21	44.74	1792.07			1792.07	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-22A	36.92	1759.46	29.49		1729.97	7.12	13.43	9/4/2013	8:61 AM		pH, TDS, Cr, ClO_4

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M-23	44.47	1720.35	33.10		1687.25	7.55	5.39	8/20/2013	9:15 AM		pH, TDS, Cr, ClO_4
M-25	41.47	1759.93	30.28		1729.65	7.31	8.91	8/19/2013	10:38 AM		pH, TDS, Cr, ClO_4
M-31A	55.00	1796.87	42.13		1754.74	7.52	1.01	9/5/2013	6:43 AM		pH, TDS, Cr, ClO_4
M-33	46.78	1800.29			1800.29	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-35	39.70	1772.78	31.09		1741.69	7.18	5.67	8/22/2013	5:16 AM		pH, TDS, Cr, ClO_4
M-36	37.85	1759.82			1759.82			8/22/2013	6:30 AM	Well damaged depth to the dirt 20.59	pH / Cr / Cr^6 / ClO_4 / TDS
M-37	37.18	1761.06	29.77		1731.29	7.20	8.51	8/19/2013	10:25 AM		pH / Cr / Cr^6 / ClO_4 / TDS
M-38	36.82	1759.73	29.91		1729.82	7.55	12.00	9/4/2013	8:41 AM		pH / Cr / Cr^6 / ClO_4 / TDS
M-44	37.65	1698.31	23.67		1674.64	7.37	9.67	8/21/2013	10:19 AM		pH / TDS / Cr / Cr6 / Cl04
M-48A	40	1718.36	29.36		1689.00	7.44	3.49	8/20/2013	8:58 AM		pH, TDS, Cr, ClO_4
M-52	47.38	1801.92			1801.92			9/5/2013	7:00 AM	well destroyed	pH, TDS, Cr, ClO_4
M-55	45.00	1750.88	24.65		1726.23			8/12/2013	11:33 AM		DTW Only
M-56	40.00	1750.83	26.93		1723.90			8/12/2013	11:35 AM		DTW Only
M-57A	42.40	1753.44	28.79		1724.65	7.74	4.30	8/19/2013	9:37 AM		pH, TDS, Cr, ClO_4
M-58	45.00	1751.25	29.36		1721.89			8/12/2013	11:39 AM		DTW Only
M-60	43.00	1750.94	28.76		1722.18			8/12/2013	11:37 AM		DTW Only
M-64	38.00	1749.76	25.01		1724.75	7.13	8.87	8/19/2013	7:05 AM		pH, TDS, Cr, ClO_4
M-65	40.00	1753.91	27.64		1726.27	6.96	13.12	8/19/2013	7:29 AM		pH, TDS, Cr, ClO_4

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M-66	43.00	1754.24	30.02		1724.22	6.88	14.64	8/19/2013	7:44 AM		pH, TDS, Cr, ClO_4
M-67	38.00	1745.91	21.69		1724.22	7.70	6.43	8/20/2013	10:35 AM		pH, TDS, Cr, ClO_4
M-68	41.00	1750.23	26.31		1723.92	7.45	6.80	8/20/2013	10:22 AM		pH, TDS, Cr, ClO_4
M-69	40.00	1749.75	31.24		1718.51	7.23	5.31	8/19/2013	8:34 AM		pH, TDS, Cr, ClO_4
M-70	41.00	1748.25	33.00		1715.25	7.22	7.15	9/4/2013	7:21 AM		pH, TDS, Cr, ClO_4
M-71	43.00	1747.04	34.19		1712.85	6.91	11.25	9/4/2013	7:31 AM		pH, TDS, Cr, ClO_4
M-72	36.00	1746.49	31.49		1715.00	6.95	10.9	9/4/2013	7:40 AM		pH, TDS, Cr, ClO_4
M-73	36.00	1741.14	28.78		1712.36	7.13	7.84	8/22/2013	6:09 AM		pH, TDS, Cr, ClO_4
M-74	39.00	1744.38	29.05		1715.33	7.26	6.67	8/22/2013	5:54 AM		pH, TDS, Cr, ClO_4
M-75	53.90	1784.21	41.81		1742.40			8/12/2013	2:14 PM		DTW ONLY
M-76	54.60	1785.22	38.87		1746.35			8/12/2013	2:16 PM		DTW ONLY
M-77	47.20	1799.61	36.26		1763.35			9/5/2013	6:34 AM		DTW ONLY
M-78	43.60	1751.50	25.75		1725.75			8/12/2013	11:34 AM		DTW ONLY
M-79	37.60	1742.53	29.45		1713.08	7.29	5.76	8/19/2013	8:01 AM		pH / TDS / Cr / ClO_4
M-80	43.70	1746.04	35.28		1710.76	7.18	3.09	9/4/2013	6:58 AM		TDS / Cr / ClO_4
M-81A	41.60	1744.16	35.19		1708.97	7.39	6.67	8/22/2013	6:33 AM		TDS / Cr / ClO_4
M-83	42.50	1742.77	31.16		1711.61	6.65		8/30/2013	1:15 PM		pH, TDS, Cr, ClO_4
M-92	48.50	1800.76	36.27		1764.49			8/12/2013	12:05 PM		DTW ONLY

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M-93	49.00	1797.54	35.32		1762.22			8/12/2013	12:09 PM		DTW ONLY
M-95	30.00	1694.09	16.47		1677.62	7.43	6.98	8/20/2013	8:26 AM		pH / TDS / Cr / Cr6 / Cl04
M-96	16.90	1693.52			1693.52			8/20/2013	8:19 AM	Well Dry TWD in Field 16.20	pH / TDS / Cr / Cr6 / Cl04
M-97	52.50	1800.85	39.64		1761.21			8/12/2013	12:07 PM		DTW ONLY
M-98	33.40	1731.90			1731.90			8/21/2013	8:55 AM	Well Dry TWD I Field 33.68	pH, TDS, Cr, ClO_4
M-99	35.59	1730.74	33.28		1697.46	7.16	5.04	9/6/2013	7:30 AM		pH, TDS, Cr, ClO_4
M-100	33.81	1730.93			1730.93			8/12/2013		Well Dry TWD in Field 33.82	pH / TDS / Cr / Cr6 / Cl04
M-101	32.15	1730.81			1730.81			8/12/2013		Well Dry TWD in Field 32.36	pH, TDS, Cr, ClO_4
M-115	47.50	1787.64	37.31		1750.33			8/12/2013	2:22 PM		DTW ONLY
M-131	39.00	1754.13	31.32		1722.81	7.57	4.46	8/19/2013	9:24 AM		pH, TDS, Cr, ClO_4
M-135	39.00	1751.85	32.43		1719.42	7.47	4.74	8/19/2013	8:49 AM		pH, TDS, Cr, ClO_4
M-166	32.00	1751.09	27.21		1723.88			8/12/2013	11:23 AM		DTW Only
M-167	30.00	1749.95	24.37		1725.58			8/12/2013	11:25 AM		DTW Only
M-168	35.00	1748.46	22.19		1726.27			8/12/2013	11:26 AM		DTW Only
M-169	35.00	1750.22	24.09		1726.13			8/12/2013	11:27 AM		DTW Only
M-170	35.00	1750.66	24.43		1726.23			8/12/2013	11:29 AM		DTW Only
M-172	37.00	1750.58	25.64		1724.94			8/12/2013	11:30 AM		DTW Only
M-173	40.00	1749.88	27.88		1722.00			8/12/2013	11:38 AM		DTW Only

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M-174	28.00	1742.29	19.96		1722.33			8/12/2013	11:44 AM		DTW Only
M-175	29.00	1742.74	21.01		1721.73			8/12/2013	11:45 AM		DTW Only
M-176	30.00	1745.35	23.88		1721.47			8/12/2013	11:47 AM		DTW Only
M-177	30.00	1743.23	21.71		1721.52			8/12/2013	11:48 AM		DTW Only
MW-K4	50	1614.96	27.71		1587.25	7.63		8/29/2013	9:00 AM		pH, TDS, Cr, ClO_4
MW-K5	44	1598.87	30.94		1567.93	7.36		8/29/2013	7:26 AM		pH, TDS, Cr, ClO_4
PC-18	52	1618.39	28.32		1590.07	7.78		8/28/2013	1:12 PM		pH, TDS, Cr, ClO_4
PC-53	33	1595.17	28.31		1566.86	7.55		8/29/2013	7:12 AM		pH, TDS, Cr, ClO_4
PC-55	54.9	1618.46	27.31		1591.15	7.56		8/29/2013	10:45 AM		pH, TDS, Cr, ClO_4
PC-56	55	1568.25	22.08		1546.17	8.48		8/28/2013	10:45 AM		pH, TDS, Cr, ClO_4
PC-58	33	1,567.01	22.86		1544.15	7.97		8/28/2013	10:27 AM		pH, TDS, Cr, ClO_4
PC-59	35	1567.92	20.31		1547.61	8.92		8/28/2013	11:26 AM		pH, TDS, Cr, ClO_4
PC-60	40.0	1568.38	21.28		1547.10	8.89		8/28/2013	11:07 AM		pH, TDS, Cr, ClO_4
PC-62	38.0	1567.83	19.29		1548.54	8.04		8/28/2013	11:45 AM		pH, TDS, Cr, ClO_4
PC-68	55.3	1566.97	19.41		1547.56	8.14		8/28/2013	12:04 PM		pH, TDS, Cr, ClO_4
PC-86	28.0	1553.85	12.62		1541.23	8.61		2/28/2013	10:04 AM		pH, TDS, Cr, ClO_4
PC-90	15.0	1550.46	6.07		1544.39	7.48		8/28/2013	9:12 AM		pH, TDS, Cr, ClO_4
PC-91	37.0	1552.33	11.94		1540.39	8.02		8/28/2013	9:27 AM		pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 3rd Quarter Groundwater Monitoring, Aug. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
PC-92	22.0	1552.05			1552.05	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
PC-94	20.0	1548.95	12.78		1536.17	7.71		8/28/2013	9:45 AM		pH, TDS, Cr, ClO_4
PC-95	35.0	1550.62			1550.62					Destroyed years ago	pH, TDS, Cr, ClO_4
PC-97	33.5	1548.53	4.71		1543.82	6.96		8/28/2013	8:50 AM		pH, TDS, Cr, ClO_4
PC-98R	40.5	1593.35	23.31		1570.04	7.50		8/29/2013	10:12 AM		pH, TDS, Cr, ClO_4
PC-99R2/R3	55.3	1552.48	15.21		1537.27	7.39		8/5/2013	12:43 PM		pH, TDS, Cr, ClO_4
PC-101R	50.5	1618.04	29.07		1588.97	7.36		8/29/2013	8:41 AM		pH, TDS, Cr, ClO_4
PC-103	29.5	1599.49	22.96		1576.53	7.91		8/29/2013	10:01 AM		pH, TDS, Cr, ClO_4
PC-115R	55.5	1554.71	12.84		1541.87	7.33		8/5/2013	12:46 PM		pH, TDS, Cr, ClO_4
PC-116R	55.5	1552.10	15.73		1536.37	7.32		8/5/2013	12:50 PM		pH, TDS, Cr, ClO_4
PC-117	53.0	1552.26	14.08		1538.18	7.60		8/5/2013	12:55 PM		pH, TDS, Cr, ClO_4
PC-118	51.0	1554.53	9.94		1544.59	7.54		8/5/2013	12:59 PM		pH, TDS, Cr, ClO_4
PC-119	47.0	1554.66	7.65		1547.01	7.52		8/5/2013	1:03 PM		pH, TDS, Cr, ClO_4
PC-120	47.0	1554.64	5.60		1549.04	7.34		8/5/2013	1:10 PM		pH, TDS, Cr, ClO_4
PC-121	38.5	1554.10	5.45		1548.65	7.28		8/5/2013	1:13 PM		pH, TDS, Cr, ClO_4
PC-122	38.0	1618.02	32.97		1585.05	7.17		8/29/2013	6:57 AM		pH, TDS, Cr, ClO_4
PC-123	34.70	1626.44	22.68		1603.76	7.20	7.51	8/21/2013	4:31 AM		pH, TDS, Cr, ClO_4
PC-124	34.60	1635.73	25.18		1610.55	7.03	10.49	8/20/2013	6:46 AM		pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 3rd Quarter Groundwater Monitoring, Aug. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
PC-125	33.50	1635.06	23.18		1611.88	7.26	9.38	8/20/2013	7:38 AM		pH, TDS, Cr, ClO_4
PC-126	34.30	1634.33	21.99		1612.34	7.30	11.87	8/20/2013	7:50 AM		pH, TDS, Cr, ClO_4
PC-127	34.70	1632.42	18.50		1613.92	7.37	7.3	8/20/2013	8:01 AM		pH, TDS, Cr, ClO_4
PC-128	34.70	1633.36	18.42		1614.94	7.26	6.99	8/21/2013	4:48 AM		pH, TDS, Cr, ClO_4
PC-129	37.70	1633.99	18.48		1615.51	7.04	8.13	8/22/2013	4:33 AM		pH, TDS, Cr, ClO_4
PC-130	49.70	1633.21	19.02		1614.19	7.30	8.15	8/21/2013	5:07 AM		pH, TDS, Cr, ClO_4
PC-131	39.40	1633.58	10.92		1622.66	7.12	12.63	8/21/2013	5:31 AM		pH, TDS, Cr, ClO_4
PC-132	39.70	1634.84	9.72		1625.12	7.15	11.78	8/21/2013	5:51 AM		pH, TDS, Cr, ClO_4
PC-133	40.2	1553.00			1553.00	7.30		8/5/2013	12:40 PM	roots in well no DTW collected	pH, TDS, Cr, ClO_4
PC-135A	50.8	1618.58	29.21		1589.37	7.21	13.86	9/5/2013	10:28 AM		pH, TDS, Cr, ClO_4
PC-136	40.3	1618.04	33.74		1584.30	7.32	7.20	9/5/2013	9:58 AM		pH, TDS, Cr, ClO_4
PC-144	39.7	1618.63	30.30		1588.33	7.23	7.87	9/5/2013	10:12 AM		pH, TDS, Cr, ClO_4
PC-148	50.2	1617.96	28.96		1589.00	7.38	9.67	9/6/2013	8:50 AM		pH, TDS, Cr, ClO_4
PC-149	50	1618.93	29.65		1589.28	7.29	5.25	9/6/2013	9:28 AM		pH, TDS, Cr, ClO_4
PC-150	45.7	1619.09	29.79		1589.30	7.57	7.45	9/6/2013	10:24 AM		pH, TDS, Cr, ClO_4
INTERCEPTOR WELLS											
I-AA	46.00	1753.93	31.56		1722.37	7.51	5.32	9/4/2013	8:05 AM		pH, TDS, Cr, ClO_4
I-AB	52..0	1753.89	30.83		1723.06	7.38	5.69	9/4/2013	8:12 AM		pH, TDS, Cr, ClO_4
I-AC	50	1752.76	29.07		1723.69			9/4/2013	9:40 AM	No Sample No water pumping out	pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 3rd Quarter Groundwater Monitoring, Aug. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
I-AD	50	1755.39	28.92		1726.47			9/4/2013	9:45 AM	No Sample No water pumping out	pH, TDS, Cr, ClO_4
I-AR	45.00	1758.35	27.63		1730.72	6.96	8.44	8/19/2013	10:17 AM		pH, TDS, Cr, ClO_4
I-B	45.70	1752.87	34.04		1718.83	6.98	8.19	8/14/2013	10:45 AM		pH, TDS, Cr, ClO_4
I-C	43.80	1752.77	27.67		1725.10	7.34	10.1	8/14/2013	10:38 AM		pH, TDS, Cr, ClO_4
I-D	47.70	1752.67	26.75		1725.92	7.49	9.48	8/14/2013	10:36 AM		pH, TDS, Cr, ClO_4
I-E	46.70	1752.36	44.27		1708.09	7.28	10.34	8/14/2013	10:34 AM		pH, TDS, Cr, ClO_4
I-F	45.80	1749.70	24.59		1725.11	7.36	12.53	8/14/2013	10:32 AM		pH, TDS, Cr, ClO_4
I-G	42.60	1752.50	37.86		1714.64	6.89	13.91	8/14/2013	10:29 AM		pH, TDS, Cr, ClO_4
I-H	46.50	1753.21	32.91		1720.30	7.13	13.64	8/14/2013	10:25 AM		pH, TDS, Cr, ClO_4
I-I	44.20	1745.50	23.47		1722.03	7.55	9.83	8/20/2013	9:56 AM		pH, TDS, Cr, ClO_4
I-J	44.50	1750.09	32.15		1717.94	7.32	6.74	8/20/2013	10:08 AM		pH, TDS, Cr, ClO_4
I-K	40.60	1746.04	31.12		1714.92	7.41	6.8	8/20/2013	10:15 AM		pH, TDS, Cr, ClO_4
I-L	43.40	1751.69	26.34		1725.35	7.22	9.53	8/14/2013	10:40 AM		pH, TDS, Cr, ClO_4
I-M	43.70	1752.90	27.89		1725.01	7.56	9.26	8/14/2013	10:35 AM		pH, TDS, Cr, ClO_4
I-N	41.70	1751.45	26.01		1725.44	7.48	10.77	8/14/2013	10:33 AM		pH, TDS, Cr, ClO_4
I-O	43.80	1752.79	32.13		1720.66	6.96	12.18	8/14/2013	10:23 AM		pH, TDS, Cr, ClO_4
I-P	47.80	1751.66	42.52		1709.14	7.07	13.87	8/14/2013	10:24 AM		pH, TDS, Cr, ClO_4
I-Q	43.80	1753.11	28.13		1724.98	6.83	13.29	8/14/2013	10:31 AM		pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 3rd Quarter Groundwater Monitoring, Aug. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
I-R	45.30	1751.35	13.83		1737.52	6.89	9.81	8/14/2013	10:43 AM		pH, TDS, Cr, ClO_4
I-S	47.70	1750.03	24.52		1725.51	7.34	9.54	8/14/2013	10:39 AM		pH, TDS, Cr, ClO_4
I-T	47.80	1751.66	28.93		1722.73	6.45	9.94	8/14/2013	10:28 AM		pH, TDS, Cr, ClO_4
I-U	47.60	1752.17	44.41		1707.76	6.99	13.03	8/14/2013	10:27 AM		pH, TDS, Cr, ClO_4
I-V	47.70	1752.13	31.51		1720.62	7.38	10.93	8/20/2013	9:48 AM		pH, TDS, Cr, ClO_4
I-W	50.00	1751.50	29.40		1722.10	7.35	14.4	9/4/2013	9:29 AM		pH, TDS, Cr, ClO_4
I-X	50.00	1748.60	21.07		1727.53			9/4/2013	8:30 AM	electrical issue no sample collected	pH, TDS, Cr, ClO_4
I-Y	35.00	1751.40	26.06		1725.34	7.13	10.05	9/4/2013	8:22 AM		pH, TDS, Cr, ClO_4
I-Z	37.00	1743.78	34.78		1709.00	7.39	7.99	8/20/2013	10:08 AM		pH, TDS, Cr, ClO_4
OTHER WELLS (OFFSITE)											
PC-37	43.08	1707.72	29.48		1678.24	7.43	9.14	8/21/2013	7:41 AM		pH, TDS, Cr, ClO_4
PC-54	34.60	1704.43	22.97		1681.46	7.35	6.11	8/20/2013	8:43 AM		pH, TDS, Cr, ClO_4
PC-71	33.23	1698.73	26.31		1672.42	7.34	9.06	8/21/2013	6:51 AM		pH, TDS, Cr, ClO_4
PC-72	39.54	1699.43	28.79		1670.64	7.41	8.01	8/21/2013	7:07 AM		pH, TDS, Cr, ClO_4
PC-73	49.44	1699.50	29.96		1669.54	7.37	8.46	8/21/2013	7:23 AM		pH, TDS, Cr, ClO_4
PIONEER CHEMICAL WELL											
H-28A	51.00	1731.75	38.75		1693.00	7.36	12.9	8/21/2013	8:05 AM		(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
DUPLICATE SAMPLES											
VD-1	M-44		23.67			7.37	9.67	8/21/2013	10:19 AM		pH / TDS / Cr / Cr6 / Cl04

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VD-2	PC-144		30.30			7.23	7.87	9/5/2013	10:12 AM		pH, TDS, Cr, ClO_4
VD-3	M-66		30.02			6.88	14.64	8/19/2013	7:44 AM		pH, TDS, Cr, ClO_4
VD-4	M-12A		40.09			7.87	7.87	9/5/2013	11:00 AM		pH / TDS / Cr / Cr6 / Cl04
VD-5	M-14A		31.67			7.71	4.83	9/4/2013	9:12 AM		pH, TDS, Cr, ClO_4
OTHER SAMPLES COLLECTED											
EB-1								8/19/2013	9:52 AM		pH / TDS / Cr / Cr6 / Cl04
EB-1								8/29/2013	9:34 AM		CLO4
EB-2								9/4/2013	10:25 AM		pH / TDS / Cr / Cr6 / Cl04

NOTES:

ART and PC

Monthly

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Chain of Custody Record

TestAmericc
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 2 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below 10 DAY			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen- Monthly ART and PC Wells pg 1	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_CALCED- TOTAL DISSOLVED	3140_LL- PERCHLORATE	CR 200.7 - 200.7
ART-1	8-5-13	1201 P	NORMAL	WATER	2		1	1	3
ART-2		1159A	NORMAL	WATER	2		1	1	3
ART-3		1148A	NORMAL	WATER	2		1	1	3
ART-4		1144A	NORMAL	WATER	2		1	1	3
ART-6		1137A	NORMAL	WATER	2		1	1	3
ART-7		1211P	NORMAL	WATER	2		1	1	3
ART-8		1152A	NORMAL	WATER	2		1	1	3
ART-9		1214P	NORMAL	WATER	2		1	1	3
PC-99R2/R3		1243P	NORMAL	WATER	2		1	1	3
PC-115R		246P	NORMAL	WATER	2		1	1	3
PC-116R		1250P	NORMAL	WATER	2		1	1	3
PC-117		1255P	NORMAL	WATER	2		1	1	3

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	8-5-13 1410		TA	8/6/13 1710
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	PG 2 OF 2 COC's
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen- Monthly ART and PC Wells pg 2	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_CALCED- TOTAL DISSOLVED SOLIDS	314.0_LL- PERCHLORATE	CR 200.7 - 200.7
PC-118	8-5-13	1259	NORMAL	WATER	2		1	1	3
PC-119	8-5-13	1039	NORMAL	WATER	2		1	1	3
PC-120	8-5-13	1102	NORMAL	WATER	2		1	1	3
PC-121	8-5-13	1137	NORMAL	WATER	2		1	1	3
PC-133	8-5-13	1240	NORMAL	WATER	2		1	1	3

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	8-5-13/1415		TA	8/5/13 1415
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen Northshore Rd LVW 0.55	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	CLO4, 314.0	tds,pH	CR															
I-S	8/14/2013	145p	NORMAL	WATER	3		1	1	4															
I-C	8/14/2013	140p	NORMAL	WATER	3		1	1	4															
I-N	8/14/2013	122p	NORMAL	WATER	3		1	1	4															
I-H	8/14/2013	1251p	NORMAL	WATER	3		1	1	4															
I-O	8/14/2013	1241p	NORMAL	WATER	3		1	1	4															
I-P	8/14/2013	1247p	NORMAL	WATER	3		1	1	4															
I-D	8/14/2013	135p	NORMAL	WATER	3		1	1	4															
I-G	8/14/2013	105p	NORMAL	WATER	3		1	1	4															
I-U	8/14/2013	1255p	NORMAL	WATER	3		1	1	4															
I-M	8/14/2013	130p	NORMAL	WATER	3		1	1	4															
I-T	8/14/2013	1259p	NORMAL	WATER	3		1	1	4															
I-E	8/14/2013	1325p	NORMAL	WATER	3		1	1	4															

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8/14-13			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below ______			
FAX:	[x] 2 weeks			SDG No.
Project Name: Envirogen Northshore Rd LVW 0.55	[ ] 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	[ ] 2 days			
P O # 3693	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	CLO4, 314.0	tds,pH	CR
I-Q	8/14/2013	112p	NORMAL	WATER	3		1	1	4
I-F	8/14/2013	115p	NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4
	8/14/2013		NORMAL	WATER	3		1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification
[x] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* *Poison B* [ ] *Unknown* [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] *Return To Client* [ ] *Disposal By Lab* [x] *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8-14-13/	[signature]	[illegible]	[illegible]
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
M-64	8-19-13	719a	NORMAL	WATER	3		4	1	1	
M-65	8-19-13	939a	NORMAL	WATER	3		4	1	1	
M-66	8-19-13	755a	NORMAL	WATER	3		4	1	1	
M-79	8-19-13	812a	NORMAL	WATER	3		4	1	1	
M-69	8-19-13	844a	NORMAL	WATER	3		4	1	1	
M-135	8-19-13	859a	NORMAL	WATER	3		4	1	1	
M-131	8-19-13	930a	NORMAL	WATER	3		4	1	1	
M-57A	8-19-13	947a	NORMAL	WATER	3		4	1	1	
M-37	8-19-13	1032a	NORMAL	WATER	3		4	1	MB	1
I-L	8-19-13	908a	NORMAL	WATER	3		4	1	1	
I-R	8-19-13	914a	NORMAL	WATER	3		4	1	1	
I-B	8-19-13	920a	NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8-19-13 1700		TA	8/19/13 1900
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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17461 Derian Ave
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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			
FAX:	☑ 2 weeks			SDG No.
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
EB-1 ✓	8-19-13	952a	NORMAL	WATER	3		4	1		1
M-25 ✓	8-19-13	1052	NORMAL	WATER	3		4	1	1	
I-AR ✓	8-19-13	1019a	NORMAL	WATER	3		4	1	1	
VD-3 ✓	8-19-13	755a	NORMAL	WATER	3		4	1	1	
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8/19/13 1900		TA	8/20/13 1707
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			
FAX:	☑ 2 weeks			SDG No.
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
PC-124	8-20-13	731a	NORMAL	WATER	3		4	1	1	
PC-125	8-20-13	745a	NORMAL	WATER	3		4	1	1	
PC-126	8-20-13	757a	NORMAL	WATER	3		4	1	1	
PC-127	8-20-13	810a	NORMAL	WATER	3		4	1	1	
M-95	8-20-13	831a	NORMAL	WATER	3		4	1		1
PC-54	8-20-13	850a	NORMAL	WATER	3		4	1	1	
M-48A	8-20-13	905a	NORMAL	WATER	3		4	1	1	
M-23	8-20-13	923a	NORMAL	WATER	3		4	1	1	
I-V	8-20-13	950a	NORMAL	WATER	3		4	1	1	
I-I	8-20-13	958a	NORMAL	WATER	3		4	1	1	
I-2	8-20-13	1003a	NORMAL	WATER	3		4	1	1	
I-J	8-20-13	1010a	NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8/20/13 1248			8/20/13 1248
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TEST

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	**Analysis Turnaround Time**			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below _____			
FAX:	☑ 2 weeks			SDG No.
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
I-K ✓	8.20.13	1017a	NORMAL	WATER	3		4	1	1	
M-68 ✓	8.20.13	1030a	NORMAL	WATER	3		4	1	1	
M-107 ✓	8.20.13	1045a	NORMAL	WATER	3		4	1	1	
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8.20.2013 12:45			8/20/13 12:45
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☒ 2 weeks			
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
PC-123	8-21-13	440A	NORMAL	WATER	3		4	1	1	
PC-128		500A	NORMAL	WATER	3		4	1	1	
PC-130		522A	NORMAL	WATER	3		4	1	1	
PC-131		543A	NORMAL	WATER	3		4	1	1	
PC-132		606A	NORMAL	WATER	3		4	1	1	
PC-71		701A	NORMAL	WATER	3		4	1	1	
PC-72		718A	NORMAL	WATER	3		4	1	1	
PC-73		735A	NORMAL	WATER	3		4	1	1	
PC-37		750A	NORMAL	WATER	3		4	1	1	
M-44		1030A	NORMAL	WATER	3		4	1		1
VD-1	↓	1032A	NORMAL	WATER	3		4	1		1
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification

☒ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☒ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8-21-13/1400		TA	8/21/13 1417
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmericc

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below ____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen Quarterly RCRA	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	CLO4 314.0	Cr, B, Iron, Mn, Na 200.7 - 200.7	300_ORGFM_28D - 300: Cl/SO4, 150.1-150: pH, 2540C_Calcd - 2540: TDS, 2510B - 2510: Conductance	5310C - 5310C: TOC	9020B- 9020, TOX	420.1 - 420, Phenols, Total
H-28A ✓	8-21-13	820A	NORMAL	WATER	3		1	4	1	6	3	3
M-6A ✓	8-21-13	845a	NORMAL	WATER	3		1	4	1	6	3	3

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* *Disposal By Lab* ☐ *Archive For* ☒ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Braun	Envirogen	8-21-13/ 1900		TA	8/22/13 1900
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TEST

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
PC-129	✓ 8-22-13	446a	NORMAL	WATER	3		4	1	1	
M-19	✓ 8-22-13	541a	NORMAL	WATER	3		4	1	1	
M-35	✓ 8-22-13	526a	NORMAL	WATER	3		4	1	1	
M-74	✓ 8-22-13	603a	NORMAL	WATER	3		4	1	1	
M-73	✓ 8-22-13	619a	NORMAL	WATER	3		4	1	1	
M-81A	✓ 8-22-13	930a	NORMAL	WATER	3		4	1	1	
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michael Bowen	Envirogen	8-22-13 1400	[illegible]	TA	8/22/13 1900
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			
FAX:	☐ 2 weeks			SDG No.
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	354.0 Cald - TDS	314.0 CLO4	pH	Total Chrome
PC-86	8.28.13	1013A	Normal	water	3		1	1	1	4
PC-90		917A					1	1	1	4
PC-91		935A					1	1	1	4
PC-97		902A					1	1	1	4
PC-18		120P					1	1	1	4
ARP-1		102P					1	1	1	4
PC-58		1035A					1	1	1	4
PC-56		1059A					1	1	1	4
PC-60		1117A					1	1	1	4
PC-59		1135A					1	1	1	4
PC-62		1155A					1	1	1	4
PC-68		1218P					1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* *Disposal By Lab* *Archive For* ☑ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	8.28.13 1400		TALU	8-28-13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☐ 2 weeks			
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	354or Calcd TDS	340.0 Calcd	pH	Total Chrome
PC-94	8.28.13	950A	Normal	water	3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* *Disposal By Lab* ☐ *Archive For* ~~1~~ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	8.28.13 1400		TALV	8-29-13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☐ 2 weeks			
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Henderson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TDS	pH	CLOY	Total Chrome
ART-7B	8-29-13	651a	Normal	Water	3		1	1	1	4
PC-122		703a			3		1	1	1	4
PC-53		717a			3		1	1	1	4
MW-K5		731a			3		1	1	1	4
ARP-7		747a			3		1	1	1	4
ARP-6B		803a			3		1	1	1	4
ARP-5A		817a			3		1	1	1	4
ARP-4A		830a			3		1	1	1	4
MW-K4		909a			3		1	1	1	4
PC-101R		849a			3		1	1	1	4
ARP-3A		927a			3		1	1	1	4
EB-1		934a			1 3 MB		MB	MB	1	MB

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client Disposal By Lab Archive For ~~☑~~ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	8-29-13 1345		TALV	8-29-13 1345
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☐ 2 weeks			
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TDS 2540C_calcd	pH	CLO4 314.0	Total Chrome 200.7
ARP-2A	8/29/13	951a	Normal	Water	3		1	1	1	4
PC-103	↓	1005a	↓	↓	3		1	1	1	4
PC-98R		1031a			3		1	1	1	4
PC-55		1152a			3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* *Archive For* ☑ *Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	8-29-13 1345		TALV	8 29 13 1345
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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17461 Derian Ave
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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☐ 2 weeks			
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	pH	TDS	CLCL	Total Chrome
M-B-3	8/30/13	1270	Normal	Water	3		1	1	1	1

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client Disposal by Lab Archive For ☒ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Mashella Bowen	Envirogen	8-30-13			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Shipped via FedEx
From Envirogen

Irvine
17461 Derian Ave
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Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TEST

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	**Analysis Turnaround Time**			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
M-80	9-4-13	716A	NORMAL	WATER	3		4	1	1	
M-70	9-4-13	726A	NORMAL	WATER	3		4	1	1	
M-71	9-4-13	935A	NORMAL	WATER	3		4	1	1	
M-72	9-4-13	747a	NORMAL	WATER	3		4	1	1	
I-AA	9-4-13	807a	NORMAL	WATER	3		4	1	1	
I-AB	9-4-13	814a	NORMAL	WATER	3		4	1	1	
I-V	9-4-13	824a	NORMAL	WATER	3		4	1	1	
M-22A	9-14-13	837a	NORMAL	WATER	3		4	1	1	
M-38 *	9-14-13	850A	NORMAL	WATER	3		4	1		1
M-14A	9-14-13	918A	NORMAL	WATER	3		4	1	1	
YD-5	9-14-13	9:19A	NORMAL	WATER	3		4	1	1	
I-W	9-14-13	931A	NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☑ Archive For 1 Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Mukhil Prakash	Envirogen	9-4-13/ 1400		TB	9/9/13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
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Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below ______			
FAX:	[x] 2 weeks			SDG No.
Project Name: Envirogen- 3rd Quarter M Wells	[ ] 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	[ ] 2 days			
P O # 3693	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
EB-2 *	9-4-13	1025A	NORMAL	WATER	3		4	1		1
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification
[x] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* *Poison B* [ ] *Unknown* [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] *Return To Client* [ ] *Disposal By Lab* [x] *Archive For 1 Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	9-4-13/1400	[signature]	[signature]	9/4/13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
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Chain of Custody Record

TestAmeric

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	TestAmerica Laboratories, Inc.
Envirogen Technolcgies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	COC No:
510 South Fourth Street	Analysis Turnaround Time			1 of 1 COCs
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			Job No.
702-371-9307	TAT if different from Below _____			
FAX:	☑ 2 weeks			SDG No.
Project Name: Envirogen Quarterly RCRA	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	ClO4 314.0	Cr, B, Iron, Mn, Na 200.7 - 200.7	300_ORGFM_28D - 300: Cl/SO4, 150.1-150: pH, 2540C_Calcd - 2540: TDS, 2510B - 2510: Conductance	5310C - 5310C TOC	9020B- 9020, TOX	420.1 - 420, Phenols, Total
M-5A	9.4.13	1020A	NORMAL	WATER	8		1	4	1	6	3	3
M-7B	9-4-13	1103A	NORMAL	WATER	8		1	4	1	6	3	3

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* *Disposal By Lab* ☑ *Archive For 1 months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michael Brown	Envirogen	9-4-13 1430			
Relinquished by:	Company:	Date/Time:	Received by:	Company: TA	Date/Time: 9/5/13 1000
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

rvine
7461 Derian Ave
uite 100
rvine, CA 92614
hone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmericc
THE LEADER IN ENVIRONMENTAL TEST NG

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
nvirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
10 South Fourth Street	Analysis Turnaround Time			Job No.
lenderson, NV 89015	Calendar (C) or Work Days (W) WORK			
02-371-9307	TAT if different from Below _____			SDG No.
AX:	☑ 2 weeks			
roject Name: Envirogen- 3rd Quarter M Wells	☐ 1 week			
ite: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	ClO4	TDS, pH	TDS, pH, CRVI
M-31A	9-5-13	652a	NORMAL	WATER	3		4	1	1	
PC-136		1005a	NORMAL	WATER	3		4	1	1	
PC-144		1019a	NORMAL	WATER	3		4	1	1	
PC-135A		1040a	NORMAL	WATER	3		4	1	1	
M-12A		1106a	NORMAL	WATER	3		4	1		1
M-11		1156a	NORMAL	WATER	3		4	1		1
VD-2		1020a	NORMAL	WATER	3		4	1	1	
VD-4		1108a	NORMAL	WATER	3		4	1		1
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

reservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

ossible Hazard Identification

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☑ Archive For 1 Months

pecial Instructions/QC Requirements & Comments:

	Company:	Date/Time:	Received by:	Company:	Date/Time:
linquished by: Mitchell Brown	Envirogen	9-5-13 1350			
linquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
linquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☐ 2 weeks			
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	200.7-B, cr, Iron, Mn	SM4500NH3 D - Ammonia, TKN	300.1B 28D - Chlorate	300_ORGANS - (wet) Nitrate Nitrite N	300_oxgen_28D Chloride	150.1 pH	2540c_calcd TDS	218.6 dissolved Hex	314.0 ClO4
M-10	9-5-13	105p	Normal	water	6		4	3	6	1	1	1	1	1	1

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client Disposal by Lab Archive For ☑ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	9-5-13 1300		Tx	9/6/13 1305
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☐ 2 weeks			
Project Name: Envirogen	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	cloy	pH	TDS	GR
PC-150	9-6-13	1104A	Normal	water	3		1	1	1	4
PC-149		955a			3		1	1	1	4
PC-148		922a			3		1	1	1	4
M-99		740a			3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client Disposal By Lab Archive For ☑ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	9-6-13 1250		TA	9/6/13 1250
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Shipping Summary

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Bottle Order Information

Bottle Order:	*3rd Qtr - pH, TDS, Cr, CLO4*
Bottle Order #:	*5498*
Date Order Posted:	*7/11/2013 12:34:33PM*
Order Status:	*Ready To Process*
Prepared By:	*Sushmitha Reddy*
Deliver By Date:	***7/19/2013 11:59:00PM***

Project/Event Information

Project Manager:	*Sushmitha Reddy*
Lab Project Number:	*44008877*
Project Ref:	*NERT - Quarterly 3rd*
Event Desc:	*NERT 3rd Qtr*

Client Samples: ARP-1, ARP-2A, ARP-3A, ARP-4A, ARP-5A, ARP-6B, ARP-7, ART-1, ART-3, ART-4, ART-6, ART-8, ART-9, I-AA, I-AB, I-AC, I-AD, I-AR, I-B, I-C, I-D, I-E, I-F, I-G, I-H, I-I, I-J, I-K, I-L, I-M, I-N, I-O, I-P, I-Q, I-R, I-S, I-T, I-U, I-V, I-W, I-X, I-Y, I-Z, L-635, L-637, M-101, M-131, M-135, M-14A, M-19, M-22A, M-23, M-25, M-31A, M-35, M-48A, M-50, M-52, M-57A, M-64, M-65, M-66, M-67, M-68, M-69, M-70, M-71, M-72, M-73, M-74, M-79, M-80, M-81A, M-83, M-98, M-99, MW-K4, MW-K5, PC-101R, PC-103, PC-115R, PC-116R, PC-117, PC-118, PC-119, PC-120, PC-121, PC-122, PC-123, PC-124, PC-125, PC-126, PC-127, PC-128, PC-129, PC-130, PC-131, PC-132, PC-133, PC-135A, PC-136, PC-144, PC-148, PC-149, PC-150, PC-18, PC-37, PC-53, PC-54, PC-55, PC-56, PC-58, PC-59, PC-60, PC-62, PC-68, PC-71, PC-72, PC-73, PC-86, PC-90, PC-91, PC-94, PC-97, PC-98R, PC-99R2/R3

Sets	Bottles/Set	Bottle Type Description	Field Filtered	Preservative	Method	Matrix	Comments
129	1	Plastic 500ml - with Nitric Acid		Nitric Acid	200.7 - Chromium	Water	
129	1	Plastic 500ml - unpreserved		None	2540C_Calcd - Total Dissolved Solids SM4500_H+ - pH	Water Water	
129	1	Plastic 125mL - sterile		None		Water	Perchlorate

Please notify us immediately if an error is found in shipment

Shipping Summary

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

S448-33741

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Bottle Order Information

Bottle Order:	*NERT 3rd Qtr - pH, Cr, CLO4, TDS, CrVI*
Bottle Order #:	*5499*
Date Order Posted:	*7/11/2013 12:35:24PM*
Order Status:	*Ready To Process*
Prepared By:	*Sushmitha Reddy*
Deliver By Date:	***7/19/2013 11:59:00PM***

Project/Event Information

Project Manager:	*Sushmitha Reddy*
Lab Project Number:	*44008877*
Project Ref:	*NERT - Quarterly 3rd*
Event Desc:	*NERT 3rd Qtr*

Client Samples: M-100, M-11, M-12A, M-36, M-37, M-38, M-44, M-95, M-96

Sets	Bottles/Set	Bottle Type Description	Field Filtered	Preservative	Method	Matrix	Comments
15	1	Plastic 500ml - with Nitric Acid		Nitric Acid	200.7 - Chromium	Water	
15	1	Plastic 500ml - unpreserved		None	2540C_Calcd - Total Dissolved Solids 218.6_ORGFM - Chromium, hexavalent SM4500_H+ - pH	Water Water Water	
15	1	Plastic 125mL - sterile		None		Water	Perchlorate

Please notify us immediately if an error is found in shipment

Shipping Summary

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Bottle Order Information

Bottle Order:	*NERT - Quarterly 3rd*
Bottle Order #:	*5497*
Date Order Posted:	*7/11/2013 12:20:49PM*
Order Status:	*Ready To Process*
Prepared By:	*Sushmitha Reddy*
Deliver By Date:	***7/19/2013 11:59:00PM***

Project/Event Information

Project Manager:	*Sushmitha Reddy*
Lab Project Number:	*44008877*
Project Ref:	*NERT - Quarterly 3rd*
Event Desc:	*NERT 3rd Qtr*

Client Samples: H-28A, M-5A, M-6A, M-7B

Sets	Bottles/Set	Bottle Type Description	Field Filtered	Preservative	Method	Matrix	Comments
4	1	Plastic 500ml - with Nitric Acid		Nitric Acid	200.7 - B, Cr, Iron, Mn, Na	Water	
4	1	Amber Glass 500mL - Sulfuric Acid		Sulfuric Acid	420.1 - Phenols	Water	
4	2	Plastic 500ml - unpreserved		None	2540C_Calcd - Total Dissolved Solids 2510B - Specific Conductance 300_ORGFM_28D - Cl/SO4 SM4500_H+ - pH	Water Water Water Water	
4	1	Amber Glass 250ml - H3PO4		Phosphoric Acid	5310C - Total Organic Carbon	Water	
4	2	Amber Glass 500mL - Sulfuric Acid		Sulfuric Acid	9020B - QUAD TOX (in quadruplicate)	Water	
4	1	Plastic 125mL - sterile		None		Water	Perchlorate

Please notify us immediately if an error is found in shipment

Bottle Order Information

Bottle Order: NERT - Quarterly M-10
Bottle Order #: 4296
Date Order Posted: 3/21/2013 12:00:12PM
Order Status: Ready To Process
Prepared By: Sushmitha Reddy
Deliver By Date: ***6/24/2013 11:59:00PM***
Lab Project Number: 44008210

Order Completion Information

Filled by:
Sent Date:
Sent Via:
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
1	1	1	Plastic 500ml - with Nitric Acid	Nitric Acid	200.7 - B, Cr, Iron, Mn	Water	Normal		
1	1	1	Plastic 500ml - with Sulfuric Acid	Sulfuric Acid	SM4500NH3_D - Ammonia, TIN	Water	Normal		
1	1	1	Plastic 125mL - ethylene diamine	Ethylene Diamine	300.1B_28D - Chlorate	Water	Normal		
1	2	2	Plastic 500ml - unpreserved	None	300_ORGFMS - (MOD) Nitrate-Nitrite as N	Water	Normal		
					300_ORGFM_28D - Chloride	Water	Normal		
					150.1 - pH	Water	Normal		
					2540C_Calcd - Total Dissolved Solids	Water	Normal		
					218.6_ORGFM - Chromium, hexavalent	Water	Normal		
1	1	1	Plastic 125mL - sterile	None		Water	Normal	CLO4	

Notes to Field Staff:

Health and Safety Notes:

Preservative	Comment
Ethylene Diamine	CAUTION! CORROSIVE! CONTAINS ETYLENEDIAMINE. Harmful if inhaled. Use adequate ventilation. Harmful in contact with skin and eyes. If contact is made, FLUSH IMMEDIATELY with water.
Nitric Acid	CAUTION! STRONG OXIDIZER! CONTAINS 1:1 NITRIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sulfuric Acid	CAUTION! CONTAINS 1:1 SULFURIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify us immediately if an error is found in shipment

ENVIROGEN
TECHNOLOGIES

Groundwater Field Log

This Section Contains:

- Water Sampling Field Logs

ENVIROGEN
TECHNOLOGIES

Water Sampling Field Log

Well No.: ARP-1

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 44.2 feet Time: 1254p

Depth to Water: - 23.99 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	20.21 feet	X (0.4893)	1.9	4.41	=	10 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1258p	10	8.13	27.9°C	Clear

Comments:

Sample Collection Time - 109p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-2A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8.29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny, breezy

Well Information:

Total Well Depth: 540 feet Time: 941a

Depth to Water: - 25.51 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	**4-in.**	**6-in**		
Water Column (L):	28.49 feet	X	0.4893	1.9	4.41	=	14 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
942a	14 gal	7.67	27.3°C	Clear

Comments:

Sample Collection Time - 951a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-3A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny, breezy

Well Information:

Total Well Depth: 41.00 feet Time: 912a

Depth to Water: - 26.92 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	14.08 feet	X	0.4893	1.9	4.41	= 7 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
923a	7	7.80	27.8°C	clear

Comments:

EB-1 collected here before moving to next well

CLO4 - 1 btl 934a

Sample Collection Time - 927a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-4A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, sunny, breezy

Well Information:

Total Well Depth: 33.0 feet Time: 826a

Depth to Water: - 29.02 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	3.98 feet	X (0.4893)	1.9	4.41	=	3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
828a	3 gal	7.66	25.7°C	Clear

Comments:

Sample Collection Time - 830a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-5A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, Sunny, Breezy

Well Information:

Total Well Depth: 38.0 feet Time: 812a

Depth to Water: - 32.58 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	5.42 feet	X	0.4893	1.9	4.41	=	3gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
813a	3	7.70	25.5°C	clear

Comments:

Sample Collection Time - 817a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-6B

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny, breezy

Well Information:

Total Well Depth: 43.00 feet Time: 756a

Depth to Water: - 32.21 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	10.79 feet	X	0.4893	1.9	4.41	= 5gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
758a	5	7.38	26.1°C	Clear

Comments:

Sample Collection Time - 803a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-7

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8 29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm sunny, slight breeze

Well Information:

Total Well Depth: 39.20 feet Time: 742c

Depth to Water: - 30.26 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	**4-in.**	**6-in**		
Water Column (L):	8.94 feet	X	0.4893	1.9	4.41	=	4 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
744a	4	7.36	27.2 c	Clear

Comments:

Sample Collection Time - 747a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-1

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

8-7-13

Total Well Depth: 56.0 feet Time: 10:15A

Depth to Water: - 35.03 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	20.97 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1201p	0	7.50	25.0°C	clear

Comments:

Sample Collection Time - 1201p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-1A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm

Well Information:

Total Well Depth: 56.00 feet Time: 1016a

Depth to Water: - 24.06 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	31.94 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- ~~3~~ 0

Water Sampling Field Log

Well No.: ART-2

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information: 8-7-13

Total Well Depth: 56.0 feet Time: 1012a

Depth to Water: - 27.73 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	**4-in.**	**6-in**		
Water Column (L):	28.27 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1157a	0	7.22	26.0°C	clear

Comments:

Sample Collection Time - 1157a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-2A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm

Well Information:

Total Well Depth: 56.00 feet Time: 1013A

Depth to Water: - 26.33 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	29.67 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- ~~3~~ 0

Water Sampling Field Log

Well No.: ART-3

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information: 8-7-13

Total Well Depth: 47.00 feet Time: 1004a

Depth to Water: - 30.74 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	16.26 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1148a	8	7.51	25.6°C	Clear

Comments:

Sample Collection Time - 1148a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-3A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: warm

Well Information:

Total Well Depth: 55.00 feet Time: 1007a

Depth to Water: - 43.85 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	11.15 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3 0

Water Sampling Field Log

Well No.: ART-4

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm

Well Information:

Total Well Depth: 46.00 feet Time: 1002a

Depth to Water: - 28.75 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	17.25 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY
No pump or piping in well

Sample Collection Time -

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 10

Water Sampling Field Log

Well No.: ART-4A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

8-7-13

Total Well Depth: 46.00 feet Time: 1003a

Depth to Water: - 42.27 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	3.73 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1144a	0	7.56	26.0 °C	Clear

Comments:

Sample Collection Time - 1144a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-6

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port O Disposable Bailer ● Electric pump O

Weather Conditions: warm, breezy

Well Information:

Total Well Depth: 36.00 feet Time: 1130a

Depth to Water: - 29.99 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	6.01 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1137a	∅	7.38	25.7°C	Clear

Comments:

Sample Collection Time - 1137a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-7

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 38.90 feet (8-7-13) Time: 956a

Depth to Water: - 31.13 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	6.77 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1211p	8	7.30	25.0°C	Clear

Comments:

Sample Collection Time - 1211p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-7A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm

Well Information:

Total Well Depth: 40.00 feet Time: 957a

Depth to Water: - 32.99 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	7.01 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3 0

Water Sampling Field Log

Well No.: ART-7B

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, some clouds

Well Information:

Total Well Depth: 50.00 feet Time: 619a

Depth to Water: - 35.29 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	14.71 feet	X	0.4893	1.9	4.41	=	65gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
620a	65	6.74	25.0°C	clear

Comments: calibrated Hanna Field Probe Here

7.0 Know value 8.0
6.98 Calib 7.99
28.6°C Temp 28.4°C

Sample Collection Time - 651a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-8

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: warm

Well Information:

Total Well Depth: 50.50 feet Time: 1009a

Depth to Water: - 27.87 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	22.63 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-8A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: warm, breezy

Well Information: 8-7-13

Total Well Depth: 54.00 feet Time: 1010A

Depth to Water: - 27.45 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	26.55 feet	X 0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1152a	0	7.36	25.5°C	clear

Comments:

Sample Collection Time - 1152a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-9

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 43.00 feet (8-7-13) Time: 954a

Depth to Water: - 32.83 feet

		Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in	
Water Column (L):	10.17 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1214p	0	7.34	25.1°C	Clear

Comments:

Sample Collection Time - 1214p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: H-28A

Project No.: _____ Site: TRONOX LLC- HENDERSON, NEVADA

Sampling Team: Michele Brown, Wendy prescott Date: 8-21-13

Sampling Method: Electric Pump O Dedicated bailer O Non Dedicated Bailer ● (disposable)

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 51.00 feet Time: 805a

Depth to Water: 38.75 feet

Well Diameter (circle one): (2-in.) 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
12.25	X 3	

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
807a	0 gal	7.36	12.90 mS/cm	26.6 °C	clear with some silt

Sample Appearance: some silt in sample

Sample Collection - Time Start: 810a Time Finished: 820a

Analyses:	CLO4	B, Cr, Iron, Mn, Na	pH, TDS, Chloride, Conductance	TOC	TOX	Phenols, Total
Bottles:	1 btl	1 btl	2 btls	2 btls	1 btl	1 btl

TOTAL BOTTLES- 8

Comments: Well not purged due to location

Dup EC reading

12.83 EC 26.9°C Temp

Water Sampling Field Log

Well No.: L-635

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: _____ feet Time: 135p

Depth to Water: - _____ feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	_____ feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: NO ACCESS

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: L-637

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: _____ feet Time: 135p

Depth to Water: - _____ feet

		Well Diameter (circle one)			Purge Volume
		2-in.	**4-in.**	**6-in**	
Water Column (L):	_____ feet X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: NO ACCESS

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: M-5A

Project No.: _____ Site: TRONOX LLC- HENDERSON, NEVADA

Sampling Team: Michele Brown, Wendy prescott Date: 9-4-13

Sampling Method: Electric Pump ● Dedicated bailer O Non Dedicated Bailer O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 50.00 feet Time: 950a

Depth to Water: 37.58 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
12.42		
8.07	X 3	24 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
952	----	----	----	----	
1001a	8 gal	7.61	12.03 mS/cm	27.8°C	Clear
1009a	16 gal	7.62	12.61 mS/cm	26.7°C	Clear
1019a	24 gal	7.14	12.86 mS/cm	26.5°C	Clear
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 1020A Time Finished: 1020A

Analyses:	CLO4	B, Cr, Iron, Mn, Na	pH, TDS, Chloride, Conductance	TOC	TOX	Phenols, Total
Bottles:	1 btl	1 btl	2 btls	2 btls	1 btl	1 btl

TOTAL BOTTLES- 8

Comments: EB-2 taken here before moving to next well 1025A

CLO4, TDS, pH, CR, CRVI

Dup EC

12.79 EC

26.4°C Temp

Water Sampling Field Log

Well No.: M-6A

Project No.: _____ Site: TRONOX LLC- HENDERSON, NEVADA

Sampling Team: Michele Brown, Wendy prescott Date: 8-21-13

Sampling Method: Electric Pump O Dedicated bailer ● Non Dedicated Bailer O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 46.00 feet Time: 828a

Depth to Water: 38.44 feet

Well Diameter (circle one): (2-in.) 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
7.56	X 3	

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
830a	0 gal	7.45	11.15 mS/cm	26.1°C	silty

Sample Appearance: silty

Sample Collection - Time Start: 834a Time Finished: 845a

Analyses:	CLO4	B, Cr, Iron, Mn, Na	pH, TDS, Chloride, Conductance	TOC	TOX	Phenols, Total
Bottles:	1 btl	1 btl	2 btls	2 btls	1 btl	1 btl

TOTAL BOTTLES- 8

Comments:

Well not purged due to location

Water Sampling Field Log

Well No.: M-MB

Project No.: _____ Site: TRONOX LLC- HENDERSON, NEVADA

Sampling Team: Michele Brown, Wendy prescott Date: 9-4-13

Sampling Method: Electric Pump MB Dedicated bailer O Non Dedicated Bailer O disposable bailer

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 55.00 feet Time: 1053*

Depth to Water: 35.66 feet

19.34

Well Diameter (circle one): (2-in.) 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
_____	X 3	_____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1055a	gal	7.52	10.02 mS/cm	28.6 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: 1103a Time Finished: 1103a

Analyses:	CLO4	B, Cr, Iron, Mn, Na	pH, TDS, Chloride, Conductance	TOC	TOX	Phenols, Total
Bottles:	1 btl	1 btl	2 btls	2 btls	1 btl	1 btl

TOTAL BOTTLES- 8

Comments: Due to washouts - NO access with truck + trailer well not purged Sampled with bailer

Water Sampling Field Log

Well No.: M-10

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" ●

Weather Conditions: hot humid

Well Information:

Total Well Depth: 69.45 feet Time: 1210p

Depth to Water: 46.81 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 22.64 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 33.28 gal. (Well Volume (WV)) * 3 (Purge Factor) = 100 (Purge Volume)

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1215p	----	----	----	----	
1230p	34 gal	7.61	3.61 mS/cm	26.2°C	orangish
1246p	67 gal	7.56	3.54mS/cm	26.3°C	slightly orange
103p	100 gal	7.25	3.49 mS/cm	27.7°C	Very slight orange
	gal				
	gal				
	gal				

Sample Appearance: Very slightly orange

Sample Collection - Time Start: 105p Time Finished: 105p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

See bottle order sup. cooler

TOTAL BOTTLES: 6

Comments:

Dup EC 3.47 EC 27.9°C Temp

Water Sampling Field Log

Well No.: M-11

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" ●

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 58.00 feet Time: 1115A

Depth to Water: 42.38 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 15.62 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 22.96 gal. (Well Volume (WV)) * 3 (Purge Factor) = 69 gal (Purge Volume)

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1117A	---	---	---	---	
1127A	23 gal	8.21	3.61 mS/cm	26.1°C	slight yellow tint
1140A	46 gal	8.02	3.51 mS/cm	25.9°C	slightly yellow
1154A	69 gal	8.10	3.50 mS/cm	25.4°C	slightly yellow
	gal				
	gal				
	gal				

Sample Appearance: slightly yellow

Sample Collection - Time Start: 1156A Time Finished: 1156A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-12A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Hot, humid

Well Information:

Total Well Depth: 50.0 feet Time: 11:00

Depth to Water: 40.09 feet

Height of Water Column (L): 9.91 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV) = 1.58 gal. * Purge Factor 3 = Purge Volume 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1101A	-----	---MD	---	----	
1103A	2 gal	7.69	7.27 mS/cm	25.6°C	light yellow
1104A	4 gal	7.82	7.87 mS/cm	25.1°C	light yellow
1105A	5 gal	7.87	7.87 mS/cm	25.0°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 1106A Time Finished: 1106A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

VD-4 collected here 3 btls 1108A

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-14A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 42.40 feet Time: 912A

Depth to Water: 31.69 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
10.73 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.71 gal.	*	3	=	5gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
913a	----	----	----	----	
915a	2 gal	7.72	5.31 mS/cm	27.1°c	clear
916a	4 gal	7.74	4.89 mS/cm	26.4°c	clear
917a	5 gal	7.71	4.83 mS/cm	26.0°c	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 918a Time Finished: 918a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

VD-5 collected here TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-19

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm

Well Information:

Total Well Depth: 41.20 feet Time: 534a

Depth to Water: 34.43 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):			Well Volume (WV)	Purge Factor	Purge Volume
6.77 feet	* 0.16 gal/ft	* 0.65 gal/ft * 1.47 gal/ft	= 1.08 gal.	* 3	= 3gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
535a	---	---	---	---	
537a	1 gal	7.45	5.74 mS/cm	25.6°c	Clear
538a	2 gal	7.37	5.89 mS/cm	25.5°c	Clear
539a	3 gal	7.39	5.99 mS/cm	25.0°c	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 541a Time Finished: 541a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-22A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid, sunny

Well Information:

Total Well Depth: 36.92 feet Time: 831a

Depth to Water: 29.49 feet

Height of Water Column (L): 7.43 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV): 1.18 gal. * Purge Factor: 3 = Purge Volume: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
832a	----	----	----	----	
834a	2 gal	7.08	12.53 mS/cm	26.8 °C	yellow
835a	3 gal	7.09	13.35 mS/cm	26.3 °C	yellow
836a	4 gal	7.12	13.43 mS/cm	26.0 °C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 837a Time Finished: 837a

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-23

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot sunny

Well Information:

Total Well Depth: 44.47 feet Time: 915a

Depth to Water: 33.10 feet

Height of Water Column (L): 11.37 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV): 1.81 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
916a	-----	---	-----	-----	
918a	2 gal	7.72	5.89 mS/cm	27.2°c	clear
920a	4 gal	7.68	5.44 mS/cm	25.9°c	clear
921a	5 gal	7.55	5.39 mS/cm	25.5°c	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 923a Time Finished: 923a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: Dup EC 5.42 EC 25.8°c Temp

Water Sampling Field Log

Well No.: M-25

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 41.47 feet Time: 1038a

Depth to Water: 30.28 feet

Height of Water Column (L): 11.19 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): = 1.79 gal. * Purge Factor: 3 = **Purge Volume**: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1040a	----	----	----	----	
1043a	2 gal	7.27	936 mS/cm	26.9°C	yellow
1045a	4 gal	7.39	899 mS/cm	26.0°C	yellow
1046a	5 gal	7.31	891 mS/cm	25.8°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 1050a Time Finished: 1050a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-31A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, humid

Well Information:

Total Well Depth: 55.00 feet Time: 643a

Depth to Water: 42.13 feet

Height of Water Column (L): 12.87 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 2.05 gal.	* 3	= 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
644a	---	---	---	---	
647a	2 gal	7.41	1.07 mS/cm	23.6°C	silty
649a	4 gal	7.48	1.00 mS/cm	23.2°C	clear
650a	6 gal	7.52	1.01 mS/cm	23.1°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 652a Time Finished: 652a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-35

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm

Well Information:

Total Well Depth: 39.70 feet Time: 516a

Depth to Water: 31.09 feet

Height of Water Column (L): 8.61 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV) = 1.37 gal. * Purge Factor 3 = Purge Volume 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
518a	---	---	---	---	
521a	2 gal	7.23	5.46 mS/cm	25.7°c	clear slight yellow
523a	3 gal	7.21	5.60 mS/cm	25.8°c	slightly yellow
524a	4 gal	7.18	5.67 mS/cm	25.8°c	very slight yellow
	gal				
	gal				
	gal				

Sample Appearance: Very slightly yellow

Sample Collection - Time Start: 526a Time Finished: 526a

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-36

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm

Well Information:

Total Well Depth: 37.85 feet Depth to dirt Time: 1630a

Depth to Water: 20.59 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): _____ feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Well Volume (WV)	Purge Factor	Purge Volume

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	----	----	----	----	
	gal				
	gal				well damaged
	gal				No sample
	gal				NO DTW
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments: well washed away
metal outside casing gone
pvc broke - dirt filled up well
bailer stuck in well

Water Sampling Field Log

Well No.: M-37

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 37.18 feet Time: 1025a

Depth to Water: 29.77 feet

Height of Water Column (L): 7.41 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV) = 1.18 gal. * Purge Factor 3 = Purge Volume 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1026a	----	----	----	----	
1028a	2 gal	7.14	8.57 mS/cm	27.5°c	clear
1029a	3 gal	7.21	8.57 mS/cm	26.7°c	clear
1030a	4 gal	7.20	8.51 mS/cm	26.5°c	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection Time Start: 1032a Time Finished: 1032a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRW
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-38

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Electric Pump O Dedicated Bailer ● Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot humid

Well Information:

Total Well Depth: 36.82 feet Time: 841a

Depth to Water: 29.91 feet

Height of Water Column (L):	Well Diameter (circle one) 2-in.	4-in.	6-in	Well Volume (WV)	Purge Factor	Purge Volume
6.91 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.10 MB gal.	* 3	= 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
842a	----	----	----	----	
845a	1 gal	7.58	12.30	26.2°C	yellow
847a	2 gal	7.58	12.07	25.7°C	yellow
849a	3 gal	7.55	12.00	25.6°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 850a Time Finished: 850a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-44

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Sunny Warm

Well Information:

Total Well Depth: 37.65 feet Time: 1019A

Depth to Water: 23.67 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):				Well Volume (WV)		Purge Factor		Purge Volume
13.98 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 2.23 gal.	*	3	=	7 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1020A	-----	-----	-----	-----	
1023A	3 gal	7.47	9.80mS/cm	25.1°C	clear
1026A	5 gal	7.48	9.42mS/cm	25.0°C	clear
1028A	7 gal	7.37	9.67mS/cm	25.0°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1030A Time Finished: 1030A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

YD-1 collected here

TOTAL BOTTLES: 3

Comments:

Dup EC

9.73 / EC

25.0 / Temp

Water Sampling Field Log

Well No.: M-48A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 40.00 feet Time: 858a

Depth to Water: 29.36 feet

Height of Water Column (L): 10.64 feet

Well Diameter (circle one): 2-in. (* 0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV): = 1.70 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
859a	----	----	----	----	
901	2 gal	7.50	3.51 mS/cm	28.1°C	clear
902	4 gal	7.45	3.51 mS/cm	27.3°C	clear
903	5 gal	7.44	3.49 mS/cm	27.3°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 905a Time Finished: 905a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-52

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid, warm

Well Information:

Total Well Depth: 47.38 feet Time: 700a

Depth to Water: _____ feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):	Well Volume (WV)	Purge Factor	Purge Volume
_____ feet * (0.16 gal/ft / 0.65 gal/ft / * 1.47 gal/ft)	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	Well Damaged
_____	_____ gal	_____	_____	_____	No DTW
_____	_____ gal	_____	_____	_____	No Sample
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-55

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm) sunny

Well Information:

Total Well Depth: 45.00 feet Time: 1133a

Depth to Water: 24.65 feet

Height of Water Column (L): 20.35 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	**Purge Volume**
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: N-56

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 40.00 feet Time: 1135A

Depth to Water: 26.93 feet

Height of Water Column (L): 13.07 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 9

Comments:

Water Sampling Field Log

Well No.: M-57A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 42.40 feet Time: 937a

Depth to Water: 28.79 feet

Height of Water Column (L): 13.61 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

= 2.17 gal. * Well Volume (WV) 3 Purge Factor = 7 gal Purge Volume

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
939a	----	----	----	----	
942a	3 gal	7.65	4.31 mS/cm	26.9°C	Slightly cloudy
944a	5 gal	7.73	4.28 mS/cm	26.2°C	Slightly cloudy
945a	7 gal	7.74	4.30 mS/cm	26.1°C	clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 947a Time Finished: 947a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

Comments: EB-1 collected here before moving to next well 952a TOTAL BOTTLES: 3

Water Sampling Field Log

Well No.: M-58

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 45.00 feet Time: 1139A

Depth to Water: 29.36 feet

Height of Water Column (L): 15.64 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft = _____ gal. * 3 = _____

(Well Volume (WV) | Purge Factor | **Purge Volume**)

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: M-60

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 43.00 feet Time: 1137A

Depth to Water: 28.76 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):				Well Volume (WV)		Purge Factor		**Purge Volume**
14.24 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	*	3	=	_____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 8

Comments:

Water Sampling Field Log

Well No.: M-1e4

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, humid

Well Information:

Total Well Depth: 380 feet Time: 705A

Depth to Water: 25.01 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)		Well Volume (WV)		Purge Factor	Purge Volume
12.99 feet	* 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft	= 2.07 gal.	*	3	= 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
7:11	----	----	----	----	
7:12	2 gal	6.86	8.67 mS/cm	25.1°C	slight yellow tint
7:14	4 gal	7.03	8.99 mS/cm	25.2°C	same
7:16	6 gal	7.13	8.81 mS/cm	25.3°C	same
	gal				
	gal				
	gal				

Sample Appearance: slight yellow tint

Sample Collection - Time Start: 7:19A Time Finished: 7:19A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-65

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid, warm

Well Information:

Total Well Depth: 40.00 feet Time: 729a

Depth to Water: 27.65 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
12.35 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.97 gal.	*	3	=	6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
730a	----	----	----	----	
733a	2 gal	7.00	12.72mS/cm	25.2°c	yellow
735a	4 gal	6.95	13.17mS/cm	25.6°c	yellow
737a	6 gal	6.96	13.12mS/cm	25.7°c	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 739a Time Finished: 739a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-16b

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid, warm

Well Information:

Total Well Depth: 43.00 feet Time: 744a

Depth to Water: 30.02 feet

Height of Water Column (L): 12.98 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in 1.47 gal/ft = Well Volume (WV): 2.07 gal. * Purge Factor: 3 = Purge Volume: 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
745a	----	----	----	----	
748a	2 gal	7.03	14.76 mS/cm	25.6°c	yellow
750a	4 gal	6.94	14.81 mS/cm	25.7°c	yellow
752a	6 gal	6.88	14.64 mS/cm	25.7°c	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 755a Time Finished: 755a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

YD-3 collected here

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-167

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 38.00 feet Time: 1035a

Depth to Water: 21.69 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

				Well Volume (WV)		Purge Factor		Purge Volume
Height of Water Column (L):	16.31 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 2.60 gal.	* 3	=	8 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1036a	---	---	---	---	
1038a	3 gal	7.74	6.52 mS/cm	28.1 °C	light yellow
1041a	6 gal	7.73	6.43 mS/cm	27.6 °C	same
1043a	8 gal	7.90	6.43 mS/cm	26.9 °C	same
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 1045a Time Finished: 1045a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-168

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 41.00 feet Time: 1022a

Depth to Water: 26.31 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
14.69 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 2.35 gal.	*	3	=	7 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1023a	---	---	---	---	
1025a	3 gal	7.57	6.87 mS/cm	27.2°C	very slight yellow
1027a	5 gal	7.58	6.80 mS/cm	26.6°C	same
1028a	7 gal	7.45	6.80 mS/cm	26.2°C	same
	gal				
	gal				
	gal				

Sample Appearance: very slightly yellow

Sample Collection - Time Start: 1030a Time Finished: 1030

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-69

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, humid

Well Information:

Total Well Depth: 40.00 feet Time: 834a

Depth to Water: 31.24 feet

Height of Water Column (L): 8.76 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): = 1.40 gal. * Purge Factor: 3 = Purge Volume: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
836a	----	----	----	----	
839a	2 gal	7.26	5.54 mS/cm	27.1°C	clear
841a	3 gal	7.27	5.31 mS/cm	26.3°C	clear
842a	4 gal	7.23	5.31 mS/cm	26.7°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 844a Time Finished: 844a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-70

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid sunny

Well Information:

Total Well Depth: 41.00 feet Time: 721a

Depth to Water: 33.00 feet

Height of Water Column (L): 8.0 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV) = 1.28 gal. * Purge Factor 3 = Purge Volume 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
722a	----	----	----	----	
723a	2 gal	7.08	6.82mS/cm	25.3°C	very slight yellow
724a	3 gal	7.13	7.18 mS/cm	25.2°C	same
725a	4 gal	7.22	7.15 mS/cm	25.2°C	same
	gal				
	gal				
	gal				

Sample Appearance: slight yellow

Sample Collection - Time Start: 726a Time Finished: 726a

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-71

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid sunny

Well Information:

Total Well Depth: 43.00 feet Time: 731a

Depth to Water: 34.19 feet

Height of Water Column (L): 8.81 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV): 1.40 gal. * Purge Factor: 3 = Purge Volume: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
732a	----	----	----	----	
733a	2 gal	6.96	11.30 mS/cm	25.8 °C	light yellow
734a	3 gal	6.91	11.25 mS/cm	25.6°C	light yellow
735a	4 gal	6.91	11.25 mS/cm	25.7°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 735a Time Finished: 735a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-72

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid sunny

Well Information:

Total Well Depth: 36.00 feet Time: MB 940

Depth to Water: 31.49 feet

Height of Water Column (L): 4.51 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV): .72 gal. * Purge Factor: 3 = Purge Volume: 2 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
741	---	---	---	---	
742	1 gal	6.99	10.27 mS/cm	26.7°C	light yellow
744	1.5 gal	6.96	10.84 mS/cm	26.5°C	light yellow
746	2 gal	6.95	10.90 mS/cm	26.7°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 747a Time Finished: 747a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-73

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, some clouds

Well Information:

Total Well Depth: 36.00 feet Time: 609a

Depth to Water: 28.78 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)			Well Volume (WV)	Purge Factor	Purge Volume
7.22 feet	* 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft	=	1.15 gal.	* 3	= 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
612	----	----	----	----	
613a	1 gal	7.21	7.72 mS/cm	26.3 °C	yellow
615a	2 gal	7.21	7.77 mS/cm	26.0 °C	Yellow
618a	3 gal	7.13	7.84 mS/cm	26.6	Yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 619a Time Finished: 619a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-74

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, some clouds

Well Information:

Total Well Depth: 39.00 feet Time: 554a

Depth to Water: 29.05 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 9.95 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 1.59 gal. * 3 = 5gal

Well Volume (WV)	Purge Factor	Purge Volume
1.59 gal.	* 3	= 5gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
555a	---	---	---	---	
557a	2 gal	7.31	6.55mS/cm	25.3°c	very slightly yellow
559a	4 gal	7.30	6.68 mS/cm	25.3°c	same
600a	5 gal	7.26	6.67 mS/cm	25.3°c	same
	gal				
	gal				
	gal				

Sample Appearance: very slightly yellow

Sample Collection - Time Start: 603a Time Finished: 603a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

well still damaged

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-75

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8.12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 53.90 feet Time: 214p

Depth to Water: 41.81 feet

Height of Water Column (L): 12.09 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in * 1.47 gal/ft

Well Volume (WV)		Purge Factor		Purge Volume
____ gal.	*	3	=	____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
____	----	----	----	----	
____	gal	____	____	____	DTW ONLY
____	gal	____	____	____	NO SAMPLE
____	gal	____	____	____	
____	gal	____	____	____	
____	gal	____	____	____	
____	gal	____	____	____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-76

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 53.90 feet Time: 216p

Depth to Water: 38.87 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):	Well Volume (WV)	Purge Factor	Purge Volume
15.03 feet * 0.16 gal/ft / * 0.65 gal/ft / * 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
----	----	----	----	----	
	gal				
	gal				DTW ONLY
	gal				NO SAMPLE
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: M-77

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm with some clouds

Well Information:

Total Well Depth: 47.20 feet Time: 634a

Depth to Water: 36.26 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume

Height of Water Column (L): 10.94 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	----	----	----	----	
	gal				
	gal				DTW ONLY
	gal				NO SAMPLE
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 8

Comments:

Water Sampling Field Log

Well No.: M-78

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 43.60 feet Time: 1134a

Depth to Water: 25.75 feet

Height of Water Column (L): 18.85 feet

Well Diameter (circle one): 2-in. (* 0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft) = _____ gal. * Well Volume (WV) 3 Purge Factor = **Purge Volume**

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-79

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ⊗ Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Humid, warm

Well Information:

Total Well Depth: 37.60 feet Time: 8:01A

Depth to Water: 29.45 feet

Height of Water Column (L): 8.15 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): = 1.30 gal. * Purge Factor: 3 = Purge Volume: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
804a	----	----	----	----	
806a	2 gal	7.32	5.94 mS/cm	25.7 °C	clear
808a	3 gal	7.32	5.83 mS/cm	26.1 °C	clear
810a	4 gal	7.29	5.76 mS/cm	25.8 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 812a Time Finished: 8:12a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-80

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA 4 MD

Sampling Team: Wendy Prescott, Michele Brown Date: 9-8-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: humid sunny

Well Information:

Total Well Depth: 43.70 feet Time: 658 A

Depth to Water: 35.28 feet

Well Diameter (circle one): 2-in. / 4-in. / 6-in

Height of Water Column (L): 8.42 feet * 0.16 gal/ft (2-in.) / * 0.65 gal/ft (4-in.) / * 1.47 gal/ft (6-in) = Well Volume (WV) 5.47 gal. * Purge Factor 3 = Purge Volume 16

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
659A	----	----	----	----	
705A	5 gal	7.04	3.20 mS/cm	23.8°C	clear
710A	10 gal	7.14	3.03 mS/cm	23.8°C	clear
715A	16 gal	7.18	3.09 mS/cm	23.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 716A Time Finished: 716A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-81A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm

Well Information:

Total Well Depth: 41.60 feet Time: 633a

Depth to Water: 35.19 feet

Well Diameter (circle one): ~~2-in~~ MB 4-in. 6-in

Height of Water Column (L): 6.41 feet * 0.16 gal/ft ~~* 0.65 gal/ft~~ * 1.47 gal/ft = 4.16 gal. * 3 = 13 gal

Well Volume (WV)	Purge Factor	Purge Volume
4.16 gal.	* 3	= 13 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
916a	---	---	---	---	
920a	4 gal	7.58	6.55 mS/cm	26.5 °C	clear with slight yello
923a	8 gal	7.51	6.70 mS/cm	25.9 °C	clear, slightly yellow
926a	13 gal	7.39	6.67 mS/cm	26.3 °C	clear, slight yellow
	gal				
	gal				
	gal				

Sample Appearance: clear but slight yellow tint

Sample Collection - Time Start: 930a Time Finished: 930a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: had to restring new pump

Water Sampling Field Log

Well No.: M-83

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-30-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: humid cloudy, warm

Well Information:

Total Well Depth: 42.50 feet Time: 115p

Depth to Water: - 31.16 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	11.34 feet	X 0.4893	1.9	4.41	=	6gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
117p	6	6.65	24.1°C	clear

Comments: calibrated Hanna Field probe

1104p buffer 7.0 8.0
calib 7.01 7.98
temp 23.7°C 23.4°C

Sample Collection Time - 127p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: M-920

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 48.50 feet Time: 1205p

Depth to Water: 36.27 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
Height of Water Column (L): 12.23 feet * 0.16 gal/ft / * 0.65 gal/ft / * 1.47 gal/ft = _____ gal.	* 3 =	_____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	____	____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 4

Comments:

Water Sampling Field Log

Well No.: M-93

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 49.00 feet Time: 1209p

Depth to Water: 35.32 feet

Height of Water Column (L): 13.68 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Diameter	Well Volume (WV)	Purge Factor	Purge Volume
2-in.	* 0.16 gal/ft		
4-in.	* 0.65 gal/ft		
6-in	* 1.47 gal/ft		
	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	____	____	____	____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: M-95

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm sunny

Well Information:

Total Well Depth: 30.00 feet Time: 826a

Depth to Water: 16.47 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):			Well Volume (WV)		Purge Factor		Purge Volume
13.53 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 216 gal.	* 3	=	6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
827a	-----	-----	-----	-----	
828a	2 gal	7.42	7.07 mS/cm	27.3°C	Clear
829a	4 gal	7.43	7.02 mS/cm	26.6°C	Clear
830a	6 gal	7.43	6.98 mS/cm	26.7°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 831a Time Finished: 831a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-91e

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8.20.13

Sampling Method: Electric Pump ⊙ Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 16.90 feet (TWD in Field) Time: 819a

Depth to Water: 16.2 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):		Well Volume (WV)	Purge Factor	Purge Volume
_____ feet	* 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	____	____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	Well Dry
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-97

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 52.50 feet Time: 1207p

Depth to Water: 39.64 feet

Height of Water Column (L): 12.86 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft = _____ gal. * Well Volume (WV) 3 Purge Factor = Purge Volume

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-98

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm

Well Information:

Total Well Depth: 33.40 feet TWD in Field Time: 855a

Depth to Water: 33.68 feet

Height of Water Column (L):	Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
	2-in.	4-in.	6-in			
_____ feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DRY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: M-99

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-6-13

Sampling Method: Electric Pump O Dedicated Bailer ● Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm / Sunny

Well Information:

Total Well Depth: 35.59 feet Time: 730A

Depth to Water: 33.28 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):	Well Volume (WV)	Purge Factor	Purge Volume
2.31 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft	= gal.	* 3	=

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	---	---	---	---	
	gal	7.16	5.04 ms/cm	24.4	muddy
	gal				
	gal				
	gal				
	gal				
	gal				

Sample Appearance: muddy

Sample Collection - Time Start: 740a Time Finished: 74a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

Comments: well not purged due to location + low water volumn TOTAL BOTTLES: 3

Water Sampling Field Log

Well No.: M-100

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny.

Well Information:

Total Well Depth: 33.81 feet TWD in Field 33.82 Time: 232p

Depth to Water: _____ feet

Well Diameter (circle one) 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume

Height of Water Column (L): _____ feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	DRY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-101

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 32.15 feet TWD in Field 32.36 Time: 227p

Depth to Water: _____ feet

Well Diameter (circle one) 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
Height of Water Column (L): _____ feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DRY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: ~~0~~

Comments:

Water Sampling Field Log

Well No.: M-115

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 47.50 feet Time: 2229

Depth to Water: 37.31 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):	Well Volume (WV)	Purge Factor	Purge Volume
10.19 feet * 0.16 gal/ft / * 0.65 gal/ft / * 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-131

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, humid

Well Information:

Total Well Depth: 39.00 feet Time: 924a

Depth to Water: 31.23 feet

Height of Water Column (L): 7.77 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV): 1.24 gal. * Purge Factor: 3 = Purge Volume: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
925a	---	---	---	---	
927a	2 gal	7.53	4.63mS/cm	26.7°c	clear
928a	3 gal	7.57	4.48mS/cm	26.1°c	clear
929a	4 gal	7.57	4.46mS/cm	25.8°c	clear
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: 930a Time Finished: 930a

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments: Dup EC

4.49 EC

25.9°c Temp

Water Sampling Field Log

Well No.: M-135

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, humid

Well Information:

Total Well Depth: 39.00 feet Time: 849a

Depth to Water: 32.43 feet

Height of Water Column (L): 6.57 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft = Well Volume (WV) 1.05 gal. * Purge Factor 3 = Purge Volume 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
853a	----	----	----	----	
854a	1 gal	7.49	4.83 mS/cm	26.2°C	clear
855a	2 gal	7.50	4.77 mS/cm	26.1°C	clear
856a	3 gal	7.47	4.74 mS/cm	26.0°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 859a Time Finished: 859a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-16b

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 32.00 feet Time: 1123a

Depth to Water: 27.21 feet

Height of Water Column (L): 4.79 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-11e7

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 30.00 feet Time: 1125a

Depth to Water: 24.37 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)			Well Volume (WV)		Purge Factor		Purge Volume
5.63 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= gal.	* 3	=	

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	----	----	----	----	
	gal				
	gal				DTW ONLY
	gal				NO SAMPLE
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 10

Comments:

Water Sampling Field Log

Well No.: M-168

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Runny

Well Information:

Total Well Depth: 35.00 feet Time: 1126a

Depth to Water: 22.19 feet

Height of Water Column (L): 12.81 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	**Purge Volume**
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-1Le9

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 35.00 feet Time: 1127a

Depth to Water: 24.09 feet

Height of Water Column (L): 10.91 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	**Purge Volume**
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-170

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 35.00 feet Time: 1129A

Depth to Water: 24.43 feet

Height of Water Column (L): 10.57 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	----	-----	-----	
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-172

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 37.00 feet Time: 1130A

Depth to Water: 25.64 feet

Height of Water Column (L): 11.36 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in 1.47 gal/ft = _____ gal. * Well Volume (WV) 3 * Purge Factor = **Purge Volume**

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: M-173

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 40.0 feet Time: 1138A

Depth to Water: 27.88 feet

Height of Water Column (L): 12.12 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
0.16 gal/ft	0.65 gal/ft	1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: MW-174

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 28.00 feet Time: 1144a

Depth to Water: 19.96 feet

Height of Water Column (L): 8.04 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
0.16 gal/ft *	0.65 gal/ft *	1.47 gal/ft = gal. * 3 =

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	-----	----	-----	----	
	gal				
	gal				DTW ONLY
	gal				NO SAMPLE
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-195

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 29.00 feet Time: 1145a

Depth to Water: 21.01 feet

Height of Water Column (L): 7.99 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-176

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 30.00 feet Time: 1147a

Depth to Water: 23.88 feet

Well Diameter (circle one)

	2-in.	4-in.	6-in	Well Volume (WV)	Purge Factor	**Purge Volume**
Height of Water Column (L): 6.12 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	----	
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-177

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-12-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 30.00 feet Time: 1148a

Depth to Water: 21.71 feet

Height of Water Column (L): 8.29 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: Ø

Comments:

Water Sampling Field Log

Well No.: MW-K4

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8.29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, Sunny, Breezy

Well Information:

Total Well Depth: 50.00 feet Time: 900a

Depth to Water: - 27.71 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	22.29 feet	X	0.4893	1.9	4.41	=	11 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
902a	11 gal	7.63	21.7	Clear

Comments:

Sample Collection Time - 909a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: MW-K5

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny, slight breeze

Well Information:

Total Well Depth: 44.00 feet Time: 726a

Depth to Water: - 30.94 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	13.06 feet	X	0.4893	1.9	4.41	= 6 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
727a	6gal	7.36	25.2°	clear

Comments:

Sample Collection Time - 731a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-18

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 52.0 feet Time: 112p

Depth to Water: - 28.32 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	23.68 feet	X (0.4893)	1.9	4.41	=	12 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
113p	12	7.98	27.7	clear

Comments: removed sensor to collect DTW and purge.

Sample Collection Time - 120p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-37

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 43.08 feet Time: 741a

Depth to Water: 29.48 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)			Well Volume (WV)	Purge Factor	Purge Volume
13.60 feet	* 0.16 gal/ft	* 0.65 gal/ft * 1.47 gal/ft	= 2.17 gal.	* 3	= 7 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
742a	----	----	----	----	
744a	3 gal	7.51	9.37 mS/cm	26.0°C	clear
746a	5 gal	7.50	9.16 mS/cm	26.0°C	clear
748a	7 gal	7.43	9.14 mS/cm	25.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 750a Time Finished: 750a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-53

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8.29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, light breeze, some clouds

Well Information:

Total Well Depth: 33.00 feet Time: 712a

Depth to Water: - 28.31 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	**4-in.**	**6-in**		
Water Column (L):	4.69 feet	X	0.4893	1.9	4.41	=	3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
713a	3	7.55	25.5	Clear

Comments:

Sample Collection Time - 717a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-54

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 34.60 feet Time: 843a

Depth to Water: 22.97 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
11.63 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.86 gal.	*	3	=	6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
844a	---	---	---	---	
846a	2 gal	7.35	6.23 mS/cm	27.9°C	slightly cloudy
847a	4 gal	7.42	6.11 mS/cm	27.1°C	clear
848a	6 gal	7.35	6.11 mS/cm	27.1°C	clear
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: 850a Time Finished: 850a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-55

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, clouds, breezy

Well Information:

Total Well Depth: 54.9 feet Time: 1045a

Depth to Water: - 27.31 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	27.59 feet	X	0.4893	1.9	4.41	=	122 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1047	122	7.56	26.6°	Clear

Comments: Did not remove troll to collect DTW or to purge

Sample Collection Time - 1152a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-56

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 65.00 feet added 10' Time: 1045a

Depth to Water: - 22.08 feet

		Well Diameter (circle one)			Purge Volume
		2-in.	**4-in.**	**6-in**	
Water Column (L):	42.92 feet X	0.4893	1.9	4.41	= 21 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1048A	21 gal	8.48	24.3°C	Clear

Comments:

Sample Collection Time - 1059A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-58

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8·28·13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 43.00 feet added 10' Time: 1027a

Depth to Water: - 22.86 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	20.14 feet	X	0.4893	1.9	4.41	= 10 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1028a	10	7.97	27.7°C	clear

Comments:

Sample Collection Time - 1035a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-59

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8.28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 45.00 feet added 10' Time: 1126a

Depth to Water: - 20.31 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	24.69 feet	X	0.4893	1.9	4.41	= 12 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1128a	12	8.92	23.0°C	clear

Comments:

Sample Collection Time - 1135a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-160

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 50.00 feet added 10' Time: 1107a

Depth to Water: - 21.28 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	28.72 feet	X	0.4893	1.9	4.41	=	14 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1109a	14	8.89	23.4°C	clear

Comments:

Sample Collection Time - 1117a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-62

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Hot, sunny

Well Information:

Total Well Depth: 48.00 feet added 10' Time: 11:45a

Depth to Water: - 19.29 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	28.71 feet	X (0.4893)	1.9	4.41	=	14 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1146a	14	8.04	23.7°c	Clear

Comments:

Sample Collection Time - 1155a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-68

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8.28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Hot, Sunny

Well Information:

Total Well Depth: 54.60 feet Time: 1204p

Depth to Water: - 19.41 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	**4-in.**	**6-in**		
Water Column (L):	35.09 feet	X	0.4893	1.9	4.41	=	22 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1206p	22	8.14	23.4 °C	Clear

Comments:

Sample Collection Time - 1218p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-71

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 33.23 feet Time: 651a

Depth to Water: 26.31 feet

Height of Water Column (L): 6.92 feet

Well Diameter (circle one) 2-in.	4-in.	6-in	Well Volume (WV)	Purge Factor	Purge Volume
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.10 gal.	* 3	= 3gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
652a	----	----	----	----	
654a	1 gal	7.49	806 mS/cm	25.5°c	Clear
655a	2 gal	7.41	8.25mS/cm	25.7°c	Clear
656a	3 gal	7.36	938mS/cm	25.6°c	clear
657a	4 gal	7.31	9.80 mS/cm	26.1°c	clear
658a	5 gal	7.34	9.06 mS/cm	26.3°c	Clear
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 701a Time Finished: 701a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-72

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 39.54 feet Time: 707a

Depth to Water: 28.79 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
10.75 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.72 gal.	*	3	=	5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
708a	----	----	----	----	
711a	2 gal	7.47	8.06 mS/cm	25.9°C	clear
714a	4 gal	7.47	8.08 mS/cm	25.6°C	clear
715a	5 gal	7.41	8.01 mS/cm	25.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 718a Time Finished: 718a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-M3

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 49.44 feet Time: 723a

Depth to Water: 29.96 feet

Height of Water Column (L): 19.48 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV) = 3.11 gal. * Purge Factor 3 = Purge Volume 9 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
725a	----	----	----	----	
728a	3 gal	7.47	8.58 mS/cm	25.7°C	Clear
730a	6 gal	7.38	8.54 mS/cm	25.6°C	clear
731a	9 gal	7.37	8.46 mS/cm	25.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 735a Time Finished: 735a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-B6

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 38.0 feet Added 10' Time: 1004a

Depth to Water: - 12.62 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	25.38 feet	X 0.4893	1.9	4.41	=	12 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1005a	12	8.61	24.6°C	clear

Comments:

Sample Collection Time - 1013A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-90

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 15.0 feet Time: 912A

Depth to Water: - 4.07 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	8.93 feet	X 0.4893	1.9	4.41	=	4 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
913	4	7.48	27.7°C	Clear

Comments:

Sample Collection Time - 917a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-91

Project No.: Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: sunny warm

Well Information:

Total Well Depth: 37.0 feet Time: 927a

Depth to Water: - 11.94 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	25.06 feet	X (0.4893)	1.9	4.41	=	12gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
928A	12	8.02	25.3°C	Clear

Comments:

Sample Collection Time - 935a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-94

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown ✓ Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, sunny.

Well Information:

Total Well Depth: 20.0 feet Time: 945a

Depth to Water: - 12.78 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	7.22 feet	X (0.4893)	1.9	4.41	=	4 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
946a	4	7.71	26.5 NP	clear

Comments:

Sample Collection Time - 950a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-95

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: _____

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: _____

Well Information:

Total Well Depth: _____ feet Time: _____

Depth to Water: - _____ feet

		Well Diameter (circle one)			Purge Volume
		2-in.	**4-in.**	**6-in**	
Water Column (L): _____ feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: Destroyed yrs ago

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-97

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-28-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Sunny Warm

Well Information:

Total Well Depth: 33.5 feet Time: 850A

Depth to Water: - 4.71 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	28.79 feet	X	0.4893	1.9	4.41	=	14 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
853A	14	6.96	24.1°C	Clear

Comments:

Calibrated Hanna Field probe before purging this well

848a buffer 7.0 8.0
cond 7.0 7.98
temp 25.2°C 25.1°C

Sample Collection Time - 902A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-98R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm some clouds breezy

Well Information:

Total Well Depth: 40.50 feet Time: 1012a

Depth to Water: - 23.31 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	17.19 feet	X	0.4893	1.9	4.41	=	33gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1014a	33 gal	7.50	27.0 °C	clear

Comments: Did not remove troll to collect DTW or to purge

Sample Collection Time - 1031a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC99R2/R3

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

8-7-13

Total Well Depth: 57.40 feet Time: 909a

Depth to Water: - 15.21 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	31.19 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1243p	D	7.39	24.1°C	Clear

Comments:

Sample Collection Time - 1243p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-101R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, sunny, breezy

Well Information:

Total Well Depth: 50.50 feet Time: 841a

Depth to Water: - 29.07 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	21.43 feet	X	0.4893	1.9	4.41	=	10 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
843a	10 gal	7.36	26.1°C	clear

Comments:

Sample Collection Time - 8:49a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-103

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, clouding up, breezy

Well Information:

Total Well Depth: 29.50 feet Time: 1001a

Depth to Water: - 22.96 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	6.54 feet	X	0.4893	1.9	4.41	=	3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1002a	3	7.91	26.7°C	clear

Comments:

Sample Collection Time - 1005a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-115R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: warm, breezy

Well Information:

8-7-13

Total Well Depth: 55.50 feet Time: 913a

Depth to Water: - 12.84 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	42.66 feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1246p	0	7.33	23.9°C	clear

Comments:

Sample Collection Time - 1246p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-116R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information: 8-7-13

Total Well Depth: 55.50 feet Time: 900a

Depth to Water: - 15.93 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	39.97 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1250p	∅	7.32	23.7	Clear

Comments:

Sample Collection Time - 1250p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-117

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information: 8-7-13

Total Well Depth: 55.00 feet Time: 902a

Depth to Water: - 14.08 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	40.92 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1255p	0	7.60	22.4	Clear

Comments:

Sample Collection Time - 1255p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-118

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 53.00 feet Time: 915a

Depth to Water: - 9.94 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	43.06 feet	X 0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1259pm	⊘	7.54	22.1°C	clear

Comments:

Sample Collection Time - 1259pm

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-119

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

8-7-13

Total Well Depth: 49.00 feet Time: 928a

Depth to Water: - 7.65 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	41.35 feet	X 0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
103p	0	7.52	21.8°C	clear

Comments:

Sample Collection Time - 103p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-120

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

8-7-13

Total Well Depth: 49.00 feet Time: 935a

Depth to Water: - 5.60 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	43.40 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1100	0	7.34	24.1°C	Clear

Comments:

Sample Collection Time - 1100

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-121

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: warm, breezy

Well Information:

8-7-13

Total Well Depth: 40.50 feet Time: 937a

Depth to Water: - 5.45 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	35.05 feet	X 0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1130	0	7.28	23.8°C	clear

Comments:

Sample Collection Time - 1130

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-122

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8.29-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, cloudy

Well Information:

Total Well Depth: 38.0 feet Time: 657a

Depth to Water: - 32.97 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	5.03 feet	X (0.4893)	1.9	4.41	=	3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
658a		7.17	25.7°C	clear

Comments: ANTS NESTING IN WELL

Sample Collection Time - 703a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-123

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm

Well Information:

Total Well Depth: 34.70 feet Time: 431a

Depth to Water: 22.68 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)			Well Volume (WV)	Purge Factor	Purge Volume
12.02 feet	* 0.16 gal/ft	* 0.65 gal/ft * 1.47 gal/ft	= 1.92 gal.	* 3	= 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
433a	----	----	----	----	
435a	2 gal	6.76	7.48 mS/cm	25.8°C	clear
437a	4 gal	7.10	7.50 mS/cm	25.2°C	clear
438a	6 gal	7.20	7.51 mS/cm	25.2°C	clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 440a Time Finished: 440a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-124

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm Sunny

Well Information:

Total Well Depth: 34.60 feet Time: 646a

Depth to Water: 25.18 feet

Height of Water Column (L): 9.42 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in. (1.47 gal/ft)

Well Volume (WV): 1.50 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
724	----	----	----	----	
726A	2 gal	6.71	10.49 mS/cm	25.4 °C	clear
728A	4 gal	6.97	10.51 mS/cm	25.2 °C	slightly cloudy
729A	5 gal	7.03	10.49 mS/cm	25.1 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: slightly cloudy

Sample Collection - Time Start: 731a Time Finished: 731a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-125

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, clear

Well Information:

Total Well Depth: 33.50 feet Time: 738a

Depth to Water: 23.18 feet

Well Diameter (circle one): 2-in. / 4-in. / 6-in

Height of Water Column (L): 10.32 feet (* 0.16 gal/ft / * 0.65 gal/ft / * 1.47 gal/ft) = Well Volume (WV): 1.65 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
739a	-----	-----	-----	-----	
741a	2 gal	7.23	9.13 mS/cm	25.3°C	slightly cloudy
743a	4 gal	7.25	9.37 mS/cm	24.6°C	clear
744a	5 gal	7.26	9.38 mS/cm	24.4°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 745a Time Finished: 745a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-126

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 34.30 feet Time: 750a

Depth to Water: 21.99 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 12.31 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 1.96 gal. * Purge Factor 3 = Purge Volume 6 gals

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
751a	----	----	----	----	
753a	2 gal	7.39	11.96 mS/cm	25.8°C	cloudy
754a	4 gal	7.29	12.03 mS/cm	25.1°C	clear
755a	6 gal	7.30	11.87 mS/cm	24.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 757a Time Finished: 757a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-127

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Sunny warm

Well Information:

Total Well Depth: 34.70 feet Time: 801a

Depth to Water: 18.50 feet

Height of Water Column (L): 16.20 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft | 4-in. 0.65 gal/ft | 6-in 1.47 gal/ft

Well Volume (WV) = 2.59 gal. * Purge Factor 3 = Purge Volume 8 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
804a	---	---	---	---	
806a	3 gal	7.47	7.45 mS/cm	25.9°C	slightly cloudy
808a	6 gal	7.43	7.30 mS/cm	25.6°C	clear
809a	8 gal	7.37	7.30 mS/cm	25.6°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 810a Time Finished: 810a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-128

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, cloudy

Well Information:

Total Well Depth: 34.70 feet Time: 448a

Depth to Water: 18.42 feet

Well Diameter (circle one): 2-in. | 4-in. | 6-in

Height of Water Column (L): 16.28 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV): 2.60 gal. * Purge Factor: 3 = Purge Volume: 8 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
449a	----	----	----	----	
452a	3 gal	7.22	7.02 mS/cm	25.9°C	clear
456a	6 gal	7.30	7.01 mS/cm	25.8°C	clear
458a	8 gal	7.26	6.99 mS/cm	25.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 500a Time Finished: 560a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-129

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-22-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm

Well Information:

Total Well Depth: 37.70 feet Time: 433a

Depth to Water: 18.48 feet

Height of Water Column (L): 19.22 feet * Well Diameter (circle one): 2-in. (0.16 gal/ft) / 4-in. (0.65 gal/ft) / 6-in (1.47 gal/ft) = Well Volume (WV): 3.07 gal. * Purge Factor: 3 = Purge Volume: 9 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
434a	---	---	---	---	
437a	3 gal	6.87	7.99 mS/cm	25.1 °C	clear
439a	6 gal	6.99	8.07 mS/cm	25.1 °C	clear
441a	9 gal	7.04	8.13 mS/cm	25.3 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 446a Time Finished: 446a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-130

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, cloudy

Well Information:

Total Well Depth: 49.70 feet Time: 507a

Depth to Water: 19.02 feet

Height of Water Column (L): 30.68 feet * Well Diameter (circle one): (2-in.) 4-in. 6-in → * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV): 4.90 gal. * Purge Factor: 3 = Purge Volume: 15gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
508a	----	----	----	----	
512a	5 gal	7.35	7.98 mS/cm	25.2 °C	Clear
515a	10 gal	7.27	8.03 mS/cm	24.7°C	Clear
520a	15 gal	7.30	8.15 mS/cm	24.6°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: MS Clear

Sample Collection - Time Start: 522a Time Finished: 522a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: PC-131

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, cloudy

Well Information:

Total Well Depth: 39.40 feet Time: 531a

Depth to Water: 10.92 feet

Well Diameter (circle one): 2-in. / 4-in. / 6-in

Height of Water Column (L): 28.48 feet × (0.16 gal/ft / * 0.65 gal/ft / * 1.47 gal/ft) = Well Volume (WV): 4.55 gal. * Purge Factor: 3 = Purge Volume: 14 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
532a	---	---	---	---	
536a	5 gal	7.11	12.38 mS/cm	25.9°C	clear
539a	10 gal	7.17	12.65 mS/cm	25.9°C	clear
541a	14 gal	7.12	12.63 mS/cm	25.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 543a Time Finished: 543a

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-132

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, cloudy

Well Information:

Total Well Depth: 39.70 feet Time: 551a

Depth to Water: 9.72 feet

Height of Water Column (L): 29.98 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV) = 4.79 gal. * Purge Factor 3 = **Purge Volume** 14 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
552a	----	----	-----	----	
555a	5 gal	7.34	11.79 mS/cm	25.9°C	clear
600a	10 gal	7.12	11.75 mS/cm	25.8°C	clear
603a	14 gal	7.15	11.78 mS/cm	25.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 606a Time Finished: 606a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-133

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 8-5-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: _____ feet Time: _____

Depth to Water: - _____ feet

		Well Diameter (circle one)			
		2-in.	**4-in.**	**6-in**	**Purge Volume**
Water Column (L):	_____ feet X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1240p	~~0~~	7.30	25.8 °C	Clear

Comments:

roots in well casing
No DTW collected

Sample Collection Time - 1240p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-135A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 50.8 feet Time: 1028a

Depth to Water: 29.21 feet

Height of Water Column (L):	Well Diameter (circle one)			Well Volume (WV)		Purge Factor		Purge Volume
	2-in.	4-in.	6-in					
21.59 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 3.45 gal.	*	3	=	10 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1029a	---	---	---	---	
1032a	4 gal	7.10	13.63 mS/cm	28.1°C	Clear
1035a	7 gal	7.10	13.57 mS/cm	27.3°C	Clear
1038a	10 gal	7.21	13.86 mS/cm	27.6°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1040a Time Finished: 1040a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-1326

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 40.3 feet Time: 958a

Depth to Water: 33.74 feet

Height of Water Column (L): 6.56 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): = 1.04 gal.

Purge Factor: * 3

Purge Volume: = 3 gal.

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
959	---	---	---	---	
1001	1 gal	7.32	7.18 mS/cm	28.0°C	slight yellow tint
1002	2 gal	7.32	7.23 mS/cm	26.7°C	same
1003	3 gal	7.32	7.20 mS/cm	26.4°C	same
	gal				
	gal				
	gal				

Sample Appearance: slight yellow tint

Sample Collection - Time Start: 1005A Time Finished: 1005A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-144

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-5-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot humid

Well Information:

Total Well Depth: 39.7 feet Time: 1012a

Depth to Water: 30.30 feet

Height of Water Column (L): 9.40 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV) = 1.50 gal. * Purge Factor 3 = Purge Volume 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1013a	----	----	----	----	
1015a	2 gal	7.15	7.161 mS/cm	28.1°C	Clear
1016a	4 gal	7.23	7.88 mS/cm	27.3°C	Clear
1017a	5 gal	7.23	7.87 mS/cm	26.7°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 1019a Time Finished: 1019a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

VD-2 collected here 1020A

3 btls

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-148

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-6-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 50.2 feet Time: 850a

Depth to Water: 28.96 feet

Height of Water Column (L): 21.24 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 31.22 gal. * 3 = 93 gal

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume
31.22 gal.	3	93 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
856a	---	---	---	---	
904a	9 gal	7.16	9.94 mS/cm	27.1°c	clear
913a	9 gal	7.36	9.74 mS/cm	27.7°c	clear
920a	9 gal	7.38	9.67 mS/cm	28.1°c	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 922a Time Finished: 922a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: historic data reveals well slow to recharge samples were collected after ~25 gals were purged

Water Sampling Field Log

Well No.: PC-149

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-6-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 50.0 feet Time: 928a

Depth to Water: 29.65 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 20.35 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 29.91 gal. * Purge Factor 3 = Purge Volume 90 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
930a	----	----	----	----	
937a	10 gal	7.41	5.33 mS/cm	26.4°C	clear
944a	20 gal	7.40	5.35 mS/cm	26.3°C	clear
952a	30 gal	7.29	5.25 mS/cm	26.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 955a Time Finished: 955a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: historic data reveals that well is slow to recharge and samples were collected after ~30 gals were purged

Water Sampling Field Log

Well No.: PC-150

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-6-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 45.7 feet Time: 1024a

Depth to Water: 29.79 feet

Height of Water Column (L): 15.91 feet * 0.16 gal/ft * 0.65 gal/ft * (1.47 gal/ft) = 2338 gal. * 3 = 70 gal

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV) | Purge Factor | Purge Volume

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1026a	---	---	---	---	
1041a	24 gal	7.42	7.57 mS/cm	27.3°c	clear
1050a	47 gal	7.60	7.51 mS/cm	26.5°c	clear
1101a	70 gal	7.57	7.45 mS/cm	26.0°c	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1104a Time Finished: 1104a

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: Dup EC

7.41 EC

25.8°c Temp

Water Sampling Field Log

Well No.: I- AA

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: humid, sunny

Well Information:

Total Well Depth: 46.00 feet Time: 805a

Depth to Water: 31.56 feet

Height of Water Column (L): 14.44 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
806a	5.32 mS/cm	26.3°C	7.51	cloudy

Sample Appearance: cloudy

Sample Collection - Time Start: 807a Time Finished: 807a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- AB

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Humid Sunny

Well Information:

Total Well Depth: 52.00 feet Time: 812A

Depth to Water: 30.83 feet

Height of Water Column (L): 11.17 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
813a	5.69 mS/cm	25.9°C	7.38	cloudy

Sample Appearance: Cloudy

Sample Collection - Time Start: 814a Time Finished: 814a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- AC

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm humid

Well Information:

Total Well Depth: 50.00 feet Time: 940A

Depth to Water: 29.07 feet

Height of Water Column (L): 20.93 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
_____	No sample cascading sound in well but No water pumping up			

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- AD

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm humid

Well Information:

Total Well Depth: 50.00 feet Time: 945A

Depth to Water: 28.92 feet

Height of Water Column (L): 21.08 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
	No sample cascading sound in well but no water pumping out			

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- AR

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 45.00 feet Time: 1017 a

Depth to Water: 27.63 feet

Height of Water Column (L): 17.37 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1018 a	8.44 mS/cm	32.0 °C	6.96	Clear

Sample Appearance: Clear

Sample Collection - Time Start: 1019 a Time Finished: 1019 a

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- B

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 45.70 feet (8-14-13) Time: 1045a

Depth to Water: 34.04 feet

Height of Water Column (L): 11.66 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
919a	8.19 mS/cm	27.5 °C	6.98	Clear

Sample Appearance: clear

Sample Collection - Time Start: 920a Time Finished: 920a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-C

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, breezy

Well Information:

Total Well Depth: 43.80 feet Time: 1038a

Depth to Water: 27.67 feet

Height of Water Column (L): 16.13 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
139p	10.10 mS/cm	28.5°C	7.34	slight yellow tinge

Sample Appearance: slight yellow tinge

Sample Collection - Time Start: 140p Time Finished: 140p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- D

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm breezy

Well Information:

Total Well Depth: 47.70 feet Time: 1036a

Depth to Water: 26.75 feet

Height of Water Column (L): 20.95 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
134p	9.48mS/cm	29.0°C	7.49	light yellow

Sample Appearance: Light yellow

Sample Collection - Time Start: 135p Time Finished: 135p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- E

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 46.70 feet Time: 1034a

Depth to Water: 44.27 feet

Height of Water Column (L): 2.43 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
124p	10.34 mS/cm	28.3 °C	7.28	Yellow

Sample Appearance: Yellow

Sample Collection - Time Start: 125p Time Finished: 125p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- F

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 45.80 feet Time: 1032a

Depth to Water: 24.59 feet

Height of Water Column (L): 21.21 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
114p	12.53 mS/cm	29.6 °C	7.36	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 115p Time Finished: 115p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- G

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: breezy warm

Well Information:

Total Well Depth: 42.60 feet Time: 1029a

Depth to Water: 37.86 feet

Height of Water Column (L): 4.74 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1032p	13.91 mS/cm	30.6 °C	6.89	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 105p Time Finished: 105p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-H

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, breezy

Well Information:

Total Well Depth: 46.50 feet Time: 1025a

Depth to Water: 32.91 feet

Height of Water Column (L): 13.59 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1250p	13.64 mS/cm	30.1 °C	7.13	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1251p Time Finished: 1251p

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- I

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 44.20 feet Time: 956a

Depth to Water: 23.47 feet

Height of Water Column (L): 20.73 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
957a	9.83mS/cm	27.8°c	7.55	yellow

Sample Appearance: Yellow

Sample Collection - Time Start: 958a Time Finished: 958a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-J

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 44.50 feet Time: 1008a

Depth to Water: 32.15 feet

Height of Water Column (L): 12.35 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1009a	6.74 mS/cm	27.1°C	7.32	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 1010a Time Finished: 1010a

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- K

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8.20.13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 40.60 feet Time: 1015a

Depth to Water: 31.12 feet

Height of Water Column (L): 9.48 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1016a	6.80 mS/cm	27.7°C	7.41 MB ~~7.74~~	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 1017a Time Finished: 1017a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- L

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, humid

Well Information:

Total Well Depth: 43.40 feet (8-14-13) Time: 1040a

Depth to Water: 26.34 feet

Height of Water Column (L): 17.06 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
906a	953 mS/cm	28.1 °C	7.22	slight yellow

Sample Appearance: slight yellow

Sample Collection - Time Start: 908a Time Finished: 908a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- M

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8.14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm breezy

Well Information:

Total Well Depth: 43.70 feet Time: 1035a

Depth to Water: 27.89 feet

Height of Water Column (L): 15,81 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
129p	9.26 mS/cm	27.6 °C	7.56	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 130p Time Finished: 130p

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Dup EC

9.23 EC

27.8 Temp

Water Sampling Field Log

Well No.: I-N

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 41.70 feet Time: 1033a

Depth to Water: 26.01 feet

Height of Water Column (L): 15.69 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
120p	10.77 mS/cm	29.9°C	7.48	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 122p Time Finished: 122p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- O

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Sunny, Warm

Well Information:

Total Well Depth: 43.80 feet Time: 1023a

Depth to Water: 32.13 feet

Height of Water Column (L): 11.67 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1240p	12.18 mS/cm	29.9°C	6.96	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1241p Time Finished: 1241p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-P

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, breezy

Well Information:

Total Well Depth: 47.80 feet Time: 1024a

Depth to Water: 42.52 feet

Height of Water Column (L): 5.28 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1245p	13.87 mS/cm	28.0°C	7.07	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1247p Time Finished: 1247p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- Q

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, breezy

Well Information:

Total Well Depth: 43.80 feet Time: 1031a

Depth to Water: 28.13 feet

Height of Water Column (L): 15.67 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
110p	13.29 mS/cm	37.1 °C	6.83	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 112p Time Finished: 112p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-19-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, humid

Well Information:

8-14-13

Total Well Depth: 45.30 feet Time: 1043a

Depth to Water: 13.83 feet

Height of Water Column (L): 31.47 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
913a	9.81 mS/cm	27.9 °C	6.89	slight yellow

Sample Appearance: slight yellow

Sample Collection - Time Start: 914a Time Finished: 914a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments: DTW was checked twice on 8-14-13 got the same reading

Water Sampling Field Log

Well No.: I- S

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: breezy, warm

Well Information:

Total Well Depth: 47.70 feet Time: 1039a

Depth to Water: 24.52 feet

Height of Water Column (L): 23.18 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
144p	954mS/cm	27.9°c	7.34	Very slight yellow

Sample Appearance: Very slight yellow turge

Sample Collection - Time Start: 145p Time Finished: 145p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- T

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Sunny warm breezy

Well Information:

Total Well Depth: 47.80 feet Time: 1028a

Depth to Water: 28.93 feet

Height of Water Column (L): 18.87 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1258p	9.94 mS/cm	31.2°c	6.45	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1259 p Time Finished: 1259p

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-U

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-14-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 47.60 feet Time: 1027a

Depth to Water: 44.41 feet

Height of Water Column (L): 3.19 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1254p	13.03mS/cm	30.2°C	6.99	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1255pm Time Finished: 1255p

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-V

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8·20·13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Hot, sunny

Well Information:

Total Well Depth: 47.70 feet Time: 948a

Depth to Water: 31.51 feet

Height of Water Column (L): 16.19 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
949a	10.93 mS/cm	29.1 °C	7.38	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 950a Time Finished: 950a

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- W

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot humid

Well Information:

Total Well Depth: 50.00 feet Time: 929a

Depth to Water: 29.40 feet

Height of Water Column (L): 20.56 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
930	14.40 mS/cm	28.3 °C	7.35	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 931a Time Finished: 931a

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-X

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm humid

Well Information:

Total Well Depth: 50.00 feet Time: 830a

Depth to Water: 21.07 feet

Height of Water Column (L): 28.93 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
NO SAMPLE	Electrical Issue. could not get pump to turn on no electrical person on site.			

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-Y

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 9-4-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: humid, sunny

Well Information:

Total Well Depth: 35.00 feet Time: 822a

Depth to Water: 26.06 feet

Height of Water Column (L): 8.94 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
823a	1005 mS/m	26.2°C	7.13	slightly cloudy

Sample Appearance: slightly cloudy

Sample Collection - Time Start: 824a Time Finished: 824a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-Z

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 8-20-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: hot, sunny

Well Information:

Total Well Depth: 37.00 feet Time: 1008a

Depth to Water: 34.78 feet

Height of Water Column (L): 2.22 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1002a	7.99 mS/cm	28.0°C	7.39	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1003a Time Finished: 1003a

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

ENVIROGEN
TECHNOLOGIES

Fourth Quarter Well Monitoring

Nevada Environmental Response Trust Henderson, Nevada

November 4, 2013 thru November 15, 2013

ENVIROGEN
TECHNOLOGIES

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Field Data Letter Report

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ENVIROGEN
TECHNOLOGIES

Letter of Transmittal

Attention: John Pekala
Senior Manager
Environ International Corp.
510 Fourth St.
Henderson, NV 89015

Date: November 25, 2013

Project:

2013 4th Quarter Groundwater Monitoring

Enclosed:

1 copy of Field Data Letter Report

Remarks:
John,
The enclosed Quarterly Groundwater Monitoring Report with supporting documents is provided for your records.

Signature:

Wendy Prescott

Envirogen Technologies
Two Kingwood Place
700 Rockmead Drive Suite 105
Kingwood, TX 77339

ENVIROGEN
TECHNOLOGIES

Field Data Letter Report

1 INTRODUCTION

Nevada Environmental Response Trust (NERT) contracts with Envirogen Technologies to conduct groundwater sampling and analysis at their Perchlorate Removal Facility, located at 510 Fourth Street, in Henderson, Nevada. The work described herein represents the fourth quarter groundwater sampling event for 2013. The work was conducted in accordance with the Sampling and Analysis Work plan, submitted to Tronox January 9, 2004.

Envirogen has three staff members trained to assist the quarterly well monitoring events. The Envirogen monitoring team meets once prior to the sampling event to discuss all issues associated with this project, sampling and laboratory equipment needs, time tables and well site schedules. Bottle orders and bottles received are cross checked to ensure that all wells and analysis are represented.

1.1 SCOPE OF SAMPLING EVENT

This sampling effort included the following tasks:

- Soundings of the pumping water levels in 23 interceptor wells.
- Soundings of the water levels in 7 dormant interceptor wells
- Collection of groundwater samples from 28 interceptor wells.
- Soundings of water levels in 111 monitoring wells.
- Collection of groundwater samples from 84 monitoring wells.
- Collection of groundwater samples from 16 pumping wells.
- Collection of water levels in 6 backup (Buddy) wells.

Analysis of samples collected from the interceptor and monitoring wells, range from Perchlorate (CLO4), Total Chromium (Cr), Hexavalent Chromium (CRVI), pH, Specific Conductance (EC), Total Dissolved Solids (TDS), and NPDES list for well M-10, (Up Well). CR, MN, FE, B, Ammonia, TIN, Nitrate-Nitrite as N, and Chloide.

Groundwater samples were shipped daily to TestAmerica (TA) for analysis, in Irvine, California. TA is certified by the State of Nevada.
The scope of this assignment also included compiling the water level and analytical data presented in this report. Data are presented in tabular form.

2 FIELD ACTIVITIES

Envirogen conducted the field activities associated with this quarterly sampling event between Monday November 4th and Friday November 15, 2013. Activities included the sounding of "pumping water" levels in the interceptor wells, sounding the "static water" level in the monitoring wells and sampling of both the interceptor and monitoring wells. Prior to each quarter, an inventory list was issued to Environ for review and comment. Sampling was conducted according to their specifications.

Wendy Prescott, Chris Cabrera and Michele Brown were responsible for sample collection and recording all pertinent data on sample bottles. Michele Brown supervised the groundwater sampling activities. She is responsible for executing all work elements related to the groundwater sampling program, including laboratory equipment maintenances and calibration, fieldwork, documenting field activities, maintaining field notes and photographs (when applicable), and providing the Operations Manager with information concerning implementation of the sampling plan.

Envirogen maintained records of daily events and pertinent sampling data of each well on a field log sheet and addendum data in a bound log book. Log sheet entries included personnel onsite, weather conditions, water levels, activities conducted, sampling times, pH, EC, temperature and other significant field information.

2.1 Groundwater Level Soundings

Envirogen sounded pumping water levels in 23 interceptor wells. The static water readings were taken in Interceptor wells I-AA, I-AB, I-AD, I-AC, I-W, I-X and I-Y. In addition to the interceptor wells, static water levels in 111 monitoring wells were taken. There were thirty (30) wells where only static water levels were taken. The following are the 31 wells:

ART-1A	ART-2A	ART-3	ART-4	ART-7A	ART-8A	M-55	M-56	M-58	M-60	M-75
M-76	M-77	M-78	M-92	M-93	M-96	M-97	M-115	M-166	M-167	M-168
M-169	M-170	M-172	M-173	M-174	M-175	M-176	M-177			

The water levels were sounded to the nearest 0.01 foot using an electronic well sounder.

2.2 Equipment Cleaning Procedures

During the sounding of water levels, the equipment was rinsed with 3 to 4 gallons of de-ionized water after use at each well. The rinse water was collected in a polyethylene container and transported to GW-11 for treatment.

3.0 GROUNDWATER SAMPLING

3.1 Sampling Locations

The following presents the identification of wells sampled.

3.1.1 Interceptor Wells

I-AR	I-B	I-C	I-D	I-E	I-F	I-G	I-H	I-I	I-J	I-K
I-L	I-M	I-N	I-O	I-P	I-Q	I-R	I-S	I-T	I-U	I-V
I-W	I-X	I-Y	I-Z	I-AA	I-AB					

3.1.2 Pumping Wells

ART-1	ART-2	ART-3A	ART-4A	ART-7	ART-8	ART-9	PC-99R2/R3	PC-115R	PC-116R	PC-117
PC-118	PC-119	PC-133								

3.1.3 **Monitoring Wells**

ARP-1	ARP-2A	ARP-3A	ARP-4A	ARP-5A	ARP-6B	ARP-7	ART-7B	M-10	M-11	M-12A
M-14A	M-19	M-22A	M-23	M-25	M-31A	M-35	M-37	M-38	M-44	M-48A
M-52	M-57A	M-64	M-65	M-66	M-67	M-68	M-69	M-70	M-71	M-72
M-73	M-74	M-79	M-80	M-81A	M-83	M-95	M-131	M-135	MW-K4	MW-K5
PC-18	PC-37	PC-53	PC-54	PC-55	PC-56	PC-58	PC-59	PC-60	PC-62	PC-68
PC-71	PC-72	PC-73	PC-86	PC-90	PC-91	PC-94	PC-97	PC-98R	PC-101R	PC-103
PC-122	PC-123	PC-124	PC-125	PC-126	PC-127	PC-128	PC-129	PC-130	PC-131	PC-132
PC-135A	PC-136	PC-144	PC-148	PC-149	PC-150	M-99				

4.0 SAMPLING TECHNIQUES

4.1 Interceptor Wells

All interceptor wells were sampled using dedicated sampling ports. At the beginning of sampling each well or line, personnel wore a new pair of clean nitrile or latex gloves.

The sampling port was opened to drain any stagnant water from piping and valves. This water is captured and containerized. All captured water is off-loaded at GW-11 for onsite treatment.

Following the purging of the sample port, a "water quality" sample was collected for analysis of Perchlorate, Total Chromium, pH, and TDS. Envirogen also recorded the "*field*" temperature, pH, and conductivity as well as the pumping water level. The "*field*" parameters are provided in Table 1.

4.2 Monitoring Wells

Monitoring wells were purged before sampling to assure that each sample was collected from fresh formation water.

Eighty (80) wells were purged and sampled, using the 12 volt submersible pump. Two wells (2), M-10 and M-11, were purged with the "Ready Flo 2" with variable pump flow control. Two (2) wells M-99, and M-38 were sampled with a dedicated bailer. One (1) well was sampled using a non dedicated disposable bailer, ART-6. M-99 was not purged due to location and/or water column level but samples were collected. Hand bailing was done as a result of only needing to purge less than 3 gallons of water, if there was an insufficient amount of water in the well casing to use a pump or due to the location of the well.

Samples for both the interceptor and monitoring wells were collected in appropriate containers supplied by TestAmerica and analyzed for the specific required analysis of the well. The bottles were filled with minimal aeration, using laminar flow.

The samples were labeled, packaged, stored, and transported using the procedures outlined in the work plan for well samples. .

4.3 Problems Encountered

PC-133 pump was changed out the night before the well was sampled. The new pump is stronger and was bringing up black flakey debris which ended up in the sample.

4.4 Equipment Cleaning Procedures

The deionized water is changed each morning so the rinsing water is fresh. Non-dedicated sampling equipment has been replaced by disposable bailers. Conductivity/pH meter probe was thoroughly rinsed with de-ionized water after each sample was analyzed. Pumping equipment was purged with deionized water to flush and clean before leaving to sample at the next location.

5.0 QUALITY CONTROL

Quality control (QC) procedures include collection and analysis of QC duplicate samples, equipment and field blanks. The analytical laboratory is also required to meet specific QA/QC requirements for surrogate recovery, MS/MSD recovery and RPDs, and LCS recoveries.

Duplicate EC readings were conducted at one well each day to insure the accuracy of the Hanna field probe.

5.1 QC Duplicate Samples

QC duplicate samples were collected during the sampling event to evaluate the precision and accuracy of analytical data. The QC duplicates were collected, packaged, and transported in the same manner as the primary sample, but assigned a different identification number.
Six (6) duplicates were collected from the wells, representing at least 5 percent of the samples collected. The duplicate samples were collected from the following wells: M-48A, PC-144, M-37, M-12A, M-38 and M-22A. They were analyzed for the same parameters as the primary samples. TestAmerica was not informed of the identity of these "blind" samples.

5.2 Equipment Blanks

Three equipment blanks were taken this quarter. The equipment blanks were collected on, November 8, 12 and 13, 2013. One set of three (3) bottles, CLO4, pH, TDS, CR and CRVI) for two days and one (1) bottle, CLO4, for the Monthly/Quarterly sampling for a total of seven (7) bottles. This was done to evaluate the adequacy of cleaning procedures used by field personnel during this sampling event.

5.3 Field Blanks

One field blank sample was collected on November 11, 2013. One set of three bottles were sent to the laboratory for analysis to evaluate the integrity of the de-ionized water used to clean and purge the sampling equipment.

6.0 ANALYTICAL PROCEDURES

The following designates the parameter, analytical method and method reporting limits for groundwater. Some of the following analysis may not have been performed for this reporting period.

PARAMETER	ANALYTICAL METHOD	MRL
CLO4	Method 314.0	4.0 µg/L

Total Chromium	Method 200.7	0.01 mg/L
Hexavalent Chromium (CRVI)	Method 218.6 ORGFM	0.005 mg/L,
pH	Method 150.1	.01 units
TDS	Method 2540C Calcd	10 mg/L

PARAMETER	ANALYTICAL METHOD	MRL
Chloride	Method 300 ORGFM 28D	80.0 mg/L
Iron (ICAP)	Method 200.7	0.005 mg/L
Manganese (ICAP/)	Method 200.7	100 µg/L
Sodium (ICAP)	Method 200.7	5 mg/L
Phenols, Total	Method 420.1, 420	.010 mg/L
Sulfate	Method 300 ORGFM 28D	80 mg/L
Total Organic Carbon, TOC	Method 5310C	unknown
Total Organic Halogen, TOX	Method 9020B - 9020	unknown
Boron	Method 200.7	.10 mg/L
Conductance	Method 2510B - 2510	2 µohms/cm
Ammonia Nitrogen	Method 300 ORGFM	0.050 mg/L
Nitrate Nitrogen	Method 300 ORGFM	2.0 mg/L
Copper	Method 300 ORGFM	2.0 µg/L
Chlorate	Method 300.1B 28D	

6.1 Field Equipment Calibration

Prior to the start of each day's events, field laboratory equipment was calibrated. A Hanna HI 98130 water proof pH, EC/TDS and temperature field probe was calibrated and measurements recorded on daily laboratory calibration maintenance forms, which have been provided. Each day a duplicate EC reading was taken at random wells to ensure the calibration of the meter was holding. The duplicate EC readings were taken from wells PC-54, PC-150, PC-68 and PC-81A.

SUMMARY RESULTS

7.1 Groundwater Level Soundings

A summary of water level soundings collected for the interceptor and monitoring wells are presented in Table 1.

Pumping water level in interceptors wells. (Measured in feet from below the top of casing.)

LOW	HIGH
43.93 (I-E)	23.11 (I-I)

Static water level monitoring wells. (Measured in feet from below the top of casing.)

LOW	HIGH
47.17 (M-10)	3.76 (PC-97)

7.2 Summary of Field Activities

7.2.1 Interceptor Wells

CLO4, Cr, TDS, pH twenty eight (28) interceptor wells

7.2.2 Monitoring Wells

Eighty- Four (84) Monitoring wells sampled for sets that may have included: pH, TDS, CLO4, CR, CRVI, NO3 and CLO3

7.2.3 QC Duplicate Samples (Measured for the same analyses as the primary samples.)

M-37, M-38, M-12A (Measured for pH, CR, CRVI, CLO4, TDS)

M-48A, PC-144, M-22A (Measured for Total Cr., pH, CLO4 and TDS)

7.2.4 Equipment Blanks

Two (2) equipment blanks were analyzed for CLO4, Total Cr., Hex Cr., pH, and TDS.

7.2.5 Field Blank

One (1) field blank was analyzed for CLO4, Total Cr., Hex Cr., pH and TDS.

Weather	Hot/ Breezy
Total # of wells visited	164
Total water samples collected	108
Total Wells measured DTW only	35
Total Duplicate Samples (5%)	6
Total Equipment Blanks	2
Total Field Blanks	1
Total Wells hand bailed	2
Total Wells considered DRY	3
Total Wells not accessible	2
Total Wells damaged	2
Total wells not found	0
Total wells not sampled due to safety	0

ENVIROGEN
TECHNOLOGIES

Table of Well Gauging Data

This Section Contains:

- Field Sign - In Log
- Daily Maintenance & Calibration Log
- Table 1 Well Inventory
- Chain-of-Custody & Bottle Order Forms

ENVIROGEN
TECHNOLOGIES

ENVIROGEN QUARTERLY SAMPLING SIGN IN SHEET

DATE	TIME	COMPANY	SIGNATURE	PRINT NAME
11-11-13	405A	ENVIROGEN	Michele Brown	Michele Brown
11-11-13	430A	Envirogen		Chris Cabrera
11-12-13	523A	Envirogen	Michele Brown	Michele Brown
11-12-13	600A	Envirogen		Chris Cabrera
11-13-13	545A	Envirogen	Michele Brown	Michele Brown
11-13-13	600A	Envirogen		Chris Cabrera
11-13-13	1030A	ENVIROGEN	Wendy Prescott	WENDY PRESCOTT
11-14-13	510A	Envirogen	Michele Brown	Michele Brown
11-14-13	600A	Envirogen		Chris Cabrera

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 11-11-13

HANNA FIELD pH METER

			TIME/ANALYST
Known Values	1) 7.0	1) 8.0	402A / MB
Calibration Value	2) 7.02	2) 8.02	
Buffer Temperature	3) 21.2°C	3) 20.3°	
Changed Buffers yes X Please Check			

HANNA FIELD EC METER

		TIME/ANALYST
Known Values	1) 1288	355a / MB
Temp. Comp. Value	2) 1191	
Calibration Value	3) 1288	
Standard Temp.	4) 20.8°C	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # PC-54

1st Reading

EC 6.03 mS/cm Temp. 24.8°C

2nd Reading

EC 6.05 mS/cm Temp. 24.7°C

All equipment was rinsed and purged with Deionized water after each use.

Date 11-11-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 11-12-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.01	2) 7.99	522a / MB
Buffer Temperature	3) 24.4°c	3) 21.3°c	
Changed Buffers yes X Please Check			

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 1191	
Calibration Value	3) 1289	520a / MB
Standard Temp.	4) 21.1°c	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # PC-150

1st Reading

EC 7.57 mS/cm Temp. 24.7°c

2nd Reading

EC 7.58 mS/cm Temp. 24.4°c

All equipment was rinsed and purged with Deionized water after each use.

Date 11-12-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 11-13-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.02	2) 7.99	526A / MB
Buffer Temperature	3) 21.8	3) 21.8	
Changed Buffers yes X Please Check			

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 1215	524A / MB
Calibration Value	3) 1288	
Standard Temp.	4) 21.6	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # M-68

1st Reading 2nd Reading

EC 6.99 mS/cm Temp. 23.9°C EC 7.01 mS/cm Temp. 23.9°C

All equipment was rinsed and purged with Deionized water after each use.

Date 11-13-13 Verified MB

ENVIROGEN TECHNOLOGIES

DAILY MAINTENANCE AND CALIBRATION RECORD

DATE: 11-14-13

HANNA FIELD pH METER

Known Values	1) 7.0	1) 8.0	TIME/ANALYST
Calibration Value	2) 7.02	2) 8.01	505A / MB
Buffer Temperature	3) 20.5°C	3) 20.3°C	
Changed Buffers yes X Please Check			

HANNA FIELD EC METER

Known Values	1) 1288	TIME/ANALYST
Temp. Comp. Value	2) 1164	
Calibration Value	3) 1288	500A / MB
Standard Temp.	4) 20.3°C	
Changed Standards yes X Please Check		

Dupliate EC Redaing Well # M-81A

1st Reading

EC 6.15 mS/cm Temp. 22.3°C

2nd Reading

EC 6.17 mS/cm Temp. 22.3°C

All equipment was rinsed and purged with Deionized water after each use.

Date 11-14-13 Verified MB

TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 4th Quarter Groundwater Monitoring, Nov. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
ARP-1	44.2	1613.32	23.19		1590.13	7.29		11/8/2013	10:38 AM		pH, TDS, Cr, ClO_4
ARP-2A	54	1614.18	24.61		1589.57	7.62		11/7/2013	11:18 AM		pH, TDS, Cr, ClO_4
ARP-3A	41	1614.67	26.19		1588.48	7.36		11/7/2013	11:01 AM		pH, TDS, Cr, ClO_4
ARP-4A	33	1615.47	28.55		1586.92	7.47		11/7/2013	9:58 AM		pH, TDS, Cr, ClO_4
ARP-5A	38	1616.10	31.83		1584.27	7.52		11/7/2013	9:45 AM		pH, TDS, Cr, ClO_4
ARP-6B	43	1615.56	31.27		1584.29	7.24		11/7/2013	9:29 AM		pH, TDS, Cr, ClO_4
ARP-7	39.2	1613.20	29.43		1583.77	7.2		11/7/2013	9:12 AM		pH, TDS, Cr, ClO_4
ART-1	56	1614.47	25.27		1589.20	7.45		11/4/2013	1:09 PM	pumping	pH, TDS, Cr, ClO_4
ART-1A	56	1614.40	23.15		1591.25			11/8/2013	11:24 AM		DTW Only
ART-2	56	1617.10	26.72		1590.38	7.15		11/4/2013	1:13 PM	pumping	pH, TDS, Cr, ClO_4
ART-2A	58	1616.81	25.84		1590.97			11/8/2013	11:29 AM		DTW Only
ART-3	47	1617.93	29.81		1588.12			11/8/2013	11:37 AM		pH, TDS, Cr, ClO_4
ART-3A	55	1617.60	37.68		1579.92	7.12		11/4/2013	1:21 PM	pumping	DTW Only
ART-4	46	1617.39	28.23		1589.16			11/8/2013	11:40 AM		pH, TDS, Cr, ClO_4
ART-4A	46	1617.46	41.99		1575.47	7.22		11/4/2013	1:25 PM	pumping	DTW Only
ART-6	36	1615.19	28.83		1586.36	6.85		11/4/2013	1:40 PM		pH, TDS, Cr, ClO_4
ART-7	38.9	1615.37	29.79		1585.58	7.19		11/4/2013	1:30 PM	pumping	DTW Only
ART-7A	40	1614.78	31.53		1583.25			11/7/2013	8:07 AM		DTW Only
ART-7B	50	1619.62	33.96		1585.66	7.26		11/7/2013	7:40 AM		pH, TDS, Cr, ClO_4

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ART-8	50.5	1617.66	28.78		1588.88	7.06		11/4/2013	1:17 PM		pH, TDS, Cr, ClO_4
ART-8A	54	1617.10	21		1596.10			11/8/2013	11:35 AM		DTW Only
ART-9	43	1614.90	30.99		1583.91	7.25		11/4/2013	1:35 PM		pH, TDS, Cr, ClO_4
L-635	45.33	1620.94			1620.94			11/7/2013	12:30 PM	No Access	pH, TDS, Cr, ClO_4
L-637	39.5	1621.60			1621.60			11/7/2013	12:30 PM	No Access	pH, TDS, Cr, ClO_4
M-2A	47.57	1781.16			1781.16	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-5A	50.00	1751.80			1751.80	Sampled in the 2nd and 3rd quarters only					(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
M-6A	46.00	1733.19			1733.19	Sampled in the 2nd and 3rd quarters only					(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
M-7B	55.00	1732.83			1732.83	Sampled in the 2nd and 3rd quarters only					(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
M-10	69.45	1836.21	47.17		1789.04	7.38	3.30	11/13/2013	12:50 PM		pH / CR6 / Cr / ClO_4 /TDS /+NPDES list
M-11	58.00	1815.53	42.31		1773.22	8.00	3.35	11/13/2013	11:40 AM		pH / TDS / Cr / Cr6 / Cl04
M-12A	50.00	1812.76	40.82		1771.94	7.91	8.11	11/13/2013	11:17 AM		pH / TDS / Cr / Cr6 / Cl04
M-13	54.76	1814.89			1814.89	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-14A	42.40	1760.93	31.65		1729.28	7.65	4.57	11/14/2013	9:05 AM		pH, TDS, Cr, ClO_4
M-19	41.20	1766.77	34.32		1732.45	7.30	6.06	11/13/2013	7:40 AM		pH, TDS, Cr, ClO_4
M-21	44.74	1792.07			1792.07	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-22A	36.92	1759.46	29.43		1730.03	7.20	13.31	11/14/2013	8:36 AM		pH, TDS, Cr, ClO_4
M-23	44.47	1720.35	33.32		1687.03	7.34	5.27	11/14/2013	11:00 AM		pH, TDS, Cr, ClO_4

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M-25	41.47	1759.93	30.32		1729.61	7.26	8.87	11/12/2013	12:10 PM		pH, TDS, Cr, ClO_4
M-31A	55.00	1796.87	42.95		1753.92	7.90	1.07	11/13/2013	10:37 AM		pH, TDS, Cr, ClO_4
M-33	46.78	1800.29			1800.29	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4
M-35	39.70	1772.78	31.23		1741.55	7.29	6.18	11/13/2013	7:25 AM		pH, TDS, Cr, ClO_4
M-36	37.85	1759.82			1759.82					Destroyed	pH / Cr / Cr^6 / ClO_4 / TDS
M-37	37.18	1761.06	30.24		1730.82	6.95	8.08	11/12/2013	11:51 AM		pH / Cr / Cr^6 / ClO_4 / TDS
M-38	36.82	1759.73	29.96		1729.77	7.29	11.92	11/14/2013	11:53 AM		pH / Cr / Cr^6 / ClO_4 / TDS
M-44	37.65	1698.31	23.69		1674.62	7.44	9.97	11/11/2013	11:20 AM		pH / TDS / Cr / Cr6 / Cl04
M-48A	40	1718.36	29.62		1688.74	7.36	5.41	11/11/2013	9:10 AM		pH, TDS, Cr, ClO_4
M-52	47.38	1801.92	40.24		1761.68	7.50	6.08	11/13/2013	10:17 AM		pH, TDS, Cr, ClO_4
M-55	45.00	1750.88	24.46		1726.42			11/15/2013	10:33 AM		DTW Only
M-56	40.00	1750.83	27.17		1723.66			11/15/2013	10:43 AM		DTW Only
M-57A	42.40	1753.44	28.74		1724.70	7.57	4.25	11/13/2013	7:06 AM		pH, TDS, Cr, ClO_4
M-58	45.00	1751.25	28.66		1722.59			11/15/2013	10:53 AM		DTW Only
M-60	43.00	1750.94	27.82		1723.12			11/15/2013	10:46 AM		DTW Only
M-64	38.00	1749.76	25.02		1724.74	7.44	8.99	11/12/2013	12:26 PM		pH, TDS, Cr, ClO_4
M-65	40.00	1753.91	27.54		1726.37	7.14	13.27	11/12/2013	12:43 PM		pH, TDS, Cr, ClO_4
M-66	43.00	1754.24	29.81		1724.43	7.00	15.68	11/12/2013	12:57 PM		pH, TDS, Cr, ClO_4

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M-67	38.00	1745.91	21.51		1724.40	7.26	6.58	11/13/2013	7:58 AM		pH, TDS, Cr, ClO_4
M-68	41.00	1750.23	26.18		1724.05	7.27	6.99	11/13/2013	8:34 AM		pH, TDS, Cr, ClO_4
M-69	40.00	1749.75	31.43		1718.32	7.18	5.57	11/13/2013	6:23 AM		pH, TDS, Cr, ClO_4
M-70	41.00	1748.25	33.63		1714.62	7.29	7.18	11/14/2013	7:53 AM		pH, TDS, Cr, ClO_4
M-71	43.00	1747.04	34.21		1712.83	6.98	11.49	11/14/2013	8:06 AM		pH, TDS, Cr, ClO_4
M-72	36.00	1746.49	31.45		1715.04	7.02	10.67	11/14/2013	8:20 AM		pH, TDS, Cr, ClO_4
M-73	36.00	1741.14	28.89		1712.25	7.32	8.2	11/13/2013	9:03 AM		pH, TDS, Cr, ClO_4
M-74	39.00	1744.38	29.83		1714.55	7.33	7.04	11/13/2013	8:49 AM		pH, TDS, Cr, ClO_4
M-75	53.90	1784.21	42.06		1742.15			11/14/2013	8:55 AM		DTW ONLY
M-76	54.60	1785.22	39.13		1746.09			11/14/2013	8:58 AM		DTW ONLY
M-77	47.20	1799.61	38.46		1761.15			11/13/2013	10:13 AM		DTW ONLY
M-78	43.60	1751.50	25.54		1725.96			11/15/2013	10:36 AM		DTW ONLY
M-79	37.60	1742.53	29.88		1712.65	7.20	5.77	11/13/2013	6:08 AM		pH / TDS / Cr / ClO_4
M-80	43.70	1746.04	35.42		1710.62	7.57	3.19	11/14/2013	7:01 AM		TDS / Cr / ClO_4
M-81A	41.60	1744.16	35.29		1708.87	7.28	6.15	11/14/2013	7:33 AM		TDS / Cr / ClO_4
M-83	42.50	1742.77	30.48		1712.29	7.31	3.74	11/14/2013	6:44 AM		pH, TDS, Cr, ClO_4
M-92	48.50	1800.76	36.23		1764.53			11/15/2013	2:21 PM		DTW ONLY
M-93	49.00	1797.54	35.36		1762.18			11/15/2013	2:29 PM		DTW ONLY

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M-95	30.00	1694.09	16.57		1677.52	7.45	7.02	11/11/2013	11:48 AM		pH / TDS / Cr / Cr6 / Cl04
M-96	16.90	1693.52			1693.52			11/11/2013	8:15 AM	DRY	pH / TDS / Cr / Cr6 / Cl04
M-97	52.50	1800.85	39.62		1761.23			11/15/2013	2:23 PM		DTW ONLY
M-98	33.40	1731.90			1731.90			11/18/2013	10:22 AM	DRY	pH, TDS, Cr, ClO_4
M-99	35.59	1730.74	33.55		1697.19	7.24	4.56	11/14/2013	6:20 AM		pH, TDS, Cr, ClO_4
M-100	33.81	1730.93			1730.93			11/15/2013	1:59 PM	DRY	pH / TDS / Cr / Cr6 / Cl04
M-101	32.15	1730.81			1730.81			11/15/2013	1:55 PM	DRY	pH, TDS, Cr, ClO_4
M-115	47.50	1787.64	37.63		1750.01			11/14/2013	9:01 AM		DTW ONLY
M-131	39.00	1754.13	31.31		1722.82	7.60	4.39	11/13/2013	6:50 AM		pH, TDS, Cr, ClO_4
M-135	39.00	1751.85	32.43		1719.42	7.52	4.75	11/13/2013	6:36 AM		pH, TDS, Cr, ClO_4
M-166	32.00	1751.09	27.01		1724.08			11/15/2013	10:15 AM		DTW Only
M-167	30.00	1749.95	24.34		1725.61			11/15/2013	10:07 AM		DTW Only
M-168	35.00	1748.46	22.27		1726.19			11/15/2013	10:03 AM		DTW Only
M-169	35.00	1750.22	24.28		1725.94			11/15/2013	8:54 AM		DTW Only
M-170	35.00	1750.66	24.31		1726.35			11/15/2013	10:28 AM		DTW Only
M-172	37.00	1750.58	25.49		1725.09			11/15/2013	10:40 AM		DTW Only
M-173	40.00	1749.88	27.18		1722.70			11/15/2013	10:51 AM		DTW Only
M-174	28.00	1742.29	19.58		1722.71			11/15/2013	1:47 PM		DTW Only

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M-175	29.00	1742.74	20.77		1721.97			11/15/2013	1:49 PM		DTW Only
M-176	30.00	1745.35	23.78		1721.57			11/15/2013	1:51 PM		DTW Only
M-177	30.00	1743.23	21.59		1721.64			11/15/2013	1:52 PM		DTW Only
MW-K4	50	1614.96	27.19		1587.77	7.34		11/7/2013	10:44 AM		pH, TDS, Cr, ClO_4
MW-K5	44	1598.87	30.02		1568.85	7.12		11/7/2013	8:53 AM		pH, TDS, Cr, ClO_4
PC-18	52	1618.39	27.52		1590.87	7.08		11/8/2013	10:20 AM		pH, TDS, Cr, ClO_4
PC-53	33	1595.17	27.32		1567.85	7.47		11/7/2013	8:39 AM		pH, TDS, Cr, ClO_4
PC-55	54.9	1618.46	26.54		1591.92	7.25		11/8/2013	11:00 AM		pH, TDS, Cr, ClO_4
PC-56	55	1568.25	20.94		1547.31	7.43		11/6/2013	10:43 AM		pH, TDS, Cr, ClO_4
PC-58	33	1,567.01	21.83		1545.18	7.58		11/6/2013	10:25 AM		pH, TDS, Cr, ClO_4
PC-59	35	1567.92	19.50		1548.42	7.37		11/6/2013	11:20 AM		pH, TDS, Cr, ClO_4
PC-60	40.0	1568.38	20.19		1548.19	7.62		11/6/2013	11:04 AM		pH, TDS, Cr, ClO_4
PC-62	38.0	1567.83	18.64		1549.19	7.55		11/6/2013	11:36 AM		pH, TDS, Cr, ClO_4
PC-68	55.3	1566.97	18.63		1548.34	7.26		11/6/2013	11:59 AM		pH, TDS, Cr, ClO_4
PC-86	28.0	1553.85	11.63		1542.22	7.56		11/6/2013	12:19 PM		pH, TDS, Cr, ClO_4
PC-90	15.0	1550.46	4.58		1545.88			11/6/2013	9:25 AM		pH, TDS, Cr, ClO_4
PC-91	37.0	1552.33	11.24		1541.09			11/6/2013	9:43 AM		pH, TDS, Cr, ClO_4
PC-92	22.0	1552.05			1552.05	Sampled in the 2nd Quarter only					pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 4th Quarter Groundwater Monitoring, Nov. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
PC-94	20.0	1548.95	12.55		1536.40	7.45		11/6/2013	10:00 AM		pH, TDS, Cr, ClO_4
PC-95	35.0	1550.62			1550.62					Destroyed	pH, TDS, Cr, ClO_4
PC-97	33.5	1548.53	3.76		1544.77	7.06		11/6/2013	8:56 AM		pH, TDS, Cr, ClO_4
PC-98R	40.5	1593.35	22.77		1570.58	7.33		11/7/2013	11:52 AM		pH, TDS, Cr, ClO_4
PC-99R2/R3	55.3	1552.48	13.74		1538.74	7.67		11/4/2013	9:56 AM	pumping	pH, TDS, Cr, ClO_4
PC-101R	50.5	1618.04	28.01		1590.03	7.16		11/7/2013	10:27 AM		pH, TDS, Cr, ClO_4
PC-103	29.5	1599.49	23.02		1576.47	7.39		11/7/2013	11:40 AM		pH, TDS, Cr, ClO_4
PC-115R	55.5	1554.71	11.21		1543.50	7.63		11/4/2013	10:03 AM	pumping	pH, TDS, Cr, ClO_4
PC-116R	55.5	1552.10	12.67		1539.43	7.35		11/4/2013	10:00 AM	pumping	pH, TDS, Cr, ClO_4
PC-117	53.0	1552.26	10.68		1541.58	7.93		11/4/2013	10:10 AM	pumping	pH, TDS, Cr, ClO_4
PC-118	51.0	1554.53	7.68		1546.85	8.54		11/4/2013	10:07 AM	pumping	pH, TDS, Cr, ClO_4
PC-119	47.0	1554.66	6.11		1548.55	7.53		11/4/2013	10:17 AM	pumping	pH, TDS, Cr, ClO_4
PC-120	47.0	1554.64	4.31		1550.33	7.64		11/4/2013	10:24 AM		pH, TDS, Cr, ClO_4
PC-121	38.5	1554.10	4.27		1549.83	7.47		11/4/2013	10:28 AM		pH, TDS, Cr, ClO_4
PC-122	38.0	1618.02	31.64		1586.38	7.29		11/7/2013	8:24 AM		pH, TDS, Cr, ClO_4
PC-123	34.70	1626.44	24.64		1601.80	7.32		11/11/2013	4:53 AM		pH, TDS, Cr, ClO_4
PC-124	34.60	1635.73	24.87		1610.86	7.26		11/11/2013	6:58 AM		pH, TDS, Cr, ClO_4
PC-125	33.50	1635.06	22.92		1612.14	7.31		11/11/2013	7:18 AM		pH, TDS, Cr, ClO_4

Signature Michele Brown

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 4th Quarter Groundwater Monitoring, Nov. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
PC-126	34.30	1634.33	21.74		1612.59	7.35	10.95	11/11/2013	7:32 AM		pH, TDS, Cr, ClO_4
PC-127	34.70	1632.42	18.19		1614.23	7.41	7.36	11/11/2013	7:47 AM		pH, TDS, Cr, ClO_4
PC-128	34.70	1633.36	19.28		1614.08	7.42	7.08	11/11/2013	5:13 AM		pH, TDS, Cr, ClO_4
PC-129	37.70	1633.99	18.25		1615.74	7.22	7.81	11/11/2013	5:38 AM		pH, TDS, Cr, ClO_4
PC-130	49.70	1633.21	18.78		1614.43	7.31	8.3	11/11/2013	5:54 AM		pH, TDS, Cr, ClO_4
PC-131	39.40	1633.58	15.27		1618.31	7.23	13.32	11/11/2013	6:17 AM		pH, TDS, Cr, ClO_4
PC-132	39.70	1634.84	9.65		1625.19	7.24	12.4	11/11/2013	6:36 AM		pH, TDS, Cr, ClO_4
PC-133	40.2	1553.00	31.02		1521.98	7.36		11/4/2013	11:17 AM	pumping	pH, TDS, Cr, ClO_4
PC-135A	50.8	1618.58	28.81		1589.77	7.19	14.08	11/12/2013	6:59 AM		pH, TDS, Cr, ClO_4
PC-136	40.3	1618.04	32.72		1585.32	7.08	6.79	11/12/2013	6:23 AM		pH, TDS, Cr, ClO_4
PC-144	39.7	1618.63	29.83		1588.80	7.21	7.79	11/12/2013	6:43 AM		pH, TDS, Cr, ClO_4
PC-148	50.2	1617.96	28.51		1589.45	7.46	9.25	11/12/2013	7:24 AM		pH, TDS, Cr, ClO_4
PC-149	50	1618.93	29.18		1589.75	7.41	5.39	11/12/2013	7:53 AM		pH, TDS, Cr, ClO_4
PC-150	45.7	1619.09	29.24		1589.85	7.44	7.57	11/12/2013	8:26 AM		pH, TDS, Cr, ClO_4
INTERCEPTOR WELLS											
I-AA	46.00	1753.93	30.44		1723.49	7.37	4.94	11/12/2013	11:34 AM		pH, TDS, Cr, ClO_4
I-AB	52.0	1753.89	30.76		1723.13	7.37	6.47	11/12/2013	11:39 AM		pH, TDS, Cr, ClO_4
I-AC	50	1752.76	29.39		1723.37			11/15/2013	1:55 PM	No water comes out when pump is turned on	pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 4th Quarter Groundwater Monitoring, Nov. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
I-AD	50	1755.39	28.14		1727.25			11/15/2013	1:59 PM	No water comes out when pump is turned on	pH, TDS, Cr, ClO_4
I-AR	45.00	1758.35	43.19		1715.16	7.14	8.6	11-121-3	11:45 AM		pH, TDS, Cr, ClO_4
I-B	45.70	1752.87	24.68		1728.19	7.15	8.52	11/12/2013	11:28 AM		pH, TDS, Cr, ClO_4
I-C	43.80	1752.77	28.57		1724.20	7.41	10.25	11/12/2013	10:58 AM		pH, TDS, Cr, ClO_4
I-D	47.70	1752.67	26.61		1726.06	7.22	10.13	11/12/2013	10:52 AM		pH, TDS, Cr, ClO_4
I-E	46.70	1752.36	43.93		1708.43	7.01	10.69	11/12/2013	10:41 AM		pH, TDS, Cr, ClO_4
I-F	45.80	1749.70	24.38		1725.32	7.26	13.05	11/12/2013	10:22 AM		pH, TDS, Cr, ClO_4
I-G	42.60	1752.50	37.99		1714.51	7.07	14.92	11/12/2013	10:10 AM		pH, TDS, Cr, ClO_4
I-H	46.50	1753.21	31.62		1721.59	7.15	14.58	11/12/2013	9:54 AM		pH, TDS, Cr, ClO_4
I-I	44.20	1745.50	23.11		1722.39	7.32	10.12	11/13/2013	8:12 AM		pH, TDS, Cr, ClO_4
I-J	44.50	1750.09	34.78		1715.31	7.15	6.87	11/13/2013	8:20 AM		pH, TDS, Cr, ClO_4
I-K	40.60	1746.04	33.55		1712.49	7.22	7.11	11/13/2013	8:26 AM		pH, TDS, Cr, ClO_4
I-L	43.40	1751.69	26.31		1725.38	7.33	9.13	11/12/2013	11:08 AM		pH, TDS, Cr, ClO_4
I-M	43.70	1752.90	27.59		1725.31	7.19	9.73	11/12/2013	10:46 AM		pH, TDS, Cr, ClO_4
I-N	41.70	1751.45	25.83		1725.62	7.37	11.13	11/12/2013	10:33 AM		pH, TDS, Cr, ClO_4
I-O	43.80	1752.79	30.41		1722.38	7.54	13.95	11/12/2013	9:40 AM		pH, TDS, Cr, ClO_4
I-P	47.80	1751.66	37.92		1713.74	7.38	14.79	11/12/2013	9:51 AM		pH, TDS, Cr, ClO_4
I-Q	43.80	1753.11	32.95		1720.16	7.20	14.93	11/12/2013	10:13 AM		pH, TDS, Cr, ClO_4

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Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 4th Quarter Groundwater Monitoring, Nov. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
I-R	45.30	1751.35	32.35		1719.00	7.00	9.58	11/12/2013	11:20 AM		pH, TDS, Cr, ClO_4
I-S	47.70	1750.03	24.58		1725.45	7.21	9.35	11/12/2013	11:04 AM		pH, TDS, Cr, ClO_4
I-T	47.80	1751.66	29.48		1722.18	7.34	15.28	11/12/2013	10:04 AM		pH, TDS, Cr, ClO_4
I-U	47.60	1752.17	35.84		1716.33	7.15	15.04	11/12/2013	10:00 AM		pH, TDS, Cr, ClO_4
I-V	47.70	1752.13	31.01		1721.12	7.36	11.11	11/13/2013	9:20 AM		pH, TDS, Cr, ClO_4
I-W	50.00	1751.50	29.05		1722.45	7.19	14.33	11/12/2013	9:47 AM		pH, TDS, Cr, ClO_4
I-X	50.00	1748.60	23.06		1725.54	7.19	13.43	11/12/2013	10:26 AM		pH, TDS, Cr, ClO_4
I-Y	35.00	1751.40	26.46		1724.94	7.26	10.1	11/12/2013	11:15 AM		pH, TDS, Cr, ClO_4
I-Z	37.00	1743.78	28.98		1714.80	7.38	8.47	11/13/2013	8:16 AM		pH, TDS, Cr, ClO_4
OTHER WELLS (OFFSITE)											
PC-37	43.08	1707.72	29.54		1678.18	7.44	9.38	11/11/2013	10:40 AM		pH, TDS, Cr, ClO_4
PC-54	34.60	1704.43	23.04		1681.39	7.43	6.03	11/11/2013	8:49 AM		pH, TDS, Cr, ClO_4
PC-71	33.23	1698.73	26.53		1672.20	7.48	8.47	11/11/2013	9:55 AM		pH, TDS, Cr, ClO_4
PC-72	39.54	1699.43	29.06		1670.37	7.47	8.19	11/11/2013	10:09 AM		pH, TDS, Cr, ClO_4
PC-73	49.44	1699.50	30.29		1669.21	7.43	8.69	11/11/2013	10:22 AM		pH, TDS, Cr, ClO_4
PIONEER CHEMICAL WELL											
H-28A	51.00	1731.75				Sampled in the 2nd and 3rd quarters only					(pH / SC / TOC / TOX) x 4 / CLO4 / CR / TDS
DUPLICATE SAMPLES											
VD-1	M-48A							11/11/2013	9:24 AM		pH, TDS, Cr, ClO_4
VD-2	PC-144							11/12/2013	6:55 AM		pH, TDS, Cr, ClO_4

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TABLE 1
Well Inventory for Groundwater Sampling
NERT Project, Henderson, Nevada
Summary of Field Data for: 4th Quarter Groundwater Monitoring, Nov. 2013

WELL #	TOTAL DEPTH (from TOC)	TOP OF CASING ELEVATION (MSL)	DEPTH TO WATER (FEET)	NON-AQUEOUS PHASE LIQUID [1]	GROUNDWATER ELEVATION (FT MSL)	pH	SPECIFIC CONDUCTIVITY (mS/cm)	DATE	TIME	MONITORING QUALIFIER [2]	COMMENTS/Analytical Plan/Temp
VD-3	M-37							11/12/2013	12:00 PM		pH / TDS / Cr / Cr6 / Cl04
VD-4	M-12A							11/13/2013	11:30 AM		pH / TDS / Cr / Cr6 / Cl04
VD-5	M-38							11/14/2013	12:10 PM		pH / TDS / Cr / Cr6 / Cl04
VD-6	M-22A							11/14/2013	8:48 AM		pH, TDS, Cr, ClO4
EB-1								11/12/2013	12:40 PM		pH / TDS / Cr / Cr6 / Cl04
EB-2								11/13/2011	9:18 AM		pH / TDS / Cr / Cr6 / Cl04
FB-1								11/11/2013	7:40 AM		pH / TDS / Cr / Cr6 / Cl04

NOTES:

ART and PC

Monthly

Signature Michele Brown

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17461 Derian Ave
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Irvine, CA 92614
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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 2 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below 10 DAY			
FAX	[x] 2 weeks			SDG No.
Project Name: NERT- Monthly 1st Monday	[ ] 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	[ ] 2 days			
P O # 3693	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_CALCED- TOTAL DISSOLVED	314.0_LL- PERCHLORATE	pH	200.7 CR
ART-1	11/4/2013	1040	NORMAL	WATER	2		1	1	1	1
ART-2	11/4/2013	1130	NORMAL	WATER	3		1	1	1	1
ART-3	11/4/2013	1210	NORMAL	WATER	3		1	1	1	1
ART-4	11/4/2013	1340	NORMAL	WATER	2		1	1	1	1
ART-6	11/4/2013	1400	NORMAL	WATER	2		1	1	1	1
ART-7	11/4/2013	1300	NORMAL	WATER	3		1	1	1	1
ART-8	11/4/2013	1170	NORMAL	WATER	3		1	1	1	1
ART-9	11/4/2013	1350	NORMAL	WATER	2		1	1	1	1
PC-99R2/R3	11/4/2013	1356A	NORMAL	WATER	3		1	1	1	1
PC-115R	11/4/2013	1003A	NORMAL	WATER	2		1	1	1	1
PC-116R	11/4/2013	1000A	NORMAL	WATER	3		1	1	1	1
PC-117	11/4/2013	1010A	NORMAL	WATER	2		1	1	1	1

Possible Hazard Identification
[x] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* *Poison B* [ ] *Unknown* [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] *Return To Client* [ ] *Disposal By Lab* [x] *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown **Date** 11-4-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen				
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949 261 1022 fax 949 260 3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	PG 2 OF 2 COC's
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below			SDG No
FAX:	☑ 2 weeks			
Project Name: NERT- Monthly 1st Monday	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_CALCED- TOTAL DISSOLVED SOLIDS	314.0_LL- PERCHLORATE		300.0 CL
PC-118	11/4/2013	1007	NORMAL	WATER	3		1	1	1	1
PC-119	11/4/2013	1019	NORMAL	WATER	3		1	1	1	1
PC-120	11/4/2013	1029	NORMAL	WATER	3		1	1	1	1
PC-121	11/4/2013	1038	NORMAL	WATER	3		1	1	1	1
PC-133	11/4/2013	1046	NORMAL	WATER	3		1	1	1	1

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

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Signature: Michele Brown Date 11-4-13

Special Instructions/QC Requirements & Comments:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michele Brown	Envirogen				
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received by	Company	Date/Time

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17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 OF 3 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below ____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_Calcd- Total Dissolved Solids	314.0 Perchlorate	SM 4500 pH	200.7 Total Chromium
PC-97	11-6-13	912A	NORMAL	WATER	3		1	1	1	4
PC-90		932A	NORMAL	WATER	3		1	1	1	4
PC-91		952A	NORMAL	WATER	3		1	1	1	4
PC-94		1006A	NORMAL	WATER	3		1	1	1	4
PC-58		1034A	NORMAL	WATER	3		1	1	1	4
PC-56		1056A	NORMAL	WATER	3		1	1	1	4
PC-60		1112A	NORMAL	WATER	3		1	1	1	4
PC-59		1127A	NORMAL	WATER	3		1	1	1	4
PC-62		1146A	NORMAL	WATER	3		1	1	1	4
PC-68		1209P	NORMAL	WATER	3		1	1	1	4
PC-86		1227P	NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown **Date** 11-6-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	11-7-13 1450			11/7/13 1450
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
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phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 OF 3 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below ____			
FAX:	☑ 2 weeks			SDG No.
Project Name: NERT Quarterly 4th	☐ 1 week			
Site: NERT- 510 S Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_Calcd- Total Dissolved Solids	314.0 Perchlorate	SM 4500 pH	200.7 Total Chromium
ART-7B	11-7-13	814A	NORMAL	WATER	3		1	1	1	4
PC-122		829A	NORMAL	WATER	3		1	1	1	4
PC-53		844A	NORMAL	WATER	3		1	1	1	4
MW-K5		858A	NORMAL	WATER	3		1	1	1	4
ARP-7		919A	NORMAL	WATER	3		1	1	1	4
ARP-6B		935A	NORMAL	WATER	3		1	1	1	4
ARP-5A		950A	NORMAL	WATER	3		1	1	1	4
ARP-4A		1002A	NORMAL	WATER	3		1	1	1	4
PC-101R		1035A	NORMAL	WATER	3		1	1	1	4
MW-K4		1051A	NORMAL	WATER	3		1	1	1	4
ARP-3A		1108A	NORMAL	WATER	3		1	1	1	4
ARP-2A	↓	1127A	NORMAL	WATER	3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michelle Brown Date 11-7-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	11-7-13 1900		TA	11/7/13 1900
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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17461 Derian Ave
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TestAmerica

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 OF 3 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below ____			
FAX:	[x] 2 weeks			SDG No.
Project Name: NERT Quarterly 4th	[ ] 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	[ ] 2 days			
P O # 3693	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_Calcd- Total Dissolved Solids	314.0 Perchlorate	SM 4500 pH	200.7 Total Chromium
PC-103	11-7-13	1145a	NORMAL	WATER	3		1	1	1	4
PC-98R	11-7-13	1215pm	NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4
			NORMAL	WATER	3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
[x] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* [ ] *Poison B* [ ] *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] Return To Client [ ] Disposal By Lab [x] Archive For 1 Months

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)

Signature: Michelle Brown **Date** 11-7-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	11-7-13 / 1400	[signature]	TA	11/7/13 1400

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Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	3 OF 3 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: Envirogen- Monthly ARP and PC Wells pg 3	☐ 1 week			
Site: NERT- 510 S Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	2540C_Calcd - Total Dissolved Solids	314.0 Perchlorate	SM 4500 pH	200.7 Total Chromium
PC-18	11/8/2013	10:28 AM	NORMAL	WATER	3		1	1	1	4
ARP-1	11/8/13	10:45 AM	NORMAL	WATER	3		1	1	1	4
EB-1	11/8/13	10:55 AM	NORMAL	WATER	1	MS	1			
PC-55	11/8/13	12:10 PM	NORMAL	WATER	3		1	1	1	4

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown **Date** 11-8-13

Special Instructions/QC Requirements & Comments:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michele Brown	Envirogen	11-8-13 1730			11/8/13 1730
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received by	Company	Date/Time

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phone 949 261 1022 fax 949 260 3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below _____			SDG No.
FAX	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
PC-71	11-11-13	1006A	NORMAL	WATER	3		4	1	1	
PC-72	11-11-13	1016A	NORMAL	WATER	3		4	1	1	
PC-73	11-11-13	1033A	NORMAL	WATER	3		4	1	1	
PC-37	11-11-13	1050A	NORMAL	WATER	3		4	1	1	
M-23	11-11-13	1108A	NORMAL	WATER	3		4	1	1	
VD-1	11-11-13	924A	NORMAL	WATER	3		4	1	1	
FB-1	11-11-13	740A	NORMAL	WATER	3		4	1		1
M-44	11-11-13	1130A	NORMAL	WATER	3		4	1		1
M-95	11-11-13	1200P	NORMAL	WATER	3		4	1		1
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC 445.0636)
Signature: Michelle Brown **Date** 11-11-13

Special Instructions/QC Requirements & Comments:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michelle Brown	Envirogen	11-11-13 1300			1300
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica Laboratorie

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St , Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRV1
PC-123	11-11-13	501A	NORMAL	WATER	3		4	1	1	
PC-128	11-11-13	522A	NORMAL	WATER	3		4	1	1	
PC-129	11-11-13	547A	NORMAL	WATER	3		4	1	1	
PC-130	11-11-13	607A	NORMAL	WATER	3		4	1	1	
PC-131	11-11-13	628A	NORMAL	WATER	3		4	1	1	
PC-132	11-11-13	648A	NORMAL	WATER	3		4	1	1	
PC-124	11-11-13	709A	NORMAL	WATER	3		4	1	1	
PC-125	11-11-13	726A	NORMAL	WATER	3		4	1	1	
PC-126	11-11-13	738A	NORMAL	WATER	3		4	1	1	
PC-127	11-11-13	755A	NORMAL	WATER	3		4	1	1	
PC-54	11-11-13	900A	NORMAL	WATER	3		4	1	1	
M-48A	11-11-13	923A	NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown **Date** 11-11-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	11-11-13 1815			
Relinquished by	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
I-M	11-12-13	1048A	NORMAL	WATER	3		4	1	1	
I-D		1054A	NORMAL	WATER	3		4	1	1	
I-C		1101A	NORMAL	WATER	3		4	1	1	
I-S		1106A	NORMAL	WATER	3		4	1	1	
I-L		1110A	NORMAL	WATER	3		4	1	1	
I-Y		1117A	NORMAL	WATER	3		4	1	1	
I-R		1122A	NORMAL	WATER	3		4	1	1	
I-B		1130A	NORMAL	WATER	3		4	1	1	
I-AB		1141A	NORMAL	WATER	3		4	1	1	
I-AA		1136A	NORMAL	WATER	3		4	1	1	
I-AR	↓	1147A	NORMAL	WATER	3		4	1	1	
			NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC 445.0636)
Signature: Michelle Brown **Date** 11-12-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	11-12-13 1400		TA	11/12/13 1900
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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17461 Derian Ave
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Irvine, CA 92614
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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	**Analysis Turnaround Time**			Job No
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below _____			SDG No
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
I-O	11-12-13	942A	NORMAL	WATER	3		4	1	1	
I-W		949A	NORMAL	WATER	3		4	1	1	
I-P		953A	NORMAL	WATER	3		4	1	1	
I-H		956A	NORMAL	WATER	3		4	1	1	
I-U		1002A	NORMAL	WATER	3		4	1	1	
I-T		1006A	NORMAL	WATER	3		4	1	1	
I-G		1012A	NORMAL	WATER	3		4	1	1	
I-Q		1015A	NORMAL	WATER	3		4	1	1	
I-F		1024A	NORMAL	WATER	3		4	1	1	
I-X		1028A	NORMAL	WATER	3		4	1	1	
I-N		1035A	NORMAL	WATER	3		4	1	1	
I-E		1043A	NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown **Date** 11-12-13

Special Instructions/QC Requirements & Comments:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michele Brown	Envirogen	11-12-13 1405			
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company	Date/Time	Received by	Company	Date/Time

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Chain of Custody Record

TestAmerica
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below ______			SDG No.
FAX:	[x] 2 weeks			
Project Name: NERT- Quarterly 4th	[ ] 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	[ ] 2 days			
P O # 3693	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
M-65	11-12-13	1253p	NORMAL	WATER	3		4	1	1	
M-66	11-12-13	1066p	NORMAL	WATER	3		4	1	1	
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification
[x] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* *Poison B* [ ] *Unknown* [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] *Return To Client* [ ] *Disposal By Lab* [x] *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown **Date** 11-12-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	11-12-13 1400	[signature]	TA	11/12/13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
PC-136	11-12-13	1633A	NORMAL	WATER	3		4	1	1	
PC-144		1650A	NORMAL	WATER	3		4	1	1	
PC-135A		711A	NORMAL	WATER	3		4	1	1	
PC-148		748A	NORMAL	WATER	3		4	1	1	
PC-149		817A	NORMAL	WATER	3		4	1	1	
PC-150		912A	NORMAL	WATER	3		4	1	1	
VD-2		655A	NORMAL	WATER	3		4	1	1	
M-37		1158A	NORMAL	WATER	3		4	1		1
M-25		1218P	NORMAL	WATER	3		4	1	1	
VD-3		1200P	NORMAL	WATER	3		4	1		1
M-64		1235P	NORMAL	WATER	3		4	1		
EB-1	↓	1240P	NORMAL	WATER	3		4	1		1

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michele Brown Date 11-12-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michele Brown	Envirogen	11-12-13 1400			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
					11/12/13 1400
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949 261 1022 fax 949 260 3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below ____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
M-10B	11-13-13	8:42	NORMAL	WATER	3		4	1		
M-7A		8:56A	NORMAL	WATER	3		4	1		
M-9B		9:17A	NORMAL	WATER	3		4	1		
I-V		9:22A	NORMAL	WATER	3		4	1		
M-31A		10:51A	NORMAL	WATER	3		4	1		
M-12A		11:25A	NORMAL	WATER	3		4	1		
M-11		12:15P	NORMAL	WATER	3		4	1		
M-32		10:32A	NORMAL	WATER	3		4	1		
MW-4	↓	11:30A	NORMAL	WATER	3		4	1		
EB-2	11-13-13	9:18A	NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		
			NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other ____

Possible Hazard Identification
☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michelle Brown **Date** 11-13-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	11-13-13 1730			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) **WORK**			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly 4th	☐ 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
M-79	11-13	0640A	NORMAL	WATER	3		4	1		
M-69		0630A	NORMAL	WATER	3		4	1		
M-135		0645A	NORMAL	WATER	3		4	1		
M-131		0950A	NORMAL	WATER	3		4	1		
M-57A		0914A	NORMAL	WATER	3		4	1		
M-35		0931A	NORMAL	WATER	3		4	1		
M-19		0746A	NORMAL	WATER	3		4	1		
M-67		0800A	NORMAL	WATER	3		4	1		
I-1		0814A	NORMAL	WATER	3		4	1		
I-2		0818A	NORMAL	WATER	3		4	1		
I-J		0922A	NORMAL	WATER	3		4	1		
I-K		0826A	NORMAL	WATER	3		4	1		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☑ Archive For 1 Months

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michelle Brown **Date** 11-13-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Michelle Brown	Envirogen	11-13-13/1700			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949 261 1022 fax 949.261 3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	of COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	☑ 2 weeks			
Project Name: NERT- Quarterly M-10	☐ 1 week			
Site: NERT- 510 S. Fourth St. Hnederson, NV 89015	☐ 2 days			
P O # 3693	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	200.7 - B, Cr, Iron, Mn	SM4500NH3_D - Ammonia, TIN	300.1B_28D - Chlorate	314.0 Perchlorate	300_ORGFMS - (MOD) Nitate-Nitrite as N 300_ORGFM_28d - Chloride 150.1 - pH 2540C_Calcd - Total Dissolved Solids 218.6_ORGFM- Chromium, hexavalent
M-10	11-13-13	1430	NORMAL	WATER	6		4	3	6	1	1

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☑ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☐ *Disposal By Lab* ☑ *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)

Signature: Wendy Brown Date 11-13-13

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time	Received by	Company:	Date/Time
Wendy Brown	Envirogen	11-13-13 1430			
Relinquished by:	Company:	Date/Time	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time	Received by:	Company:	Date/Time:

Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Wendy Prescott	Site Contact: Wendy Prescott	Date:	COC No:
Envirogen Technologies	Tel/Fax: 702-371-9307	Lab Contact: Sushmitha Reddy	Carrier:	1 of 1 COCs
510 South Fourth Street	Analysis Turnaround Time			Job No.
Henderson, NV 89015	Calendar (C) or Work Days (W) WORK			
702-371-9307	TAT if different from Below _____			SDG No.
FAX:	[v] 2 weeks			
Project Name: NERT- Quarterly 4th	[ ] 1 week			
Site: NERT- 510 S. Fourth St., Hnederson, NV 89015	[ ] 2 days			
P O # 3693	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	TOTAL CHROME	CLO4	TDS, pH	TDS, pH, CRVI
M-99	11-14-13	622A	NORMAL	WATER	3		4	1	1	
M-83		654A	NORMAL	WATER	3		4	1	1	
M-80		726A	NORMAL	WATER	3		4	1	1	
M-81A		745A	NORMAL	WATER	3		4	1	1	
M-70		800A	NORMAL	WATER	3		4	1	1	
M-71		814A	NORMAL	WATER	3		4	1	1	
M-72		829A	NORMAL	WATER	3		4	1	1	
M-22A		845A	NORMAL	WATER	3		4	1	1	
M-14A		912A	NORMAL	WATER	3		4	1	1	
M-38		1205p	NORMAL	WATER	3		4	1		1
VD-5		1210p	NORMAL	WATER	3		4	1		1
VD-6		848A	NORMAL	WATER	3		4	1	1	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
[v] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* *Poison B* [ ] *Unknown* [ ]

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] *Return To Client* [ ] *Disposal By Lab* [v] *Archive For 1 Months*

I attest to the validity and authenticity of this (these) sample(s). I am aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636)
Signature: Michelle Bowers **Date** 11-14-13

Special Instructions/QC Requirements & Comments:

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michelle Bowers	Envirogen	11-14-13			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Shipping Order Form

S 4 4 0 - 3 8 4 7 7

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Shipping Order ID: 38477 **Ship Via: FedEx Ground** **Due On: 10/25/2013 2:00:00PM**

Ship To Information

Project Manager: Sushmitha Reddy
Company Name: Envirogen Technologies Inc
Attention: Attn: Wendy Prescott
Address 1: 510 Fourth Street
Address 2:
Address 3:
City: City: Henderson
State: NV
Zip: 89015
Phone #: 702-371-9307C
Project Ref: NERT - Quarterly 4th
Event Desc: Nert 4th Qtr

Notes to Bottle/Shipping Department

☐ Rebill Freight ☐ Labels on Coolers

Please add 142 sterile CLO4 kits

Print COC from BO.

please label the bottles.

fedex ground for receipt no later than 28

Shipping Assets

Assets	Quantity	Description	Filled
COCs	1	use form bO	☐
Coolers	1	to Fit	☐
Pre-label Bottles	1	Use the labels from TALs	☐

Please notify us immediately if an error is found in shipment

Bottle Order Information

Bottle Order: NERT - Quarterly 4th
Bottle Order #: 6764
Date Order Posted: 10/9/2013 10:59:19AM
Order Status: In Process
Prepared By: Sushmitha Reddy
Deliver By Date: ***10/25/2013 2:00:00PM***
Lab Project Number: 44009450

Order Completion Information

Filled by:
Sent Date:
Sent Via:
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
128	1	128	Plastic 500ml - with Nitric Acid	Nitric Acid	200.7 - Chromium	Water	Normal		
128	1	128	Plastic 500ml - unpreserved	None	2540C_Calcd - Total Dissolved Solids	Water	Normal		
					SM4500_H+ - pH	Water	Normal		
128	1	128	Plastic 125mL - sterile	None		Water	Normal	314	
12	1	12	Plastic 500ml - with Nitric Acid	Nitric Acid	200.7 - Chromium	Water	Normal		
12	1	12	Plastic 500ml - unpreserved	None	2540C_Calcd - Total Dissolved Solids	Water	Normal		
					218.6_ORGFM - Chromium, hexavalent	Water	Normal		
					SM4500_H+ - pH	Water	Normal		
12	1	12	Plastic 125mL - sterile	None		Water	Normal	314	

Notes to Field Staff:

Health and Safety Notes:

Preservative	Comment
Nitric Acid	CAUTION! STRONG OXIDIZER! CONTAINS 1:1 NITRIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

Relinquished By	Company	Date	Time	Received By	Company	Seal #:
						Seal #:
						Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #:
						Seal #:
						Seal #:

Please notify us immediately if an error is found in shipment

Bottle Order Information

Bottle Order: NERT - Quarterly M-10
Bottle Order #: 4296
Date Order Posted: 3/21/2013 12:00:12PM
Order Status: Ready To Process
Prepared By: Sushmitha Reddy
Deliver By Date: ***9/26/2013 11:59:00PM***
Lab Project Number: 44008210

Order Completion Information

Filled by:
Sent Date:
Sent Via:
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
1	1	1	Plastic 500ml - with Nitric Acid	Nitric Acid	200.7 - B, Cr, Iron, Mn	Water	Normal		
1	1	1	Plastic 500ml - with Sulfuric Acid	Sulfuric Acid	SM4500NH3_D - Ammonia, TIN	Water	Normal		
1	1	1	Plastic 125mL - ethylene diamine	Ethylene Diamine	300.1B_28D - Chlorate	Water	Normal		
1	2	2	Plastic 500ml - unpreserved	None	300_ORGFMS - (MOD) Nitrate-Nitrite as N	Water	Normal		
					300_ORGFM_28D - Chloride	Water	Normal		
					150.1 - pH	Water	Normal		
					2540C_Calcd - Total Dissolved Solids	Water	Normal		
					218.6_ORGFM - Chromium, hexavalent	Water	Normal		
1	1	1	Plastic 125mL - sterile	None		Water	Normal	CLO4	

Notes to Field Staff:

Health and Safety Notes:

Preservative	Comment
Ethylene Diamine	CAUTION! CORROSIVE! CONTAINS ETYLENEDIAMINE. Harmful if inhaled. Use adequate ventilation. Harmful in contact with skin and eyes. If contact is made, FLUSH IMMEDIATELY with water.
Nitric Acid	CAUTION! STRONG OXIDIZER! CONTAINS 1:1 NITRIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sulfuric Acid	CAUTION! CONTAINS 1:1 SULFURIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

Relinquished By	Company	Date	Time	Received By	Company	Seal #:
						Seal #:
						Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #:
						Seal #:
						Seal #:

Please notify us immediately if an error is found in shipment

ENVIROGEN
TECHNOLOGIES

Groundwater Field Log

This Section Contains:

- Water Sampling Field Logs

ENVIROGEN
TECHNOLOGIES

Water Sampling Field Log

Well No.: ARP-1

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warmy sunny

Well Information:

Total Well Depth: 44.20 feet Time: 1038A

Depth to Water: - 23.19 feet

		Well Diameter (circle one)				
		2-in.	4-in.	6-in		**Purge Volume**
Water Column (L):	21.01 feet	X 0.4893	1.9	4.41	=	10 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1039A	10 gal	7.29	25.16°C	clear

Comments:

EB-1
Taken here before moving to next well -

1 bottle - CLO4 1055A

Sample Collection Time - 1045A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-2A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, cloudy

Well Information:

Total Well Depth: 54.00 feet Time: 1118A

Depth to Water: - 24.61 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	29.39 feet	X (0.4893)	1.9	4.41	=	14 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1119A	14 gal	7.62	23.4 °C	clear

Comments:

Sample Collection Time - 1127A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-3A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm cloudy

Well Information:

Total Well Depth: 41.00 feet Time: 1101A

Depth to Water: - 26.19 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	14.81 feet	X	0.4893	1.9	4.41	= 7 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1102A	7 gal	11.36	24.1 °C	clear

Comments:

Sample Collection Time - 1108A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-4A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Cloudy, warm

Well Information:

Total Well Depth: 33.00 feet Time: 958A

Depth to Water: - 28.55 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	4.45 feet	X (0.4893)	1.9	4.41	=	3gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
959A	3gal	7.47	20.8°C	clear

Comments:

Sample Collection Time - 1002A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-5A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny, clouding up

Well Information:

Total Well Depth: 38.00 feet Time: 945a

Depth to Water: - 31.83 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	6.17 feet	X (0.4893)	1.9	4.41	=	3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
	3gal	7.52	21.2 C	clear

Comments:

Sample Collection Time - 950A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-16B

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 43.00 feet Time: 929A

Depth to Water: - 31.27 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	11.73 feet	X (0.4893)	1.9	4.41	=	6 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
930A	6 gal	7.24	23.0°	Clear

Comments:

Sample Collection Time - 935a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ARP-7

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 39.20 feet Time: 912A

Depth to Water: - 29.43 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	9.77 feet	X	0.4893	1.9	4.41	=	5gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
913A	5gal	7.20	23.2°C	clear

Comments:

Sample Collection Time - 919A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-1

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy

Well Information:

Total Well Depth: 56.10 feet ← 11-8-13 Time: 1123A

Depth to Water: - 25.24 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	30.73 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
109p		7.45	95.2	clear

Comments:

Sample Collection Time - 109p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-1A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm Sunny

Well Information:

Total Well Depth: 56.00 feet Time: 1124A

Depth to Water: - 23.15 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	32.85 feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample

Comments: DTW only - No SAMPLE

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-2

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy, warm)

Well Information:

Total Well Depth: 56.00 feet 11-8-13 ← Time: 1128A

Depth to Water: - 26.72 feet ↓

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	29.28 feet	X	0.4893	1.9	4.41	=	____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
113p		7.15	25.7°C	clear

Comments:

Sample Collection Time - 113p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-2A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 58.00 feet Time: 1129A

Depth to Water: - 25.84 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	32.16 feet	X 0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample

Comments: DTW ONLY - NO SAMPLE

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-3

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 49.00 feet Time: 1137A

Depth to Water: - 29.81 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	17.19 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample

Comments: DTW ONLY- NO SAMPLE

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-3A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy, warm

Well Information:

Total Well Depth: 55.00 feet 11-8-13 Time: 1138A

Depth to Water: - 37.68 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	17.32 feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
121p		7.12	25.3°	clear

Comments:

Sample Collection Time - 121p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-4

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 46.00 feet Time: 1140 A

Depth to Water: - 28.23 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	17.77 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY - NO SAMPLE

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-4A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy, warm)

Well Information:

11-8-13 ←

Total Well Depth: 46.00 feet Time: 1141A

Depth to Water: - 41.99 feet ←

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	4.01 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1250		7.22	25.0°C	clear

Comments:

Sample Collection Time - 1250

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-6

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port O Disposable Bailer ● Electric pump O

Weather Conditions: Warm, cloudy

Well Information: _____ 11-7-13

Total Well Depth: 36.00 feet Time: MSLA

Depth to Water: - 28.82 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	7.18 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
140p		6.85		Clear

Comments:

Sample Collection Time - 140p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-7

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Warm, cloudy

Well Information:

11-7-13

Total Well Depth: 38.90 feet Time: 804A

Depth to Water: - 29.79 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	9.11 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1300		7.19	24.5°C	Clear

Comments:

Sample Collection Time - 1300

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-7A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: cool clear

Well Information:

Total Well Depth: 40.00 feet Time: 807A

Depth to Water: - 31.53 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	8.47 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY - NO SAMPLE

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-7B

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: clear, cool

Well Information:

Total Well Depth: 50.00 feet Time: 740A

Depth to Water: - 33.96 feet

			Well Diameter (circle one)				
			2-in.	4-in.	6-in		Purge Volume
Water Column (L):	16.04 feet	X	0.4893	1.9	4.41	=	71 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
744a	71 gal	7.26	20.5	clear

Comments:

Hanna Field probe calibrated before sample collected
buffer 7.0
cal val 7.02
Temp 11.2°C

Sample Collection Time - 814A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-8

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: (cloudy, warm)

Well Information: _____ 11-8-13 ← MB

Total Well Depth: 50.5 feet Time: ~~28~~ 11:34A

Depth to Water: - 28.78 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	21.72 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
117p		7.06	25.7	Clear

Comments:

Sample Collection Time - 117p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-8A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 54.00 feet Time: 1135A

Depth to Water: - 21.00 feet

			Well Diameter (circle one)				**Purge Volume**
			2-in.	**4-in.**	**6-in**		
Water Column (L):	33.00 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: DTW ONLY
NO SAMPLE

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: ART-9

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: warm, cloudy

Well Information:

11-7-13

Total Well Depth: 43.0 feet Time: 8:01 A

Depth to Water: - 30.99 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	12.01 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1350		7.25	24.7	clear

Comments:

Sample Collection Time - 1350

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: L-635

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm, overcast

Well Information:

Total Well Depth: 45.33 feet Time: 1230p

Depth to Water: - _____ feet

		Well Diameter (circle one)				Purge Volume
		2-in.	4-in.	6-in		
Water Column (L):	_____ feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample

Comments: No ~~Access~~
No ~~Data~~ No Sample

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: L-637

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: warm overcast

Well Information:

Total Well Depth: 39.50 feet Time: 1230p

Depth to Water: - _____ feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	_____ feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: No Access
No Data No Sample

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: M-10

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" ●

Weather Conditions: warm Sunny

Well Information:

Total Well Depth: 69.45 feet Time: 1250p

Depth to Water: 47.17 feet

Height of Water Column (L): 22.58 feet * 0.16 gal/ft * 0.65 gal/ft * (1.47 gal/ft) = 33.19 gal. * 3 = 100 gal

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV) | Purge Factor | **Purge Volume**

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1253p	-----	-----	-----	-----	
112p	34 gal	7.56	3.27 mS/cm	24.6 °C	clear
127p	67 gal	7.53	3.26 mS/cm	24.6 °C	clear
144p	100 gal	7.38	3.30 mS/cm	23.7 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 148p Time Finished: 148p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

See bottle order

TOTAL BOTTLES: 6

Comments:

Water Sampling Field Log

Well No.: M-11

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ⊙ Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" ●

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 58.00 feet Time: 1140A

Depth to Water: 42.31 feet

Well Diameter (circle one): 2-in. 4-in. (6-in)

Well Volume (WV) | Purge Factor | Purge Volume

Height of Water Column (L): 15.69 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 23.06 gal. * 3 = 70 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1142A	-----	-----	-----	-----	
1151A	24 gal	8.30	3.42 mS/cm	24.6°C	slightly cloudy
1201P	47 gal	7.98	3.40 mS/cm	24.7°C	clear
1209P	70 gal	8.00	3.35 mS/cm	24.6°C	clear
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: 1215P Time Finished: 1245P

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-12A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 50.00 feet Time: 1117A

Depth to Water: 40.82 feet

Height of Water Column (L): 9.18 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV) = 1.46 gal. * Purge Factor 3 = **Purge Volume** 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1118A	-----	-----	-----	-----	
1121A	2 gal	7.99	7.87 mS/cm	24.0°C	yellow
1124A	3 gal	7.99	8.09 mS/cm	24.0°C	yellow
1125A	4 gal	7.91	8.11 mS/cm	24.0°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 1127A Time Finished: 1127A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

1130A VD-4 collected here for same analyses

TOTAL BOTTLES: 3

Comments:

NO well cap – covered with elec tape removed tape to sample

Water Sampling Field Log

Well No.: M-14A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny, slight breeze

Well Information:

Total Well Depth: 42.40 feet Time: 905A

Depth to Water: 31.65 feet

		Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
		2-in.	4-in.	6-in			
Height of Water Column (L):	10.75 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.72 gal.	* 3	= 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
9064	----	----	----	----	
908A	2 gal	7.92	4.63 mS/cm	23.1°C	slightly cloudy
909A	4 gal	7.81	4.57 mS/cm	24.2°C	very slightly cloudy
910A	5 gal	7.65	4.57 mS/cm	24.4°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 912A Time Finished: 912A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-19

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, sunny, slightly cloudy

Well Information:

Total Well Depth: 41.20 feet Time: 740A

Depth to Water: 34.32 feet

Height of Water Column (L): 6.88 feet

Well Diameter (circle one): 2-in. (* 0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV) = 1.10 gal. * Purge Factor 3 = **Purge Volume** 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
742A	-----	-----	-----	-----	
743A	1 gal	7.40	5.82 mS/cm	21.1°C	clear
744A	2 gal	7.38	6.11 mS/cm	22.7°C	clear
745A	3 gal	7.30	6.06 mS/cm	23.3°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 746A Time Finished: 746A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-22A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny, clear

Well Information:

Total Well Depth: 36.92 feet Time: 836A

Depth to Water: 29.43 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)		Well Volume (WV)		Purge Factor		Purge Volume
7.49 feet	* 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft	= 1.19 gal.	*	3	=	4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
839A	---	---	---	---	
841A	2 gal	7.37	13.23 mS/cm	22.6°C	Yellow
842A	3 gal	7.24	13.30 mS/cm	23.2°C	Yellow
843A	4 gal	7.20	13.31 mS/cm	23.7°C	Yellow
	gal				
	gal				
	gal				

Sample Appearance: Yellow

Sample Collection - Time Start: 845A Time Finished: 845A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: VD-6 taken at the well for same analytes 848A

Water Sampling Field Log

Well No.: M-23

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Clear, Sunny

Well Information:

Total Well Depth: 44.47 feet Time: 1100A

Depth to Water: 33.32 feet

Height of Water Column (L): 11.15 feet

Well Diameter (circle one) 2-in.	4-in.	6-in	Well Volume (WV)	Purge Factor	Purge Volume
0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.78 gal.	* 3	= 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1101A	-----	-----	-----	-----	
1104A	2 gal	7.68	5.65 mS/cm	25.0°C	Clear
1105A	4 gal	7.37	5.31 mS/cm	24.6°C	Clear
1106A	5 gal	7.34	5.24 mS/cm	24.6°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 1108A Time Finished: 1108A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-25

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ◉ Dedicated Bailer ○ Non Dedicated Bailer ○ Ready Flo 2" ○

Weather Conditions: cloudy, warm, breezy

Well Information:

Total Well Depth: 41.47 feet Time: 1210p

Depth to Water: 30.32 feet

Height of Water Column (L): 11.15 feet

Well Diameter (circle one): 2-in. (* 0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV): 1.78 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1211p	-----	-----	-----	-----	
1213p	2 gal	7.15	8.89 mS/cm	24.2°C	light yellow
1215p	4 gal	7.33	8.84 mS/cm	24.2°C	light yellow
1216p	5 gal	7.24	8.87 mS/cm	24.6°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 1218p Time Finished: 1218p

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-31A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 55.00 feet Time: 1037A

Depth to Water: 42.95 feet

Height of Water Column (L): 12.05 feet

Well Diameter (circle one): 2-in. (* 0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

= 1.92 gal. * 3 (Purge Factor) = 6 gal (Purge Volume)

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1049A	-----	-----	-----	-----	
1052A	2 gal	8.19	1.12 mS/cm	25.4°C	cloudy
1054A	4 gal	7.89	1.08 mS/cm	24.3°C	slightly cloudy
1056A	6 gal	7.90	1.07 mS/cm	24.5°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1059A Time Finished: 1059A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-35

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, slightly cloudy

Well Information:

Total Well Depth: 39.70 feet Time: 7:25A

Depth to Water: 31.23 feet

Height of Water Column (L): 8.47 feet

Well Diameter (circle one): (2-in.) 4-in. 6-in

(0.16 gal/ft) * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV): 1.35 gal. * Purge Factor: 3 = **Purge Volume**: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
726A	-----	-----	-----	-----	
728A	2 gal	7.44	5.607 mS/cm	21.2°C	slightly yellow
729A	3 gal	7.30	5.90 mS/cm	22.8°C	slightly yellow
730A	4 gal	7.29	6.18 mS/cm	23.1°C	slightly yellow
	gal				
	gal				
	gal				

Sample Appearance: slightly yellow

Sample Collection - Time Start: 731A Time Finished: 731A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-36

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: _____

Well Information:

Total Well Depth: 37.85 feet Time: _____

Depth to Water: _____ feet

Well Diameter (circle one) 2-in. 4-in. 6-in

Height of Water Column (L): _____ feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Well Volume (WV) | Purge Factor | Purge Volume

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	----	-----	----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	well destroyed
_____	_____ gal	_____	_____	_____	NO data
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: M-37

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, some rain, cloudy

Well Information:

Total Well Depth: 37.18 feet Time: 1151A

Depth to Water: 30.24 feet

Height of Water Column (L): 6.94 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft * 4-in. 0.65 gal/ft * 6-in 1.47 gal/ft = Well Volume (WV): 1.11 gal. * Purge Factor: 3 = **Purge Volume**: 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1152A	-----	-----	-----	-----	
1153A	1 gal	7.06	6.52 mS/cm	25.0°C	clear
1154A	2 gal	6.96	7.84 mS/cm	25.2°C	clear
1155A	3 gal	6.94	8.06 mS/cm	25.2°C	clear
1156A	4 gal	6.95	8.08 mS/cm	24.9°C	clear
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1158A Time Finished: 1158A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: VD-3 collected here 1200 for same analyses

Water Sampling Field Log

Well No.: M-38

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump O Dedicated Bailer ● Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny, slight breeze

Well Information:

Total Well Depth: 36.82 feet Time: 1153A

Depth to Water: 29.96 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)		Well Diameter		Well Volume (WV)	Purge Factor	Purge Volume
6.86 feet	* 0.16 gal/ft (2-in.)	* 0.65 gal/ft (4-in.)	* 1.47 gal/ft (6-in)	= 1.09 gal.	* 3	= 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1157A	1 gal	7.45	11.92 mS/cm	24.5°C	yellow
1200p	2 gal	7.44	11.69 mS/cm	24.2°C	yellow
1204p	3 gal	7.29	11.92 mS/cm	24.2°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 1205p Time Finished: 1205p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: VD-5 taken here at 1210p for same analyses

Water Sampling Field Log

Well No.: M-44

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-21-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny, clear

Well Information:

Total Well Depth: 37.65 feet Time: 1120A

Depth to Water: 23.69 feet

Height of Water Column (L): 13.96 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft | 4-in. 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): = 2.23 gal. * Purge Factor: 3 = **Purge Volume**: 7 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1121A	-----	-----	-----	-----	
1123A	3 gal	7.70	9.79 mS/cm	24.3°C	clear
1125A	5 gal	7.59	10.03 mS/cm	24.2°C	clear
1128A	7 gal	7.44	9.97 mS/cm	24.4°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1130A Time Finished: 1130A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-48A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 40.0 feet Time: 910A

Depth to Water: 29.62 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 10.38 feet (0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft) = Well Volume (WV): 1.66 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
912A	-----	-----	-----	-----	
917A	2 gal	7.53	5.48 mS/cm	25.1°C	clear
918A	4 gal	7.39	5.40 mS/cm	25.6°C	clear
919A	5 gal	7.36	5.41 mS/cm	25.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 923A Time Finished: 923A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments: VD-1 924A taken here for same analyses

Water Sampling Field Log

Well No.: M-52

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 47.38 feet Time: 1017A

Depth to Water: 40.24 feet

Height of Water Column (L): 7.14 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): = 1.14 gal. * Purge Factor: 3 = **Purge Volume**: 3gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1019A	-----	-----	-----	-----	
1021A	1 gal	7.56	6.61 mS/cm	24.6°C	clear w/ floaties
1024A	2 gal	7.58	6.24 mS/cm	24.8°C	muddy
1026A	3 gal	7.50	6.08 mS/cm	24.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1030A Time Finished: 1030A

Analyses: CLO4 / pH / TDS / CR / pH / TDS / CRVI

Bottles: 1 BTL / 1 BTL / 1 BTL / 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-55

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 45.00 feet Time: 1033A

Depth to Water: 24.46 feet

Height of Water Column (L): 20.54 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

removed bailer perman.

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-56

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 40.00 feet Time: 1043A

Depth to Water: 27.17 feet

Height of Water Column (L): 12.83 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	**Purge Volume**
2-in.	4-in.	6-in			
0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements: Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-57A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, slightly cloudy

Well Information:

Total Well Depth: 42.40 feet Time: 7060A

Depth to Water: 28.74 feet

Height of Water Column (L): 13.76 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV) 2.20 gal. * Purge Factor 3 = **Purge Volume** 7 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
7080	-----	-----	-----	-----	
7110A	3 gal	7.71	4.05 mS/cm	20.2°C	slightly cloudy
7114A	5 gal	7.61	4.28 mS/cm	22.0°C	very slightly cloudy
7124A	7 gal	7.57	4.25 mS/cm	22.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 7144 Time Finished: 7144

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-58

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 45.00 feet Time: 1053A

Depth to Water: 28.66 feet

Height of Water Column (L): 16.34 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-6D

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 43.00 feet Time: 1046A

Depth to Water: 27.82 feet

Height of Water Column (L): 15.18 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-164

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cloudy, warm

Well Information:

Total Well Depth: 38.00 feet Time: 12:26p

Depth to Water: 25.02 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 12.98 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 2.07 gal. * Purge Factor 3 = **Purge Volume** 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1227p	-----	-----	-----	-----	
1230p	2 gal	7.47	9.46 mS/cm	25.5°C	cloudy
1231p	4 gal	7.44	9.29 mS/cm	25.8°C	cloudy
1232p	6 gal	7.44	8.99 mS/cm	25.7°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 1235p Time Finished: 1235p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

EB-1 collected here before moving to next well 1240p

TOTAL BOTTLES: 3

Comments: CR, CLO4, TDS, pH CRVI

Water Sampling Field Log

Well No.: M-105

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cloudy, warm

Well Information:

Total Well Depth: 40.00 feet Time: 1243p

Depth to Water: 27.54 feet

Height of Water Column (L): 12.46 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV): 1.99 gal. * Purge Factor: 3 = **Purge Volume**: 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1244p	-----	-----	-----	-----	
1247p	2 gal	7.32	12.85 mS/cm	24.8°C	yellow
1249p	4 gal	7.15	13.32 mS/cm	25.2°C	yellow
1251p	6 gal	7.14	13.27 mS/cm	25.8°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 1253p Time Finished: 1253p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-166

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, cloudy, slight breeze

Well Information:

Total Well Depth: 43.00 feet Time: 1257p

Depth to Water: 29.81 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
13.19 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 2.11 gal.	*	3	=	6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1258p	-----	-----	-----	-----	
100p	2 gal	7.15	15.41 mS/cm	25.1°C	yellow
102p	4 gal	7.07	15.64 mS/cm	25.7°C	yellow
103p	6 gal	7.00	15.68 mS/cm	25.4°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 106p Time Finished: 106p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-27

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm sunny

Well Information:

Total Well Depth: 38.00 feet Time: 758A

Depth to Water: 21.51 feet

Height of Water Column (L): 16.49 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

(0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft) = Well Volume (WV): 2.63 gal. * Purge Factor: 3 = **Purge Volume**: 8 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
759A	-----	-----	-----	-----	
802A	3 gal	7.45	6.44 mS/cm	22.7°C	slightly yellow
804A	6 gal	7.28	6.56 mS/cm	23.7°C	slightly yellow
805A	8 gal	7.24	6.58 mS/cm	24.4°C	slightly yellow
	gal				
	gal				
	gal				

Sample Appearance: slightly yellow

Sample Collection - Time Start: 806A Time Finished: 806A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-68

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 41.00 feet Time: 834A

Depth to Water: 26.18 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L):	Well Volume (WV)	Purge Factor	Purge Volume
14.82 feet * 0.16 gal/ft (2-in.) / * 0.65 gal/ft (4-in.) / * 1.47 gal/ft (6-in)	= 2.37 gal.	* 3	= 7 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
835A	-----	-----	-----	-----	
837A	3 gal	7.41	6.91 mS/cm	22.9°C	clear
839A	5 gal	7.33	6.97 mS/cm	23.6°C	clear
840A	7 gal	7.27	6.99 mS/cm	23.9°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 842A Time Finished: 842A

Analyses: CLO4 / pH / TDS / CR / pH / TDS / CRVI

Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments: Dup EC

7.01 EC 23.9 Temp

Water Sampling Field Log

Well No.: M-69

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, slightly cloudy

Well Information:

Total Well Depth: 40.00 feet Time: 623A

Depth to Water: 31.43 feet

Height of Water Column (L): 8.57 feet * Well Diameter (circle one): (2-in.) 4-in. 6-in * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 1.37 gal. * Purge Factor 3 = Purge Volume 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
624A	-----	-----	-----	-----	
626A	2 gal	7.29	561 mS/cm	20.7°C	clear
628A	3 gal	7.22	5.63 mS/cm	21.8°C	clear
629A	4 gal	7.18	5.57 mS/cm	23.2°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 630A Time Finished: 630A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-70

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny, clear

Well Information:

Total Well Depth: 41.00 feet Time: M53A

Depth to Water: 33.63 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)	Purge Factor	Purge Volume
7.37 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 1.17 gal.	* 3	= 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
M54A	-----	-----	-----	-----	
M56A	2 gal	7.47	7.07 mS/cm	21.4°C	light yellow
M58A	3 gal	7.12	7.32 mS/cm	22.6°C	light yellow
M59A	4 gal	7.29	7.18 mS/cm	22.9°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 800A Time Finished: 800A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-11

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny, clear

Well Information:

Total Well Depth: 43.00 feet Time: 806A

Depth to Water: 34.21 feet

Height of Water Column (L): 8.79 feet * (Well Diameter (circle one): 2-in. 0.16 gal/ft; 4-in. * 0.65 gal/ft; 6-in * 1.47 gal/ft) = Well Volume (WV): 1.40 gal. * Purge Factor: 3 = **Purge Volume**: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
808A	-----	-----	-----	-----	
810A	2 gal	7.14	11.36 mS/cm	21.9°C	yellow
811A	3 gal	7.04	11.44 mS/cm	22.9°C	yellow
812A	4 gal	6.98	11.49 mS/cm	23.3°C	yellow
	gal				
	gal				
	gal				

Sample Appearance: yellow

Sample Collection - Time Start: 814A Time Finished: 814A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-72

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny, clear

Well Information:

Total Well Depth: 36.00 feet Time: 820A

Depth to Water: 31.45 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
4.55 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= .72 gal.	*	3	=	2 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
823A	-----	-----	-----	-----	
824A	1 gal	7.14	10.26 mS/cm	21.7°C	light yellow
825A	1.5 gal	7.07	10.89 mS/cm	22.1°C	light yellow
825A	2 gal	7.02	10.67 mS/cm	22.4°C	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 829A Time Finished: 829A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-73

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 36.00 feet Time: 903A

Depth to Water: 28.89 feet

Height of Water Column (L): 7.11 feet

Well Diameter (circle one): (2-in.) 4-in. 6-in

* 0.16 gal/ft (2-in.) * 0.65 gal/ft (4-in.) * 1.47 gal/ft (6-in) = Well Volume (WV): 1.13 gal. * Purge Factor: 3 = Purge Volume: 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
904A	-----	-----	-----	-----	
905A	1 gal	7.54	7.46 mS/cm	21.8°C	light yellow
908A	2 gal	7.28	8.39 mS/cm	23.1°C	light yellow
910A	3 gal	7.30	8.25 mS/cm	23.4°C	light yellow
912A	4 gal	7.32	8.20 mS/cm	22.9°C	light yellow
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 914A Time Finished: 914A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments: well slow to recharge

EB-2 collected here before moving to next well 914A

Water Sampling Field Log

Well No.: M-74

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 39.00 feet Time: 849A

Depth to Water: 29.83 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)		Well Volume (WV)		Purge Factor		Purge Volume
9.17 feet	* 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft	= 1.46 gal.	*	3	=	4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
850A	-----	-----	-----	-----	
852A	2 gal	7.51	6.71mS/cm	22.1 °C	clear
854A	3 gal	7.38	7.05mS/cm	23.5 °C	clear
855A	4 gal	7.33	7.04 mS/cm	24.0 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 856A Time Finished: 856A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: N-75

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny, slight breeze.

Well Information:

Total Well Depth: 53.90 feet Time: 855A

Depth to Water: 42.06 feet

Height of Water Column (L): 11.84 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= gal.	* 3	=

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	----	----	----	----	
	gal				DTW only
	gal				No sample
	gal				
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: M-726

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny, slight breeze

Well Information:

Total Well Depth: 54.60 feet Time: 858A

Depth to Water: 39.13 feet

Height of Water Column (L): 15.47 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)		Purge Factor		Purge Volume
0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal. * 3 =	_____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	no Sample
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: M-77

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

extension Added To well

Total Well Depth: 47.20 feet Time: 1013 A

Depth to Water: 38.46 feet

Height of Water Column (L): 8.74 feet

Well Diameter (circle one)			Well Volume (WV)		Purge Factor		Purge Volume
2-in.	4-in.	6-in					
*0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	=	gal.	* 3	=	

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
	----	----	----	----	
	gal				DTW only
	gal				no Sample
	gal				
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-MW

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 43.60 feet Time: 1036A

Depth to Water: 25.54 feet

Well Diameter (circle one)

Height of Water Column (L):		2-in.	4-in.	6-in	Well Volume (WV)	Purge Factor	Purge Volume
18.06 feet	*	0.16 gal/ft	0.65 gal/ft	1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-79

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, slightly cloudy

Well Information:

Total Well Depth: 37.60 feet Time: 1608A

Depth to Water: 29.88 feet

Height of Water Column (L): 7.72 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV): 1.23 gal. * Purge Factor: 3 = **Purge Volume**: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1611A	-----	-----	-----	-----	
1614A	2 gal	7.00	5.50 mS/cm	18.8 °C	clear
1615A	3 gal	7.19	5.70 mS/cm	20.8 °C	clear
1616A	4 gal	7.20	5.77 mS/cm	22.8	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1617A Time Finished: 1617A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-80

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 43.70 feet Time: 701A

Depth to Water: 35.42 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)			Well Volume (WV)	Purge Factor	Purge Volume
8.28 feet	* 0.16 gal/ft	(* 0.65 gal/ft) * 1.47 gal/ft	= 5.38 gal.	* 3	= 16 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
702A	---	---	---	---	
707A	6 gal	7.65	3.14 mS/cm	19.9°C	clear
721A	9 gal	7.66	3.12 mS/cm	18.3°C	clear
725A	10 gal	7.57	3.19 mS/cm	18.3°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 726A Time Finished: 726A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: Well purged dry slow to recharge

Water Sampling Field Log

Well No.: M-81A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 41.60 feet Time: M33A

Depth to Water: 35.29 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)			Well Volume (WV)	Purge Factor	Purge Volume
6.31 feet	* 0.16 gal/ft	* 0.65 gal/ft * 1.47 gal/ft	= 4.10 gal.	* 3	= 12 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
M34A	----	----	----	----	
737A	4 gal	7.36	6.08 mS/cm	21.7°C	slightly yellow tint
740A	8 gal	7.32	6.18 mS/cm	22.3°C	same
M43A	12 gal	7.28	6.15 mS/cm	22.3°C	same
	gal				
	gal				
	gal				

Sample Appearance: slightly yellow tint

Sample Collection - Time Start: 745A Time Finished: 745A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Dup EC

22.3°C Temp

6.17 EC

Water Sampling Field Log

Well No.: M-83

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Sunny, cool

Well Information:

Total Well Depth: 42.50 feet Time: 6:44A

Depth to Water: 30.48 feet

Height of Water Column (L): 12.02 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV) = 1.92 gal. * Purge Factor 3 = Purge Volume 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
6:47A	-----	-----	-----	-----	
6:49A	2 gal	7.30	3.62 mS/cm	19.5°C	Clear
6:51A	4 gal	7.29	3.75 mS/cm	20.8°C	Clear
6:52A	6 gal	7.31	3.74 mS/cm	21.3°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 6:54A Time Finished: 6:54A

Analyses:	ClO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-92

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 48.50 feet Time: 221p

Depth to Water: 36.23 feet

Height of Water Column (L): 12.27 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV) = _____ gal. * Purge Factor 3 = **Purge Volume** _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: N-93

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 49.00 feet Time: 229p

Depth to Water: 35.36 feet

Well Diameter (circle one) 2-in. 4-in. 6-in

Height of Water Column (L):	Well Volume (WV)	Purge Factor	Purge Volume
13.64 feet * 0.16 gal/ft (2-in.) / * 0.65 gal/ft (4-in.) / * 1.47 gal/ft (6-in)	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

Comments: bailer stuck inside well well damaged yrs ago

TOTAL BOTTLES: 0

Water Sampling Field Log

Well No.: M-95

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Sunny, Warm

Well Information:

Total Well Depth: 30.00 feet Time: 1148A

Depth to Water: 16.57 feet

Well Diameter (circle one): (2-in.) 4-in. 6-in

Height of Water Column (L): 13.43 feet * 0.16 gal/ft (2-in.) *0.65 gal/ft (4-in.) * 1.47 gal/ft (6-in) = Well Volume (WV) 2.14 gal. * Purge Factor 3 = Purge Volume 6.42 gal.

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1150A	----	----	----	----	
1152A	2 gal	7.69	7.04mS/cm	23.1°C	Clear
1155A	4 gal	7.50	6.94mS/cm	24.6°C	Clear
1157A	6 gal	7.45	7.02mS/cm	25.3°C	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 1200p Time Finished: 1200p

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-96

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm sunny

Well Information:

Total Well Depth: 16.90 feet Time: 815A

Depth to Water: 16.69 feet

Well Diameter (circle one) 2-in. 4-in. 6-in

Well Volume (WV) | Purge Factor | Purge Volume

Height of Water Column (L): .21 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	Well dry	
_____	gal	_____	_____	_____	NO SAmple
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: M-97

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 52.50 feet Time: 2230

Depth to Water: 39.62 feet

Height of Water Column (L): 12.88 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV) = _____ gal. * Purge Factor 3 = **Purge Volume** _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: N-98

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-18-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 33.40 feet Time: 1022A

Depth to Water: _____ feet

Height of Water Column (L): _____ feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	**Purge Volume**
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	Well dry
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: M-99

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump O Dedicated Bailer ● Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: COOL

Well Information:

Total Well Depth: 35.59 feet Time: 620A

Depth to Water: 33.55 feet

Height of Water Column (L): 204 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
621A	gal	7.24	4.56 mS/cm	18.2 °C	muddy
	gal				
	gal				
	gal				
	gal				
	gal				

Sample Appearance: muddy

Sample Collection - Time Start: 622A Time Finished: 622A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: Did not purge to collect sample due to low water volume

Water Sampling Field Log

Well No.: M-100

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 33.81 feet TWD in Field Time: 1590

Depth to Water: 33.76 feet

Height of Water Column (L): _____ feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	Well dry
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	No Sample
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-101

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 32.15 feet TWD in Field Time: 1550

Depth to Water: 32.23 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume

Height of Water Column (L): _____ feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	well dry	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-115

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-14-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny, slight breeze

Well Information:

Total Well Depth: 47.50 feet Time: 901A

Depth to Water: 37.63 feet

Height of Water Column (L): 9.87 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

Well Volume (WV) = _____ gal. * Purge Factor 3 = Purge Volume _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	----	----	----	----	
_____	gal	_____	_____	_____	DTW only
_____	gal	_____	_____	_____	No Sample
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: _____

Comments:

Water Sampling Field Log

Well No.: M-131

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, slightly cloudy

Well Information:

Total Well Depth: 39.00 feet Time: 650A

Depth to Water: 31.31 feet

Height of Water Column (L): 7.69 feet

Well Diameter (circle one): 2-in. 0.16 gal/ft * 4-in. 0.65 gal/ft * 6-in 1.47 gal/ft = Well Volume (WV): 1.23 gal. * Purge Factor: 3 = **Purge Volume**: 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
651A	-----	-----	-----	-----	
653A	2 gal	7.77	4.33 mS/cm	20.8°C	clear
654A	3 gal	7.61	4.28 mS/cm	22.4°C	clear
655A	4 gal	7.60	4.39 mS/cm	22.3°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 656A Time Finished: 656A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-135

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, slightly cloudy

Well Information:

Total Well Depth: 39.00 feet Time: 1636A

Depth to Water: 32.43 feet

Height of Water Column (L): 6.57 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (* 0.65 gal/ft) 6-in (* 1.47 gal/ft)

Well Volume (WV): = 1.05 gal.

Purge Factor: * 3

Purge Volume: = 3gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1638A	-----	-----	-----	-----	
1639A	1 gal	7.82	4.21mS/cm	20.2°C	clear
1640A	2 gal	7.57	4.65mS/cm	21.9°C	clear
1641A	3 gal	7.53	4.75mS/cm	22.6°C	clear
1642A	4 gal	7.52	4.75mS/cm	22.9°C	clear
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1645A Time Finished: 1645A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: M-1616

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Sunny, Warm

Well Information:

Total Well Depth: 32.00 feet Time: 1015A

Depth to Water: 27.01 feet

Height of Water Column (L): 4.99 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV) = _____ gal. * Purge Factor 3 = **Purge Volume** _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	
_____	_____ gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-1167

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 30.00 feet Time: 10074

Depth to Water: 24.34 feet

Height of Water Column (L): 5.66 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
(0.16 gal/ft)	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: ~~0~~

Comments:

Water Sampling Field Log

Well No.: M-168

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 35.00 feet Time: 1003A

Depth to Water: 22.27 feet

Height of Water Column (L): 12.73 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	Purge Volume
2-in.	4-in.	6-in			
0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-169

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 35.00 feet Time: 854a

Depth to Water: 24.28 feet

Height of Water Column (L): 10.72 feet

Well Diameter (circle one)	Well Volume (WV)	Purge Factor	Purge Volume
2-in. * 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-170

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 35.00 feet Time: 1028A

Depth to Water: 24.31 feet

Height of Water Column (L): 10.69 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV) = _____ gal. * Purge Factor 3 = **Purge Volume** _____

Field Measurements: Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____
_____	gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-172

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 37.00 feet Time: 1040A

Depth to Water: 25.49 feet

Height of Water Column (L): 11.51 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)		Purge Factor		Purge Volume
0.16 gal/ft *	0.65 gal/ft *	1.47 gal/ft =	gal. *	3 =

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-173

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 40.00 feet Time: 1051A

Depth to Water: 27.18 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Well Volume (WV)	Purge Factor	Purge Volume

Height of Water Column (L): 12.82 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	DTW ONLY
_____	gal	_____	_____	_____	NO SAMPLE
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	
_____	gal	_____	_____	_____	

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-174

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 28.00 feet Time: 1470

Depth to Water: 19.58 feet

Well Diameter (circle one)

	2-in.	4-in.	6-in
Well Volume (WV)	0.16 gal/ft	0.65 gal/ft	1.47 gal/ft
Purge Factor			
Purge Volume			

Height of Water Column (L): 7.42 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = _____ gal. * 3 = _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-175

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 29.00 feet Time: 149p

Depth to Water: 20.77 feet

Height of Water Column (L): 8.23 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV): _____ gal. * Purge Factor: 3 = **Purge Volume**: _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: M-176

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 30.00 feet Time: 1510

Depth to Water: 23.78 feet

Height of Water Column (L): 6.22 feet

Well Diameter (circle one)			Well Volume (WV)	Purge Factor	**Purge Volume**
2-in.	4-in.	6-in			
* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= _____ gal.	* 3	= _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: ~~0~~

Comments:

Water Sampling Field Log

Well No.: M-177

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Electric Pump O Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 30.00 feet Time: 1520

Depth to Water: 21.59 feet

Height of Water Column (L): 8.41 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV) = _____ gal. * Purge Factor 3 = **Purge Volume** _____

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
_____	-----	-----	-----	-----	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	DTW ONLY
_____	_____ gal	_____	_____	_____	NO SAMPLE
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____
_____	_____ gal	_____	_____	_____	_____

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 0

Comments:

Water Sampling Field Log

Well No.: MW-K4

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, over cast

Well Information:

Total Well Depth: 50.00 feet Time: 1044a

Depth to Water: - 27.19 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	22.81 feet	X (0.4893)	1.9	4.41	=	11 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1045a	11 gal	7.34	23.8°C	clear

Comments:

Sample Collection Time - 1051A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: MW-K5

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: sunny, clear, cool

Well Information:

Total Well Depth: 44.00 feet Time: 853A

Depth to Water: - 30.02 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	13.98 feet	X (0.4893)	1.9	4.41	=	7 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
854A	7 gal	7.12	22.3°C	clear

Comments:

Sample Collection Time - 858A

Analyses:	pH/ TDS	CR	ClO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-18

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm sunny

Well Information:

Total Well Depth: 52.00 feet Time: 1020A

Depth to Water: - 27.52 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	24.48 feet	X (0.4893)	1.9	4.41	=	12 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1021A	12gal	7.08	25.9°C	Clear

Comments: Calibrated Hanna Field probe here before sampling
Buffer 7.01
Cal value 7.02
temp 18.7°C

Sample Collection Time - 1028A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-37

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, clear, sunny

Well Information:

Total Well Depth: 43.08 feet Time: 1040A

Depth to Water: 29.54 feet

Height of Water Column (L): 13.54 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV) = 2.16 gal. * Purge Factor 3 = **Purge Volume** 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1042A	-----	-----	-----	-----	
1044A	2 gal	7.58	9.54 mS/cm	25.2°C	clear
1046A	4 gal	7.53	9.40 mS/cm	25.4°C	clear
1048A	6 gal	7.44	9.38 mS/cm	25.3°C	clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 1050A Time Finished: 1050A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-53

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: cool, clear

Well Information:

Total Well Depth: 33.00 feet Time: 839A

Depth to Water: - 27.32 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	5.68 feet	X	0.4893	1.9	4.41	= 3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
3 gal	840A	7.47	21.8 °C	clear

Comments:

Sample Collection Time - 844a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-54

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm sunny

Well Information:

Total Well Depth: 34.60 feet Time: 849A

Depth to Water: 23.04 feet

Height of Water Column (L): 11.56 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV): = 1.84 gal. * Purge Factor: 3 = Purge Volume: 6 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
853	-----	-----	-----	-----	
855A	2 gal	7.54	5.95 mS/cm	23.2°C	clear
856A	4 gal	7.47	6.06 mS/cm	24.6°C	clear
857A	6 gal	7.43	6.03 mS/cm	24.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 900A Time Finished: 900A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

Dup EC

TOTAL BOTTLES: 3

Comments: 24.7°C temp 605 EC

Water Sampling Field Log

Well No.: PC-55

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-8-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 54.90 feet Time: 1100A

Depth to Water: - 26.54 feet

			Well Diameter (circle one)				
			2-in.	4-in.	6-in		Purge Volume
Water Column (L):	28.36 feet	X	0.4893	1.9	4.41	=	125 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1102A	125 gal	7.25	25.6 °C	Clear

Comments:

Sample Collection Time - 1210p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-56

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: clear, chilly

Well Information:

Added 10'

Total Well Depth: 65.00 feet Time: 1043A

Depth to Water: - 20.94 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	44.06 feet	X	0.4893	1.9	4.41	= 22 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1045A	22	7.43	23.6°C	clear

Comments:

Sample Collection Time - 1056A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-58

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, clear, sunny

Well Information:

Total Well Depth: 43.00 feet Added 10' Time: 1025A

Depth to Water: - 21.83 feet

		Well Diameter (circle one)				Purge Volume
		2-in.	**4-in.**	**6-in**		
Water Column (L):	20.77 feet	X	0.4893	1.9	4.41	= 10 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1027A	10	7.58	22.6°C	Clear

Comments:

Sample Collection Time - 1034A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-59

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 35.00 feet Added 10' Time: 1120A

Depth to Water: - 19.50 feet

		Well Diameter (circle one)				
		2-in.	4-in.	6-in		**Purge Volume**
Water Column (L):	15.50 feet	X 0.4893	1.9	4.41	=	8 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1122A	8	7.37	23.3°C	clear

Comments:

Sample Collection Time - 1127A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-6D

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 50.00 feet Added 10' Time: 1104am

Depth to Water: - 20.19 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	29.81 feet	X	0.4893	1.9	4.41	= 15 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1105A	15 gal	7.62	23.5°C	clear

Comments: No lock - cast casing lid damaged

Sample Collection Time - 1112A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-602

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ◉

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 48.00 feet added 10' Time: 1136A

Depth to Water: - 18.64 feet

		Well Diameter (circle one)				
		2-in.	4-in.	6-in		**Purge Volume**
Water Column (L):	29.36 feet	X	0.4893	1.9	4.41	= 14 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1138A	14	7.55	21.6	clear

Comments: No Lock

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-68

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 65.30 feet Added 10' Time: 1159A

Depth to Water: - 18.63 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	46.67 feet	X (0.4893)	1.9	4.41	=	23gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1200PM	23gal	7.26	23.0°C	Clear

Comments:

Sample Collection Time - 1209p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-71

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, Clear, Sunny

Well Information:

Total Well Depth: 33.23 feet Time: 955A

Depth to Water: 26.53 feet

Height of Water Column (L): 6.70 feet (Well Diameter (circle one): 2-in. / 4-in. / 6-in) * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 1.07 gal. * 3 = 3 gal

Well Volume (WV)	Purge Factor	Purge Volume
1.07 gal.	* 3	= 3 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
956a	-----	-----	-----	-----	
957a	1 gal	7.65	8.11 mS/cm	23.4°c	Clear
958A	2 gal	7.52	8.20 mS/cm	24.2°c	Clear
959A	3 gal	7.48	8.47 mS/cm	24.6°c	Clear
	gal				
	gal				
	gal				

Sample Appearance: Clear

Sample Collection - Time Start: 1600A Time Finished: 1000A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-72

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, clear, sunny

Well Information:

Total Well Depth: 39.54 feet Time: 1009A

Depth to Water: 29.06 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 10.48 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 1.67 gal. * Purge Factor 3 = **Purge Volume** 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1010A	-----	-----	-----	-----	
1012A	2 gal	7.55	7.91 mS/cm	24.4°C	clear
1013A	4 gal	7.50	8.14 mS/cm	24.8°C	Clear
1014A	5 gal	7.47	8.19 mS/cm	25.1°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1016A Time Finished: 1016A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-13

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ◉ Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, clear, sunny

Well Information:

Total Well Depth: 49.47 feet Time: 1023A

Depth to Water: 30.29 feet

Height of Water Column (L): 19.15 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft | 4-in. 0.65 gal/ft | 6-in 1.47 gal/ft = Well Volume (WV): 3.06 gal. * Purge Factor: 3 = **Purge Volume**: 9 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1024A	-----	-----	-----	-----	
1027A	3 gal	7.68	8.69 mS/cm	24.4°C	clear
1029A	6 gal	7.47	8.72 mS/cm	24.3°C	clear
1031A	9 gal	7.43	8.69 mS/cm	24.2°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1033A Time Finished: 1033A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-86

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 38.00 feet Added 10' Time: 1219p

Depth to Water: - 11.63 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	26.37 feet	X (0.4893)	1.9	4.41	=	13 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1221p	13	7.56	22.0°C	Clear

Comments: NO Lock

Sample Collection Time - 1227p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-90

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: sunny, cool

Well Information:

Total Well Depth: 15.00 feet Time: 925A

Depth to Water: - 4.58 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	10.42 feet	X (0.4893)	1.9	4.41	=	5 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
927A	5 gal	7.51	21.7°C	clear

Comments:

Sample Collection Time - 932A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-91

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: sunny, cool

Well Information:

Total Well Depth: 37.00 feet Time: 9:43A

Depth to Water: - 11.24 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	25.76 feet	X	0.4893	1.9	4.41	= 13 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
945A	13	7.71	21.6°C	Clear

Comments:

Sample Collection Time - 952A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-94

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Clear, warm

Well Information:

Total Well Depth: 20.00 feet Time: 10:00A

Depth to Water: - 12.55 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	7.45 feet	X (0.4893)	1.9	4.41	=	4 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1003A	4	7.45	21.5°C	Clear w/ some silt

Comments:

Sample Collection Time - 1006A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-95

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: _____

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: _____

Well Information: _____

Total Well Depth: _____ feet Time: _____

Depth to Water: - _____ feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	_____ feet	X	0.4893	1.9	4.41	= _____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**

Comments: destroyed yrs) ago

Sample Collection Time - _____

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-97

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-6-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: cool, clear

Well Information:

Total Well Depth: 33.50 feet Time: 856A

Depth to Water: - 3.76 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	29.74 feet	X (0.4893)	1.9	4.41	=	15 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
904A	15gal	7.06	19.9°c	clear

Comments:

Calibrated Hanna Field probe before sampling well

909A - 7.01 buffer
7.02 cal value
16.2°c temp

Sample Collection Time - 912A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-98R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: Warm, cloudy, slight breeze

Well Information:

Total Well Depth: 40.50 feet Time: 1152A

Depth to Water: - 22.77 feet

			Well Diameter (circle one)				
			2-in.	4-in.	6-in		Purge Volume
Water Column (L):	17.73 feet	X	0.4893	1.9	4.41	=	34 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1153A	34 gal	7.33	24.4°C	clear

Comments:

Sample Collection Time - 1215p

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-99R2/R3

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy

Well Information:

Total Well Depth: 55.3 feet Time: 1107A 1143

Depth to Water: - 13.74 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	41.56 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
956A		7.67	23.7	Clear

Comments:

Sample Collection Time - 956A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-101R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm, overcast

Well Information:

Total Well Depth: 50.50 feet Time: 1027A

Depth to Water: - 25.01 feet

		Well Diameter (circle one)				
		2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	22.49 feet	X (0.4893)	1.9	4.41	=	11 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1028A	11 gal	7.16	23.7°C	clear

Comments:

Sample Collection Time - 1035a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-103

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-9-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: warm cloudy slight breeze

Well Information:

Total Well Depth: 29.50 feet Time: 1140 a

Depth to Water: - 23.02 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	6.48 feet	X	0.4893	1.9	4.41	= 3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1124	3gal	7.39	23.9°C	clear

Comments:

Sample Collection Time - 1145a

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-115R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy

Well Information:

Total Well Depth: 55.50 feet Time: 11-14-13 at 11:11A

Depth to Water: - 11.21 feet

			Well Diameter (circle one)			Purge Volume
			2-in.	4-in.	6-in	
Water Column (L):	44.29 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1003A		7.65	24.6 °C	clear

Comments:

Sample Collection Time - 1003A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-116R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: warm, cloudy

Well Information: _____ 11-14-13

Total Well Depth: 55.50 feet Time: 1103 A

Depth to Water: - 12.67 feet

			Well Diameter (circle one)				
			2-in.	4-in.	6-in		Purge Volume
Water Column (L):	42.83 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1000A		7.35	23.2	clear

Comments:

Sample Collection Time - 1000A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-117

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy

Well Information:

11-14-13

Total Well Depth: 53.00 feet Time: 1057A

Depth to Water: - 10.68 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	43.32 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1010A		7.93	21.2 °C	clear

Comments:

Sample Collection Time - 1010A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-118

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy, warm

Well Information: ____ 11-14-13 ←

Total Well Depth: 51.0 feet Time: 1114A

Depth to Water: - 7.68 feet ↙

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	43.32 feet	X	0.4893	1.9	4.41	=	____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1007A		7.54	21.6°C	Clear

Comments:

Sample Collection Time - 1007A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-119

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy

Well Information: 11-14-13

Total Well Depth: 47.00 feet Time: 1117A

Depth to Water: - 6.11 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	40.89 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1017A		7.53	20.9°C	clear

Comments:

Sample Collection Time - 1017A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-120

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: Cloudy, Warm

Well Information: 11-14-13 ← 11-4-13

Total Well Depth: 47.00 feet Time: 1121A

Depth to Water: - 43.1 feet

			Well Diameter (circle one)				
			2-in.	**4-in.**	**6-in**		**Purge Volume**
Water Column (L):	42.69 feet	X	0.4893	1.9	4.41	=	_____

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
1024A		7.64	20.9°C	Clear

Comments: turned pump on to sample

Sample Collection Time - 1024A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-121

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port ● Disposable Bailer O Electric pump O

Weather Conditions: cloudy, warm

Well Information:

Total Well Depth: 38.50 feet Time: 1124A

Depth to Water: - 4.27 feet 11-14-13

			Well Diameter (circle one)			Purge Volume
			2-in.	4-in.	6-in	
Water Column (L):	33.80 feet	X	0.4893	1.9	4.41	=

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1028A		7.47	20.6°C	Clear

Comments: turned pump on to sample

Sample Collection Time - 1028A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-122

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-7-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump ●

Weather Conditions: cool, clear

Well Information:

Total Well Depth: 38.00 feet Time: 824A

Depth to Water: - 31.64 feet

		Well Diameter (circle one)				**Purge Volume**
		2-in.	**4-in.**	**6-in**		
Water Column (L):	6.36 feet	X 0.4893	1.9	4.41	=	3 gal

Field Measurements: Depth Purging From: 2 ft below DTW

Time	**gals**	**pH**	**Temp**	**Observations of Sample**
825A	3	7.29	18.9°C	clear

Comments:

Sample Collection Time - 829A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-123

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool

Well Information:

Total Well Depth: 34.70 feet Time: 453

Depth to Water: 24.64 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 10.06 feet × (0.16 gal/ft / * 0.65 gal/ft / * 1.47 gal/ft) = Well Volume (WV): 1.608 gal. * Purge Factor: 3 = **Purge Volume**: 5gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
455A	-----	-----	-----	-----	
457A	2 gal	7.15	7.53mS/cm	21.2	clear
459A	4 gal	7.30	7.53mS/cm	22.8	clear
500A	5 gal	7.32	7.62mS/cm	23.0	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 501A Time Finished: 501A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-124

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, sunny, clear.

Well Information:

Total Well Depth: 34.60 feet Time: 1658A

Depth to Water: 24.87 feet

Height of Water Column (L): 9.73 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in 1.47 gal/ft = Well Volume (WV) 1.55 gal. * Purge Factor 3 = Purge Volume 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
1702A	-----	-----	-----	-----	
1704A	2 gal	7.47	10.75 mS/cm	20.2 °C	clear
1705A	4 gal	7.27	10.78 mS/cm	21.9 °C	clear
1707A	5 gal	7.26	10.89 mS/cm	22.4 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 1709A Time Finished: 1709A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-125

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warming, sunny

Well Information:

Total Well Depth: 33.50 feet Time: 718A

Depth to Water: 22.92 feet

Height of Water Column (L): 10.58 feet

Well Diameter (circle one): 2-in. (0.16 gal/ft) 4-in. (0.65 gal/ft) 6-in (1.47 gal/ft)

Well Volume (WV): 1.69 gal. * Purge Factor: 3 = Purge Volume: 5 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
720A	-----	-----	-----	-----	
722A	2 gal	7.38	9.77 mS/cm	20.6°C	clear
723A	4 gal	7.34	9.82 mS/cm	21.7°C	cloudy
724A	5 gal	7.31	10.01 mS/cm	21.9°C	slightly cloudy
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 726A Time Finished: 726A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-126

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warm, sunny,

Well Information:

Total Well Depth: 3430 feet Time: 732A

Depth to Water: 21.74 feet

Height of Water Column (L): 12.46 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV) 1.99 gal. * Purge Factor 3 = **Purge Volume** equal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
734A	-----	-----	-----	-----	
735A	2 gal	7.56	11.43 mS/cm	20.4 °C	slightly cloudy
736A	4 gal	7.38	11.02 mS/cm	21.6 °C	clear
737A	6 gal	7.35	10.95 mS/cm	22.0 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 738A Time Finished: 738A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-127

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: Warm, clear, sunny

Well Information:

Total Well Depth: 34.70 feet Time: 747A

Depth to Water: 18.19 feet

Height of Water Column (L): 16.51 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in 1.47 gal/ft = Well Volume (WV) 2.64 gal. * Purge Factor 3 = Purge Volume 8 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
748A	-----	-----	-----	-----	
750A	3 gal	7.51	7.29 mS/cm	22.1 °C	clear
752A	6 gal	7.43	7.37 mS/cm	23.1 °C	clear
753A	8 gal	7.41	7.36 mS/cm	23.4 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 755A Time Finished: 755A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-128

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool

Well Information:

Total Well Depth: 34.70 feet Time: 513A

Depth to Water: 19.28 feet

Height of Water Column (L): 15.42 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. * 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV): 2.46 gal. * Purge Factor: 3 = Purge Volume: 7gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
515A	-----	-----	-----	-----	
518A	3 gal	7.44	7.05mS/cm	20.1°C	clear
520A	5 gal	7.41	7.11mS/cm	22.8°C	clear
521A	7 gal	7.42	7.08mS/cm	23.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 522A Time Finished: 522A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-129

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: COOL

Well Information:

Total Well Depth: 37.70 feet Time: 538A

Depth to Water: 18.25 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
19.45 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 3.11 gal.	*	3	=	9 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
540A	-----	-----	-----	-----	
542A	3 gal	7.39	7.33 mS/cm	20.6°C	clear
544A	6 gal	7.23	7.74 mS/cm	22.1°C	clear
546A	9 gal	7.22	7.81 mS/cm	22.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: 547A Time Finished: 547A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-130

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: 100 L

Well Information:

Total Well Depth: 49.70 feet Time: 554A

Depth to Water: 18.78 feet

Well Diameter (circle one)

Height of Water Column (L):	30.92 feet	2-in.	4-in.	6-in	Well Volume (WV)	Purge Factor	Purge Volume
		* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 4.94 gal.	* 3	= 15 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
556A	-----	-----	-----	-----	
559A	5 gal	7.37	8.04 mS/cm	21.4 °C	silty
602A	10 gal	7.31	8.27 mS/cm	22.0 °C	clear
605A	15 gal	7.31	8.30 mS/cm	21.9 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 607A Time Finished: 607A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-131

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool

Well Information:

Total Well Depth: 39.40 feet Time: 617a

Depth to Water: 15.27 feet

Height of Water Column (L): 24.13 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in * 1.47 gal/ft = Well Volume (WV): 3.86 gal. * Purge Factor: 3 = **Purge Volume**: 12 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
619a	-----	-----	-----	-----	
622a	4 gal	7.28	13.25 mS/cm	20.4	clear
624a	8 gal	7.21	13.30 mS/cm	23.1°C	clear
626A	12 gal	7.23	13.32 mS/cm	23.8°C	clear
	gal				
	gal				
	gal				

Sample Appearance: _____

Sample Collection - Time Start: 628A Time Finished: 628A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-132

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-11-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, clear

Well Information:

Total Well Depth: 39.70 feet Time: 636a

Depth to Water: 9.65 feet

Height of Water Column (L): 30.05 feet * Well Diameter (circle one): 2-in. 0.16 gal/ft / 4-in. 0.65 gal/ft / 6-in 1.47 gal/ft = Well Volume (WV): 4.80 gal. * Purge Factor: 3 = **Purge Volume**: 14 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
638A	-----	-----	-----	-----	
641A	5 gal	7.27	12.53 mS/cm	20.3 °C	clear
644A	10 gal	7.26	12.59 mS/cm	22.3 °C	clear
647A	14 gal	7.24	12.40 mS/cm	24.3 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 640A Time Finished: 648A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-133

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Michele Brown Date: 11-4-13

Sampling Method: Sample Port O Disposable Bailer O Electric pump O

Weather Conditions: cloudy, warm

Well Information:

11-14-13 ←

Total Well Depth: 40.20 feet Time: 1052A

Depth to Water: - 31.02 feet

			Well Diameter (circle one)				Purge Volume
			2-in.	4-in.	6-in		
Water Column (L):	9.16 feet	X	0.4893	1.9	4.41	=	

Field Measurements: Depth Purging From: 2 ft below DTW

Time	gals	pH	Temp	Observations of Sample
1117A		7.36	21.1°C	

Comments: pump was changed night before sampling black flaking pieces were coming out of sample port w/water

Sample Collection Time - 1117A

Analyses:	pH/ TDS	CR	CLO4
Bottles:	1 Bottle	1 Bottle	1 Bottle

TOTAL Bottles- 3

Water Sampling Field Log

Well No.: PC-135A

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, cloudy.

Well Information:

Total Well Depth: 50.80 feet Time: 659

Depth to Water: 28.81 feet

Height of Water Column (L): 21.99 feet

Well Diameter (circle one): ~~Well~~ 2-in. 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

= 3.51 gal. * 3 = 11 gal

Well Volume (WV)	Purge Factor	Purge Volume
3.51 gal.	3	11 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
702A	-----	-----	-----	-----	
705A	4 gal	7.26	13.92 mS/cm	21.4°C	clear
7:07A	8 gal	7.14	13.94 mS/cm	23.0°C	clear
7:09A	11 gal	7.19	14.08 mS/cm	22.7°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 711A Time Finished: 711A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-136

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, cloudy

Well Information:

Total Well Depth: 40.3 feet Time: 623A

Depth to Water: 32.72 feet

Well Diameter (circle one) 2-in. 4-in. 6-in

Well Volume (WV) | Purge Factor | Purge Volume

Height of Water Column (L): 7.58 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = 1.21 gal. * 3 = 4 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
627A	-----	-----	-----	-----	
630A	2 gal	6.76	6.67 mS/cm	20.7°c	light yellow
631A	3 gal	7.04	6.71 mS/cm	22.5°c	light yellow
631A	4 gal	7.08	6.79 mS/cm	22.7°c	light yellow
	gal				
	gal				
	gal				

Sample Appearance: light yellow

Sample Collection - Time Start: 633A Time Finished: 633A

Analyses / Bottles: CLO4 1 BTL | pH / TDS 1 BTL | CR 1 BTL | pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments:

Water Sampling Field Log

Well No.: PC-144

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, cloudy

Well Information:

Total Well Depth: 39.70 feet Time: 643A

Depth to Water: 29.83 feet

Height of Water Column (L): 9.87 feet

Well Diameter (circle one): 2-in. * 0.16 gal/ft | 4-in. * 0.65 gal/ft | 6-in * 1.47 gal/ft

= 1.57 gal. (Well Volume (WV)) * 3 (Purge Factor) = 5 gal (Purge Volume)

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
644a	-----	-----	-----	-----	
646A	2 gal	7.21	7.74 mS/cm	21.2 °C	clear
648A	4 gal	7.19	7.80 mS/cm	22.8 °C	clear
649A	5 gal	7.21	7.79 mS/cm	23.5 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 650A Time Finished: 650A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: VD-2 collected here for same 655A Analyses

Water Sampling Field Log

Well No.: PC-148

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, cloudy

Well Information:

Total Well Depth: 50.20 feet Time: 724A

Depth to Water: 28.51 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 21.69 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 31.88 gal. * Purge Factor 3 = **Purge Volume** 96 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
725A	-----	-----	-----	-----	
731A	9 gal	7.52	8.85 mS/cm	20.7 °C	clear
737A	17 gal	7.45	9.35 mS/cm	21.9 °C	clear
945A	25 gal	7.46	9.25 mS/cm	20.8 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 748A Time Finished: 748A

Analyses: ClO4 (1 BTL) pH / TDS (1 BTL) CR (1 BTL) pH / TDS / CRVI (1 BTL)

Bottles:

Comments: Historic - well slow to recharge purged 25 gal before collecting sample

TOTAL BOTTLES: 3

Water Sampling Field Log

Well No.: PC-149

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: cool, cloudy

Well Information:

Total Well Depth: 50.00 feet Time: 753a

Depth to Water: 29.18 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L)				Well Volume (WV)		Purge Factor		Purge Volume
20.82 feet	* 0.16 gal/ft	* 0.65 gal/ft	* 1.47 gal/ft	= 30.60 gal.	*	3	=	92 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
754A	-----	-----	-----	-----	
801A	10 gal	7.57	5.18 mS/cm	21.3°C	clear
807A	20 gal	7.38	5.47 mS/cm	21.7°C	clear
816A	30 gal	7.41	5.39 mS/cm	22.2°C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 817A Time Finished: 817A

Analyses:	CLO4	pH / TDS	CR	pH / TDS / CRVI
Bottles:	1 BTL	1 BTL	1 BTL	1 BTL

TOTAL BOTTLES: 3

Comments: historic - Well slow to recharge purged 30 gallons before collecting sample

Water Sampling Field Log

Well No.: PC-150

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Electric Pump ● Dedicated Bailer O Non Dedicated Bailer O Ready Flo 2" O

Weather Conditions: warming, cloudy

Well Information:

Total Well Depth: 45.70 feet Time: 826A

Depth to Water: 29.24 feet

Well Diameter (circle one): 2-in. 4-in. 6-in

Height of Water Column (L): 16.46 feet * 0.16 gal/ft * 0.65 gal/ft * 1.47 gal/ft = Well Volume (WV) 24.19 gal. * Purge Factor 3 = **Purge Volume** 73 gal

Field Measurements:

Depth Purging From: 2 ft. below depth to water

Time	Cumulative Volume Purged	pH	Specific Conductivity	Temp	Observations
827A	-----	-----	-----	-----	
841A	25 gal	7.48	7.70 mS/cm	25.5 °C	clear
853A	24 gal	7.57	7.67 mS/cm	25.8 °C	clear
910A	24 gal	7.44	7.57 mS/cm	24.7 °C	clear
	gal				
	gal				
	gal				

Sample Appearance: clear

Sample Collection - Time Start: 912A Time Finished: 912A

Analyses / Bottles: CLO4 1 BTL; pH / TDS 1 BTL; CR 1 BTL; pH / TDS / CRVI 1 BTL

TOTAL BOTTLES: 3

Comments: Dup EC 7.58 EC 24.4 Temp

Water Sampling Field Log

Well No.: I- AA

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, cloudy, some sun

Well Information:

Total Well Depth: 46.00 feet Time: 1134A

Depth to Water: 30.44 feet

Height of Water Column (L): 15.56 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1135A	494 mS/cm	25.2°C	7.37	clear

Sample Appearance: clear

Sample Collection - Time Start: 1136A Time Finished: 1136A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- AB

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, some sun, cloudy

Well Information:

Total Well Depth: 52.00 feet Time: 1139A

Depth to Water: _____ feet

Height of Water Column (L): _____ feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1140A	6.47 mS/cm	7.37	25.1°C	clear

Sample Appearance: clear

Sample Collection - Time Start: 1141A Time Finished: 1141A

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- AC

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 50.00 feet Time: 155p

Depth to Water: 29.39 feet

Height of Water Column (L): 20.61 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments: NO SAMPLE

when pump was turned on noise could be heard but no water was pulled to the surface

Water Sampling Field Log

Well No.: I- AD

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-15-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny

Well Information:

Total Well Depth: 50.00 feet Time: 159p

Depth to Water: 28.14 feet

Height of Water Column (L): 21.86 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations

Sample Appearance: _____

Sample Collection - Time Start: _____ Time Finished: _____

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments: No Sample when pump was turned on no water was pulled to surface

Water Sampling Field Log

Well No.: I- AR

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm; some sun, cloudy

Well Information:

Total Well Depth: 45.00 feet Time: 1145A

Depth to Water: 43.19 feet

Height of Water Column (L): 1.81 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1146A	860 mS/cm	25.6°C	7.14	clear

Sample Appearance: clear

Sample Collection - Time Start: 1147A Time Finished: 1147A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- B

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, some sun, cloudy

Well Information:

Total Well Depth: 45.70 feet Time: 1128A

Depth to Water: 24.68 feet

Height of Water Column (L): 21.02 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1129A	8.52 mS/cm	24.0 °C	7.15	clear

Sample Appearance: clear

Sample Collection - Time Start: 1130A Time Finished: 1130A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- C

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny, some clouds

Well Information:

Total Well Depth: 43.80 feet Time: 1058A

Depth to Water: 28.57 feet

Height of Water Column (L): 15 23 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1059A	1025 mS/cm	22.1 °C	7.41	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 1101A Time Finished: 1101A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- D

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny, some clouds

Well Information:

Total Well Depth: 47.70 feet Time: 1052A

Depth to Water: 26.61 feet

Height of Water Column (L): 21.09 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1053A	10.13 mS/cm	27.9 °C	7.22	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 1054A Time Finished: 1054 A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- E

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, Sunny, some clouds

Well Information:

Total Well Depth: 46.70 feet Time: 1041A

Depth to Water: 43.93 feet

Height of Water Column (L): 2.74 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1042A	1069 mS/cm	29.3 °C	9.01	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 1043A Time Finished: 1043A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- F

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny, some clouds

Well Information:

Total Well Depth: 45.80 feet Time: 1022A

Depth to Water: 24.38 feet

Height of Water Column (L): 21.42 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1023A	3.05 mS/cm	26.9°C	7.26	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1024A Time Finished: 1024A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- G

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: sunny, warm, some clouds

Well Information:

Total Well Depth: 42.60 feet Time: 1010A

Depth to Water: 37.99 feet

Height of Water Column (L): 4.61 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1011A	14.92 mS/cm	26.9 °C	7.07	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1012A Time Finished: 1012A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- H

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, cloudy, some sun

Well Information:

Total Well Depth: 46.50 feet Time: 954A

Depth to Water: 31.62 feet

Height of Water Column (L): 14.88 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
955A	14.58 mS/cm	27.0 °C	7.15	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 956A Time Finished: 956A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- I

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 44.20 feet Time: 812A

Depth to Water: 23.11 feet

Height of Water Column (L): 21.09 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
813A	10.12 mS/cm	23.1°C	7.32	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 814A Time Finished: 814

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- J

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny

Well Information:

Total Well Depth: 44.50 feet Time: 820A

Depth to Water: 34.78 feet

Height of Water Column (L): 9.72 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
821A	6.87 mS/cm	23.4 °C	7.15	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 822A Time Finished: 822A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- K

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 40.60 feet Time: 826A

Depth to Water: 33.55 feet

Height of Water Column (L): 7.05 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
827A	7.11 mS/cm	23.9°C	7.23	slight yellow

Sample Appearance: slight yellow tint

Sample Collection - Time Start: 828A Time Finished: 829A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- L

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny, some clouds

Well Information:

Total Well Depth: 43.40 feet Time: 1108A

Depth to Water: 26.31 feet

Height of Water Column (L): 17.09 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1109A	913 mS/cm	27.3°C	7.33	slightly yellow tint

Sample Appearance: slightly yellow tint

Sample Collection - Time Start: 1110A Time Finished: 1110A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- M

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny, some clouds

Well Information:

Total Well Depth: 43.70 feet Time: 1046 A

Depth to Water: 27.59 feet

Height of Water Column (L): 16.11 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1047 A	9.73 mS/cm	26.8 °C	7.19	light yellow

Sample Appearance: light yellow

Sample Collection - Time Start: 1048 A Time Finished: 1048 A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- N

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny, some clouds

Well Information:

Total Well Depth: 41.70 feet Time: 1033 A

Depth to Water: 25.83 feet

Height of Water Column (L): 15.87 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1034A	11.13 mS/cm	28.2°C	7.37	light yelloe

Sample Appearance: light yelloe

Sample Collection - Time Start: 1035A Time Finished: 1035A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- O

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, cloudy

Well Information:

Total Well Depth: 43.80 feet Time: 940A

Depth to Water: 30.41 feet

Height of Water Column (L): 13.39 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
941A	13.95 mS/cm	27.0 °C	7.54	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 942A Time Finished: 942A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-P

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: cloudy warm

Well Information:

Total Well Depth: 47.80 feet Time: 951A

Depth to Water: 37.92 feet

Height of Water Column (L): 9.88 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
952A	14.79 mS/cm	24.7 °C	7.38	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 953A Time Finished: 953A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-Q

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, sunny, some clouds

Well Information:

Total Well Depth: 43.80 feet Time: 1013A

Depth to Water: 32.95 feet

Height of Water Column (L): 10.85 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1014A	14.93mS/cm	27.9 °C	7.20	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1015A Time Finished: 1015A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- R

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: warm, cloudy, some sun

Well Information:

Total Well Depth: 45.30 feet Time: 11:20A

Depth to Water: 32.35 feet

Height of Water Column (L): 12.95 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1121A	9.58 mS/cm	25.9 °C	7.00	colorless w/ sand

Sample Appearance: colorless w/ sand

Sample Collection - Time Start: 1122A Time Finished: 1122A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- S

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Sunny, Warm, some Clouds

Well Information:

Total Well Depth: 47.70 feet Time: 1104A

Depth to Water: 24.58 feet

Height of Water Column (L): 23.12 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1105A	935 mS/cm	26.7 °C	7.21	slightly yellow

Sample Appearance: slightly yellow

Sample Collection - Time Start: 1106A Time Finished: 1106A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- T

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny, some clouds

Well Information:

Total Well Depth: 47.80 feet Time: 1004A

Depth to Water: 29.48 feet

Height of Water Column (L): 18.32 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1005A	15.28 mS/cm	30.2°C	7.34	Yellow

Sample Appearance: Yellow

Sample Collection - Time Start: 1006A Time Finished: 1006A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- 11

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Sunny, clouds, warm

Well Information:

Total Well Depth: 47.60 feet Time: 1000A

Depth to Water: 35.84 feet

Height of Water Column (L): 11.76 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1001A	15.04 mS/cm	26.5 °C	7.15	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1002A Time Finished: 1002A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-V

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, Sunny

Well Information:

Total Well Depth: 47.70 feet Time: 920A

Depth to Water: 31.01 feet

Height of Water Column (L): 16.69 feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
921A	11.11 mS/cm	23.2 °C	7.36	Yellow

Sample Appearance: yellow

Sample Collection - Time Start: 922A Time Finished: 922A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-W

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, cloudy

Well Information:

Total Well Depth: 50.00 feet Time: 947A

Depth to Water: _____ feet

Height of Water Column (L): _____ feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
948A	14.33 mS/cm	24.2°C	7.19	Yellow

Sample Appearance: yellow

Sample Collection - Time Start: 949A Time Finished: 949

Analyses: pH / TDS CR CLO4

Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I-X

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny.

Well Information:

Total Well Depth: 50.00 feet Time: 1026a

Depth to Water: _____ feet

Height of Water Column (L): _____ feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1027A	13.43 mS/cm	25.6°C	7.19	yellow

Sample Appearance: yellow

Sample Collection - Time Start: 1028A Time Finished: 1028A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- Y

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-12-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm, sunny, some clouds

Well Information:

Total Well Depth: 35.00 feet Time: 1115A

Depth to Water: _____ feet

Height of Water Column (L): _____ feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
1116A	1010 uS/cm	25.9°C	7.26	clear

Sample Appearance: clear

Sample Collection - Time Start: 1117A Time Finished: 1117A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Water Sampling Field Log

Well No.: I- Z

Project No.: _____ Site: NERT PROJECT- HENDERSON, NEVADA

Sampling Team: Wendy Prescott, Michele Brown Date: 11-13-13

Sampling Method: Sample taken from spigot on treatment system discharge line

Weather Conditions: Warm Sunny

Well Information:

Total Well Depth: 37.00 feet Time: 816A

Depth to Water: _____ feet

Height of Water Column (L): _____ feet

Field Measurements:

Time	Specific Conductivity	Temperature	pH	Oberservations
817A	847 mS/cm	23.5°C	7.38	Yellow

Sample Appearance: Yellow

Sample Collection - Time Start: 818A Time Finished: 818A

Analyses: pH / TDS CR CLO4
Bottles: 3 Bottles

Comments:

Appendix C

Data Validation Summary Report (DVSR)

(Provided on CD)

Data Validation Summary Report, Revision 1
July through December 2013
Annual Remedial Performance Sampling
Nevada Environmental Response Trust (NERT)
Henderson, Nevada

Prepared for

ENVIRON International Corporation
Emeryville, California

Prepared by

Laboratory Data Consultants, Inc.
7750 El Camino Real, Suite 2C
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May 28, 2014

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ATTACHMENT

LIST OF ACRONYMS AND ABBREVIATIONS

CCB	Continuing Calibration Blank
DQO	Data Quality Objectives
DUP	Duplicate
DVSR	Data Validation Summary Report
EB	Equipment Blank
FB	Field Blank
FD	Field Duplicate
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
LCS/LCSD	Laboratory Control Sample / Laboratory Control Sample Duplicate
LDC	Laboratory Data Consultants, Inc.
MS/MSD	Matrix Spike / Matrix Spike Duplicate
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, Sensitivity
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance / Quality Control
QAPP	Quality Assurance Project Plan
RPD	Relative Percent Difference
SDG	Sample Delivery Group
SQL	Sample Quantitation Limit
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TOX	Total Organic Halides
USEPA	United States Environmental Protection Agency
ug/L	Micrograms per Liter
mg/L	Milligram per Liter
%D	Percent Difference
%R	Percent Recovery

1.0 INTRODUCTION

This data validation summary report (DVSR) has been prepared by Laboratory Data Consultants, Inc. (LDC) to assess the validity and usability of laboratory analytical data from the Annual Remedial Performance Sampling conducted at the Nevada Environmental Response Trust (NERT) site in Henderson, Nevada. The assessment was performed by ENVIRON as a part of the *Revised Phase B Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada* dated May 2009 and included the collection and analyses of 457 environmental and quality control (QC) samples. The analyses were performed by the following methods:

Metals by Environmental Protection Agency (EPA) Method 200.7

Wet Chemistry:
Hexavalent Chromium by EPA Method 218.6
Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate (Anions) by EPA Method 300.0
Chlorate by EPA Method 300.1
Perchlorate by EPA Method 314.0
Ammonia as Nitrogen by EPA Method 350.1
Phenols by EPA Method 420.1
Nitrate/Nitrite as Nitrogen and Total Inorganic Nitrogen by Calculation Method
Specific Conductance by Standard Method 2510
Total Dissolved Solids (TDS) by Standard Method 2540C
pH by Standard Method 4500 H+B
Total Organic Carbon (TOC) by Standard Method 5310C
Total Organic Halides (TOX) by EPA SW-846 Method 9020

Laboratory analytical services were provided by TestAmerica, Inc. The samples were grouped into sample delivery groups (SDGs). The water samples are associated with QA/QC samples designed to document the data quality of the entire SDG or a sub-group of samples within an SDG. Table I is a cross-reference table listing each sample, analysis, SDG, collection date, laboratory sample number, matrix, and validation level.

The laboratory analytical data were validated in accordance with procedures described in the Nevada Division of Environmental Protection (NDEP) *Data Verification and Validation Requirements - Supplement* established for the BMI Plant Sites and Common Areas Projects, Henderson, Nevada, April 13, 2009. Consistent with the NDEP requirements, approximately ninety percent of the analytical data (410 of the 457 samples) were validated according to Stage 2B data validation procedures and ten percent of the analytical data (47 of the 457 samples) were validated according to Stage 4 data validation procedures. The analytical data were evaluated for quality assurance and quality control (QA/QC) based on the following documents: *Basic Remediation Company (BRC) Standard Operating Procedures (SOP) 40 Data Review/Validation,* Revision 4, May 2009; *Revised Phase B Quality Assurance Project Plan Tronox LLC Facility, Henderson, Nevada (*QAPP), Revision, May 2009; Nevada Department of Environmental Protection (NDEP) *Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas*, January 5 2012; *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004; and the *EPA SW 846 Third Edition, Test Methods for Evaluating Solid Waste,* update I, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IV, February 2007.

This report summarizes the QA/QC evaluation of the data according to precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) relative to the project data quality objectives (DQOs). This report provides a quantitative and qualitative assessment of the data and identifies potential sources of error, uncertainty, and bias that may affect the overall usability.

The PARCCS summary report evaluates and summarizes the results of QA/QC data validation for the entire sampling program. Each analytical fraction has a separate section for each of the PARCCS criteria. These sections interpret specific QC deviations and their effects on both individual data points and the analyses as a whole. Section 5.0 presents a summary of the PARCCS criteria by comparing quantitative parameters with acceptability criteria defined in the project DQO's. Qualitative PARCCS criteria are also summarized in this section.

Precision and Accuracy of Environmental Data

Environmental data quality depends on sample collection procedures, analytical methods and instrumentation, documentation, and sample matrix properties. Both sampling procedures and laboratory analyses contain potential sources of uncertainty, error, and/or bias, which affect the overall quality of a measurement. Errors for sample data may result from incomplete equipment decontamination, inappropriate sampling techniques, sample heterogeneity, improper filtering, and improper preservation. The accuracy of analytical results is dependent on selecting appropriate analytical methods, maintaining equipment properly, and complying with QC requirements. The sample matrix also is an important factor in the ability to obtain precise and accurate results within a given media.

Environmental and laboratory QA/QC samples assess the effects of sampling procedures and evaluate laboratory contamination, laboratory performance, and matrix effects. QA/QC samples include: equipment blanks (EBs), field blanks (FBs), field duplicates (FDs), method blanks, laboratory control samples and laboratory control sample duplicates (LCS/LCSDs), laboratory duplicates (DUP), and matrix spike/matrix spike duplicates (MS/MSDs).

Before conducting the PARCCS evaluation, the analytical data were validated according to the BRC SOP-40 (July 2007), QAPP (May 2009), Functional Guidelines (USEPA 2004), and EPA SW 846 Test Methods. Samples not meeting the acceptance criteria were qualified with a flag, an abbreviation indicating a deficiency with the data. The following are flags used in data validation.

J- Estimated The associated numerical value is an estimated quantity with a negative bias. The analyte was detected but the reported value may not be accurate or precise.

J+ Estimated The associated numerical value is an estimated quantity with a positive bias. The analyte was detected but the reported value may not be accurate or precise.

J Estimated The associated numerical value is an estimated quantity. It is not possible to assess the direction of the potential bias. The analyte was detected but the reported value may not be accurate or precise. The "J" qualification indicates the data fell outside the QC limits, but the exceedance was not sufficient to cause rejection of the data.

R Rejected The data is unusable (the compound or analyte may or may not be present). Use of the "R" qualifier indicates a significant variance from functional guideline acceptance criteria. Either resampling or reanalysis is necessary to determine the presence or absence of the rejected analyte. The "R" designation is also applied to yield only one complete set of data for a given sample and eliminate redundant data.

U Nondetected Analyses were performed for the compound or analyte, but it was not detected. The "U" flag is used to qualify any result that is detected in an environmental sample and associated blank at less than the PQL.

UJ Estimated/Nondetected Analyses were performed for the compound or analyte, but it was not detected and the sample quantitation or detection limit is an estimated quantity due to poor accuracy or precision. This qualification is also used to flag possible false negative results in the case where low bias in the analytical system is indicated by low calibration response, surrogate, or other spike recovery.

None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

A Indicates the finding is based upon technical validation criteria.
P Indicates the finding is related to a protocol/contractual deviation.

The hierarchy of flags is listed below:

R > J	The R flag will always take precedence over the J qualifier.
J > J+ or J-	A non-biased (J) flag will always supersede biased (J+ or J-) flags since it is not possible to assess the direction of the potential bias.
J = J+ plus J-	Adding biased (J+, J-) flags with opposite signs will result in a non-biased flag (J).
UJ = U plus J or J+ or J-	The UJ flag is used when a non-detected (U) flag is added to a biased (J+ or J-) or non-biased flag (J).

Table II lists the reason codes used. Reason codes explain why flags have been applied and identify possible limitations of data use. Reason codes are cumulative except when one of the flags is R then only the reason code associated to the R flag will be used.

Table III presents the overall qualified results after all the flags or validation qualifiers and associated reason codes have been applied.

Once the data are reviewed and qualified according to the BRC SOP-40, QAPP, functional guidelines, and EPA Test Methods, the data set is then evaluated using PARCCS criteria. PARCCS criteria provide an evaluation of overall data usability. The following is a discussion of PARCCS criteria as related to the project DQOs.

Precision is a measure of the agreement or reproducibility of analytical results under a given set of conditions. It is a quantity that cannot be measured directly but is calculated from percent recovery data. Precision is expressed as the relative percent difference (RPD):

$$RPD = (D1-D2)/\{1/2(D1+D2)\} \text{ X } 100$$

where:
D1 = reported concentration for the sample
D2 = reported concentration for the duplicate

Precision is primarily assessed by calculating an RPD from the percent recoveries of the spiked compounds for each sample in the MS/MSD pair. In the absence of an MS/MSD pair, a laboratory duplicate or LCS/LCSD pair can be analyzed as an alternative means of assessing precision. An additional measure of sampling precision was obtained by collecting and analyzing field duplicate samples, which were compared using the RPD result as the evaluation criteria.

MS and MSD samples are field samples spiked by the laboratory with target analytes prior to preparation and analysis. These samples measure the overall efficiency of the analytical method in recovering target analytes from an environmental matrix. A LCS is similar to an MS/MSD sample in that the LCS is spiked with the same target analytes prior to preparation and analysis. However, the LCS is prepared using a controlled interference-free matrix instead of a field sample aliquot. Laboratory reagent water is used to prepare aqueous LCS. The LCS measures laboratory efficiency in recovering target analytes from either an aqueous matrix in the absence of matrix interferences.

One primary sample is analyzed and accompanied by an unspiked laboratory duplicate. The data reviewer compares the reported results of the primary analysis and the laboratory duplicate, then calculates RPDs, which are used to assess laboratory precision.

Laboratory and field sampling precision are evaluated by calculating RPDs for aqueous field sample duplicate pairs. The sampler collects two field samples at the same location and under identically controlled conditions. The laboratory then analyzes the samples under identical conditions.

An RPD outside the numerical QC limit in either MS/MSD samples or LCS/LCSD indicates imprecision. Imprecision is the variance in the consistency with which the laboratory arrives at a particular reported result. Thus, the actual analyte concentration may be higher or lower than the reported result.

Possible causes of poor precision include sample matrix interference, improper sample collection or handling, inconsistent sample preparation, and poor instrument stability. In some duplicate pairs, results maybe reported in either the primary or duplicate samples at levels below the practical quantitation limit (PQL) or non-detected. Since these values are considered to be estimates, RPD exceedances from these duplicate pairs do not suggest a significant impact on the data quality.

Accuracy is a measure of the agreement of an experimental determination and the true value of the parameter being measured. It is used to identify bias in a given measurement system. Recoveries outside acceptable QC limits may be caused by factors such as instrumentation, analyst error, or matrix interference. Accuracy is assessed through the analysis of MS, MSD, LCS, and LCSD. In some cases, samples from multiple SDGs were within one QC batch and therefore are associated with the same laboratory QC samples. Accuracy of inorganic analyses is determined using the percent recoveries of MS and LCS analyses.

Percent recovery (%R) is calculated using the following equation:

$$\%R = (A-B)/C \times 100$$

where:
A = measured concentration in the spiked sample
B = measured concentration of the spike compound in the unspiked sample
C = concentration of the spike

The percent recovery of each analyte spiked in MS/MSD samples and LCS/LCSD is evaluated with the acceptance criteria specified by the previously noted documents. Spike recoveries outside the acceptable QC accuracy limits provide an indication of bias, where the reported data may overestimate or underestimate the actual concentration of compounds detected or quantitation limits reported for environmental samples.

Representativeness is a qualitative parameter that expresses the degree to which the sample data are characteristic of a population. It is evaluated by reviewing the QC results of blanks, samples and holding times. Positive detects of compounds in the blank samples identify compounds that may have been introduced into the samples during sample collection, transport, preparation, or analysis. The QA/QC blanks collected and analyzed are method blanks, EBs, and FBs.

A method blank is a laboratory grade water or solid matrix that contains the method reagents and has undergone the same preparation and analysis as the environmental samples. The method blank provides a measure of the combined contamination derived from the laboratory source water, glassware, instruments, reagents, and sample preparation steps. Method blanks are prepared for each sample of a similar matrix extracted by the same method at a similar concentration level.

Initial and continuing calibration blanks (ICB/CCBs) consist of acidified laboratory grade water, which are injected at the beginning and at a regular frequency during each 12 - hour sample analysis run. These blanks estimate residual contaminants from the previous sample or standards analysis and measure baseline shifts that commonly occur in emission and absorption spectroscopy.

Equipment blanks consist of analyte-free water poured over or through the sample collection equipment. The water is collected in a sample container for laboratory analysis. These blanks are collected after the sampling equipment is decontaminated and measure efficiency of the decontamination procedure. Equipment blanks were collected and analyzed for all target analytes.

Field blanks consist of analyte-free source water stored at the sample collection site. The water is collected from each source water used during each sampling event. Field blanks were collected and analyzed for all target analytes.

Contaminants found in both the environmental sample and the blank sample are assumed to be laboratory artifacts if both values are less than the PQL or if a sample result and blank contaminant value were greater than the PQL and less than 10 times the blank contaminant value. The blanks and associated samples were evaluated according to the NDEP *BMI Plant Sites and Common Areas Projects, Henderson, Nevada, Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas*, January 5 2012.

Holding times are evaluated to assure that the sample integrity is intact for accurate sample preparation and analysis. Holding times will be specific for each method and matrix analyzed. Holding time exceedance can cause loss of sample constituents due to biodegradation, precipitation, volatization, and chemical degradation. In accordance with EPA guidance (USEPA 2004), sample results for analyses that were performed after the method holding time but less than two times the method holding time were qualified as estimated (J- or UJ) and sample results for analyses that were performed after two times the method holding time were qualified as rejected (R), with the exception of specific pH results detailed in Attachment B, Section I. Although the holding time for some pH analyses was exceeded by more than two times the holding time, using professional judgment the associated sample results were qualified as estimated (J/UJ) because the sample condition and integrity was maintained during collection, transport, and storage.

Comparability is a qualitative expression of the confidence with which one data set may be compared to another. It provides an assessment of the equivalence of the analytical results to data obtained from other analyses. It is important that data sets be comparable if they are used in conjunction with other data sets. The factors affecting comparability include the following: sample collection and handling techniques, matrix type, and analytical method. If these aspects of sampling and analysis are carried out according to standard analytical procedures, the data are considered comparable. Comparability is also dependent upon other PARCCS criteria, because only when precision, accuracy, and representativeness are known can data sets be compared with confidence.

Completeness is defined as the percentage of acceptable sample results compared to the total number of sample results. Completeness is evaluated to determine if an acceptable amount of usable data were obtained so that a valid scientific site assessment can be completed. Completeness equals the total number of sample results for each fraction minus the total number of rejected sample results divided by the total number of sample results multiplied by 100. As specified in the project DQOs, the goal for

completeness for target analytes in each analytical fraction is 90 percent.

Percent completeness is calculated using the following equation:

$$\%C = (T - R)/T \times 100$$

where:
%C = percent completeness
T = total number of sample results
R = total number of rejected sample results

Completeness is also determined by comparing the planned number of samples per method and matrix as specified in the QAPP, with the number determined above.

Sensitivity is the ability of an analytical method or instrument to discriminate between measurement responses representing different concentrations. This capability is established during the planning phase to meet the DQOs. It is important that calibration requirements, detection limits (DLs), and PQLs presented in the QAPP are achieved and that target analytes can be detected at concentrations necessary to support the DQOs. In addition, sample results are compared to method blank and field blank results to identify potential effects of laboratory background and field procedures on sensitivity.

The following sections present a review of QC data for each analytical method.

2.0 METALS

A total of 276 water samples were analyzed for metals by EPA Method 200.7. All metal data were assessed to be valid since none of the 298 total results were rejected based on holding time and QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

2.1 Precision and Accuracy

2.1.1 Instrument Calibration

Initial and continuing calibration verification results provide a means of evaluating accuracy within a particular SDG. Correlation coefficient (r) and percent recovery (%R) are the two major parameters used to measure the effectiveness of instrument calibration. The correlation coefficient indicates the linearity of the calibration curve. %R is used to verify the ongoing calibration acceptability of the analytical system. The most critical of the two calibration parameters, r, has the potential to affect data accuracy across an SDG when it is outside the acceptable QC limits. %R exceedances suggest more routine instrumental anomalies, which typically impact all sample results for the affected analytes.

The correlation coefficients in the initial calibrations met the acceptance criteria of ≥ 0.995.

Although CCV %Rs outside of acceptance criteria demonstrate a high bias, the affected compounds in the associated samples were non-detected and did not warrant the qualification of the data.

2.1.2 MS/MSD Samples

Due to high MS/MSD %Rs outside of acceptance criteria as stated in the QAPP, the chromium results for 9 samples were qualified as detected estimated (J+). The details regarding the qualification of results are presented in Attachment A, Section VI.

2.1.3 LCS/LCSD Samples

All LCS/LCSD %Rs and RPDs met acceptance criteria as stated in the QAPP.

2.1.4 ICP Interference Check Sample

All ICP interference check %Rs met acceptance criteria as stated in the QAPP.

2.1.5 ICP Serial Dilution

All ICP serial dilution %Ds met acceptance criteria as stated in the QAPP.

2.1.6 FD Samples

The field duplicate samples were evaluated for acceptable precision with RPDs or difference in instances the results were less than five times the reporting limit for the compounds. The field duplicate RPDs or differences were within the acceptance criteria. The field duplicate RPDs or differences are presented in detail in Attachment A, Section XIII.

2.1.7 Analyte Quantitation and Target Identification

Raw data were evaluated for the Stage 4 samples. All analyte quantitation and target identifications were acceptable.

2.2 Representativeness

2.2.1 Sample Preservation and Holding Times

The evaluation of holding times to verify compliance with the method was conducted. All samples met the 180-day analysis holding time criteria for metals.

2.2.2 Blanks

Method blanks, ICB/CCBs, EBs, and FBs were analyzed to evaluate representativeness. The concentration for an individual target compound in any of the types of QA/QC blanks was used for data qualification.

If contaminants were detected in a blank, corrective actions were made for the chemical analytical data during data validation. The corrective action consisted of amending the laboratory reported results based on the following criteria.

> Results Below the PQL If a sample result and blank contaminant value were less than the PQL, the sample result was amended as estimated (J) at the concentration reported in the sample results.
>
> Results Above the PQL If a sample result and blank contaminant value were greater than the PQL and less than 10 times the blank contaminant value, the sample result was qualified as detected estimated (J+) at the concentration reported in the sample results.
>
> No Action If blank contaminant values were less than the PQL and associated sample results were greater than the PQL, or if blank contaminant values were greater than the PQL and associated sample results were greater than 10 times the blank contaminant value, the result was not amended.

2.2.2.1 Method and Calibration Blanks

The chromium results in samples PC-56, PC-59, PC-90, PC-91, and PC-97 (all sampled on 11/6/13) were qualified as detected estimated (J) due to contaminants detected in the method or calibration blanks. The details regarding the qualification of results are presented in Attachment A, Section IV.

2.2.2.2 EBs and FBs

No data were qualified due to contaminants detected in the equipment blanks for this analysis.

2.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the Sample Quantitation Limits (SQLs) attained were at or below the PQLs. The comparability of the metals data is regarded as acceptable.

2.4 Completeness

The completeness level attained for metal field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

2.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory PQLs met the specified requirements described in the QAPP.

3.0 WET CHEMISTRY

A total of 24 water samples were analyzed for hexavalent chromium by EPA Method 218.6; 6 water samples were analyzed for anions by EPA Method 300.0; 2 water samples were analyzed for chlorate by EPA Method 300.1, ammonia as nitrogen by EPA Method 350.1, and nitrate/nitrite as nitrogen and total inorganic nitrogen by Calculation Method; 457 water samples were analyzed for perchlorate by EPA Method 314.0; 4 water samples were analyzed for phenols by EPA Method 420.1, specific conductance by Standard Method 2510, TOC by Standard Method 5310C, and TOX by EPA SW-846 Method 9020; 451 water samples were analyzed for TDS by Standard Method 2540C; and 259 water samples were analyzed for pH by Standard Method 4500 H+B. All wet chemistry data were assessed to be valid since none of the 1,278 total results were rejected based on holding time and QC exceedances. This section discusses the QA/QC supporting documentation as defined by the PARCCS criteria and evaluated based on the DQOs.

3.1 Precision and Accuracy

3.1.1 Instrument Calibration

As previously discussed in Section 2.1.1, initial and continuing calibration results provide a means of evaluating accuracy.

Instrument calibrations were evaluated for all wet chemistry methods. The correlation coefficients in the initial calibrations were within the acceptance criteria of ≥ 0.995 and the %Rs in the continuing calibration verifications met the acceptance criteria of 90-110%.

3.1.2 Surrogate

Surrogates were evaluated for chlorate analysis by EPA Method 300.1. All surrogate %Rs met the acceptance criteria as stated in the QAPP.

3.1.3 MS/MSD Samples

MS/MSD samples were evaluated for all wet chemistry methods with the exception of chlorate by EPA Method 300.1, perchlorate by EPA Method 314.0, specific conductance by Standard Method 2510, TDS by Standard Method 2540C, pH by Standard Method 4500 H+B, and TOC by Standard Method 5310C. Due to high MS/MSD %R outside of acceptance criteria as stated in the QAPP, the chloride result for sample M-10 (sampled on 9/5/13) was qualified as detected estimated (J+). The details regarding the qualification of results are presented in Attachment B, Section V.

3.1.4 DUP Samples

DUP samples were evaluated for specific conductance by Standard Method 2510, TDS by Standard Method 2540C, and pH by Standard Method 4500 H+B. All DUP RPDs met the acceptance criteria as stated in the QAPP.

3.1.5 LCS/LCSD Samples

LCS/LCSD samples were evaluated for all wet chemistry methods. All LCS/LCSD %Rs and RPDs met the acceptance criteria as stated in the QAPP.

3.1.6 FD Samples

FD samples were evaluated for hexavalent chromium by EPA Method 218.6, perchlorate by EPA Method 314.0, TDS by Standard Method 2540C, and pH by Standard Method 4500 H+B. The field duplicate samples were evaluated for acceptable precision with RPDs or difference in instances the results were less than five times the reporting limit for the compounds. The field duplicate RPDs or differences were within the acceptance criteria. The details regarding the qualification of results are presented in Attachment B, Section X.

3.1.7 Analyte Quantitation and Target Identification

Raw data were evaluated for the Stage 4 samples. All analyte quantitation and target identifications were acceptable.

In instances where data was reanalyzed and multiple results reported, data was qualified as unusable by the validators in order to yield only one complete set of data for a given sample.

3.2 Representativeness

3.2.1 Sample Preservation and Holding Times

The evaluation of holding times to verify compliance with all wet chemistry methods was conducted. All water samples met the 48-hour analysis holding time criteria for nitrate as nitrogen and nitrite as nitrogen, the 7-day analysis holding time criteria for TDS, and the 28-day analysis holding time criteria for ammonia as nitrogen, chlorate, chloride, sulfate, phenols, specific conductance, TOC, TOX, and perchlorate.

Due to holding time criteria exceedance, 163 results for hexavalent chromium and pH were qualified as detected estimated (J-/J) or non-detected estimated (UJ). The analysis holding time criteria for water samples is 24 hours for hexavalent chromium and 48 hours for pH.

Due to low pH in the unfiltered sample containers, the TDS results for samples ART-1, ART-2, ART-7, ART-8, and ART-9 (all sampled on 11/4/13) were analyzed utilizing the filtered sample containers. The associated results were qualified as detected estimated (J-). Total dissolved solids analysis should be performed upon unfiltered sample containers.

The details regarding the qualification of results are presented in Attachment B, Section I.

3.2.2 Blanks

As previously discussed in Section 2.2.2, method blanks, ICB/CCBs, EBs, and FBs were analyzed to evaluate representativeness.

3.2.2.1 Method and Calibration Blanks

Method and calibration blanks were evaluated for all wet chemistry methods with the exception of pH by Standard Method 4500 H+B. No contaminants were detected in the method or calibration blanks for this analysis.

3.2.2.2 EBs and FBs

EBs and FBs were evaluated for hexavalent chromium by EPA Method 218.6, perchlorate by EPA Method 314.0, TDS by Standard Method 2540C, and pH by Standard Method 4500 H+B. No data were qualified due to contaminants detected in the equipment and field blanks for this analysis.

3.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the SQLs attained were at or below the PQLs. The comparability of the data is regarded as acceptable.

3.4 Completeness

The completeness level attained for wet chemistry field samples was 100 percent. This percentage was calculated as the total number of accepted sample results divided by the total number of sample results multiplied by 100.

3.5 Sensitivity

The calibration was evaluated for instrument sensitivity and was determined to be technically acceptable. All laboratory PQLs met the specified requirements described in the QAPP.

4.0 VARIANCES IN ANALYTICAL PERFORMANCE

The laboratory used standard analytical methods for all of the analyses throughout the project. No systematic variances in analytical performance were noted in the laboratory case narratives.

5.0 SUMMARY OF PARCCS CRITERIA

The validation reports present the PARCCS results for all SDGs. Each PARCCS criterion is discussed in detail in the following sections.

5.1 Precision and Accuracy

Precision and accuracy were evaluated using data quality indicators such as calibration, surrogates, MS/MSD, DUP, LCS/LCSD, and field duplicates. The precision and accuracy of the data set were considered acceptable after integration of result qualification.

All calibrations were performed as required and met the acceptance criteria. All surrogate, MS/MSD, DUP, LCS/LCSD, and field duplicate percent recoveries, RPDs, and difference met acceptance criteria with the exceptions noted in Sections 2.1.2 and 3.1.3. All ICP interference check sample %Rs met acceptance criteria.

5.2 Representativeness

All samples for each method and matrix were evaluated for holding time compliance. All samples were associated with a method blank in each individual SDG. The representativeness of the project data is considered acceptable after integration of result qualification.

5.3 Comparability

Sampling frequency requirements were met in obtaining necessary equipment blanks, field blanks and field duplicates. The laboratory used standard analytical methods for the analyses. The analytical results were reported in correct standard units. Sample integrity criteria were met. Sample preservation and holding times were within QC criteria with the exceptions noted in Section 3.2.1. The overall comparability is considered acceptable after integration of result qualification.

5.4 Completeness

Of the 1,576 total analytes reported, none of the sample results were rejected. The completeness for the SDGs is as follows:

Parameter	Total Analytes	No. of Rejects	% Completeness
Metals	298	0	100
Wet Chemistry	1,278	0	100
Total	**1,576**	**0**	**100**

The completeness percentage based on rejected data met the 90 percent DQO goal.

5.5 Sensitivity

Sensitivity was achieved by the laboratory to support the DQOs. Calibration concentrations and PQLs met the project requirements and low level contamination in the method blanks, equipment blanks, and field blanks did not affect sensitivity.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The analytical data quality assessment for the water sample laboratory analytical results generated during the Annual Remedial Performance Sampling at the Nevada Environmental Response Trust (NERT) site in Henderson, Nevada established that the overall project requirements and completeness levels were met. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the Stage 2B and Stage 4 data validation all other results are considered valid and usable for all purposes.

7.0 REFERENCES

NDEP 2009. Data Verification and Validation Requirements - Supplement established for the BMI Plant Sites and Common Areas Projects, Henderson, Nevada. April 13.

NDEP 2012. Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas. January 5.

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TABLE I

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-50529-1	ART-1	440-50529-1	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-1DUP	440-50529-1DUP	Water	20130701	DUP	Stage 2B										X			
440-50529-1	ART-2	440-50529-2	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-3	440-50529-3	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-4	440-50529-4	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-6	440-50529-5	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-7	440-50529-6	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-8	440-50529-7	Water	20130701		Stage 2B					X					X			
440-50529-1	ART-9	440-50529-8	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-99R2/R3	440-50529-9	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-115R	440-50529-10	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-116R	440-50529-11	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-117	440-50529-12	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-118	440-50529-13	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-119	440-50529-14	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-120	440-50529-15	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-121	440-50529-16	Water	20130701		Stage 2B					X					X			
440-50529-1	PC-133	440-50529-17	Water	20130701		Stage 2B					X					X			
440-51645-1	PC-86	440-51645-1	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-86DUP	440-51645-1DUP	Water	20130710	DUP	Stage 2B										X			
440-51645-1	PC-90	440-51645-2	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-91	440-51645-3	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-97	440-51645-4	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-18	440-51645-5	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-55	440-51645-6	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-101R	440-51645-7	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-101RDUP	440-51645-7DUP	Water	20130711	DUP	Stage 2B										X			
440-51645-1	MW-K4	440-51645-8	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-1	440-51645-9	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-2A	440-51645-10	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-3A	440-51645-11	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-4A	440-51645-12	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-5A	440-51645-13	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-6B	440-51645-14	Water	20130711		Stage 2B					X					X			
440-51645-1	ARP-7	440-51645-15	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-53	440-51645-16	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-103	440-51645-17	Water	20130711		Stage 2B					X					X			
440-51645-1	MW-K5	440-51645-18	Water	20130711		Stage 2B					X					X			
440-51645-1	M-83	440-51645-19	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-98R	440-51645-20	Water	20130711		Stage 2B					X					X			
440-51645-1	PC-58	440-51645-21	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-56	440-51645-22	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-60	440-51645-23	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-59	440-51645-24	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-62	440-51645-25	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-68	440-51645-26	Water	20130710		Stage 2B					X					X			
440-51645-1	PC-122	440-51645-27	Water	20130711		Stage 2B					X					X			
440-51645-1	EB-1	440-51645-28	Water	20130710	EB	Stage 2B					X								
440-53556-1	ART-1	440-53556-1	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-1MS	440-53556-1MS	Water	20130805	MS	Stage 4	X												
440-53556-1	ART-1MSD	440-53556-1MSD	Water	20130805	MSD	Stage 4	X												
440-53556-1	ART-2	440-53556-2	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-3	440-53556-3	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-4	440-53556-4	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-6	440-53556-5	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-7	440-53556-6	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-8	440-53556-7	Water	20130805		Stage 4	X				X					X			
440-53556-1	ART-9	440-53556-8	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-99R2/R3	440-53556-9	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-115R	440-53556-10	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-116R	440-53556-11	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-116RMS	440-53556-11MS	Water	20130805	MS	Stage 4	X												

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-53556-1	PC-116RMSD	440-53556-11MSD	Water	20130805	MSD	Stage 4	X												
440-53556-1	PC-117	440-53556-12	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-118	440-53556-13	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-119	440-53556-14	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-120	440-53556-15	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-121	440-53556-16	Water	20130805		Stage 4	X				X					X			
440-53556-1	PC-133	440-53556-17	Water	20130805		Stage 4	X				X					X			
440-54568-1	I-S	440-54568-1	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-SMS	440-54568-1MS	Water	20130814	MS	Stage 2B	X												
440-54568-1	I-SMSD	440-54568-1MSD	Water	20130814	MSD	Stage 2B	X												
440-54568-1	I-C	440-54568-2	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-N	440-54568-3	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-H	440-54568-4	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-O	440-54568-5	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-P	440-54568-6	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-D	440-54568-7	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-G	440-54568-8	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-U	440-54568-9	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-M	440-54568-10	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-T	440-54568-11	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-TMS	440-54568-11MS	Water	20130814	MS	Stage 2B	X												
440-54568-1	I-TMSD	440-54568-11MSD	Water	20130814	MSD	Stage 2B	X												
440-54568-1	I-E	440-54568-12	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-Q	440-54568-13	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-F	440-54568-14	Water	20130814		Stage 2B	X				X					X	X		
440-54568-1	I-FDUP	440-54568-14DUP	Water	20130814	DUP	Stage 2B											X		
440-54682-1	ART-6	440-56582-1	Water	20130909		Stage 2B					X					X			
440-54862-1	M-64	440-54862-1	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-64MS	440-54862-1MS	Water	20130819	MS	Stage 2B	X												
440-54862-1	M-64MSD	440-54862-1MSD	Water	20130819	MSD	Stage 2B	X												
440-54862-1	M-65	440-54862-2	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-66	440-54862-3	Water	20130819	FD3	Stage 2B	X				X					X	X		
440-54862-1	M-66DUP	440-54862-3DUP	Water	20130819	DUP	Stage 2B											X		
440-54862-1	M-79	440-54862-4	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-79	440-54862-4RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-69	440-54862-5	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-135	440-54862-6	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-135	440-54862-6RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-131	440-54862-7	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-131	440-54862-7RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-57A	440-54862-8	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-57A	440-54862-8RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	M-37	440-54862-9	Water	20130819		Stage 2B	X	X			X					X	X		
440-54862-1	M-37MS	440-54862-9MS	Water	20130819	MS	Stage 2B		X											
440-54862-1	M-37MSD	440-54862-9MSD	Water	20130819	MSD	Stage 2B		X											
440-54862-1	I-L	440-54862-10	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	I-LDUP	440-54862-10DUP	Water	20130819	DUP	Stage 2B											X		
440-54862-1	I-L	440-54862-10RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	I-R	440-54862-11	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	I-RDUP	440-54862-11DUP	Water	20130819	DUP	Stage 2B											X		
440-54862-1	I-RMS	440-54862-11MS	Water	20130819	MS	Stage 2B	X												
440-54862-1	I-RMSD	440-54862-11MSD	Water	20130819	MSD	Stage 2B	X												
440-54862-1	I-B	440-54862-12	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	EB-1	440-54862-13	Water	20130819	EB	Stage 2B	X	X			X					X	X		
440-54862-1	M-25	440-54862-14	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	M-25	440-54862-14RE	Water	20130819	RE	Stage 2B					X								
440-54862-1	I-AR	440-54862-15	Water	20130819		Stage 2B	X				X					X	X		
440-54862-1	VD-3	440-54862-16	Water	20130819	FD3	Stage 2B	X				X					X	X		
440-54862-1	VD-3	440-54862-16RE	Water	20130819	RE,FD3	Stage 2B					X								
440-54975-1	PC-124	440-54975-1	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	PC-124DUP	440-54975-1DUP	Water	20130820	DUP	Stage 2B										X			
440-54975-1	PC-125	440-54975-2	Water	20130820		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-54975-1	PC-126	440-54975-3	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	PC-127	440-54975-4	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-95	440-54975-5	Water	20130820		Stage 2B	X	X			X					X	X		
440-54975-1	PC-54	440-54975-6	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	PC-54MS	440-54975-6MS	Water	20130820	MS	Stage 2B	X												
440-54975-1	PC-54MSD	440-54975-6MSD	Water	20130820	MSD	Stage 2B	X												
440-54975-1	M-48A	440-54975-7	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-48ADUP	440-54975-7DUP	Water	20130820	DUP	Stage 2B											X		
440-54975-1	M-23	440-54975-8	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-23DUP	440-54975-8DUP	Water	20130820	DUP	Stage 2B											X		
440-54975-1	I-V	440-54975-9	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-I	440-54975-10	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-Z	440-54975-11	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-J	440-54975-12	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	I-K	440-54975-13	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-68	440-54975-14	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-67	440-54975-15	Water	20130820		Stage 2B	X				X					X	X		
440-54975-1	M-67DUP	440-54975-15DUP	Water	20130820	DUP	Stage 2B											X		
440-55076-1	PC-123	440-55076-1	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-128	440-55076-2	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-130	440-55076-3	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-130	440-55076-3RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-131	440-55076-4	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-131	440-55076-4RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-132	440-55076-5	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-132	440-55076-5RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-71	440-55076-6	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-71	440-55076-6RE	Water	20130821	RE	Stage 2B					X								
440-55076-1	PC-72	440-55076-7	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-73	440-55076-8	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	PC-73MS	440-55076-8MS	Water	20130821	MS	Stage 2B	X												
440-55076-1	PC-73MSD	440-55076-8MSD	Water	20130821	MSD	Stage 2B	X												
440-55076-1	PC-37	440-55076-9	Water	20130821		Stage 2B	X				X					X	X		
440-55076-1	M-44	440-55076-10	Water	20130821	FD1	Stage 2B	X	X			X					X	X		
440-55076-1	M-44DUP	440-55076-10DUP	Water	20130821	DUP	Stage 2B											X		
440-55076-1	M-44	440-55076-10RE	Water	20130821	RE,FD1	Stage 2B					X								
440-55076-1	VD-1	440-55076-11	Water	20130821	FD1	Stage 2B	X	X			X					X	X		
440-55076-1	VD-1MS	440-55076-11MS	Water	20130821	MS	Stage 2B		X											
440-55076-1	VD-1MSD	440-55076-11MSD	Water	20130821	MSD	Stage 2B		X											
440-55076-1	VD-1	440-55076-11RE	Water	20130821	RE,FD1	Stage 2B					X								
440-55104-1	H-28A	440-55104-1	Water	20130821		Stage 2B	X		X		X		X		X	X	X	X	X
440-55104-1	H-28ADUP	440-55104-1DUP	Water	20130821	DUP	Stage 2B											X		
440-55104-1	H-28AMS	440-55104-1MS	Water	20130821	MS	Stage 2B	X						X						X
440-55104-1	H-28AMSD	440-55104-1MSD	Water	20130821	MSD	Stage 2B	X						X						X
440-55104-1	M-6A	440-55104-2	Water	20130821		Stage 2B	X		X		X		X		X	X	X	X	X
440-55218-1	PC-129	440-55218-1	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	PC-129DUP	440-55218-1DUP	Water	20130822	DUP	Stage 2B											X		
440-55218-1	PC-129	440-55218-1RE	Water	20130822	RE	Stage 2B					X								
440-55218-1	M-19	440-55218-2	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-35	440-55218-3	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-74	440-55218-4	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-73	440-55218-5	Water	20130822		Stage 2B	X				X					X	X		
440-55218-1	M-81A	440-55218-6	Water	20130822		Stage 2B	X				X					X	X		
440-55674-1	PC-86	440-55674-1	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-86MS	440-55674-1MS	Water	20130828	MS	Stage 2B	X												
440-55674-1	PC-86MSD	440-55674-1MSD	Water	20130828	MSD	Stage 2B	X												
440-55674-1	PC-90	440-55674-2	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-91	440-55674-3	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-97	440-55674-4	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-18	440-55674-5	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	ARP-1	440-55674-6	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-58	440-55674-7	Water	20130828		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-55674-1	PC-56	440-55674-8	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-60	440-55674-9	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-59	440-55674-10	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-62	440-55674-11	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-62MS	440-55674-11MS	Water	20130828	MS	Stage 2B	X												
440-55674-1	PC-62MSD	440-55674-11MSD	Water	20130828	MSD	Stage 2B	X												
440-55674-1	PC-68	440-55674-12	Water	20130828		Stage 2B	X				X					X	X		
440-55674-1	PC-94	440-55674-13	Water	20130828		Stage 2B	X				X					X	X		
440-55769-1	ART-7B	440-55769-1	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-122	440-55769-2	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-53	440-55769-3	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	MW-K5	440-55769-4	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-7	440-55769-5	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-6B	440-55769-6	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-5A	440-55769-7	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	ARP-4A	440-55769-8	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	MW-K4	440-55769-9	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-101R	440-55769-10	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-101RMS	440-55769-10MS	Water	20130829	MS	Stage 2B	X												
440-55769-1	PC-101RMSD	440-55769-10MSD	Water	20130829	MSD	Stage 2B	X												
440-55769-1	ARP-3A	440-55769-11	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	EB-1	440-55769-12	Water	20130829	EB	Stage 2B					X								
440-55769-1	ARP-2A	440-55769-13	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-103	440-55769-14	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-98R	440-55769-15	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-55	440-55769-16	Water	20130829		Stage 2B	X				X					X	X		
440-55769-1	PC-55DUP	440-55769-16DUP	Water	20130829	DUP	Stage 2B											X		
440-55874-1	M-83	440-55874-1	Water	20130830		Stage 2B	X				X					X	X		
440-56136-1	M-80	440-56136-1	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-80MS	440-56136-1MS	Water	20130904	MS	Stage 4	X												
440-56136-1	M-80MSD	440-56136-1MSD	Water	20130904	MSD	Stage 4	X												
440-56136-1	M-80	440-56136-1RE	Water	20130904	RE	Stage 4					X								
440-56136-1	M-70	440-56136-2	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-70	440-56136-2RE	Water	20130904	RE	Stage 4					X								
440-56136-1	M-71	440-56136-3	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-71	440-56136-3RE	Water	20130904	RE	Stage 4					X								
440-56136-1	M-72	440-56136-4	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-AA	440-56136-5	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-AA	440-56136-5RE	Water	20130904	RE	Stage 4					X								
440-56136-1	I-AB	440-56136-6	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-AB	440-56136-6RE	Water	20130904	RE	Stage 4					X								
440-56136-1	I-Y	440-56136-7	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-22A	440-56136-8	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	M-38	440-56136-9	Water	20130904		Stage 4	X	X			X					X	X		
440-56136-1	M-38DUP	440-56136-9DUP	Water	20130904	DUP	Stage 4											X		
440-56136-1	M-38MS	440-56136-9MS	Water	20130904	MS	Stage 4		X											
440-56136-1	M-38MSD	440-56136-9MSD	Water	20130904	MSD	Stage 4		X											
440-56136-1	M-14A	440-56136-10	Water	20130904	FD5	Stage 4	X				X					X	X		
440-56136-1	VD-5	440-56136-11	Water	20130904	FD5	Stage 4	X				X					X	X		
440-56136-1	VD-5MS	440-56136-11MS	Water	20130904	MS	Stage 4	X												
440-56136-1	VD-5MSD	440-56136-11MSD	Water	20130904	MSD	Stage 4	X												
440-56136-1	VD-5	440-56136-11RE	Water	20130904	RE,FD5	Stage 4					X								
440-56136-1	I-W	440-56136-12	Water	20130904		Stage 4	X				X					X	X		
440-56136-1	I-WDUP	440-56136-12DUP	Water	20130904	DUP	Stage 4											X		
440-56136-1	I-W	440-56136-12RE	Water	20130904	RE	Stage 4					X								
440-56136-1	EB-2	440-56136-13	Water	20130904	EB	Stage 4	X	X			X					X	X		
440-56249-1	M-5A	440-56249-1	Water	20130904		Stage 2B	X		X		X		X		X	X	X	X	X
440-56249-1	M-5AMS	440-56249-1MS	Water	20130904	MS	Stage 2B							X						
440-56249-1	M-5AMSD	440-56249-1MSD	Water	20130904	MSD	Stage 2B							X						
440-56249-1	M-7B	440-56249-2	Water	20130904		Stage 2B	X		X		X		X		X	X	X	X	X
440-56249-1	M-7BDUP	440-56249-2DUP	Water	20130904	DUP	Stage 2B									X				
440-56333-1	M-31A	440-56333-1	Water	20130905		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-56333-1	M-31ADUP	440-56333-1DUP	Water	20130905	DUP	Stage 2B											X		
440-56333-1	M-31A	440-56333-1RE	Water	20130905	RE	Stage 2B					X								
440-56333-1	PC-136	440-56333-2	Water	20130905		Stage 2B	X				X					X	X		
440-56333-1	PC-136	440-56333-2RE	Water	20130905	RE	Stage 2B					X								
440-56333-1	PC-144	440-56333-3	Water	20130905	FD2	Stage 2B	X				X					X	X		
440-56333-1	PC-135A	440-56333-4	Water	20130905		Stage 2B	X				X					X	X		
440-56333-1	PC-135A	440-56333-4RE	Water	20130905	RE	Stage 2B					X								
440-56333-1	M-12A	440-56333-5	Water	20130905	FD4	Stage 2B	X	X			X					X	X		
440-56333-1	M-11	440-56333-6	Water	20130905		Stage 2B	X	X			X					X	X		
440-56333-1	M-11MS	440-56333-6MS	Water	20130905	MS	Stage 2B		X											
440-56333-1	M-11MSD	440-56333-6MSD	Water	20130905	MSD	Stage 2B		X											
440-56333-1	VD-2	440-56333-7	Water	20130905	FD2	Stage 2B	X				X					X	X		
440-56333-1	VD-2	440-56333-7RE	Water	20130905	RE,FD2	Stage 2B					X								
440-56333-1	VD-4	440-56333-8	Water	20130905	FD4	Stage 2B	X	X			X					X	X		
440-56333-1	VD-4	440-56333-8RE	Water	20130905	RE,FD4	Stage 2B					X								
440-56361-1	M-10	440-56361-1	Water	20130905		Stage 2B	X	X	X	X	X	X		X		X	X		
440-56361-1	M-10MS	440-56361-1MS	Water	20130905	MS	Stage 2B			X										
440-56361-1	M-10MSD	440-56361-1MSD	Water	20130905	MSD	Stage 2B			X										
440-56471-1	PC-150	440-56471-1	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	PC-150DUP	440-56471-1DUP	Water	20130906	DUP	Stage 4											X		
440-56471-1	PC-149	440-56471-2	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	PC-149MS	440-56471-2MS	Water	20130906	MS	Stage 4	X												
440-56471-1	PC-149MSD	440-56471-2MSD	Water	20130906	MSD	Stage 4	X												
440-56471-1	PC-148	440-56471-3	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	PC-148	440-56471-3RE	Water	20130906	RE	Stage 4					X								
440-56471-1	M-99	440-56471-4	Water	20130906		Stage 4	X				X					X	X		
440-56471-1	M-99	440-56471-4RE	Water	20130906	RE	Stage 4					X								
440-56477-1	ART-1	440-56477-1	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-1DUP	440-56477-1DUP	Water	20130906	DUP	Stage 2B										X			
440-56477-1	ART-2	440-56477-2	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-3	440-56477-3	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-4	440-56477-4	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-7	440-56477-5	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-8	440-56477-6	Water	20130906		Stage 2B					X					X			
440-56477-1	ART-9	440-56477-7	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-99R2/R3	440-56477-8	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-115R	440-56477-9	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-116R	440-56477-10	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-116R	440-56477-10RE	Water	20130906	RE	Stage 2B					X								
440-56477-1	PC-117	440-56477-11	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-118	440-56477-12	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-119	440-56477-13	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-120	440-56477-14	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-121	440-56477-15	Water	20130906		Stage 2B					X					X			
440-56477-1	PC-133	440-56477-16	Water	20130906		Stage 2B					X					X			
440-57563-1	PC-97	440-57563-1	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-97DUP	440-57563-1DUP	Water	20130919	DUP	Stage 2B										X			
440-57563-1	PC-90	440-57563-2	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-91	440-57563-3	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-86	440-57563-4	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-86	440-57563-4RE	Water	20130919	RE	Stage 2B					X								
440-57563-1	PC-58	440-57563-5	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-60	440-57563-6	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-59	440-57563-7	Water	20130919		Stage 2B					X					X			
440-57563-1	EB-1	440-57563-8	Water	20130919	EB	Stage 2B					X								
440-57563-1	PC-62	440-57563-9	Water	20130919		Stage 2B					X					X			
440-57563-1	PC-68	440-57563-10	Water	20130919		Stage 2B					X					X			
440-57630-1	PC-122	440-57630-1	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-53	440-57630-2	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-53	440-57630-2RE	Water	20130920	RE	Stage 2B					X								
440-57630-1	MW-K5	440-57630-3	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-7	440-57630-4	Water	20130920		Stage 2B					X					X			

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-57630-1	ARP-6B	440-57630-5	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-5A	440-57630-6	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-4A	440-57630-7	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-101R	440-57630-8	Water	20130920		Stage 2B					X					X			
440-57630-1	MW-K4	440-57630-9	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-3A	440-57630-10	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-2A	440-57630-11	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-103	440-57630-12	Water	20130920		Stage 2B					X					X			
440-57630-1	PC-98R	440-57630-13	Water	20130920		Stage 2B					X					X			
440-57630-1	ARP-1	440-57630-14	Water	20130920		Stage 2B					X					X			
440-57832-1	PC-55	440-57832-1	Water	20130924		Stage 2B					X					X			
440-57832-1	PC-55	440-57832-1RE	Water	20130924	RE	Stage 2B					X								
440-57832-1	PC-18	440-57832-2	Water	20130924		Stage 2B					X					X			
440-57832-1	PC-18	440-57832-2RE	Water	20130924	RE	Stage 2B					X								
440-57832-1	M-83	440-57832-3	Water	20130924		Stage 2B					X					X			
440-58695-1	ART-4	440-58695-1	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-3	440-58695-2	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-8	440-58695-3	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-2	440-58695-4	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-7	440-58695-5	Water	20131003		Stage 2B					X					X			
440-58695-1	ART-9	440-58695-6	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-120	440-58695-7	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-119	440-58695-8	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-117	440-58695-9	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-116R	440-58695-10	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-99R2/R3	440-58695-11	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-115R	440-58695-12	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-133	440-58695-13	Water	20131003		Stage 2B					X					X			
440-58695-1	PC-121	440-58695-14	Water	20131003		Stage 2B					X					X			
440-59168-1	ART-1	440-59168-1	Water	20131007		Stage 2B					X					X			
440-59168-1	ART-6	440-59168-2	Water	20131007		Stage 2B					X					X			
440-59168-1	PC-118	440-59168-3	Water	20131007		Stage 2B					X					X			
440-59335-1	PC-122	440-59355-1	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-53	440-59355-2	Water	20131010		Stage 2B					X					X			
440-59335-1	MW-K5	440-59355-3	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-7	440-59355-4	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-6B	440-59355-5	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-5A	440-59355-6	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-4A	440-59355-7	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-101R	440-59355-8	Water	20131010		Stage 2B					X					X			
440-59335-1	MW-K4	440-59355-9	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-3A	440-59355-10	Water	20131010		Stage 2B					X					X			
440-59335-1	ARP-2A	440-59355-11	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-98R	440-59355-12	Water	20131010		Stage 2B					X					X			
440-59335-1	PC-103	440-59355-13	Water	20131010		Stage 2B					X					X			
440-59416-1	PC-97	440-59416-1	Water	20131008		Stage 4					X					X			
440-59416-1	PC-90	440-59416-2	Water	20131008		Stage 4					X					X			
440-59416-1	PC-91	440-59416-3	Water	20131008		Stage 4					X					X			
440-59416-1	PC-68	440-59416-4	Water	20131008		Stage 4					X					X			
440-59416-1	PC-62	440-59416-5	Water	20131008		Stage 4					X					X			
440-59416-1	PC-59	440-59416-6	Water	20131008		Stage 4					X					X			
440-59416-1	PC-60	440-59416-7	Water	20131008		Stage 4					X					X			
440-59416-1	PC-56	440-59416-8	Water	20131008		Stage 4					X					X			
440-59416-1	PC-58	440-59416-9	Water	20131008		Stage 4					X					X			
440-59416-1	PC-18	440-59416-10	Water	20131008		Stage 4					X					X			
440-59416-1	ARP-1	440-59416-11	Water	20131008		Stage 4					X					X			
440-59416-1	EB-1	440-59416-12	Water	20131008	EB	Stage 4					X								
440-59608-1	PC-86	440-59608-1	Water	20131011		Stage 2B					X					X			
440-59608-1	M-83	440-59608-2	Water	20131011		Stage 2B					X					X			
440-59608-1	PC-55	440-59608-3	Water	20131011		Stage 2B					X					X			
440-61402-1	ART-1	440-61402-1	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-2	440-61402-2	Water	20131104		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-61402-1	ART-3	440-61402-3	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-4	440-61402-4	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-6	440-61402-5	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-7	440-61402-6	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-8	440-61402-7	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	ART-9	440-61402-8	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-99R2/R3	440-61402-9	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-115R	440-61402-10	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-115RMS	440-61402-10MS	Water	20131104	MS	Stage 2B	X												
440-61402-1	PC-115RMSD	440-61402-10MSD	Water	20131104	MSD	Stage 2B	X												
440-61402-1	PC-116R	440-61402-11	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-117	440-61402-12	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-117MS	440-61402-12MS	Water	20131104	MS	Stage 2B	X												
440-61402-1	PC-117MSD	440-61402-12MSD	Water	20131104	MSD	Stage 2B	X												
440-61402-1	PC-118	440-61402-13	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-119	440-61402-14	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-120	440-61402-15	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-120DUP	440-61402-15DUP	Water	20131104	DUP	Stage 2B											X		
440-61402-1	PC-121	440-61402-16	Water	20131104		Stage 2B	X				X					X	X		
440-61402-1	PC-133	440-61402-17	Water	20131104		Stage 2B	X				X					X	X		
440-61866-1	PC-97	440-61866-1	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-97DUP	440-61866-1DUP	Water	20131106	DUP	Stage 2B										X			
440-61866-1	PC-97MS	440-61866-1MS	Water	20131106	MS	Stage 2B	X												
440-61866-1	PC-97MSD	440-61866-1MSD	Water	20131106	MSD	Stage 2B	X												
440-61866-1	PC-90	440-61866-2	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-91	440-61866-3	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-94	440-61866-4	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-58	440-61866-5	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-58DUP	440-61866-5DUP	Water	20131106	DUP	Stage 2B											X		
440-61866-1	PC-56	440-61866-6	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-56DUP	440-61866-6DUP	Water	20131106	DUP	Stage 2B											X		
440-61866-1	PC-60	440-61866-7	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-59	440-61866-8	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-62	440-61866-9	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-68	440-61866-10	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-86	440-61866-11	Water	20131106		Stage 2B	X				X					X	X		
440-61866-1	PC-86MS	440-61866-11MS	Water	20131106	MS	Stage 2B	X												
440-61866-1	PC-86MSD	440-61866-11MSD	Water	20131106	MSD	Stage 2B	X												
440-61866-1	ART-7B	440-61866-12	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-122	440-61866-13	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-53	440-61866-14	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	MW-K5	440-61866-15	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-7	440-61866-16	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-6B	440-61866-17	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-5A	440-61866-18	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-4A	440-61866-19	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-101R	440-61866-20	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	MW-K4	440-61866-21	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-3A	440-61866-22	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	ARP-2A	440-61866-23	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-103	440-61866-24	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-98R	440-61866-25	Water	20131107		Stage 2B	X				X					X	X		
440-61866-1	PC-98RDUP	440-61866-25DUP	Water	20131107	DUP	Stage 2B											X		
440-62043-1	PC-18	440-62043-1	Water	20131108		Stage 2B	X				X					X	X		
440-62043-1	PC-18MS	440-62043-1MS	Water	20131108	MS	Stage 2B	X												
440-62043-1	PC-18MSD	440-62043-1MSD	Water	20131108	MSD	Stage 2B	X												
440-62043-1	ARP-1	440-62043-2	Water	20131108		Stage 2B	X				X					X	X		
440-62043-1	EB-1	440-62043-3	Water	20131108	EB	Stage 2B					X								
440-62043-1	PC-55	440-62043-4	Water	20131108		Stage 2B	X				X					X	X		
440-62127-1	PC-71	440-62127-1	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	PC-71MS	440-62127-1MS	Water	20131111	MS	Stage 2B	X												
440-62127-1	PC-71MSD	440-62127-1MSD	Water	20131111	MSD	Stage 2B	X												

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-62127-1	PC-72	440-62127-2	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	PC-73	440-62127-3	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	PC-37	440-62127-4	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	M-23	440-62127-5	Water	20131111		Stage 2B	X				X					X	X		
440-62127-1	VD-1	440-62127-6	Water	20131111	FD6	Stage 2B	X				X					X	X		
440-62127-1	FB-1	440-62127-7	Water	20131111	FB	Stage 2B	X	X			X					X	X		
440-62127-1	M-44	440-62127-8	Water	20131111		Stage 2B	X	X			X					X	X		
440-62127-1	M-95	440-62127-9	Water	20131111		Stage 2B	X	X			X					X	X		
440-62129-1	PC-123	440-62129-1	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-128	440-62129-2	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-129	440-62129-3	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-130	440-62129-4	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-131	440-62129-5	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-132	440-62129-6	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-124	440-62129-7	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-125	440-62129-8	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-126	440-62129-9	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-126MS	440-62129-9MS	Water	20131111	MS	Stage 2B	X												
440-62129-1	PC-126MSD	440-62129-9MSD	Water	20131111	MSD	Stage 2B	X												
440-62129-1	PC-127	440-62129-10	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	PC-127DUP	440-62129-10DUP	Water	20131111	DUP	Stage 2B											X		
440-62129-1	PC-54	440-62129-11	Water	20131111		Stage 2B	X				X					X	X		
440-62129-1	M-48A	440-62129-12	Water	20131111	FD6	Stage 2B	X				X					X	X		
440-62282-1	PC-136	440-62282-1	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-136DUP	440-62282-1DUP	Water	20131112	DUP	Stage 2B										X	X		
440-62282-1	PC-136MS	440-62282-1MS	Water	20131112	MS	Stage 2B	X												
440-62282-1	PC-136MSD	440-62282-1MSD	Water	20131112	MSD	Stage 2B	X												
440-62282-1	PC-144	440-62282-2	Water	20131112	FD7	Stage 2B	X				X					X	X		
440-62282-1	PC-135A	440-62282-3	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-148	440-62282-4	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-149	440-62282-5	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	PC-150	440-62282-6	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	VD-2	440-62282-7	Water	20131112	FD7	Stage 2B	X				X					X	X		
440-62282-1	M-37	440-62282-8	Water	20131112	FD8	Stage 2B	X	X			X					X	X		
440-62282-1	M-25	440-62282-9	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	VD-3	440-62282-10	Water	20131112	FD8	Stage 2B	X	X			X					X	X		
440-62282-1	M-64	440-62282-11	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	M-64MS	440-62282-11MS	Water	20131112	MS	Stage 2B	X												
440-62282-1	M-64MSD	440-62282-11MSD	Water	20131112	MSD	Stage 2B	X												
440-62282-1	EB-1	440-62282-12	Water	20131112	EB	Stage 2B	X	X			X					X	X		
440-62282-1	EB-1MS	440-62282-12MS	Water	20131112	MS	Stage 2B		X											
440-62282-1	EB-1MSD	440-62282-12MSD	Water	20131112	MSD	Stage 2B		X											
440-62282-1	M-65	440-62282-13	Water	20131112		Stage 2B	X				X					X	X		
440-62282-1	M-66	440-62282-14	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-O	440-62286-1	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-ODUP	440-62286-1DUP	Water	20131112	DUP	Stage 2B										X			
440-62286-1	I-OMS	440-62286-1MS	Water	20131112	MS	Stage 2B	X												
440-62286-1	I-OMSD	440-62286-1MSD	Water	20131112	MSD	Stage 2B	X												
440-62286-1	I-W	440-62286-2	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-P	440-62286-3	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-H	440-62286-4	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-HDUP	440-62286-4DUP	Water	20131112	DUP	Stage 2B											X		
440-62286-1	I-U	440-62286-5	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-T	440-62286-6	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-G	440-62286-7	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-Q	440-62286-8	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-F	440-62286-9	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-FDUP	440-62286-9DUP	Water	20131112	DUP	Stage 2B											X		
440-62286-1	I-X	440-62286-10	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-N	440-62286-11	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-NMS	440-62286-11MS	Water	20131112	MS	Stage 2B	X												
440-62286-1	I-NMSD	440-62286-11MSD	Water	20131112	MSD	Stage 2B	X												

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-62286-1	I-E	440-62286-12	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-EDUP	440-62286-12DUP	Water	20131112	DUP	Stage 2B											X		
440-62286-1	I-M	440-62286-13	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-D	440-62286-14	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-C	440-62286-15	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-S	440-62286-16	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-L	440-62286-17	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-Y	440-62286-18	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-R	440-62286-19	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-B	440-62286-20	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-AB	440-62286-21	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-AA	440-62286-22	Water	20131112		Stage 2B	X				X					X	X		
440-62286-1	I-AR	440-62286-23	Water	20131112		Stage 2B	X				X					X	X		
440-62441-1	M-10	440-62444-1	Water	20131113		Stage 4	X	X	X	X	X	X		X		X	X		
440-62441-1	M-10DUP	440-62444-1DUP	Water	20131113	DUP	Stage 4											X		
440-62441-1	M-10MS	440-62444-1MS	Water	20131113	MS	Stage 4						X							
440-62441-1	M-10MSD	440-62444-1MSD	Water	20131113	MSD	Stage 4						X							
440-62442-1	M-68	440-62442-1	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-68DUP	440-62442-1DUP	Water	20131113	DUP	Stage 2B										X			
440-62442-1	M-68MS	440-62442-1MS	Water	20131113	MS	Stage 2B	X												
440-62442-1	M-68MSD	440-62442-1MSD	Water	20131113	MSD	Stage 2B	X												
440-62442-1	M-74	440-62442-2	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-74DUP	440-62442-2DUP	Water	20131113	DUP	Stage 2B											X		
440-62442-1	M-73	440-62442-3	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	I-V	440-62442-4	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-31A	440-62442-5	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	M-31ADUP	440-62442-5DUP	Water	20131113	DUP	Stage 2B											X		
440-62442-1	M-12A	440-62442-6	Water	20131113	FD9	Stage 2B	X	X			X					X	X		
440-62442-1	M-11	440-62442-7	Water	20131113		Stage 2B	X	X			X					X	X		
440-62442-1	M-52	440-62442-8	Water	20131113		Stage 2B	X				X					X	X		
440-62442-1	VD-4	440-62442-9	Water	20131113	FD9	Stage 2B	X	X			X					X	X		
440-62442-1	EB-2	440-62442-10	Water	20131113	EB	Stage 2B	X	X			X					X	X		
440-62447-1	M-79	440-62447-1	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-79MS	440-62447-1MS	Water	20131113	MS	Stage 2B	X												
440-62447-1	M-79MSD	440-62447-1MSD	Water	20131113	MSD	Stage 2B	X												
440-62447-1	M-69	440-62447-2	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-135	440-62447-3	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-131	440-62447-4	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-57A	440-62447-5	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-35	440-62447-6	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-19	440-62447-7	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	M-67	440-62447-8	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-I	440-62447-9	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-Z	440-62447-10	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-J	440-62447-11	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-JMS	440-62447-11MS	Water	20131113	MS	Stage 2B	X												
440-62447-1	I-JMSD	440-62447-11MSD	Water	20131113	MSD	Stage 2B	X												
440-62447-1	I-K	440-62447-12	Water	20131113		Stage 2B	X				X					X	X		
440-62447-1	I-KDUP	440-62447-12DUP	Water	20131113	DUP	Stage 2B											X		
440-62549-1	M-99	440-62549-1	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-99DUP	440-62549-1DUP	Water	20131114	DUP	Stage 2B										X			
440-62549-1	M-83	440-62549-2	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-80	440-62549-3	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-80MS	440-62549-3MS	Water	20131114	MS	Stage 2B	X												
440-62549-1	M-80MSD	440-62549-3MSD	Water	20131114	MSD	Stage 2B	X												
440-62549-1	M-81A	440-62549-4	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-70	440-62549-5	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-71	440-62549-6	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-72	440-62549-7	Water	20131114		Stage 2B	X				X					X	X		
440-62549-1	M-72DUP	440-62549-7DUP	Water	20131114	DUP	Stage 2B											X		
440-62549-1	M-22A	440-62549-8	Water	20131114	FD11	Stage 2B	X				X					X	X		
440-62549-1	M-14A	440-62549-9	Water	20131114		Stage 2B	X				X					X	X		

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Metals (200.7)	Hex. Chrom. (218.6)	Anions (300.0)	Chlorate (300.1)	ClO_4 (314.0)	NH_3-N (350.1)	Phenols (420.1)	NO_3/NO_2-N, TIN (Calc)	Spec. Cond. (SM2510)	TDS (SM2540C)	pH (SM4500H+B)	TOC (SM5310C)	TOX (SW9020)
440-62549-1	M-38	440-62549-10	Water	20131114	FD10	Stage 2B	X	X			X					X	X		
440-62549-1	M-38DUP	440-62549-10DUP	Water	20131114	DUP	Stage 2B											X		
440-62549-1	VD-5	440-62549-11	Water	20131114	FD10	Stage 2B	X	X			X					X	X		
440-62549-1	VD-6	440-62549-12	Water	20131114	FD11	Stage 2B	X				X					X	X		
440-63928-1	ART-1	440-63928-1	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-2	440-63928-2	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-3	440-63928-3	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-4	440-63928-4	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-7	440-63928-5	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-8	440-63928-6	Water	20131202		Stage 2B					X					X			
440-63928-1	ART-9	440-63928-7	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-99R2/R3	440-63928-8	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-115R	440-63928-9	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-116R	440-63928-10	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-117	440-63928-11	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-118	440-63928-12	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-118DUP	440-63928-12DUP	Water	20131202	DUP	Stage 2B										X			
440-63928-1	PC-119	440-63928-13	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-120	440-63928-14	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-121	440-63928-15	Water	20131202		Stage 2B					X					X			
440-63928-1	PC-133	440-63928-16	Water	20131202		Stage 2B					X					X			
440-64096-1	ART-6	440-64096-1	Water	20131203		Stage 2B					X					X			
440-64922-1	PC-97	440-64922-1	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-90	440-64922-2	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-91	440-64922-3	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-58	440-64922-4	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-56	440-64922-5	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-60	440-64922-6	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-60DUP	440-64922-6DUP	Water	20131211	DUP	Stage 2B										X			
440-64922-1	PC-59	440-64922-7	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-62	440-64922-8	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-68	440-64922-9	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-86	440-64922-10	Water	20131211		Stage 2B					X					X			
440-64922-1	PC-18	440-64922-11	Water	20131211		Stage 2B					X					X			
440-65073-1	PC-122	440-65073-1	Water	20131212		Stage 2B					X					X			
440-65073-1	PC-53	440-65073-2	Water	20131212		Stage 2B					X					X			
440-65073-1	MW-K5	440-65073-3	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-7	440-65073-4	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-6B	440-65073-5	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-5A	440-65073-6	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-4A	440-65073-7	Water	20131212		Stage 2B					X					X			
440-65073-1	PC-101R	440-65073-8	Water	20131212		Stage 2B					X					X			
440-65073-1	MW-K4	440-65073-9	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-3A	440-65073-10	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-2A	440-65073-11	Water	20131212		Stage 2B					X					X			
440-65073-1	EB-1	440-65073-12	Water	20131212	EB	Stage 2B					X								
440-65073-1	PC-103	440-65073-13	Water	20131212		Stage 2B					X					X			
440-65073-1	PC-98R	440-65073-14	Water	20131212		Stage 2B					X					X			
440-65073-1	ARP-1	440-65073-15	Water	20131212		Stage 2B					X					X			
440-65073-1	M-83	440-65073-16	Water	20131212		Stage 2B					X					X			
440-65193-1	PC-55	440-65193-1	Water	20131213		Stage 2B					X					X			

TABLE II

Table II. Qualification Codes and Definitions

Reason Code	Explanation
a	qualified due to low abundance (radiochemical activity)
be	qualified due to equipment blank contamination
bf	qualified due to field blank contamination
bl	qualified due to lab blank contamination
bt	qualified due to trip blank contamination
bp	qualified due to pump blank contamination (wells w/o dedicated pumps, when contamination is detected in the Pump Blk)
br	qualified due to filter blank contamination (aqueous Hexavalent Chromium and Dissolved sample fractions)
c	qualified due to calibration problems
cp	qualified due to insufficient ingrowth (radiochemical only)
dc	duel column confirmation %D exceeded
e	concentration exceeded the calibration range
fd	qualified due to field duplicate imprecision
h	qualified due to holding time exceedance
i	qualified due to internal standard areas
k	qualified as Estimated Maximum Possible Concentrations (dioxins and PCB congeners)
l	qualified due to LCS recoveries
ld	qualified due to lab duplicate imprecision (matrix duplicate, MSD, LCSD)
m	qualified due to matrix spike recoveries
nb	qualified due to negative lab blank contamination (nondetect results only)
nd	qualified due to non-detected target analyte
o	other
p	qualified as a false positive due to contamination during shipping
pH	sample preservation not within acceptance range
q	qualified due to quantitation problem
s	qualified due to surrogate recoveries
sd	serial dilution did not meet control criteria
sp	detected value reported >SQL <PQL
st	sample receipt temperature exceeded
t	qualified due to elevated helium tracer concentrations
vh	volatile headspace detected in aqueous sample containers submitted for VOC analysis
x	qualified due to low % solids
z	qualified due to ICS results

TABLE III

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-54568-1	I-S	20130814	200.7	7440-47-3	Chromium	1.4		0.0020	mg/l	J+	m	Matrix Spike %R	129/135	%
440-61866-1	PC-56	20131106	200.7	7440-47-3	Chromium	0.0027	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-59	20131106	200.7	7440-47-3	Chromium	0.0020	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-90	20131106	200.7	7440-47-3	Chromium	0.0034	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-91	20131106	200.7	7440-47-3	Chromium	0.0025	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-61866-1	PC-97	20131106	200.7	7440-47-3	Chromium	0.0022	JB	0.0020	mg/l	J	bl	Method Blank	0.00435	mg/L
440-62127-1	M-23	20131111	200.7	7440-47-3	Chromium	0.38		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	M-44	20131111	200.7	7440-47-3	Chromium	1.2		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	M-95	20131111	200.7	7440-47-3	Chromium	0.75		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-37	20131111	200.7	7440-47-3	Chromium	0.22		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-71	20131111	200.7	7440-47-3	Chromium	0.71		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-72	20131111	200.7	7440-47-3	Chromium	0.23		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	PC-73	20131111	200.7	7440-47-3	Chromium	0.50		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-62127-1	VD-1	20131111	200.7	7440-47-3	Chromium	1.8		0.010	mg/l	J+	m	Matrix Spike %R	136	%
440-56361-1	M-10	20130905	218.6	18540-29-9	Chromium, hexavalent	45	H	0.25	ug/l	J-	h	Holding Time	51.5	Hours
440-62127-1	FB-1	20131111	218.6	18540-29-9	Chromium, hexavalent		UH	0.25	ug/l	UJ	h	Holding Time	29.25	Hours
440-62127-1	M-44	20131111	218.6	18540-29-9	Chromium, hexavalent	910	H	5.0	ug/l	J-	h	Holding Time	25.75	Hours
440-62442-1	EB-2	20131113	218.6	18540-29-9	Chromium, hexavalent		UH	0.25	ug/l	UJ	h	Holding Time	27	Hours
440-56361-1	M-10	20130905	300.0	16887-00-6	Chloride	150		40	mg/l	J+	m	Matrix Spike %R	145/142	%
440-61402-1	ART-1	20131104	SM2540C	TDS	Total Dissolved Solids	6500		50	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-2	20131104	SM2540C	TDS	Total Dissolved Solids	9900		100	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-7	20131104	SM2540C	TDS	Total Dissolved Solids	8200		50	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-8	20131104	SM2540C	TDS	Total Dissolved Solids	10000		100	mg/l	J-	o	Other	Filtered sample analyzed	
440-61402-1	ART-9	20131104	SM2540C	TDS	Total Dissolved Solids	6500		50	mg/l	J-	o	Other	Filtered sample analyzed	
440-54862-1	EB-1	20130819	SM4500H+B	C-006	pH	7.09	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-AR	20130819	SM4500H+B	C-006	pH	7.46	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-B	20130819	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-L	20130819	SM4500H+B	C-006	pH	7.65	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	I-R	20130819	SM4500H+B	C-006	pH	7.07	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-131	20130819	SM4500H+B	C-006	pH	7.89	HF	0.100	s.u.	J	h	Holding Time	9	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-54862-1	M-135	20130819	SM4500H+B	C-006	pH	7.90	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-25	20130819	SM4500H+B	C-006	pH	7.84	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-37	20130819	SM4500H+B	C-006	pH	7.41	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-57A	20130819	SM4500H+B	C-006	pH	7.89	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-64	20130819	SM4500H+B	C-006	pH	7.81	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-65	20130819	SM4500H+B	C-006	pH	7.60	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-66	20130819	SM4500H+B	C-006	pH	7.51	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-69	20130819	SM4500H+B	C-006	pH	7.77	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	M-79	20130819	SM4500H+B	C-006	pH	7.74	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54862-1	VD-3	20130819	SM4500H+B	C-006	pH	7.52	HF	0.100	s.u.	J	h	Holding Time	9	Days
440-54975-1	I-I	20130820	SM4500H+B	C-006	pH	7.71	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-J	20130820	SM4500H+B	C-006	pH	7.74	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-K	20130820	SM4500H+B	C-006	pH	7.72	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-V	20130820	SM4500H+B	C-006	pH	7.70	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	I-Z	20130820	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-23	20130820	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-48A	20130820	SM4500H+B	C-006	pH	7.97	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-67	20130820	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-68	20130820	SM4500H+B	C-006	pH	7.75	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	M-95	20130820	SM4500H+B	C-006	pH	7.76	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-124	20130820	SM4500H+B	C-006	pH	7.64	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-125	20130820	SM4500H+B	C-006	pH	7.67	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-126	20130820	SM4500H+B	C-006	pH	7.69	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-127	20130820	SM4500H+B	C-006	pH	7.78	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-54975-1	PC-54	20130820	SM4500H+B	C-006	pH	7.78	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	M-44	20130821	SM4500H+B	C-006	pH	7.42	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-123	20130821	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-128	20130821	SM4500H+B	C-006	pH	7.50	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-130	20130821	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-131	20130821	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-132	20130821	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-37	20130821	SM4500H+B	C-006	pH	7.43	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-71	20130821	SM4500H+B	C-006	pH	7.45	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-72	20130821	SM4500H+B	C-006	pH	7.51	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	PC-73	20130821	SM4500H+B	C-006	pH	7.41	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55076-1	VD-1	20130821	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-19	20130822	SM4500H+B	C-006	pH	7.91	HF	0.100	s.u.	J	h	Holding Time	8	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-55218-1	M-35	20130822	SM4500H+B	C-006	pH	7.89	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-73	20130822	SM4500H+B	C-006	pH	7.69	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-74	20130822	SM4500H+B	C-006	pH	7.81	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	M-81A	20130822	SM4500H+B	C-006	pH	7.79	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55218-1	PC-129	20130822	SM4500H+B	C-006	pH	7.80	HF	0.100	s.u.	J	h	Holding Time	8	Days
440-55674-1	ARP-1	20130828	SM4500H+B	C-006	pH	7.83	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-18	20130828	SM4500H+B	C-006	pH	7.53	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-56	20130828	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-58	20130828	SM4500H+B	C-006	pH	7.84	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-59	20130828	SM4500H+B	C-006	pH	7.75	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-60	20130828	SM4500H+B	C-006	pH	7.83	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-62	20130828	SM4500H+B	C-006	pH	7.82	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-68	20130828	SM4500H+B	C-006	pH	7.73	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-86	20130828	SM4500H+B	C-006	pH	7.77	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-90	20130828	SM4500H+B	C-006	pH	7.68	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-91	20130828	SM4500H+B	C-006	pH	7.68	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-94	20130828	SM4500H+B	C-006	pH	7.58	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55674-1	PC-97	20130828	SM4500H+B	C-006	pH	7.66	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-2A	20130829	SM4500H+B	C-006	pH	7.53	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-3A	20130829	SM4500H+B	C-006	pH	7.36	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-4A	20130829	SM4500H+B	C-006	pH	7.34	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-5A	20130829	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-6B	20130829	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ARP-7	20130829	SM4500H+B	C-006	pH	7.23	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	ART-7B	20130829	SM4500H+B	C-006	pH	7.13	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	MW-K4	20130829	SM4500H+B	C-006	pH	7.37	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	MW-K5	20130829	SM4500H+B	C-006	pH	7.20	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-101R	20130829	SM4500H+B	C-006	pH	7.22	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-103	20130829	SM4500H+B	C-006	pH	7.43	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-122	20130829	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-53	20130829	SM4500H+B	C-006	pH	7.48	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-55	20130829	SM4500H+B	C-006	pH	7.43	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55769-1	PC-98R	20130829	SM4500H+B	C-006	pH	7.31	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-55874-1	M-83	20130830	SM4500H+B	C-006	pH	7.79	HF	0.100	s.u.	J	h	Holding Time	6	Days
440-56361-1	M-10	20130905	SM4500H+B	C-006	pH	6.94	HF	0.100	s.u.	J	h	Holding Time	5	Days
440-61402-1	ART-1	20131104	SM4500H+B	C-006	pH	7.53	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	ART-2	20131104	SM4500H+B	C-006	pH	7.29	HF	0.100	s.u.	J	h	Holding Time	10	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-61402-1	ART-3	20131104	SM4500H+B	C-006	pH	7.21	HF	0.100	s.u.	J	h	Holding Time	49.75	Hours
440-61402-1	ART-4	20131104	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	49	Hours
440-61402-1	ART-6	20131104	SM4500H+B	C-006	pH	7.65	HF	0.100	s.u.	J	h	Holding Time	48.25	Hours
440-61402-1	ART-7	20131104	SM4500H+B	C-006	pH	7.27	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	ART-8	20131104	SM4500H+B	C-006	pH	7.31	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	ART-9	20131104	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	10	Days
440-61402-1	PC-115R	20131104	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	52	Hours
440-61402-1	PC-116R	20131104	SM4500H+B	C-006	pH	7.31	HF	0.100	s.u.	J	h	Holding Time	52	Hours
440-61402-1	PC-117	20131104	SM4500H+B	C-006	pH	7.50	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-61402-1	PC-118	20131104	SM4500H+B	C-006	pH	7.48	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-61402-1	PC-119	20131104	SM4500H+B	C-006	pH	7.41	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-61402-1	PC-120	20131104	SM4500H+B	C-006	pH	7.37	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-61402-1	PC-121	20131104	SM4500H+B	C-006	pH	7.35	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-61402-1	PC-133	20131104	SM4500H+B	C-006	pH	7.44	HF	0.100	s.u.	J	h	Holding Time	50.75	Hours
440-61402-1	PC-99R2/R3	20131104	SM4500H+B	C-006	pH	7.30	HF	0.100	s.u.	J	h	Holding Time	52	Hours
440-61866-1	PC-56	20131106	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	57	Hours
440-61866-1	PC-58	20131106	SM4500H+B	C-006	pH	7.82	HF	0.100	s.u.	J	h	Holding Time	56.25	Hours
440-61866-1	PC-59	20131106	SM4500H+B	C-006	pH	7.69	HF	0.100	s.u.	J	h	Holding Time	56.5	Hours
440-61866-1	PC-60	20131106	SM4500H+B	C-006	pH	7.78	HF	0.100	s.u.	J	h	Holding Time	56.75	Hours
440-61866-1	PC-62	20131106	SM4500H+B	C-006	pH	7.67	HF	0.100	s.u.	J	h	Holding Time	56.25	Hours
440-61866-1	PC-68	20131106	SM4500H+B	C-006	pH	7.66	HF	0.100	s.u.	J	h	Holding Time	55.75	Hours
440-61866-1	PC-86	20131106	SM4500H+B	C-006	pH	7.72	HF	0.100	s.u.	J	h	Holding Time	55.5	Hours
440-61866-1	PC-90	20131106	SM4500H+B	C-006	pH	7.66	HF	0.100	s.u.	J	h	Holding Time	57.75	Hours
440-61866-1	PC-91	20131106	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	57.5	Hours
440-61866-1	PC-94	20131106	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	57.25	Hours
440-61866-1	PC-97	20131106	SM4500H+B	C-006	pH	7.62	HF	0.100	s.u.	J	h	Holding Time	58.25	Hours
440-62043-1	ARP-1	20131108	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62043-1	PC-18	20131108	SM4500H+B	C-006	pH	7.26	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62043-1	PC-55	20131108	SM4500H+B	C-006	pH	7.48	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-AA	20131112	SM4500H+B	C-006	pH	7.34	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-AB	20131112	SM4500H+B	C-006	pH	7.39	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-AR	20131112	SM4500H+B	C-006	pH	7.10	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-B	20131112	SM4500H+B	C-006	pH	7.14	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-C	20131112	SM4500H+B	C-006	pH	7.45	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-D	20131112	SM4500H+B	C-006	pH	7.20	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-E	20131112	SM4500H+B	C-006	pH	6.98	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-F	20131112	SM4500H+B	C-006	pH	7.18	HF	0.100	s.u.	J	h	Holding Time	3	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-62286-1	I-G	20131112	SM4500H+B	C-006	pH	6.85	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-L	20131112	SM4500H+B	C-006	pH	7.34	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-M	20131112	SM4500H+B	C-006	pH	7.12	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-N	20131112	SM4500H+B	C-006	pH	7.54	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-Q	20131112	SM4500H+B	C-006	pH	7.32	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-R	20131112	SM4500H+B	C-006	pH	7.01	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-S	20131112	SM4500H+B	C-006	pH	7.25	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-X	20131112	SM4500H+B	C-006	pH	7.27	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62286-1	I-Y	20131112	SM4500H+B	C-006	pH	7.07	HF	0.100	s.u.	J	h	Holding Time	3	Days
440-62442-1	EB-2	20131113	SM4500H+B	C-006	pH	6.31	HF	0.100	s.u.	J	h	Holding Time	50.5	Hours
440-62442-1	I-V	20131113	SM4500H+B	C-006	pH	7.11	HF	0.100	s.u.	J	h	Holding Time	50	Hours
440-62442-1	M-12A	20131113	SM4500H+B	C-006	pH	7.84	HF	0.100	s.u.	J	h	Holding Time	48.5	Hours
440-62442-1	M-31A	20131113	SM4500H+B	C-006	pH	7.55	HF	0.100	s.u.	J	h	Holding Time	49	Hours
440-62442-1	M-52	20131113	SM4500H+B	C-006	pH	7.35	HF	0.100	s.u.	J	h	Holding Time	49.5	Hours
440-62442-1	M-68	20131113	SM4500H+B	C-006	pH	7.18	HF	0.100	s.u.	J	h	Holding Time	50.5	Hours
440-62442-1	M-73	20131113	SM4500H+B	C-006	pH	7.21	HF	0.100	s.u.	J	h	Holding Time	50	Hours
440-62442-1	M-74	20131113	SM4500H+B	C-006	pH	7.22	HF	0.100	s.u.	J	h	Holding Time	50.25	Hours
440-62442-1	VD-4	20131113	SM4500H+B	C-006	pH	7.87	HF	0.100	s.u.	J	h	Holding Time	48.5	Hours
440-62447-1	I-I	20131113	SM4500H+B	C-006	pH	7.10	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-62447-1	I-J	20131113	SM4500H+B	C-006	pH	7.04	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-62447-1	I-K	20131113	SM4500H+B	C-006	pH	7.08	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-62447-1	I-Z	20131113	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	51.5	Hours
440-62447-1	M-131	20131113	SM4500H+B	C-006	pH	7.44	HF	0.100	s.u.	J	h	Holding Time	53	Hours
440-62447-1	M-135	20131113	SM4500H+B	C-006	pH	7.38	HF	0.100	s.u.	J	h	Holding Time	53.25	Hours
440-62447-1	M-19	20131113	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	52.25	Hours
440-62447-1	M-35	20131113	SM4500H+B	C-006	pH	7.16	HF	0.100	s.u.	J	h	Holding Time	52.5	Hours
440-62447-1	M-57A	20131113	SM4500H+B	C-006	pH	7.42	HF	0.100	s.u.	J	h	Holding Time	52.75	Hours
440-62447-1	M-67	20131113	SM4500H+B	C-006	pH	7.15	HF	0.100	s.u.	J	h	Holding Time	51.75	Hours
440-62447-1	M-69	20131113	SM4500H+B	C-006	pH	7.09	HF	0.100	s.u.	J	h	Holding Time	53.5	Hours
440-62447-1	M-79	20131113	SM4500H+B	C-006	pH	7.23	HF	0.100	s.u.	J	h	Holding Time	53.75	Hours
440-62549-1	M-14A	20131114	SM4500H+B	C-006	pH	7.47	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-22A	20131114	SM4500H+B	C-006	pH	7.14	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-38	20131114	SM4500H+B	C-006	pH	7.21	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-70	20131114	SM4500H+B	C-006	pH	7.29	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-71	20131114	SM4500H+B	C-006	pH	6.86	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-72	20131114	SM4500H+B	C-006	pH	6.98	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-80	20131114	SM4500H+B	C-006	pH	7.59	HF	0.100	s.u.	J	h	Holding Time	4	Days

Table III. Overall Qualified Results

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding	
440-62549-1	M-81A	20131114	SM4500H+B	C-006	pH	7.28	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-83	20131114	SM4500H+B	C-006	pH	7.29	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	M-99	20131114	SM4500H+B	C-006	pH	7.49	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	VD-5	20131114	SM4500H+B	C-006	pH	7.24	HF	0.100	s.u.	J	h	Holding Time	4	Days
440-62549-1	VD-6	20131114	SM4500H+B	C-006	pH	7.16	HF	0.100	s.u.	J	h	Holding Time	4	Days

ATTACHMENT A

Metals Data Validation Report

Metals by EPA Method 200.7

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. ICPMS Tune

ICP-MS was not utilized in these SDGs.

III. Calibration

The initial and continuing calibrations were performed at the required frequency.

The calibration standards criteria were met with the following exceptions:

SDG	Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
440-53556-1	8/13/13	CCV (22:23)	Chromium	113 (90-110)	PC-115R PC-116R PC-117 PC-118 PC-119 PC-120 PC-121 PC-133 PC-116RMS PC-116RMSD	J+ (all detects)	P

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No metal contaminants were found in the preparation blanks with the following exceptions:

SDGs	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
440-56249-1	PB (prep blank)	Sodium	0.618 mg/L	All samples in SDG 440-56249-1
440-56249-1	ICB/CCB	Sodium	0.840 mg/L	All samples in SDG 440-56249-1
440-55104-1	PB (prep blank)	Sodium	0.249 mg/L	All samples in SDG 440-55104-1
440-55104-1	ICB/CCB	Sodium	0.276 mg/L	All samples in SDG 440-55104-1

SDGs	Method Blank ID	Analyte	Maximum Concentration	Associated Samples
440-61866-1	PB (prep blank)	Chromium	0.00435 mg/L	PC-97 PC-90 PC-91 PC-94 PC-58 PC-56 PC-60 PC-59 PC-62 PC-68 PC-86 ART-7B PC-122 PC-53 MW-K5 ARP-7 ARP-6B ARP-5A ARP-4A PC-101R

Sample concentrations were compared to concentrations detected in the method blanks as required by the QAPP. No sample data was qualified with the following exceptions:

SDG	Sample	Analyte	Reported Concentration	Modified Final Concentration
440-61866-1	PC-97	Chromium	0.0022 mg/L	0.0022J mg/L
440-61866-1	PC-90	Chromium	0.0034 mg/L	0.0034J mg/L
440-61866-1	PC-91	Chromium	0.0025 mg/L	0.0025J mg/L
440-61866-1	PC-56	Chromium	0.0027 mg/L	0.0027J mg/L
440-61866-1	PC-59	Chromium	0.0020 mg/L	0.0020J mg/L

Samples EB-1 (from SDGs 440-54862-1 and 440-62282-1) and EB-2 (from SDG 440-56136-1) were identified as equipment blanks. No metal contaminants found were found.

Sample FB-1 (from SDG 440-62127-1) was identified as a field blank. No metal contaminants found were found.

V. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

VI. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

SDGs	Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
440-54568-1	I-SMS/MSD (I-S)	Chromium	129 (75-125)	135 (75-125)	-	J+ (all detects)	A
440-62127-1	PC-71MS/MSD (All samples in SDG 440-62127-1)	Chromium	136 (75-125)	-	-	J+ (all detects)	A

VII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in these SDGs, and therefore duplicate analyses were not performed for these SDGs.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Internal Standards (ICP-MS)

ICP-MS was not utilized in these SDGs.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XI. Sample Result Verification

All sample result verifications were acceptable for samples on which a Stage 4 review was performed. Raw data were not evaluated for the samples reviewed by Stage 2B criteria.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples M-12A and VD-4 (from SDG 440-62442-1), samples M-66 and VD-3 (from SDG 440-54862-1), samples M-44 and VD-1 (from SDG 440-55076-1), samples M-38 and VD-5 (from SDG 440-62549-1), samples M-22A and VD-6 (from SDG 440-62549-1), samples M-14A and VD-5 (from SDG 440-56136-1), samples PC-144 and VD-2 (from SDG 440-56333-1), samples M-12A and VD-4 (from SDG 440-56333-1), samples M-48A (from SDG 440-62129-1) and VD-1 (from SDG 440-62127-1), samples PC-144 and VD-2 (from SDG 440-62282-1), and samples M-37 and VD-3 (from SDG 440-62282-1) were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-62442-1	Chromium	8.3	8.2	1 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-66	VD-3				
440-54862-1	Chromium	22	24	9 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-44	VD-1				
440-55076-1	Chromium	0.94	0.93	1 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference	Flag	A or P
		M-38	VD-5				
440-62549-1	Chromium	18	20	11 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference	Flag	A or P
		M-22A	VD-6				
440-62549-1	Chromium	20	22	10 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5				
440-56136-1	Chromium	0.056	0.049	-	0.007 (≤0.025)	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-56333-1	Chromium	0.82	0.73	12 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-56333-1	Chromium	9.0	9.0	0 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-48A	VD-1				
440-62127-1 440-62129-1	Chromium	1.8	1.7	6 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-62282-1	Chromium	0.58	0.54	7 (≤30)	-	-	-

SDG	Analyte	Concentration (mg/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-37	VD-3				
440-62282-1	Chromium	0.035	0.054	-	0.019 (≤0.025)	-	-

2013 Annual Remedial Performance Sampling
Metals - Data Qualification Summary - SDGs 440-62286-1, 440-53556-1, 440-56249-1, 440-56361-1, 440-62442-1, 440-56471-1, 440-54568-1, 440-54862-1, 440-62444-1, 440-54975-1, 440-62447-1, 440-55076-1, 440-62549-1, 440-55104-1, 440-55218-1, 440-55674-1, 440-55769-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

SDG	Sample	Analyte	Flag	A or P	Reason
440-53556-1	PC-115R PC-116R PC-117 PC-118 PC-119 PC-120 PC-121 PC-133	Chromium	J+ (all detects)	P	Calibration (%R)
440-54568-1 440-62127-1	I-S PC-71 PC-72 PC-73 PC-37 M-23 VD-1 FB-1 M-44 M-95	Chromium	J+ (all detects)	A	Matrix spike/Matrix spike duplicate (%R)

2013 Annual Remedial Performance Sampling
Metals - Laboratory Blank Data Qualification Summary - SDGs 440-62286-1, 440-53556-1, 440-56249-1, 440-56361-1, 440-62442-1, 440-56471-1, 440-54568-1, 440-54862-1, 440-62444-1, 440-54975-1, 440-62447-1, 440-55076-1, 440-62549-1, 440-55104-1, 440-55218-1, 440-55674-1, 440-55769-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

SDG	Sample	Analyte	Modified Final Concentration	A or P
440-61866-1	PC-97	Chromium	0.0022J mg/L	A
440-61866-1	PC-90	Chromium	0.0034J mg/L	A
440-61866-1	PC-91	Chromium	0.0025J mg/L	A
440-61866-1	PC-56	Chromium	0.0027J mg/L	A
440-61866-1	PC-59	Chromium	0.0020J mg/L	A

2013 Annual Remedial Performance Sampling
Metals - Field Blank Data Qualification Summary - SDGs 440-62286-1, 440-53556-1, 440-56249-1, 440-56361-1, 440-62442-1, 440-56471-1, 440-54568-1, 440-54862-1, 440-62444-1, 440-54975-1, 440-62447-1, 440-55076-1, 440-62549-1, 440-55104-1, 440-55218-1, 440-55674-1, 440-55769-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

No Sample Data Qualified in these SDGs

ATTACHMENT B

Wet Chemistry Data Validation Report

Hexavalent Chromium by EPA Method 218.6
Chloride, Nitrate as Nitrogen, Nitrite as Nitrogen, and Sulfate by EPA Method 300.0
Chlorate by EPA Method 300.1B
Perchlorate by EPA Method 314.0
Ammonia as Nitrogen by EPA Method 350.1
Phenols by EPA Method 420.1
Nitrate/Nitrite as Nitrogen and Total Inorganic Nitrogen by Calculation Method
Specific Conductance by Standard Method 2510B
Total Dissolved Solids by Standard Method 2540C
pH by Standard Method 4500 H+B
Total Organic Carbon by Standard Method 5310C
Toxic Organic Halides by EPA SW 846 Method 9020B

I. Technical Holding Times

All technical holding time requirements were met with the following exceptions:

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-62286-1	I-G I-Q I-F I-X I-N I-E I-M I-D I-C I-S I-L I-Y I-R I-B I-AB I-AA I-AR I-FDUP I-EDUP	pH	3 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	EB-2	Hexavalent chromium	27 hours	24 hours	J- (all detects) UJ (all non-detects)	P
440-62442-1	M-68 EB-2	pH	50.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-74 M-74DUP	pH	50.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-73 I-V	pH	50 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-31A M-31ADUP	pH	49 hours	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-62442-1	M-12A VD-4	pH	48.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62442-1	M-52	pH	49.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-56361-1	M-10	Hexavalent chromium	51.5 hours	24 hours	J- (all detects) R (all non-detects)	P
440-56361-1	M-10	pH	5 days	48 hours	J (all detects) UJ (all non-detects)	P
440-54862-1	M-64 M-65 M-66 M-79 M-69 M-135 M-131 M-57A M-37 I-L I-R I-B EB-1 M-25 I-AR VD-3 M-66DUP I-LDUP I-RDUP	pH	9 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-79	pH	53.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-69	pH	53.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-135	pH	53.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-131	pH	53 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-57A	pH	52.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-35	pH	52.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	M-19	pH	52.25 hours	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-62447-1	M-67 I-I	pH	51.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62447-1	I-Z I-J I-K I-KDUP	pH	51.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-54975-1	PC-124 PC-125 PC-126 PC-127 M-95 PC-54 M-48A M-23 I-V I-I I-Z I-J I-K M-68 M–67 M-48ADUP M-23DUP M–67DUP	pH	8 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62549-1	M-99 M-83 M-80 M-81A M-70 M-71 M-72 M-22A M-14A M-38 VD-5 VD-6 M-72DUP M-38DUP	pH	4 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55076-1	PC-123 PC-128 PC-130 PC-131 PC-132 PC-71 PC-72 PC-73 PC-37 M-44 VD-1 M-44DUP	pH	8 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55218-1	PC-129 M-19 M-35 M-74 M-73 M-81A PC-129DUP	pH	8 days	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-55674-1	All samples in SDG 440-55674-1	pH	6 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55769-1	ART-7B PC-122 PC-53 MW-K5 ARP-7 ARP-6B ARP-5A ARP-4A MW-K4 PC-101R ARP-3A ARP-2A PC-103 PC-98R PC-55 PC-55DUP	pH	6 days	48 hours	J (all detects) UJ (all non-detects)	P
440-55874-1	All samples in SDG 440-55874-1	pH	6 days	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-3	pH	49.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-4	pH	49 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-6	pH	48.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-99R2/R3 PC-115R PC-116R	pH	52 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-117 PC-118 PC-119	pH	51.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-120 PC-121 PC-120DUP	pH	51.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	PC-133	pH	50.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61402-1	ART-1 ART-2 ART-7 ART-8 ART-9	pH	10 days	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-97	pH	58.25 hours	48 hours	J (all detects) UJ (all non-detects)	P

SDG	Sample	Analyte	Total Time From Sample Collection Until Analysis	Required Holding Time From Sample Collection Until Analysis	Flag	A or P
440-61866-1	PC-90	pH	57.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-91	pH	57.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-94	pH	57.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-58 PC-58DUP PC-62	pH	56.25 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-56 PC-56DUP	pH	57 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-60	pH	56.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-59	pH	56.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-68	pH	55.75 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-61866-1	PC-86	pH	55.5 hours	48 hours	J (all detects) UJ (all non-detects)	P
440-62043-1	PC-18 ARP-1 PC-55	pH	3 days	48 hours	J (all detects) UJ (all non-detects)	P
440-62127-1	FB-1	Hexavalent chromium	29.25 hours	24 hours	J- (all detects) UJ (all non-detects)	P
440-62127-1	M-44	Hexavalent chromium	25.75 hours	24 hours	J- (all detects) UJ (all non-detects)	P

Although the holding time for some pH analyses was exceeded by more than two times the holding time, using professional judgment the associated sample results were qualified as estimated (J/UJ) because the sample condition and integrity was maintained during collection, transport, and storage.

All samples were received in good condition with the following exceptions:

SDG	Sample	Analyte	Finding	Criteria	Flag	A or P
440-61402-1	ART-1 ART-2 ART-7 ART-8 ART-9	Total dissolved solids	Due to low pH in the unfiltered sample, filtered sample was used to analyze for total dissolved solids.	Unfiltered sample should be analyzed for total dissolved solids.	J- (all detects) UJ (all non-detects)	P

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing, and preparation blanks.

Samples EB-1 (from SDGs 440-62282-1, 440-59416-1, 440-54862-1, 440-65073-1, 440-55769-1, 440-57563-1, and 440-62043-1) and EB-2 (from SDGs 440-62442-1 and 440-56136-1) were identified as equipment blanks. No contaminant concentrations were found with the following exceptions:

SDG	Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
440-51645-1	EB-1	7/10/13	Perchlorate	0.99 ug/L	PC-86 PC-90 PC-91 PC-97 PC-55 PC-58 PC-56 PC-60 PC-59 PC-62 PC-68

SDG	Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
440-54862-1	EB-1	8/19/13	Total dissolved solids	55 mg/L	M-64 M-65 M-66 M-79 M-69 M-135 M-131 M-57A M-37 I-L I-R I-B M-25 I-AR VD-3
440-54862-1	EB-1	8/19/13	Perchlorate	1.6 ug/L	M-64 M-65 M-66 M-79 M-79RE M-69 M-135 M-135RE M-131 M-131RE M-57A M-57ARE M-37 I-L I-LRE I-R I-B M-25 M-25RE I-AR VD-3 VD-3RE
440-56136-1	EB-2	9/4/13	Perchlorate	1.7 ug/L	M-80 M-70 M-71 M-72 I-AA I-AB I-Y M-22A M-38 M-14A VD-5 I-W M-80RE M-70RE M-71RE I-AARE I-ABRE VD-5RE I-WRE

Sample FB-1 (from SDGs 440-62127-1 and 440-62129-1) was identified as a field blank. No contaminant concentrations were found with the following exceptions:

SDG	Blank ID	Sampling Date	Analyte	Concentration	Associated Samples
440-62127-1	FB-1	11/11/13	Perchlorate	0.93 ug/L	PC-71 PC-72 PC-73 PC-37 M-23 VD-1 M-44 M-95
440-62129-1	FB-1	11/11/13	Perchlorate	0.93 ug/L	All samples in SDG 440-62129-1

Sample concentrations were compared to concentrations detected in the field blanks as required by the QAPP. No sample data was qualified.

V. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

SDG	Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
440-56361-1	M-10MS/MSD (All samples in SDG 440-56361-1)	Chloride	145 (75-125)	142 (75-125)	-	J+ (all detects)	A

VII. Duplicates

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits.

VIII. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) were within QC limits.

IX. Sample Result Verification

All sample result verifications were acceptable for samples on which a Stage 4 review was performed. Raw data were not evaluated for the samples reviewed by Stage 2B criteria.

X. Overall Assessment of Data

The overall assessment of data was acceptable. In the case where more than one result was reported for an individual sample, the least technically acceptable results were rejected as follows:

SDG	Sample	Compound	Flag	A or P
440-56471-1	PC-148RE M-99RE	Perchlorate	R	A
440-57630-1	PC-53RE	Perchlorate	R	A
440-57832-1	PC-55RE PC-18RE	Perchlorate	R	A
440-54862-1	M-79RE M-135RE M-131RE M-57ARE I-LRE M-25RE VD-3RE	Perchlorate	R	A
440-55076-1	PC-130RE PC-131RE PC-132RE PC-71RE M-44RE VD-1RE	Perchlorate	R	A
440-55218-1	PC-129RE	Perchlorate	R	A
440-56136-1	M-80RE M-70RE M-71RE I-AARE I-ABRE VD-5RE I-WRE	Perchlorate	R	A
440-56333-1	M-31ARE PC-136RE PC-135ARE VD-2RE VD-4RE	Perchlorate	R	A
440-56477-1	PC-116RRE	Perchlorate	R	A
440-57563-1	PC-86RE	Perchlorate	R	A

Data flags are summarized at the end of this report if data has been qualified.

XI. Field Duplicates

Samples M-12A and VD-4 (from SDG 440-62442-1), samples M-66 and VD-3 (from SDG 440-54862-1), samples M-66 and VD-3RE (from SDG 440-54862-1), samples M-38 and VD-5 (from SDG 440-62549-1), samples M-22A and VD-6 (from SDG 440-62549-1), samples M-44 and VD-1 (from SDG 440-55076-1), samples M-44RE and VD-1RE (from SDG 440-55076-1), samples M-14A and VD-5 (from SDG 440-56136-1), samples M-14A and VD-5RE (from SDG 440-56136-1), samples PC-144 and VD-2 (from SDG 440-56333-1), samples PC-144 and VD-2RE (from SDG 440-56333-1), samples M-12A and VD-4 (from SDG 440-56333-1), samples M-12A and VD-4RE (from SDG 440-56333-1), samples M-48A (from SDG 440-62129-1) and VD-1 (from SDG 440-62127-1), samples PC-144 and VD-2 (from SDG 440-62282-1), and samples M-37 and VD-3 (from SDG 440-62282-1) were identified as field duplicates. No contaminant concentrations were detected in any of the samples with the following exceptions:

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-62442-1	Total dissolved solids	6700 mg/L	6800 mg/L	1 (≤30)	-	-	-
440-62442-1	pH	7.84 units	7.87 units	0 (≤30)	-	-	-
440-62442-1	Hexavalent Chromium	8000 ug/L	7900 ug/L	1 (≤30)	-	-	-
440-62442-1	Perchlorate	160000 ug/L	150000 ug/L	6 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-66	VD-3				
440-54862-1	Total dissolved solids	19000 mg/L	17000 mg/L	11 (≤30)	-	-	-
440-54862-1	pH	7.51 Units	7.52 Units	0 (≤30)	-	-	-
440-54862-1	Perchlorate	2400000 ug/L	2700000 ug/L	12 (≤30)	-	-	-

SDG	Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-66	VD-3RE				
440-54862-1	Perchlorate	2400000	2700000	12 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-38	VD-5				
440-62549-1	Total dissolved solids	12000 mg/L	12000 mg/L	0 (≤30)	-	-	-
440-62549-1	pH	7.21 unit	7.24 unit	0 (≤30)	-	-	-
440-62549-1	Hexavalent chromium	16000 ug/L	16000 ug/L	0 (≤30)	-	-	-
440-62549-1	Perchlorate	650000 ug/L	700000 ug/L	7 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-22A	VD-6				
440-62549-1	Total dissolved solids	13000 mg/L	13000 mg/L	0 (≤30)	-	-	-
440-62549-1	pH	7.14 unit	7.16 unit	0 (≤30)	-	-	-
440-62549-1	Perchlorate	1300000 ug/L	1300000 ug/L	0 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-44	VD-1				
440-55076-1	Total dissolved solids	9100 mg/L	9000 mg/L	1 (≤30)	-	-	-
440-55076-1	pH	7.42 Units	7.55 Units	2 (≤30)	-	-	-
440-55076-1	Hexavalent chromium	920 ug/L	940 ug/L	2 (≤30)	-	-	-
440-55076-1	Perchlorate	770000 ug/L	780000 ug/L	1 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-44RE	VD-1RE				
440-55076-1	Perchlorate	770000	700000	10 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5				
440-56136-1	Total dissolved solids	3500 mg/L	3500 mg/L	0 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5				
440-56136-1	pH	7.81 units	7.80 units	0 (≤30)	-	-	-
440-56136-1	Perchlorate	47000 ug/L	45000 ug/L	4 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-14A	VD-5RE				
440-56136-1	Perchlorate	47000	42000	11 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-56333-1	Total dissolved solids	6500 mg/L	6600 mg/L	2 (≤30)	-	-	-
440-56333-1	pH	7.33 units	7.35 units	0 (≤30)	-	-	-
440-56333-1	Perchlorate	330000 ug/L	350000 ug/L	6 (≤30)	-	-	-

SDG	Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2RE				
440-56333-1	Perchlorate	330000	320000	3 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4				
440-56333-1	Total dissolved solids	6400 mg/L	6400 mg/L	0 (≤30)	-	-	-
440-56333-1	pH	8.01 units	8.02 units	0 (≤30)	-	-	-
440-56333-1	Hexavalent Chromium	7700 ug/L	8100 ug/L	5 (≤30)	-	-	-
440-56333-1	Perchlorate	170000 ug/L	190000 ug/L	11 (≤30)	-	-	-

SDG	Analyte	Concentration (ug/L)		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-12A	VD-4RE				
440-56333-1	Perchlorate	170000	160000	6 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		VD-1	M-48A				
440-62127-1 440-62129-1	Total dissolved solids	4400 mg/L	4300 mg/L	2 (≤30)	-	-	-
440-62127-1 440-62129-1	pH	7.23 units	7.18 units	1 (≤30)	-	-	-
440-62127-1 440-62129-1	Perchlorate	170000 ug/L	150000 ug/L	13 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		PC-144	VD-2				
440-62282-1	Total dissolved solids	6700 mg/L	6800 mg/L	1 (≤30)	-	-	-
440-62282-1	pH	7.17 units	7.19 units	0 (≤30)	-	-	-
440-62282-1	Perchlorate	260000 ug/L	260000 ug/L	0 (≤30)	-	-	-

SDG	Analyte	Concentration		RPD (Limits)	Difference (Limits)	Flag	A or P
		M-37	VD-3				
440-62282-1	Total dissolved solids	6100 mg/L	6400 mg/L	5 (≤30)	-	-	-
440-62282-1	pH	6.96 units	6.96 units	0 (≤30)	-	-	-
440-62282-1	Hexavalent Chromium	32 ug/L	42 ug/L	27 (≤30)	-	-	-
440-62282-1	Perchlorate	1300000 ug/L	1300000 ug/L	0 (≤30)	-	-	-

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SDG	Sample	Analyte	Flag	A or P	Reason
440-62286-1 440-62442-1 440-56361-1 440-54862-1	I-G I-Q I-F I-X I-N I-E I-M I-D I-C I-S I-L I-Y I-R I-B I-AB I-AA I-AR M-68 EB-2 M-74 M-73 I-V M-31A M-12A VD-4 M-52 M-10 M-64 M-65 M-66 M-79 M-69 M-135 M-131 M-57A M-37 I-L I-R I-B EB-1 M-25 I-AR VD-3	pH	J (all detects) UJ (all non-detects)	P	Technical holding time

SDG	Sample	Analyte	Flag	A or P	Reason
440-62447-1 440-54975-1 440-62549-1 440-55076-1 440-55218-1 440-55674-1	M-79 M-69 M-135 M-131 M-57A M-35 M-19 M-67 I-I I-Z I-J I-K PC-124 PC-125 PC-126 PC-127 M-95 PC-54 M-48A M-23 I-V I-I I-Z I-J I-K M-68 M–67 M-99 M-83 M-80 M-81A M-70 M-71 M-72 M-22A M-14A M-38 VD-5 VD-6 PC-123 PC-128 PC-130 PC-131 PC-132 PC-71 PC-72 PC-73 PC-37 M-44 VD-1 PC-129 M-19 M-35 M-74 M-73 M-81A PC-86 PC-90 PC-91 PC-97 PC-18 ARP-1 PC-58 PC-56 PC-60 PC-59 PC-62 PC-68 PC-94	pH	J (all detects) UJ (all non-detects)	P	Technical holding time (continued)

SDG	Sample	Analyte	Flag	A or P	Reason
440-55769-1 440-55874-1 440-61402-1 440-61866-1 440-62043-1	ART-7B PC-122 PC-53 MW-K5 ARP-7 ARP-6B ARP-5A ARP-4A MW-K4 PC-101R ARP-3A ARP-2A PC-103 PC-98R PC-55 M-83 ART-3 ART-4 ART-6 PC-99R2/R3 PC-115R PC-116R PC-117 PC-118 PC-119 PC-120 PC-121 PC-133 ART-1 ART-2 ART-7 ART-8 ART-9 PC-97 PC-90 PC-91 PC-94 PC-58 PC-62 PC-56 PC-60 PC-59 PC-68 PC-86 PC-18 ARP-1 PC-55	pH	J (all detects) UJ (all non-detects)	P	Technical holding time (continued)
440-62442-1 440-62127-1	EB-2 FB-1 M-44	Hexavalent chromium	J- (all detects) UJ (all non-detects)	P	Technical holding time
440-56361-1	M-10	Hexavalent chromium	J- (all detects) R (all non-detects)	P	Technical holding time
440-61402-1	ART-1 ART-2 ART-7 ART-8 ART-9	Total dissolved solids	J- (all detects) UJ (all non-detects)	P	Sample condition
440-56361-1	M-10	Chloride	J+ (all detects)	A	Matrix spike/Matrix spike duplicate (%R)

SDG	Sample	Analyte	Flag	A or P	Reason
440-56471-1 440-57630-1 440-57832-1 440-54862-1 440-55076-1 440-55218-1 440-56136-1 440-56333-1 440-56477-1 440-57563-1	PC-148RE M-99RE PC-53RE PC-55RE PC-18RE M-79RE M-135RE M-131RE M-57ARE I-LRE M-25RE VD-3RE PC-130RE PC-131RE PC-132RE PC-71RE M-44RE VD-1RE PC-129RE M-80RE M-70RE M-71RE I-AARE I-ABRE VD-5RE I-WRE M-31ARE PC-136RE PC-135ARE VD-2RE VD-4RE PC-116RRE PC-86RE	Perchlorate	R	A	Overall assessment of data

2013 Annual Remedial Performance Sampling
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDGs 440-62286-1, 440-56249-1, 440-53556-1, 440-50529-1, 440-62442-1, 440-56361-1, 440-56471-1, 440-51645-1, 440-57630-1, 440-59416-1, 440-54568-1, 440-57832-1, 440-62444-1, 440-54862-1, 440-62447-1, 440-54975-1, 440-62549-1, 440-55076-1, 440-63928-1, 440-55104-1, 440-64096-1, 440-55218-1, 440-64922-1, 440-55674-1, 440-65073-1, 440-55769-1, 440-65193-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-56477-1, 440-56582-1, 440-57563-1, 440-58695-1, 440-59168-1, 440-59355-1, 440-59608-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

No Sample Data Qualified in these SDGs

2013 Annual Remedial Performance Sampling
Wet Chemistry - Field Blank Data Qualification Summary - SDGs 440-62286-1, 440-56249-1, 440-53556-1, 440-50529-1, 440-62442-1, 440-56361-1, 440-56471-1, 440-51645-1, 440-57630-1, 440-59416-1, 440-54568-1, 440-57832-1, 440-62444-1, 440-54862-1, 440-62447-1, 440-54975-1, 440-62549-1, 440-55076-1, 440-63928-1, 440-55104-1, 440-64096-1, 440-55218-1, 440-64922-1, 440-55674-1, 440-65073-1, 440-55769-1, 440-65193-1, 440-55874-1, 440-56136-1, 440-56333-1, 440-56477-1, 440-56582-1, 440-57563-1, 440-58695-1, 440-59168-1, 440-59355-1, 440-59608-1, 440-61402-1, 440-61866-1, 440-62043-1, 440-62127-1, 440-62129-1, 440-62282-1

No Sample Data Qualified in these SDGs

Appendix D

Electronic Data Deliverable (EDD)

(Database files provided electronically or on CD separately)

Attachment A

Phase I Groundwater Model Refinement

Phase I Groundwater Model Refinement

Nevada Environmental Response Trust Site; Henderson, Nevada

Prepared for:
Nevada Environmental Response Trust
Henderson, Nevada

Prepared by:
ENVIRON International Corporation
Emeryville, California

Date:
February 28, 2014

Project Number:
21-34800H

ENVIRON

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1 Introduction

On behalf of the Nevada Environmental Response Trust (the Trust), ENVIRON International Corporation, Inc. (ENVIRON) has prepared this report describing refinements made to the groundwater flow model of the Nevada Environmental Response Trust Site (the Site), located in Clark County, Nevada. The initial purpose of the groundwater model is to support the optimization of the existing groundwater extraction and treatment system (GWETS) at the Site, as described in the 2013 GWETS Optimization Work Plan (ENVIRON 2013b), approved by the Nevada Division of Environmental Protection (NDEP) on December 3, 2013 (NDEP 2013). In addition, the groundwater model will be used to support the remedial investigation and feasibility study (RI/FS), as described in the RI/FS Work Plan (ENVIRON 2014a).

The initial version of the groundwater model for the Site was developed by Northgate Environmental Management Inc. (Northgate) and was approved on April 4, 2013 by NDEP for use in capture zone evaluation and is referred to as the "Northgate Model." The Northgate Model is a steady-state flow model calibrated to Site conditions in 2008/2009, which is documented in the Capture Zone Evaluation Report (Northgate 2010). As described in the 2013 GWETS Optimization Project Work Plan, modifications to the Northgate Model are being implemented by ENVIRON in two phases. The first phase of modifications, which is discussed in this report, includes: 1) an update of the model to reflect more recent conditions and pumping and injection rates of the GWETS, American Pacific Corporation (AMPAC) and Olin/Stauffer/ Syngenta/Montrose (OSSM) remediation systems; 2) preliminary refinement of the model representation of stream-aquifer interactions near Las Vegas Wash; and 3) other changes to the model requested by NDEP or necessary to support the 2013 GWETS Optimization Project. In addition, a conceptual water budget for the model area was developed as part of the first phase activities.

The updated model resulting from this work is referred to as the "Phase I Model". This report documents the updates and refinements to the Northgate Model made to develop the Phase I Model. The components of the Phase I Model that were not modified from the Northgate Model are generally not described in this report since they are described in the Northgate Model documentation (Northgate 2010). The Phase I Model has been used to support the calculation of GWETS performance metrics that are presented in the 2013 Semi-Annual Remedial Performance Report for Perchlorate and Chromium (ENVIRON 2014b).

The second phase of modifications will involve updating and recalibrating the model to incorporate the results of aquifer testing and the conceptual water balance, and further refine the representation of stream-aquifer interactions at Las Vegas Wash. This "Phase II Model" will then be used to evaluate the performance of alternative extraction scenarios at the Site well fields as part of the 2013 GWETS Optimization Project.

2 Site Background

A brief summary of Site background relevant to the discussion of the groundwater model is provided in this section. A complete background summary is provided in the RI/FS Work Plan (ENVIRON 2014a).

The Site is located within the Las Vegas Valley in the southern region of Clark County, Nevada. Las Vegas Valley is bordered by a set of mountains that includes the Spring Mountains to the west, the Sheep Range and Las Vegas Range to the north, the Frenchman Mountains and Sunrise Mountains to the east, and the River Mountains and McCullough Mountains to the south (Figure 1). The most significant stream in the valley is the Las Vegas Wash, which flows generally from west to east before discharging into Lake Mead. The climate in the area varies from semi-arid in the mountains to arid in the lowlands. Rainfall averages about 4.5 inches per year and occurs in storms of high intensity and short duration that often lead to floods. Evaporation in the area is significant and can be higher than 80 inches per year in the lower portion of the valley (UNLV 2003).

NDEP has defined three water-bearing zones (WBZs) that are of interest in the vicinity of the Site: the Shallow, Middle, and Deep WBZs (NDEP 2009). Groundwater flow occurs predominantly in shallow quaternary alluvium (Qal) which overlies the much lower hydraulic conductivity Upper Muddy Creek formation (UMCf). A distinct paleo-channel drainage network is present in the shallow aquifer system. The ground surface across the Site generally slopes downward to the north. The Shallow WBZ extends to approximately 90 feet below ground surface (bgs), and consists of saturated portions of the Qal and the uppermost portion of the UMCf. The Shallow WBZ is unconfined to partially confined, and is considered the water table aquifer. The groundwater in the shallow aquifer flows to the north and the groundwater gradient generally mimics the surface topography. There is generally an upward vertical gradient from the UMCf to the alluvium. The extraction wells at the Site are screened in the Shallow WBZ.

There are currently three operating extraction wells fields that are associated with the Site: 1) the on-site Interceptor Well Field (IWF) with downgradient barrier wall; 2) the off-site Athens Road Well Field (AWF); and 3) the off-site Seep Well Field (SWF). These well fields are operated to remove perchlorate and hexavalent chromium from shallow groundwater and reduce the amount of perchlorate discharged to Las Vegas Wash. In addition to these well fields, neighboring companies AMPAC and OSSM operate separate groundwater capture systems west of the Site. Groundwater monitoring is being conducted at the Titanium Metals Corporation (TIMET) site, located to the east of the Site. TIMET's groundwater remediation system construction began in 2009 and is expected to be operational in March 2014 (GEI 2014).

3 Previous Groundwater Models

The Phase I Model is based on the original groundwater flow model developed for the Site by Northgate. The Northgate Model is a steady-state model calibrated to Site conditions existing during 2008/2009 (Northgate 2010). The primary focus of developing the Northgate Model was to carry out capture zone analyses of the IWF and AWF. The Las Vegas Wash in the model is beyond these two regions of interest and was simulated using a constant head boundary for simplicity. Hence, the surface-groundwater interactions that occur along the Las Vegas Wash were not simulated in detail in the model.

The active area of the Northgate Model domain is wedge-shaped, narrowing from south to north towards the Las Vegas Wash and covering an area of about 10,000 acres. From south to north, the model domain extends from south of Lake Mead Parkway to the Las Vegas Wash, an area approximately 20,000 feet (about 4 miles) in total length. Laterally, the model extends west of the Site to include the existing AMPAC and OSSM groundwater capture systems, and east of the Site to include the monitoring wells at the TIMET site. The model is discretized laterally into 200 by 200 foot grid cells. In the vertical direction, the model domain extends downwards from Shallow WBZ, and through the Middle WBZ and ends near the top of the Deep WBZ. These units were discretized vertically into six model layers.

In addition to the Northgate Model, several other groundwater flow models have been developed and documented for the Black Mountain Industrial (BMI) Complex and surrounding region. The subsections below describe groundwater flow models pertinent to the Site.

3.1 United States Geological Survey Model

A regional groundwater model of the valley-fill aquifer system of the Las Vegas Valley was developed by the United States Geological Survey (USGS) to evaluate possible groundwater management alternatives related to overdraft problems, while maximizing use of groundwater resources (USGS 1996). The model incorporates processes such as land subsidence due to groundwater withdrawal, discharges to washes, evapotranspiration, and springflow. The four-layered model consists of 60 columns and 72 rows with uniform grid size of 3,000 feet by 3,000 feet. The model was developed in two phases. In the first phase, the predevelopment groundwater conditions, representing a period from 1912 through spring 1972, were simulated. The second phase model simulated the period from summer 1972 through spring 1981, representing development conditions. As a part of the modeling efforts, a conceptual water budget was compiled for the two simulation phases.

3.2 University of Nevada at Las Vegas Model

A groundwater model to study perchlorate transport from several contaminated sites to the Las Vegas Wash was developed by a team at the University of Nevada at Las Vegas (UNLV) on behalf of the United States Environmental Protection Agency (USEPA) (UNLV 2003). The computer model was developed for saturated conditions using the software Visual MODFLOW 2.8 and was calibrated using WinPEST, an automated calibration tool. The model results included an evaluation of the time of travel and potential perchlorate migration pathways from the contaminant sources to the Las Vegas Wash. In addition to the time of travel and

concentration distribution, the transport model also evaluated the influence of domestic and industrial wastewater disposal via the infiltration ponds on the development of the plumes.

3.3 Las Vegas Wash Model

A groundwater transport model was developed by NDEP to study groundwater/surface water interactions and perchlorate transport along the Las Vegas Wash (McGinley 2003). The purpose of the modeling work was to develop a predictive tool to address temporal distributions of perchlorate in the Las Vegas Wash. MODFLOW was used to simulate groundwater flow, with the Las Vegas Wash simulated using the River Package. Only the alluvium aquifer system was simulated in the model.

3.4 Athens Road Well Field Model

A solute transport groundwater model was developed by McGinley & Associates to quantify the efficiency of capture at the AWF (McGinley & Associates 2007). The model predicted capture efficiency of 99.5% at the AWF. However, the perchlorate concentration data for downgradient wells did not appear to indicate complete capture was being achieved. The disparity between observations and calculations was attributed to limitations of the conceptual site model developed for the study area.

3.5 Basic Remediation Company Model

A groundwater transport model for the BMI Common Areas was developed by Daniel B. Stephens & Associates on behalf of the Basic Remediation Company (BRC) (BRC 2009). As part of the modeling effort, historical, present, and future conceptual water balances of the study area were developed. A series of predictive solute transport simulations were also conducted for perchlorate, arsenic, hexavalent chromium, and selenium.

3.6 AMPAC Model

On behalf of AMPAC, Geosyntec Consultants (Geosyntec) developed a conceptual and numerical model of groundwater flow in the area north of the former Pacific Engineering and Production Company of Nevada (PEPCON) facility in Henderson, Nevada (Geosyntec 2010). A steady-state numerical model was developed to validate the conceptual model against available site data and to develop quantitative estimates of design parameters and operations to remediate the perchlorate plume in groundwater that originates at the PEPCON site. The model was implemented in MODFLOW 2000 and used to simulate saturated groundwater conditions.

4 Conceptual Water Balance

A conceptual water balance was derived for groundwater within the Phase I Model domain. The model domain is shown on Figure 2. The purpose of the water balance is to provide an independent evaluation of the inflows and outflows of groundwater within the model domain that can be used to guide model refinement. The Phase I Model represents the approximately steady-state period in second quarter of 2012. The conceptual water balance incorporates data from the same time period to allow comparison of water balance components. Vertically, the model domain includes the Shallow and Middle WBZs, but does not include deeper portions of the UMCf.

The methods and data sources for individual water balance components are listed in Table 1a and are described in the following sub-sections.

4.1 Groundwater Outflow

The major groundwater outflow components in the model area are groundwater extraction, groundwater outflow to the Las Vegas Wash, and evapotranspiration from groundwater, each of which are discussed in this section.

4.1.1 Groundwater Extraction

Groundwater extraction is presently conducted from five well fields at three sites within the model area: the Site, OSSM, and AMPAC. The total groundwater extraction at these sites was aggregated from available data for second quarter 2012. At the Site, the combined average extraction rates for second quarter 2012 for the IWF, AWF and SWF were 62 gallons per minute (gpm) (12,012 cubic feet per day [cfd]), 275 gpm (52,885 cfd), and 577 gpm (111,018 cfd), respectively (ENVIRON 2012a). The combined average extraction rate for this time period was 148 gpm (29,125 cfd) for the OSSM system (Hargis and Associates, 2012) and 512 gpm (98,560 cfd) for the AMPAC system (AMPAC 2013).

4.1.2 Outflow to Las Vegas Wash

Since the rate of groundwater discharge from the Site and neighboring areas to the Las Vegas Wash cannot be directly measured, this quantity was indirectly estimated by comparing measured sources of inflows and outfalls along the reach of the Las Vegas Wash that forms the northern model boundary. The data compiled for this estimate includes streamflow data from USGS gauging stations, City of Henderson (COH) treated wastewater outflows, and treated effluent discharge rates from the Site, AMPAC, and TIMET. This data is presented in Table 1b, and the locations of various stream gauge and outfall locations are shown in Figure 1.

For this analysis, the reach of Las Vegas Wash adjoining the model domain was divided into two sub-reaches bounded by USGS stream gauges. Reach A extends from the Las Vegas Wasteway Gauge (#09419679) to the Pabco Road Gauge (#09419700), and includes a tributary of Las Vegas Wash (Duck Creek, #09419696) and inflows from several wastewater outfalls. Reach B extends from the Pabco Road Gauge to the Three Kids Gauge (#09419753). Conceptually, the calculation performed for each sub-reach involved summing all known inflows and outflows of surface water and groundwater. Groundwater inflow to Las Vegas Wash was assumed to be composed of underflow and lateral discharges. Since there was relatively little

precipitation during the water balance period, it was assumed that there was no significant rainfall runoff to Las Vegas Wash. After performing the summation, any missing flow was assumed to originate from groundwater discharges along the length of the sub-reach. The groundwater inflow to each of these sub-reaches was estimated separately, scaled to exclude groundwater inflow to Las Vegas Wash beyond the model boundary, and then summed together for entry into the overall water balance. This calculation did not separately estimate potential seepage from Las Vegas Wash due to pumping at the SWF, instead presenting overall groundwater discharge to Las Vegas Wash as a net outflow.

The streamflow data was downloaded from the USGS[1] for the above mentioned stream gauge stations. For the second quarter of 2012, the average streamflow during the water balance period was 250 cubic feet per second (cfs) at the Las Vegas Wasteway Gauge, 5.6 cfs at the Duck Creek Gauge, 281 cfs at the Pabco Road Gauge, and 285 cfs at the Three Kids Gauge. The COH wastewater outfall reportedly discharged 14 cfs to Las Vegas Wash during second quarter 2012[2]. The AMPAC outfall location is approximately 40-50 yards south of the Site discharge location and reportedly produces effluent at a rate roughly equal to the combined extraction rates from the AMPAC wells[3]. The average Site, AMPAC, and TIMET outfalls to Las Vegas Wash were 2.0 cfs[4], 1.1 cfs[5], and 1.0 cfs[6] in second quarter 2012, respectively.

A portion of the streamflow in Las Vegas Wash is lost to evaporation. The total area of Las Vegas Wash (including Duck Creek) is approximately 450 acres between the Las Vegas Wasteway and Pabco Road gauging stations. Available daily evaporation data from 1997-1999 for four stations located in or near Lake Mead indicate an average evaporation rate of 81 inches per year (Westenburg et al. 2006). Multiplying the area of Las Vegas Wash by the evaporation rate results in an estimated 4.2 cfs of surface water evaporated from Las Vegas Wash within the model area. The outflow due to evaporation was allocated to Reaches A and B based on the relative area of each reach.

As shown in Table 1b, after accounting for known and estimated flows, the estimated groundwater inflow to Las Vegas Wash along Reaches A and B from both sides of Las Vegas Wash was 16.1 cfs. Since there was no significant runoff during the water balance period, this inflow was assumed to originate from groundwater discharges to Las Vegas Wash from adjacent regions to the north and south. The allocation of groundwater inflow between the two sides of Las Vegas Wash was roughly estimated by comparing for each side of the wash: 1) the contributing area of the watershed; 2) the relative alluvial thickness as inferred from a review of USGS Geologic Maps; and 3) land use, with the assumption that in the absence of precipitation, more developed land uses would result in higher groundwater recharge (from landscape irrigation, etc.). Based on this qualitative evaluation, it was estimated that roughly 80% of the

[1] Data downloaded from http://waterdata.usgs.gov/usa/nwis/sw
[2] Per data received via email from Howard Analla of the City of Henderson, dated 7/09/2013.
[3] Per email communication with Gary Carter of AMPAC, dated 9/10/2013.
[4] NERT Effluent Records, NPDES Permit number – NV0023060.
[5] Equivalent to the combined AMPAC pumping as per email communication with Gary Carter of AMPAC, dated 9/10/2013.
[6] Based on the maximum permissible flow rate for TIMET's effluent outfall, NPDES Permit number- NV0000060

groundwater discharge to the Wash originates from the south side of Las Vegas Wash, resulting in an estimated groundwater discharge of 8.0 cfs (693,000 cfd) within the model area.

4.1.3 Evapotranspiration From Groundwater

Evapotranspiration from shallow groundwater may occur in the areas of phreatophytes found along Las Vegas Wash. Given the limited areal extent of phreatophytes, evapotranspiration from groundwater is expected to be very small compared to other water balance components. Hence, no estimate of evapotranspiration was developed for the water balance.

4.2 Groundwater Inflow

The major groundwater inflow components in the groundwater model domain are areal recharge, mountain block recharge from the southern edge of the model, seepage from Las Vegas Wash, and vertical inflow from the UMCf.

4.2.1 Areal Recharge From Precipitation

Areal recharge rate from rainfall was estimated from published values for arid and semi-arid regions, which have been found to range between 0.1% and 5% of average total rainfall (Scanlon et al. 2006). Based on interpolated climate data produced by Oregon State University's PRISM Climate Group (PRISM 2013), the average precipitation rate near the Site was 4.32 inches per year for the period 1990-2012. Assuming 2.55% (average of 0.1% and 5%) of precipitation as net areal recharge, the total areal recharge for the model area (4×10^8 square feet) is expected to be 11,000 cfd.

4.2.2 Recharge from Surface Water Bodies

Recharge from several surface water bodies in the model domain were evaluated separately and incorporated into the water balance. A significant source of surficial recharge to groundwater is a series of unlined ponds operated by COH as a bird viewing preserve. An average of 1.22 million gallons per day (MGD) of inflow to the ponds was recorded by COH for the period from 2008 to 2013. The ponds have an area of approximately 110 acres. Assuming COH is maintaining a relatively constant level of surface water in the ponds, and assuming an evaporation rate of 81 inches per year (see Section 4.1.2), the recharge from the ponds to the shallow groundwater aquifer is estimated to be 5.6 feet per year. The total pond recharge rate was estimated to be 74,000 cfd.

Several facilities near the Site operate infiltration ponds and trenches that present potential sources of focused recharge. The OSSM treatment system discharges treated groundwater to recharge trenches located north of the OSSM extraction wells (Figure 1). Based on the OSSM third quarter 2012 monitoring report, an average of 147 gpm (29,000 cfd) of water was discharged to the trenches between January and September 2012 (Hargis and Associates 2012). Other historical sources of focused recharge, including the former recharge trenches at the Site, former COH Rapid Infiltration Basins (RIBs), BMI Pond, TIMET Pond, and the AMPAC reinjection system were not active during the Phase I Model period.

4.2.3 Lateral and Vertical Boundary Inflows

The southern lateral boundary inflow was estimated using the hydraulic conductivity of the UMCf and the head gradient at the southern boundary of the Site. The alluvium is unsaturated

along the southern boundary, and the UMCf is partially saturated. Within the water balance domain, the UMCf consists of two distinct interbedded units, composed of either coarse-grained sediments (UMCf-cg) or fine-grained sediments (UMCF-fg) (ENVIRON, 2014a)[7]. Plate 6 of the RI/FS Workplan (ENVIRON 2014a) is a cross-section illustrating the orientation of these units near the southern model boundary. As shown in the Plate 6, the shallowest interval of the UMCf-fg pinches out before reaching the IWF.

Based on the depiction of the saturated portion of the UMCf-fg and UMCf-cg in Plate 6, 30% of the southern boundary thickness was allocated to the UMCf-fg, and 70% was allocated to the UMCf-cg. The horizontal hydraulic conductivity for the UMCf from the Northgate Model (0.72 feet per day [feet/day]) was used for the UMCf-fg, and the hydraulic conductivity of the UMCf-cg (6 feet/day) was obtained from the AMPAC model (Geosyntec 2010). The horizontal head gradient measured during second quarter 2012 upgradient of the Site boundary was approximately 0.0077 feet per foot (feet/foot) (ENVIRON 2014a). The southern model boundary is 20,000 feet in length and the thickness of UMCf is 267 feet in the model. Using these values, an inflow of approximately 183,000 cfd is expected from the southern boundary.

The vertical boundary inflow consists of upward flow from the deeper portion of the UMCf in the Deep WBZ. The average vertical head gradient between pairs of wells in the IWF and the AWF was about 0.11 feet/foot during second quarter 2012. The well pairs used for this purpose are M-71/M-163, M-74/M-165, PC-135A/PC-134A, and PC-136/PC-137. Using this head gradient, a total surface area of 4.33×10^8 square feet in the model, and a representative UMCf vertical conductivity of 4.8×10^{-3} feet/day, a vertical inflow of approximately 229,000[8] cfd is expected from the Deep WBZ.

Because the model area is oriented along the general direction of groundwater flow, net inflows and/or outflows along the eastern and western lateral boundaries of the conceptual water balance area are expected to be minimal. However, in the vicinity of Las Vegas Wash, there will be groundwater underflow into the model area on the western boundary and out of the model area on the eastern boundary. These underflows were estimated by roughly estimating the width and depth of saturated alluvium, the hydraulic gradient, and hydraulic conductivity at the model area boundaries. The width of the alluvium was estimated based on the USGS geologic map shown in Figure 1. The depth and hydraulic conductivity of the alluvium were based on McGinley (2003). A hydraulic gradient of 0.005 was assumed for this estimate. The inflow from the western boundary was estimated to be 510,000 cfd, and the outflow at the eastern boundary was estimated to be 31,000 cfd.

[7] The Phase I Model doesn't represent the UMCf-fg and UMCf-cg as separate units.
[8] Vertical inflow is rounded to nearest thousand. The calculated value is 228,624 cubic feet. The total model area is also rounded for these calculations. The calculated model area is 433,016,249.793 square feet.

5 Phase I Groundwater Model Update

To support the 2013 GWETS Optimization Project, the Northgate Model was updated to reflect the more recent configuration and extraction and injection rates of the Site, AMPAC, and OSSM remediation systems. A regional water balance was prepared (as discussed in Section 4) to guide further model refinements. An initial evaluation of the stream-aquifer interaction in the vicinity of the SWF was also conducted and the model was updated accordingly. The key model components revised in this phase are described in the following sections.

5.1 Model Solver

The Northgate Model was developed using an early and unpublished version of the MODFLOW-NWT code. Minor revisions were made to the model so it can be run using MODFLOW-NWT version 1.0.7 (Niswonger 2011), a recent version of the code that is available on the USGS website[9]. MODFLOW-NWT is a version of MODFLOW-2005 with a Newton formulation of the groundwater flow equation that is designed to solve problems that are nonlinear due to unconfined aquifer conditions and/or some combination of nonlinear boundary conditions.

5.2 Model Extent

The model extent was revised at the northern boundary of the model to more accurately represent Las Vegas Wash. This boundary was revised based on the Las Vegas Stream centerline shape file available at the Clark County Regional Flood Control District (CCRFCD) website[10]. The model boundary was also extended in the northwestern part of the model area to incorporate the Duck Creek tributary stream channel in the simulation. With these changes, the total model area has increased by about 40 acres as compared to the Northgate Model. The revised model extent is shown in Figure 2.

5.3 Selection of Steady-State Time Period

The Northgate Model was calibrated to Site conditions existing during 2008/2009 (Northgate 2010). A goal of the Phase I Model development was to update the groundwater model to reflect more recent hydrologic and pumping conditions. Groundwater hydrographs and other hydraulic records (rainfall and evaporation rates) were reviewed to identify a relatively stable period to use for steady-state modeling. The data reviewed suggests that steady state groundwater conditions existed at the Site between late 2010 and 2012 (Figure 2a through 2d of the 2013 Semi-Annual Report; ENVIRON 2014b). Higher water levels were measured starting in November 2012 due to higher than average rainfall during fourth quarter 2012 through first quarter 2013. Between April and June 2013, many of the active IWF extraction wells, which are located directly upgradient of the barrier wall, had water levels that were approximately 5 to 15 feet higher than the same period in 2012 (ENVIRON 2013a). Therefore, the Phase I Model was revised to represent the most recent observed steady-state period of second quarter 2012.

[9] Available from http://water.usgs.gov/nrp/gwsoftware/modflow_nwt/ModflowNwt.html
[10] Available from ftp://www.ccrfcd.org/Shapefiles/

5.4 Spatial Discretization and Layer Refinement

The following refinements were made to the model layer elevations to better represent the Site topography and stratigraphy:

- Model layers 1 and 2 in the Northgate Model, representing the Qal, were combined together in a single layer in the Phase I Model since the saturated thickness of the alluvium is relatively thin throughout the model area. The revised model has five layers, with the top layer representing the Qal and the lower four layers representing the shallow and deeper parts of the UMCf.
- The layer thicknesses of top two layers were adjusted to match the geometry of the slurry wall as discussed in Section 5.7.1. The updated layer thicknesses are given in Table 4.
- The top surface of model layer 1 was updated to use elevation values from the USGS Digital Elevation Model (DEM) with the spatial resolution of 10 meters for the Site area.
- The Qal and UMCf contact elevation surface was refined by performing an interpolation using LeapFrog Hydro 3D geological modeling software (LeapFrog). The source data used for the interpolation included Qal/UMCf contact elevations reported for more than 1,000 wells within the model domain (McGinley 2014), and geological cross-sections for the Site well fields and other areas within the model domain.[11] The contact elevation was manually adjusted near the UMCf ridge in the AWF area to produce a more realistic surface. The revised contact elevation was then imported into the model as the bottom elevation of layer 1.

The grid size was further refined within the study area boundary around three well fields as shown in Figure 4. The grid was also refined near Las Vegas Wash to more accurately simulate surface water-groundwater interaction.

5.5 Areal Recharge

The Northgate Model has spatially distributed recharge rates assigned to different areas based on land use. These land use areas were retained in the Phase I Model and are shown in Figure 3.

The areal recharge rates for residential, industrial, undeveloped, and golf course areas selected by Northgate were not changed in the Phase I Model update. Recharge rates that have been updated include:

- Based on the calculations described in Section 4.2.2, an estimated recharge of 5.61 feet/year was applied to the area of the COH Bird Viewing Preserve in the Phase I Model. This estimated value is higher than the recharge rate of 2.43 X 10^{-3} feet per day or 0.9 feet per year (Appendix E, Table 1E, Northgate 2010) used in the Northgate Model to represent recharge from these ponds.

[11] Particular cross sections incorporated in the interpolation included: Plate 6 from the RI/FS Workplan (ENVIRON, 2012b); Plates 3, 4 and 5 from the 2012 Annual Remedial Performance Report (ENVIRON 2013a); cross-sections presented in the geophysical investigation of Las Vegas Wash (McGinley 2003); and Figure 4-8 of the BRC Closure Plan (BRC 2007) .

- Additional recharge of 0.01 feet/day was assigned in the areas of unlined storm water retention ponds on the Site. It was assumed that 75% of the rainfall falling on the Site will become recharge. No recharge was applied in the lined pond areas around the IWF.
- The former on-site recharge trenches, former COH RIBs, BMI Pond, TIMET Pond, the AMPAC reinjection system are inactive; therefore, no focused recharge is applied in those locations in the Phase I Model.
- The OSSM remediation system discharges treated groundwater to recharge trenches located north of the OSSM extraction wells (Figure 2). Based on the OSSM third quarter 2012 monitoring report, an average of 151 gpm (29,125 cfd) of water was discharged to the trenches from Jan-Sept 2012 (Hargis and Associates 2012). The model was updated to incorporate this recharge rate.

The spatial distribution of recharge rates in the Phase I Model is shown on Figure 3 and listed in Table 2. These preliminary recharge rates may be revised during the next phase of model calibration, as needed.

5.6 Changes to the GWETS and Other Extraction Systems

The Phase I Model was updated to use the available second quarter 2012 extraction and injection rates for on-site and off-site wells. The combined average extraction rates for second quarter 2012 for the IWF, AWF and SWF were 62 gpm (12,012 cfd), 275 gpm (52,885 cfd) and 577 gpm (111,018 cfd), respectively. The combined average extraction rate for the OSSM wells was 151 gpm (29,125 cfd) (Hargis and Associates 2012). The on-site recharge trenches downgradient of the IWF were no longer in use in 2012. The total injection of treated water through OSSM recharge trenches was assumed to be equal to the OSSM combined pumping rate of 151 gpm (29,125 cfd).

For the AMPAC extraction system, the combined average extraction rate for all wells, shown in Figure 2, was 512 gpm for the Phase I Model period (AMPAC 2013). The AMPAC injection wells that were active in the Northgate Model are no longer in use and so are inactive in the revised model. Five new AMPAC extraction wells (AMEW wells) were constructed in the first quarter of 2012. These wells are not active in the revised model because they are screened in a coarse-grained UMCf that is not currently represented in the model. The total AMPAC extraction initially configured in the model is about 237 gpm (46,000 cfd). It is unknown whether this system rate is sustainable over the long-term. Hence, the AMPAC wells were configured in the model to allow extraction to reduce automatically based on the water level at each pumping well. The final modeled flow rate for the AMPAC system is presented in the water balance in Table 5.

The extraction well screen elevations were adjusted based on the revised model layers as discussed in Section 5.4 of this report. The locations of a few wells in the IWF were revised based on the updated coordinates provided by McGinley and Associates (McGinley 2014). The revised extraction rates applied to the Phase I Model are listed in Table 3. The overall extraction rates in the revised model are similar to the Northgate Model.

5.7 Hydraulic Properties

The hydraulic properties of the slurry wall and the alluvium aquifer layer were revised in the Phase I model. The effective porosities of the aquifer material were also updated in the model based on available values.

5.7.1 IWF Barrier Wall

The conductivity of the hydraulic flow barrier (barrier wall), located immediately north of the IWF, was revised based on the reported hydraulic conductivity value of the material used to construct the wall by Vector Engineering. The reported range of conductivities used during construction was 4.7×10^{-8} centimeters per second (cm/sec) to 8.0×10^{-7} cm/sec (Vector 2001). This range is similar to the average hydraulic conductivity measured by permeability testing of the barrier wall at four locations of 8.8×10^{-7} cm/sec, as reported in the Capture Zone Evaluation Report (Northgate 2010). For modeling purposes, the value of 4.7×10^{-8} cm/sec was used to represent the barrier wall's hydraulic conductivity.

According to the conceptual site model developed by ENSR International Corporation (ENSR), the slurry wall is about 1,600 feet long, 3 feet wide, and 60 feet deep, and was constructed to tie into approximately 30 feet of UMCf (ENSR 2005). The layer thicknesses were adjusted in the Phase I Model to accurately represent the slurry wall configuration.

5.7.2 Hydraulic Conductivity Distribution

The hydraulic conductivity distribution in the Phase I Model is mostly unchanged from the Northgate Model. The horizontal and vertical hydraulic conductivities for layers representing the UMCf were not changed. For layer 1 (Qal), areas adjoining Las Vegas Wash were updated with horizontal conductivity values ranging between 250 to 485 feet/day. A horizontal-to-vertical anisotropy ratio of 10:1 was used to define the vertical hydraulic conductivity in the area near Las Vegas Wash. The hydraulic conductivity zones were adjusted to extend the paleochannels in model layer 1 up to the Las Vegas Wash. The hydraulic conductivity values for paleochannels were kept unchanged.

In the area of UMCf ridge in the AWF, the conductivity value of layer 1 was modified to match that of layer 2 since there the alluvium is not saturated in this area. The horizontal hydraulic conductivity values remained unchanged for the remainder of the Qal. The spatial distribution of hydraulic conductivity values in the alluvial aquifer is shown on Figure 4.

5.7.3 Aquifer Porosity

The effective porosities were modified for all model layers in order to produce accurate estimates of groundwater velocities and particle travel times. In the Northgate Model, the porosities for the Qal and UMCf aquifers were set to 0.4 and 0.54, respectively. For the Phase I Model, the Qal layer was set to have a uniform porosity of 0.1, which is the same value used in the UNLV and BRC Models (see Section 3). The effective porosity of layers representing the UMCf was reduced to 0.2, consistent with the value used in the BRC Model and similar to the value used in the UNLV Model (0.25).

5.8 Boundary Conditions

The groundwater model has lateral inflows from the upgradient (southern) boundary and vertical inflow from the bottom boundary of the model. These inflow components were revised as described in the following sections.

5.8.1 Vertical Inflows from Bottom Boundary

The vertical inflow from the bottom boundary is simulated in the model using the general head boundary (GHB) package. The Northgate Model included an area of downward flow from the Qal to UMCf near the downgradient area of the Las Vegas Wash. Since there are no definitive data that show vertically downward flow from the Qal to the UMCf anywhere in the model area, the area of downward flow was removed from the Phase I Model.

The GHB reference heads were refined in certain areas of the Phase I Model to match observed vertical head differences measured at well clusters. It was assumed that these head differences vary along the general direction of groundwater flow, but not transverse to groundwater flow. Near the IWF, the reference heads were revised using the measured head differences between well pairs M-135/M-161 and M-71/M-162, where a vertical head difference of about 11 feet was measured in second quarter 2012. Near the AWF, well pair PC-136/PC-137 showed a vertical head difference of about 2.4 feet measured in second quarter 2012. For areas between the IWF and AWF, the vertical head difference between the alluvium and UMCf was interpolated from values determined from well clusters at the IWF and AWF. This linear relationship was also extrapolated to estimate the head differences in the model domain to the north and south of these well fields. The estimated head difference at each model location was then subtracted from the water table surface from second quarter 2012 to determine the reference head. The resulting reference heads in the Phase I Model now range from 1906 feet at the southernmost boundary to 1530 feet at the northernmost boundary. A constant GHB conductance value of 0.0636 square feet per day was assigned throughout the model domain.

5.8.2 Lateral Boundary Inflows

The upgradient boundary inflows were not changed except for the addition of extra inflows in several cells added to the model due to grid refinement as discussed in Section 5.4. The boundary inflows may be adjusted during the next phase of model calibration.

5.8.3 Model Boundary near Las Vegas Wash

In the Northgate Model, the downgradient model boundary at Las Vegas Wash was simulated using constant head cells. As part of the Phase I Model update, this boundary is now implemented with the MODFLOW Stream Package (Prudic 1989). The Stream Package is intended for modeling stream-aquifer interactions, and can be used to simulate the flow entering and exiting the model domain through Las Vegas Wash.

As described in Section 5.2, the geometry of Las Vegas Wash has been updated in the Phase I Model to align with the centerline of Las Vegas Wash (Figure 5). To implement the Stream Package, the stream stage elevations along Las Vegas Wash were interpolated from the average stream stages recorded in 2012 for the three USGS gauging stations shown in Figure 6. The streambed elevations were interpolated from the streambed elevation profiles given in

the Flood Insurance Study Report, Clark County, Nevada (FEMA 2011b). The interpolated streambed elevations along the northernmost model boundary are also shown on Figure 6.

The other important inputs required for the stream boundary were the stream width, thickness of streambed, stream length in each boundary cell, streambed conductivity, and the net flow of surface water entering at each segment of the stream boundary. The stream length within each boundary cell is the actual length of the stream falling in the individual model cell. A uniform stream width of 50 feet was used in the model. The streambed conductivity range of 0.05 feet/day to 0.55 feet/day was used in the model, with lower values in the upstream portion above the Duck Creek confluence. The stream in this area is braided and the streambed is expected to have lower conductivity. The higher conductivity values were applied in the downstream portion of Las Vegas Wash. The streambed conductivity values may be revised during the next phase of model calibration.

Four segments of Las Vegas Wash are simulated in the model. The main segment (Segment #1) extends across the entire downgradient model boundary. Three minor segments that flow to Las Vegas Wash are also simulated, including Duck Creek (Segment # 2), a small tributary stream carrying surface water discharges near Pabco Road (Segment # 3), and the C-1 Channel (Segment # 4) (Figure 5). The inflows entering each stream segment were estimated from various measured sources of discharge to Las Vegas Wash, including streamflow data from USGS gauging stations, COH treated wastewater outflows, and effluent discharge rates from the Site, AMPAC, and TIMET outfalls.

The Las Vegas Wasteway and Duck Creek stream gauges are located upstream of the model boundary, and recorded average streamflows of 250 and 5.6 cfs, respectively, for second quarter 2012. The average rate of COH treated water discharge to Las Vegas Wash was 14 cfs (obtained from COH via e-mail) during the second quarter 2012. The average Site, AMPAC and TIMET outfalls to the Las Vegas Wash were 2.0 cfs, 1.1 cfs and <1 cfs respectively for 2012. For Segment # 3, a combined flow of 16.6 cfs from Site, AMPAC, TIMET, and COH was assigned.

The reported average streamflow at the Pabco Road gauging station for second quarter 2012 was approximately 281 cfs. This value was not used as input to the model, but may be used for calibrating boundary parameter values during the future calibration phase.

6 Model Results

To evaluate the model calibration, the head targets from the Northgate Model were updated with measured groundwater elevation data from the second quarter of 2012. In addition to the 263 targets from the Northgate Model, data from an additional 193 targets were added to the Phase I Model to increase the calibration dataset[12] (Figure 7). There are 12 target locations in the Northgate model that fall in the same cells as the additional targets. These 12 targets were deleted in the Phase I Model. The revised list of target wells and their groundwater elevations for second quarter 2012 is provided in Appendix A. The measured groundwater elevations were also presented in the 2012 Annual Performance Report (ENVIRON 2012a).

6.1 Modeled Groundwater Balance

Table 5 presents a comparison of the major flow components of the conceptual water balance to the Northgate Model and updated Phase I Model. These models simulate different extraction and other boundary conditions. Although the water balances are not directly comparable, they provide confirmation that the major model flow components remain generally similar after the changes made for the Phase I Model update.

A significant difference between the Northgate Model and Phase I Model results is the net outflow to Las Vegas Wash from the model area. This outflow increased by 54,000 cfd in the Phase I Model. The difference may be attributed to the modified stream stage elevations which are about 10 feet higher in the Phase I Model, as compared to the constant head boundary cells in the Northgate Model.

As previously mentioned, the Phase I Model is configured to allow reduced extraction to avoid dewatered conditions. The initial total AMPAC pumping input to the model (46,000 cfd) was automatically reduced by the solver to 33,000 cfd. The conceptual water balance incorporates all AMPAC extraction within the boundary during the second quarter of 2012, including extraction from the deep UMCf wells, and is therefore a higher number (99,000 cfd).

Table 5 demonstrates that the Phase I Model has increased inflow to groundwater due to infiltration from the COH Bird Viewing Preserve, relative to the Northgate Model. This change results from increasing the infiltration rate from 0.8 to 5.6 feet/year. Primarily due to higher heads near the stream boundary, there is also an increase in groundwater outflow due to evapotranspiration in the Phase I Model.

6.2 Calibration Statistics and Simulated Groundwater Elevations

Figure 8 shows a plot characterizing the match between modeled and observed heads at wells used as calibration targets. The plot illustrates that there is generally good agreement between modeled and observed heads, with points generally falling close to the 1:1 correlation line. The simulated heads appear to be biased low near the upgradient model boundary, particularly in layer 5. This deviation will be addressed when the upgradient boundary is recalibrated for the

[12] The groundwater elevations for the extra target wells were obtained from data files received from APMAC, TIMET, and OSSM via email in August 2012.

Phase II Model. No other global bias in the modeled heads is evident. The "goodness-of-fit" R^2 value is 0.98, demonstrating an acceptable fit to the observed heads.

Table 6 provides a comparative summary of calibration statistics for the Northgate Model and updated Phase I Model. A positive residual mean value indicates that the simulated heads are lower than the observed heads. The calibration statistics for the Phase I Model have been presented for both the original set of target wells from the Northgate Model, and the 444 observation wells in the updated target list. However, the results with different target sets and from different calibration periods are not directly comparable.

Figure 9 shows the simulated heads in the Shallow WBZ. The overall heads are generally consistent with the contoured groundwater elevations for second quarter 2012 presented in Plate 2 in the 2012-2013 Annual Performance Report (ENVIRON 2012a).

7 Conclusions

The Phase I Model reasonably simulates groundwater conditions at the Site and can be used to begin evaluating the performance of the GWETS. Upon completion of the aquifer testing program of the 2013 GWETS Optimization Project, the Phase I Model will be recalibrated and verified against the field data and aquifer testing results. In the recalibration phase, the hydraulic parameters of the Site geologic materials will be updated, as needed. The calibration may also require adjusting other parameter values and boundary conditions to improve the overall accuracy of the model. The conceptual water balance will be used to guide model development.

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Tables

TABLE 1A: CONCEPTUAL WATER BALANCE SUMMARY

Nevada Environmental Response Trust Site

Henderson, Nevada

	Parameters	Flow (cfd)	Source Data
Groundwater Inflow	Southern Boundary inflow	183,000	Based on Darcy's Law and horizontal head gradient
	Vertical inflow from UMCf	220,000	Based on Darcy's Law and vertical head gradient
	Western boundary inflow beneath the Wash	510,000	Based on Darcy's Law and horizontal head gradient
	Areal Recharge		
	Infiltration from Bird Viewing Preserve	74,000	Estimated as inflow rate minus evaporation rate
	Rainfall Recharge	11,000	Based on 2.55% of rainfall (Scanlon et al 2006)
	OSSM Injection	29,000	Hargis and Associate 2012
Total Inflow (cfd)		**1,027,000**	
Groundwater Outflow	Groundwater Extraction		
	NERT (IWF)	12,000	ENVIRON 2012a
	NERT (AWF)	53,000	ENVIRON 2012a
	NERT (SWF)	110,000	ENVIRON 2012a
	OSSM	29,000	Hargis and Associate 2012
	AMPAC	99,000	AMPAC 2013
	Groundwater discharge to Wash	693,000	Net discharge estimated in Table 1b
	Eastern boundary outflow beneath the Wash	31,000	Based on Darcy's Law and horizontal head gradient
	Evapotranspiration	NE	Assumed to be small over model area
Total Outflow (cfd)		**1,027,000**	

Notes:

cfd = cubic feet per day

UMCF = Upper Muddy Creek Formation

NA = Not Applicable

NE = Not Evaluated

IWF = Interceptor Well Field

AWF = Athens Road Well Field

SWF = Seep Well Field

AMPAC = American Pacific Corporation

COH = City of Henderson

NERT = Nevada Environmental Response Trust

OSSM = Olin Chlor-Alkali/Stauffer/Syngenta/Montrose

TABLE 1B: INFLOWS AND OUTFLOWS AT LAS VEGAS WASH

Nevada Environmental Response Trust Site

Henderson, Nevada

Flows along Reach A (Las Vegas Wasteway to Pabco Road)

	Flow (cfs)	Flow (cfd)	Source
Inflows to Reach A			
Surface inflows to Reach A:			
Las Vegas Wasteway	250	22,000,000	Average flow second quarter 2012 at USGS stream gauge
Duck Creek	5.6	490,000	Average flow second quarter 2012 at USGS stream gauge
COH Wasteway	14	1,200,000	Data provided by COH
NERT Outfall	2.0	180,000	Data collected by NERT
AMPAC Outfall	1.1	98,000	Equal to total pumping
TIMET Outfall	1.0	86,000	Max. permissible flow rate in NPDES permit
Groundwater inflows to Reach A:			
Groundwater inflow along Reach A	*9.8*	850,000	Adjusted to balance Reach A inflow with outflow
Total Surface Water and Groundwater Inflow	**284**	**25,000,000**	

Outflows from Reach A			
Evaporation from Wash	2.4	210,000	Estimated based on the surface area of Wash and recorded evaporation rates
Surface flow at Pabco Road Gauge	281	24,000,000	Average flow second quarter 2012 at USGS stream gauge
Total Surface Water and Groundwater Outflow	**284**	**25,000,000**	

TABLE 1B: INFLOWS AND OUTFLOWS AT LAS VEGAS WASH

Nevada Environmental Response Trust Site

Henderson, Nevada

Flows along Reach B (Pabco Road to Three Kids)

	Flow (cfs)	Flow (cfd)	Source
Inflows to Reach B			
Surface flow at Pabco Road Gauge	281	24,000,000	Average flow second quarter 2012 at USGS stream gauge
Groundwater inflow along Reach B	*6.2*	540,000	Adjusted to balance Reach B inflow with outflow
Total Surface Water and Groundwater Inflow	**288**	**25,000,000**	

Outflows from Reach B			
Surface flow at Three Kids Gauge	285	25,000,000	Average flow second quarter 2012 at USGS stream gauge
Evaporation	1.7	150,000	Estimated based on the surface area of wash along Reach B and recorded evaporation rates
Total Surface Water and Groundwater Outflow	**288**	**25,000,000**	

Total Groundwater Inflow to Reaches A and B	**16.1**	**1,390,000**
Total Groundwater Inflow Within Study Area [a]	**8.0**	**693,000**

Notes

cfs = cubic feet per second cfd = cubic feet per day

[a] Assumes: 80% of groundwater discharge is from the south side of Las Vegas Wash; 71% of Reach A is within model domain; and 48 % of Reach B is within model domain.

TABLE 2: PHASE I GROUNDWATER MODEL - AREAL RECHARGE DISTRIBUTION

Nevada Environmental Response Trust

Henderson, Nevada

Region	Recharge Rate (ft/d)	Recharge Volume (ft^3/d)	Recharge Volume (AFY)	Source
Residential areas	5.6×10^{-5}	2.3×10^{3}	1.9×10^{1}	Original Value, not revised
Industrial areas	4.3×10^{-4}	1.5×10^{4}	1.3×10^{2}	Original Value, not revised
Tuscany Golf Course	1.78×10^{-3}	1.7×10^{4}	1.4×10^{2}	Original Value, not revised
Undeveloped areas	1.83×10^{-5}	4.7×10^{3}	3.9×10^{1}	Natural recharge rate - Original Value
COH Birding Preserve	1.5×10^{-2}	7.3×10^{4}	6.1×10^{2}	COH data sent from Howard Analla on 7/9/13
Northern RIBs	1.83×10^{-5}	--	--	No longer active, Natural recharge rate - Original Value
TIMET ponds	None	--	--	No longer active
NERT ponds	None	--	--	Ponds are double-lined; recharge is insigificant
Stormwater retention basins	1.2×10^{-2}	7.6×10^{3}	6.4×10^{1}	Assumes 75% of rainfall falling on Site becomes recharge

Notes:

ft/d = feet per day

ft^3/d = cubic feet per day

AFY = acre-feet per year

COH = City of Henderson

NERT = Nevada Environmental Response Trust

RIB = Rapid Infiltration Basin

TIMET = Titanium Metals Corporation

Residential areas, industrial areas, and recharge from Tuscany Golf Course were not revised from the Northgate Model (Northgate 2010).

TABLE 3: GROUNDWATER EXTRACTION RATES - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Well Name	Owner	Pumping Rate (cfd)
ART-1	NERT	3,006
ART-2	NERT	12,025
ART-3	NERT	9,016
ART-4	NERT	1,517
ART-6	NERT	0
ART-7	NERT	6,013
ART-8	NERT	12,357
ART-9	NERT	8,950
I-AR	NERT	208
I-B	NERT	258
I-C	NERT	1,058
I-D	NERT	228
I-E	NERT	229
I-F	NERT	1,119
I-G	NERT	34
I-H	NERT	160
I-I	NERT	972
I-J	NERT	985
I-K	NERT	746
I-L	NERT	398
I-M	NERT	528
I-N	NERT	535
I-O	NERT	224
I-P	NERT	358
I-Q	NERT	36
I-R	NERT	540
I-S	NERT	982
I-T	NERT	78
I-U	NERT	115
I-V	NERT	995
I-Z	NERT	1,227
PC-115R	NERT	19,008
PC-116R	NERT	24,014
PC-117	NERT	24,036
PC-118	NERT	18,019
PC-119	NERT	13,646
PC-120	NERT	1
PC-121	NERT	1
PC-133	NERT	769
PC-99R2/R3	NERT	11,523
C	OSSM	2,368

TABLE 3: GROUNDWATER EXTRACTION RATES - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Well Name	Owner	Pumping Rate (cfd)
D2	OSSM	1,405
E3	OSSM	4,293
F	OSSM	1,598
G	OSSM	1,290
H2	OSSM	2,175
I	OSSM	1,502
J	OSSM	1,482
K2	OSSM	1,944
L	OSSM	2,214
M2	OSSM	1,579
N	OSSM	173
O	OSSM	2,464
P	OSSM	1,463
Q	OSSM	1,636
R	OSSM	1,540
AMEW-1	AMPAC	25,988
AMEW-2	AMPAC	9,048
AMEW-3	AMPAC	4,043
AMEW-4	AMPAC	4,813
AMEW-5	AMPAC	9,048
APEW-1	AMPAC	0
APEW-2	AMPAC	8,874
APEW-3	AMPAC	1,309
AREW-1	AMPAC	6,545
AREW-2	AMPAC	7,508
AREW-3	AMPAC	5,198
AREW-4	AMPAC	3,850
AREW-5	AMPAC	9,048
AREW-6	AMPAC	3,465

Notes:

cfd = cubic feet per day

AMPAC = American Pacific Corporation

OSSM = Olin Chlor-Alkali/Stauffer/Sygenta/Montrose

NERT = Nevada Environmental Response Trust

AMPAC's AMEW wells are not simulated in the model

TABLE 4: PHASE I GROUNDWATER MODEL LAYERS

Nevada Environmental Response Trust

Henderson, Nevada

Model Layers	Lithology	Layer Thickness (ft)
Layer 1	Alluvium	3.8-153.9
Layer 2	UMCf	30
Layer 3	UMCf	28.3-90.5
Layer 4	UMCf	60
Layer 5	UMCf	108

Notes:

ft = feet

UMCf = Upper Muddy Creek Formation

TABLE 5: MODELED WATER BALANCE SUMMARY

Nevada Environmental Response Trust Site

Henderson, Nevada

	Parameters	Northgate Model	Conceptual Water Balance	Phase I Model
Groundwater Inflow (cfd)	Upgradient Boundary inflow	68,957	183,000	73,007
	Vertical inflow from UMCf	121,701	220,000	109,866
	Inflow from the Wash	438,211	510,000	249,968
	Combined Recharge	91,723	114,000	147,726
	Infiltration from Bird View Pond	14,401	74,000	73,646
	GW-11 Pond Infiltration	30	0	0
	Industrial Recharge	30,547	NE	29,125
	AMPAC Injection	8,528	0	0
	OSSM Injection	19,200	29,000	29,125
	NERT Retention Basin	0	NE	8,070
	Other (rainfall, residential areas)	19,017	11,000	7,759
Total Inflow (cfd)		**720,592**	**1,027,000**	**580,567**
Groundwater Outflow (cfd)	Pumping NERT (IWF)	12,668	12,000	12,012
	Pumping NERT (AWF)	52,433	53,000	52,885
	Pumping NERT (SWF)	110,562	110,000	111,018
	Pumping OSSM	24,834	29,000	29,125
	Pumping AMPAC	49,460	99,000	33,095
	Outflow to the Wash	470,327	724,000	336,510
	Evapotranspiration	286	NE	5,733
Total Outflow (cfd)		**720,570**	**1,027,000**	**580,378**

Notes:

cfd = cubic feet per day

UMCF = Upper Muddy Creek Formation

NE = Not Evaluated

IWF = Interceptor Well Field

AWF = Athens Road Well Field

SWF = Seep Well Field

AMPAC = American Pacific Corporation

NERT = Nevada Environmental Response Trust

OSSM = Olin Chlor-Alkali/Stauffer/Syngenta/Montrose

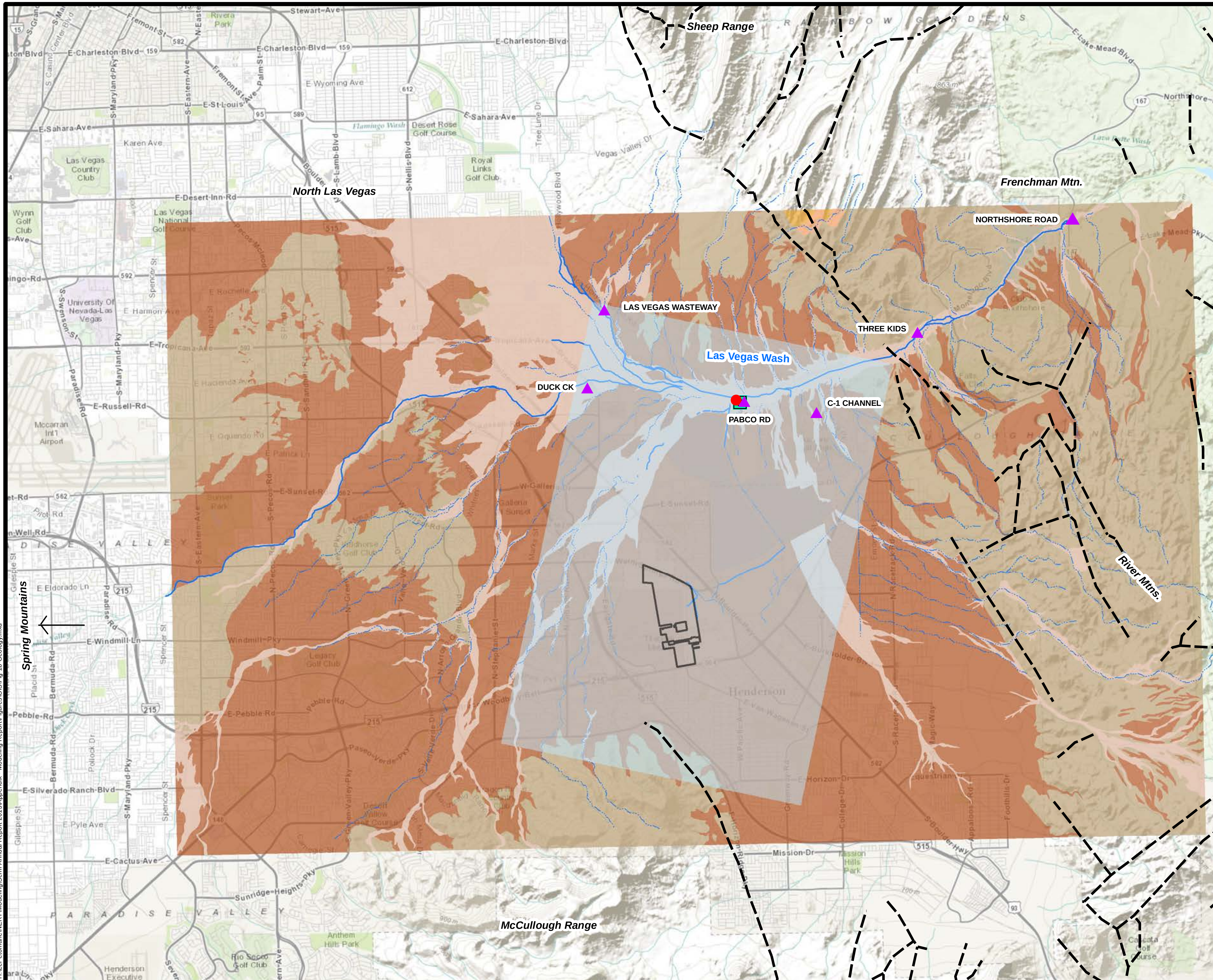
TABLE 6: CALIBRATION STATISTICS

Nevada Environmental Response Trust Site

Henderson, Nevada

Parameters	Northgate Model	Phase I (Northgate Targets)	Phase I Model (Revised Targets)
Residual Mean (RM) in feet	1.76	-0.58	0.02
RMS Error	7.61	7.82	8.55
Residual Standard Deviation	7.40	7.80	8.55
Range of Observations	285.84	286.23	310.17
Residual Sum of Squares	1.52×10^4	1.54×10^4	3.25×10^4
Number of Observations	263	251	444

Figures



EXPLANATION

- USGS Stream Gauge Station
- City Of Henderson -Outfall
- NERT/AMPAC/TIMET Outfall
- NERT Property Boundary
- Study Area

Geology

- Permian
- Quaternary
- Tertiary
- Triassic
- Modern wash deposits
- Fault Lines

Geological Map Reference:

E.C.Bingler, 1977, Geologic Map of the Las Vegas SE Quadrangle, Nevada: Nevada Bureau of Mines and Geology Map 3Ag, 1:24,000 scale

Bell, J.W., 1980, Geologic Map of the Henderson Quadrangle, Nevada: Nevada Bureau of Mines and Geology Map 67, 1:24,000 scale

N W E S

0 1.25 2.5 Miles

ENVIRON

LOCATION MAP
Nevada Environmental Response Trust Site
Henderson, Nevada

Date: 2/28/2014	Contract Number: 21-34800H		Figure 1
Drafter: AS	Approved:	Revised:	

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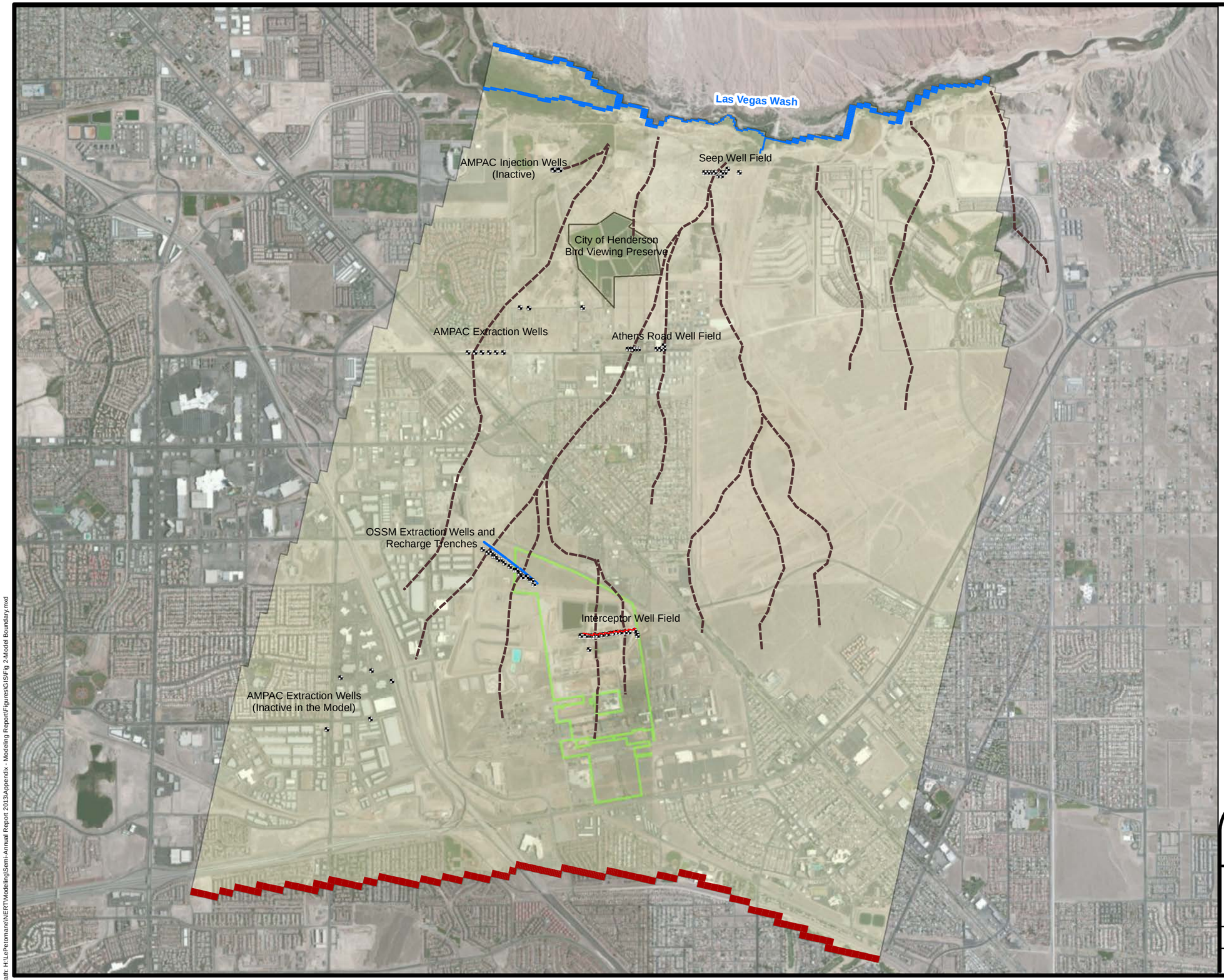


EXPLANATION

- Extraction Wells
- Slurry Wall
- OSSM Recharge Trenches
- Paleochannels
- Stream Boundary
- Specified Flux Boundary
- Revised Model Domain
- NERT Property Boundary

NERT = Nevada Environmental Response Trust
AMPAC = American Pacific Corporation
OSSM = Olin/Stauffer/Syngenta/Montrose

N
W E
S

0 0.5 1 Miles

ENVIRON

GROUNDWATER MODEL EXTENT
Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		2
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\Appendix - Modeling Report\Figures\GIS\Fig 2-Model Boundary.mxd

Las Vegas Wash

City of Henderson
Bird Viewing Preserve

Tuscuny Golf Course

OSSM Recharge
Trench

Stormwater Retention
Basins

EXPLANATION

- Stormwater Retention Basins
- NERT Property Boundary

Areal Recharge (ft/d)

- Lined Ponds (0)
- Undeveloped Areas (1.8E-5)
- Residential Area (5.6E-5)
- Industrial Area (4.3E-4)
- Retention Basin (1E-3)
- Tuscany Golf Course (1.8E-3)
- COH Birding Pond (1.5E-2)
- OSSM Recharge Trench (1.1E-1)
- Revised Model Domain

NERT = Nevada Environmental Response Trust
AMPAC = American Pacific Corporation
OSSM = Olin/Stauffer/Syngenta/Montrose
ft/d = feet per day

N
W E
S

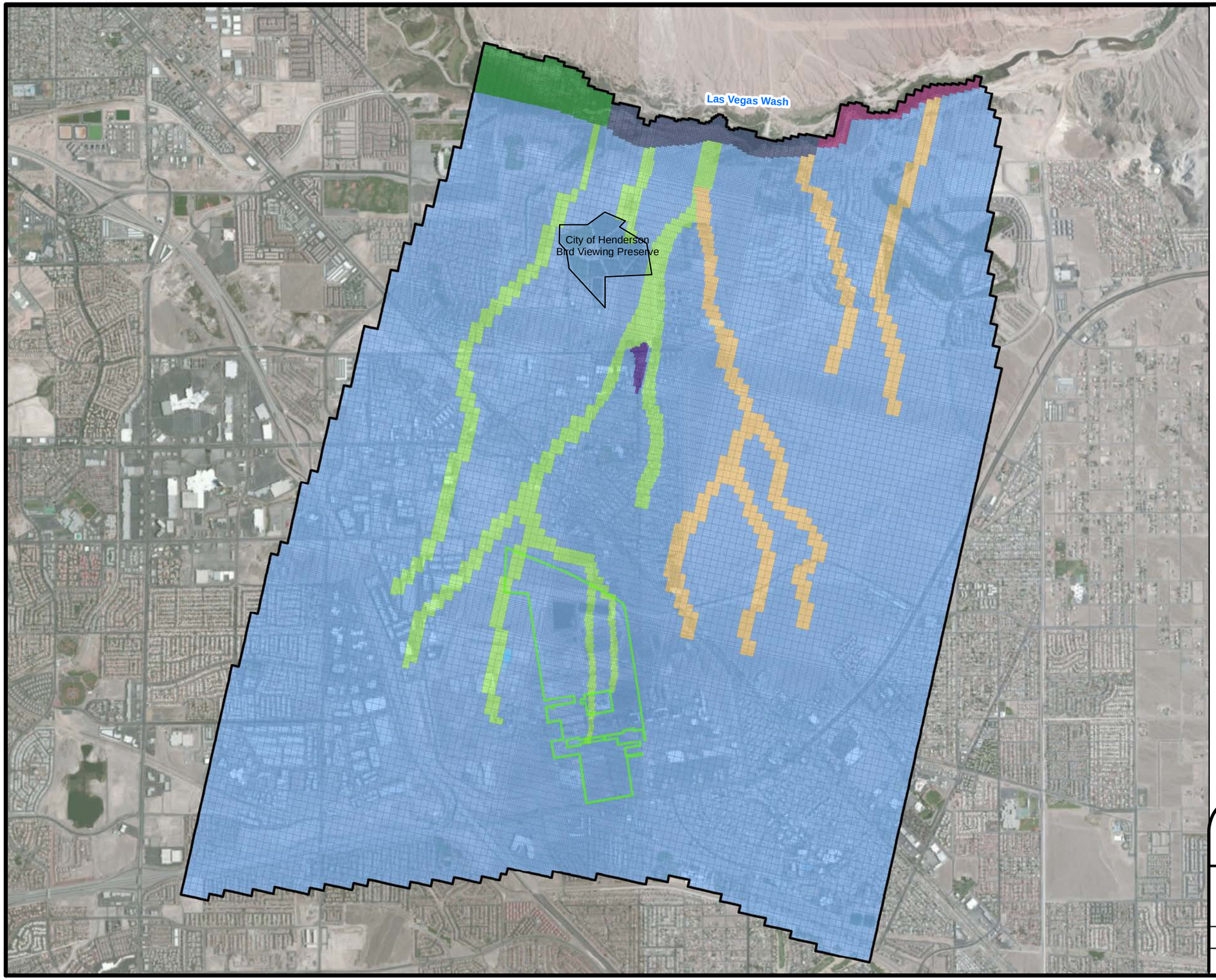
0 0.5 1 Miles

ENVIRON

AREAL RECHARGE DISTRIBUTION
Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		3
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\Appendix - Modeling Report\Figures\GIS\Fig 3-Areal Recharge.mxd



EXPLANATION

- NERT Property Boundary
- Revised Model Domain

Hydraulic Conductivity (ft/d)

- 0.72
- 35
- 100
- 200
- 250
- 300
- 485

ft/d = feet per day

N
W E
S

0 0.5 1 Miles

ENVIRON

HYDRAULIC CONDUCTIVITY - LAYER 1

Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		4
Drafter: AS	Approved:	Revised:	

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LAS VEGAS WASTEWAY

LAKE LAS VEGAS INLET

THREE KIDS

Stream Segment # 1

DUCK CK

Stream Segment # 2

Stream Segment # 4

PABCO RD

Stream Segment # 3

C-1 CHANNEL ABV MOUTH

City of Henderson
Bird Viewing
Preserve

C-1 CHANNEL NR WARM SPGS RD

EXPLANATION

- USGS Stream Gauge Station
- Las Vegas Wash Centerline
- City Of Henderson -Outfall
- NERT/AMPAC/TIMET Outfall Locations
- Revised Model Domain
- Site Boundary
- Downgradient Plume Area

Note: The outfall locations are approximate.

N
W E
S

0 0.5 1 Miles

ENVIRON

MEASURED OUTFALL & STREAMFLOW LOCATIONS
Las Vegas Wash
Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		5
Drafter: AS	Approved:	Revised:	

Path: H:\LePetomane\NERT\Modeling\Semi-Annual Report 2013\Appendix - Modeling Report\Figures\GIS\Fig 5-Las Vegas Wash Measured Outfall Locations.mxd

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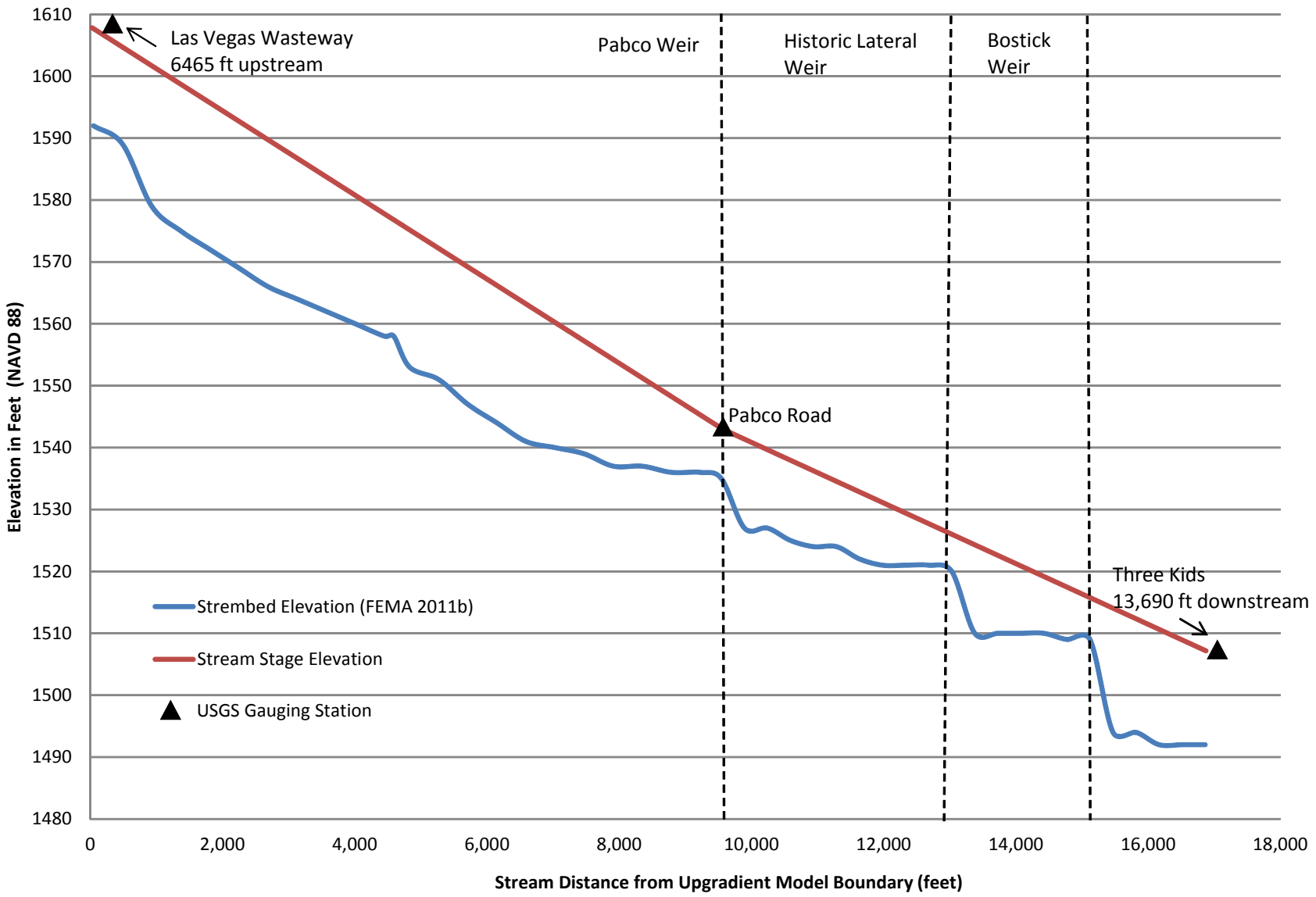
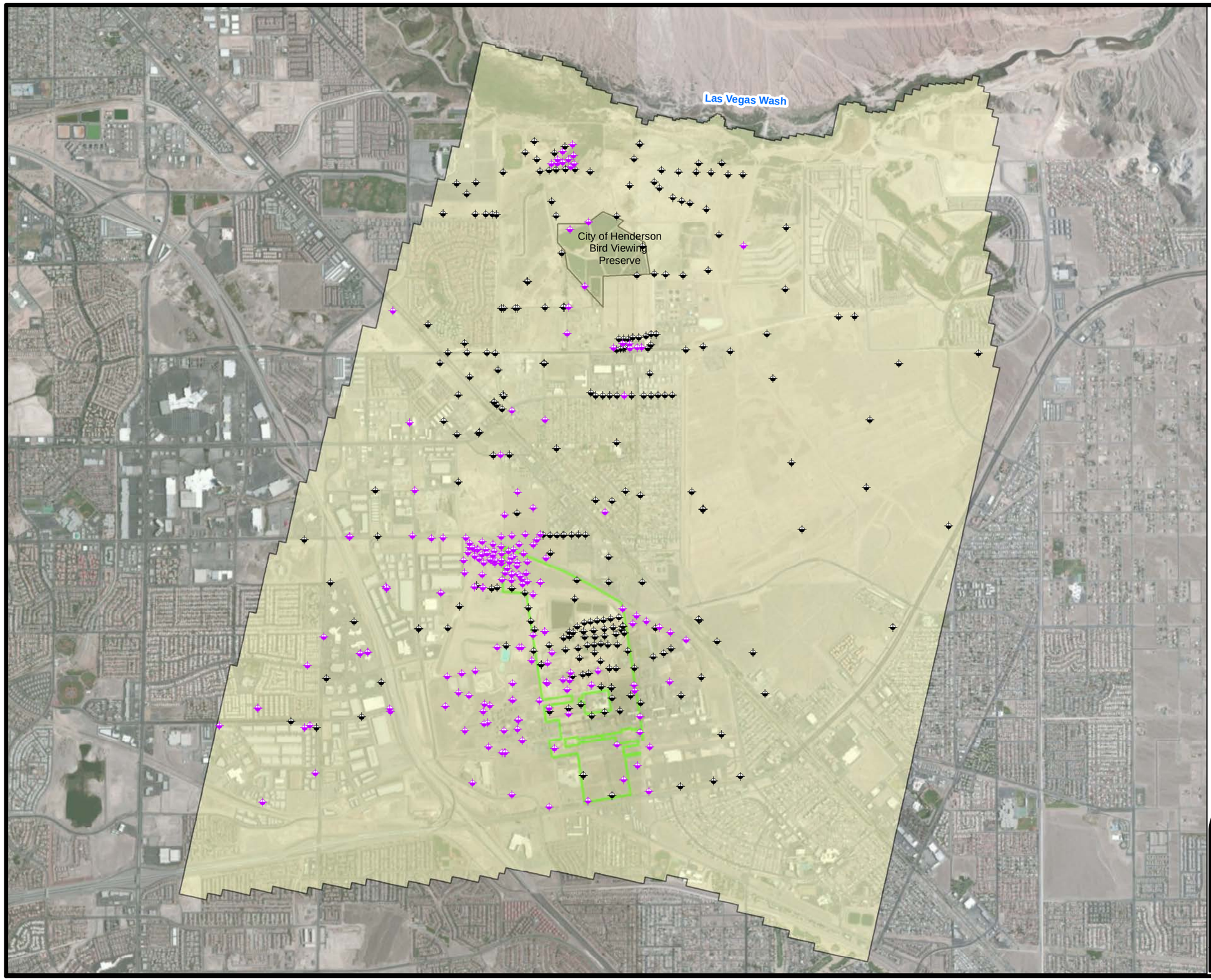


ENVIRON

Las Vegas Wash Stream Stage and Streambed Elevation
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
6

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:



EXPLANATION

Model Targets

- Existing Model
- Additional Locations
- NERT Property Boundary
- Revised Model Domain

N

W E

S

0 0.5 1 Miles

ENVIRON

MODEL TARGETS

Nevada Environmental Response Trust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		7
Drafter: AS	Approved:	Revised:	

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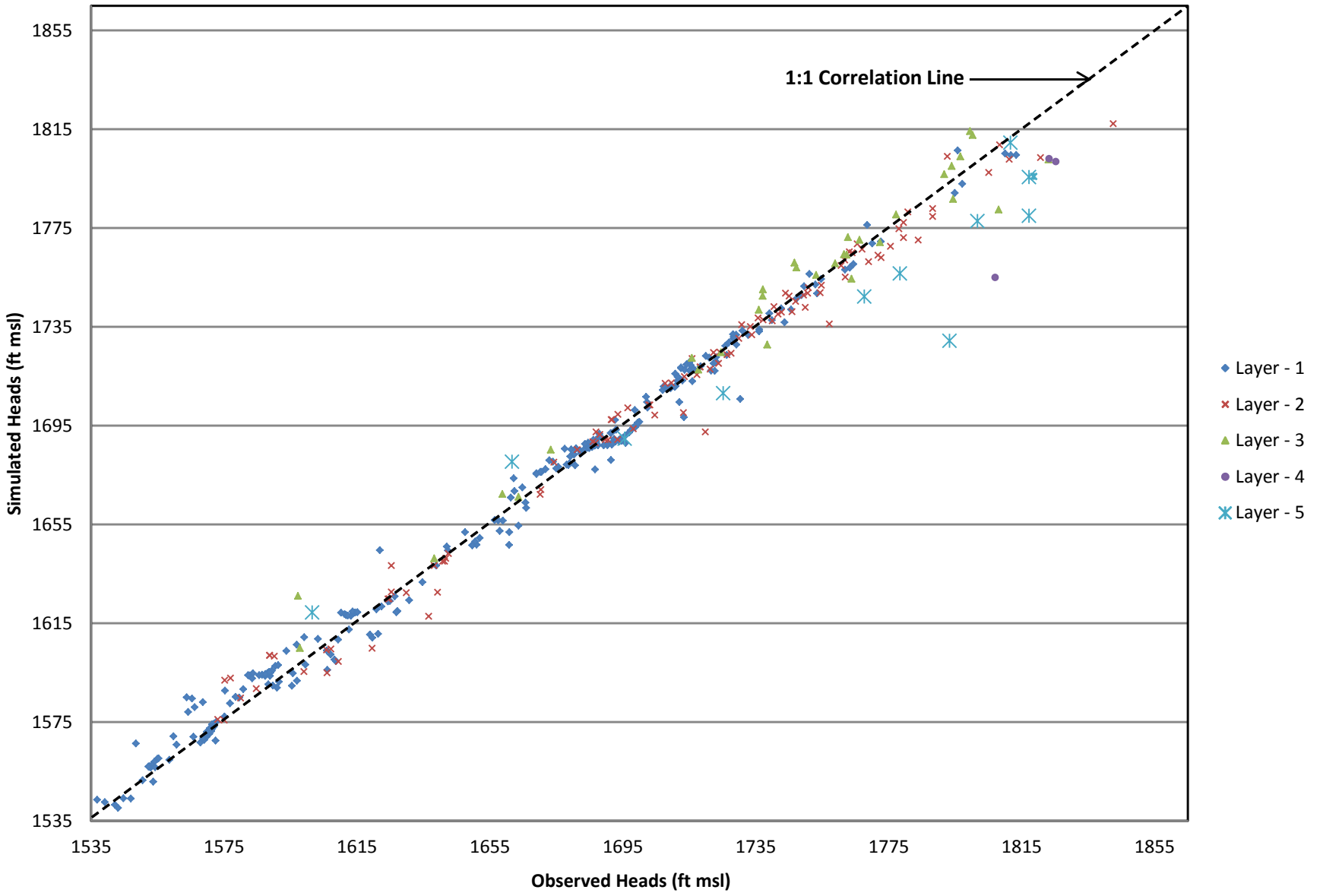
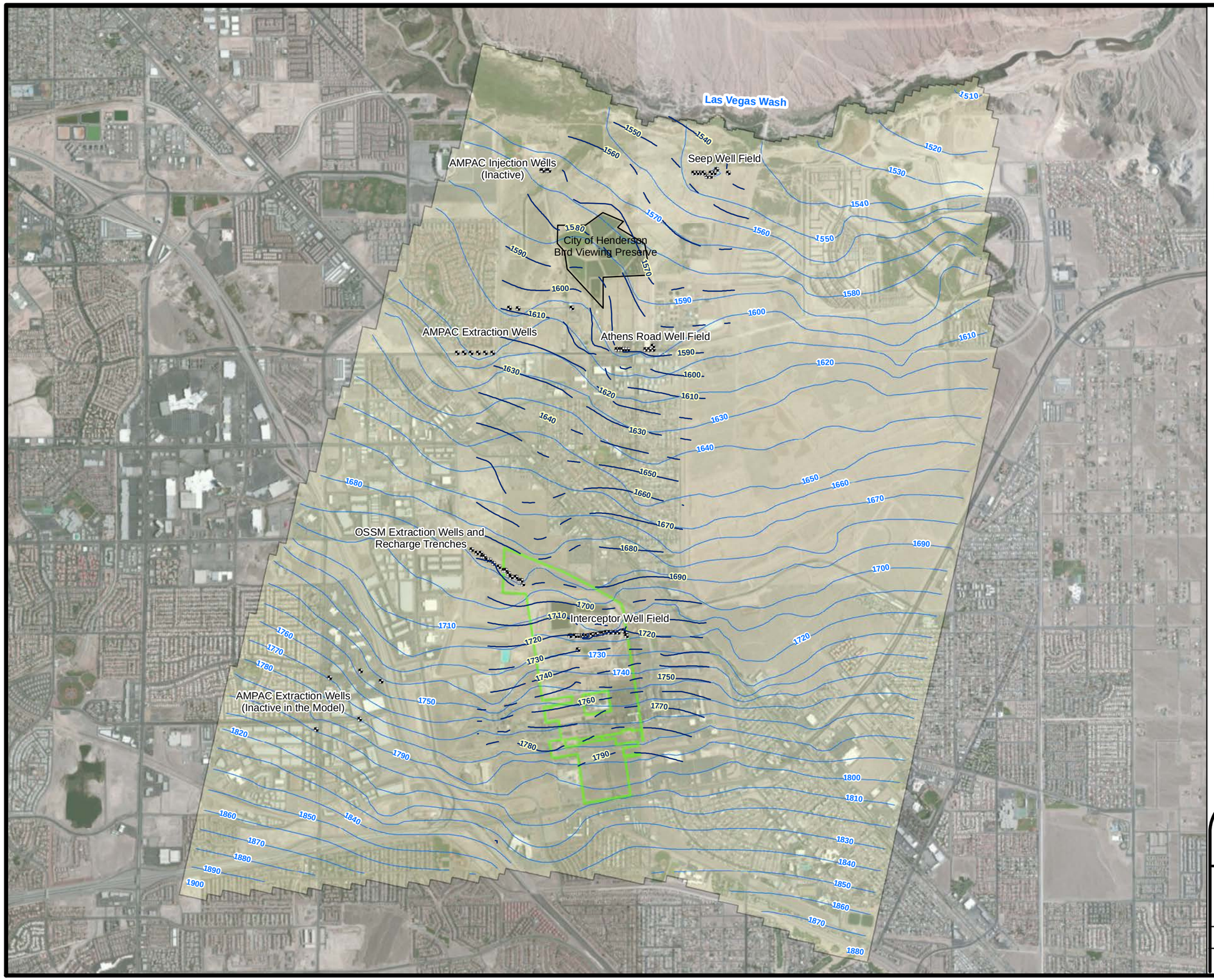


ENVIRON

Observed Versus Simulated Groundwater Elevation
Nevada Environmental Response Trust Site
Henderson, Nevada

Figure
8

Drafter: RS | Date: 2/28/2014 | Contract Number: 21-34800H | Approved: | Revised:



EXPLANATION

- Extraction Wells
- Simulated Heads (ft amsl)
- Groundwater Elevations (ENVIRON 2012)
- NERT Property Boundary
- Revised Model Domain

NERT = Nevada Environmental Response Trust
AMPAC = American Pacific Corporation
OSSM = Olin/Stauffer/Syngenta/Montrose

N
W E
S

0 0.5 1 Miles

ENVIRON

SIMULATED GROUNDWATER ELEVATION
Nevada Environmental ResponseTrust Site
Henderson, Nevada

Date:	Contract Number:		Figure
2/28/2014	21-34800H		9
Drafter: AS	Approved:	Revised:	

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Appendix A

Model Target Groundwater Elevations

APPENDIX A: GROUNDWATER ELEVATIONS - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Observation Well Name	Easting	Northing	Target (ft amsl)	Mid-Screen Elevation (ft amsl)	Group
AA-01	830921.12	26720238.47	1,708.42	1,718.13	1
AA-08	827756.55	26733208.24	1,565.80	1,561.19	1
AA-09	831041.59	26723441.40	1,657.94	1,648.73	1
AA-10	825935.16	26730040.80	1,595.76	1,590.35	1
AA-13	833889.39	26722860.98	1,662.15	1,676.69	1
AA-18	836690.87	26727656.38	1,609.34	1,614.50	1
AA-20	831811.84	26728007.71	1,599.15	1,608.49	1
AA-21	826148.08	26734078.78	1,572.51	1,560.20	1
AA-22	833425.59	26731586.01	1,553.70	1,560.53	1
AA-27	832471.34	26719301.66	1,721.55	1,717.88	1
AA-BW-02A	826041.40	26720214.67	1,707.71	1,705.80	1
AA-BW-03A	825973.66	26720593.46	1,702.31	1,698.63	1
AA-BW-04A	825492.25	26721142.81	1,692.99	1,689.49	1
AA-BW-05A	825065.41	26721183.83	1,698.19	1,682.40	1
AA-BW-06A	824476.16	26721238.26	1,699.49	1,698.40	1
AA-BW-07A	823979.46	26720637.98	1,702.44	1,699.73	1
AA-BW-08A	825332.70	26719492.77	1,712.49	1,715.68	1
AA-MW-07	826126.54	26719344.40	1,726.29	1,713.72	1
AA-UW1	831427.20	26719624.99	1,722.32	1,714.63	1
AA-UW2	832819.54	26718117.11	1,754.38	1,756.38	1
AA-UW4	836517.02	26720029.40	1,757.14	1,754.88	1
AA-UW5	838134.66	26722958.50	1,719.85	1,721.51	1
AAX-15	823068.13	26728783.01	1,627.14	1,621.80	1
ACX-16	823946.00	26724229.00	1,670.10	1,659.10	1
ACY-15	821545.80	26723985.40	1,691.40	1,679.70	1
ADX-135	821150.50	26717438.90	1,808.06	1,665.15	1
AEX-35	821720.40	26718438.60	1,745.05	1,737.70	1
AGX-160	822790.37	26719978.45	1,738.45	1,580.40	1
AGX-50	822804.72	26719991.41	1,713.51	1,690.36	1
AMX-40	820936.20	26720195.70	1,729.87	1,711.20	1
APX-1-45	825255.70	26729255.10	1,609.43	1,573.70	1
APX-2-45	825650.90	26729263.00	1,606.05	1,571.10	1
APX-2-P1O1	825601.60	26729261.20	1,606.08	1,594.50	1
APX-4-20	826451.20	26729275.10	1,607.17	1,595.70	1
APX-5-16	827009.30	26729285.00	1,605.87	1,595.40	1
APX-5-7	826987.80	26729285.20	1,605.95	1,606.10	1
APX-7-14	825193.10	26729254.30	1,608.73	1,598.20	1
ARP-1	828593.16	26728365.51	1,588.55	1,584.32	1
ARP-2	828726.35	26728363.61	1,588.67	1,579.29	1
ARP-3	828860.77	26728364.89	1,587.66	1,583.17	1
ARP-4A	829167.89	26728411.81	1,585.61	1,590.27	1
ARP-5A	829375.01	26728458.43	1,582.78	1,590.90	1

APPENDIX A: GROUNDWATER ELEVATIONS - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Observation Well Name	Easting	Northing	Target (ft amsl)	Mid-Screen Elevation (ft amsl)	Group
ARP-6B	829520.52	26728499.92	1,582.72	1,580.36	1
ARP-7	829668.22	26728501.08	1,582.28	1,586.70	1
BEC-4	830699.33	26723946.72	1,651.96	1,648.84	1
BEC-9	833049.52	26727221.50	1,597.29	1,566.24	1
BRW-R1	831558.84	26716928.10	1,797.12	1,794.15	1
CLD3-R	829651.41	26720010.74	1,716.71	1,752.24	1
CLD4-R	829034.28	26718854.29	1,743.67	1,781.96	1
DBMW-14	838987.26	26727957.62	1,636.57	1,634.96	1
DBMW-19	831488.74	26731383.23	1,548.48	1,555.90	1
DBMW-2	830530.28	26728059.44	1,593.80	1,597.00	1
DBMW-3	831032.81	26728150.18	1,596.90	1,596.86	1
DBMW-5	833398.98	26729807.56	1,584.71	1,584.65	1
DBMW-8	835406.87	26729027.21	1,575.24	1,574.55	1
DX-30	819846.50	26717128.90	1,805.10	1,790.20	1
DX-75	819846.60	26717139.50	1,819.96	1,745.10	1
DY-26	820125.60	26718551.10	1,779.46	1,764.60	1
FX-25	820249.00	26721316.00	1,727.62	1,722.30	1
H-21R	824914.54	26721148.51	1,699.05	1,692.85	1
H-28	825871.32	26721021.82	1,693.57	1,688.95	1
H-55	823645.49	26720010.20	1,710.92	1,715.65	1
H-58A	825642.55	26723331.88	1,664.78	1,646.43	1
J2D1-R2	829885.78	26719274.00	1,729.08	1,741.88	1
J2D2-R2	830098.48	26719406.73	1,725.82	1,736.46	1
J2D4	829582.57	26719171.05	1,736.03	1,744.29	1
KX-18	823949.00	26726751.40	1,634.70	1,629.40	1
KY-23	824268.80	26727268.40	1,626.40	1,620.60	1
M-11	828617.03	26717608.56	1,772.72	1,772.38	1
M-111A	827447.19	26719134.86	1,733.84	1,734.07	1
M-115	827243.65	26718612.90	1,749.92	1,747.64	1
M-120	828387.79	26715162.90	1,800.27	1,788.58	1
M-126	826569.37	26719505.57	1,724.18	1,729.31	1
M-12A	828178.52	26717575.29	1,771.79	1,767.76	1
M-13	827806.03	26717477.66	1,768.51	1,776.89	1
M-131	827158.08	26719770.57	1,721.29	1,720.43	1
M-133	828698.61	26720067.29	1,715.80	1,678.92	1
M-135	827154.48	26719890.17	1,717.31	1,718.15	1
M-14A	827045.36	26719382.67	1,728.39	1,730.93	1
M-152	826973.49	26722690.63	1,673.33	1,563.50	1
M-153	828385.63	26718288.08	1,763.83	1,636.69	1
M-17A	828061.72	26719053.74	1,735.99	1,728.99	1
M-19	828846.19	26719350.03	1,731.02	1,742.27	1
M-22A	828270.11	26719531.63	1,728.28	1,733.46	1

APPENDIX A: GROUNDWATER ELEVATIONS - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Observation Well Name	Easting	Northing	Target (ft amsl)	Mid-Screen Elevation (ft amsl)	Group
M-23	827373.96	26721391.25	1,686.92	1,696.95	1
M-25	827677.80	26719503.57	1,726.32	1,728.43	1
M-31A	828368.37	26718289.58	1,750.64	1,751.87	1
M-34	828318.25	26718833.45	1,739.82	1,741.10	1
M-35	828509.37	26718840.13	1,739.99	1,740.28	1
M-36	828069.09	26719556.63	1,726.94	1,732.32	1
M-37	827414.22	26719422.01	1,728.97	1,733.56	1
M-38	827877.66	26719523.27	1,728.20	1,732.23	1
M-39	828548.82	26719525.34	1,729.20	1,728.73	1
M-44	827005.61	26722699.15	1,675.59	1,678.31	1
M-48	828303.85	26721337.52	1,692.41	1,699.68	1
M-50	828083.47	26718315.58	1,749.40	1,746.04	1
M-52	828394.48	26717985.39	1,761.94	1,762.42	1
M-57A	826993.31	26719716.74	1,723.81	1,723.44	1
M-61	828671.94	26719953.97	1,722.68	1,722.78	1
M-64	827601.30	26719748.40	1,719.97	1,724.76	1
M-65	827899.72	26719746.36	1,720.99	1,727.21	1
M-66	828183.64	26719787.47	1,722.29	1,724.34	1
M-67	828508.52	26719829.72	1,723.14	1,723.11	1
M-68	828751.00	26719864.47	1,722.91	1,724.73	1
M-69	827265.73	26719885.28	1,716.01	1,720.15	1
M-70	827567.35	26719904.69	1,712.53	1,720.60	1
M-71	827859.71	26719943.63	1,711.45	1,717.29	1
M-72	828172.13	26719977.14	1,714.20	1,724.04	1
M-73	828427.82	26720018.47	1,711.78	1,717.74	1
M-74	828713.65	26720062.18	1,713.59	1,720.38	1
M-75	827718.82	26718702.64	1,741.70	1,742.26	1
M-76	827550.73	26718659.92	1,745.89	1,743.27	1
M-77	828932.32	26718046.00	1,763.33	1,763.21	1
M-79	827382.10	26720048.92	1,710.78	1,719.43	1
M-83	827584.70	26720159.92	1,709.37	1,717.22	1
M-84	827766.70	26720189.13	1,715.94	1,718.08	1
M-85	827962.63	26720219.88	1,711.86	1,719.82	1
M-86	828141.82	26720238.99	1,710.62	1,718.13	1
M-87	828358.13	26720276.13	1,707.02	1,720.08	1
M-88	828588.75	26720313.96	1,707.27	1,717.30	1
M-89	827890.08	26719294.84	1,732.76	1,738.09	1
M-93	827143.44	26717685.92	1,761.75	1,757.14	1
M-94	827222.85	26722695.81	1,680.61	1,678.07	1
M-95	827426.74	26722701.69	1,678.64	1,677.09	1
M-96	827626.08	26722700.30	1,678.14	1,678.02	1
M-97	827492.47	26717795.18	1,760.72	1,760.85	1

APPENDIX A: GROUNDWATER ELEVATIONS - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Observation Well Name	Easting	Northing	Target (ft amsl)	Mid-Screen Elevation (ft amsl)	Group
M-99	827309.69	26720851.72	1,698.63	1,707.24	1
MCF-01B	830888.59	26720256.83	1,709.63	1,686.28	1
MCF-05	832871.21	26728512.84	1,601.51	1,401.37	1
MCF-06C	834945.84	26729004.59	1,576.94	1,581.62	1
MCF-09A	831024.27	26723427.11	1,661.63	1,415.87	1
MCF-09B	831019.19	26723449.62	1,658.74	1,580.77	1
MCF-10B	825951.40	26730022.81	1,597.80	1,521.86	1
MCF-16C	835846.38	26726030.18	1,625.37	1,628.98	1
MCF-32B	835753.14	26724074.91	1,663.59	1,582.70	1
MW-D2D	819110.50	26717312.60	1,823.05	1,772.30	1
MW-J	824962.00	26725010.00	1,658.89	1,650.50	1
MW-K	823523.00	26725991.00	1,651.01	1,648.60	1
MW-K1	827777.00	26726810.00	1,625.35	1,618.55	1
MW-K4	828994.00	26728410.00	1,586.45	1,585.95	1
MW-K5	829617.00	26730252.00	1,563.80	1,553.05	1
MW-R	825423.00	26725016.00	1,656.47	1,641.90	1
MW-S	826941.00	26730853.00	1,583.47	1,576.20	1
MW-T	826644.00	26732347.00	1,576.86	1,562.20	1
MW-U	826312.00	26733219.00	1,575.14	1,563.50	1
MW-V	825243.00	26733189.00	1,579.99	1,575.20	1
NX-17	823645.90	26727961.68	1,626.90	1,623.97	1
NY-15	823414.10	26727670.20	1,630.75	1,626.90	1
OX-16	824203.08	26727965.13	1,621.38	1,619.75	1
OY-8	824123.60	26728244.00	1,619.67	1,613.60	1
PC-101R	828711.72	26728107.74	1,588.20	1,583.12	1
PC-103	829110.87	26730205.73	1,575.31	1,580.49	1
PC-104	829277.08	26731049.70	1,566.14	1,574.18	1
PC-108	828526.96	26731913.05	1,571.95	1,557.61	1
PC-110	826778.31	26731928.11	1,579.55	1,572.77	1
PC-112	828898.31	26732800.69	1,560.73	1,548.15	1
PC-12	829430.43	26728102.92	1,587.41	1,594.07	1
PC-123	829485.04	26727358.44	1,603.26	1,598.94	1
PC-124	830132.95	26726741.58	1,610.23	1,607.93	1
PC-125	829925.95	26726739.82	1,611.34	1,608.86	1
PC-126	829724.72	26726737.84	1,611.74	1,607.33	1
PC-127	829316.65	26726735.62	1,613.20	1,607.42	1
PC-128	828953.97	26726732.39	1,614.48	1,608.56	1
PC-130	828538.19	26726729.31	1,613.70	1,600.91	1
PC-131	828123.28	26726725.41	1,622.37	1,608.78	1
PC-132	827913.94	26726723.10	1,624.95	1,610.04	1
PC-134	828776.17	26728126.42	1,590.12	1,552.31	1
PC-135	828765.25	26728123.18	1,588.87	1,582.55	1

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PC-136	829517.89	26728191.37	1,583.68	1,587.02	1
PC-17	828732.63	26728089.23	1,588.99	1,586.50	1
PC-18	828636.25	26728079.97	1,589.41	1,587.00	1
PC-2	830443.45	26730209.58	1,568.64	1,575.57	1
PC-21A	829269.53	26721332.72	1,692.65	1,700.52	1
PC-24	829524.18	26726729.82	1,612.27	1,610.98	1
PC-28	828530.65	26725375.67	1,638.86	1,636.10	1
PC-31	826781.65	26725195.83	1,647.54	1,625.86	1
PC-37	826612.10	26722172.24	1,679.01	1,678.42	1
PC-4	831171.80	26730353.42	1,564.25	1,570.22	1
PC-50	828326.94	26726722.30	1,620.87	1,606.66	1
PC-53	829941.58	26730225.29	1,565.41	1,572.28	1
PC-54	828296.34	26722067.79	1,682.42	1,682.43	1
PC-55	828530.49	26728056.66	1,590.41	1,583.18	1
PC-56	830645.29	26732289.43	1,553.02	1,538.45	1
PC-58	831123.78	26732118.20	1,552.53	1,547.71	1
PC-59	830150.30	26732452.69	1,554.06	1,548.12	1
PC-60	830405.14	26732358.75	1,553.32	1,546.38	1
PC-62	829764.28	26732733.52	1,554.94	1,545.23	1
PC-64	827916.52	26723702.44	1,665.71	1,663.79	1
PC-65	828386.90	26723682.74	1,665.93	1,663.81	1
PC-66	828779.40	26723966.95	1,660.87	1,656.63	1
PC-67	829207.80	26723846.87	1,660.79	1,650.52	1
PC-68	829616.96	26732906.82	1,555.32	1,534.57	1
PC-71	826805.90	26722687.72	1,675.00	1,677.83	1
PC-72	826604.72	26722688.82	1,670.57	1,674.43	1
PC-73	826404.90	26722694.93	1,669.08	1,667.00	1
PC-74	829203.52	26734003.52	1,552.65	1,520.84	1
PC-76	829183.79	26734006.74	1,552.24	1,547.60	1
PC-77	829031.63	26733568.07	1,558.60	1,532.40	1
PC-80	829823.82	26733250.46	1,554.30	1,539.68	1
PC-82	830316.93	26733194.96	1,550.54	1,507.15	1
PC-86	830826.99	26733185.76	1,547.01	1,531.35	1
PC-88	831259.41	26733178.42	1,543.14	1,506.01	1
PC-92	831749.30	26733109.85	1,539.18	1,535.55	1
PC-93	832179.60	26733117.81	1,536.82	1,516.26	1
PC-96	830896.56	26733450.83	1,544.75	1,518.57	1
PC-97	831565.69	26733441.54	1,542.20	1,520.53	1
POD8	833586.10	26724789.80	1,621.89	1,691.16	1
POU3	831329.98	26721664.71	1,689.38	NA	1
PX-40	824778.75	26727968.46	1,619.56	1,590.04	1
PY-14	825017.12	26727951.78	1,618.92	1,617.58	1

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SB-1-8	824928.20	26731968.90	1,588.35	1,592.20	1
SB-2-7	824742.70	26731972.20	1,591.53	1,594.20	1
SB-29-3	825052.30	26731965.60	1,589.70	1,595.10	1
SB-3-13	824433.70	26731978.50	1,599.05	1,594.70	1
SB-5-5	823505.90	26731993.00	1,608.27	1,605.60	1
SBMW-11-11	824459.80	26732893.90	1,590.96	1,589.00	1
SBMW-18-5	824190.70	26732562.50	1,596.98	1,596.10	1
SBMW-6-12	823897.80	26732861.90	1,595.43	1,588.90	1
TIMETMW-4	830973.92	26718582.87	1,748.75	1,752.61	1
TIMETMW-5	830385.81	26718063.61	1,761.85	1,762.47	1
TIMETMW-6R	829221.18	26717836.95	1,768.97	1,762.96	1
TMMW-102	830371.18	26715433.08	1,810.06	1,815.46	1
TMMW-103	831325.82	26715583.05	1,811.79	1,810.95	1
TMMW-104	832104.88	26715722.71	1,813.35	1,813.78	1
TR-10	827562.53	26715739.77	1,793.94	1,764.06	1
TR-2	826156.85	26719954.57	1,724.57	1,592.29	1
TR-3	826342.89	26718941.61	1,778.39	1,538.34	1
TR-4	826342.53	26718951.58	1,735.93	1,638.05	1
TR-5	826595.86	26717592.13	1,801.72	1,564.27	1
TR-9	827560.22	26715752.71	1,811.60	1,614.29	1
TWA-20	823910.40	26725603.50	1,650.55	1,645.90	1
TWB-21	825054.30	26726461.00	1,641.73	1,628.60	1
TWBX-21	825214.90	26726338.40	1,642.54	1,630.40	1
TWBY-21	824976.90	26726538.30	1,641.39	1,629.60	1
TWBY-36	824987.70	26726539.50	1,640.81	1,614.80	1
TWC-15	825243.90	26726761.20	1,638.28	1,630.00	1
TWC-48	825263.10	26726714.00	1,638.26	1,592.50	1
TWD1-17	824527.20	26725647.10	1,649.79	1,642.10	1
TWD4-15	824560.30	26725671.20	1,649.74	1,643.70	1
TWE-15	826426.20	26727676.60	1,624.35	1,616.90	1
TWE-18	826426.70	26727666.40	1,624.38	1,610.70	1
TWE-33	826427.00	26727656.30	1,624.70	1,594.20	1
TWH-14	825097.20	26727472.80	1,629.86	1,624.70	1
UC-1	825882.70	26733747.80	1,575.12	1,556.20	1
UC-3	826729.20	26733740.60	1,570.59	1,562.10	1
UC-4	827027.30	26733933.70	1,569.04	1,555.70	1
UD-2	826218.40	26733561.40	1,573.11	1,571.20	1
UWO-16	826575.50	26733241.60	1,572.67	1,555.90	1
UXO-16	826778.31	26733263.60	1,571.42	1,553.50	1
UYO-16	827047.00	26733277.70	1,570.74	1,551.60	1
UZO-17	827323.40	26733274.00	1,570.00	1,551.50	1
WS1-14	821616.20	26722663.10	1,704.59	1,694.00	1

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ZX-11	819494.20	26722564.50	1,730.32	1,717.20	1
AA-BW-01A	826112.39	26719802.79	1,715.50	1,711.56	2
AA-BW-09A	825703.31	26719455.90	1,715.03	1,720.12	2
AA-BW-12A	824440.21	26718772.36	1,728.59	1,719.54	2
AA-MW-05	824351.37	26715530.83	1,794.86	1,797.56	2
AA-MW-13R	825265.78	26717045.47	1,770.05	1,762.74	2
AA-MW-14	825660.68	26717082.46	1,772.63	1,768.31	2
AA-MW-16	826447.64	26719904.41	1,718.32	1,722.61	2
AA-MW-20	824824.72	26716567.82	1,779.45	1,760.23	2
AA-MW-24	825495.58	26715179.28	1,792.66	1,788.58	2
AA-MW-25	825508.33	26717917.91	1,747.44	1,749.87	2
ADY-36	821333.30	26719305.80	1,737.22	1,720.20	2
ADY-70	821323.00	26719305.80	1,737.05	1,691.20	2
ADYX-165	821116.31	26719273.57	1,807.06	1,587.41	2
ADYX-38	821103.55	26719268.39	1,740.46	1,720.07	2
AFX-30	821985.53	26717595.85	1,764.37	1,760.63	2
AFX-75	821964.11	26717675.40	1,762.74	1,714.16	2
AK-204	821851.29	26721204.59	1,793.28	1,521.53	2
AK-25	821872.05	26721155.18	1,711.98	1,701.70	2
AK-86	821868.13	26721163.69	1,717.72	1,640.45	2
B01	825676.63	26717341.36	1,767.03	1,757.64	2
B16	823953.15	26718137.87	1,742.68	1,735.20	2
BHE1-10	828193.10	26723364.50	1,670.35	1,660.70	2
CLD1-R	828993.72	26720138.24	1,712.98	1,745.19	2
CP-1	825287.67	26716403.47	1,794.36	1,707.62	2
DMC-MW-26	825692.03	26717360.62	1,817.20	1,530.96	2
DMC-MW-27R	825211.51	26716407.16	1,818.60	1,582.80	2
DMC-MW-28	825775.48	26719450.04	1,767.65	1,488.03	2
DPT-01	825680.22	26717349.85	1,772.37	1,686.07	2
DX-161C	819657.50	26717192.60	1,825.29	1,651.40	2
DX-24	819502.00	26717126.30	1,811.28	1,801.00	2
DZ-15	818150.03	26717687.40	1,820.66	1,811.66	2
DZ-152	818149.68	26717703.43	1,823.30	1,674.18	2
EC-10	823570.10	26717752.81	1,749.55	1,746.08	2
EC-12	824795.32	26717268.65	1,766.22	1,679.37	2
EC-13	824661.58	26717593.80	1,762.34	1,676.29	2
EC-14	824258.28	26718049.25	1,753.14	1,672.42	2
EC-2	825069.70	26719453.56	1,715.83	1,711.43	2
EC-3	824697.84	26717247.43	1,763.17	1,744.04	2
EC-4	824135.84	26717035.31	1,765.53	1,751.48	2
EC-7	824698.68	26717808.89	1,745.65	1,743.47	2
E-S	825485.40	26721390.81	1,687.75	1,687.36	2

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F3-27	819578.43	26718923.53	1,783.86	1,762.93	2
H-10A	825185.53	26722638.83	1,672.91	1,672.46	2
H-11	826574.18	26714839.94	1,795.78	1,868.47	2
H-14	823168.07	26722605.48	1,695.74	1,709.57	2
H-18A	824126.38	26721612.61	1,698.70	1,691.36	2
H-19	824407.06	26721202.71	1,699.96	1,688.14	2
H-25	824166.68	26722628.35	1,695.83	1,707.51	2
H-36	825183.10	26721873.34	1,687.50	1,682.55	2
H-43	824660.68	26721179.60	1,699.45	1,694.72	2
H-43	824660.68	26721179.60	1,699.52	1,694.72	2
H-48	825658.27	26723952.95	1,655.38	NA	2
H-49A	826110.29	26723485.40	1,662.36	1,649.96	2
H-53	824507.76	26722290.36	1,691.57	1,684.25	2
H-56A	825665.28	26723934.55	1,661.33	1,641.13	2
HM-2	832199.20	26731069.80	1,559.79	1,588.00	2
HMW13	827711.49	26731740.35	1,578.47	1,595.51	2
HMW14	827174.04	26731535.30	1,580.80	1,599.82	2
HMW15	827608.00	26729901.00	1,599.47	1,611.97	2
HMW16	827090.00	26728531.00	1,612.63	1,621.43	2
J2U2	830063.17	26718456.02	1,753.44	1,747.35	2
JX-11	825170.27	26725018.41	1,657.56	1,650.63	2
M-10	828536.18	26716636.63	1,788.19	1,783.21	2
M-103	828728.34	26715622.48	1,796.59	1,787.41	2
M-121	827694.57	26715011.24	1,799.47	1,788.63	2
M-123	826516.40	26718416.92	1,743.93	1,741.63	2
M-124	827092.23	26718226.14	1,750.85	1,746.16	2
M-125	826531.82	26718993.90	1,733.39	1,728.83	2
M-128	827171.63	26718501.70	1,746.97	1,736.30	2
M-137	829129.33	26716034.14	1,791.70	1,785.54	2
M-141	829044.45	26718195.34	1,754.74	1,754.66	2
M-142	827191.75	26718713.09	1,742.76	1,735.90	2
M-145	829205.27	26717451.15	1,775.53	1,759.68	2
M-146	829203.29	26716991.99	1,778.08	1,767.48	2
M-148A	829030.35	26718357.14	1,754.71	1,755.34	2
M-21	827792.86	26718359.30	1,751.10	1,764.07	2
M-2A	827984.75	26718769.56	1,739.08	1,746.16	2
M-7B	826106.50	26720979.66	1,696.54	1,694.83	2
M-92	827138.09	26717531.94	1,764.04	1,760.86	2
MC100	825791.43	26721421.10	1,686.93	1,679.94	2
MC102	825360.37	26721725.67	1,686.34	1,675.95	2
MC103	825009.31	26721975.65	1,691.72	1,682.92	2
MC105	824275.66	26722336.79	1,693.91	1,685.95	2

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MC109	825294.38	26721609.56	1,686.92	1,687.16	2
MC111	825942.13	26721355.46	1,687.97	1,694.50	2
MC113	825538.88	26722279.41	1,680.34	1,673.44	2
MC114	825835.01	26722158.53	1,679.22	1,675.48	2
MC-120	824999.35	26721888.67	1,690.46	1,693.57	2
MC-125	824944.69	26721928.06	1,690.45	1,688.74	2
MC-127	825805.48	26721281.42	1,688.30	1,696.55	2
MC-128	824642.14	26722133.70	1,690.37	1,688.04	2
MC21	824270.86	26722460.62	1,693.97	1,694.64	2
MC3	825209.50	26721410.01	1,691.36	1,725.73	2
MC3	825209.50	26721410.01	1,691.40	1,725.73	2
MC33	824104.02	26721968.11	1,696.93	1,694.72	2
MC35	824496.97	26722273.85	1,691.77	1,716.18	2
MC41	825520.41	26721583.32	1,686.38	1,681.24	2
MC45	825400.42	26722230.35	1,682.27	1,678.98	2
MC48	824952.84	26722431.11	1,679.50	1,681.90	2
MC49	825182.72	26722360.49	1,680.93	1,679.08	2
MC5	825192.38	26721968.59	1,687.14	1,717.47	2
MC50	825534.87	26722076.15	1,683.34	1,676.82	2
MC51	825647.67	26721900.05	1,684.47	1,679.38	2
MC53	825942.24	26721920.01	1,683.29	1,685.27	2
MC58	824989.32	26722230.58	1,684.52	1,687.17	2
MC6	825207.92	26722160.22	1,683.63	1,712.17	2
MC61	825702.25	26722433.39	1,673.99	1,669.36	2
MC62	825880.72	26722727.61	1,669.00	1,663.04	2
MC63	826321.93	26722717.05	1,669.05	1,660.83	2
MC65	826119.27	26722421.15	1,671.71	1,674.93	2
MC66	826221.26	26722558.00	1,670.24	1,665.41	2
MC71	824635.01	26722508.47	1,677.55	1,677.15	2
MC77	824228.29	26722198.17	1,695.08	1,682.54	2
MC78	824546.42	26722002.33	1,693.88	1,680.12	2
MC8	824684.03	26721897.09	1,694.06	1,719.65	2
MC81	824637.59	26721548.31	1,697.41	1,695.03	2
MC84	824413.48	26722287.11	1,692.78	1,680.61	2
MC87	824735.41	26722276.80	1,685.77	1,681.67	2
MC89	824948.93	26722120.35	1,689.25	1,685.49	2
MC92	825467.59	26722035.56	1,684.93	1,669.18	2
MC94	825912.02	26721595.27	1,686.14	1,685.78	2
MC95	825642.30	26721800.45	1,685.69	1,676.35	2
MC98	825696.66	26721567.14	1,686.42	1,682.42	2
MCF-BW-10A	823621.72	26718620.39	1,735.67	1,714.86	2
MCF-BW-11A	824044.54	26718693.95	1,730.75	1,713.88	2

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Henderson, Nevada

Observation Well Name	Easting	Northing	Target (ft amsl)	Mid-Screen Elevation (ft amsl)	Group
MC-MW-09	825794.59	26716752.37	1,777.23	1,709.98	2
MC-MW-10	825523.88	26717919.06	1,747.21	1,703.91	2
MC-MW-11	824860.15	26717766.00	1,746.64	1,694.50	2
MC-MW-12	826293.89	26717903.04	1,758.89	1,690.04	2
MC-MW-15	825513.65	26718415.14	1,737.17	1,698.75	2
MC-MW-17	826576.82	26717707.84	1,761.54	1,719.92	2
MC-MW-18	826495.85	26718439.15	1,743.27	1,680.60	2
MC-MW-29	825436.29	26721910.09	1,685.97	1,649.05	2
MC-MW-30	825000.22	26721948.80	1,690.56	1,676.73	2
MC-MW-31	824775.80	26722161.64	1,686.70	1,672.35	2
MC-MW-32	826314.47	26721325.15	1,691.74	1,670.25	2
MC-MW-32	826314.47	26721325.15	1,691.50	1,670.25	2
MC-MW-33	825490.04	26721551.65	1,688.08	1,646.20	2
MC-MW-34	824867.82	26721979.95	1,689.68	1,664.90	2
MC-MW-35	824348.73	26722329.67	1,693.46	1,653.66	2
MC-MW-36	825497.46	26722678.55	1,674.28	1,644.38	2
MC-MW-38	826484.48	26722040.65	1,681.30	1,656.41	2
MC-MW-39	826973.77	26718516.45	1,746.16	1,674.86	2
MC-MW-41	826067.64	26719059.20	1,728.85	1,661.23	2
MC-MW-42	826654.91	26719290.51	1,728.10	1,658.50	2
MW-08	841021.90	26734440.76	1,812.87	1,582.82	2
MW-16	826447.64	26719904.41	1,718.23	1,722.61	2
MW-AA	822059.00	26729177.00	1,639.24	1,632.75	2
MW-AB	822535.00	26725941.00	1,663.60	1,655.35	2
MW-AC	822686.00	26723991.00	1,686.64	1,681.80	2
MW-AHX	823443.00	26721020.30	1,703.14	1,678.10	2
MW-AHX	823443.00	26721020.30	1,702.78	1,678.10	2
MW-AJ	826455.00	26726030.00	1,642.01	1,629.30	2
MW-AX-72	818280.30	26714977.50	1,846.99	1,804.10	2
MW-C	819813.00	26715809.70	1,823.24	1,795.40	2
MW-F2	820057.00	26719757.00	1,752.96	1,752.60	2
MW-I	817038.00	26717185.00	1,842.59	1,817.20	2
PC-107	827136.50	26729287.58	1,607.09	1,604.24	2
PC-129	828747.28	26726730.81	1,615.18	1,608.59	2
PC-142	828436.04	26728106.76	1,591.35	1,592.94	2
PC-143	828698.71	26728238.64	1,588.66	1,572.00	2
PC-144	828903.75	26728223.86	1,587.48	1,583.93	2
PC-148	829249.33	26728124.42	1,588.77	1,583.46	2
PC-149	829117.97	26728122.90	1,588.73	1,584.43	2
PC-150	828915.29	26728104.18	1,588.73	1,589.59	2
PMW-4	826635.40	26733437.00	1,571.97	1,553.20	2
PMW-5	826814.80	26733442.70	1,571.47	1,547.30	2

APPENDIX A: GROUNDWATER ELEVATIONS - SECOND QUARTER 2012

Nevada Environmental Response Trust Site

Henderson, Nevada

Observation Well Name	Easting	Northing	Target (ft amsl)	Mid-Screen Elevation (ft amsl)	Group
PMW-6	826821.60	26733562.00	1,571.15	1,548.20	2
PMW-7	826962.14	26733788.63	1,569.82	1,549.57	2
PMW-8	827253.81	26733988.97	1,567.94	1,545.21	2
PW-1	825302.29	26716402.77	1,780.75	1,767.38	2
RIT-04	827202.85	26733337.57	1,569.87	1,545.57	2
RIT-06	827297.23	26733433.85	1,569.44	1,542.78	2
RIT-07	826964.16	26733478.96	1,570.31	1,543.00	2
RIT-08	827127.94	26733558.18	1,569.51	1,541.65	2
RIT-10	827280.22	26733679.40	1,568.80	1,543.65	2
SB-6-8	822827.90	26731997.40	1,613.58	1,608.70	2
TIMETMW-3R	829483.25	26716571.73	1,788.23	1,786.89	2
TMMW-101	829462.76	26715285.26	1,808.39	1,796.91	2
TMPZ-105	828703.77	26720557.27	1,701.99	1,707.68	2
TMPZ-106	829102.42	26720359.15	1,709.31	1,713.25	2
TMPZ-107	829386.70	26720209.59	1,711.53	1,716.60	2
TMPZ-108	829756.76	26720032.09	1,715.03	1,714.46	2
TMPZ-109	830082.66	26719874.25	1,718.42	1,720.59	2
TMPZ-110	830531.86	26719668.76	1,723.07	1,729.00	2
TMW-3	825730.52	26721507.20	1,686.57	1,684.51	2
TR-11	825422.57	26721918.29	1,725.20	1,496.55	2
TR-12	825286.37	26723271.82	1,695.54	1,414.06	2
TR-7	826724.99	26716525.47	1,817.22	1,554.03	2
TWI	825501.20	26726290.60	1,642.37	1,639.30	2
W-S	824421.01	26722094.11	1,694.20	1,682.94	2
WS2-15	822624.20	26722682.80	1,698.20	1,686.90	2
WS4-11	823505.99	26722616.08	1,694.63	1,689.84	2
WS5-10	820784.55	26722650.42	1,713.36	1,704.01	2
WS5-40	820799.59	26722650.60	1,713.26	1,678.56	2
WS5-80	820814.63	26722650.92	1,716.25	1,633.70	2

Notes:

ft amsl = feet above mean sea level

Group 1: Observation Wells are the same as those listed in the Northgate model (Northgate 2010)

Group 2: Additional observation wells data for second quarter 2012

Highlighted wells have groundwater elevations from Northgate model.

Easting and northing location data and mid screen elevations are compiled from All Well Database (McGinley 2012).