

Surface Water Investigation Technical Memorandum

NERT Remedial Investigation – Downgradient Study Area Nevada Environmental Response Trust Site Henderson, Nevada

Final Draft



AECOM

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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.

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List of Abbreviations

cfs cubic feet per second

CSM Conceptual Site Model

DL detection limit

DOI Department of the Interior

DTS Distributed temperature sensing

DVSR Data Validation Summary Report

EB equipment blank

EPA United States Environmental Protection Agency

FB field blank

FD field duplicate

GLW Designation for new sampling locations within the LVW

GLWC Designation for new sampling locations from tributaries and side streams

KM seep sample stations sampled by Kerr McGee

lb/day pounds per day

LVW Las Vegas Wash

LW Designation for pre-existing sampling locations in the LVW

LWC Designation for pre-existing sampling locations from tributaries and side streams

mg/L milligrams per liter

MS matrix spike

MSD matrix spike duplicate

NDEP Nevada Division of Environmental Protection

NERT Nevada Environmental Response Trust

NTU Nephelometric Turbidity Units

PST Pacific Standard Time

QAPP Quality Assurance Project Plan

RI Remedial Investigation

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RM River Mile

RPD Relative Percent Difference

SNWA Southern Nevada Water Authority

SWIP Surface Water Investigation Plan

t/ss tributary/side stream

μg/L micrograms per liter

μS/cm micro-Siemens per centimeter

USGS United States Geological Survey

Definition of Key Terms

Groundwater discharge: approximate location where groundwater is entering the surface, either on land or under water. The groundwater may or may not contain perchlorate.

Groundwater flux: measurement of the amount of groundwater discharging per unit of time (for example gallons per minute or cubic feet per second).

Perchlorate discharge: approximate location where groundwater containing perchlorate is discharging to the surface, either on land or under water.

Perchlorate flux: estimate of the amount of perchlorate present in a stream per unit of time (e.g. pounds per day).

Potential discharge: a location where discharge may be occurring, but where there is still uncertainty.

Seep: an area of slow discharge of groundwater on land or into a body of water.

Spring: a discrete place where groundwater actively discharges on land or into a body of water. Springs often create small rivulets on the ground surface, and may be visible underwater as sand boils or areas of reduced cloudiness.

Sump: a manmade collection structure used to manage surface runoff.

Time: all time presented as HHMM Pacific Standard or Daylight Saving Time (e.g., 0823 or 1741 for 8:23 a.m. and 5:41 p.m.)

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1.0 Introduction

This technical memorandum (memo) describes the surface water investigation conducted for the Nevada Environmental Response Trust (NERT) Remedial Investigation (RI) - Downgradient Study Area in Henderson, Nevada (Figure 1). The surface water investigation consisted of water level gaging and surface water sampling along various reaches of the Las Vegas Wash (LVW) within the Downgradient Study Area. The main purpose of the surface water investigation described in this memo is to identify reaches along the LVW where perchlorateimpacted groundwater discharges to the LVW, which would subsequently reach Lake Mead and the Colorado River, a source of potable water for portions of Arizona, California and Nevada. Determination of the seasonal patterns of perchlorate concentrations is not the intent of the sampling events described in this memo. Although the concentrations in the LVW may vary significantly with time, both diurnally (from wastewater reclamation discharge) and seasonally (due to sporadic rain events, evapotranspiration, etc.), the sampling design described in this memo is intended to provide indication as to which reaches in the LVW are currently receiving significant perchlorate from groundwater or seep discharges. This in turn will assist in focusing additional investigations of perchlorate pathways in groundwater within the Downgradient Study Area. This memo has been prepared as in interim deliverable in advance of the forthcoming NERT RI Report. Except as noted in this memo, the work was conducted per the procedures and methods described in the Surface Water Investigation Plan (SWIP; AECOM 2016a) approved by the Nevada Division of Environmental Protection (NDEP) in December, 2016.

While quarterly sampling has been conducted at a limited number of surface water locations in the past few years, a coordinated effort to quantify perchlorate concentrations relative to flow and location in the LVW has not been undertaken. As part of the planning phase for the surface water investigation in the Downgradient Study Area, sampling of these historical surface water sample locations was conducted in May 2016 to assess surface water conditions in the LVW. The surface water and seep sampling locations sampled in May 2016 were reported in a Surface Water Technical Memorandum (AECOM 2016b) and are shown on **Figure 2**. In addition, the United States Geological Survey (USGS) is currently working under a contract with NDEP to conduct a long-term study of flows and seeps in the LVW, which will provide more insights on the potential inputs of perchlorate in the LVW in the future. This long-term study includes installation of flow gages on the LVW, periodic surveys of seeps along the shoreline, and flow-controlled stream gaging. These data will be incorporated in NERT's RI Report.

The objective of the Downgradient Study Area Investigation is to identify downgradient and cross-gradient subsurface pathways through which perchlorate-impacted groundwater is entering the LVW (**Figure 1**). The surface water sampling program is being conducted to aid in meeting that objective. This surface water investigation consisted of several tiers of sampling to characterize surface water concentrations of key constituents under a variety of flow conditions.

The reaches where perchlorate is entering the LVW can be grossly defined, but additional data are required to direct a subsurface investigation that will identify more specific loci of perchlorate discharge. The gaps include:

- Is there residual perchlorate discharge not being captured by the seep well field that is entering the LVW?
- If so, what are the approximate locations and fluxes of those inputs and the contribution of each location to the perchlorate flux discharging to Lake Mead?
- Of the almost 20 seeps sampled by Kerr McGee in 2000 that were investigated by AECOM in May 2016, only three were located. Where might the other seeps, if still active, be discharging?
- Are seeps, including those known and potentially unknown, contributing perchlorate to the LVW?

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• To what extent do the daily fluctuations in the flow in the LVW, due to waste water discharges, impact the concentrations of perchlorate?

- What is the variability in perchlorate concentrations across each cross-section? Are potential points of groundwater discharge located near the south bank, mid-channel, or near the north bank of the LVW?
- Are there other, unknown, sources of perchlorate to the LVW?

The gaging, sampling and analytical results of the samples collected during this investigation are summarized in this technical memorandum. The data collected during this field effort have been used to estimate perchlorate flux in the LVW and update the Conceptual Site Model (CSM), previously presented in the SWIP. As an interim deliverable, this document presents the sampling and analytical results of the samples collected per the SWIP. All surface water data will be further evaluated by NERT during the preparation of the RI report.

2.0 Field Procedures

Surface water sampling for this investigation was conducted consistent with the SWIP in two field mobilizations: sampling was conducted during the USGS seepage study in December 2016 and the gage installation, transect and discrete sampling was performed in February 2017. Daily field reports are provided in **Appendix A**. Daily Health and Safety sheets are provided in **Appendix B**. **Appendix C** contains the calibration logs for the field equipment used for recording water quality readings.

AECOM's field teams for each of the efforts consisted of two environmental scientists per team who performed the field work in the Downgradient Study Area. The December 2016 sampling consisted of two teams (four staff total) collecting surface water samples over a one-day period in coordination with USGS, who was conducting a seepage study on behalf of NDEP. In February 2017, one team (two staff total) was deployed for a week to install nine staff gages. During the second week, two teams (four staff total) collected 48 surface water samples from locations along the 11 transects ("transect sampling") that were established during the first week, including the eight transects at newly installed staff gages and three transects at established USGS gages. The third week of sampling in February 2017 consisted of five teams plus one coordinator (11 staff total) who collected 180 discrete surface water samples from locations in the LVW and the tributary/ side streams (t/ss), including Wastewater Channel, locations over four days ("discrete sampling"). Details of the field efforts are provided in the following subsections.

The location names for the sampling event coordinated with USGS flow controlled stream gaging in December 2016 and the discrete sampling in February 2017 are generally consistent with historic sampling conducted on the LVW and tributaries. Some of the "LWC" t/ss¹ samples were located in t/ss under current post-weir construction conditions. Others were in the LVW proper, although usually along a bank indicating the coordinates could have historically been in the side stream. New locations (those not previously sampled by Southern Nevada Water Authority [SNWA] or others) are prefaced with "G". The digits following "LW", "GLW", or "T" (for transects) indicate the estimated river mile (RM), which is measured from the high pool elevation of Lake Mead (i.e., the elevation of the water [1,221 feet above mean sea level] when the water reaches the top of the spillway crest of Hoover Dam) (Shanahan and Zhou 2013). Samples collected near each other are designated with "_1", "_2", etc. to distinguish them from main stations. As part of this investigation, a base map of detailed (i.e., to 0.05 mile) RM with locations of samples collected in 2016 and 2017 was created. The identification and estimated RM for every location sampled was evaluated on this base map of RMs. Since many of the locations are historic, the identification of the locations (e.g., LW7.2, etc.) was not changed. However it was noted that several of the sample and location identifications did not match the RM; for example LW7.2 is closer to RM 6.95 than 7.2. Plotting the data by RM was complicated by this. Therefore, a cross-reference table (Table 1) of sample point, weirs, and other features has been developed to assist in the presentation of the data.

2.1 Sampling Event during USGS Seepage Study, December 2016

The USGS plans to conduct two seepage studies in the LVW involving measurements of temperature and specific conductance at approximately 12 sites in the Downgradient Study Area. One seepage study has been completed (December 2016), and one was planned for the summer of 2017. The overall goal of the USGS study is to identify reaches where groundwater is discharging to the LVW (or vice versa) and the design of the studies is to conduct them, to the degree practical, while wastewater is maintained at a low discharge and constant flow. In

¹ "LWC" is the designation for pre-existing sampling locations from tributaries and side streams (t/ss).

December 2016, the treatment plants did not hold flows steady, but provided detailed flow data from their facilities for the date.

The first USGS seepage study event took place on December 8, 2016. Since one goal of the SWIP is to limit the influence of flow/discharge on perchlorate concentrations measured throughout the Downgradient Study Area, AECOM mobilized a four-person field team to the Site in order to conduct a one-day surface water sampling effort simultaneous with the first USGS seepage study event field effort.

On December 7, 2016, the field team arrived at the Downgradient Study Area. The team performed a site reconnaissance determining vehicle access and parking locations; possible canoe launch, and safe wading entrances into the LVW. Once on site the field team was made aware that Clark County Water Reclamation District no longer intended to control wastewater discharges at a constant rate the following day. However, the USGS decided to perform their seepage study the following day regardless of the wastewater discharges and AECOM planned to concurrently conduct the grab surface water sampling fieldwork as well.

2.1.1 Sampling Procedures

During the first AECOM field mobilization on December 8, 2016, 19 surface water locations were sampled between the hours of 0823 and 1545 Pacific Standard Time (PST). Two teams conducted the field work both on foot and by canoe, as conditions required. Water quality parameters using a YSI multi-parameter sonde, which measures temperature, specific conductivity, turbidity, dissolved oxygen, and pH (Table 2), were recorded prior to sample collection at each location. Coordinates were collected in Arc Pad using a handheld Trimble each time a sample location was accessed (Table 3). At sample locations with less than 3 feet of water or where practical, surface water samples were collected by direct immersion of unpreserved dedicated sample bottles. Bottles were filled at mid-depth in order to capture the mixed system. For sample locations with 3 feet of water or deeper, a peristaltic pump with dedicated tubing was used to collect samples at one third and two thirds of the total water depth. A total of 20 samples, not including quality control, were collected during the program (Table 4). Locations of the samples are presented in Figure 3. Quality control samples (including field duplicates) were collected in compliance with the SWIP (AECOM, 2016a), which incorporates by reference the requirements of the Quality Assurance Project Plan (QAPP) (AECOM, 2016c). After collection, samples were stored on ice, and transported that day to the local Test America facility for shipment to their Irvine, California, laboratory for analyses of perchlorate, chloride, bromide and total dissolved solids.

2.1.2 Deviations from SWIP

Due to circumstances beyond control and conditions encountered in the field, the following deviations from the SWIP were noted for the USGS coordination sampling:

- The intention of the first mobilization was to collect surface water samples on a day absent of or with minimal discharge of wastewater to the LWV. This mobilization, which was performed in coordination with the USGS seepage study, was intended to characterize perchlorate concentrations within reaches of the LVW without the influence of discharges from the four treatment plants that discharge to the LVW including the Clark County Water Reclamation District, City of Las Vegas, City of North Las Vegas, and City of Henderson facilities. Despite previous arrangements between USGS and the wastewater treatment facilities, on the day before the scheduled sampling, USGS was informed that the facilities could not hold flows the following day. However, AECOM and USGS conducted their fieldwork as scheduled. Since the wastewater flow rates and fluctuations are the predominant contributors of water flow through the LVW and contain insignificant concentrations of perchlorate, they heavily influence the perchlorate concentrations in the LVW. Timing of the samples collected was therefore plotted with flows from the nearest USGS gage for reference (Appendix D).
- The objective of sample GLW3.78 was to sample a location upstream of the seep KM67 that may have evidence of groundwater input. The southern bank along the Three Kids Weir was examined visually

and using the conductivity meter for possible groundwater seeps. The weir and southern bank are heavily rip-rapped and access to surface water was extremely limited. Due to the presence of rip-rap, only the temperature and dissolved oxygen probes could be submerged to sufficient depths for recording the water quality. The temperature and dissolved oxygen readings of the surface water accessed along the southern bank did not indicate evidence of groundwater influx (i.e., areas of groundwater influx tend to have higher temperature and low dissolved oxygen). Therefore, the location for sample GLW3.78 was selected midway up the weir on a rip-rap slope.

2.2 Staff Gage Installation

Daily water flow in the LVW varies due to discharge of treated water from several wastewater facilities located upstream of the Downgradient Study Area. The wastewater in these daily discharges is assumed to be virtually free of perchlorate and, therefore, will dilute perchlorate concentrations, particularly during periods of higher flow. While existing USGS water level gages are used to calculate flow in various section of the LVW, there is a substantial distance and time lag between them. Additional gages were necessary to further define areas where perchlorate discharge may be entering the LVW and to fill some gaps in the knowledge of flows in the LVW (i.e., fill spatial gaps between USGS stations). The USGS gages are located at:

- USGS Gage 09419698 Below Duck Creek Confluence (RM6.84)
- USGS Gage 09419700 Pabco Road (RM6.08)
- USGS Gage 09419747 Above Bostick Weir (RM5.16)
- USGS Gage 01419749 Above Homestead Weir (RM4.59)
- USGS Gage 09419753 Above Three Kids Wash (RM3.3)

At eight pre-selected locations, a staff gage was installed. At these eight locations plus three locations at USGS gages, a cross-sectional diagram of water depth and bottom contour was developed by recording water depth at intervals across each transect (**Appendix G**). These locations and the rationale for their selection are summarized in **Table 5**. Appendix G also presents example gage heights at the USGS gages and installed staff gages, as an example, from February 1 and 2, 2017. These data indicate flows lag approximately by 1.25 hours between the gages at Duck Creek and Pabco Road, 1 hour from Pabco Road to the gage at Homestead Weir, and 0.75 hour from the gage at Homestead Weir to the gage at Three Kids.

2.2.1 Installation Procedures

Staff gage and transducer assemblies were similar in design to those used by USGS, but modified as appropriate given the temporary nature of the installations. The assemblies were installed at eight locations shown on **Figure 4**. Specific installation points were identified to be reachable from the shore-side access road but generally away from areas frequented by foot traffic.

Except as noted below, each assembly consists of a recording pressure transducer mounted inside an L-shaped length of PVC pipe. The transducer head is mounted inside a perforated PVC protective casing. The transducer cable runs back to shore through the PVC pipe into a short standpipe. The standpipe has a secure, lockable cap to allow access to the data retrieval port.

The staff gage assembly was anchored to the southern bank of the LVW (except as noted below) using fence posts. The standpipe is located at the water's edge or near-shore, depending on the condition of the LVW bottom. The transducer head extends into the channel approximately 10 feet north and is secured with fence posts. Where conditions permit, the horizontal pipes were laid in a shallow trench to both protect and secure the pipe, and to minimize their profile in the LVW.

The staff gages, marked in 0.01-foot increments, were secured to the posts at the channel-end of the pipe assemblies. The gages are located near enough to shore to allow accurate readings from the stream banks and deep enough to cover the range of streamflow variation.

On-shore pressure transducers (barometers) were places at three locations along the study area to provide reference atmospheric pressure data. These transducers are presented in **Figure 4** and are located near:

- Pabco Weir (B6.0), west of the main parking area;
- Lower Narrows Weir (B4.65), at the end of the access road; and
- Three Kids Weir (B3.8), adjacent to the parking area.

2.2.2 Deviations from SWIP

Due to conditions encountered in the field, the following modifications, which deviated from the SWIP, were made to staff gage installation:

- S3.75 (Immediately downstream of Three Kids Weir): Rocky conditions on the shore banks and stream
 bed precluded anchoring the gage assembly on shore and extending it into the wash. Instead, the
 pressure transducer was located approximately one third of the way across the wash from the south
 bank, mounted inside a PVC pipe driven into the sediment. The pipe has a locked cap to allow for
 access to the data port. The staff gage was secured directly to this pipe. This location is accessible by
 foot directly downstream from the Three Kids Weir.
- S6.35 (Downstream of Proposed Sunrise Mountain Weir): Extensive vegetation up to and along the shore of the wash precluded anchoring the gage assembly on the southern bank. The assembly was anchored to the opposite bank and extended into the LVW from the north. On-shore access to this gage is made by crossing the LVW at the Pabco Road Weir and following the LVW upstream approximately one-third mile to the west.

2.3 Transect Sampling

The main objectives of the Transect Sampling were to: 1) assess the variability in perchlorate concentrations across each cross-section and thereby determine any potential points of groundwater discharge within the southern bank, northern bank or within the channel of the LVW; and (2) provide an average perchlorate concentration within each transect.

2.3.1 Sampling Procedures

A total of 11 transects were staked and sampled between January 30, and February 3, 2017 within the Downgradient Study Area (**Figure 5**). Two teams conducted the field work both on foot and by canoe, as conditions required. Two to three transects were sampled each day during the reach specific predicted low-flow period. Flow periods were forecasted using available USGS data and transducer/staff gage data collected during the staff gage installation program. Each targeted transect was field established. From the south bank, a target was identified and staked on the north bank, perpendicular to the LVW. The teams placed stakes along the transect, and proceeded across the channel on foot or by canoe to each staked location. Approximately every 5 to 10 feet along each transect, depending on the channel width, a depth to streambed from water surface was measured and recorded. Transects or cross sections are provided in **Table 6** and shown on **Figure 5**.

Surface water grab samples were subsequently collected near the north and south banks, as well as within the channel within the alignment of each transect. Water quality parameters (temperature, specific conductivity, turbidity, dissolved oxygen, and pH) were measured using a YSI multi-parameter sonde (**Table 7**) prior to sample collection at each location. A minimum of three locations along each transect were sampled and a total of 45

locations were sampled during the transect sampling (**Figure 5**). Coordinates of each sample location were collected in Arc Pad using a hand-held Trimble (**Table 8**). At sample locations with less than 3 feet of water, surface water samples were collected by direct immersion of unpreserved dedicated sample bottles. Bottles were filled from near bottom depth in order to capture any potential seep inputs. For sample locations with 3 feet of water or deeper, a peristaltic pump with dedicated tubing was used to collect samples at one third the total water depth in addition to near bottom. A total of 48 samples, not including quality control, were collected during the program (**Table 9**). Quality control samples (including field duplicates) were collected in compliance with the Quality Assurance Project Plan (QAPP) (AECOM 2016c). After collection, samples were stored on ice, and transported that day to the local Test America facility for shipment to their Irvine, California, laboratory for analyses of perchlorate, chlorate, chloride, bromide and total dissolved solids.

2.3.2 Deviations from SWIP

Due to conditions encountered in the field, the following deviations from the SWIP were noted in transect sampling:

- T3.6 (Mid-way between Three Kids Weir and Rainbow Gardens Weir): The SWIP indicates a transect "T3.6". Pre-made chain-of-custody records and labels listed this transect as T3.5. The samples will remain indicated as T3.5, which is a minor modification from the SWIP. This does not affect the data quality objective of the placement of this transect, which was to evaluate water quality downgradient of Three Kids Weir, but before Rainbow Gardens Weir.
- At sample location 3.5A along transect T3.5, the YSI conductivity reading would not stabilize and therefore a range of observed conductivities was recorded.
- The depth profile across T3.5 was moved approximately 5 feet downstream of Transect sample 3.5D because strong current and wind conditions, combined with water depth, prohibited the field team from safely and accurately maintaining a position closer to the station.
- The specific conductivity across T6.8 was low near the north and south banks (2,304 and 2,614 μS/cm, respectively) but was 3,539 μS/cm (or approximately 50% higher) in the middle of LVW. Due to notable changes in specific conductivity across T6.8, it was decided in the field to collect samples at five locations to help capture any potential inputs of perchlorate that may be indicated by the higher specific conductivity.

2.4 Discrete Sampling

The objectives of the discrete sampling program were to 1) obtain a current snapshot assessment of perchlorate concentrations in the LVW; 2) assess whether the loci of groundwater discharge can be delineated and used to determine loci perchlorate discharge; and 3) determine to what extent daily fluctuations in the flow in the LVW, due to waste water discharges, impact the concentrations of perchlorate.

2.4.1 Sampling Procedures

During the discrete sampling, 19 surface water locations were sampled daily for four consecutive days during daily minimum flow and daily high-end flow within the Downgradient Study Area (**Figure 6**). A sub-set of five locations were also sampled during an estimated mid-flow period. Flow charts with sample times are provided in **Appendix D**. Sampling was conducted from February 6 through February 9, 2017. Five teams conducted the field work both on foot and by canoe, as conditions required. Each team was tasked with accessing and sampling three to five sample locations, depending on accessibility and proximity. Due to the geographical spread of sample locations and intensity of sampling, an additional field person served as the on-shore point person and was responsible for coordinating between teams, collecting and putting samples on ice, preparing samples for laboratory delivery, and ensuring daily field records were complete and correct.

Daily flows were monitored in real time from the office and communicated to the field teams to ensure flow requirements described in the SWIP were met. The flow requirements were:

- Daily low flow was the lower 10th percentile of flow at each location, based on measurements from the nearest USGS gage.
- Daily high-flow target was above the 50th percentile of flow. Since high flows last for eight to ten hours, this percentile encompasses the highest daily flows.
- Daily mid flows were defined as the mid-point on the hydrograph, between the low point and the peak high flow.

Water quality parameters (temperature, specific conductivity, turbidity, dissolved oxygen, and pH) were measured using a YSI multi-parameter sonde (**Table 10**) prior to sample collection at each location. Except as noted in the deviations, below, coordinates were collected in Arc Pad using a hand-held Trimble each time a sample location was accessed (**Table 11**). At sample locations with less than 3 feet of water, surface water samples were collected by direct immersion of unpreserved dedicated sample bottles. Bottles were filled at mid-depth in order to capture the mixed system. For sample locations with 3 feet of water or deeper, a peristaltic pump with dedicated tubing was used to collect samples at one third and two thirds of the total water depth. A total of 180 samples, not including quality control, were collected during the program (**Table 12**). Quality control samples (including field duplicates) were collected in compliance with the QAPP (AECOM 2016c). After collection, samples were stored on ice, and transported that day to the local Test America facility for shipment to their Irvine, California, laboratory for analyses of perchlorate, chlorate, chloride, bromide and total dissolved solids.

2.4.2 Deviations from SWIP

The following deviation from the SWIP was noted during discrete sampling:

- The AECOM field team was notified that three of the five ordered GPS units would not arrive until the afternoon of the first sampling day of the discrete sampling program. To keep the program on schedule, the field team leader decided to pre-locate and stake several of the sampling locations with the two available GPS units. On February 5, one day before the start ("Day 1") of the discrete sampling, the AECOM field team accessed 11 sample locations using the available GPS units for the three teams that did not have GPS units on Day 1. Reliable marking devices such as stakes, flagging and rebar (depending on location conditions) were used to pre-mark the sample stations and all materials were removed from the LVW upon the completion of the discrete sampling program. On Day 1 the three teams without GPS units, navigated to the sampling locations and collected their samples at the pre-marked locations. Details on collection of coordinates are provided in Table 11. The missing GPS units were received by the field teams in the evening of Day 1. For the remainder of the discrete sampling program ("Day 2" through "Day 4") each time a sample was collected the coordinates were collected in Arc Pad on the GPS device, with the following exceptions:
 - One team continued to navigate to the pre-staked locations for stations LW6.05, LW6.7 and LW7.2 and, because samples were collected at the stake every time, there was no need to collect coordinates on the GPS.
 - Coordinates were not collected at stations GLW4.4, GLW4.8 and LW.41 on Day 4. However, station
 markers were still in place and, as with previous days, the samples were collected consistently at
 these markers.

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3.0 Analytical Program

The analytical program was focused on Downgradient Study Area groundwater constituents that may affect water quality in the LVW (**Table 13**), with refinements made based on the results of the May 2016 Surface Water Sampling Program. Surface water samples were analyzed for the following constituents:

- Perchlorate (United States Environmental Protection Agency [EPA] Method 314.0);
- Chlorate (EPA Method 300.1);
- Chloride (EPA Method 300.0);
- Bromide (EPA Method 300.0); and
- Total Dissolved Solids (Standard Method 2540C).

Total dissolved and hexavalent chromium have been analyzed previously, including in the May 2016 surface water sampling program. Based on a review of the data conducted in the SWIP (AECOM, 2016a), AECOM determined that analyzing for dissolved and hexavalent chromium was not necessary to achieve the objectives of the surface water sampling program (i.e., locate areas of contaminated groundwater input). Perchlorate and chlorate concentrations in the seep samples collected in May 2016 were elevated by one to two orders of magnitude compared to adjacent samples in the LVW. Therefore, both perchlorate and chlorate can be used as tracers for this seep water. The SWIP, therefore, did not include additional analyses of dissolved chromium and hexavalent chromium.

As directed by NDEP, field-filtering of water samples for perchlorate analysis was not required. Copies of the analytical results and chain-of-custody records are provided in **Appendix E**.

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4.0 Data Validation

Consistent with the recently revised NDEP requirements, all samples were validated according to Stage 2A data validation procedures. The overall project requirements and completeness levels were met. As presented in the Data Validation Summary Report (DVSR; **Appendix F**), there were:

- 22 surface water samples coordinated with the USGS seepage study (including two field duplicates), one field blank and one equipment blank;
- 55 transect surface water samples (including seven field duplicates), six equipment blanks and three field blanks; and
- 199 discrete surface water samples (including 17 field duplicates), nine equipment blanks and nine field blanks;

Each primary sample, duplicate, equipment blank, and field blank was analyzed for five constituents (perchlorate, chlorate, total dissolved solids, chloride, and bromide) for a total of 1,525 results. A total of 150 results, or 9.8 percent of the total, were qualified by either the laboratory or during data validation. No results were rejected. Based upon the Stage 2A data validation all other results are considered valid and usable for all purposes.

The frequency of qualified results for each component of the surface water investigation was as follows:

- Of the 120 results from the samples coordinated with the USGS seepage study, 17 results (14.2 percent) were qualified.
- Of the 320 results from the transect surface water samples, 36 results (11.3 percent) were qualified.
- Of the 1,085 results from the discrete surface water samples, 97 results (8.9 percent) were qualified.

Qualified results consisted of three categories: results below the practical quantification limit but above the MDL (95 qualified results), results whose corresponding matrix spike percent recoveries exceeded criteria provided in the QAPP (49 results) and results whose field duplicate RPD exceeded criteria provided in the QAPP (6 results). Results in all three categories were qualified with a J-flag indicating that the quantity provided is an estimate.

Due to a lapse in laboratory certification for perchlorate in non-potable water, all perchlorate analyses related to this investigation were collected in deviation from the QAPP. This deviation has been investigated and it was concluded that there was no negative impact on data quality. Corrective actions from both AECOM and the laboratory are being implemented. Details of the deviation, investigation, and corrective action are provided in **Appendix F**.

5.0 Summary of Surface Water Data: Sampling Event during USGS Seepage Study

Surface water samples were collected from 14 locations in the LVW channel (LW3.4, LW3.75, GLW3.78, LW3.85, LW4.1, GLW4.4, GLW4.85, GLW4.9, LW4.95, LW5.3, LW5.9, LW6.05, LW6.7, and LW7.2), one location outside the channel (t/ss location LWC3.7) and 4 locations in Wastewater Channel (LWC6.1_1, LWC6.1_2, GLWC6.1_3, and GLWC6.1_4) (**Figure 3**). **Table 14** presents the analytical results of surface water sampling conducted in coordination with USGS efforts.

5.1 Field Water Quality Parameters

At each location, a YSI multi-parameter sonde was used to measure pH, specific conductivity, dissolved oxygen, turbidity and temperature in the field (**Table 2**). Temperature ranged from 15.87 to 25.29 degrees Celsius. The water temperature was generally coolest in the samples collected in the morning. Samples in the LVW collected later in the day tended to be warmer. Specific conductivity ranged from 1,012 to 4,342 micro-Siemens per centimeter (µS/cm). The highest conductivity of 4,342 µS/cm was measured at LWC3.7 (near the KM67 seep), which is almost two times higher than the next highest reading (2,404 µS/cm at GLW4.85). The pH measurements were generally near neutral to slightly alkaline, ranging from 7.18 (LWC3.7) to 8.48 (LW6.05). Dissolved oxygen in the surface water ranged from 0.65 to 12.19 milligrams per liter (mg/L), and most locations were near or exceeded 100 percent saturation (saturation is the dissolved oxygen concentration corrected for water temperature and daily atmospheric pressure [entered during daily calibration of YSI multi-parameter sondes]). Dissolved oxygen was lowest in LWC3.7, near the KM67 seep (0.65 mg/L; 7.8 percent saturation); all other stations had dissolved oxygen at or greater than 80 percent saturation. The turbidity meter was not functional for all locations. Turbidity that was measured ranged from 3.1 to 8.9 Nephelometric Turbidity Units (NTUs). The high specific conductivity and low dissolved oxygen at LWC3.7 indicates it was likely sampled very close to seep KM67.

5.2 Laboratory Analyses Results

As discussed in Section 3, surface water samples were analyzed for perchlorate, chlorate, chloride, bromide, and Total Dissolved Solids. Concentrations for each analyte are included in **Table 14** and presented on a map of the Downgradient Study Area, plotted on a semi-logarithmic scale by RM and in comparison to May 2016 data, respectively. Figures of the sampling results during the December 2016 USGS Seepage Study are presented for perchlorate (**Figure 7** through **Figure 9**), chlorate (**Figure 10** through **Figure 12**), total dissolved solids (**Figure 13** through **Figure 15**), chloride (**Figure 16** through **Figure 18**), bromide (**Figure 19** through **Figure 21**), and chloride/bromide ratios (**Figure 22** through **Figure 24**). The analytical results are discussed below.

5.2.1 Perchlorate

Perchlorate concentrations generally increase with distance downstream (i.e., declining RM) (**Figure 7** and **Figure 8**). Following is a summary of the perchlorate analytical results from samples collected from upstream to downstream locations in the LVW during the December 2016 USGS Seepage Study:

Upper Reach (LW7.2 to Proposed Location of Sunrise Mountain Weir)

Two samples were collected from the Upper Reach of the Study Area (LW7.2 to the proposed location of Sunrise Mountain Weir). Perchlorate was not detected in either sample (detection limit [DL] of 0.95 µg/L).

Pabco Road Reach (Proposed Location of Sunrise Mountain Weir to LW5.9)

In the Pabco Road Reach, concentrations of perchlorate in the t/ss of the Wastewater Channel were low (1.5 J μ g/L [GLWC6.1_4] and 1.7 J μ g/L [GLWC6.1_3]) and non-detect [< 0.95 μ g/L]). Perchlorate in the LVW increased, but remained below 10 μ g/L in the two samples from this reach.

Main Reach (LW5.9 to Homestead Weir)

Perchlorate was detected in all samples in this reach (> $0.95 \mu g/L$). The concentrations of perchlorate in the Main Reach of the LVW increased slightly from the Pabco Road Reach, and a markedly higher concentration (270 $\mu g/L$ at the new location GLW4.85) downstream of Calico Ridge Weir at RM 4.65. Immediately upstream of Homestead Weir (at RM 4.1), the concentration of perchlorate was 23 $\mu g/L$, which was slightly higher than the perchlorate concentration measured upstream of Calico Ridge Weir at RM 4.7 (14 $\mu g/L$). This indicates that the high perchlorate concentration noted at GLW4.85 may be attributable to a nearby seep that disperses into the overall flow through the LVW. No seep has been documented in the immediate vicinity of Calico Ridge Weir near GLW4.85. However, seep KM-91, sampled by Kerr McGee in 2000 (AECOM, 2016b) is located approximately 500 feet downstream. When sampled in 2000, KM-91 had a perchlorate concentration of 2,100 $\mu g/L$.

Three Kids Reach (Homestead Weir to Rainbow Gardens Weir)

Perchlorate was detected in all samples in this reach (> $0.95 \mu g/L$). The concentrations in the samples from the Three Kids Reach are higher, on average, than in the reaches upstream, ranging in concentration from 20 to 47 $\mu g/L$. In addition, LWC3.7 had a high concentration (1,600 $\mu g/L$), which likely reflects a seep near the Three Kids Weir.

Downstream Reach (Rainbow Gardens Weir to LW3.1)

Perchlorate was detected in all samples in this reach (> 0.95 μ g/L). The Downstream of Rainbow Gardens Weir, the estimated concentration of perchlorate, which was below the reporting limit, was 33 J μ g/L, similar to the reach immediately upstream.

Comparison to May 2016 Grab Samples

The samples collected in May 2016 were targeted at a low flow; the samples collected simultaneously with the USGS Seepage Study in December 2016 were all collected in one day, regardless of flow. While these two data sets are not fully comparable due to differences in flows and locations (different samples were collected in May and December with some overlap), they reflect similar patterns (**Figure 9**). Concentrations of perchlorate trend higher with distance downstream. The unaccounted increase in the Main Reach appears to be from a previously unsampled source at GLW4.85 (RM 4.65 immediately downstream of Calico Ridge Weir). Previous concentrations of perchlorate at LWC3.7 were not elevated (61 µg/L in May 2016), but the sample collected in December 2016 may reflect influence from the seep KM67, which was sampled in May but not in December 2016.

5.2.2 Chlorate

Chlorate was detected (> 10 μ g/L) in all samples and ranged from 20 μ g/L (LWC6.1_2 in the Wastewater Channel) to 4,300 μ g/L (LWC3.7). The concentrations of chlorate are similar to perchlorate concentrations in the reach from Historic Lateral Weir to Three Kids Weir, including a high concentration (980 μ g/L) at GLW4.85 downstream of Calico Ridge Weir (**Figure 10** and **Figure 11**). However, chlorate increased in the t/ss location LWC3.7, which had a perchlorate concentration (4,300 μ g/L) that was higher than surrounding locations. In addition, while perchlorate was non-detect in the Upper Reach, chlorate was detected at concentrations similar to those downstream. This is consistent with previous observations and may indicate that reclaimed water (i.e., non-

NERT outfalls and discharges to the LVW located upstream of the Downgradient Study Area) may be a significant source of chlorate (but not perchlorate) to the LVW.

Compared to May 2016 results, chlorate concentration show greater variability in December, with higher concentrations noted near Calico Ridge Weir and Three Kids Weir (**Figure 12**). The location at Calico Ridge represents a new location not sampled in May 2016. The location at Three Kids Weir (LWC3.7) shows higher concentrations of chlorate in December 2016 (4,300 μ g/L) than in May 2016 (260 μ g/L). LWC3.7 was likely sampled closer to the seep (KM67) in December 2016 since the concentration is similar to the chlorate concentration of 4,400 μ g/L in KM67 when it was sampled in May 2016. KM67 was not sampled in December.

5.2.3 Total Dissolved Solids

Total dissolved solids were detected (> 5.0 mg/L) in all samples (**Figure 13** and **Figure 14**). Total dissolved solids concentrations ranged from 620 to 3,300 mg/L, with the lowest concentration in the Wastewater Channel (LWC6.1_2) and the highest concentration at LWC3.7 near Three Kids Weir, where high concentrations of perchlorate and chlorate were noted. Other surface water samples ranged from 1,000 to 1,600 mg/L.

In May 2016, the sample collected at LWC6.3_1 had a total dissolved solids concentration of 5,000 mg/L; this location was not resampled in December 2016. Compared to May 2016 results, total dissolved solids concentrations were similar in December to locations sampled in May 2016, with lower concentrations noted in the other Wastewater Channel t/ss samples (**Figure 15**). The location at Three Kids Weir (LWC3.7) shows higher concentrations of total dissolved solids than in May, and was likely sampled closer to the seep (KM67) which was not sampled in December.

5.2.4 Chloride and Bromide

Chloride (Figure 16 and Figure 17) was detected (> 0.25 mg/L) in all surface water locations. Chloride concentrations followed the pattern of total dissolved solids, and were generally similar, ranging from 200 to 250 mg/L in most samples. Noted exceptions are a low concentration (84 mg/L) at LWC6.1_2, located in the Wastewater Channel, 350 mg/L at GLWC6.1_4 in the Wastewater Channel downstream of the confluence of the outfalls, and 490 mg/L at LWC3.7. Compared to sampling conducted in May 2016 (Figure 18), chloride concentrations were consistent, with high and low concentrations in the Wastewater Channel samples. Similar to the other constituents measured in the surface water samples, the high concentration of chloride at LWC3.7 noted in December was not noted in May.

Bromide (**Figure 19** and **Figure 20**) was detected (>0.25 mg/L) in all surface water samples, although several samples were "J" flagged during validation. Concentrations were highest at LWC3.7 (2.4 J mg/L) and lowest at LWC6.1_2 (0.31 J mg/L). Similar to sampling conducted in May 2016 (**Figure 21**), bromide concentrations varied in December 2016, with high (1.2 mg/L at LWC6.1_1) and low (0.31 J mg/L at LWC6.1_2) concentrations in the Wastewater Channel samples. During the May 2016 event, bromide concentrations in the Wastewater Channel samples also varied, but were generally higher, ranging from undetected (< 0.5 mg/L at LWC6.1_2) to 3.5 mg/L (LWC6.1_1). Similar to the other constituents measured in the surface water samples, the high concentration of bromide at LWC3.7 reported in December (2.4 J mg/L) was not encountered in May (0.93 mg/L).

The ratios of chloride to bromide (**Figure 22** and **Figure 23**) vary considerably between sample locations with no clear discernable patterns. Higher ratios were noted upstream of Three Kids Weir and Calico Ridge Weir. Compared to sampling conducted in May 2016 (**Figure 24**), chloride to bromide ratios reported for December were highly varied.

5.2.5 Quality Control Samples

Quality control samples collected with the water samples coordinated with the USGS seepage study included two field duplicates (FD), a field blank (FB), and an equipment blank (EB). As required, the laboratory ran quality

control procedures including matrix spike and matrix spike duplicate (MS/MSD) analysis. A detailed discussion of quality control and data validation is included in the DVSR (**Appendix F**).

FD samples were collected for two primary samples (LW3.85-20161208-0.3 and LWC3.7-20160208-0.6) (DVSR Table 5). Acceptable relative percent difference (RPD) between the primary and duplicate sample was specified as 30 percent in the QAPP (AECOM 2016c). Acceptable field and analytical precision was demonstrated for all field duplicate pairs for samples coordinated with the USGS seepage study.

An EB sample and a FB sample were collected and analyzed with this group of samples. Target analytes were not detected in the either the EB or the FB; therefore, no data from samples coordinated with the USGS seepage study were qualified based on the EB or FB.

MS/MSD samples were run as required by the laboratory. One perchlorate MS/MSD recovery exceeded control criteria. Perchlorate results for 9 primary samples (GLWC6.1_3-20161208-0.5, GLWC6.1_4-20161208-0.5, LW3.4-20161208-0.5, LW3.85-20161208-0.3, LW3.85-20161208-0.3-FD, LW4.1-20161208-0.2, LW5.3-20161208-1.0, LW5.3-20161208-2.5, LW6.05-20161208-0.5) were qualified on the basis of this exceedance. While the results from these samples would be expected to be biased high, the bias is not expected to impact the discussion provided in this section. Details of these qualifications are provided in the DVSR (**Appendix F**).

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6.0 Summary of Staff Gage Installation and Cross Sections

Staff gages were installed at eight locations along the LVW (**Figure 4** and **Table 5**). These staff gages were used to fill gaps in flow record from the five USGS stations present in the Downgradient Study Area.

6.1 Gage Readings

The recording pressure transducers (Solinst Leveloggers) installed at the staff gage locations were programmed to record water pressure every 5 minutes (288 times per day). The Levelogger is not a vented unit, so pressure data collected on the datalogger required compensation for changes in barometric pressure. Three recording barometers (Solinst Barologgers) were installed at various locations throughout the study area and programmed to collect barometric pressure readings on a 5-minute frequency. Corrected water pressure readings were then correlated to readings on the attached staff gage through comparison to the manual readings of the staff gage throughout the study period.

The pressure transducers were downloaded several times during the sampling period to help evaluate the timing of transect sampling relative to the nearby flow regime in the LVW, and to help predict that timing during the discrete sampling week. An example of the staff gage readings from S3.8, the staff gage located at transect T3.8 is presented in **Appendix G**. These readings are representative of staff gage readings from January/February 2017. Readings at the eight stations installed by AECOM (collected on a 5-minute frequency) are plotted as calibrated to the readings on the staff gage. Chart blank includes both the automated data collected by the datalogger (after barometric compensation and correlation to staff gage readings) and the manual readings of the staff gage during the study period.

At the end of the study period, all units (Solinst Leveloggers and Solinst Barologgers) were reprogrammed to record pressure on an hourly frequency. The units are still in the field recording data and will be retrieved during a future sampling event.

The temporary stream gages installed in January 2017 have not been calibrated for direct reading of flow and record only the height of the staff gage; however, these gages were used to estimate flows based on the flow data from the nearest USGS gages. The cross-sections of the transects were taken at large intervals that do not lend themselves for the generation of calibrated flow curves. The cross sections provided depth information across the LVW that was used in the transect sample design and can be used in the future to select additional sampling locations and depths.

Readings at the USGS stations (collected on a 15-minute frequency) were adjusted to plot on a similar scale as the AECOM stations. The adjusted USGS data correctly show the timing and magnitude of stream stage change at the respective stations. Most stations show the observed downstream delay in daily low and daily peak streamflow. The gage at Bostick Weir reflects a somewhat different timing. The stream channel in that area was strongly impacted by the storms prior to the sampling period, and conditions may have still been adjusting during the time period represented on the chart.

6.2 Cross Sections

Water depths along the transects were measured at regular intervals (**Table 6**). These data were plotted with sample location and are presented in **Appendix G**.

7.0 Summary of Surface Water Data: Transect Sampling

Surface water samples were collected from 45 locations along 11 transects (**Figure 5**). Three locations were sampled for two depths. **Table 15** presents the analytical results of surface water sampling from transects.

7.1 Field Water Quality Parameters

At each location, a meter was used to measure pH, specific conductivity, dissolved oxygen, turbidity and temperature in the field (**Table 7**). Temperature ranged from 16.50 to 20.09 degrees Celsius. The water temperature was generally coolest in the samples collected in the morning. Samples in the LVW collected later in the day tended to be warmer. Specific conductivity ranged from 2,031 to 7,162 µS/cm. The highest conductivity was measured at T5.3 along the south bank. The pH measurements were generally near neutral to slightly alkaline, ranging from 7.49 (T4.75_D) to 8.30 (T3.5_F). Dissolved oxygen in the surface water ranged from 6.26 to 14.28 mg/L, and most locations were near or exceeded 100 percent saturation. Dissolved oxygen was lowest in samples along T4.75. The turbidity meter was not functional for all locations. Turbidity that was measured ranged from 0.1 to 135.5 NTUs. High turbidity was noted along the south bank of T4.2 and T4.6.

7.2 Laboratory Analyses Results

Surface water samples were collected generally from near-bottom depth. Samples were collected near the south bank, near the north bank and at locations along the transects determined during the field event to represent the flow and channelization of the LVW. **Appendix G** shows the sampling locations along the transects with cross sections of streambed depth. Figures are presented for perchlorate (**Figure 25**), chlorate (**Figure 26**), total dissolved solids (**Figure 27**), chloride (**Figure 28**), bromide (**Figure 29**), and chloride/bromide ratios (**Figure 30**). The results of the laboratory analysis of surface water samples from transect samples are presented in **Table 15** and discussed below. The discussion focuses on the pattern within each transect, with some consideration given to between transect discussion.

7.2.1 Perchlorate

Figure 25 presents the perchlorate data along the transects. Following is a summary of the perchlorate analytical results from samples collected from upstream to downstream transects in the LVW during the February 2017 transect sampling event:

Transect T6.8 (Upstream of Duck Creek Confluence): Perchlorate was not detected (<0.95 μg/L) in four of five samples across this transect. The mid-channel sample was detected at a low concentration (1.6 J μg/L).

Transect T6.35 (Downstream of Proposed Sunrise Mountain Weir): Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations on the north and south bank were identical (18 μ g/L) and the concentration in the midchannel was similar (17 μ g/L) in shallow and deep samples. This increase in concentration from Transect T6.8 was consistent with findings from the May 2016, December 2016 and February 2017 grab sampling where increases were noted downstream of Proposed Sunrise Mountain Weir, close to Pabco Road Weir. No sampling had been conducted by AECOM near the Proposed Sunrise Mountain Weir prior to this transect sampling. This demonstrates that the increase in perchlorate is closer to the Proposed Sunrise Mountain Weir than Pabco Road Weir.

<u>Transect T6.0 (Upstream of Pabco Road Weir):</u> Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations from the south bank to the middle of the channel were identical (16 μ g/L) and the concentration near the north bank was similar (15 μ g/L). This increase in concentration from Transect T6.8 was consistent with

findings from grab sampling conducted by AECOM in 2016 and 2017. During grab sampling events, no marked increase in perchlorate was noted between this Transect and upstream T6.35, so the results of the transect sampling were consistent with other events.

<u>Transect T5.3 (Downstream of Proposed Historic Lateral Weir Expansion):</u> Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations from mid-channel and the north bank were similar (17 and 18 μ g/L, respectively) to each other and upstream transects T6.0 and T6.35. The shallow and deep samples from near the south bank were almost two times the concentration (32 and 33 μ g/L, respectively) which accounts for the slight increase that has been noted during AECOM grab sampling events from sample LW5.3 near the proposed location of the Historic Lateral Weir Expansion.

<u>Transect T4.75 (Downstream of Calico Ridge Weir)</u>: Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations from mid-channel were similar (22 J and 23 J μ g/L) to each other and reflect the mixed concentrations from T5.3. Near both the north bank (420 J μ g/L) and south bank (820 J μ g/L), concentrations were markedly higher. These samples may reflect a slow (i.e., low flow) perchlorate "seep" or may be from incomplete mixing at an upstream location. This data gap should be addressed.

Transect T4.65 (Upstream of Lower Narrows Weir): Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations from northerly mid-channel and north bank samples were similar (31 and 30 μ g/L) to each other and reflect mixed concentrations from the mid-channel and north bank locations of T4.75. They indicate that the north bank perchlorate concentration at T4.75 is not contributing a large flux of perchlorate to the LVW. The concentrations from the south bank sample (57 J μ g/L) and first mid-channel sample from the south bank (51 μ g/L) were markedly higher than the other locations at T4.65. These samples likely reflect the mixing of the higher perchlorate detected along the south bank at T4.75 into the channel of the LVW.

<u>Transect T4.6 (Downstream of Lower Narrows Weir)</u>: Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations of perchlorate in T4.6, located downstream of Lower Narrows Weir, are similar to those in T4.65 which is on the immediate upstream side of Lower Narrows Weir. Concentrations from northerly, mid-channel and north bank samples were similar (30 J and 32 J μ g/L) to each other and to T4.65. The concentrations from the south bank sample (64 J μ g/L) and first mid-channel sample from the south bank (57 J μ g/L) were markedly higher than the other locations at T4.6 and slightly higher than the concentrations immediately upstream in the same locations from T4.65.

Transect T4.2 (Upstream of Homestead Weir): Perchlorate was detected (>0.95 μ g/L) in all samples. Concentrations of perchlorate in T4.2, located immediately upstream of Homestead Weir, are similar to those in T4.65 and T4.6 in that concentrations from northerly mid channel and north bank samples were similar (27 and 25 μ g/L) to each other and lower than in the other samples along the transect. The concentrations at T4.2 were lower than those immediately upstream, but the difference is insignificant. The concentrations from the south bank sample (66 μ g/L) and first mid-channel sample from the south bank (40 μ g/L) were markedly higher than the other locations at T4.2. The mid-channel location is lower than upstream, indicating there may be cross sectional mixing near the Homestead Weir.

<u>Transect T3.8 (Upstream of Three Kids Weir):</u> Perchlorate was detected (>0.95 μ g/L) in all samples. The perchlorate concentration from northerly mid channel sample (32 J μ g/L) was lower than other samples along T3.8. At the north bank, the concentration was 46 J μ g/L, indicating there may be a perchlorate influx just upstream of Three Kids Weir. The concentrations from the south bank sample (57 J μ g/L) and first mid-channel sample from the south bank (45 J μ g/L) were similar to the concentrations immediately upstream at T4.2.

<u>Transect T3.75 (Downstream of Three Kids Weir):</u> Perchlorate was detected (>0.95 μ g/L) in all samples. Transect T3.75 is located immediately downstream of Three Kids Weir. The perchlorate concentration from northerly mid channel sample (31 μ g/L) was lower than other samples along T3.75, similar to the transect T3.8 upstream of Three Kids Weir. At the north bank, the concentration was 85 μ g/L, much higher than the locations upstream on

the north bank (i.e., T3.8 [46 J μ g/L], T4.2 [25 μ g/L], etc.). There may be a perchlorate influx just downstream of Three Kids Weir. The concentrations from the south bank sample (63 J μ g/L) and first mid-channel sample from the south bank (51 J μ g/L) were similar to the concentrations immediately upstream at T3.8, but slightly higher.

Transect T3.5 (Mid-way between Three Kids Weir and Rainbow Gardens Weir): Perchlorate was detected (>0.95 μ g/L) in all samples. Transect T3.5 is located approximately midway between Three Kids Weir and Rainbow Gardens Weir. The perchlorate concentrations increased from the north bank (38 μ g/L) toward the south (47 μ g/L to 66 μ g/L to 98 μ g/L to a maximum of 140 μ g/L) in the sample collected just towards mid-channel from the south bank. The south bank sample contained 73 μ g/L of perchlorate. This pattern indicates that there may be an input of perchlorate to the south of the mid-channel line.

7.2.2 Chlorate

Figure 26 presents the chlorate data along the transects. Following is a summary of the chlorate analytical results from samples collected from upstream to downstream transects in the LVW during the February 2017 transect sampling event:

<u>Transect T6.8 (Upstream of Duck Creek Confluence)</u>: Chlorate was detected (>0.25 μ g/L) in all five samples across this transect. Concentrations ranged from 48 to 73 μ g/L, with the highest chlorate detected mid-channel, consistent with the perchlorate pattern along this transect mid-channel

<u>Transect T6.35 (Downstream of Proposed Sunrise Mountain Weir)</u>: Chlorate was detected (>0.25 μ g/L) in all samples. Concentrations in all samples were similar, ranging from 53 to 57 μ g/L. This increase in concentration from Transect T6.8 is consistent with findings from grab sampling and consistent with the perchlorate data from the transect sampling.

<u>Transect T6.0 (Upstream of Pabco Road Weir):</u> Chlorate was detected (>0.25 μ g/L) in all samples. Concentrations from the south bank to the north were similar (49 to 50 μ g/L). Unlike perchlorate, concentrations of chlorate decrease slightly from Transect T6.8.

<u>Transect T5.3 (Downstream of Proposed Historic Lateral Weir Expansion):</u> Chlorate was detected (>0.25 μ g/L) in all samples. Concentrations from mid-channel and the north bank were similar (54 and 51 μ g/L, respectively) to each other and upstream transects T6.0 and T6.35. The shallow and deep samples from near the south bank were almost three times the concentration (140 and 130 μ g/L, respectively). This is consistent with the pattern of perchlorate in transect samples.

<u>Transect T4.75 (Downstream of Calico Ridge Weir):</u> Chlorate was detected (>0.25 μ g/L) in all samples. Concentrations from mid-channel were similar (83 and 94 μ g/L) to each other and reflect the mixed concentrations from T5.3. Near both the north bank (35 J μ g/L) and south bank (3,100 μ g/L), concentrations were markedly different. The increase on the south bank is similar to but greater in magnitude than the perchlorate increase noted at this transect. On the north bank, perchlorate increased, but chlorate was lower.

<u>Transect T4.65 (Upstream of Lower Narrows Weir):</u> Chlorate was detected (>0.25 μ g/L) in all samples. Concentrations increased from north to south (78 μ g/L, 100 μ g/L, 210 μ g/L and 250 μ g/L) and were higher than T4.75, but the southern samples may reflect mixing from the high chlorate in the south bank sample at T4.75.

<u>Transect T4.6 (Downstream of Lower Narrows Weir)</u>: Chlorate was detected (>0.25 μ g/L) in all samples. Similar to T4.65 upstream of Lower Narrows Weir, concentrations of chlorate in T4.6, located immediately downstream of Lower Narrows Weir, increased from north to south (83 μ g/L, 100 μ g/L, 210 μ g/L and 260 μ g/L).

<u>Transect T4.2 (Upstream of Homestead Weir)</u>: Chlorate was detected (>0.25 μg/L) in all samples. The pattern of chlorate in T4.2, upstream of Homestead Weir, followed that of T4.6 and T7.65. Concentrations increased from

north to south (78 μ g/L, 88 μ g/L, 170 μ g/L and 260 μ g/L), and were slightly lower than the immediate upstream transects.

<u>Transect T3.8 (Upstream of Three Kids Weir):</u> Chlorate was detected (>0.25 μ g/L) in all samples. The chlorate concentration mimics that of perchlorate from this transect, with the northerly mid-channel sample (110 μ g/L) lower than other samples along T3.8. At the north bank, the concentration was 130 μ g/L. The concentrations from the south bank sample (270 μ g/L) and first mid-channel sample from the south bank (210 μ g/L) were similar to the concentrations immediately upstream at T4.2 and those in T4.6 and T4.65, further upstream.

Transect T3.75 (Downstream of Three Kids Weir): Chlorate was detected (>0.25 μ g/L) in all samples. Transect T3.75 is located immediately downstream of Three Kids Weir. The perchlorate concentration from the northerly mid-channel sample (110 μ g/L) was lower than other samples along T3.75, similar to the transect T3.8 upstream of Three Kids Weir. At the north bank, the concentration was 260 μ g/L, which is much higher than upstream locations on the north bank. This pattern is consistent with perchlorate concentrations. The concentrations from the south bank sample (270 μ g/L) and first mid-channel sample from the south bank (210 μ g/L) were identical to the concentrations immediately upstream at T3.8.

Transect T3.5 (Mid-way between Three Kids Weir and Rainbow Gardens Weir): Chlorate was detected (>0.25 μ g/L) in all samples. Transect T3.5 is located approximately midway between Three Kids Weir and Rainbow Gardens Weir. The chlorate concentrations increase from the north bank (140 μ g/L) toward the south (190 μ g/L to 270 μ g/L to 420 μ g/L to a maximum of 430 μ g/L) in the sample collected just towards mid-channel from the south bank. This is the same pattern observed in the perchlorate data. The south bank sample contained 310 μ g/L of perchlorate. This pattern indicates that there may be an input of chlorate mid-channel close to the south bank.

7.2.3 Total Dissolved Solids

Figure 27 presents the total dissolved solids data along the transects. Following is a summary of the total dissolved solids analytical results from samples collected from upstream to downstream transects in the LVW during the February 2017 transect sampling event:

<u>Transect T6.8 (Upstream of Duck Creek Confluence)</u>: Total dissolved solids were detected (>5 mg/L) in all five samples across this transect. Concentrations ranged from 1,200 to 1,900 mg/L, with the highest concentration detected mid-channel, consistent with the perchlorate and chlorate.

<u>Transect T6.35 (Downstream of Proposed Sunrise Mountain Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations in all samples were similar, ranging from 1,500 to 1,600 mg/L. This reflects a well-mixed channel.

<u>Transect T6.0 (Upstream of Pabco Road Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were identical (1,500 mg/L). This reflects a well-mixed channel.

<u>Transect T5.3 (Downstream of Proposed Historic Lateral Weir Expansion):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were identical (1,500 mg/L). This reflects a well-mixed channel.

<u>Transect T4.75 (Downstream of Calico Ridge Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from mid-channel were identical (1,600 mg/L) to each other and upstream at T5.3 and T6.0. Near both the north bank (2,100 mg/L) and south bank (2,200 mg/L), concentrations were markedly higher. The increase is similar to the perchlorate increase noted on the north bank and the chlorate and perchlorate increase noted at the south bank at this transect.

<u>Transect T4.65 (Upstream of Lower Narrows Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were identical (1,500 mg/L). The observed higher concentrations at upstream T4.75 were not apparent. This reflects a well-mixed channel.

<u>Transect T4.6 (Downstream of Lower Narrows Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were similar (1,500 to 1,600 mg/L). This reflects a well-mixed channel.

<u>Transect T4.2 (Upstream of Homestead Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were identical (1,400 mg/L). Concentrations were slightly lower than the immediate upstream transects, similar to perchlorate and chlorate levels in this area. This reflects a well-mixed channel.

<u>Transect T3.8 (Upstream of Three Kids Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were similar (1,400 to 1,500 mg/L). This reflects a well-mixed channel.

<u>Transect T3.75 (Downstream of Three Kids Weir):</u> Total dissolved solids were detected (>5 mg/L) in all samples. Concentrations from the south bank to the north were similar (1,400 to 1,500 mg/L) and identical to the T3.8, located immediately upstream. This reflects a well-mixed channel.

<u>Transect T3.5 (Mid-way between Three Kids Weir and Rainbow Gardens Weir):</u> Total dissolved solids were detected (>5 mg/L) all samples. Transect T3.5 is located approximately midway between Three Kids Weir and Rainbow Gardens Weir. The total dissolved solids concentrations were generally consistent from the north bank toward the south, ranging from 1,500 to 1,600 mg/L. The south bank sample contained 2,700 mg/L total dissolved solids.

7.2.4 Chloride and Bromide

7.2.4.1 Chloride

Figure 28 presents the chloride data along the transects. Following is a summary of the chloride analytical results from samples collected from upstream to downstream transects in the LVW during the February 2017 transect sampling event:

<u>Transect T6.8 (Upstream of Duck Creek Confluence)</u>: Chloride was detected (>0.25 mg/L) in all five samples across this transect. Concentrations ranged from 230 to 290 mg/L, with the highest chloride detected midchannel, consistent with the pattern observed for other constituents.

<u>Transect T6.35 (Downstream of Proposed Sunrise Mountain Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations in all samples were similar, ranging from 260 to 270 mg/L.

<u>Transect T6.0 (Upstream of Pabco Road Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations from the south bank to the north were similar (280 to 290 mg/L). Chloride was slightly higher in T6.0 than upstream at T6.35.

<u>Transect T5.3 (Downstream of Proposed Historic Lateral Weir Expansion):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations from the south bank to the north were similar (290 to 300 mg/L), and were slightly higher in T5.3 than upstream at T6.0.

<u>Transect T4.75 (Downstream of Calico Ridge Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations from mid-channel were similar (260 and 270 mg/L) to each other. Near both the north bank (350

mg/L) and south bank (360 mg/L), concentrations were markedly higher. A similar pattern was noted for perchlorate and total dissolved solids.

<u>Transect T4.65 (Upstream of Lower Narrows Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations were similar from north (260 mg/L) to the south bank (280 mg/L). Similar to total dissolved solids, the observed higher concentrations at upstream T4.75 were not apparent.

<u>Transect T4.6 (Downstream of Lower Narrows Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations in all samples were 280 mg/L.

<u>Transect T4.2 (Upstream of Homestead Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations were similar in all samples (260 to 270 mg/L).

<u>Transect T3.8 (Upstream of Three Kids Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations were similar in all samples (250 to 260 mg/L) and slightly lower than upstream at T4.2.

<u>Transect T3.75 (Downstream of Three Kids Weir):</u> Chloride was detected (>0.25 mg/L) in all samples. Concentrations in all samples were 280 mg/L.

Transect T3.5 (Mid-way between Three Kids Weir and Rainbow Gardens Weir): Chloride was detected (>0.25 μg/L) in all samples. Transect T3.5 is located approximately midway between Three Kids Weir and Rainbow Gardens Weir. The chlorate concentrations increase from the north bank (260 mg/L) toward the south, increasing to 280 mg/L in the sample collected just towards mid-channel from the south bank. This is the same pattern observed in the perchlorate data. The south bank sample contained 420 mg/L of chloride. This pattern indicates that there may be an input of chloride mid-channel close to the south bank.

7.2.4.2 Bromide

Figure 29 presents the bromide data along the transects. Following is a summary of the bromide analytical results from samples collected from upstream to downstream transects in the LVW during the February 2017 transect sampling event:

<u>Transect T6.8 (Upstream of Duck Creek Confluence)</u>: Bromide was detected (>0.25 – 0.50 mg/L) in all five samples across this transect. Concentrations ranged from 0.64 to 1.8 mg/L, with the highest bromide detected mid-channel, consistent with the pattern observed for other constituents. The concentrations of bromide at Transect T6.8 were generally higher than other LVW transect samples. Downstream at Transect T4.65 and Transect T4.6, bromide concentrations are of similar magnitude (see below). Overall, bromide is variable and a trend is not discernible.

<u>Transect T6.35 (Downstream of Proposed Sunrise Mountain Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in most samples. Bromide was not detected (< 0.25 mg/L) near the north bank. Concentrations in other samples were similar, ranging from 0.31 J to 0.57 mg/L, with a higher concentration noted mid-channel.

<u>Transect T6.0 (Upstream of Pabco Road Weir):</u> Bromide was not detected (<0.50 mg/L) in all samples.

<u>Transect T5.3 (Downstream of Proposed Historic Lateral Weir Expansion):</u> Bromide was detected (>0.25-0.50 mg/L) in one sample on the south bank (0.30 J mg/L). Bromide was not detected (<0.50 mg/L) in the other samples.

<u>Transect T4.75 (Downstream of Calico Ridge Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in most samples. Bromide was not detected (< 0.50 mg/L) near the north bank. Concentrations in other samples were similar, ranging from 0.57 to 0.69 J mg/L, with a higher concentration noted near the south bank.

<u>Transect T4.65 (Upstream of Lower Narrows Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in all samples. The concentration in the sample collected towards mid-channel from the north bank (0.74 J mg/L) was lower than the north bank (1.7 mg/L) and the two southern samples (1.8 and 1.4 mg/L).

<u>Transect T4.6 (Downstream of Lower Narrows Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in most samples. Bromide was not detected (< 0.25 mg/L) towards mid-channel from the north bank. Concentrations in other samples were similar, ranging from 1.6 to 1.7 mg/L.

<u>Transect T4.2 (Upstream of Homestead Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in all samples. Concentrations were similar, ranging from 0.58 to 0.67 J mg/L.

<u>Transect T3.8 (Upstream of Three Kids Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in most samples. Bromide was not detected (< 0.50 mg/L) near the north bank. Concentrations in other samples were similar, ranging from 0.53 J to 0.60 J mg/L.

<u>Transect T3.75 (Downstream of Three Kids Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in the samples near the south bank and mid-channel. Bromide was not detected (< 0.50 mg/L) in the sample collected near the north bank. Bromide was detected at similar concentration in the mid-channel and south bank samples (0.33 J – 0.34 J mg/L).

<u>Transect T3.5 (Mid-way between Three Kids Weir and Rainbow Gardens Weir):</u> Bromide was detected (>0.25 – 0.50 mg/L) in the samples near the north and south banks. Bromide was not detected (< 0.50 mg/L) in three samples collected mid-channel. Bromide was detected (0.64 J mg/L) in the sample collected towards mid-channel of the south bank. At the north bank, the concentrations (0.70 to 0.84 J mg/L) were slightly lower than the south bank (1.1 mg/L).

7.2.4.3 Ratio of Chloride to Bromide

Figure 30 presents the chloride/bromide ratio along the transects. Following is a summary of the chloride-to-bromide ratios based on samples collected from upstream to downstream transects in the LVW during the February 2017 transect sampling event:

<u>Transect T6.8 (Upstream of Duck Creek Confluence)</u>: The chloride/bromide ratio was higher near the north bank (312 and 359) than mid-channel and south, where the ratio ranged from 161 to 192.

<u>Transect T6.35 (Downstream of Proposed Sunrise Mountain Weir):</u> The ratio at the north bank (1,080) was higher than other locations. Mid-channel was 474 to 844 and the ratio at the south bank was 839.

<u>Transect T6.0 (Upstream of Pabco Road Weir):</u> At transect T6.0, the chloride/bromide ratio was similar across the transect (560 to 580).

<u>Transect T5.3 (Downstream of Proposed Historic Lateral Weir Expansion):</u> At transect T5.3, the chloride/bromide ratio was similar to transect T6.0 (580) with the exception of the south bank (ratio of 1,000).

<u>Transect T4.75 (Downstream of Calico Ridge Weir):</u> The chloride/bromide ratio was higher on the north bank (700) and south bank (522) than mid-channel (441 to 474).

<u>Transect T4.65 (Upstream of Lower Narrows Weir)</u>: The chloride/bromide ratio was highest just towards midchannel of the north bank (351). The other samples ranged from 144 to 200.

<u>Transect T4.6 (Downstream of Lower Narrows Weir):</u> Similar to T4.65, the chloride/bromide ratio was highest just towards mid-channel of the north bank (1120). The other samples ranged from 165 to 175.

<u>Transect T4.2 (Upstream of Homestead Weir):</u> The chloride/bromide ratio along T4.2 was relatively even, ranging from 388 to 466.

<u>Transect T3.8 (Upstream of Three Kids Weir):</u> The chloride/bromide ratio along T3.8 was relatively even, ranging from 433 to 500.

<u>Transect T3.75 (Downstream of Three Kids Weir):</u> At transect T3.75, located immediately downstream of Three Kids Weir, the chloride/bromide ratio is lower on the north bank (560) than the other three locations which ranged from 824 to 848.

<u>Transect T3.5 (Mid-way between Three Kids Weir and Rainbow Gardens Weir):</u> The chloride/bromide ratio downstream at T3.5 was higher in mid-channel locations than north (310 to 357) or south bank (382). The mid-channel ratios ranged from 438 to 540, lower than those upstream at T3.75.

7.3 Quality Control Samples

Quality control samples collected with the Transect samples included seven FD, three FB, and six EB. As required, the laboratory ran quality control procedures including MS/MSD analysis. A detailed discussion of quality control and data validation is included in the DVSR (**Appendix F**).

FD samples were collected for seven primary samples (DVSR Table 5). Acceptable RPD between the primary and duplicate sample was specified as 30 percent in the QAPP (AECOM 2016c). Acceptable field and analytical precision was demonstrated for all FD pairs except for the bromide analysis of sample T3.8C-20170130-0.4 and its duplicate.

EB samples (six) and FB samples (three) were collected and analyzed. Target analytes were either not detected in EBs and FBs or did not require data qualification. Sample concentrations were compared to concentrations detected in the EB and FB as required by the QAPP (AECOM 2016c). No sample data were qualified based on the EB or FB results because no analytes were detected in those samples.

MS/MSD samples were run as required by the laboratory. Four of the perchlorate MS/MSD recoveries exceeded control criteria. Perchlorate results for 18 samples were qualified on this basis. These qualified results would be expected to be biased high and include several samples with relatively high concentrations of perchlorate (T4.75A-20170201-1.3 [820 μ g/L], T4.75A-20170201-1.3-FD [830 μ g/L], and T4.75D-2017-201-1.5 [420 μ g/L]. Despite the high bias, the conclusion that these locations likely represent a nearby seep is still considered valid. Details of these qualifications are provided in Section 2.1.2 of the DVSR (**Appendix F**).

AECOM 8-1

8.0 Summary of Surface Water Data: Discrete Sampling

Surface water samples were collected from 14 locations in the LVW channel (LW3.4, LW3.75, GLW3.78, LW3.85, LW4.1, GLW4.4, GLW4.85, GLW4.9, LW4.95, LW5.3, LW5.9, LW6.05, LW6.7, and LW7.2), one location outside the channel (t/ss location LWC3.7) and four locations in Wastewater Channel (LWC6.1_1, LWC6.1_2, GLWC6.1_3, and GLWC6.1_4) (Figure 6). Samples were collected from each location at least twice a day during the sample period, targeting both the typical low-flow and high-flow periods. In addition, several locations were sampled a third time each day targeting moderate flow conditions. For purposes of this program, the daily low flow ("daily minimum flow") was defined as the lower 10th percentile of daily flows. For high flows, the 90th percentile of daily flow had been proposed as the sampling target but was relaxed to the 50th percentile to allow the field teams to work in safe conditions during daylight hours (the 90th percentile of daily flow occurs from approximately 0000 to 0400). Mid flows are those flows occurring approximately half way between the daily minimum and daily maximum flow on the hydrograph. Table 16 presents the analytical results of discrete surface water sampling.

8.1 Field Water Quality Parameters

At each location, a meter was used to measure pH, specific conductivity, dissolved oxygen, turbidity and temperature in the field (**Table 10**). During low flows, temperature ranged from 14.77 to 22.89 degrees Celsius. The water temperature was generally coolest in the samples collected in the morning. Temperature ranges increased at high flows (16.30 to 23.64 degrees Celsius).

The highest conductivity of 4,342 μ S/cm was measured at LWC3.7 (near the KM67 seep). The pH measurements were generally near neutral to slightly alkaline, ranging from 7.32 (GLWC6.1_3) to 8.41 (LW3.4) at low flows and 7.30 (GLWC6.1_3) to 8.46 (LW3.85) at high flows.

Dissolved oxygen in the surface water ranged from 5.2 to 11.63 mg/L at low flow and 2.1 to 10.30 mg/L at high flow, and most locations were near or exceeded 100 percent saturation (saturation was corrected for temperature and atmospheric pressure). Dissolved oxygen was lowest in LWC3.7, near the KM67 seep, during low and high flows.

The turbidity meter was not functional for all locations. Turbidity that was measured ranged from 0.0 to 14.2 NTUs at low flow and 0.0 to 13.5 NTU at high flow. The water quality data at LWC3.7 (low dissolved oxygen, low turbidity) indicates it was likely sampled very close to seep KM67.

8.2 Laboratory Analyses Results

In February 2017, the concentrations of target contaminants in the LVW and t/ss confirmed other recent findings (May 2016) of an overall reduction at most locations sampled than in previous sampling events. The results of the 2017 sampling are presented in **Figure 31** through **Figure 48**, and discussed below.

8.2.1 Perchlorate

Perchlorate data from the discrete sampling are provided in **Table 16** and presented in **Figure 31** (low-flow sampling results), **Figure 32** (high-flow sampling results) and **Figure 33** (mid-flow sampling results). The results are discussed by reach, below.

Upper Reach (LW7.2 to Proposed Location of Sunrise Mountain Weir)

AECOM 8-2

Concentrations of perchlorate in surface water were not detected in the upper portions of the LVW (<0.95 µg/L at LW7.2 and at LW6.7] during any of the low-flow, high-flow, or mid-flow samples over four days of sampling.

Pabco Road Reach (Proposed Location of Sunrise Mountain Weir to LW5.9)

By the time water in the LVW reaches the Pabco Road Weir, perchlorate concentrations under low-flow conditions increase to 18 to 19 μ g/L at LW6.05, and 15 to 21 μ g/L at LW5.9. As would be expected, concentrations are highly flow dependent, with concentrations under high-flow conditions of 6.0 to 8.9 μ g/L at LW6.05, and 6.7 to 10 μ g/L at LW5.9. During periods of moderate flow (mid-flow), concentrations ranged from 8.0 J to 17 μ g/L at LW6.05.

It is not known how much the increase in this reach is attributable to the addition of perchlorate that may be transported via groundwater discharge from the Kerr-McGee sump area and how much may be attributable to other, more diffused groundwater inputs from uncharted paleochannels, underground sources, or other discharges such as uncaptured groundwater from the American Pacific Corporation (AMPAC; Endeavor) perchlorate plume. Please refer to Endeavor (2017) for additional information on groundwater impacts and perchlorate mass entering the LVW from this plume. During the February 2017 sampling period, samples collected in the Wastewater Channel that enters the LVW near the Pabco Road Weir indicated that channel contributed relatively minor amounts of perchlorate. Of the 33 samples collected in that channel, only four contained perchlorate above method detection limits: one of nine samples from LWC6.1_1 at 1.3 J μ g/L; two of eight samples from GLWC6.1_3 at 1.1J μ g/L and 1.5J μ g/L; and one of eight samples from GLWC6.1_4 at 1.3J μ g/L. All of the eight samples at LWC6.1_2 were <0.95 μ g/L.

Main Reach (LW5.9 to Homestead Weir)

In the region of the Proposed Historic Lateral Weir Expansion, sampling results from LW5.3 indicate similar results to upstream samples near Pabco Road. Water depths at LW5.3 were greater than 3 feet, so samples were collected from a both a shallow depth (1.0 to 1.2 feet below water surface) and a deeper interval (2.0 to 2.4 feet below surface). Results for samples collected from different depths under the same flow conditions did not vary significantly. During low-flow conditions, the shallow sample ranged from 17 to 22 μ g/L with a median of 18 μ g/L, and the deep samples ranged from 16 to 30 μ g/L with a median of 19 μ g/L. During high-flow conditions, the shallow sample ranged from 8.9 to 11 μ g/L with a median of 10 μ g/L, and the deep samples ranged from 8.8 to 12 μ g/L with a median of 9.3 μ g/L.

Near the eastern edge of the Henderson Landfill Site (LW4.95), perchlorate results indicated an increase in perchlorate concentration, with 19 to 24 μ g/L during low flows, 12 to 22 μ g/L during moderate flows, and 10 to 13 μ g/L during high flows. LW4.95 is located downstream of the Bostick Weir. Between the Bostick and Calico Ridge Weirs, the LVW channel is split into two subchannels by a large island, with LW4.95 located in the northern channel. Because most of the perchlorate increase is located along the southern shore, the sampling location may be isolated to a degree from the mixing in of any upstream inputs. GLW4.9 is located a short distance downstream in the southern channel, and sample results were higher. Perchlorate concentrations at GLW4.9 were 22 to 28 J μ g/L during low flows, and 14 to 21 μ g/L during high flows.

Below the Calico Ridge Weir (GLW4.85), samples collected near the south bank contained variable and high concentrations of perchlorate. The velocity of water is very low in that area so any waters disturbance near the time of sampling (either from entering the water to sample, or spooking of resident fish) may have a significant impact upon results. Perchlorate concentrations at GLW4.85 were 290 to 1,100 μ g/L during low flows, and 180 to 750 μ g/L during high flows.

Concentrations of perchlorate in surface water were higher at the Homestead Weir. At station GLW4.4, immediately upstream of the Weir, perchlorate results were 25 to 28 μ g/L during low flows, 25 to 33 μ g/L during moderate flows, and 15 to 23 μ g/L during high flows Much of that increase may be attributable to the high

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concentrations found near the Calico Ridge Weir (GLW4.85), which indicate groundwater may be contributing a significant amount of perchlorate in that area.

Three Kids Reach (Homestead Weir to Rainbow Gardens Weir)

Sampling results indicate significantly higher perchlorate concentrations below the Homestead Weir; however, the location of LW4.1 was near the southern quarter of the channel. Downstream results indicate that surface water sampled at LW4.1 was either not sufficiently mixed from upstream groundwater seepage, or was near a location of seepage. Perchlorate results from LW4.1 were 40 to 53 μ g/L during low flows, and 35 to 38 μ g/L for three of the four high-flow samples. The fourth high-flow sample from LW4.1 (LW4.1-20170208-16:33-0.4) returned a result of <0.95 μ g/L. Other analytes for that sample (bromide, chlorate, chloride, and total dissolved solids) were within the range of other high-flow samples, so the perchlorate result is considered to be anomalous.

Sample results for stations located mid-channel near the Three Kids Weir indicate concentrations similar to those found above the Homestead Weir (at GLW4.4). Above the Three Kids Weir, perchlorate concentrations in samples from LW3.85 were 28 to 36 μ g/L during low flows, and 24 to 32 μ g/L during high flows. Below the weir, perchlorate concentrations in samples from LW3.75 were 26 to 35 J μ g/L during low flows, and 23 to 31 μ g/L during high flows. Two other stations were sampled near the southern shore at the Three Kids Weir. At station GLW3.78, water sampled from below the surface of the boulder structure of the weir indicated perchlorate concentrations of 40 to 54 μ g/L during low flows, and 40 to 48 μ g/L during high flows. During the sampling period, the fluctuation in flows in the LVW did not proportionally impact the perchlorate concentrations. Near the toe of the weir, samples collected at LWC3.7 had concentrations of 550 to 670 μ g/L during low flows, and 770 to 1,100 μ g/L during high flows. LWC3.7 is located in a very low velocity section of the channel a short distance upstream of spring KM-67. That spring was sampled in May 2016 and found to have a perchlorate concentration of 1,500 μ g/L. Groundwater discharging from the spring is significantly clearer. Under the often cloudy conditions of surface water in the LVW, that clearer water could be seen backing up into the vicinity of LWC3.7, particularly during higher flow periods.

Downstream Reach (Rainbow Gardens Weir to LW3.1)

Samples collected at the Rainbow Gardens Weir indicate a rise in perchlorate concentrations of surface water within the LVW. The results from LW3.4 ranged from 42 to 53 μ g/L during low flows, 42 to 57 μ g/L during moderate flows, and 32 to 39 μ g/L during high flows. Most of that increase is attributed to the discharge of groundwater at KM-67. Some additional contaminated groundwater may be entering the LVW from the south in the vicinity of KM-67; however, the nearby topography and geology suggests a groundwater divide a short distance downstream. In this portion of the LVW, the valley floor crosses the volcanic rocks of the Horse Spring Formation (Rainbow Garden and Frenchman Mountain). Those rocks represent a topographic high to the north. A short cliff consisting of lithified alluvial deposits is located approximately 100 feet downstream of KM-67, representing a topographic high extending to the south. With the water table typically reflecting topography, these features suggest the presence of groundwater divides in the vicinity of the Three Kids Weir. Faulting is also present in this area. The groundwater flow in this area is complex and not well characterized. There may be groundwater upwelling and/or a groundwater divide in the vicinity of the Three Kids Weir.

8.2.2 Chlorate

Chlorate data from the discrete sampling are provided in **Table 16** and presented in **Figure 34** (low-flow sampling results), **Figure 35** (high-flow sampling results) and **Figure 36** (mid-flow sampling results). The results are discussed, below.

Chlorate was detected above the detection limit ($> 20 \mu g/L$) in all samples from the LVW channel and t/ss. Chlorate concentrations fluctuated with streamflow magnitude in a fashion similar to observations for perchlorate. Several of the results represented outliers including an anomalously low value during high flow sampling at

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LWC3.7 on Day 3(80 μ g/L compared to other results of 2,500 (Day 1), 2,600 (Day 2) and 3,100 (Day 4) μ g/L for other high-flow samples at this location), and an anomalously high value at LW4.95 (2,000 μ g/L on Day 3 compared to other results of 57 to 78 μ g/L for high-flow samples).

Within those stations thought to represent conditions in the main channel of the LVW, chlorate concentrations increased in the downstream direction. Between LW7.2 and LW5.3, chlorate results are relatively stable at 50 to 120 μ g/L during low-flow conditions and 43 to 69 μ g/L during high-flow conditions. Samples collected between the Bostick and Calico Ridge Weirs demonstrate an increase in chlorate concentration. In the northern channel of the LVW (LW4.95), chlorate results were 79 to 86 μ g/L during low flow, 70 to 91 μ g/L during moderate flow, and 57 to 78 μ g/L during high flows, with an anomalous peak of 2,000 μ g/L measured in a sample on Day 3 high-flow. Downstream results in the southern channel (GLW4.9) indicate chlorate is about 10 μ g/L higher, with 87 to 100 μ g/L during low flow, and 71 to 91 μ g/L during high flow.

Above the Homestead Weir, chlorate results indicate another increase in concentration. Results from GLW4.4 were 99 to 120 μ g/L during low flows, 93 to 140 μ g/L during moderate flows, and 79 to 110 μ g/L during high flows. Similar concentrations were observed at the two mid-channel sampling stations near the Three Kids Weir (LW3.85 and LW3.75). Those concentrations ranged from 100 to 140 μ g/L during low flows, and 100 to 130 μ g/L during low flows.

By the time the LVW reached the Rainbow Gardens Weir (LW3.4), concentrations of chlorate had risen to 170 to 190 µg/L during low flows, 160 to 200 µg/L during moderate flows, and 130 to 160 µg/L during high flows.

The highest chlorate concentrations were found in samples collected near regions of suspected groundwater discharge. Below the Calico Ridge Weir (GLW4.85), chlorate concentrations were 1,200 to 4,300 μ g/L during low flow, and 900 to 3,000 μ g/L during high flow. Two other stations in the LVW whose results were impacted by the nearby discharge of groundwater (LW4.1 and GLW3.78) had chlorate concentrations that were elevated relative to concentrations at other nearby stations (160 to 230 μ g/L).

Samples collected in the wastewater channel entering the LVW near the Pabco Road Weir had moderately low concentrations of chlorate (81 to 110 μ g/L at LW6.1_1, 47 to 91 μ g/L at LW6.1_2, 76 to 110 μ g/L at GLWC6.1_3, and 71 to 100 μ g/L at GLWC6.1_4).

8.2.3 Total Dissolved Solids

Total dissolved solids data from the discrete sampling are provided in **Table 16** and presented in **Figure 37** (low flow sampling results), **Figure 38** (high-flow sampling results) and **Figure 39** (mid-flow sampling results). The results are discussed below.

Total dissolved solids were detected above the detection limit (> 5 mg/L) in all samples from the LVW channel and t/ss. Total dissolved solids concentrations in the samples other than the Wastewater Channel ranged from 1,200 to 2,200 mg/L during low flow, 1,300 to 1,600 mg/L at mid flow and 1,100 to 2,500 mg/L at high flow, indicating little difference in total dissolved solids. The highest concentrations were detected at LWC3.7 and GLW4.85, both in samples that contained high concentrations of perchlorate. In the Wastewater Channel, concentrations ranged from 610 to 1,400 mg/L at low flow and 590 to 1,400 mg/L at high flow. The lowest total dissolved solids concentrations were collected at LWC6.1_2.

8.2.4 Chloride and Bromide

Chloride and bromide data from the discrete sampling are provided in **Table 16**. Chloride concentrations are presented in **Figure 40** (low-flow sampling results), **Figure 41** (high-flow sampling results) and **Figure 42** (midflow sampling results). Bromide concentrations are presented in **Figure 43** (low-flow sampling results), **Figure 44** (high-flow sampling results) and **Figure 45** (mid-flow sampling results). The results of the ratio of chloride to

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bromide concentrations are presented in **Figure 46** (low-flow sampling results), **Figure 47** (high-flow sampling results) and **Figure 48** (mid-flow sampling results). The results are discussed below.

Chloride was detected above the detection limit (> 0.25 mg/L) in all surface water locations. Chloride concentrations followed the pattern of total dissolved solids, and were generally similar, ranging from 200 to 460 mg/L in most samples. Noted exceptions were low concentrations (96 to 140 mg/L) at LWC6.1_2, located in the Wastewater Channel. Chloride did not vary substantially with depth or flow.

Bromide was detected above the detection limit (> 0.25 to 1.25 mg/L) in most surface water samples, and several samples were "J" flagged during validation. Including locations where either the sample or field duplicate was non-detect, 55 samples were non-detects, split relatively evenly among low flow (28 of 80) and high flow (24 of 80). Three locations out of 20 collected during mid flow were non-detect. Overall, concentrations were higher during low flow than high flow indicating influx into the LVW. During low flow, concentrations ranged up to 2.3 mg/L compared to 1.6 mg/L during high flow. The highest concentrations at low flow were noted at LW5.3 and GLW4.9, near proposed Historic Lateral Weir Expansion and Calico Ridge Weir. The highest concentration during high flow was at LWC3.7. During mid flow, concentrations were generally higher upstream at LW6.7 and LW7.2, but LWC3.7, LW5.3 and GLW4.9 were not sampled for comparison to low and high flow.

The ratios of chloride to bromide were varied. Higher ratios were noted during high flow samples compared to low or mid flow samples. This reflects the higher bromide concentrations during low flows, which may be indicative of a higher flow contribution from groundwater.

8.2.5 Quality Control Samples

Quality control samples collected for discrete samples included FD, FB, and EB. As required, the laboratory ran quality control procedures including MS/MSD analysis. A detailed discussion of quality control and data validation is included in the DVSR (**Appendix F**).

FD samples were collected for 17 primary samples (DVSR Table 5). Acceptable RPD between the primary and duplicate sample was specified as 30 percent in the QAPP (AECOM 2016c). Acceptable field and analytical precision was demonstrated for all FD pairs with the exception of bromide analysis in the following pairs:

- 1. LW3.85-20170207-15:50-0.6 and its FD which had a RPD of 33 percent,
- 2. GLWC6.1_4-20170208-10:35-1.3 and its FD which had an RPD of 59.15 percent, and
- 3. GLW4.9-20170208-16:35-1.4 and its FD which had an RPD of 33 percent.

Bromide results in these three pairs of samples were qualified as estimates with a "J" flag.

EB samples (nine) and FB samples (eight) were collected and analyzed. Target analytes were either not detected in EBs and FBs or did not require data qualification. Sample concentrations were compared to concentrations detected in the EB and FB as required by the QAPP (AECOM 2016c). No sample data were qualified based on the EB or FB results because no analytes were detected in those samples.

MS/MSD samples were run as required by the laboratory. Some of the bromide (one) and perchlorate (nine) MS/MSD recoveries exceeded control criteria. No bromide samples required qualification, but perchlorate results for 25 samples were qualified on this basis. Details of these qualifications are provided in Section 2.1.2 of the DVSR (**Appendix F**).

9.0 Perchlorate Mass Flux Estimates

The perchlorate results were converted from concentrations (in µg/L) to estimates of perchlorate mass flux (in pound per day [lb/day]) using estimates of streamflow in the LVW at the time of sampling.

9.1 Screening of Samples

The transect and discrete sampling data both had a wide range of perchlorate concentrations and did not show a consistent curve of increase with distance downstream. The transect sampling was designed to identify loci across the LVW that may be contributing to perchlorate inputs. During the discrete sampling, samples collected near suspected or previously unknown perchlorate inputs show up as "anomalous" high concentrations that would cause a mass flux estimate to be biased high. The sample data were evaluated and sub-sets of transect and discrete data were selected to minimize bias in the perchlorate mass flux estimates. The treatment of the sample data is described in Sections 9.3 and 9.4.

9.2 Provisional Flow Estimates for Flux Calculations

AECOM estimated streamflow at the transects and the discrete locations using the five permanent USGS gaging stations and several AECOM temporary stream gaging stations along the study reach of the LVW. All those stations demonstrate the daily pattern of highs and lows related to the release of wastewater from upstream wastewater treatment plants. The timing of those highs and lows vary from station to station, arriving later in the day with distance downstream. Between the stations at the Duck Creek Confluence and Rainbow Gardens Weirs (essentially representing the study reach), the daily highs and lows are separated by approximately three hours. Stream stage and estimated streamflow are reported by the USGS on a 15-minute frequency. Those data are available from the USGS on their "WaterWatch" webpage (USGS 2017). The temporary stream gages installed by AECOM (see Section 6.0) could not be used to estimate flow as they have not been calibrated for direct reading of flow and record only the height of the staff gage; however, these gages were used to estimate flows based on the flow data from the USGS gages.

Stream channels are highly dynamic environments, and the relationship between stream stage and streamflow (rating equation) often changes. Through periodic direct measurements of streamflow at the stations, the USGS evaluates that relationship and makes changes to the rating equation (and streamflow estimates) as needed. Until data are officially approved by the USGS, reported streamflow data are considered provisional in nature and may be subject to later revision. Several large storms reached the Las Vegas area during the weeks prior to transect sampling. While the stormwater runoff from such events is quickly passed through the LVW, the peak flows caused alterations to portions of the stream channel and significantly changed the rating equation at several of the USGS stations (USGS 2017), including the stations at Bostick and Three Kids. There have been several adjustments to data reported for the LVW during the period of transect sampling; however, some of the data will likely require further modification prior to USGS approval. The provisional data used in this analysis were downloaded on May 3, 2017.

In comparison to historic streamflow patterns in the LVW, data reported at the time of downloading for the LVW above Three Kids Wash (USGS station 09419753) were lower than anticipated by AECOM throughout the sampling period. During portions of the sampling period, data reported for the stations above the Bostick and Homestead Weirs (USGS stations 09419747 and 09419749, respectively) were also different from what was expected, with some of the data reported for the Bostick Weir lower than expected and flow at the Homestead Weir higher than expected based on AECOM review of historic data. AECOM contacted USGS who confirmed the data are provisional and, because of high flows in January, some erosion occurred and the flow calibration curves for the gages would need to be reviewed. With these three stations representing flow conditions for the

lower half of the study area, AECOM also utilized flow data from the downstream station below Lake Las Vegas (USGS station 09419800) to help characterize flow at the time of sampling. With nearly 70 percent of the length of the channel between the Three Kids station (immediately upstream of the Rainbow Gardens Weir) and the Lake Las Vegas station being conveyed through a pipeline at relatively high velocities, the timing and magnitude of daily peaks and lows are very similar at the two stations. A review of high and low flow peaks at the two gages indicates a 15 to 30 minute delay from Three Kids to Lake Las Vegas.

Streamflows at sampling locations above Pabco Road were estimated using data from the station below Duck Creek confluence (USGS station 09419698). Depending upon the location of stations below Pabco Road, where the LVW picks up a significant flow from a series of treatment outfalls, streamflows were mostly estimated using a combination of data from the Pabco Road and Lake Las Vegas stations (USGS stations 09419700 and 09419800, respectively). Given the uncertainty associated with some of the available data, USGS were consulted and agreed that the approach was appropriate for preliminary estimates of perchlorate flux (USGS 2017b). Some of the streamflow data reported for the Bostick and Homestead stations were used for streamflow estimates when that data reflected the observed flow regime elsewhere in the LVW.

To help derive flow estimates at transects located some distance from the USGS streamflow stations, stage data collected at AECOM's eight temporary stations were used to determine when the samples were collected relative to the daily streamflow cycle. For instance, if a sample was collected at a transect when stream stage there indicated the height of water was 5 percent above the daily low, the similarly timed low stage at the closest USGS gaging station was adjusted upward by 5 percent and flow at the transect was estimated based upon that stage.

The USGS characterizes the accuracy of approved daily average streamflow data as excellent (95% of daily data within 5% of actual streamflow), good (95% of daily flows within 10% of actual flow), fair (95% of daily data within 15% of actual flow), and poor, or having a less than "fair" accuracy (USGS 2009). For the two long-term stations at Pabco Road and below the Three Kids Weirs, annual data summaries characterize the data quality as fair, i.e., 95% of daily data falls within 15% of actual flow. Most of the data used in this study were provisional, i.e., data of "unverified accuracy and subject to revision" (USGS 2016). The high frequency provisional data used to evaluate flow conditions throughout the study area should be considered to be accurate to no less than 15% of true streamflow (30 to 60 cubic feet per second [cfs] over the typical daily range of flows of 200 to 400 cfs). Uncertainty also comes from the stage/flow estimates for ungaged (i.e., no flows calibrated for the gage) transect locations. Additionally there may be real differences in streamflow between stations (groundwater inflow and outflow, evaporation, etc.); however, those differences are likely to be small relative to the 30 to 60 cfs uncertainty associated with the use of preliminary USGS data and the correlation of that flow to AECOM's temporary stations.

9.3 Flux Estimates: Transect Samples

Where sampling results along the individual transect indicated the potential for the inflow of contaminated groundwater, a "representative" concentration was selected in an attempt to characterize the average level of perchlorate concentration entering the transect (**Table 17**). It was assumed that any inputs observed along the transect, which generally are observed as higher concentrations near the banks, would be the representative concentration at downstream transects. In the case of the transect below the Calico Ridge Weir (T4.75) for example, the perchlorate results for the sample collected near the south bank was almost 40 times higher than samples collected near the middle of the channel. Without knowing the perchlorate concentration and flow rate of that groundwater inflow, higher concentrations from one or more samples along the transect could not be integrated into a representative concentration without introducing significant error to the subsequent flux calculations. Instead, an average concentration from samples collected near the middle of the transect was chosen (as the median).

The perchlorate flux estimates at the transect sections are shown in **Table 17** and **Figure 49**. Several transects (i.e., T6 and T4.2) indicated a downstream drop in perchlorate flux. Those apparent losses are thought to be related to data issues (primarily the estimation of flows) and the complex way in which water in an open stream

channel mixes. The differences in perchlorate flux between those two stations and their neighboring stations can be explained by the potential 10 percent error in accuracy for preliminary streamflow data.

Near the Duck Creek Confluence Weir (Transect T6.8), samples were mostly below the 0.95 μ g/L detection limit. One sample near the middle (T6.8C) had an estimated concentration of 1.6 μ g/L. Assuming the average concentration at T6.8 was 0.95 μ g/L, the resulting mass flux would have been < 1.0 lb/day. By the time it reached Transect T6.35, the perchlorate concentration in the LVW had increased to 18 μ g/L, corresponding to 18 lb/day of perchlorate flux. That station is near a formerly sampled seep (KM71) that contained 3,400 μ g/L of perchlorate during a 2000 sampling event conducted by Kerr McGee. Attempts to find KM71 have been unsuccessful since the original sampling of the seep.

Near Pabco Road, the apparent perchlorate flux dropped to 15 lb/day. A significant volume (approximately 40 cfs) of surface flow comes in immediately downstream of that transect (T6) from the Wastewater Channel. This is approximately 15 percent of the total flow in the LVW. Samples for perchlorate collected from the Wastewater Channel are generally below the detection limit, so if there is mixing of that water at T6 it would result in a lower concentration and resulting flux estimate (flow at T6 is estimated from the Duck Creek station near T6.8). This apparent drop is thought to be related to the increase in flow and not reflective of an actual loss of perchlorate in the system.

Near the proposed Historic Lateral Weir Expansion (Transect T5.3), the estimated perchlorate flux representative of the main channel was 17 lb/day, which is similar to the 18 lb/day estimated at T6.35. The potential influence from contaminated groundwater can be seen near the south bank where sample T5.3A contained 32 μ g/L (vs. 18 μ g/L in the main channel). By the time it passed through the Calico Ridge Weir (Transect T4.75), the perchlorate flux near the center of the LVW had risen to 25 lb/day with a significant increase observed coming in from the south and north banks (T4.75A at 820 J μ g/L and T4.75D at 420 J μ g/L, respectively).

Transects above and below the Lower Narrows Weir (T4.65 and T4.6, respectively) both had estimated perchlorate flux of 35 lb/day. Samples collected near the south bank continue to show some additional perchlorate entering the system (results of 40 to 66 μ g/L from T4.65 to T3.8); however, the estimated flux changed only a little by the time the flow reaches the Three Kids Weir. Above the Three Kids Weir, Transect T3.8 had an estimated flux of 37 lb/day. Below the weir, the flux was a similar 35 lb/day at T3.75. While the concentration of perchlorate near the banks between the Lower Narrows and Three Kids Weirs may be almost twice as high as in the main channel, the rate of groundwater inflow must be low enough to not appreciably alter the total perchlorate flux in the LVW.

The data for Transect 4.2 near the Homestead Weir indicates an apparent 5 lb/day drop in perchlorate flux. Similar to the apparent loss near Pabco Road, the reduction near the Homestead Weir is thought to be related to the data, not a true loss of perchlorate to the system. Estimates of flux using the discrete data collected near that location (sample GLW4.4; **Table 18**) indicated perchlorate flux of 30 to 45 lb/day.

Near the Three Kids Weir, the influence of groundwater can be seen again near the north bank (samples T3.8D at 46 μ g/L and T3.75D at 85 μ g/L). The flux estimate is 37 lb/day. Immediately downstream of T3.75, a large spring enters the LVW. During a May 2016 sampling event, that spring (KM67) was found to contain 1,500 μ g/L of perchlorate.

Flow from the spring KM67 enters the LVW below the Three Kids Weir in a somewhat braided area of the stream. Most of the discharge from KM67 is likely to enter several smaller channels along the south bank, while the majority of flow passes to the north. The final transect crosses this braided area, with concentrations of up to 140 µg/L in stations to the south (T3.5A to T3.5D) and lower concentrations to the north (37 to 47 µg/L at T3.5E and T3.5F). A concentration of 43 µg/L was selected as being representative of the main flow through the transect, for an estimated flux of 43 lb/day. The actual perchlorate flux in the LVW at Transect T3.5 would likely be higher

after the mixing of all the subchannels. Estimates of flux using discrete data downstream of T3.5 indicated flux may be as high as 57 to 75 lb/day (sample LW3.4; **Table 18**).

9.4 Flux Estimates: Discrete Samples

Flux calculations were made to demonstrate both how the total estimated perchlorate flux along the LVW changes, and how changes in the flow regime over the daily cycle may impact that flux. Most stations were sampled twice a day over the four-day period during a time of low and high streamflow. Several of the stations were also sample a third time each day with the goal of capturing mid-cycle flows (LW6.05, LW4.95, LW4.4, and LW3.4). In contrast, samples collected from the transects were collected once during periods of low streamflow.

Samples were collected at the discrete sampling locations on four consecutive days. That resulted in a range of concentrations and calculated perchlorate flux; however, perchlorate flux calculated at each station under the same flow regime (low, mid, and high) were generally in good agreement with each other. Some of the variation in flux and concentration at the sampling points may be attributed to the streamflow estimation process critical in the calculation of flux from perchlorate concentration, and some may be attributed to variations in perchlorate influx into the LVW and how that influx mixes with the surface water in the LVW. The perchlorate flux estimates provided in this report use the median values from each location and flow regime from the discrete sampling.

Several stations were not included in the estimation and discussion of perchlorate flux. Four stations were excluded from the estimation and discussion of perchlorate flux as they represented flow from the Wastewater Channel that enters the LVW at the Pabco Road Weir (LWC6.1_1, LWC6.1_2, GLWC6.1_3, and GLWC6.1_4). Of the 33 total samples collected from those four locations, 29 samples were below the method detection limit of 0.95 μ g/L, and four were estimated to contain up to 1.5 μ g/L of perchlorate. That water enters the LVW upstream of the Pabco Road Weir. In contrast, samples of water in the LVW at discrete sampling locations near Pabco Road averaged 13 μ g/L, approximately an order of magnitude higher than the concentrations in the Wastewater Channel.

In addition to the locations in the Wastewater Channel, four other discrete stations were not included as their sample results clearly indicate they were outliers impacted by the nearby discharge of contaminated groundwater (LWC3.7, GLW3.78, LW4.1, and GLW4.85). Those elevated results are not representative of average concentrations passing through LVW. Attributing those concentrations to the entire flow passing through the vicinity of the sampling location would greatly overestimate the total flux of perchlorate in that region of the LVW. Those perchlorate contributions detected at these four stations would show up at downstream stations as the groundwater influx mixes with surface water in the LVW:

LWC3.7 – This location is near the south bank immediately upstream of a spring that discharges below the toe of the Three Kids Weir. A sample collected from spring KM67 in May 2016 was found to contain 1,500 µg/L of perchlorate (AECOM, 2016). During the discrete sampling event, water velocity in the LVW in the vicinity of LWC3.7 and KM67 is very low, and discharge from the spring was visibly observed to back up into the region of the sampling location (groundwater discharge from KM67 is significantly clearer than surface water in the LVW). The median concentration of perchlorate from samples collected at LWC3.7 (730 µg/L) was 24 times higher than samples collected in the main channel of the LVW near the Three Kids Weir (30 µg/L at LW3.85 and LW3.75). The perchlorate contribution from KM67 (and any other nearby contributions from the aquifer feeding it) becomes mixed with the waters of the LVW as it travels to the lowest discrete sampling point at the Rainbow Gardens Weir (LW3.4). Samples from LW3.4 were collected mid-stream within the weir outlet and may be representative of the total, well-mixed load of the LVW at that point. As discussed later in this section, the flux of perchlorate increases from approximately 36 lb/day near the Homestead and Three Kids Weirs to between 60 and 70 lb/day at the Rainbow Gardens Weir. This flux is slightly higher than that provided by EPA for the Northshore Road measurements (52-67 lb/day) (NDEP Northshore sampling results, 1998-current pending provided via email October 2, 2017) but is in general good agreement considering the

uncertainties in the provisional flow data provided by USGS, the one-time sampling and estimation, the flow estimates based on the water levels measured at the staff gages and the variability in concentrations along and across the LVW. Assuming that the 24 to 34 lb/day gain of perchlorate flux originates from KM67, the spring would need to be flowing at a rate of 3.0 to 4.2 cfs (1,300 to 1,900 gallons per minute) to provide this mass flux gain at a concentration of 1,500 μ g/L.

- GLW3.78 Some of the higher concentration observed at LWC3.7 may be attributed to additional groundwater discharge through springs and seepage along the southern bank of the Three Kids Weir. Station GLW3.78 was selected to evaluate for that potential, with samples targeted to represent a mix of surface water flowing through the rock structure of the weir and potential groundwater inflow from the south. Samples collected at GLW3.78 had a median concentration of 47 μg/L, 56 percent higher than the 30 μg/L median for samples collected nearby in the main channel. The results for GLW3.78 are somewhat lower than results for samples collected near the southern shore during the Transect sampling discussed in Section 9.3. From the Lower Narrows Weir down to the Three Kids Weir, those near shore samples ranged from 57 to 64 μg/L. It is not known if the elevated results at GLW3.78 are attributable to groundwater discharge along the bank of the Three Kids Weir or if it is the result of incomplete mixing of upstream groundwater discharge with the surface water of the main channel. Due to the potential for influence or incomplete mixing, GLW3.78 was not included in the flux calculations.
- LW4.1 Samples collected during the discrete sampling below the Homestead Weir (LW4.1) averaged 43 μg/L, 70 percent higher than samples collect upstream near the weir (25 μg/L at GLW4.4). Given the higher concentration of perchlorate observed near the south shore sampling locations along this reach of stream during the transect sampling week, some increase in concentration and total perchlorate flux would be anticipated in the area. However, by the time the LVW enters the Three Kids Weir, samples collected near the middle of the channel (LW3.85 and LW3.75) averaged 30 μg/L, or 26 percent lower than the average at LW4.1. That downstream decrease in concentration would represent an average loss in perchlorate flux of 20 lb/day. With samples at LW4.1 being collected approximately one-quarter of the stream width away from the south bank, the anomalously high levels observed there are attributed to an incomplete mixture of groundwater along that bank.
- LW4.85 Other than results related to the spring near the Three Kids Weir (KM67 near LWC3.7), the highest levels of perchlorate along that southern bank were encountered at GLW4.85. Samples from that station, which was located immediately downstream of the Calico Ridge Weir, had a median perchlorate concentration of 310 μg/L, with one sample as high as 1,100 μg/L. That average concentration (310 μg/L) is 13 times higher than concentrations found near the middle of that channel cross section during the transect sampling (23 μg/L). During the transect sampling, elevated perchlorate concentrations were found at both the south and north banks (820 and 420 μg/L, respectively). Together, those observations clearly indicate an influx of groundwater near the Calico Ridge Weir.

The results from several of the discrete sampling locations (LW5.9 and LW3.75) indicated a small drop in perchlorate flux from the upstream location (LW6.05 and LW3.85, respectively). Rather than representing an actual reduction of perchlorate flux, that observed drop is likely related to data uncertainties (primarily the estimation of flows) and the complex way in which water in an open stream channel mixes. Similar to some of the results from the transect sampling, the differences in flux could largely be explained by the potential 10 percent error in accuracy for preliminary streamflow data (Section 9.2). It should also be noted here that at one station (LW5.3), water depth was over 3 feet, so samples were collected from both a deep location near the streambed and from a shallower location. Results from samples collected at different depths were not significantly different, so shallow and deep concentrations were combined for calculating median perchlorate flux values.

The perchlorate flux estimates at all other discrete sampling locations are shown in **Table 18**. The table includes perchlorate results (median concentration, median flow, and median perchlorate flux) for low-flow, mid-flow (where applicable), and high-flow sampling regimes. The flux estimates are presented by RM for low-flow estimates (**Figure 50**), high-flow estimates (**Figure 51**) and mid-flow estimates (**Figure 52**).

The maximum potential perchlorate flux at upstream stations where perchlorate results were below detection limits (LW7.2 and LW6.7) were calculated by assuming the perchlorate concentration was near the method detection limit of 0.95 μ g/L. That assumption resulted in a maximum potential flux of 0.9 lb/day under low-flow conditions (<1 lb/day in **Table 18**) and 1.7 lb/day under high-flow conditions (<2 lb/day). The maximum potential flux rates at these stations were calculated to represent a potential starting point for changes in perchlorate flux across downstream reaches of the LVW. The actual flux of perchlorate near the Duck Creek Confluence Weir and Upper Narrows Weir is likely to be substantially lower than that maximum potential.

Perchlorate flux estimates at different flow regimes generally remained in good agreement from Pabco Road down to station GLW4.9 (upstream of the Calico Ridge Weir). At the next station downstream of Pabco Road (LW5.9), the perchlorate flux was essentially the same under low- and high-flow conditions (16 and 15 lb/day, respectively). Perchlorate flux estimates at the next two stations are complicated by flow dynamics below the Bostic Weir. Between the Bostick and Calico Ridge Weirs, the LVW is split into two channels by a large island. Station LW4.95 is located in the northern channel near the Bostic Weir. Station GLW 4.9 is located in the southern channel near the downstream Calico Ridge Weir. Between those stations, sampling results indicate there is a gain in perchlorate along the southern bank. Under low- and mid-flow regimes, the perchlorate flux at LW4.95 remained steady at 25 to 26 lb/day, respectively, but dropped to 22 lb/day under the high-flow regime. That decrease under the high-flow regime may be related to variations in streamflow routing between the two channels under different flow regimes. The average perchlorate flux estimate at GLW4.9 under both the low-flow and high-flow regimes was 29 lb/day. Where that northern and southern channel merge back together (above the Calico Ridge Weir), the actual perchlorate flux of the LVW would reflect a combination of the flux in the northern channel (approximately 25 lb/day at LW4.95) and in the southern channel (approximately 29 lb/day. The flux of perchlorate immediately above the Calico Ridge Weir is estimated from this at 25 to 29 lb/day.

Beginning near GLW4.4 (upstream of the Homestead Weir), estimated perchlorate fluxes become consistently higher under high-flow conditions. While the estimated flux at GLW4.4 under the low-flow regime (median value of 30 lb/day) was similar to the estimated flux under the high-flow regime (33 lb/day), higher flux was estimated under the mid-flow regime (45 lb/day). Near the Three Kids Weir, the estimated perchlorate flux under the low-flow regime (37 and 31 lb/day, respectively, at stations LW3.85 and LW3.75) was approximately 20 lb/day lower than under the high-flow regime (56 to 50 lb/day, respectively). It should be noted that the indicated perchlorate flux decrease from the upstream station (LW3.85) to the downstream station (LW3.75) is thought to reflect differences in the mixing of surface water through the weir. The actual range of results at the two stations under the two different regimes is very similar; however, lower values in the respective ranges were more common at the downstream station.

At the Rainbow Gardens Weir, the most downstream station in the discrete sampling investigation, the difference between estimated perchlorate fluxes under the low-flow regime (median value of 57 lb/day at LW3.4) was approximate 15 lb/day lower than under the high-flow regime (71 lb/day). The magnitude of that difference is lower than at the Three Kids Weir (20 lb/day). That may be due to the significant influx of perchlorate from the spring near the toe of that weir (KM-67), which may serve to moderate background fluctuations in upstream perchlorate concentration. That impact may also be reflected in the agreement between estimated perchlorate fluxes under the mid-flow regime (median value of 75 lb/day) and high-flow regime (71 lb/day).

The perchlorate concentration at any given time and location throughout the NERT RI Downgradient Study Area is dependent upon the perchlorate concentration in surface water entering the location from upstream, additional perchlorate entering the LVW from groundwater discharge near the location, the timing of observation within the daily cycle of streamflow peaks and lows, and the delay between that cycle and the arrival of diluted wastewater driving daily peak flows. All of those variables may change significantly from one sample location to another, leading to variations in perchlorate flux estimates throughout the flow regime. At stations above the Calico Ridge Weir, the perchlorate flux under different flow regimes appears to be similar on average, although significant differences may still arise between individual measurements. Near the Lower Narrows Weir, perchlorate

estimates under different flow regimes become more significant, with higher estimates of flux under mid-to-high-flow regimes.

9.5 Influence of Wastewater Discharge and Flow

One of the goals of the SWIP was to observe how concentrations of perchlorate fluctuate with respect to the daily cycle of wastewater discharge. During periods of low flow, streamflow in the LVW was generally on the order of 200 cfs. The rate of wastewater discharge from upstream treatment plants increases in the late morning, and streamflow in the LVW increases to approximately 350 cfs. Similar to the perchlorate concentrations observed in the Wastewater Channel entering the LVW near Pabco Road (LWC6.1_1, LWC6.1_2, GLWC6.1_3, and GLWC6.1_4), wastewater from those sources is assumed to contain low concentrations of perchlorate (<0.95 µg/l). That assumption is confirmed to a degree for the period of this study by the results for the two upstream stations. When the streamflow increased by approximately 75 percent between low-flow and high-flow conditions, the concentration of perchlorate remained under the method detection limit.

That dilution is complicated by the travel time of water particles in the LVW, which lags significantly behind the propagation of the streamflow peak from upstream wastewater release. The arrival of daily low and daily high streamflow at the USGS station above the Three Kids Wash (near the Rainbow Gardens Weir) generally occurs 3 hours after the arrival at the upstream station at the Duck Creek Confluence Weir. In contrast, the peak concentration of particles in a recent dye tracing study (Department of the Interior [DOI] 2016) lagged by approximately 6 hours over a similar reach of the LVW (between the Upper Narrows Weir and Fire Station Weir). As that water moves downstream, it mixes in with streamflow that is gaining perchlorate from a series of springs and groundwater seepage locations along the way.

Along portions of the study area, the timing of additional perchlorate and additional wastewater discharge may be balanced to a degree, with increased flow being compensated by the dilution of perchlorate concentration. The result of dilution can be seen near Pabco Road, where perchlorate flux at station LW6.05 did not change under low- and mid-flow regimes. The average streamflow during sampling collection increased by 30 percent; however, the average flux remained 18 lb/day (**Table 18**) due to a lower concentration resulting from the wastewater discharges. At high-flow conditions, the flux dropped to 12 lb/day (**Table 18**). That drop may be due to the arrival of increasingly diluted water, and may also be related to mixing of water with low perchlorate concentrations from the Wastewater Channel that enters the LVW at Pabco Road.

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10.0 Revised Conceptual Site Model for Las Vegas Wash

A CSM of the LVW and potential inputs of perchlorate was developed for the SWIP (AECOM 2016a). This section updates the CSM based on the data collected to implement the SWIP in December 2016 and January and February 2017. A diagram of the updated CSM is provided in **Figure 53**. NERT will incorporate this information with all other data collected during the RI and present a comprehensive CSM in the RI Report.

10.1 Anthropogenic Sources of Discharge to the LVW

Discharges from the four major wastewater treatment plants in the valley represent the vast majority of anthropogenic flow in the LVW (Clark County Water Reclamation District, City of Las Vegas Water Pollution and Control Facility, City of Henderson Water Reclamation Facilities, and City of North Las Vegas Water Reclamation Facility). Outfalls from groundwater treatment plants (NERT, American Pacific Corporation, and TIMET) join the channel conveying treated wastewater from the City of Henderson, entering LVW above Pabco Weir (indicated as combined treated wastewater inflow on **Figure 53**). The remaining flow in the LVW comes from other sources such as Duck Creek and the C-1 channel, as well as non-point sources including urban and stormwater runoff and shallow groundwater discharge. It is expected that some reaches of the LVW are below the groundwater table and, therefore, receive groundwater discharge. Other reaches of the LVW are above the groundwater, which cause infiltration (loss) of the surface water. This condition is dynamic and changes depending on a wide variety of variables including, but not limited to, increases in flow rates from the wastewater treatment plants due to increased land development, diurnal fluctuations in wastewater flows, seasonal fluctuations of the groundwater table and occasional episodes of precipitation in the LVW drainage area.

The treatment plants contribute a relatively steady daily supply of water to the LVW throughout the year. The outfalls discharge continuously but at a predictably cyclic rate. That cycling causes a diurnal flow pattern similar to a tidal pattern, with daily high and daily low flows. Unless disrupted by rain storm events, daily high flows are on the order of 100 percent higher than the daily low. However, the constant daily discharge represents the vast majority of flow in LVW, and the natural, seasonal variability in streamflow has largely been eliminated. On average, streamflow tends to be somewhat higher from October through March (290 to 340 cfs) and lower from April through September (260 to 310 cfs) (USGS 2017).

Along with the general increase in background flow in LVW through the years, there has also been an increase in the magnitude of stormwater runoff draining into the LVW. Fifty years ago, the annual peak flow at Pabco Road was on the order of 300 cfs (median value of 280 cfs from 1957 to 1967), or similar to the current average annual flow (298 cfs). More recently, annual peak flows are on the order of 4,500 cfs (median value of 4,350 cfs from 2005 to 2015) (USGS 2016).

In an effort to protect the channel from the erosive forces of higher flows, a series of erosion control structures (weirs) have been constructed to slow the water velocities in the LVW. Where erosional forces have been allowed to run their course, the stream channel within the Downgradient Study Area is generally 40 feet or less in width. Near some of the weirs, the width increases to 300 feet or more.

The channel materials consist of loose, unconsolidated sediments that have been shifted and sorted by the energy of the flowing water. Most of the underlying material is alluvium that consists of both fine-grained materials (silts and clays) and courser materials (sands and gravels). As the water carries those deposits downstream, sand and gravel are deposited in areas with higher velocity, providing a more solid streambed. Where streamflow slows down in natural pools and behind some of the weir structures, silts and clays are deposited, creating a soft bottom. The Horse Springs Formation is present in the southern streambank east of Calico Ridge Weir, and the

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Thumb Formation is present on the northern and southern streambanks between the Lower Narrows and Three Kids Weirs.

10.2 Known Sources of Perchlorate

During the May 2016 sampling program (AECOM 2016), an attempt was made to locate the seeps that were sampled by Kerr McGee in 2000. Seeps that were successfully located, accessible, and flowing were subsequently sampled. It is surmised that weir construction, onshore riparian zone restoration, flooding and vegetative growth during intervening years, and the ongoing regional drought conditions may have affected the occurrence and, if present, the flow from the previously identified seeps. Because the installation of the weirs likely changed the seep locations, attempts were made to relocate the seeps and, if possible, sample them. Of the 18 historic seep locations, only three (KM-45, KM-67 and KM-71) could be located in the field. All other historic seeps may have been buried by weir and bank construction, submerged by the expanded stream channel and associated sediments, temporarily dried up under the ongoing drought conditions, or obscured by dense vegetation. Two seeps (KM-67 and KM-71) were sampled. The concentrations of perchlorate in the seeps were lower in 2016 than in 2000. At KM-71, the concentration in 2016 (1.4 J μg/L) was substantially lower than in 2000 (3,400 µg/L). In 2000, KM-71 was located downgradient of the proposed location of the Sunrise Mountain Weir. The seep was located in 2016 immediately upstream of this location in a backwater channel. While unknown from existing information, the seep that was sampled in May 2016 could be a different seep than that sampled in 2000. At KM-67, located near the Three Kids Weir, the concentration (1,500 µg/L) in 2016 was slightly lower than in 2000 (2,100 µg/L). Construction of Three Kids Weir was completed in July 2015. A riprap weir referred to as "Demonstration Weir" was constructed near this location in 1999. The Demonstration Weir was relocated and rebuilt in 2007 and was eventually dismantled in 2013 and replaced by the Three Kids Weir (Las Vegas Wash Coordination Committee 2016). Although a weir was in place in this location during both the 2000 and 2016 sampling events, it is not clear to what extent, if any, each weir affected the stream flow and sample results during the 2000 and 2016 sampling events.

In the SWIP (AECOM, 2016a), sampling locations and methodology were designed to further refine the understanding of where perchlorate enters the LVW, and what impact the varying flow regime has on perchlorate concentrations in surface water samples. Known and suspected regions of perchlorate discharge were selected to help pinpoint loci of discharge and where, along transects, that discharge may be occurring. During the January/February 2017 sampling event, samples were collected from sampling points across 11 transects. Perchlorate concentrations from the transect sampling are provided in **Figure 25**. During December 2016 and February 2017, samples were collected from 14 discrete sampling locations on the LVW, one backchannel location, and four locations along the Wastewater Channel entering the LVW near Pabco Road. The LVW locations ranged from the upstream portion of the Downgradient Study Area (LW7.2) downstream to LW3.4, located downstream of the Downgradient Study Area. The perchlorate concentrations from these grab and discrete samples are provided in **Figure 7 and Figure 8** (December 2016 sampling), and **Figure 31** through **Figure 33** (February 2017 sampling; low flow, high flow and mid flow, respectively).

The results of the seep sampling conducted by Kerr McGee in 2000 and by AECOM in May 2016, December 2016 and January/February 2017 indicate that there is perchlorate discharge to the LVW. The data indicate perchlorate is entering the LVW in the areas near the proposed Sunrise Mountain Weir, the Bostick Weir, the Calico Ridge Weir, and the Three Kids Weir. Sampling results also indicate the potential for small gains of perchlorate along the southern bank of the LVW from the region near the proposed Historic Lateral Weir Expansion down to the Three Kids Weir, where perchlorate was generally found to be approximately twice as high as samples collected from mid-channel locations. Along much of that bank, the slow, relatively minor seepage of groundwater may not be significant enough to appreciably increase the detected concentrations in the main flow of the LVW. Larger, observable gains observed in sample results are more likely to be attributed to more focused discharge of groundwater with higher concentrations of perchlorate, such as the 1,500 µg/L results for the spring at KM67, near the toe of the Three Kids Weir.

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By characterizing the flow regime during sample collection, estimates of actual perchlorate flux were calculated to represent flow-weighted sampling results (**Section 9**). **Figure 53** is the revised conceptual site model that shows the range (minimum and maximum) fluxes of perchlorate calculated from the discrete sampling (**Table 18**). The following discussion of perchlorate flux is based on the data presented in the conceptual site model (**Figure 53**).

The daily fluctuations in flows in the LVW have a significant impact upon perchlorate concentrations in samples. At stations upstream of the Calico Ridge Weir, the dilution of perchlorate concentration (in $\mu g/L$) at higher flows shows a tendency to balance with the flow rate such that the perchlorate flux (in lb/day) is generally in good agreement across the range of observed flow conditions. Downstream of the Lower Narrows Weir, differences in perchlorate flux become more pronounced, with higher flux under mid-to-high-flow conditions. Those differences complicate the general estimates of perchlorate fluxes at those downstream stations.

Above the Upper Narrows Weir, perchlorate levels were nearly all below the method detection limit of 0.95 µg/L (one of the five samples collected along transect T6.8 was found to have an estimated concentration of 1.6 µg/L). The first increase in perchlorate concentrations moving downstream appears near the proposed Sunrise Mountain Weir, where samples collected at transect T6.35 indicate a perchlorate flux of 12 to18 lb/day (Figure 53). Estimated perchlorate flux remained near that level downstream to the proposed Historic Lateral Weir Expansion (perchlorate flux of 17 to 21 lb/day). The results from samples collected between the Bostick Weir and Calico Ridge Weir indicate the LVW may gain approximately 5 lb/day between the proposed Historic Lateral Weir Expansion and the Bostick Weir, for a perchlorate flux of 22 to 26 lb/day. An additional 8 to 19 lb/day may be gained by the time the LVW passes through the Lower Narrows Weir, for a perchlorate flux of 30 to 45 lb/day. Most of that additional flux is suspected to come from groundwater discharge near the toe of the Calico Ridge Weir. Samples collected near the south bank of that weir contained up to 1,100 µg/L of perchlorate, 50 times higher than samples collected near the middle of the channel. Samples collected near the north bank were also elevated (almost 20 times higher). By the Three Kids Weir, the LVW may gain more perchlorate; however, perchlorate flux estimates from the lower portions of the study area were increasingly impacted by the varying flow regime. Some gain would be expected along this section of the channel given the somewhat higher concentrations observed along the south bank. At the Three Kids Weir, estimated perchlorate fluxes were generally on the order of 37 to 56 lb/day, for a potential gain of 7 to 11 lb/day. Below the Three Kids Weir, discharge from spring KM-67 enters on the south bank and begins to mix in with the waters of the LVW (Figure 53). That mixing occurs over a long distance due in part to the splitting of the channel by several small islands. At the lowest transect (T3.5), higher concentrations attributable to that spring remained in the southern half of the cross section. The sub channels all merge below that transect and are thought to be well mixed by the time the LVW passed through the lowest discrete sampling location (LW3.4 below at the Rainbow Gardens Weir). The estimated perchlorate flux at the Rainbow Gardens Weir was generally 57 to 75 lb/day, for a gain of approximately 19 to 20 lb/day. Most of that gain is attributed to KM-67 (1,500 µg/L); however, perchlorate concentrations near the northern bank (60 µg/L) were also elevated relative to mid-channel samples (30 µg/L). There is uncertainty associated with these flux data, including a potential overestimation of gain, as these results are based on limited data. Confirmation of these data during additional sampling is recommended (Section 12).

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11.0 Conclusions

The SWIP was designed, in part, to address the following study questions developed based on the CSM.

Study Question1. Is there residual perchlorate discharge not being captured by the seep well field that is entering the LVW?

Concentrations of perchlorate appear to increase based on transect sampling (**Figure 49**) in the area of the seep well field, downgradient of the proposed Sunrise Mountain Weir. This area had not previously been sampled. The concentrations at T6.35 near proposed Sunrise Mountain Weir are higher (17 to 18 μ g/L) than at T6.8 (upstream of Duck Creek Confluence Weir [<0.95 to 1.6 J μ g/L; **Figure 25**]), indicating there is some input to the system between these transects on the order of approximately 18 lb/day. Given this, the potential for uncaptured or residual perchlorate to be discharging to the LVW from the AMPAC/Endeavor plume and/or the NERT plume cannot be ruled out. Additional information on groundwater impacts and perchlorate mass entering LVW is provided in the Semi-Annual Monitoring and Performance Report, July 1 to December 31, 2016, Perchlorate Bioremediation System (Endeavor 2017).

Study Question 2. If so, what are the approximate locations and fluxes of those inputs and the contribution of each location to the perchlorate flux discharging to Lake Mead?

As described in Section 9.0, perchlorate flux increases at certain key points along the LVW. Between proposed Sunrise Mountain Weir (RM 6.35) and proposed Historic Lateral Weir (RM 5.25), the flux is relatively constant at 16 to 19 lb/day. Near Calico Ridge Weir (RM 4.68), there is an increase of approximately 45 percent above the upstream flux to 24 to 29 lb/day. Perchlorate flux increases again at Lower Narrows Weir (RM 4.4) to 35 lb/day. Some increase downstream near Three Kids Weir (RM 3.63) to 37 to 47 lb/day is noted. At RM 3.27 downstream of Rainbow Gardens Weir, perchlorate flux increases notably again to 68 lb/day. Based on this, inputs appear to be near proposed Sunrise Mountain Weir, Bostick Weir, Calico Ridge Weir, Three Kids Weir and Rainbow Gardens Weir (**Figure 54**).

Study Question 3. Of the almost 20 seeps sampled by Kerr McGee in 2000 that were investigated in May 2016, only three were located. Where might the other seeps, if still active, be discharging?

Other seeps may be actively discharging. USGS is currently investigating the presence of additional seeps. As discussed under Study Question 2, inputs appear to be near proposed Sunrise Mountain Weir, Bostick Weir, Calico Ridge Weir, Three Kids Weir and Rainbow Gardens Weir (Figure 54).

Study Question 4. Are these seeps contributing perchlorate to the LVW?

Based on the data collected during this investigation, both documented and undocumented sources of perchlorate-impacted groundwater discharging to LVW are present. Documented sources including seep KM71 may be contributing to the perchlorate increases near proposed Sunrise Mountain Weir and KM67 is discharging near Three Kids Weir. Additional unaccounted seeps likely are present near Calico Ridge Weir.

Study Question 5. To what extent do the daily fluctuations in the flow in the LVW, due to waste water discharges, impact the concentrations of perchlorate?

Daily fluctuation of flow in the LVW impact perchlorate concentrations, but the measured flows are not directly accountable for increases or decreases (i.e., increases to 1.5 times low flow does not cause a directly

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proportionate decrease in perchlorate concentrations). The dilution of perchlorate by increased flows from wastewater discharge is complicated by the travel time of water particles in the LVW, which lags significantly behind the propagation of the streamflow peak from upstream wastewater release. As that water moves downstream, it mixes in with streamflow that is gaining perchlorate from a series of springs and groundwater seepage locations along way. There is a lag in mixing, based on the difference in the time it takes for flows to increase across the Downgradient Study Area (approximately 3 hours) and the mixing time based on the Bureau of Land Management (2016) dye tracer study (6 hours).

Study Question 6. What is the variability in perchlorate concentrations across each cross-section? Are potential points of groundwater discharge located near the south bank, mid-channel, or near the north bank of the LVW?

As described in Section 7, perchlorate concentrations are relatively even across transects in the upstream reaches of the Downgradient Study Area. High variability is noted across transect T4.75 downstream of Calico Ridge Weir, with concentrations 20 to 40 times higher in the north and south banks, respectively, than the midchannel samples. The concentrations on the south bank remain two to three times higher than other samples in the transects downstream near Lower Narrows Weir (T4.65 and T4.6) and above Homestead Weir (T4.2). At T3.75, downstream of Three Kids Weir, the concentrations on the banks are elevated compared to mid-channel, with the north bank showing the highest concentration. The furthest downstream transect (T3.5) located halfway between Three Kids Weir and Rainbow Gardens Weir also has highly varied concentrations of perchlorate across the transect, with the highest concentrations just towards mid-channel from the south bank. Overall, these data indicate the potential for inputs on the north bank near Calico Ridge Weir and Three Kids Weir, and potential inputs from the south bank from Calico Ridge Weir and downstream to the end of the transects.

Study Question 7. Are there other, unknown, sources of perchlorate to the LVW?

There may be sources of perchlorate to the LVW other than the NERT and AMPAC plumes near Calico Ridge Weir and downstream of Three Kids Weir that have not been documented. No surface features have been identified that may be contributing perchlorate, so it is assumed these sources would be groundwater discharging to the LVW.

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12.0 Recommendations

Based on the SWIP sampling effort, several locations of potential perchlorate input have been identified. At several locations along the LVW in the study area, perchlorate concentrations increase, as noted in the following bullets:

- An increase in perchlorate is noted near Calico Ridge Weir. This increase is approximately 45 percent or 5 to 10 lb/day.
- An increase of approximately 6 lb/day is noted at Lower Narrows Weir.
- Up to 10 lb/day of perchlorate is added to the LVW near Three Kids Weir.
- Downstream of Rainbow Gardens Weir, the flux of perchlorate almost doubles to an estimated 68 lb/day (from 37 to 47 lb/day at Three Kids Weir).

While these flux measurements are estimates based on a one-time sampling event, they do indicate reaches where perchlorate may be entering the LVW. To help focus the investigation, additional sampling should be considered to confirm the observations described in this technical memorandum. The additional sampling should include two phases: additional surface water perchlorate sampling to fill data gaps in the perchlorate flux in the LVW and identifying areas of groundwater inflow (which may or may not contain perchlorate).

Between discrete/grab sampling and transect sampling, identification of loci of perchlorate inputs appears to be better determined using transects and near bottom sampling. Resampling the existing transects and adding transects and locations along existing transects could help reduce the uncertainty in the loci of perchlorate discharge:

- Transect data currently being collected monthly by NERT can be reviewed to reduce the uncertainty.
- Transects should be added near the Upper Narrows Weir and above the proposed Sunrise Mountain Weir to determine where from Duck Creek to Pabco Road the increases in perchlorate are obvious.
- Further downstream, an additional transect above Calico Ridge Weir and additional samples along the transect below Calico Ridge Weir would support identifying loci of the high concentrations noted on the north and south bank samples below Calico Ridge Weir.
- A transect below Homestead Weir would help identify the location of the perchlorate inputs in this area.
- No transect was located near Rainbow Gardens Weir, where the discrete data indicted a large flux of perchlorate. A transect upstream of this weir could help identify the loci.

In addition to surface water sampling for perchlorate, groundwater inputs can be identified (independent of perchlorate concentration) using temperature sensors. Tools such as distributed temperature sensing (DTS) can be used to monitor groundwater flux using temperature differences between the groundwater and surface water. These tools can be deployed for several days over a reach of approximately 0.25 miles in the areas of suspected perchlorate inputs. The current understanding of the perchlorate patterns in the LVW indicate that groundwater may be contributing to the perchlorate load near Pabco Road (likely due to uncaptured perchlorate from AMPAC and NERT plumes), and downstream near Calico Ridge Weir and Three Kids Weir (potential sources unknown). By monitoring temperature in the LVW surface water near these two unknown perchlorate sources using DTS, the loci of groundwater inputs can be identified. Paired with the perchlorate sampling data, the locations of potential sources of groundwater containing perchlorate can be refined.

AECOM 13-1

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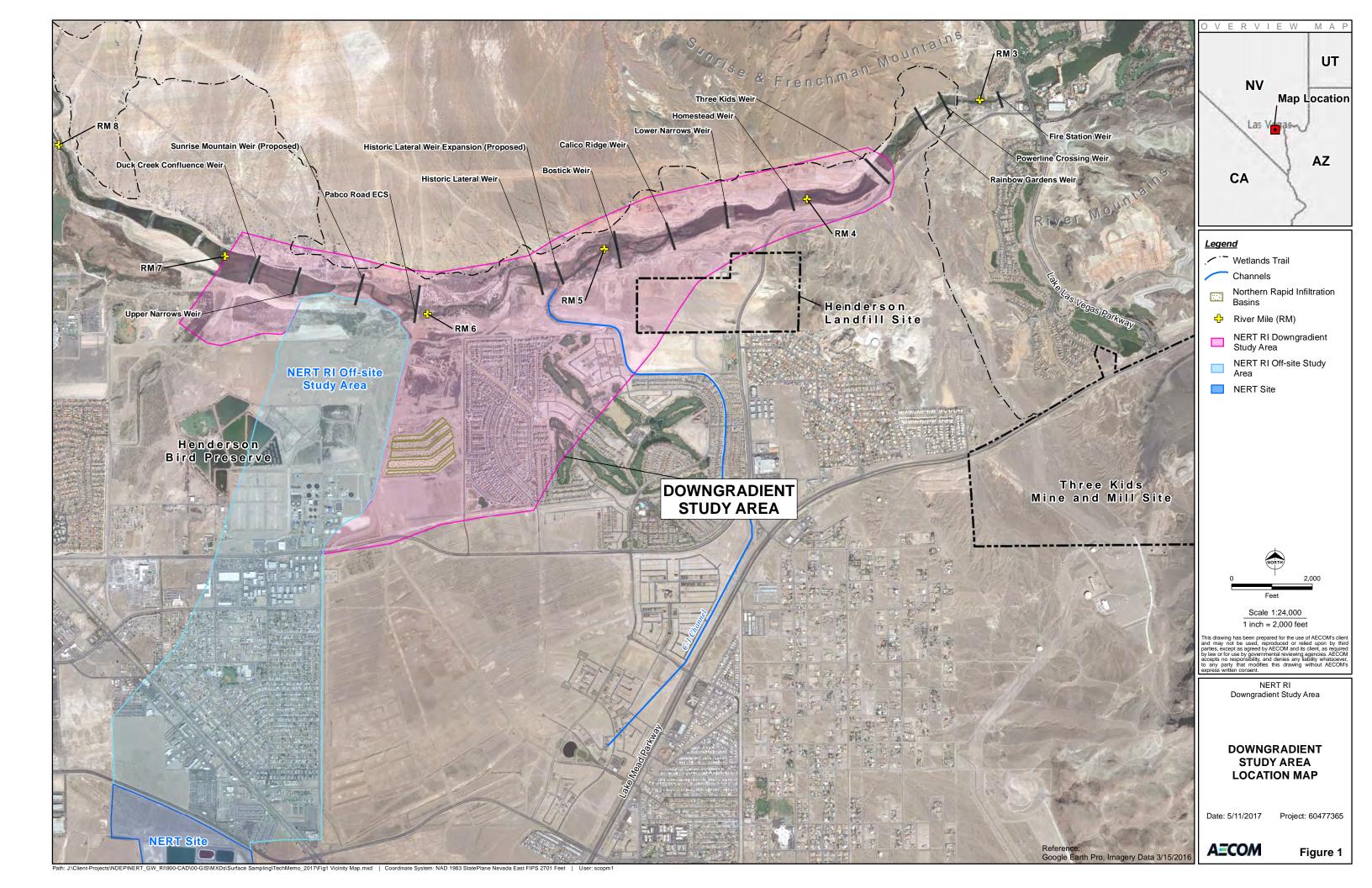
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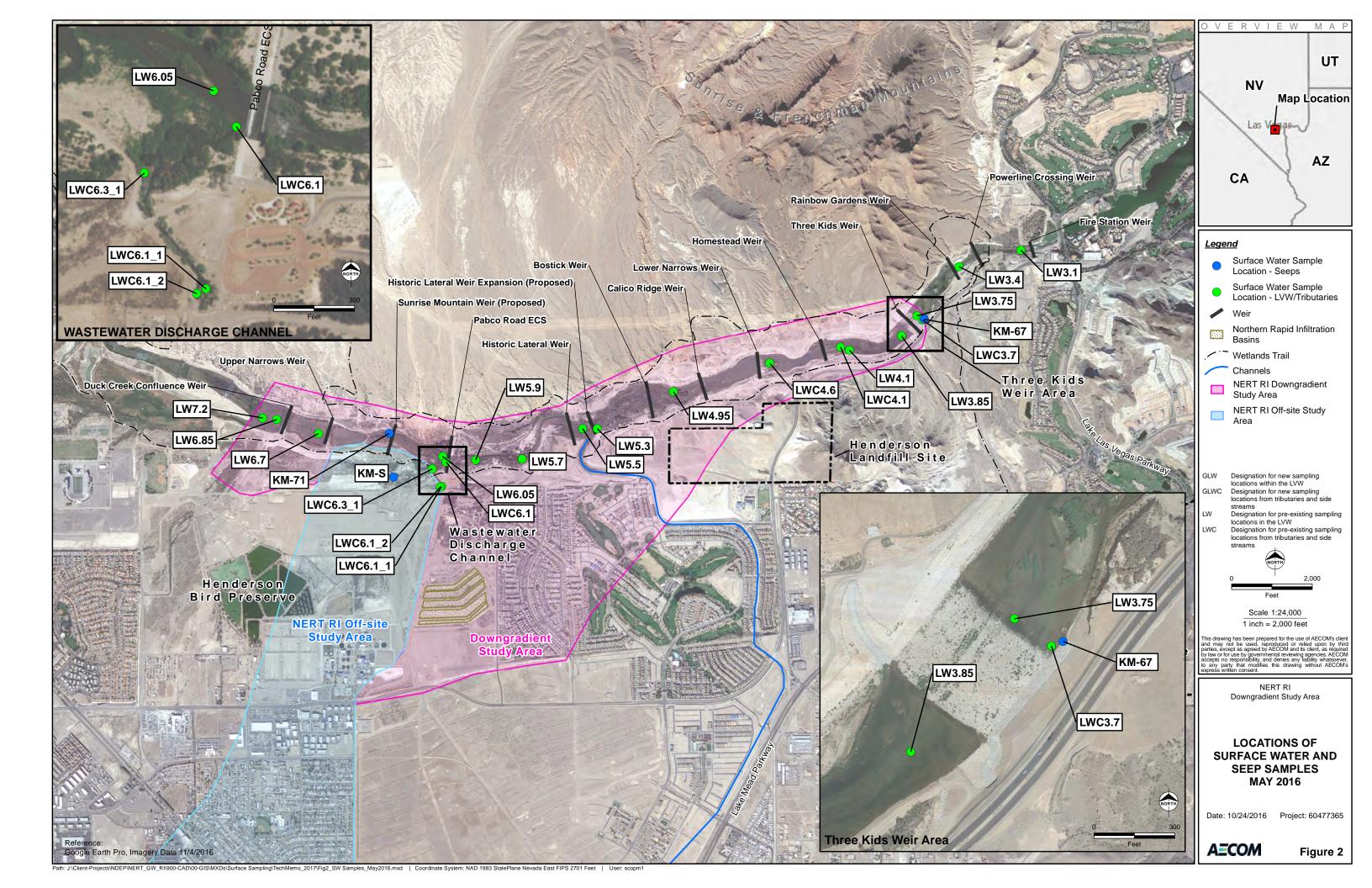
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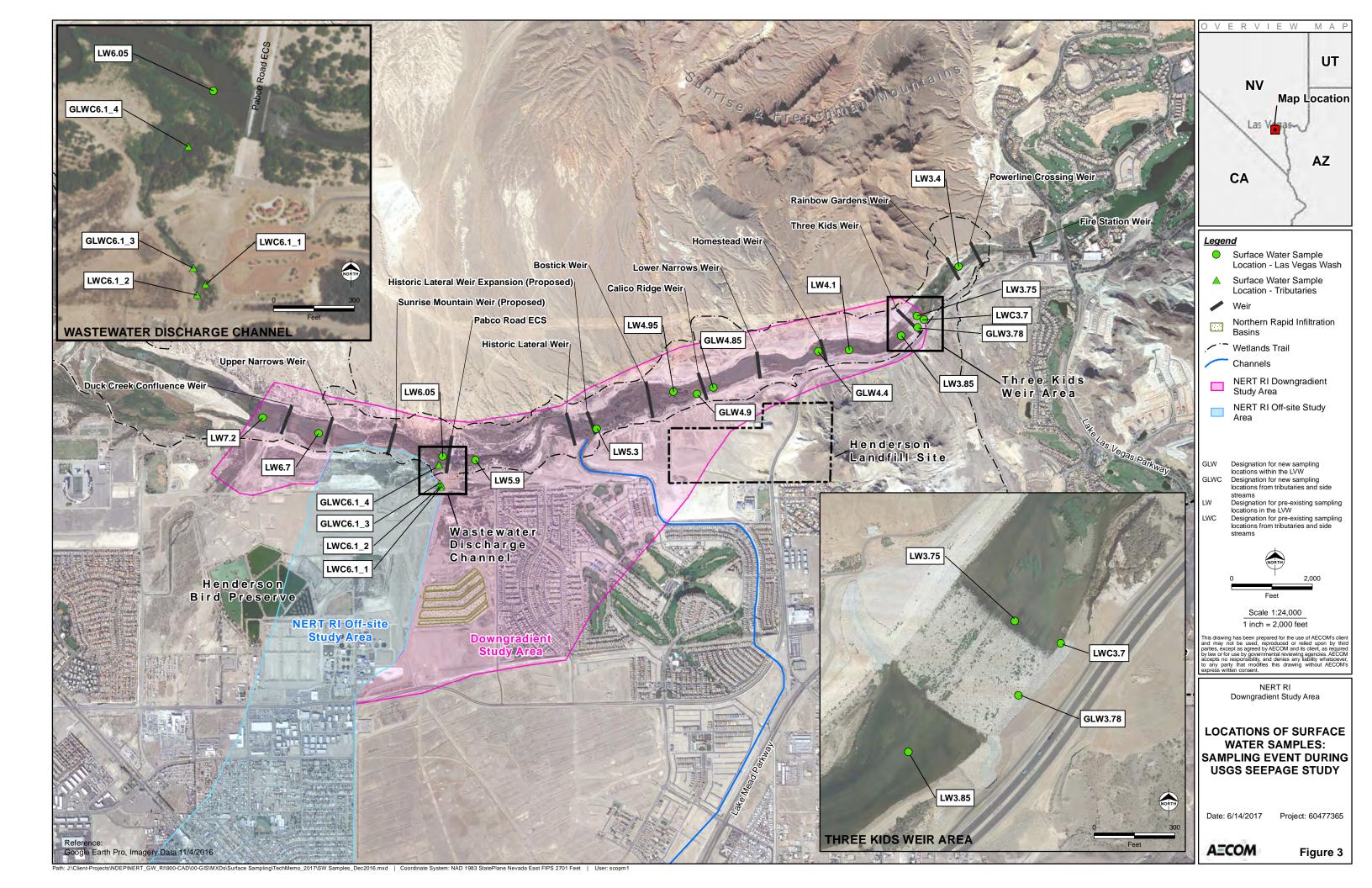
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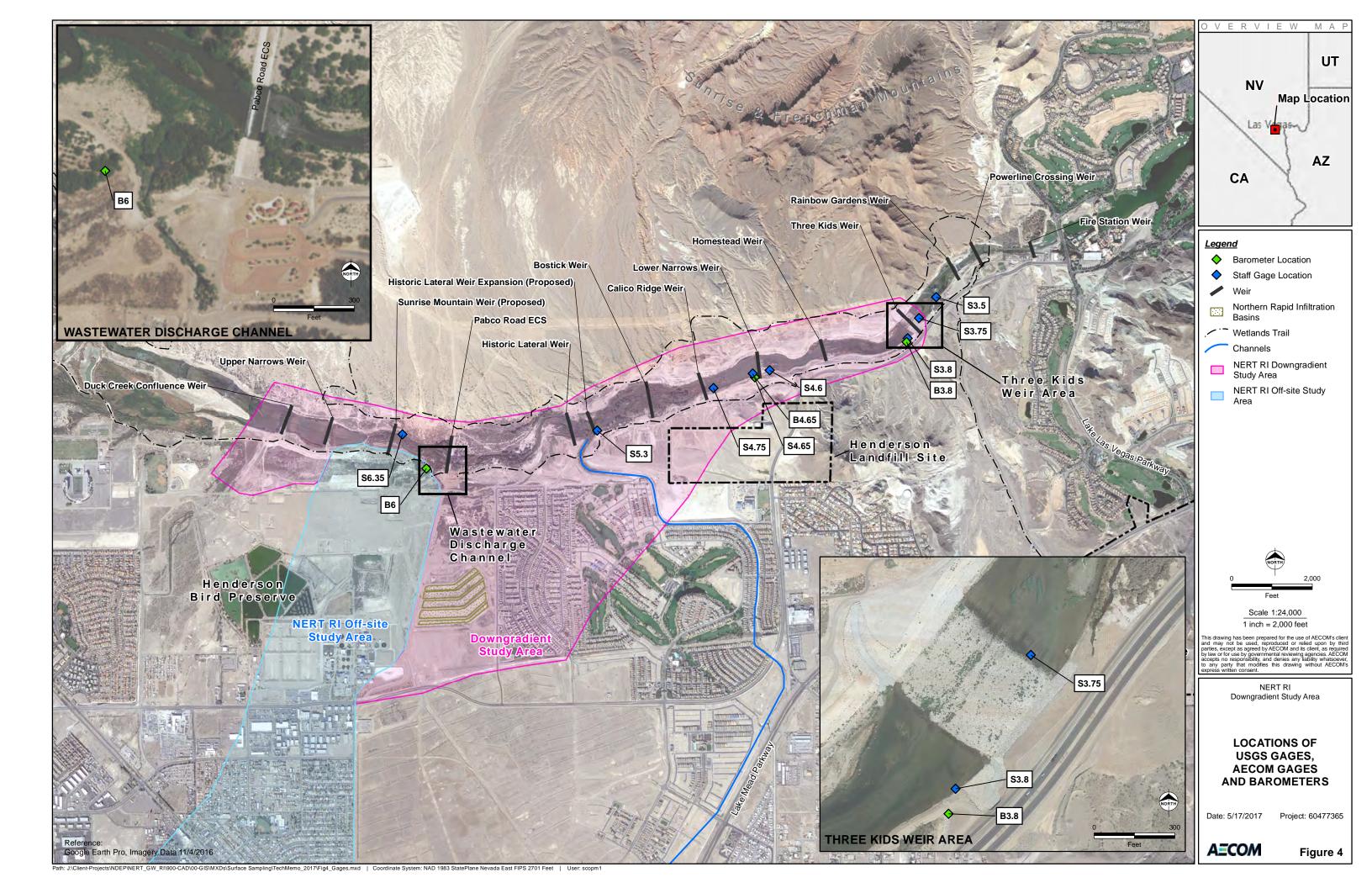
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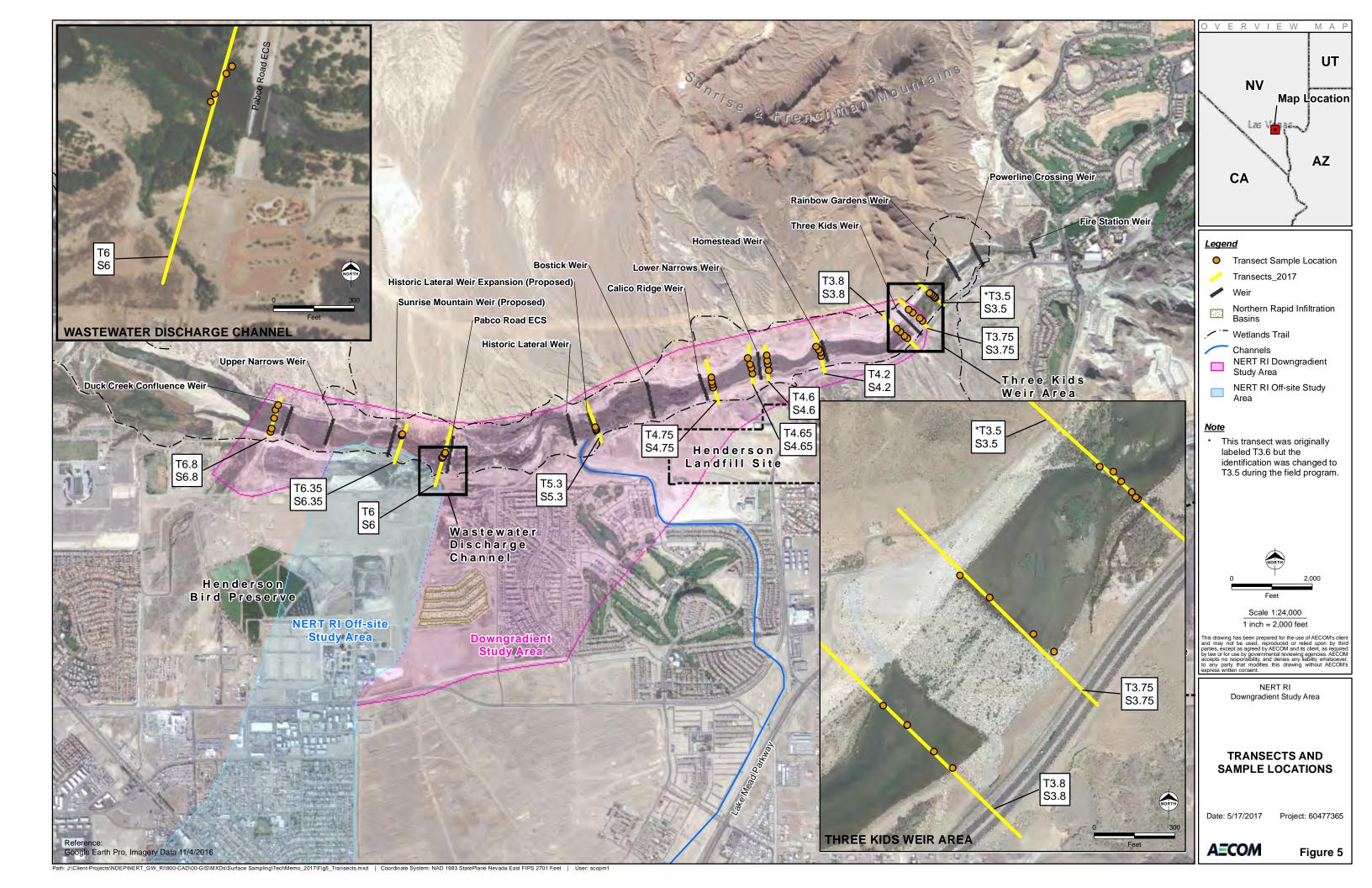
Figures

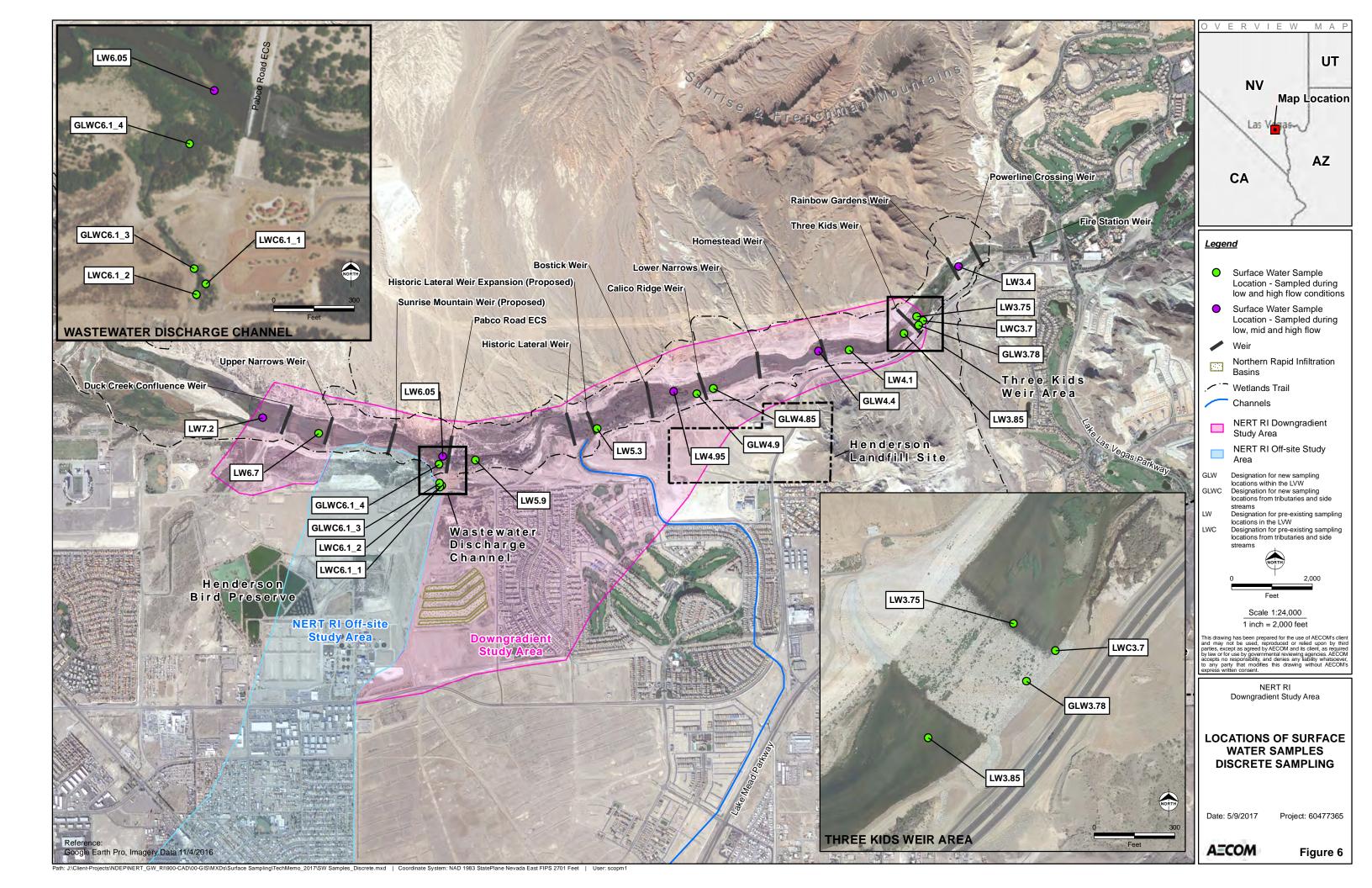


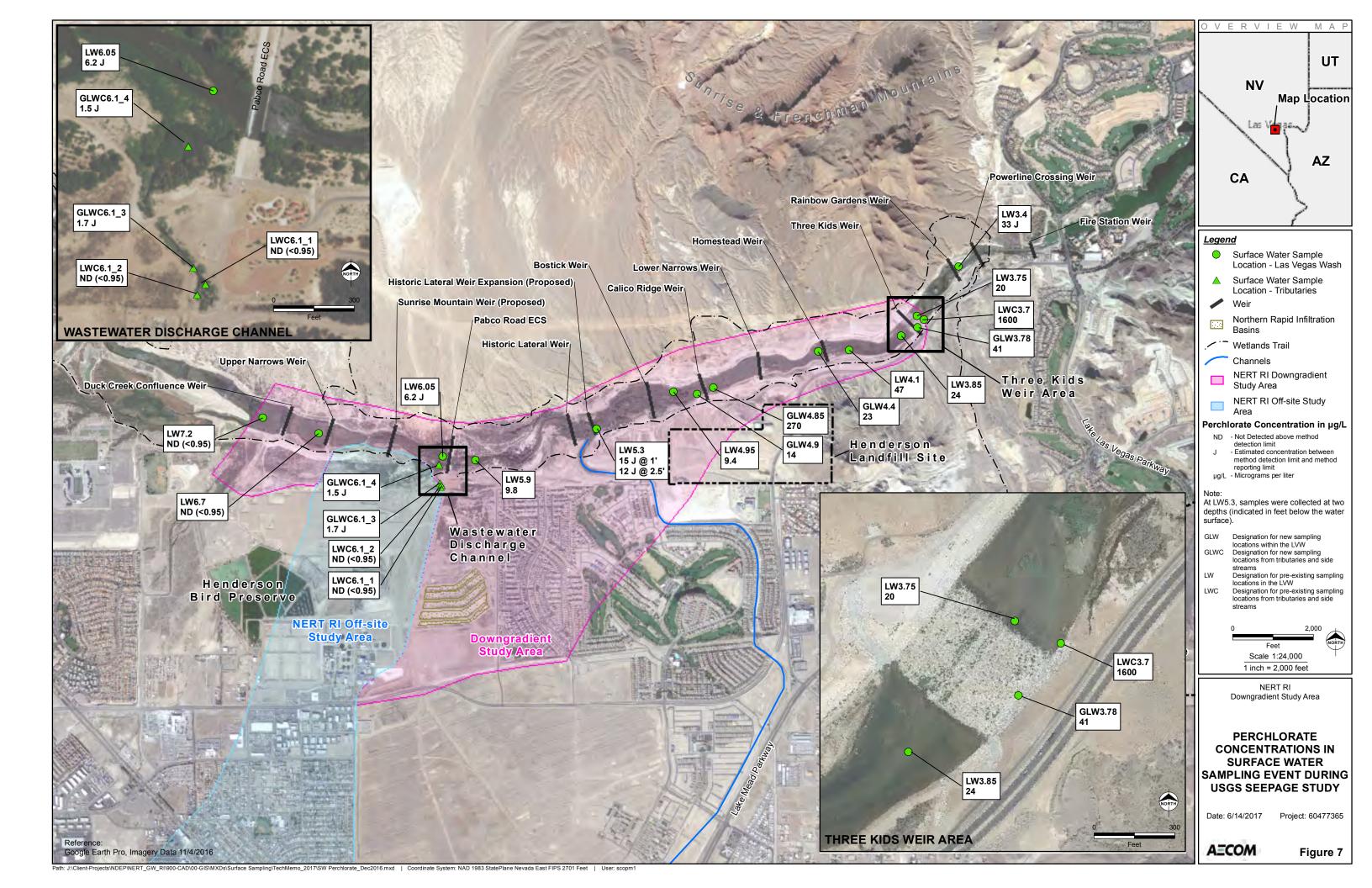


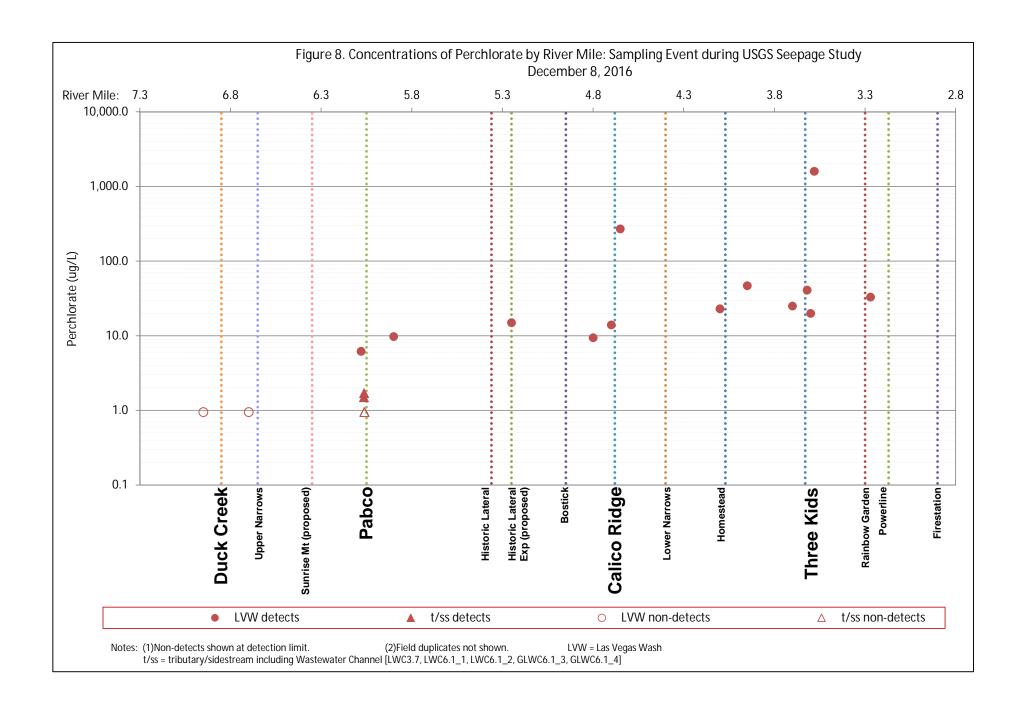


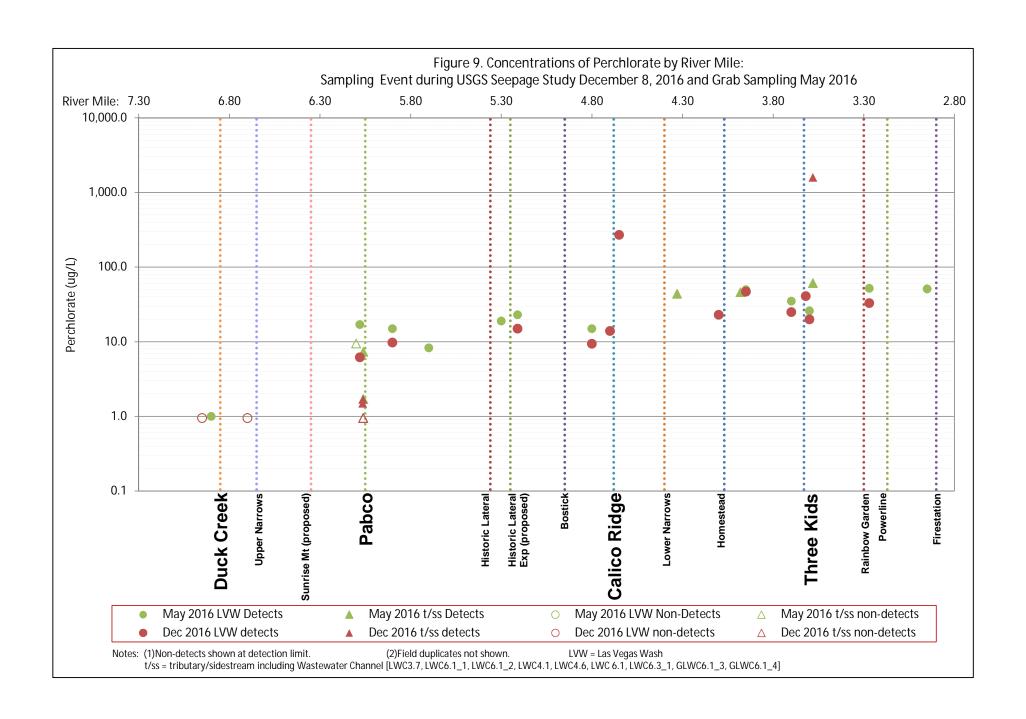


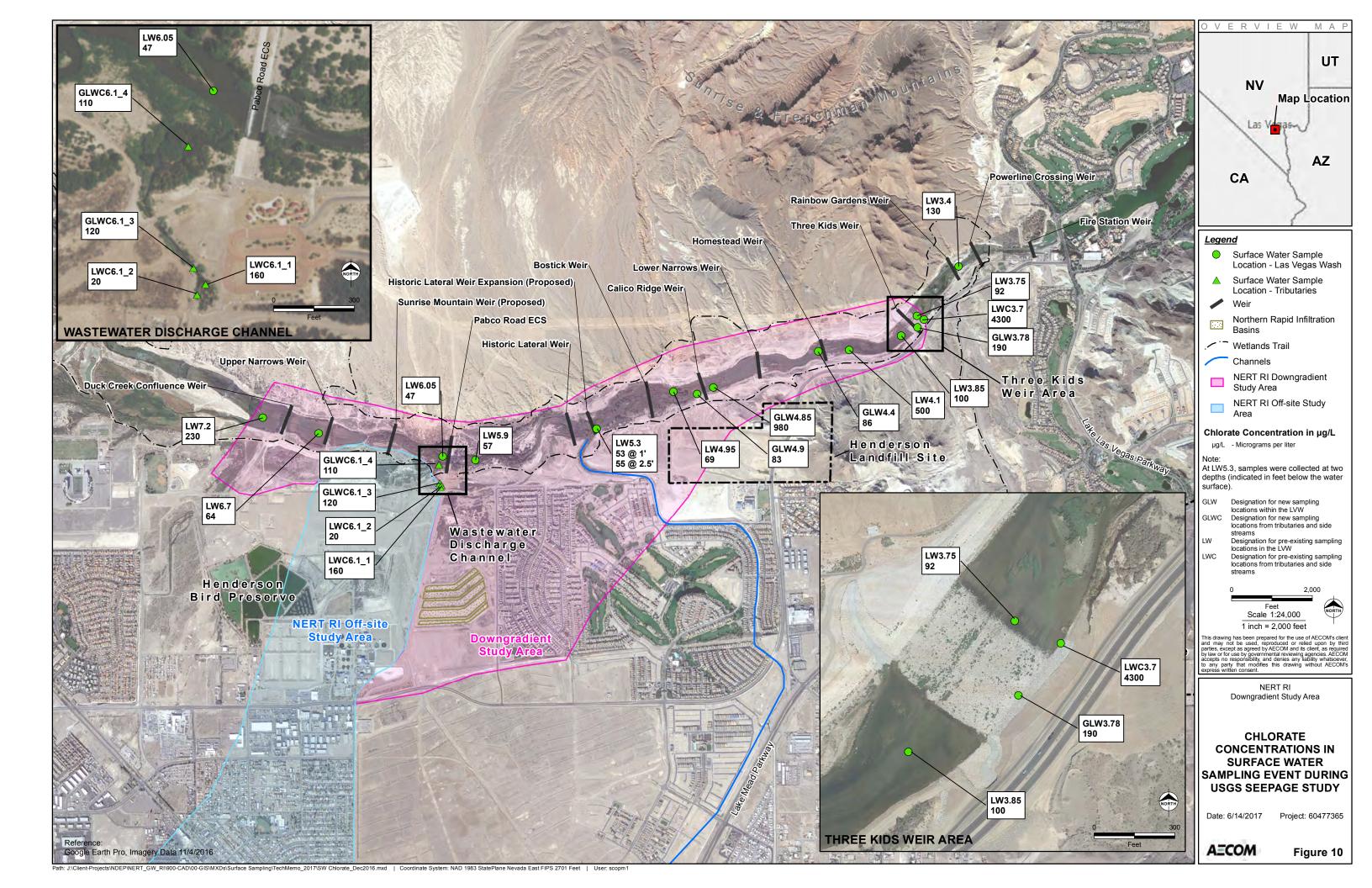


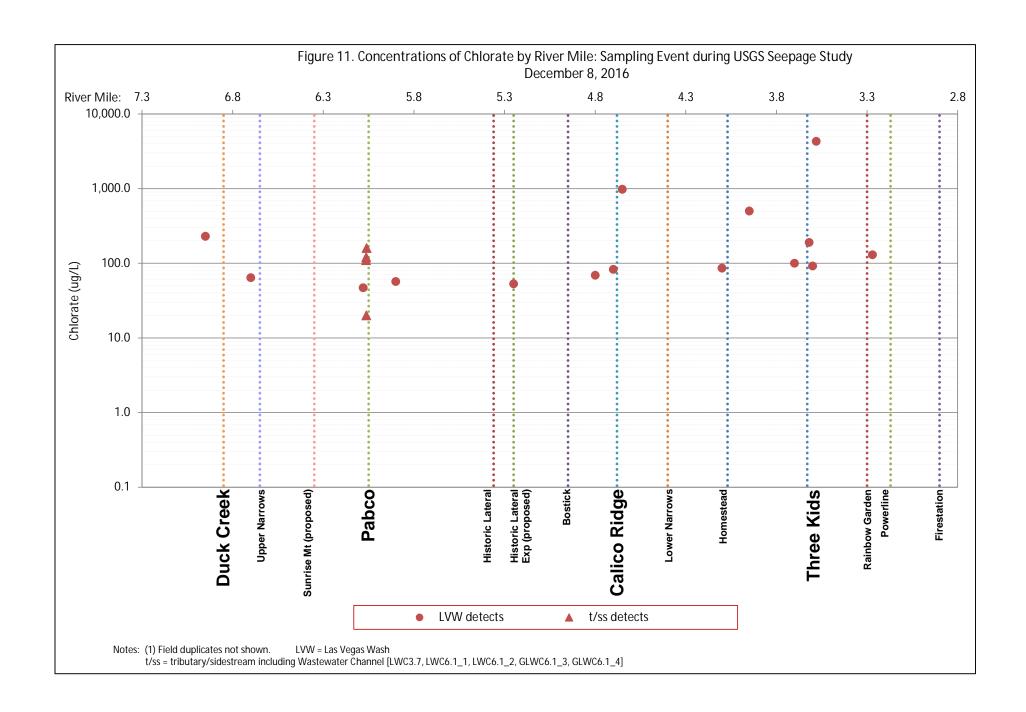


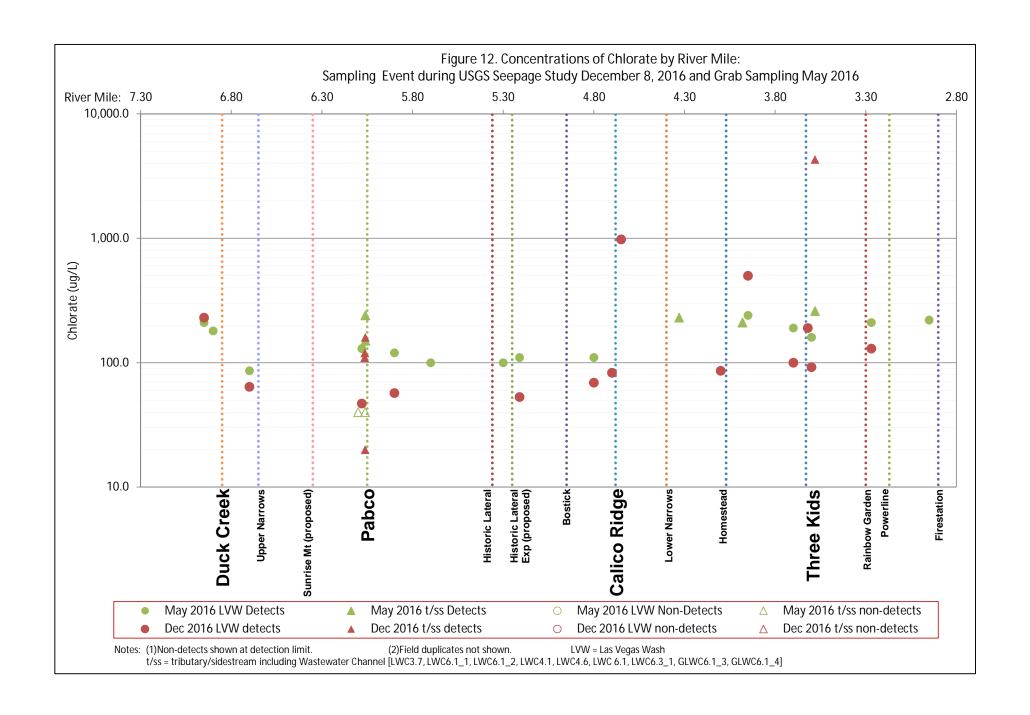


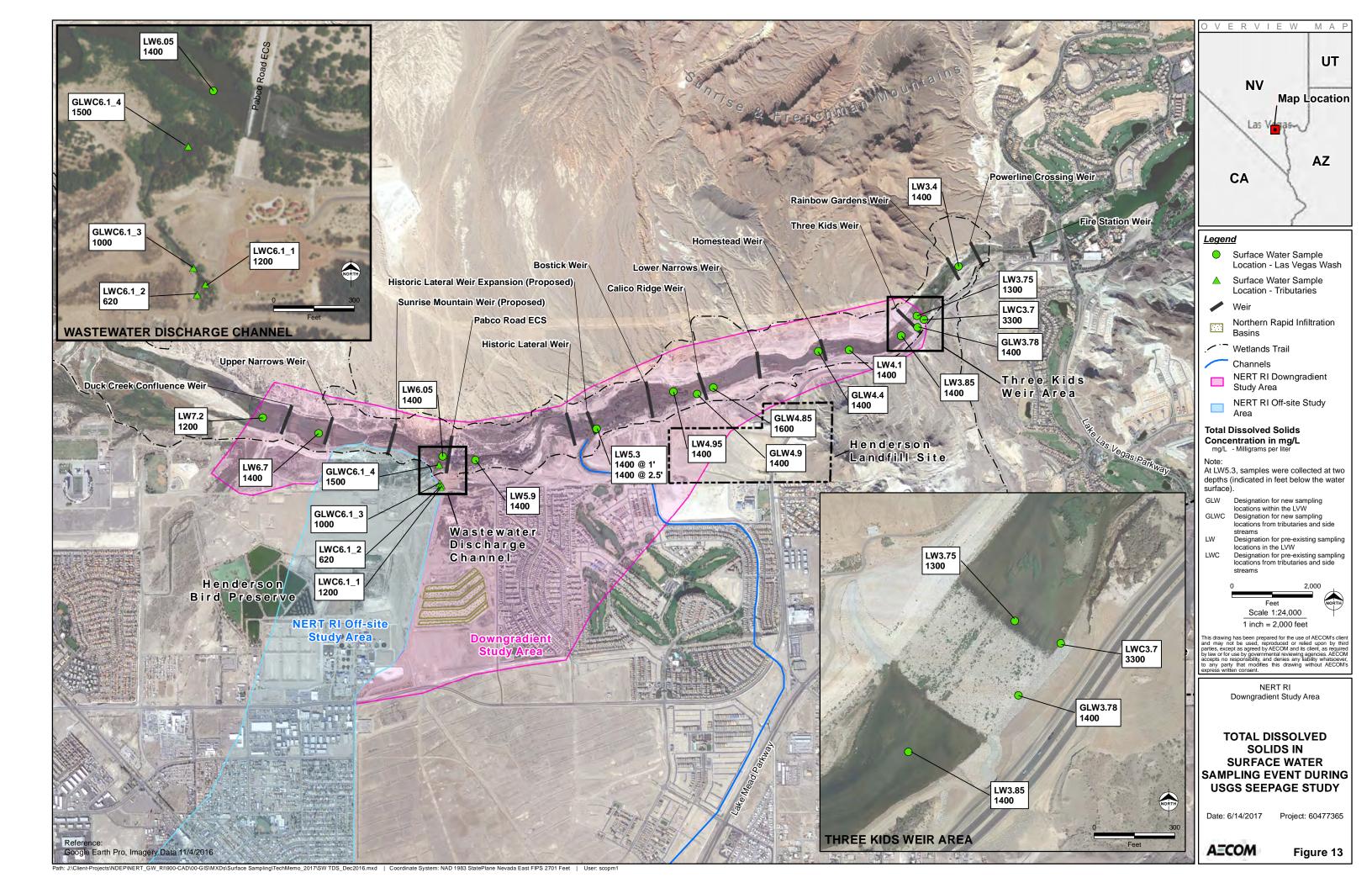


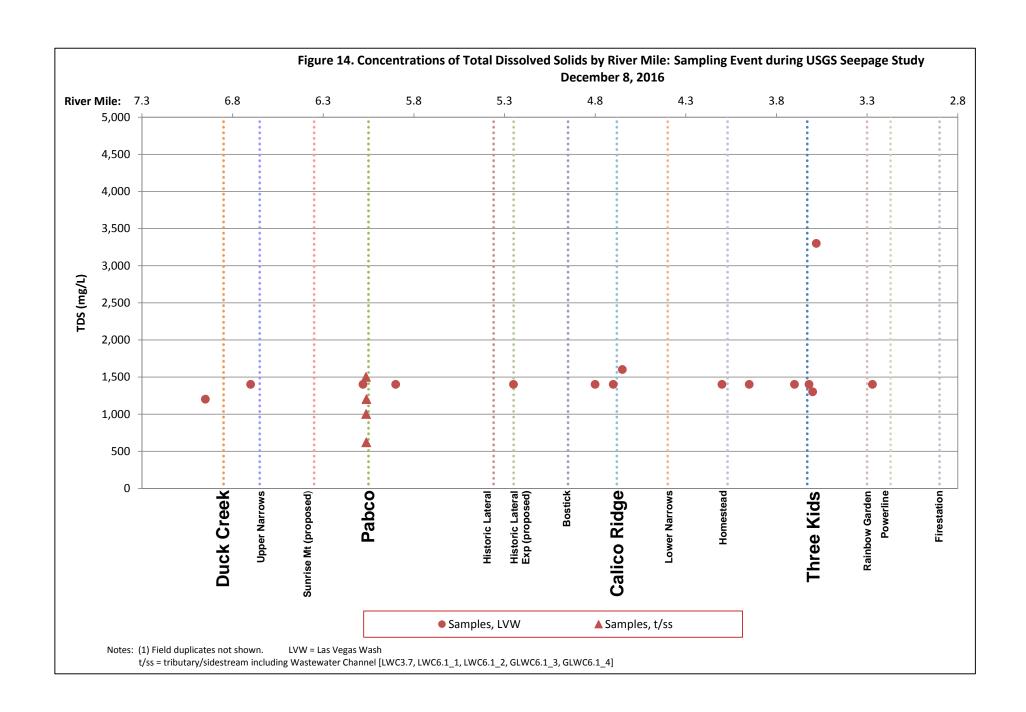


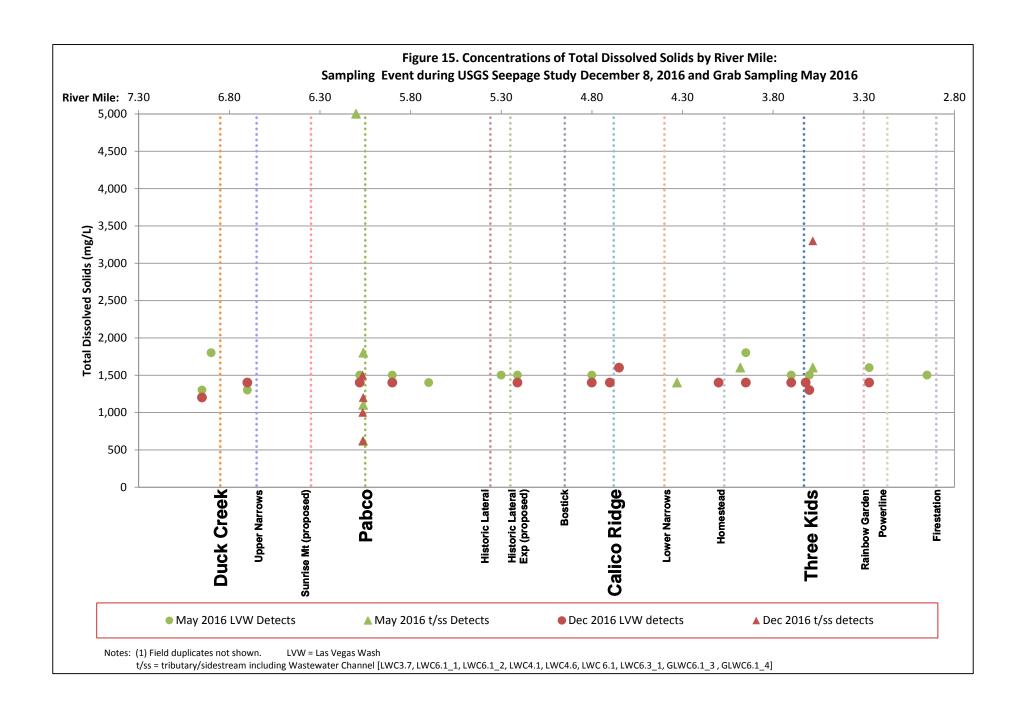


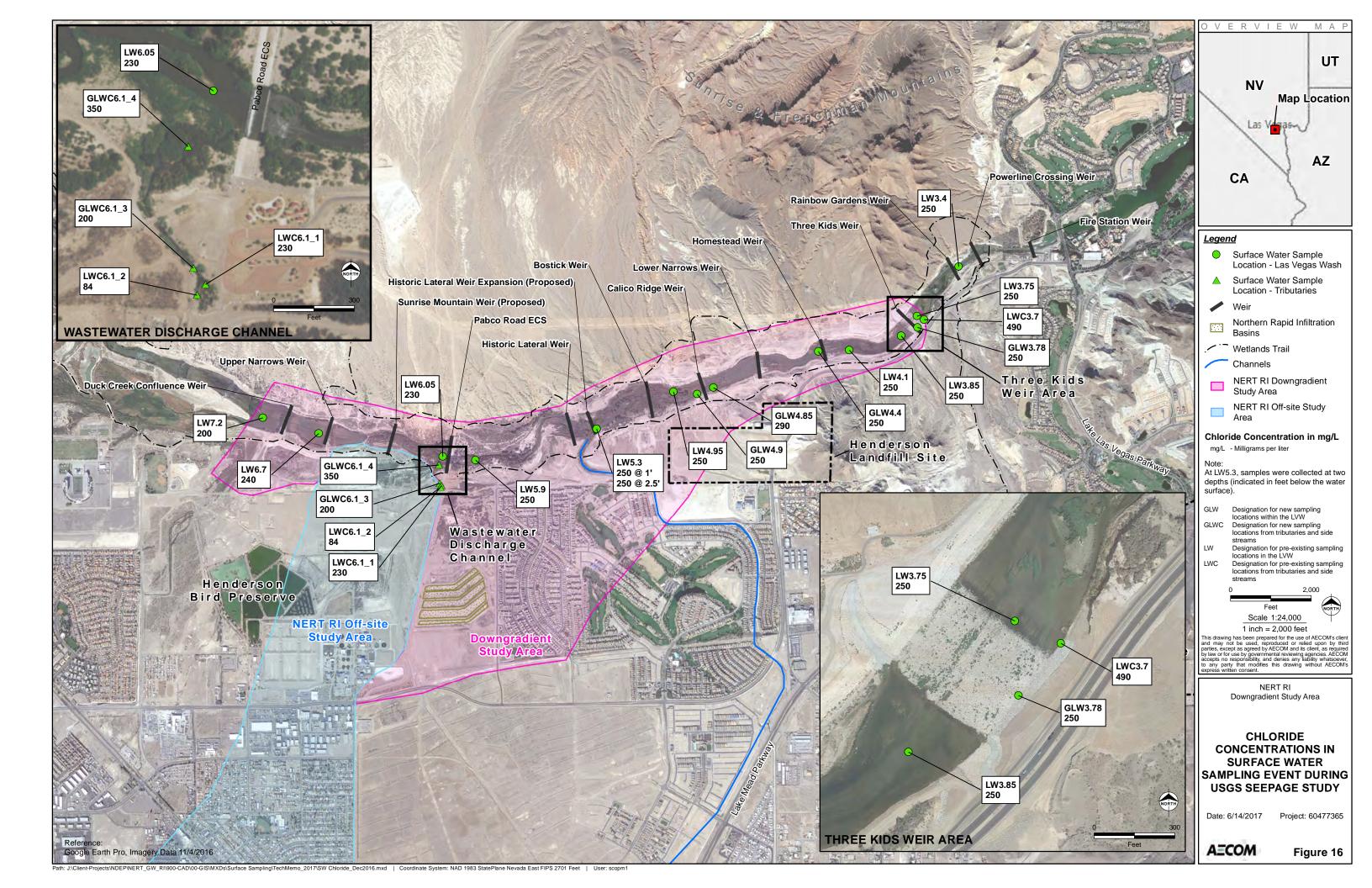


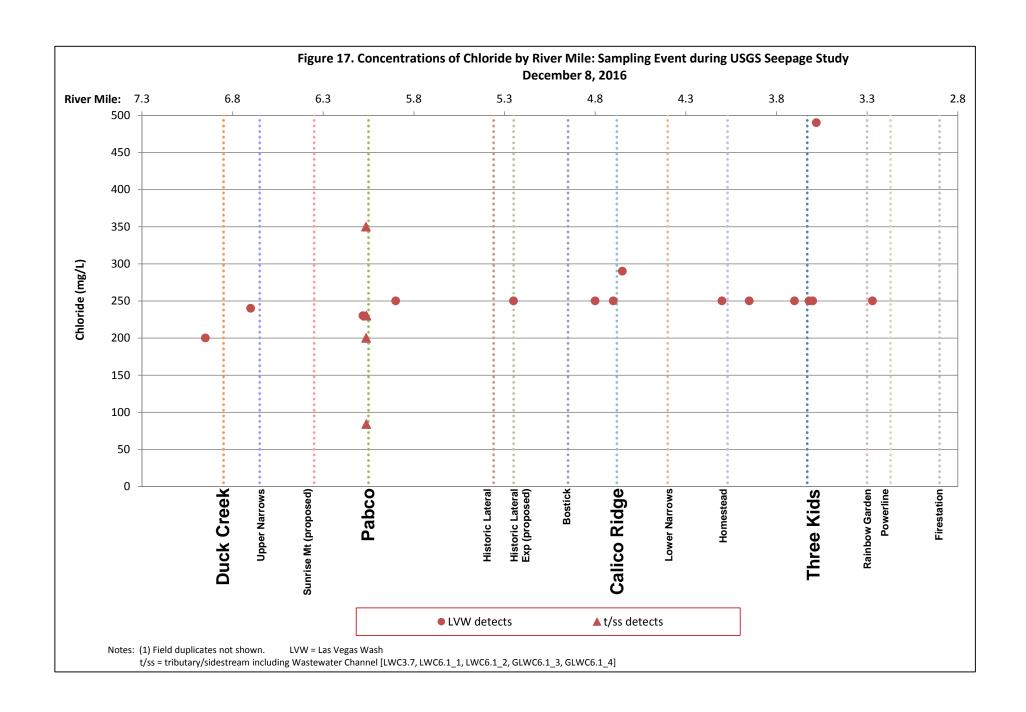


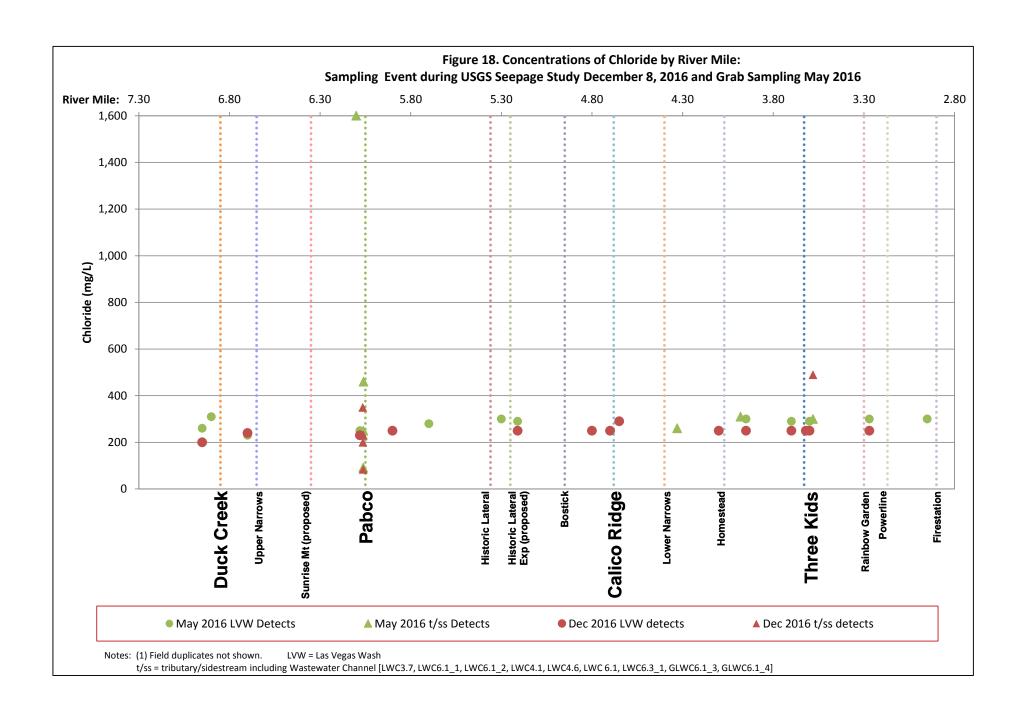


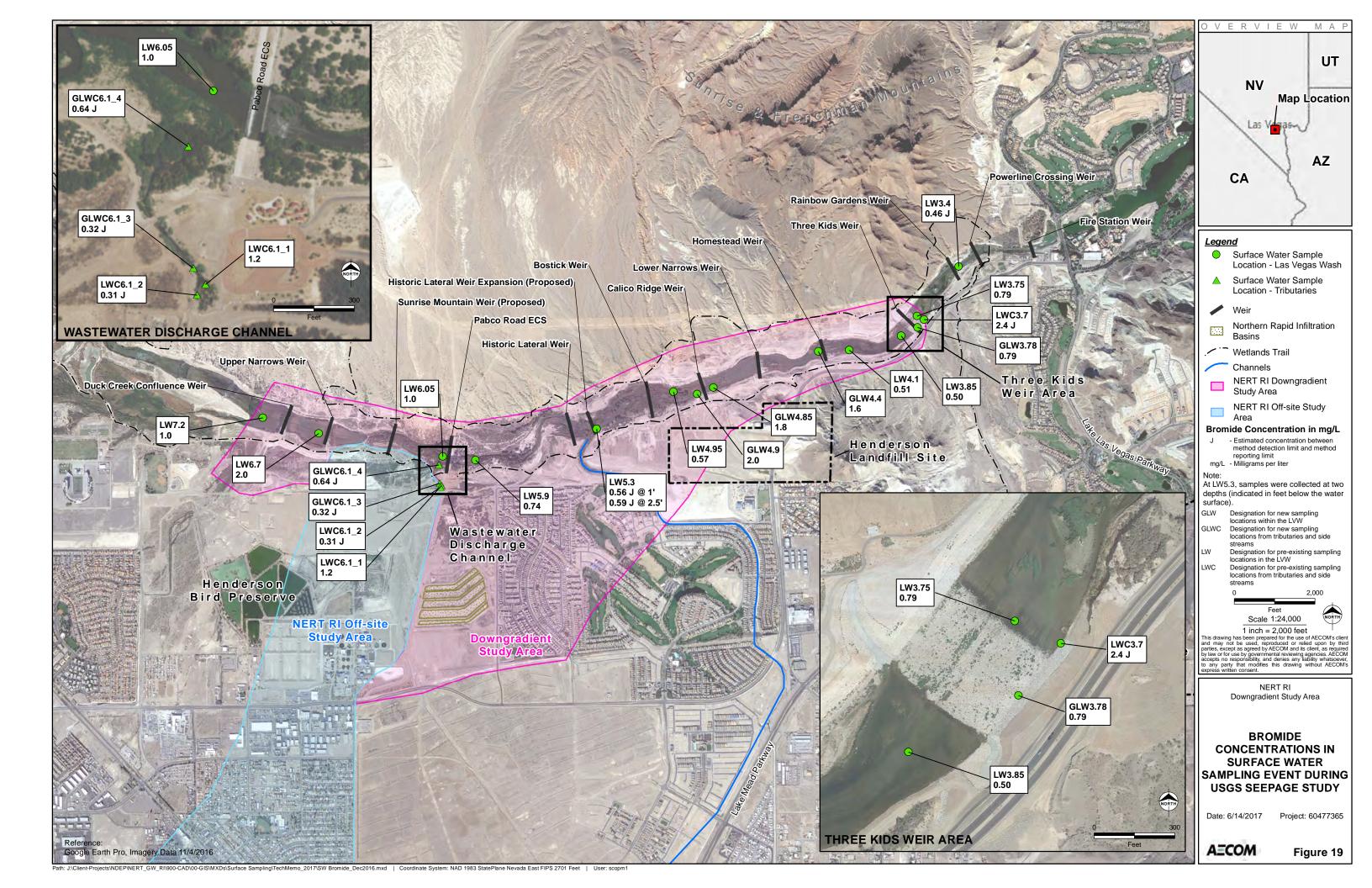


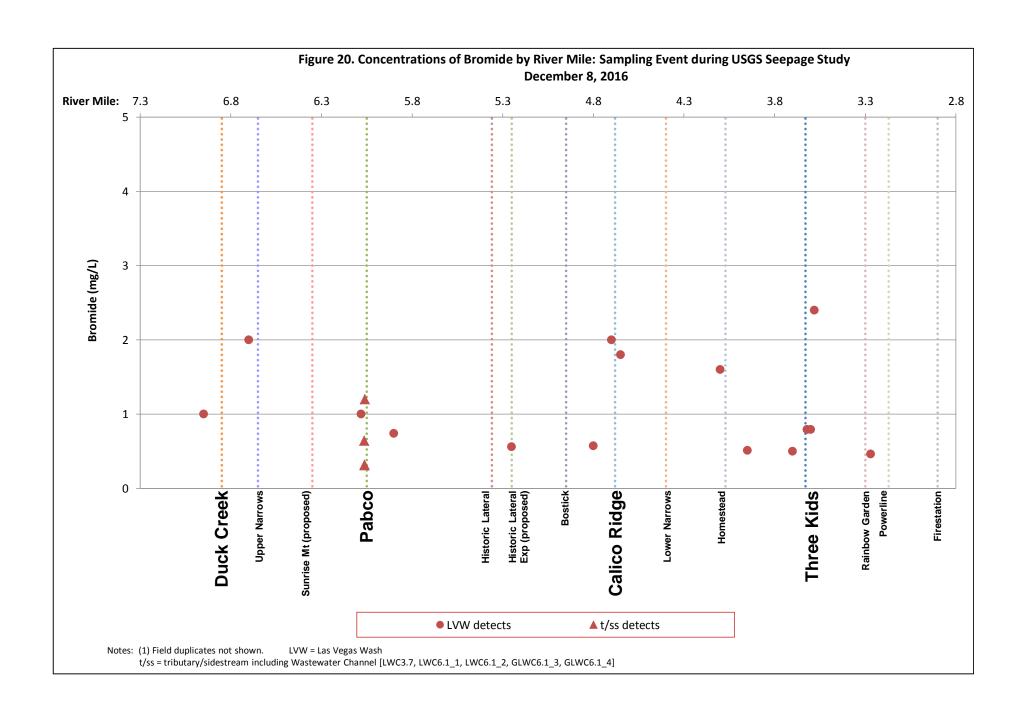


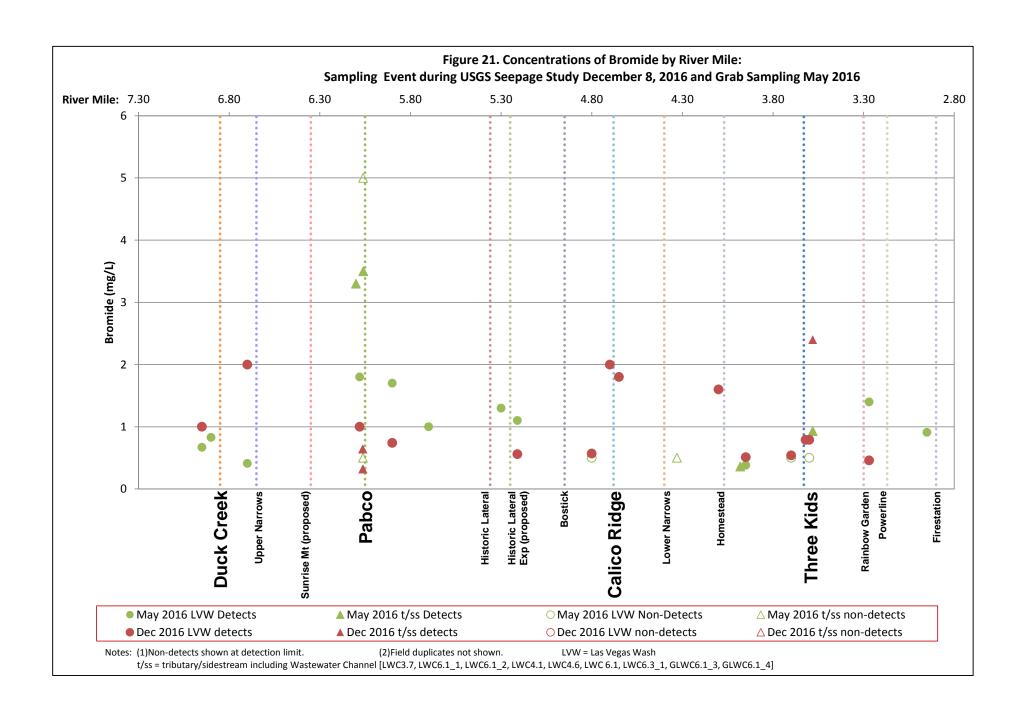


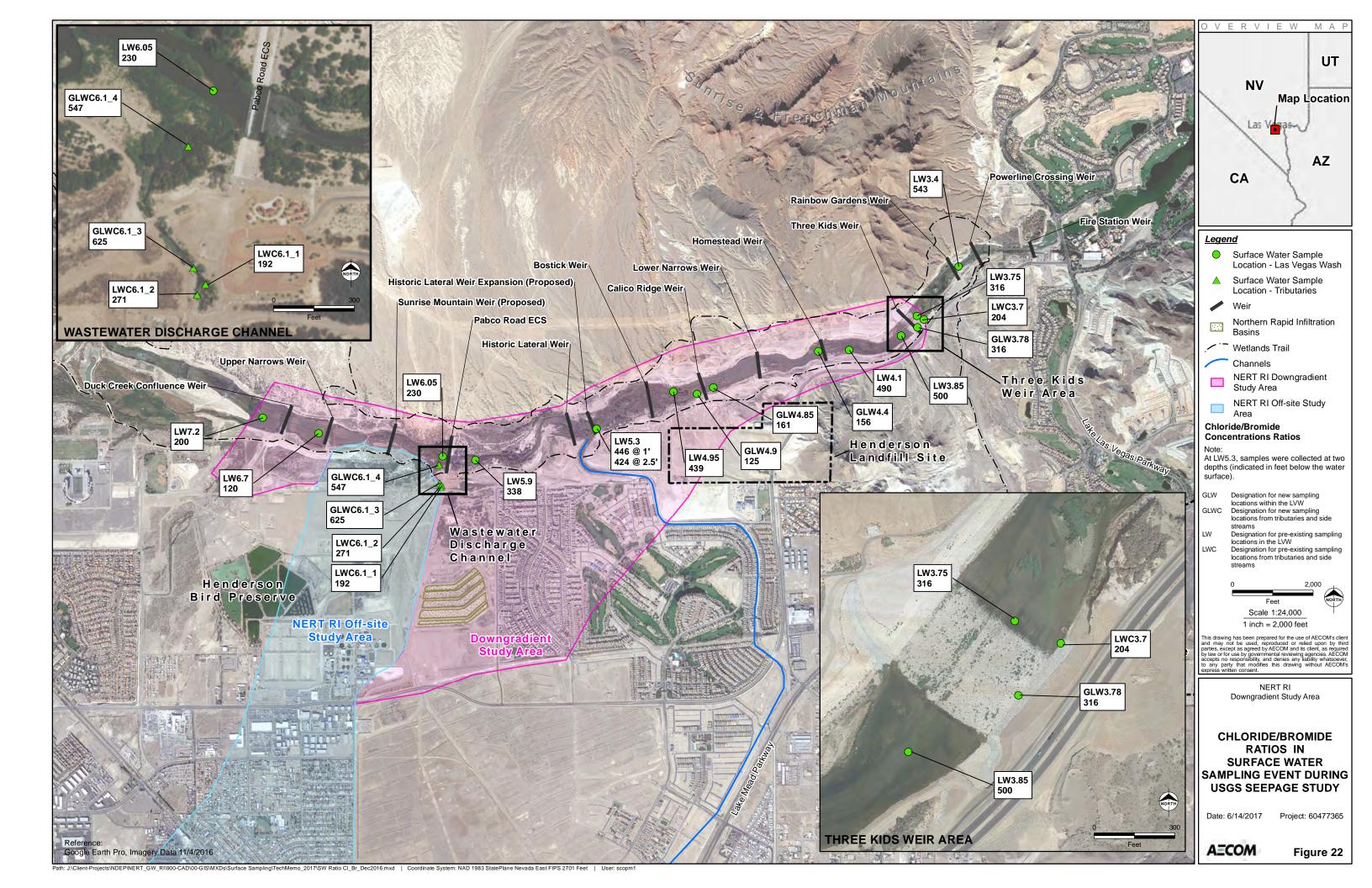


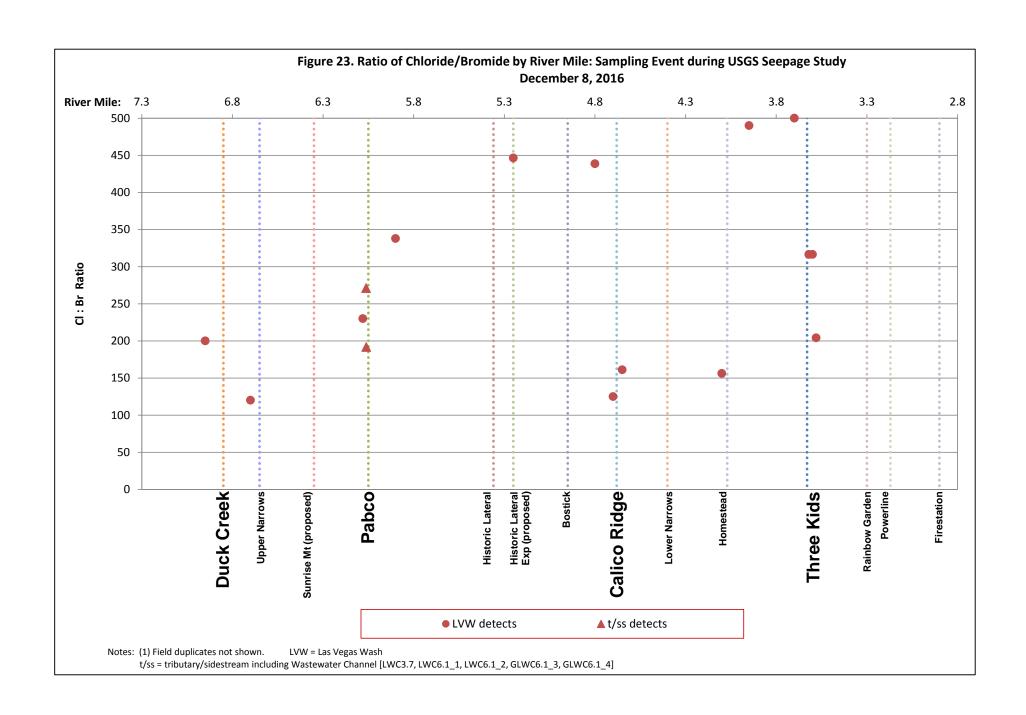


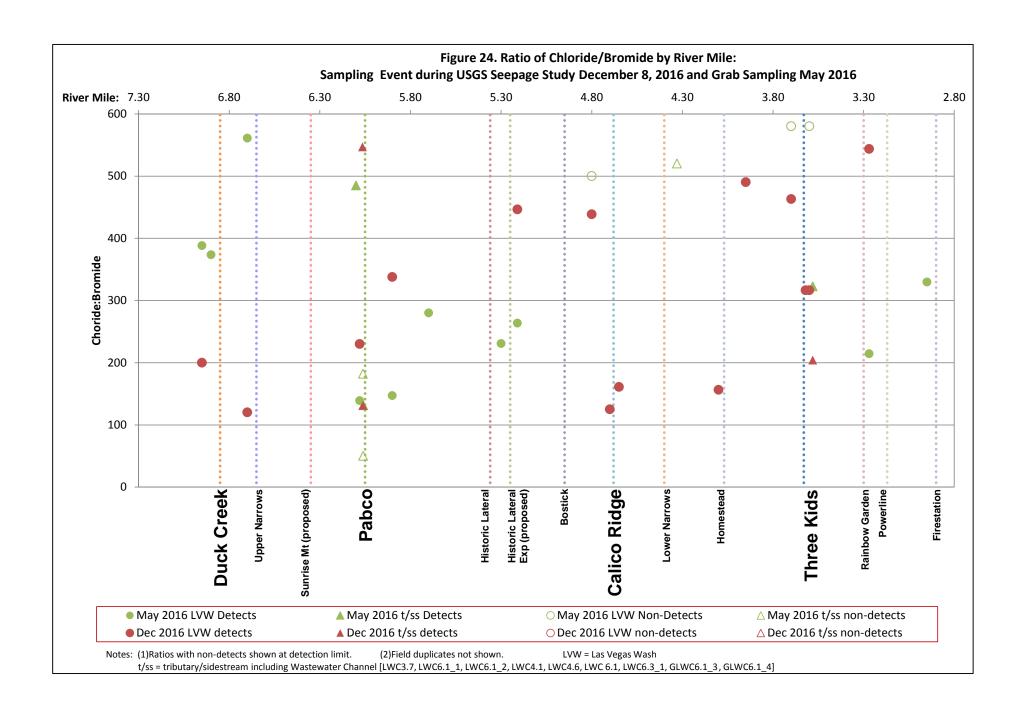


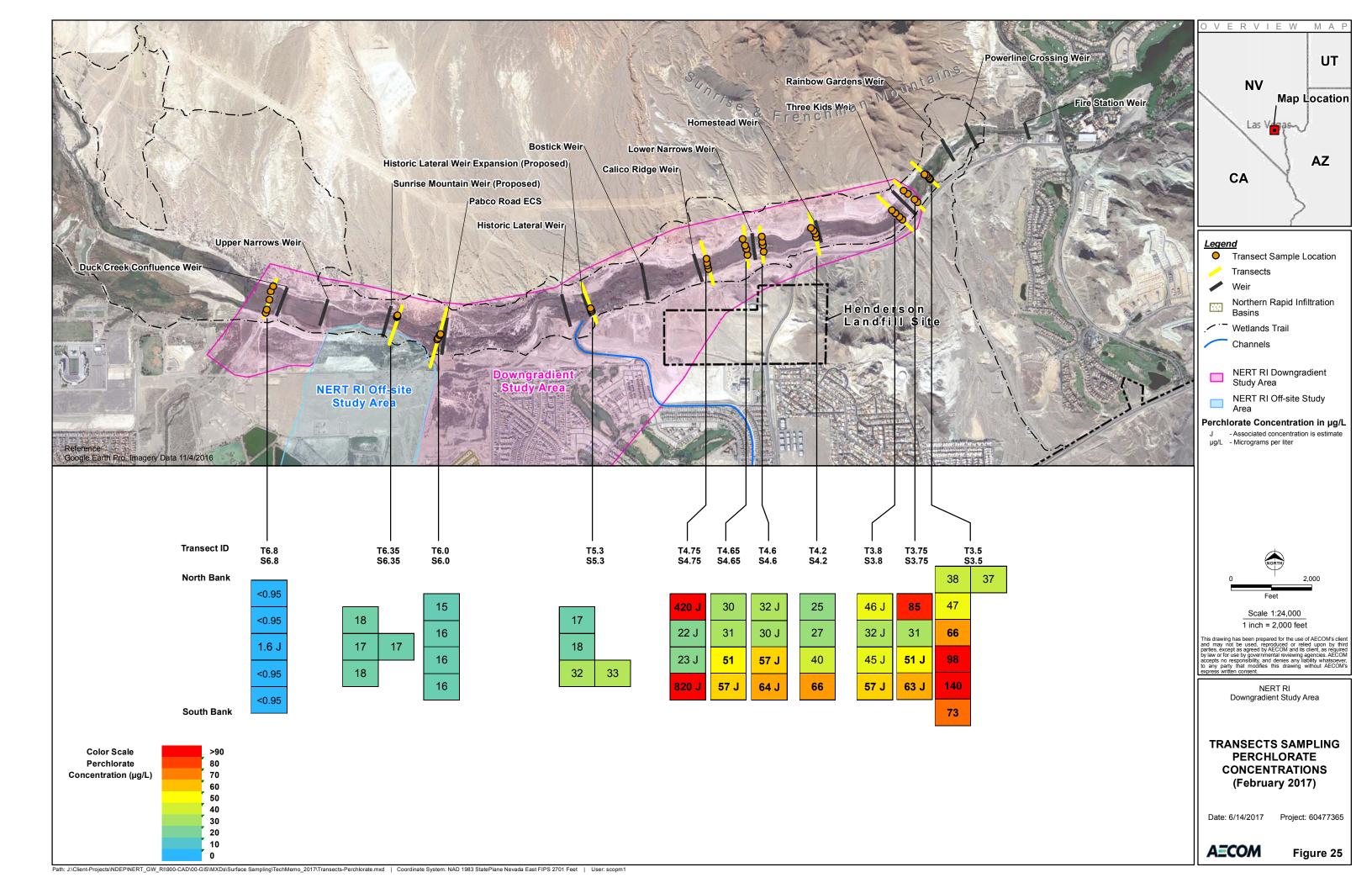


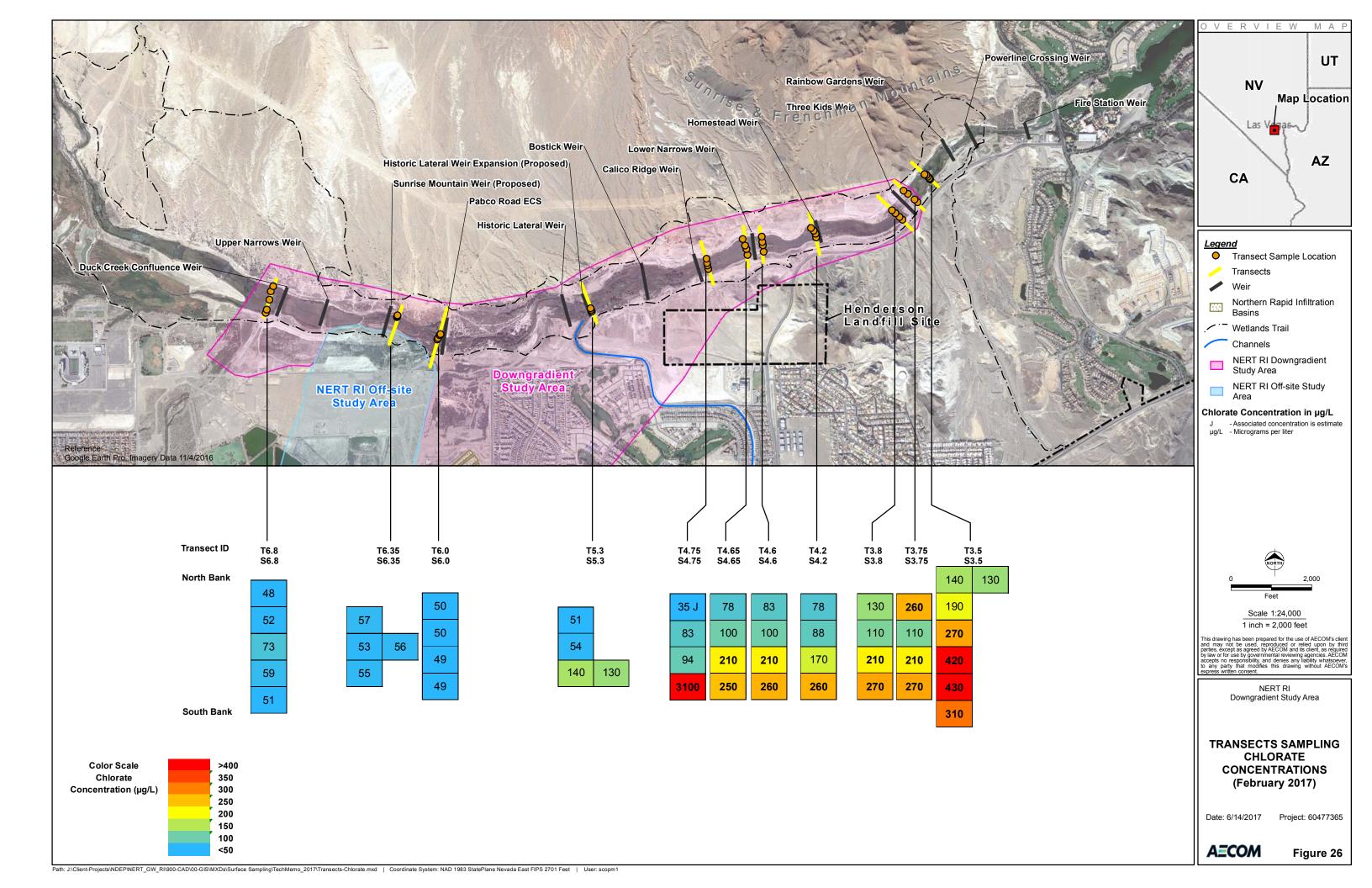


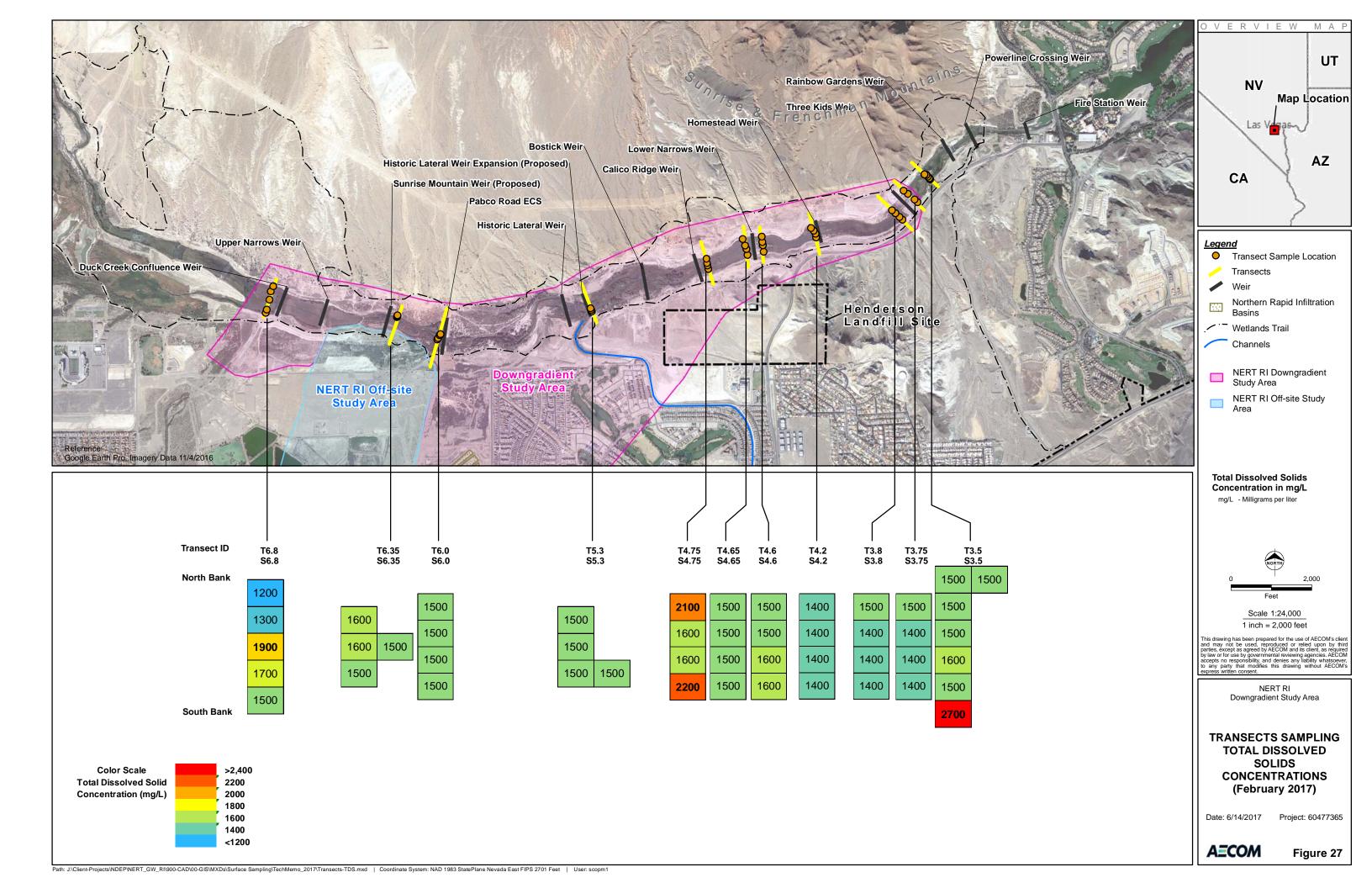


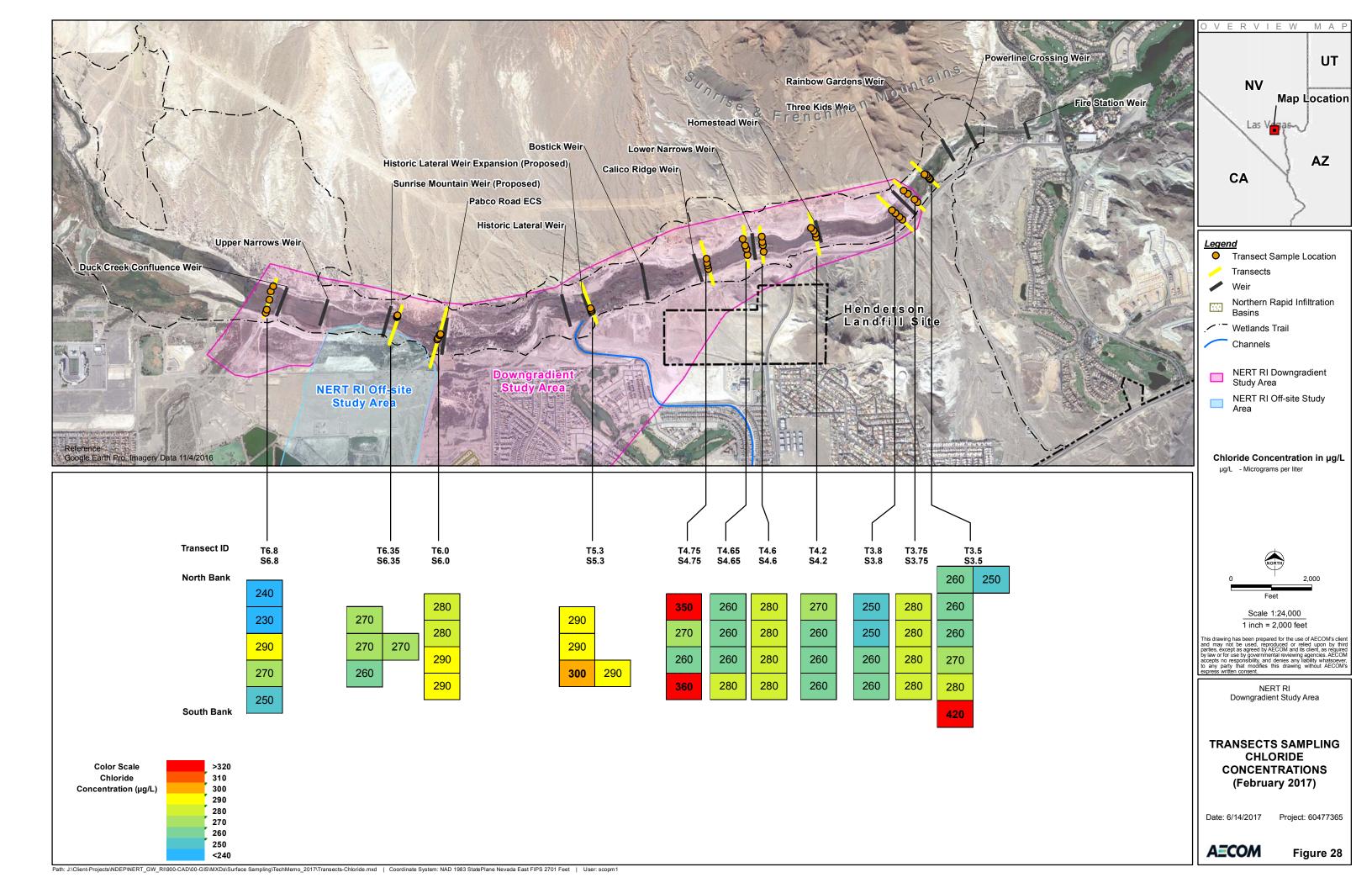


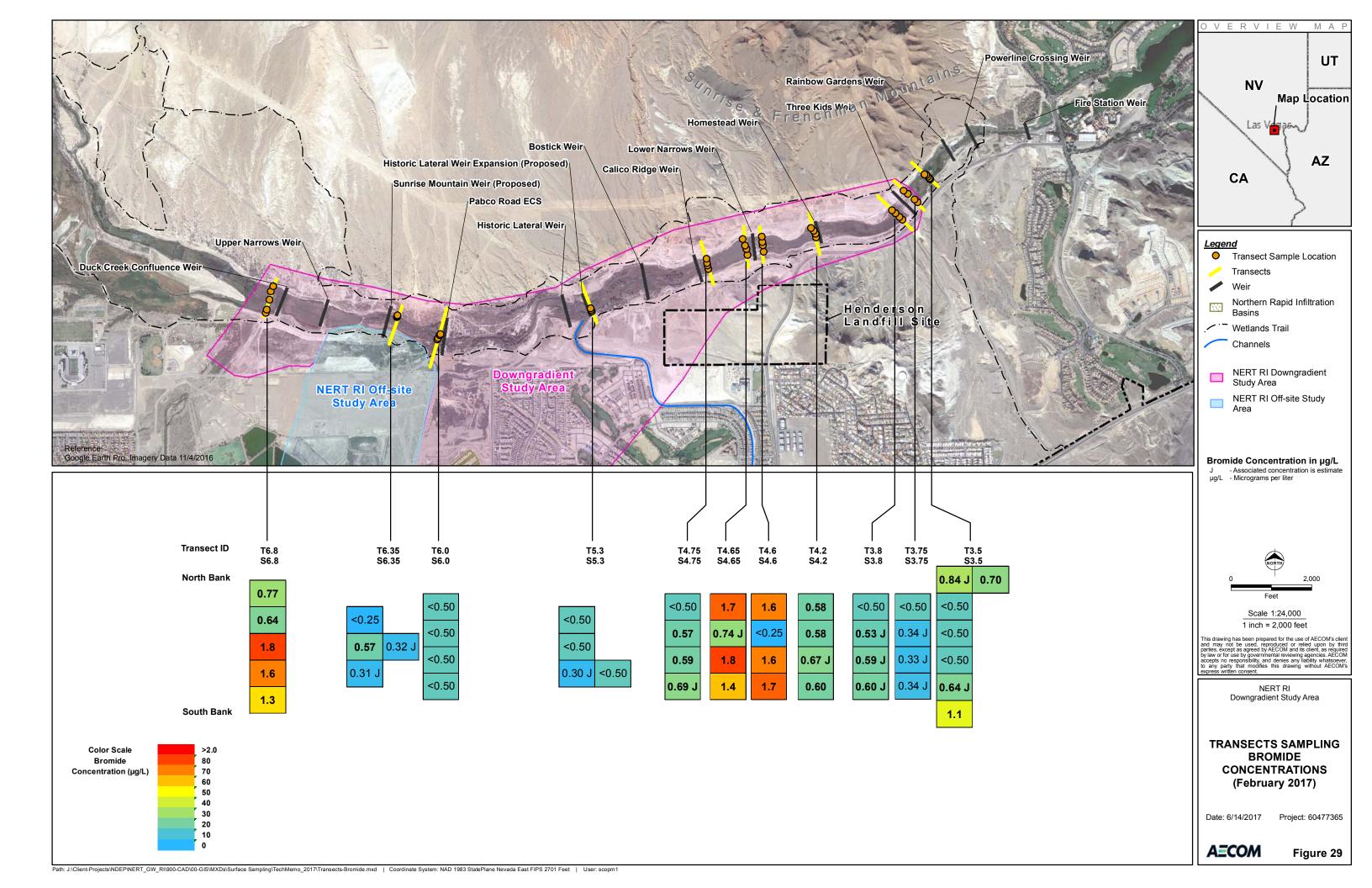


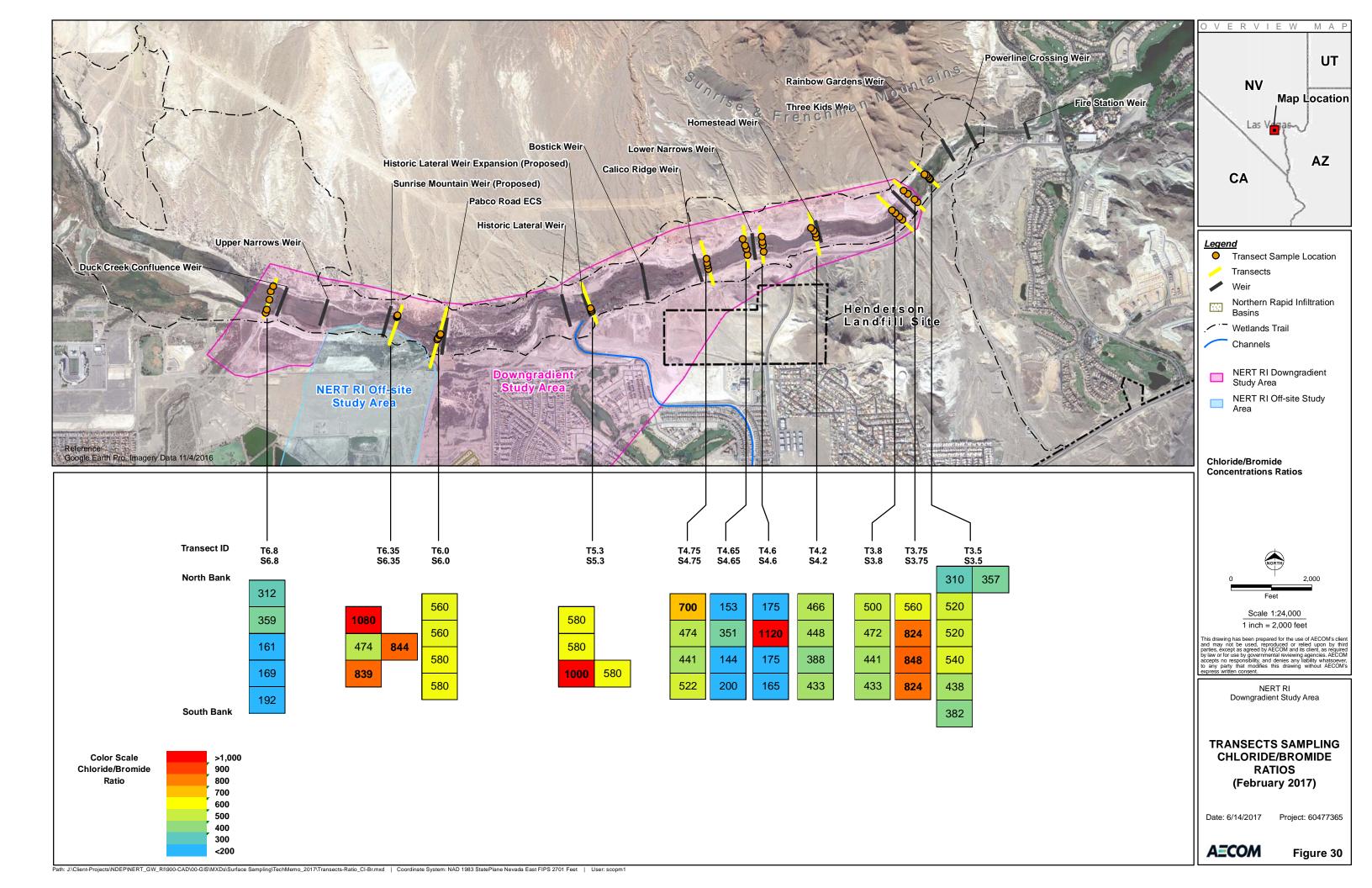


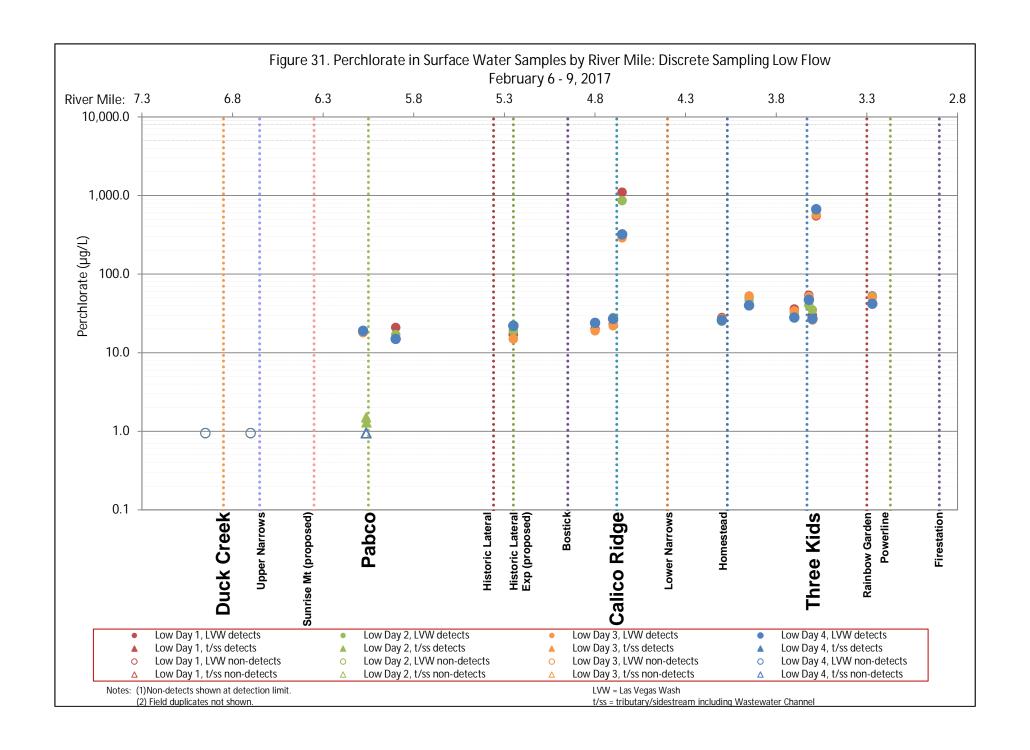


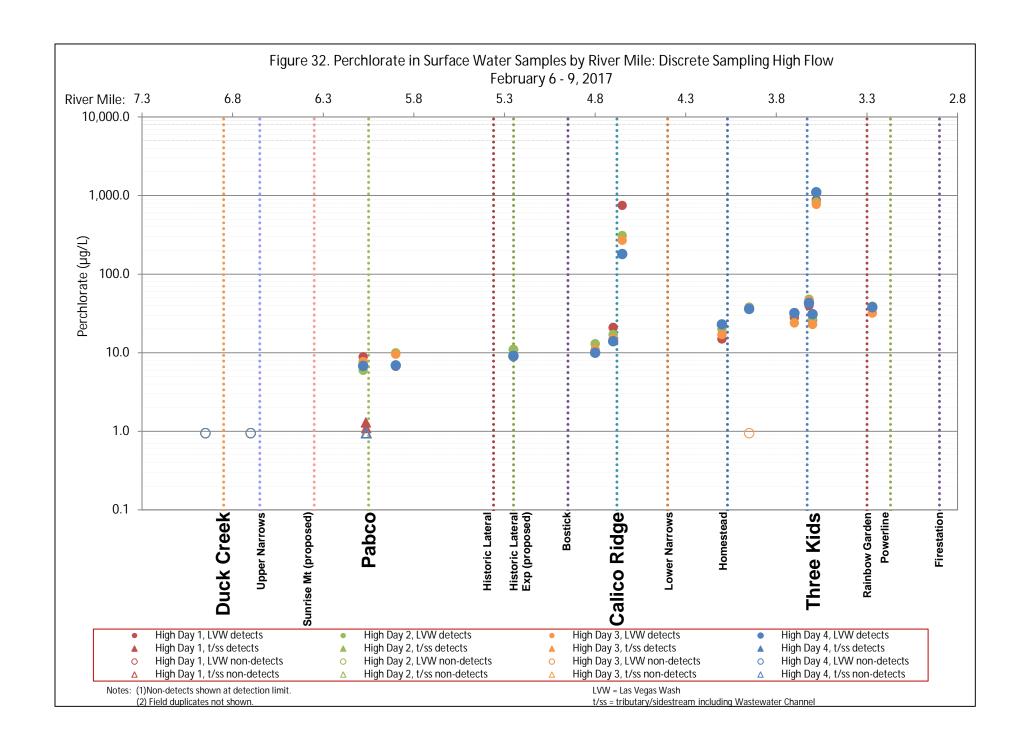


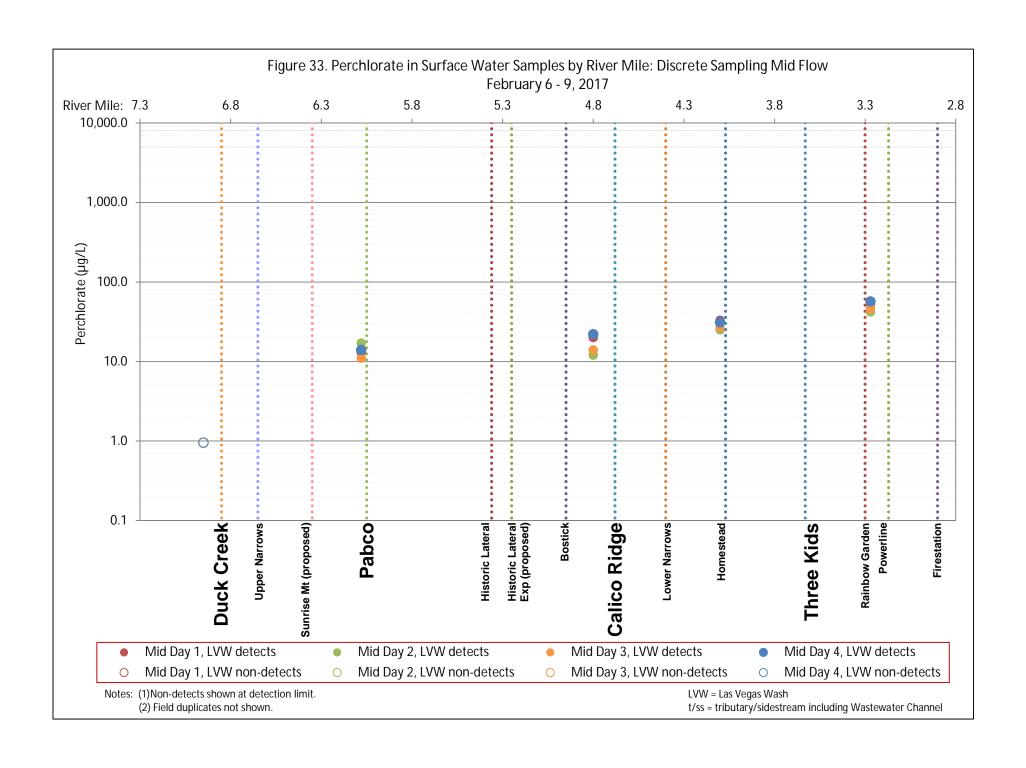


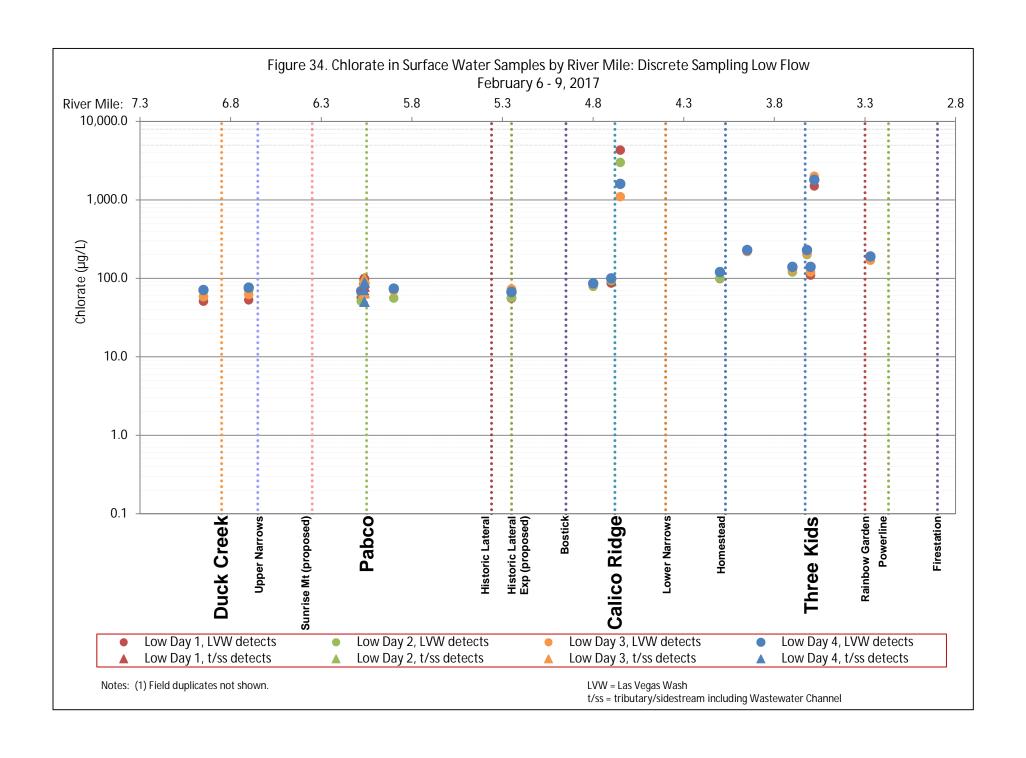


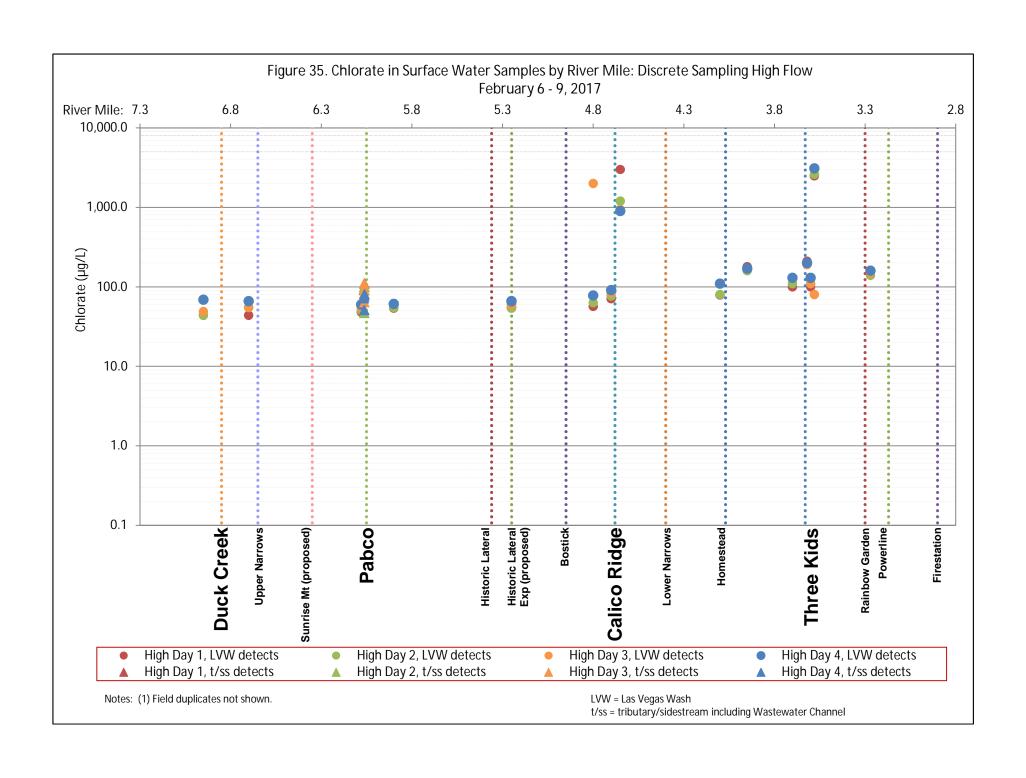


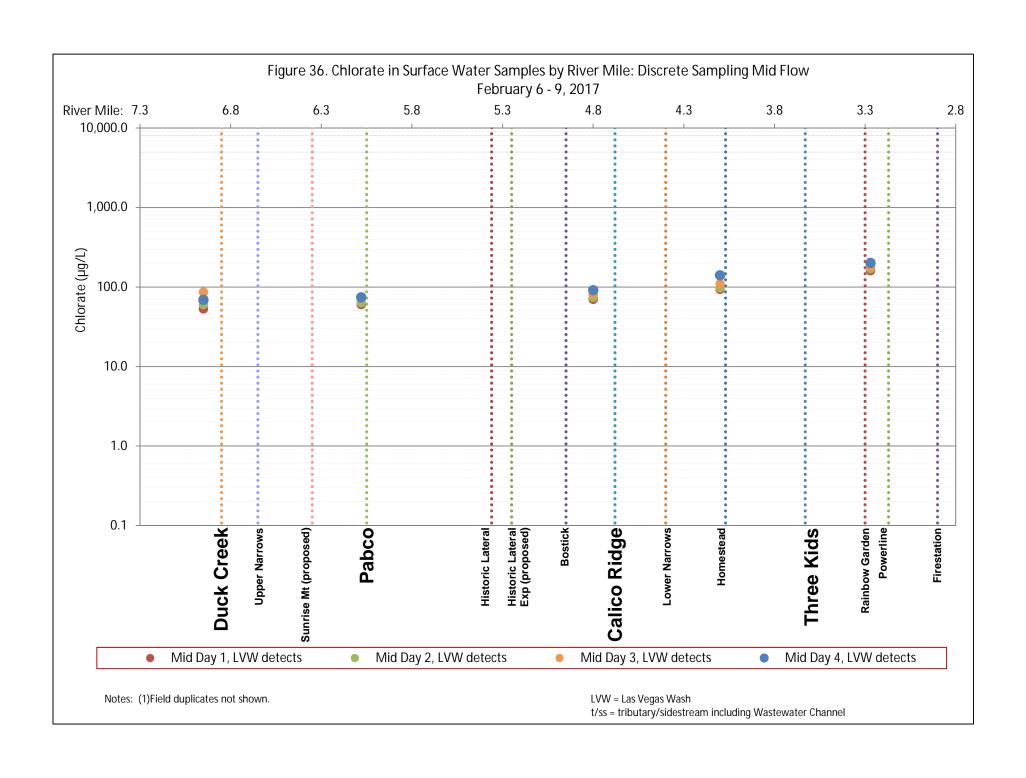


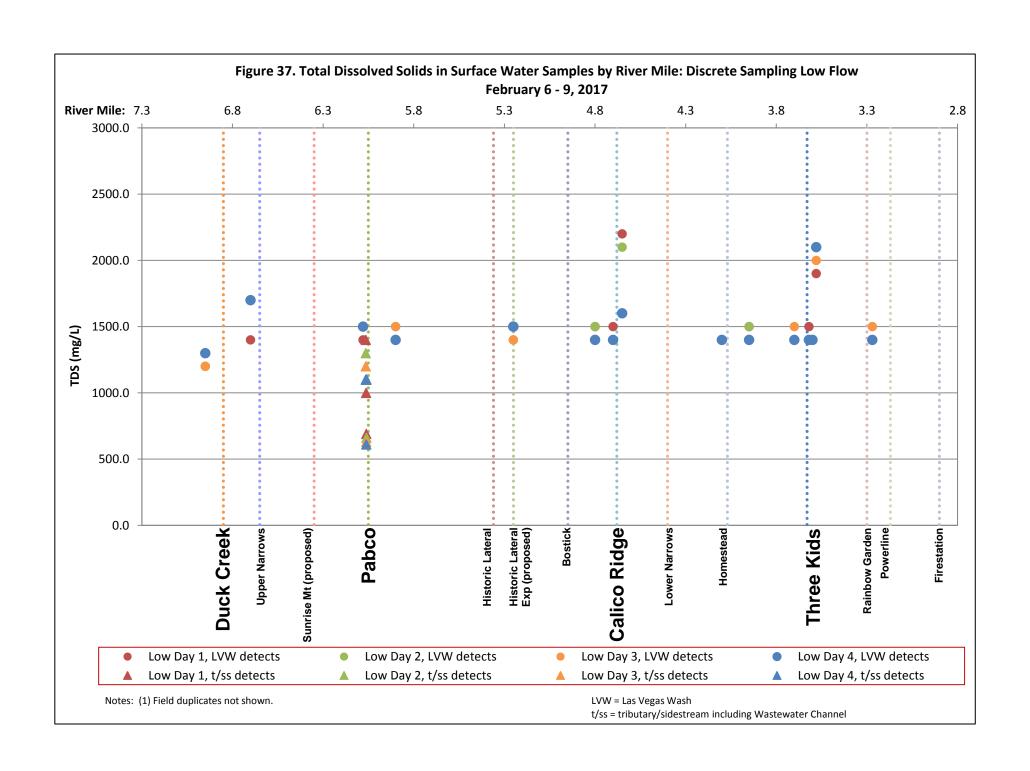


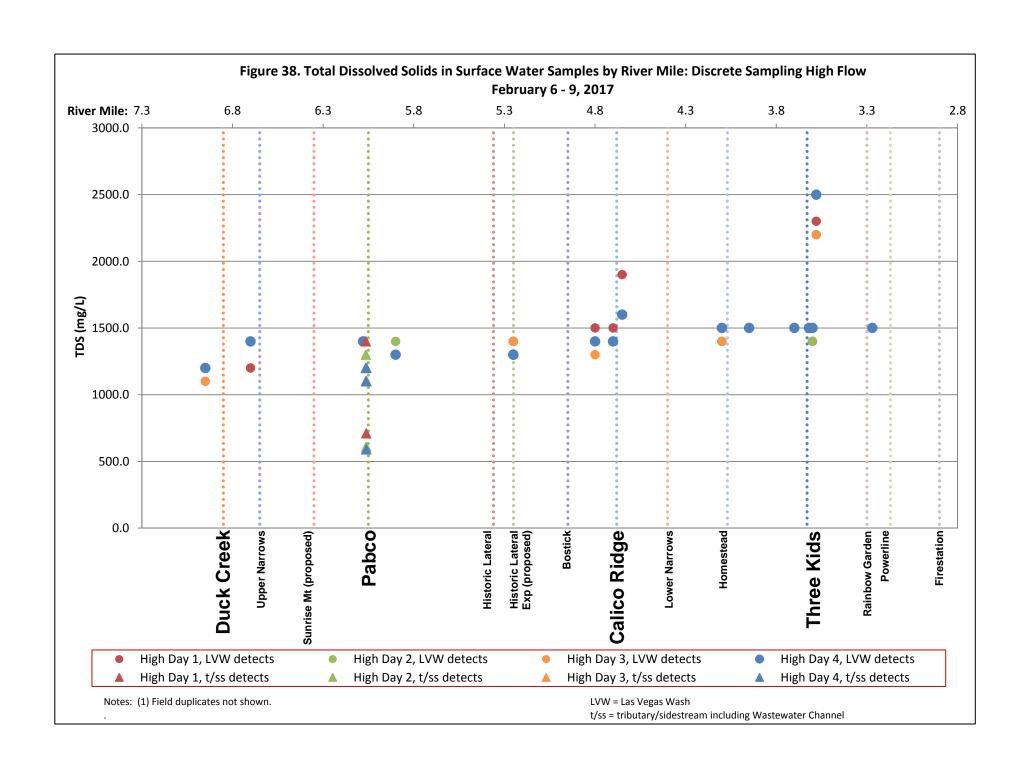


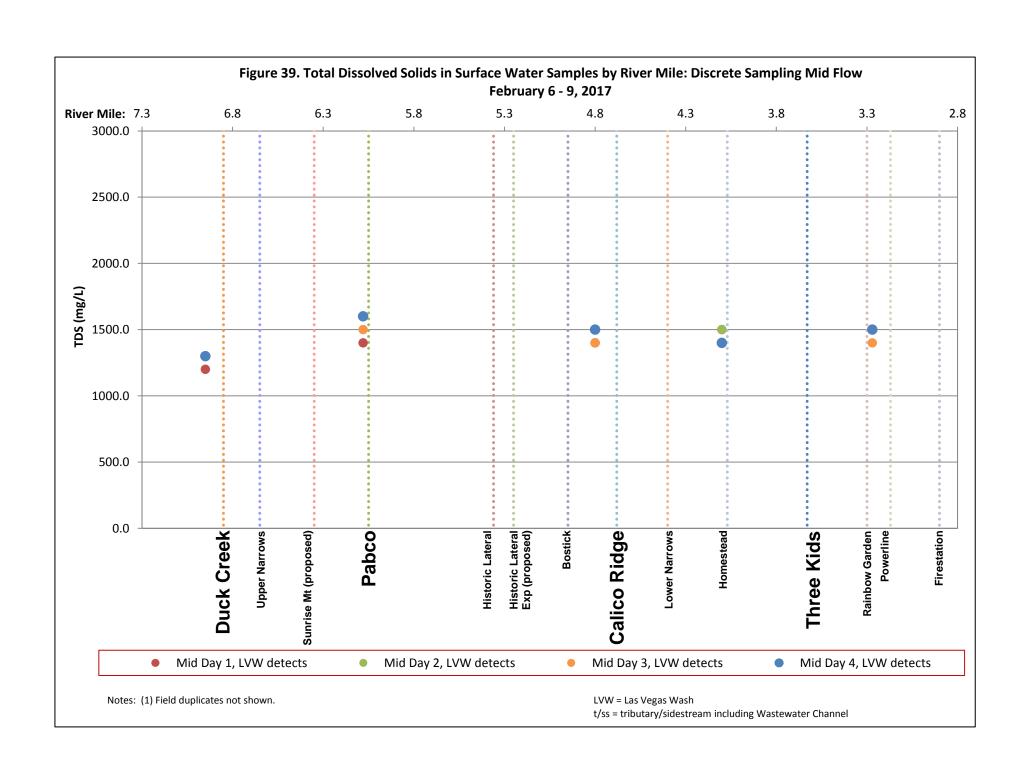


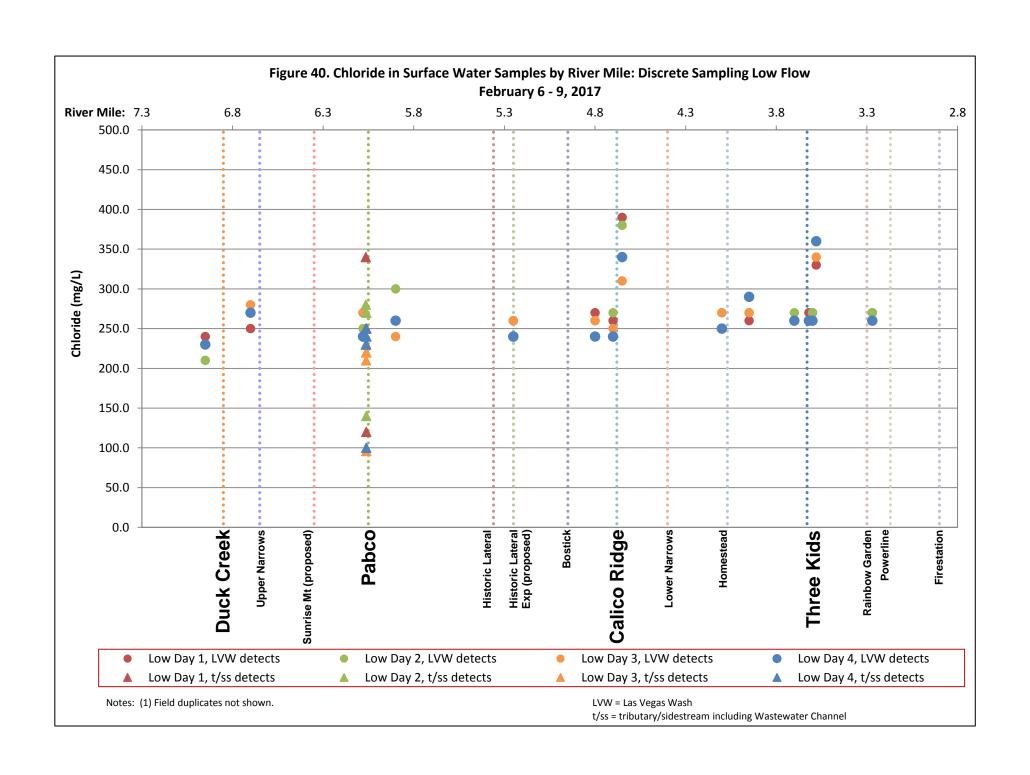


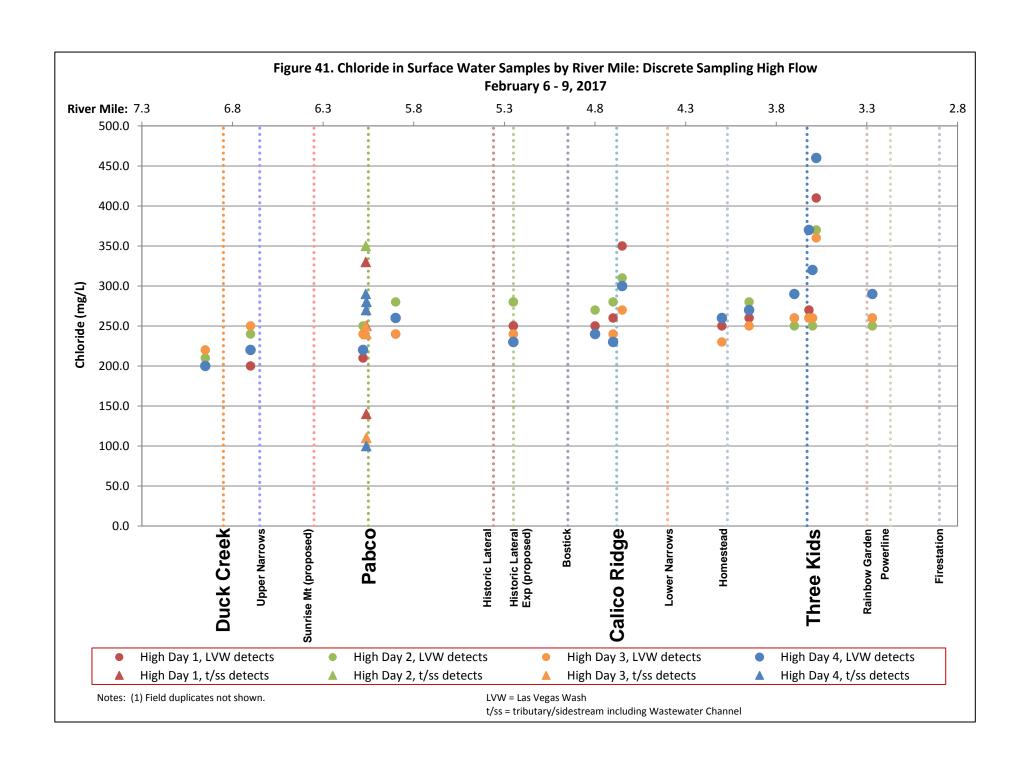


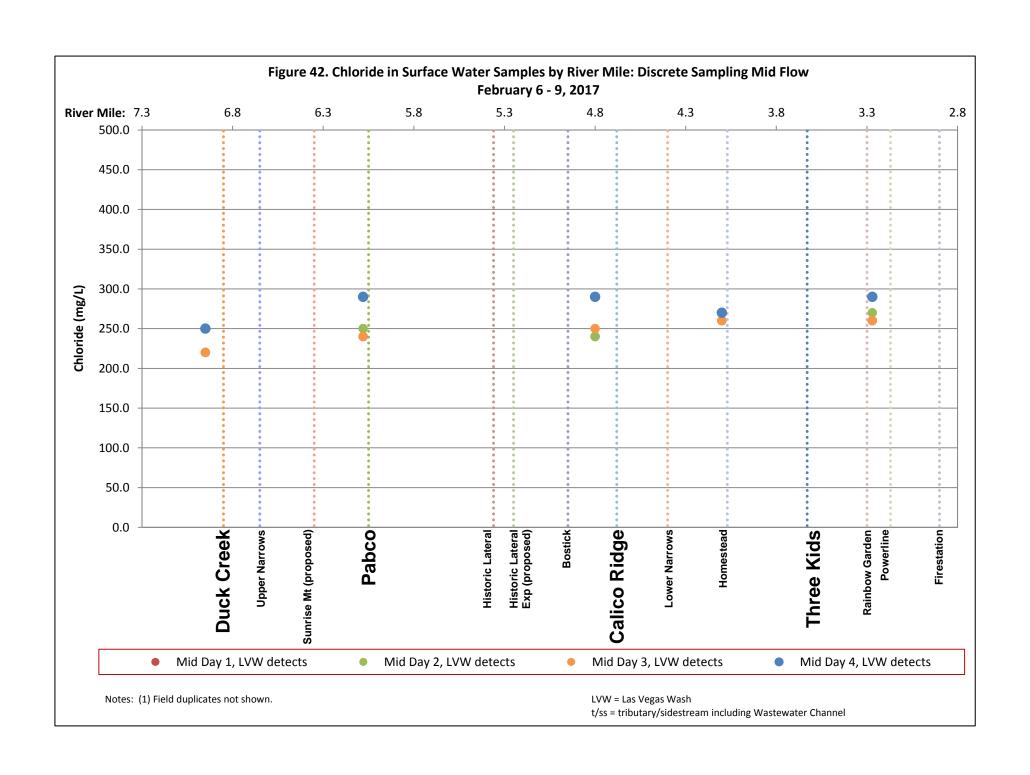


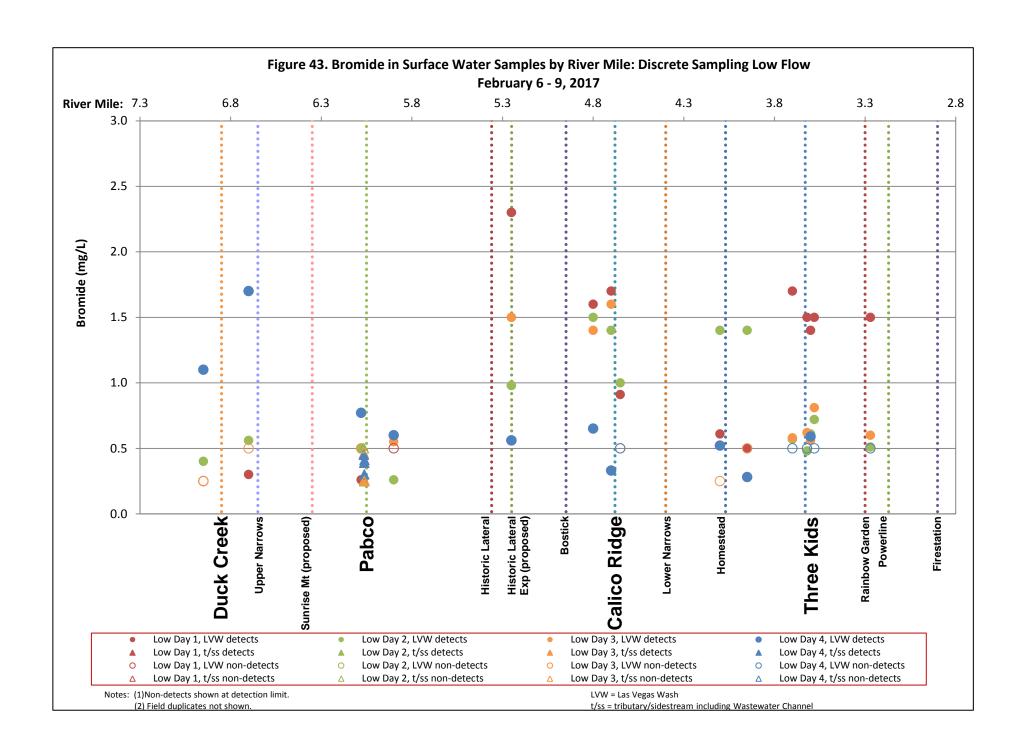


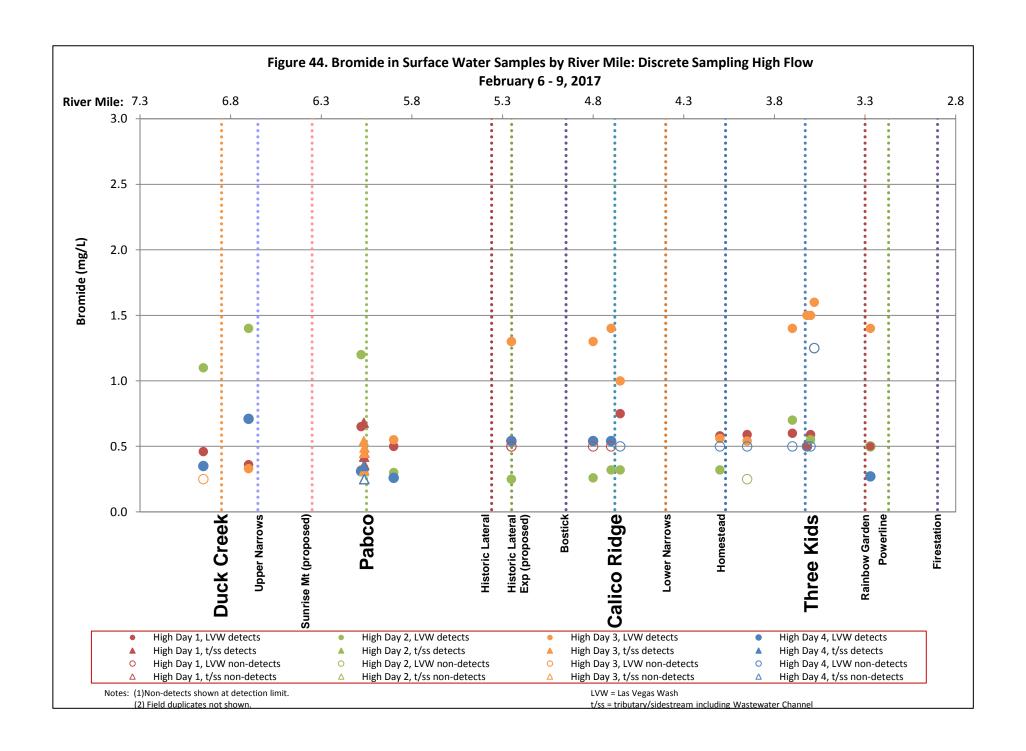


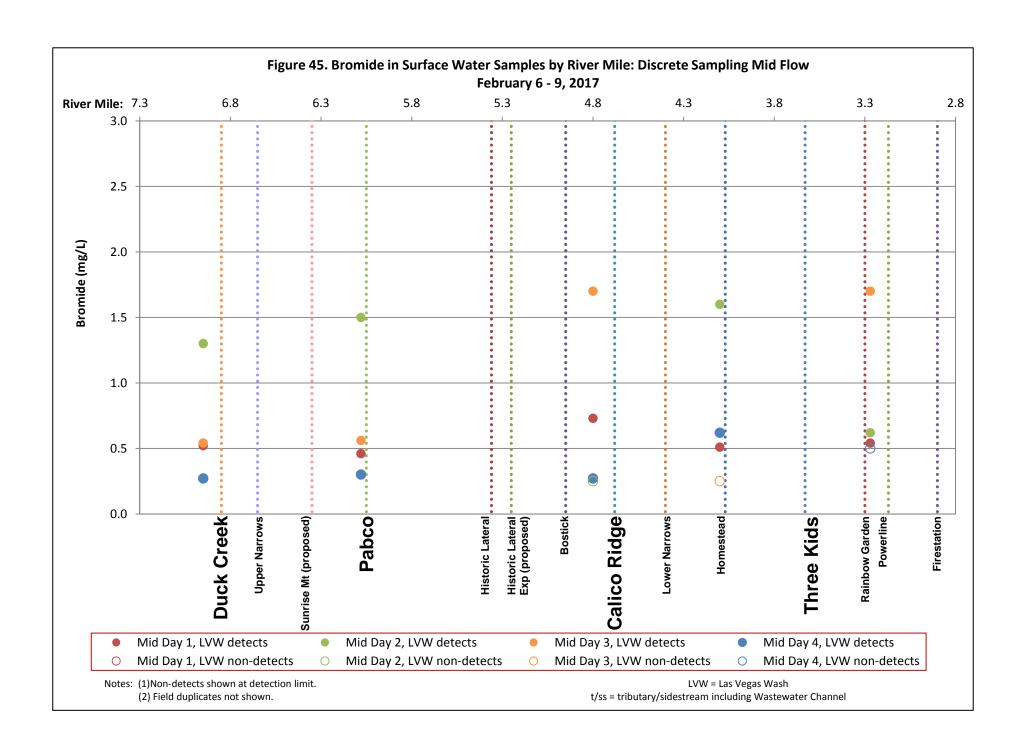


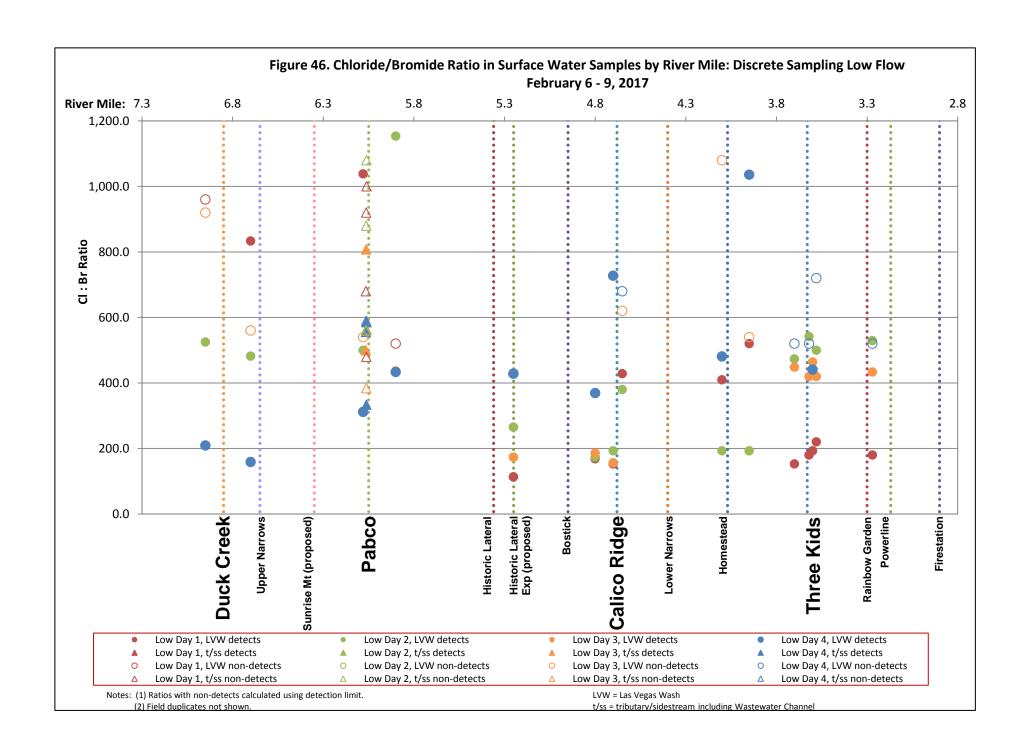


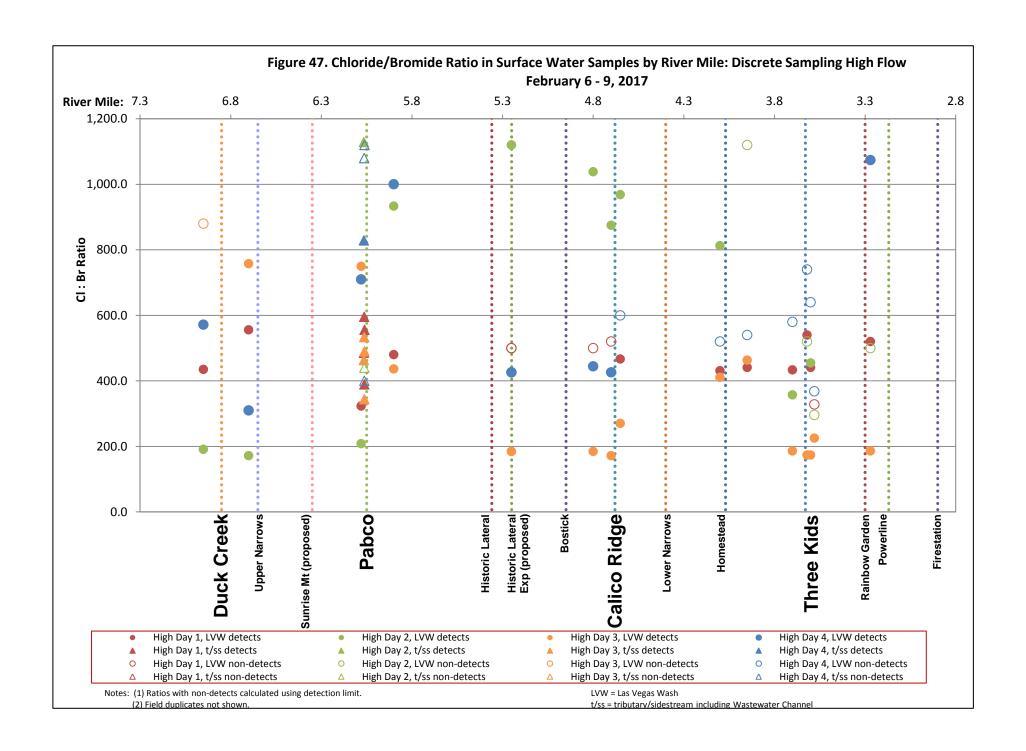












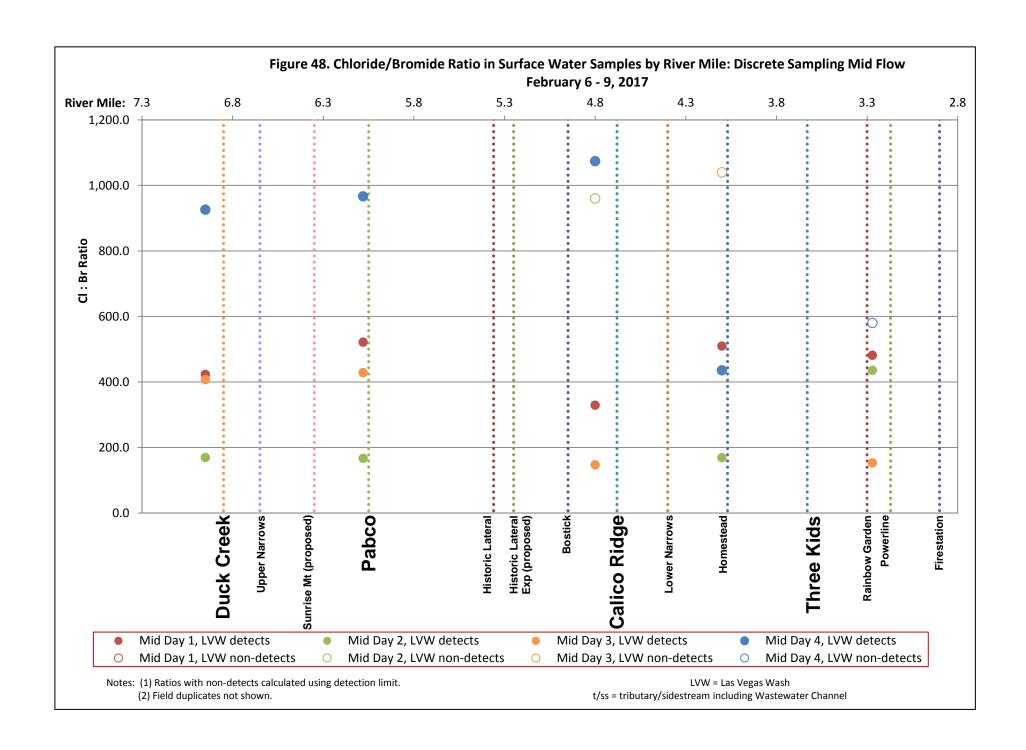


Figure 49. Perchlorate Flux Estimates (lb/day): Transect Samples

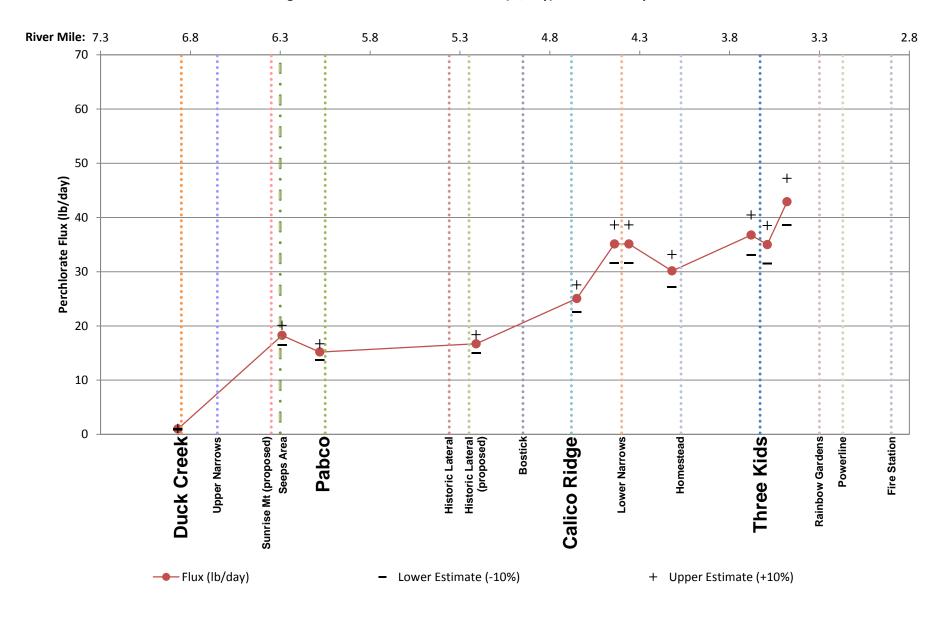


Figure 50. Perchlorate Flux Estimates (lb/day): Discrete Low Flow Samples

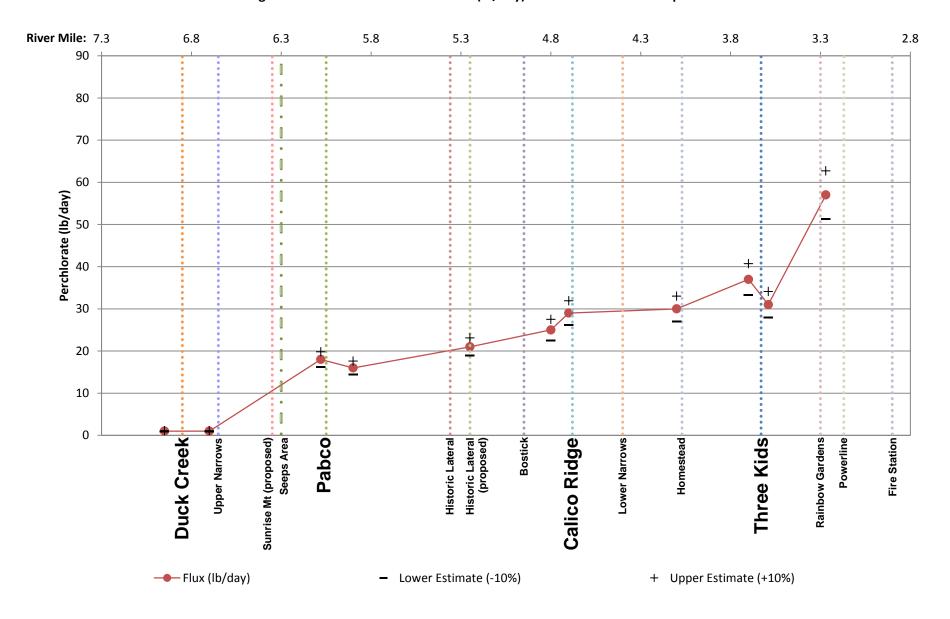


Figure 51. Perchlorate Flux Estimates (lb/day): Discrete High Flow Samples

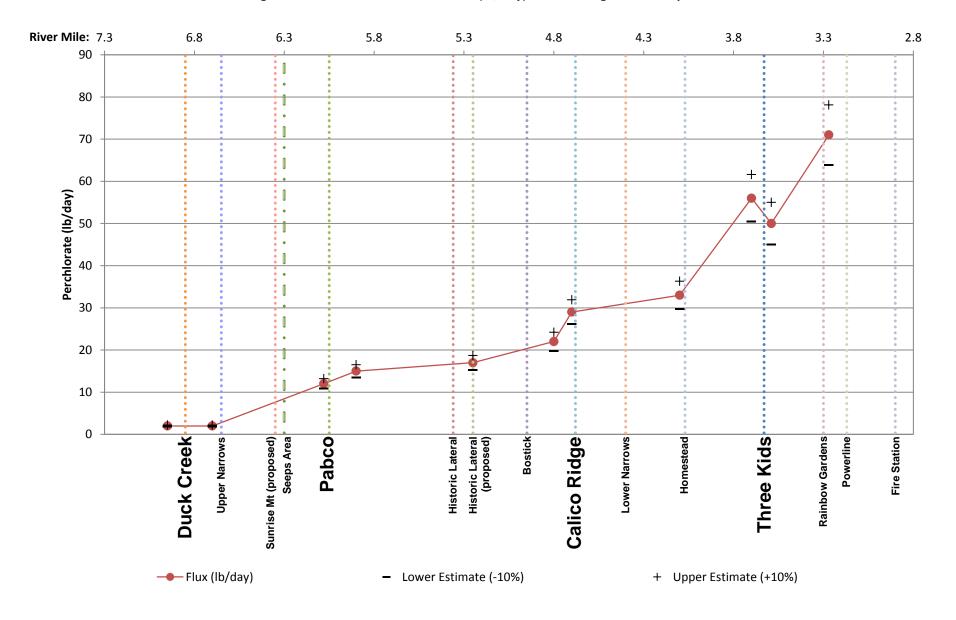
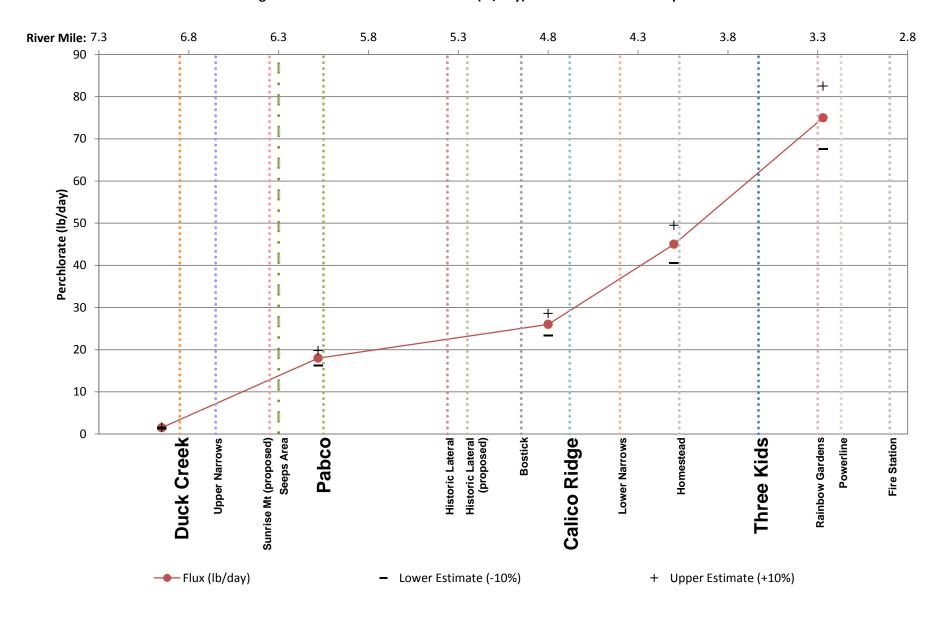


Figure 52. Perchlorate Flux Estimates (lb/day): Discrete Mid Flow Samples



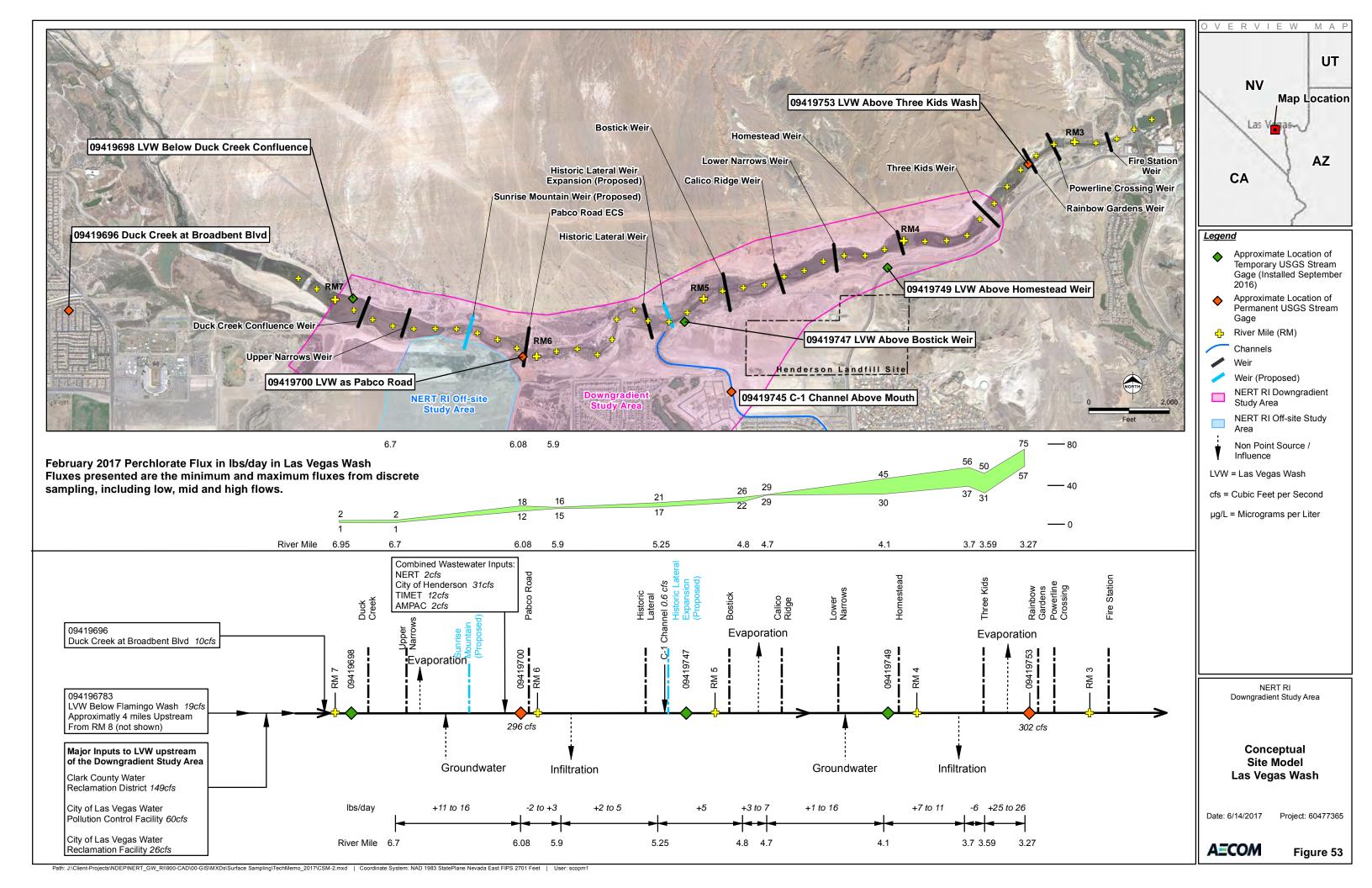
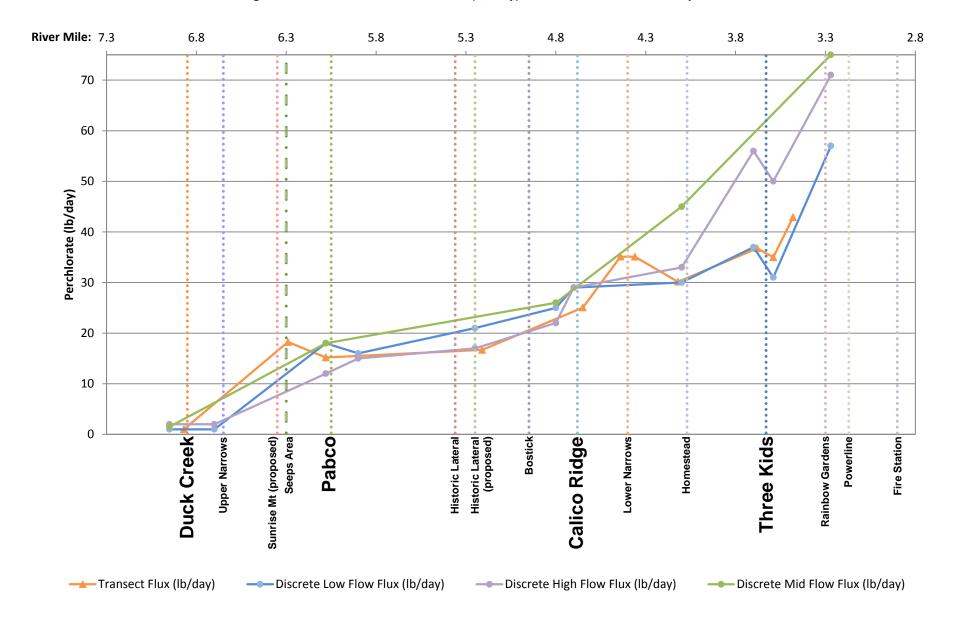


Figure 54. Perchlorate Flux Estimates (lb/day): Transect and Discrete Samples



Tables

60477365 October 2017

Table 1 Cross Reference of Historical Sample Locations, Sample IDs, Features, and River Miles

NERT Remedial Investigation, Downgradient Study Area Henderson, Nevada

Location ID / Feature	Former River Mile	Revised River Mile
LW7.2	7.20	6.95
LW6.85	6.85	6.90
T6.8	6.80	6.87
Duck Creek Weir	6.80	6.85
LW6.7	6.70	6.70
Upper Narrows Weir	6.60	6.65
KM-71 [seep]	6.40	6.36
Sunrise Mountain Weir (Proposed)	6.36	6.35
Seep Area	6.30	6.30
T6.35	6.35	6.29
LW6.05	6.05	6.08
T6.0	6.00	6.08
GLWC6.1_4 [t/ss]	6.14	6.06
GLWC6.1_3 [t/ss]	6.13	6.06
LWC6.1_2 [t/ss]	6.12	6.06
LWC6.1_1 [t/ss]	6.11	6.06
LWC6.1 [t/ss]	6.00	6.06
Pabco Road Weir	5.95	6.05
LW5.9	5.90	5.90
LW5.7	5.70	5.70
Historic Lateral Weir	5.55	5.36
LW5.5	5.50	5.30
LW5.3	5.30	5.25
Historic Lateral Weir Expansion (Proposed)	5.31	5.25
T5.3	5.30	5.21
Bostick Weir	5.10	4.95
LW4.95	4.95	4.80
GLW4.9	4.90	4.70
Calico Ridge Weir	4.80	4.68
GLW4.85	4.85	4.65
T4.75	4.75	4.65
T4.65	4.65	4.44
Lower Narrows Weir	4.50	4.40
		4.36
T4.6	4.60	
LWC4.6 [t/ss]	4.60	4.33
T4.2	4.20	4.12
GLW4.4	4.40	4.10
Homestead Weir	4.00	4.07
LWC4.1 [t/ss]	4.15	3.98
LW4.1	4.10	3.95
LW3.85	3.85	3.70
T3.8	3.80	3.68
Three Kids Weir	3.80	3.63
GLW3.78	3.78	3.62
LW3.75	3.75	3.60
T3.75	3.75	3.59
LWC3.7 [t/ss]	3.70	3.58
KM-67 [seep]	3.72	3.57
T3.5	3.50	3.48
Rainbow Gardens Weir	3.45	3.30
LW3.4	3.40	3.27
Powerline Crossing Weir	3.30	3.17
LW3.1	3.10	2.95
Fire Station Weir	3.05	2.90

Notes:

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

ID: identification

[&]quot;Former River Mile" refers to location used in development of figures and tables through the SWIP.

[&]quot;Revised River Mile" reflects a more accurate representation of location along the LVW.

Table 2 Field Collected Water Quality Data: Sampling Event during USGS Seepage Study

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

	Date and Time of	Total	Sample	Temperature	Spec. Cond.		Turbidity	Dissolv	ed Oxygen
Location ID	Measurement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
LW7.2	12/8/2016 15:40	2.00	NR	21.78	1740	8.23	Error ¹	9.56	109.5
LW6.7	12/8/2016 15:00	1.00	NR	20.43	2163	8.31	NR	10.67	119.3
LW6.05	12/8/2016 13:45	1.00	NR	20.21	2041	8.48	Error ¹	11.10	123.3
GLWC6.1_3 [t/ss]	12/8/2016 12:15	1.50	0.80	23.40	1602	7.63	NR	8.44	99.7
GLWC6.1_4 [t/ss]	12/8/2016 13:25	1.00	NR	23.25	2343	7.34	NR	7.40	87.2
LWC6.1_1 [t/ss]	12/8/2016 11:45	NR	NR	22.62	1779	7.84	Error ¹	8.51	99.4
LWC6.1_2 [t/ss]	12/8/2016 12:05	1.00	NR	25.29	1012	8.46	Error ¹	8.33	101.7
LW5.9	12/8/2016 10:00	1.00	NR	18.36	2115	8.24	Error ¹	10.31	110.2
LW5.3	12/8/2016 9:25	3.50	1.75 ³	17.79	2131	8.16	Error ¹	9.96	105.6
LW4.95	12/8/2016 13:58	1.40	0.70	18.90	2193	8.36	3.8	9.24	100.2
GLW4.9	12/8/2016 14:18	2.20	1.10	18.69	2204	8.31	4.9	8.87	95.8
GLW4.85	12/8/2016 14:45	1.60	0.80	18.92	2404	8.07	3.1	7.36	80.0
GLW4.4	12/8/2016 12:06	2.20	1.10	17.48	2186	8.20	4.0	9.83	103.5
LW4.1	12/8/2016 11:28	0.40	0.20	17.09	2175	8.15	5.6	9.56	98.9
LW3.85	12/8/2016 10:36	0.60	0.30	17.15	2128	8.46	4.2	12.19	127.4
GLW3.78	12/8/2016 10:05	0.25	0.10	16.04	NR ²	8.22	5.1	10.05	101.7
LW3.75	12/8/2016 9:07	0.50	0.30	16.19	2112	8.29	6.2	10.57	108.0
LWC3.7 [t/ss]	12/8/2016 9:24	1.20	0.60	23.12	4342	7.18	NR	0.65	7.8
LW3.4	12/8/2016 8:17	1.00	0.50	15.87	2151	8.14	8.9	9.63	89.0

Notes:

- 1) Field notes indicate turbidity sensor was not working properly; reading "Error".
- 2) Sample location was too shallow to submerge the specific conductivity sensor in the water.
- 3) Due to total depth, two samples were collected for laboratory analysis (from 1.5 feet and 2.5 feet) at LW5.3; however, only one set of water quality parameters were recorded (measured from 1.75 feet).

NR - Not Recorded

Spec. Cond. - Specific Conductivity

LW - Prefix indicates historical locations that were sampled in May 2016

GLW - Prefix indicates new grab locations

ft - feet

ID - identification

°C - degrees Celsius

µS/cm - micro-Siemens per centimeter

NTU - Nephelometric Turbitiy Unit

mg/L - milligrams per Liter

% - Percent

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

% saturation for dissolved oxygen is based on sample temperature and daily atmospheric barometric pressure (input during calibration)

Table 3 GPS Coordinates: Sampling Event during USGS Seepage Study

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Surface Water	Date and Time of Sample		GPS Coo	rdinates
Location Sample ID		Collection		Easting
LW7.2	12/8/2016	15:45	26735154.1764	828169.516523
LW6.7	12/8/2016	15:10	26734766.8596	829555.863160
LW6.05	12/8/2016	13:50	26734195.7184	832631.194936
GLWC6.1_3 [t/ss]	12/8/2016	12:20	26733537.9448	832556.136687
GLWC6.1_4 [t/ss]	12/8/2016	13:25	26733989.3753	832537.314546
LWC6.1_1 [t/ss]	12/8/2016	11:48	26733476.4360	832600.633974
LWC6.1_2 [t/ss]	12/8/2016	12:10	26733438.3482	832570.092368
LW5.9	12/8/2016	10:25	26734111.4991	833447.419025
LW5.3	12/8/2016	9:29	26734883.9414 ^[1]	836445.363817 ^[1]
LW5.3	12/8/2016	9:34	26734883.9414 ^[1]	836445.363817 ^[1]
LW4.95	12/8/2016	14:02	26735800.8645	838354.591954
GLW4.9	12/8/2016	14:20	26735744.7130	838936.950697
GLW4.85	12/8/2016	14:50	26735901.5496	839338.536180
GLW4.4	12/8/2016	12:10	26736802.1895	841941.137930
LW4.1	12/8/2016	11:32	26736833.1567	842708.315530
LW3.85	12/8/2016	10:40	26737186.6278	843989.553781
GLW3.78	12/8/2016	10:12	26737396.7569	844398.532622
LW3.75	12/8/2016	9:12	26737672.9440	844386.046426
LWC3.7 [t/ss]	12/8/2016	9:30	26737590.0758	844557.400742
LW3.4	12/8/2016	8:23	26738900.7254	845419.303874

Notes:

ID - Identification

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

GPS - global positioning system

(1) Coordinates are the same for shallow and deep samples.

Table 4 Samples Collected: Sampling Event during USGS Seepage Study

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Sample ID	Date	Time	QC Type
LW7.2-20161208-1.0	12/8/2016	15:45	
LW6.7-20161208-0.5	12/8/2016	15:10	
LW6.05-20161208-0.5	12/8/2016	13:50	MS/MSD
GLWC6.1_3-20161208-0.5	12/8/2016	12:20	
GLWC6.1_4-20161208-0.5	12/8/2016	13:25	
LWC6.1_1-20161208-0.5	12/8/2016	11:48	
LWC6.1_2-20161208-0.5	12/8/2016	12:10	
LW5.9-20161208-0.5	12/8/2016	10:25	
LW5.3-20161208-1.0	12/8/2016	9:34	
LW5.3-20161208-1.0-EB	12/8/2016	14:20	EB
LW5.3-20161208-2.5	12/8/2016	9:29	
LW4.95-20161208-0.7	12/8/2016	14:02	
GLW4.9-20161208-1.1	12/8/2016	14:20	
GLW4.85-20161208-0.8	12/8/2016	14:50	
GLW4.4-20161208-1.1	12/8/2016	12:10	
LW4.1-20161208-0.2	12/8/2016	11:32	
LW3.85-20161208-0.3	12/8/2016	10:40	
LW3.85-20161208-0.3-FD	12/8/2016	10:40	FD
GLW3.78-20161208-0.1	12/8/2016	10:12	
LW3.75-20161208-0.3	12/8/2016	9:12	
LWC3.7-20161208-0.6	12/8/2016	9:30	
LWC3.7-20161208-0.6-FD	12/8/2016	9:30	FD
LW3.4-20161208-0.5	12/8/2016	8:23	
LW3.4-20161208-0.5-FB	12/8/2016	14:25	FB

Notes:

ID - Identification

FD - field duplicate

FB - field blank

EB - equipment blank

MS - matrix spike

MSD - matrix spike duplicate

QC - quality control

Sample ID comprised of "Location"-"YYYYMMDD"-"Depth"-"QC type if applicable"

YYMMDD - YearMonthDay (example 20161208 is December 8, 2016)

Table 5 Surface Water Investigation Staff Gage and Transect Locations
NERT Remedial Investigation, Downgradient Study Area
Henderson, Nevada

Transect ID	Gage ID	Location	Rationale for Location
T3.5 ^[1]	AECOM Gage S3.5	Mid-way between Three Kids Weir and Rainbow Gardens Weir	Evaluate water quality downstream of groundwater inputs near Three Kids Weir
T3.75	AECOM Gage S3.75	Immediately downstream of Three Kids Weir	Check for potential groundwater inputs along Three Kids Weir upstream of KM67 (2,100 µg/L perchlorate)
T3.8	AECOM Gage S3.8	Immediately upstream of Three Kids Weir	Evaluate water quality entering Three Kids Weir
T4.2	USGS Gage 01419749 [Above Homestead Weir]	Upstream of Homestead Weir	Downgradient of western edge of Henderson Landfill Site near new USGS staff gage/seepage study
T4.6	AECOM Gage S4.6	Downstream of Lower Narrows Weir	Downgradient of middle portions of Henderson Landfill Site in region of observed perchlorate gain
T4.65	AECOM Gage S4.65	Upstream of Lower Narrows Weirs	Downgradient of middle portions of Henderson Landfill Site in region of observed perchlorate gain
T4.75	AECOM Gage S4.75	Downstream of Calico Ridge Weir	Downgradient of western edge of Henderson Landfill Site in region of potential perchlorate gain
T5.3	AECOM Gage S5.3	Downstream of Proposed Historic Lateral Weir Expansion	Mid-point between Pabco Road and Calico Ridge Weir
Т6	USGS Gage 09419700 [Pabco Road]	Upstream of Pabco Road Weir	Downstream of Groundwater inputs from NERT Off-Site Study Area and Henderson WWTP
T6.35	AECOM Gage S6.35	Downstream of Proposed Sunrise Mountain Weir	Downgradient of NERT Off-Site Study area near mapped location of KM71 seep (3,400 µg/L perchlorate)
T6.8	USGS Gage 09419698 [Below Duck Creek Confluence]	Upstream of Duck Creek Confluence	Downgradient of NERT Off-Site Study area near mapped location of KM71 seep (3,400 µg/L perchlorate)

1) This transect was originally T3.6 but the identification was changed to T3.5 during the field program.

ID - identification

USGS - United States Geological Survey

μg/L - micrograms per liter

WWTP - wastewater treamtne plant

NERT - Nevada Environmental Response Trust

Measurement Number	Distance from South Bank (feet)	Depth to Bottom (feet)	Notes
Transect:	T6.8	Measurements Collected: 2/3/2	017 10:04 to 10:42
1	0	0.00	"A" sample collection point
2	5	1.50	•
3	10	1.75	
4	20	1.58	
5	30	1.58	
6	40	1.58	
7 8	50 60	1.58	
9	70	1.83 1.92	
10	80	1.67	
11	90	1.42	"B" sample collection point
12	100	1.33	
13	110	1.42	
14	125	1.08	
15	140	1.08	
16	155	1.33	
17	170	1.33	
18	185	1.17	
19 20	200	1.00	
21	215 230	1.17 1.08	
22	245	1.06	
23	260	1.33	
24	275	1.00	
25	290	0.83	
26	305	0.67	
27	320	0.58	"C" sample collection point
28	335	0.58	
29	350	0.50	
30	365	0.42	
31	380	0.38	
32 33	395 410	0.42 0.42	
34	425	0.42	
35	440	0.58	
36	455	0.67	
37	470	0.83	
38	485	0.92	
39	500	0.92	
40	515	1.08	"D" sample collection point
41	530	1.25	
42	545	1.00	
43 44	560	0.79	
44	575 590	1.00 1.17	
46	605	1.17	
47	620	1.00	
48	635	0.92	
49	640	1.00	
50	645	1.00	
51	650	1.00	
52	655	0.96	
53	660	0.83	"E" sample collection point
54	665	0.00	
Transect:		Measurements Collected: 2/3/2	
1	0	2.22	"A" sample collection point
1.4	12	2.63	
1.5	8	2.95	
2	15	2.87	
2.5	15 21	3.31 3.58	
7 6	∠1		
2.6	26	1 05	"R" sample collection point
3	26 34	4.05	"B" sample collection point
	26 34 40	4.05 5.6 3	"B" sample collection point

Measurement Number	Distance from South Bank (feet)	Depth to Bottom (feet)	Notes
Transect:	T6	Measurements Collected: 2/2/20	017 11:08 to 11:25
1	0	0.94	"A" sample collection point
2	12	2.14	
3	25	2.36	
4	37	1.77	"B" sample collection point
5	50	1.46	2 cample concentration
6	61	0.77	
7	66	0.77	Island
	89	0	
<u>8</u> 9		-	Island
-	102	0.46	
10	112	1.15	
11	124	1.79	"C" sample collection point
12	137	2.45	
13	147	1.64	
14	159	2.23	
15	172	0.37	"D" sample collection point
Transect:	T5 2	Measurements Collected: 2/2/20	017 0:00 to 10:15
1 1	0	0.95	North Bank
2	6	4.34	"A" sample collection point
	14		A sample collection point
<u>3</u> 4	30	5.67	
		4.1	
5	36	3	
6	42	2.77	"B" sample collection point
7	54	1.94	
8	62	1.67	
9	72	1.85	
10	85	1.74	"C" South Bank
10			0 000
-	,	•	
Transect:	T4.75	Measurements Collected: 2/1/20	
<u>Transect:</u>	T4.75 0	Measurements Collected: 2/1/20	
<u>Transect:</u> 1 2	T4.75 0 10	Measurements Collected: 2/1/20 0.00 1.50	
<u>Transect:</u> 1 2 3	T4.75 0 10 20	Measurements Collected: 2/1/20 0.00 1.50 2.08	
Transect: 1 2 3 4	T4.75 0 10 20 30	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58	
Transect: 1 2 3 4 5	T4.75 0 10 20 30 40	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67	
Transect: 1 2 3 4 5 6	T4.75 0 10 20 30 40 50	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25	
Transect: 1 2 3 4 5 6 7	T4.75 0 10 20 30 40 50 60	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25	
Transect: 1 2 3 4 5 6 7	T4.75 0 10 20 30 40 50 60 70	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42	
Transect: 1 2 3 4 5 6 7 8 9	T4.75 0 10 20 30 40 50 60 70	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75	
Transect: 1 2 3 4 5 6 7 8 9 10	T4.75 0 10 20 30 40 50 60 70 80	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67	
Transect: 1 2 3 4 5 6 7 8 9 10	T4.75 0 10 20 30 40 50 60 70 80 90 100	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11	T4.75 0 10 20 30 40 50 60 70 80 90 100 105	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13	T4.75 0 10 20 30 40 50 60 70 80 90 100 105	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167	Measurements Collected; 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167	Measurements Collected; 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 177	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67 >6.5 >6.5 >6.5 5.92	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 167 177	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67 >6.5 >6.5	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 177 187	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67 >6.5 >6.5 >6.5 5.92	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 167 177 187 197	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 0.00 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67 >6.5 >6.5 >6.5 5.92 3.92	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 177 187 197 207 217 227	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67 >6.5 >6.5 >6.5 5.92 3.92 3.08 2.58	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 177 187 197 207 217 227 237	Measurements Collected: 2/1/20 0.00 1.50 2.08 1.58 0.67 2.25 4.25 5.42 5.75 5.67 3.75 0.00 0.00 0.00 0.25 3.25 2.50 2.33 2.67 >6.5 >6.5 >6.5 \$ 5.92 3.92 3.08 2.58 2.67	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 167 177 1887 197 207 217 227 237 247	Measurements Collected: 2/1/20	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 167 177 187 197 207 217 227 237 247	Measurements Collected: 2/1/20	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 177 187 187 197 207 217 227 237 247 247 257	Measurements Collected; 2/1/20	017 10:42 to 11:35
Transect: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	T4.75 0 10 20 30 40 50 60 70 80 90 100 105 117 127 137 147 157 167 167 177 187 197 207 217 227 237 247	Measurements Collected: 2/1/20	017 10:42 to 11:35

Measurement Number	Distance from South Bank	Depth to Bottom (feet)	Notes
mododi omone redinoci	(feet)	Dopin to Dottom (rest)	110100
Transect: T4.65 Measurements Collected: 1/		/2017 11:33 to 12:04	
1	0	0.00	,
2	10	2.00	
3	20	2.00	
4	30	2.13	
5	40	2.08	
6	50	2.25	
7	60	2.00	
8	70	2.17	
9	80	1.92	
10	90	2.08	
11	100	1.83	
12	110	1.92	
13	120	1.92	
14	130	1.92	
15	140	1.83	
16	150	1.83	"B" sample collection point
17	160	2.00	
18	170	1.83	
19	180	1.92	
20	190	2.00	
21	200	1.83	
22	210	1.83	
23	220	1.75	
24	230	1.50	"C" sample collection point
25	240	1.42	
26	250	1.25	
27	260	1.17	
28	270	1.08	
29	280	1.42	
30	290	1.50	
31	300	1.67	
32	310	1.83	
33	320	1.83	
34	330	1.92	
35	340	1.83	
36	350	2.00	
37	360	1.92	
38	370	1.75	
39	380	1.25	
40	390	0.92	
41	400	0.67	
42	410	0.00	Shoreline

Measurement Number	Distance from South Bank (feet)	Depth to Bottom (feet)	Notes
Transect:	T4.6	Measurements Collected: 1/3	31/2017 11:50 to 13:00
0	377	1.13	"D" sample collection point
1	370	1.13	
2	358	1.02	
3	347	0.83	
4	336	0.87	
5	327	0.6	
6	315	0.81	
7	307	1.12	
8	300	1.4	
9 10	290 279	1.77 1.43	
11	271	1.49	
12	262	1.91	
13	252	2.18	
14	243	1.92	
15	231	1.22	"C" sample collection point
16	224	1.7	o cample concolor point
17	214	1.72	
18	201	1.35	
19	193	0.62	
20	182	0.74	
21	172	0.78	
22	157	1.17	
23	146	1.26	"B" sample collection point
24	136	0.95	·
25	127	0.59	
26	116	0.46	
27	104	0.95	
28	97	2.04	
29	85	2.2	
30	74	1.25	
31	64	0.58	
32	54	1.43	
33	42	0.87	
34	34	1.01	
35	19	0.73	"A" comple collection point
36	0	1.06	"A" sample collection point
Transect:		Measurements Collected: 2/1	
1	0	0.79	"A" sample collection point
2	9	1.59	
3	21	2.1	
4	33	2	
5	42	2.43	
6	59	2.55	
7 Ω	68 84	2.19	
8 9	96	2.06 2.14	"B" sample collection point
10	105	1.54	B sample collection point
11	114	2.04	
12	124	1.54	
13	135	1.93	
14	146	2.2	
15	157	1.81	
16	168	1.73	
17	178	1.42	
18	187	1.09	"C" sample collection point
19	197	0.76	•
20	207	0.71	
21	218	0.74	
22	229	0.7	
23	240	0.98	
24	251	1.34	
25	260	1.74	
26	270	1.68	"D" sample collection point

Measurement Number	Distance from South Bank (feet)	Depth to Bottom (feet)	Notes
Transect: T3.8 Measurements Collected: 1/3		0/2017 12:15 to 13:00	
1	0	0.62	"A" sample collection point
2	10	1.38	
3	24	0.96	
4	36	0.85	
5	48	0.83	
6	59	0.9	
7	69	0.98	
8	79	0.8	
9	93	1.05	"B" sample collection point
10	102	0.92	
11	112	1.15	
12	124	1.33	
13	135	0.5	
14	144	0.89	
15	156	1.1	
16	168	0.78	
17	176	0.69	
18	189	0.58	
19	199	0.68	
20	209	0.87	
21	220	0.63	
22	231	0.51	
22.5	234	0.5	"C" sample collection point
23	243	0.82	
24	255	0.97	
25	265	0.87	
26	275	0.8	
27	287	0.89	
28	296	0.95	
29	306	0.88	
30	316	0.79	
31	328	0.8	
32	338	0.86	
33	349	0.66	"D" sample collection point
34	359	0.61	
35	370	0.6	

Measurement Number	Distance from South Bank (feet)	Depth to Bottom (feet)	Notes
Transect:	T3.75	Measurements Collected: 1/30/	/2017 12:34 to 13:34
0	2	0	South Bank
1	6	1	"A" sample collection point
2	10	0.25	
3	15	0.1	
4	20	0.2	Daal
5	25	0 0.1	Rock
<u>6</u> 7	30 35	0.1	
8	40	0.4	
9	45	0.4	
10	50	0.625	
11	55	0.92	
12	60	0.92	
13	65	0.92	
14	70	0.75	
15	75	0.96	
16	80	1.04	
17	85	0.88	
18	90	0.83	
19	95	0.83	
20	100	0.63	
21	105	0.88	
22	108	4.48	"B" sample collection point
23	110	0.79	
24	115	0.42	
25	120	0.71	
26	125	0.88	
27 28	130 135	0.67 0.50	
29	137	1.08	
30	140	1.33	
31	145	1.25	
32	150	1.58	
33	155	0.83	
34	160	1.04	
35	165	1.08	
36	170	1.33	
37	175	0.58	
38	180	1.00	
39	185	1.17	
40	190	1.08	
41	192	2.33	
42	194	0.50	
43	198	1.83	
44	200	1.83	
45	205	1.50	
46	210	1.67	
47	215	1.42	
48 49	220 225	1.08 0.58	
50	230	0.38	
50	235	0.42	
52	240	0.23	
53	245	0.67	
54	250	0.58	
55	255	0.00	Island start
56	257.5	0.00	Island end
57	260	0.75	
58	270	0.67	
59	280	0.96	
60	290	0.67	
61	300	1.13	
62	310	1.08	"C" sample collection point
63	320	1.00	
64	330	1.08	
65	340	1.42	
66	350	0.58	
67	360	0.83	
68	370	1.25	
69 70	380 390	1.67 0.92	
70	390 400	0.92	
72	410	1.00	
73	420	0.83	
74	430	0.65	
75	435	0.00	"D" sample collection point
7.0	700	0.00	D Sample collection point

Measurement Number	Distance from South Bank (feet)	Depth to Bottom (feet)	Notes	
Transect: T3.5 Measurements Collected: 2/2/2017 12:58 to 13:41				
1	0	0.00	"A" sample collection point	
2	1.5	0.25		
3	2	0.00		
4	2.5	0.00		
5	3	0.17		
6	8	0.33		
7	13	0.58	"B" sample collection point	
8	15	0.75		
9	16	0.50		
10	17	0.00	start island	
11	24	0.00	end island	
12	26	0.50		
13	30	1.08		
14	35	0.75	"C" sample collection point	
15	40	0.33	•	
16	45	0.42		
17	50	0.25		
18	53	0.00	island start	
19	63	0.00	island end	
20	68	0.33		
21	70	0.92		
22	80	1.08		
23	85	1.50		
24	90	2.42	"D" sample collection point	
25	100	3.25		
26	110	4.58		
27	120	3.17		
28	130	1.42		
29	140	1.58	"E" sample collection point	
30	150	4.42		
31	160	6.33		
32	170	>6.5		
33	180	>6.6		
34	190	4.75	"F" sample collection point	
35	198	0.00		

Notes:

Sample collection points are noted as "A" for near the southern bank and progress B, C, etc. moving north.

Table 7 Field Collected Water Quality Data: Transect Sampling

Location ID	ocation ID Date and Time of		Total	Sample	Temperature	Spec. Cond.	рН	Turbidity	Dissolv	ved Oxygen
Location iD	Measure	ment	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рп	(NTU)	mg/L	% saturation
T6.8_A	2/3/2017	9:09	1.10	1.00	17.40	2614	7.64	8.8	7.32	77.1
T6.8_B	2/3/2017	9:19	1.40	1.30	18.52	3048	7.83	2.7	9.36	100.7
T6.8_C	2/3/2017	9:27	0.50	0.40	17.80	3539	7.93	0.1	10.16	107.7
T6.8_D	2/3/2017	9:38	1.00	0.90	20.09	2366	8.03	1.1	9.63	106.7
T6.8_E	2/3/2017	9:47	0.80	0.70	18.21	2304	7.86	4.4	7.36	78.9
T6.35_A	2/3/2017	9:32	2.20	1.50	17.95	2385	7.85	2.3	8.74	92.8
T6.35_B ⁵	2/3/2017	9:44	4.05	3.00	18.05	2407	7.93	2.4	9.07	96.7
T6.35_B ⁵	2/3/2017	9:55	4.05	1.00	18.05	2410	7.93	3.0	9.04	96.2
T6.35_C	2/3/2017	9:19	1.62	1.00	17.92	2380	7.50	9.7	9.67	102.6
T6_A	2/2/2017	8:57	1.00	0.90	17.80	2723	7.83	2.9	8.55	90.8
T6_B	2/2/2017	9:03	1.80	1.70	17.87	2719	7.83	2.9	8.79	93.3
T6_C	2/2/2017	9:09	1.80	1.70	17.90	2721	7.82	3.4	8.75	93.0
T6_D	2/2/2017	9:14	0.50	0.40	17.27	2685	7.80	14.1	8.90	93.2
T5.3_A ⁵	2/2/2017	9:22	4.34	1.40	17.85	2357	7.51	4.4	8.95	95.9
T5.3_A ⁵	2/2/2017	9:32	4.34	2.80	17.86	2356	7.61	4.3	8.93	94.7
T5.3_B	2/2/2017	10:13	2.77	2.00	18.10	2367	7.91	6.4	9.34	99.5
T5.3_C	2/2/2017	9:59	1.74	1.20	18.10	2340	7.86	8.4	9.34	99.4
T4.75_A	2/1/2017	10:00	1.40	1.30	19.56	3416	7.60	40.9 ¹	6.80	69.2
T4.75_B	2/1/2017	10:10	1.00	0.90	18.08	2660	8.01	3.5	9.69	103.3
T4.75_C	2/1/2017	10:21	2.30	2.20	18.08	2672	8.04	3.7	9.79	104.5
T4.75_D	2/1/2017	10:30	1.65	1.50	19.63	3031	7.49	12.8	6.26	69.4
T4.65_A	1/31/2017	10:38	0.80	0.70	17.53	2558	7.68	7.4	9.61	96.7
T4.65_B	1/31/2017	10:50	2.00	1.90	18.21	2581	7.98	4.2	10.00	106.9
T4.65_C	1/31/2017	10:55	1.40	1.30	18.16	2560	8.01	4.6	10.15	108.5
T4.65_D	1/31/2017	11:06	0.70	0.60	17.25	2525	7.92	8.5	9.70	101.9
T4.6_A	1/31/2017	10:40	NR	0.30	16.92	2348	7.66	135.5	8.77	91.4
T4.6_B	1/31/2017	10:47	0.95	0.60	17.50	2358	7.83	5.1	9.35	98.9
T4.6_C	1/31/2017	10:56	1.27	0.80	17.50	2329	7.93	8.3	9.48	99.9
T4.6_D	1/31/2017	11:13	1.13	0.80	17.49	2337	7.96	6.8	9.29	97.5
T4.2_A	2/1/2017	9:55	0.79	0.40	16.50	2308	8.24	126.3	8.94	138.5
T4.2_B	2/1/2017	10:19	NR	1.00	17.38	2316	8.08	7.5	9.98	104.9
T4.2_C	2/1/2017	10:35	NR	0.80	17.46	2311	8.00	52.0	10.50	105.8

Table 7 Field Collected Water Quality Data: Transect Sampling

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Location ID	Date and T	ime of	Total	Sample	Temperature	Spec. Cond.	ьU	Turbidity	Dissolv	ed Oxygen
Location ID	Measure	ment	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
T4.2_D	2/1/2017	10:47	NR	1.00	17.53	2307	7.98	10.8	9.98	105.2
T3.8_A	1/30/2016	11:30	0.50	0.40	17.84	2061	8.01	4.1	10.66	113.0
T3.8_B	1/30/2016	11:37	0.50	0.40	18.44	2060	8.19	4.4	11.50	123.1
T3.8_C	1/30/2016	11:46	0.50	0.40	18.44	2054	8.15	6.0	10.99	117.9
T3.8_D	1/30/2016	11:55	0.50	0.40	18.58	2031	8.13	9.5	10.90	117.1
T3.75_A	1/30/2016	11:40	1.00	0.90	17.07	2063	7.95	6.2	9.71	101.3
T3.75_B	1/30/2016	11:53	0.80	NR	17.62	2053	8.12	7.5	10.47	110.3
T3.75_C	1/30/2016	12:10	0.80	0.70	17.56	2196	7.98	24.0	9.52	100.3
T3.75_D	1/30/2016	12:09	0.60	0.50	17.56	2035	8.11	10.8	10.50	110.8
T3.5_A ³	2/2/2017	11:06	0.20	0.20	16.60	7162	7.55	41 ²	9.52	99.3
T3.5_A ³	2/2/2017	12:44	0.20	0.20	NR	6752-5478 ⁴	7.68	11.5	14.28	156.3
T3.5_B	2/2/2017	11:13	0.60	0.50	19.03	2794	8.08	3.3	9.80	106.6
T3.5_C	2/2/2017	11:22	0.70	0.60	19.09	2787	8.05	4.0	9.78	106.6
T3.5_D	2/2/2017	12:00	1.50	1.40	19.30	2727	8.21	4.7	10.40	113.6
T3.5_E	2/2/2017	12:03	1.60	1.50	19.30	2685	8.26	5.9	10.45	114.2
T3.5_F ⁵	2/2/2017	12:13	4.80	4.00	19.22	2673	8.24	6.2	10.25	111.8
T3.5_F ⁵	2/2/2017	12:34	4.80	1.50	19.40	2681	8.30	6.3	10.36	113.6

Notes:

- 1) Field notes indicate high turbidity due to stirred silt by canoe and fish.
- 2) High turbidity reading due to disturbed silty streambed.
- 3) Due to disturbed streambed during initial water quality readings, sample location T3.5 was revisited and water quality readings were collected a second time.
- 4) A range of readings were provided because the specific conductivity reading did not stabilize within 10 minutes.
- 5) Due to total depths greater than or equal to 3.0 feet, two samples were collected at sample locations T5.3_A, T6.35B and T3.5_F.

NR - Not Recorded

Spec. Cond. - Specific Conductivity

Transect sample location A is located near the southern Bank

and continue B, C, D,.. to the northern bank.

ft - feet

ID - identification

°C - degrees Celsius

µS/cm - micro-Siemens per centimeter

NTU - Nephelometric Turbitiy Unit

mg/L - milligrams per Liter

% - Percent

% saturation for dissolved oxygen is based on sample temperature and daily atmospheric barometric pressure (input during calibration)

Table 8 GPS Coordinates: Barometers, Staff Gages and Transect Samples

			GPS Coordinates					
Idntification	Date and Time of S	Sample Collection	Northing	Easting				
Barometers			•					
B6 [Pabco Road]	1/26/2017	NR	26733899.2259	832227.942134				
B4.65 [Lower Narrows]	1/26/2017	NR	26736165.1918	840367.414372				
B3.8 [Three Kids]	1/29/2017	NR	26737037.8180	844126.017419				
Staff Gages								
S6.35	1/26/2017	NR	26734748.9312	831632.177249				
S5.3	1/27/2017	NR	26734845.4172	836460.371661				
S4.75	1/27/2017	NR	26735892.7891	839339.429879				
S4.65	1/26/2017	NR	26736254.1460	840312.179246				
S4.6	1/29/2017	NR	26736334.7978	840729.157415				
S3.8	1/24/2017	NR	26737131.2306	844152.302143				
S3.75	1/25/2017	NR	26737628.2817	844432.358013				
S3.5	1/29/2017	NR	26738151.8899	844861.616669				
Transect Samples								
6.8_A	02/03/17	9:13	26734811.1046	828367.800248				
6.8_B	02/03/17	9:25	26734889.3525	828394.004592				
6.8_C	02/02/17	9:32	26735139.9297	828459.376836				
6.8 D	02/02/17	9:32	26735346.2889	828495.414166				
<u>—</u>	02/02/17	9:50	26735470.0613					
6.8_E				828552.953421				
6.35_A	02/03/17	09:32	26734706.9779	831617.787186				
6.35_B	02/03/17	9:55	26734731.2961 ^[1]	831625.536514 ^[1]				
6.35_B	02/03/17	9:44	26734731.2961 ^[1]	831625.536514 ^[1]				
6.35_C	02/03/17	9:19	26734752.2048	831632.855725				
6_A	02/03/17	9:00	26734155.8543	832621.087345				
6_B	02/03/17	9:05	26734184.6239	832636.455096				
6_C	02/03/17	9:13	26734261.1051	832679.418921				
6_D	02/03/17	9:18	26734287.1516	832699.987449				
5.3_A	02/02/17	9:32	26734848.4841 ^[1]	836445.655811 ^[1]				
5.3_A	02/02/17	9:37	26734848.4841 ^[1]	836445.655811 ^[1]				
5.3_B	02/02/17	10:13	26734884.4362	836430.697508				
5.3 C	02/02/17	9:59	26734922.5578	836416.284807				
4.75_A	02/01/17	10:04	26735899.6749	839337.203834				
4.75 B	02/01/17	10:13	26735984.4090	839320.559182				
4.75_C	02/01/17	10:23	26736047.9857	839307.906320				
4.75_D	02/01/17	10:35	26736154.7591	839291.202613				
4.65_A	01/31/17	10:40	26736249.0850	840315.123794				
4.65 B	01/31/17	10:50	26736391.3000	840285.154694				
4.65 C	01/31/17	10:58	26736476.2673	840250.798135				
4.65 D	01/31/17	11:06	26736637.3405	840195.513141				
4.63_D 4.6 A	01/31/17	10:40	26736327.6751	840715.072469				
4.6_B	01/31/17	10:47	26736483.5626	840694.370411				
4.6_C	01/31/17	10:56	26736568.0991	840677.425891				
4.6_D	01/31/17	11:13	26736700.1930	840664.234644				
4.0_D 4.2 A	02/01/17	09:55	26736677.4641	842013.435030				
4.2_A 4.2_B	02/01/17	10:19	26736772.8156	842013.433030				
4.2_B 4.2_C	02/01/17	10:35	26736844.5868	841951.608710				
4.2_C 4.2_D	02/01/17	10:35	+					
_			26736915.5325	841884.369671				
3.8_A	01/30/17	11:30	26737122.1541	844150.764417				
3.8_B	01/30/17	11:37	26737182.7390	844080.294085				
3.8_C	01/30/17	11:46	26737281.9566	843981.791985				
3.8_D	01/30/17	11:55	26737353.5211	843892.955221				
3.75_A	01/30/17	11:48	26737555.3518	844527.832232				

Table 8 GPS Coordinates: Barometers, Staff Gages and Transect Samples

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

			GPS Cod	ordinates
Idntification	Date and Time of	Sample Collection	Northing	Easting
3.75_B	01/30/17	11:53	26737620.3129	844450.440983
3.75_C	01/30/17	12:00	26737756.1968	844287.791045
3.75_D	01/30/17	12:09	26737837.9326	844177.711541
3.5_A	02/02/17	11:08	26738121.7460	844839.008447
3.5_B	02/02/17	11:13	26738127.5849	844831.662333
3.5_C	02/02/17	11:22	26738148.1540	844817.137428
3.5_D	02/02/17	12:00	26738187.2888	844776.408178
3.5_E	02/02/17	12:07	26738224.3245	844747.628380
3.5_F	02/02/17	12:34	26738242.0948 ^[1]	844698.140400 ^[1]
3.5_F	02/02/17	12:25	26738242.0948 ^[1]	844698.140400 ^[1]

NR - Not Recorded

GPS - global positioning system
(1) Coordinates are the same for shallow and deep samples.

Sample ID	Location on Transect	Depth	QC Type	Date Sampled	Time Sampled
Transect 6.8					
T6.8A-20170203-1.0	Near south bank	Near bottom		2/3/2017	9:13
T6.8B-20170203-1.3	Second from south bank	Near bottom		2/3/2017	9:25
T6.8C-20170203-0.4	Third from south bank	Near bottom		2/3/2017	9:32
T6.8D-20170203-0.9	Fourth from south bank	Near bottom		2/3/2017	9:41
T6.8E-20170203-0.7	Fifth from south bank	Near bottom		2/3/2017	9:50
Transect 6.35		•	•	•	
T6.35A-20170203-1.5	Near south bank	Near bottom		2/3/2017	9:32
T6.35B-20170203-1.0	Second from south bank	Near bottom		2/3/2017	9:55
T6.35C-20170203-3.0	Third from south bank	Near bottom		2/3/2017	9:44
T6.35B-20170203-1.0	Second from south bank	1/3 depth		2/3/2017	9:19
Transect 6					
T6A-20170202-0.9	Near south bank	Near bottom		2/2/2017	9:00
T6A-20170202-FB	Near south bank	Near bottom	FB	2/2/2017	15:35
T6B-20170202-1.7	Second from south bank	Near bottom	1	2/2/2017	9:05
T6C-20170202-1.7	Third from south bank	Near bottom	+	2/2/2017	9:13
T6D-20170202-0.4	Fourth from south bank	Near bottom	+	2/2/2017	9:18
Transect 5.3	. Sa.a Sili dodai balik				5.10
T5.3A-20170202-2.8	Near south bank	Near bottom		2/2/2017	9:37
T5.3B-20170202-2.0	Second from south bank	Near bottom		2/2/2017	0:13
T5.3B-20170202-2.0-FD	Second from south bank	Near bottom	FD	2/2/2017	10:13
T5.3C-20170202-1.2	Third from south bank	Near bottom	10	2/2/2017	9:59
T5.3A-20170202-1.4	Near south bank	1/3 depth		2/2/2017	9:37
T5.3A-20170202-1.4-EB	Near south bank	1/3 depth	EB	2/2/2017	15:30
Transect 4.75	iveal south bank	1/3 deptil	LD	2/2/2017	13.30
T4.75A-20170101-1.3	Near south bank	Near bottom		2/1/2017	10:04
T4.75A-20170101-1.3	Near south bank	Near bottom	FD	2/1/2017	10:04
T4.75B-20170201-0.9			FD		
T4.75C-20170201-0.9	Second from south bank	Near bottom		2/1/2017	10:13
T4.75D-20170201-2.2	Third from south bank	Near bottom		2/1/2017	10:23
	Fourth from south bank	Near bottom	ED	2/1/2017	10:35
T4.75B-20170201-EB	Second from south bank	Near bottom	EB	2/1/2017	10:00
Transect 4.65		T N 1 "		1/01/0017	40.40
T4.65A-20170131-0.7	Near south bank	Near bottom	140	1/31/2017	10:40
T4.65A-20170131-0.7-MS	Near south bank	Near bottom	MS	1/31/2017	10:40
T4.65A-20170131-0.7-MSD	Near south bank	Near bottom	MSD	1/31/2017	10:40
T4.65B-20170131-0.9	Second from south bank	Near bottom		1/31/2017	10:50
T4.65B-20170131-0.9-FD	Second from south bank	Near bottom	FD	1/31/2017	10:50
T4.65C-20170131-1.3	Third from south bank	Near bottom		1/31/2017	10:58
T4.65D-20170131-0.6	Fourth from south bank	Near bottom		1/31/2017	11:06
Transect 4.6					
T4.6A-20170131-EB	Near south bank	Near bottom	EB	1/31/2017	10:00
T4.6A-20170131-0.3	Near south bank	Near bottom		1/31/2017	10:40
T4.6B-20170131-0.6	Second from south bank	Near bottom		1/31/2017	10:47
T4.6B-20170131-0.6-FD	Second from south bank	Near bottom	FD	1/31/2017	10:47
T4.6C-20170131-0.8	Third from south bank	Near bottom		1/31/2017	10:56
T4.6D-20170131-0.8	Fourth from south bank	Near bottom		1/31/2017	11:13
Transect 4.2					
T4.2A-20170201-0.4	Near south bank	Near bottom		2/1/2017	9:55
T4.2A-20170201-0.4-EB	Near south bank	Near bottom	EB	2/1/2017	10:00
T4.2A-20170201-0.4-MS	Near south bank	Near bottom	MS	2/1/2017	9:55
T4.2A-20170201-0.4-MSD	Near south bank	Near bottom	MSD	2/1/2017	9:55
T4.2B-20170201-1.0	Second from south bank	Near bottom		2/1/2017	10:19
T4.2B-20170201-1.0-FD	Second from south bank	Near bottom	FD	2/1/2017	10:19
T4.2C-20170201-0.8	Third from south bank	Near bottom		2/1/2017	10:35
T4.2D-20170201-1.0	Fourth from south bank	Near bottom		2/1/2017	10:47

Sample ID	Location on Transect	Depth	QC Type	Date Sampled	Time Sampled
Transect 3.8					
T3.8A-20170130-0.4	Near south bank	Near bottom		1/30/2017	11:30
T3.8A-20170130-FB	Near south bank	Near bottom	FB	1/30/2017	11:05
T3.8B-2017130-0.4	Second from south bank	Near bottom		1/30/2017	11:37
T3.8B-2017130-0.4-MS	Second from south bank	Near bottom	MS	1/30/2017	11:37
T3.8B-2017130-0.4-MSD	Second from south bank	Near bottom	MSD	1/30/2017	11:37
T3.8C-20170130-0.4	Third from south bank	Near bottom		1/30/2017	11:46
T3.8C-20170130-0.4-FD	Third from south bank	Near bottom	FD	1/30/2017	11:46
T3.8D-20170130-0.4	Fourth from south bank	Near bottom		1/30/2017	11:55
Transect 3.75	•	•		•	
T3.75A-20170130-0.9	Near south bank	Near bottom		1/30/2017	11:48
T3.75A-20170130-EB	Near south bank	Near bottom	EB	1/30/2017	11:05
T3.75B-20170130-0.7	Second from south bank	Near bottom		1/30/2017	11:53
T3.75C-20170130-0.6	Third from south bank	Near bottom		1/30/2017	12:00
T3.75D-20170130-0.4	Fourth from south bank	Near bottom		1/30/2017	12:09
Transect 3.5	·				
T3.5A-20170202-0.2	Near south bank	Near bottom		2/2/2017	11:08
T3.5A-20170202-FB	Near south bank	Near bottom	FB	2/2/2017	15:40
T3.5B-20170202-0.5	Second from south bank	Near bottom		2/2/2017	11:13
T3.5B-20170202-0.5-FD	Second from south bank	Near bottom	FD	2/2/2017	11:13
T3.5C-20170202-0.6	Third from south bank	Near bottom		2/2/2017	11:22
T3.5C-20170202-0.6-EB	Third from south bank	Near bottom	EB	2/2/2017	15:45
T3.5D-20170202-1.4	Fourth from south bank	Near bottom		2/2/2017	12:00
T3.5E-20170202-1.5	Fifth from south bank	Near bottom		2/2/2017	12:07
T3.5F-20170202-4.0	Sixth from south bank	Near bottom		2/2/2017	12:25
T3.5F-20170202-1.5	Sixth from south bank	1/3 depth		2/2/2017	12:34

Notes:

ID - Identification

FD - field duplicate

FB - field blank

EB - equipment blank

MS - matrix spike

MSD - matrix spike duplicate

QC - quality control

Sample ID comprised of "Location"-"YYYYMMDD"-"Depth"-"QC type if applicable"

YYMMDD - YearMonthDay (example 20170202 is February 2, 2017)

Leastice ID	Targeted	Date and	Time	Total	Sample	Temperature	Spec. Cond.	m11	Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measur	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
Day 1											
LW7.2	Low	2/6/2017	9:45	1.52	0.80	18.14	1881	7.99	4.8	9.27	100.7
LW6.7	Low	2/6/2017	10:15	0.75	0.40	18.36	2061	8.04	5.4	9.58	102.7
LW6.05	Low	2/6/2017	11:20	1.22	0.60	17.95	2151	8.09	2.8	9.96	105.5
LWC6.1_1 [t/ss]	Low	2/6/2017	9:30	1.17	0.58	18.28	1798	7.68	1.2	8.19	87.5
LWC6.1_2 [t/ss]	Low	2/6/2017	9:57	1.75	0.83	21.97	1082	8.10	1.5	7.95	91.2
GLWC6.1_3 [t/ss]	Low	2/6/2017	10:05	2.08	1.04	18.87	1692	7.61	1.3	8.25	89.1
GLWC6.1_4 [t/ss]	Low	2/6/2017	10:30	2.25	1.08	18.85	2214	7.70	7.7	8.80	95.2
LW5.9	Low	2/6/2017	11:06	1.00	0.50	14.77	2225	8.02	7.0	9.92	94.9
LW5.3	Low	2/6/2017	10:00	3.40	1.20	17.80	2156	7.92	3.0	9.27	98.3
LW5.3	Low	2/6/2017	10:30	3.40	2.35	17.82	2154	7.91	3.3	9.21	97.6
LW4.95	Low	2/6/2017	11:00	2.19	1.10	17.80	2158	8.06	3.1	9.44	99.9
GLW4.9	Low	2/6/2017	11:15	2.91	1.45	17.94	2137	7.97	3.7	8.95	95.2
GLW4.85	Low	2/6/2017	10:18	13.00	0.60	19.50	3105	7.50	11.5	5.97	66.0
GLW4.4	Low	2/6/2017	11:01	2.20	1.10	17.80	2277	8.06	2.2	10.30	109.0
LW4.1	Low	2/6/2017	11:17	0.60	0.30	18.00	2306	8.00	12.7	9.95	106.0
LW3.85	Low	2/6/2017	9:50	1.00	0.50	18.31	2602	8.28	0.8	10.55	113.1
GLW3.78	Low	2/6/2017	10:32	0.83	0.42	18.42	2621	8.07	5.6	8.93	96.0
LW3.75	Low	2/6/2017	10:23	1.67	0.83	18.31	2604	8.19	2.8	9.43	101.0
LWC3.7 [t/ss]	Low	2/6/2017	10:12	0.67	0.33	20.12	3467	7.52	3.6	5.97	66.1
LW3.4	Low	2/6/2017	11:06	0.83	0.42	18.39	2638	8.25	3.8	9.33	100.2
LW7.2	Mid	2/6/2017	12:10	1.71	0.80	20.28	1868	8.26	3.1	10.03	111.7
LW6.05	Mid	2/6/2017	12:36	1.33	0.70	18.60	2125	8.27	4.5	9.83	105.8
LW4.95	Mid	2/6/2017	13:20	2.15	1.08	18.26	2113	8.19	4.9	9.39	100.4
GLW4.4	Mid	2/6/2017	14:15	2.40	1.20	18.26	2322	8.25	2.7	10.80	115.0
LW3.4	Mid	2/6/2017	14:43	1.25	0.63	18.74	2733	8.38	7.3	9.26	100.2
LW7.2	High	2/6/2017	14:30	1.80	1.00	20.63	1780	8.18	4.5	9.47	106.1
LW6.7	High	2/6/2017	15:02	1.25	0.60	20.24	1813	8.27	7.7	9.47	105.3
LW6.05	High	2/6/2017	15:26	1.40	0.70	19.52	2000	8.31	10.7	9.46	103.8
GLWC6.1_4 [t/ss]	High	2/6/2017	15:17	1.21	0.58	16.30	2079	8.20	13.5	9.31	95.5
LWC6.1_2 [t/ss]	High	2/6/2017	14:53	1.17	0.58	21.44	1197	8.26	2.3	7.99	90.8
LWC6.1_1 [t/ss]	High	2/6/2017	14:35	1.67	0.83	18.33	1838	7.63	1.0	8.23	88.0

Location ID	Targeted	Date and	Time	Total	Sample	Temperature	Spec. Cond.	nЦ	Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measure	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
GLWC6.1_3 [t/ss]	High	2/6/2017	14:58	1.83	0.92	18.51	1803	7.80	1.8	8.32	89.6
LW5.9	High	2/6/2017	15:42	2.63	1.25	18.64	2248	7.61	10.5	7.70	82.9
LW5.3	High	2/6/2017	16:00	3.40	1.20	19.05	1973	8.18	0.2	8.28	89.9
LW5.3	High	2/6/2017	16:10	3.40	2.30	19.05	1973	8.19	5.4	9.06	98.4
LW4.95	High	2/6/2017	15:15	2.20	1.10	18.72	2052	8.22	6.4	9.03	97.4
GLW4.9	High	2/6/2017	15:00	2.95	1.50	18.52	2090	8.20	4.4	9.02	97.0
GLW4.85	High	2/6/2017	15:55	1.30	0.60	19.40	2732	7.97	1.2	8.08	88.8
GLW4.4	High	2/6/2017	16:17	2.60	1.30	18.30	2263	8.27	3.0	9.98	106.0
LW4.1	High	2/6/2017	16:39	0.70	0.30	18.10	2302	8.23	5.6	9.55	101.8
LW3.85	High	2/6/2017	16:00	1.17	0.58	18.47	2657	8.38	3.8	9.68	104.2
GLW3.78	High	2/6/2017	16:37	1.92	0.96	18.45	2707	8.20	5.5	8.67	93.5
LW3.75	High	2/6/2017	16:28	1.33	0.67	18.34	2642	8.36	3.4	9.07	97.7
LWC3.7 [t/ss]	High	2/6/2017	16:16	1.67	0.58	21.41	3757	7.48	0.6	4.07	43.7
LW3.4	High	2/6/2017	17:01	1.42	0.71	18.29	2668	8.27	5.9	8.93	95.7

Location ID	Targeted	Date and	Time	Total	Sample	Temperature	Spec. Cond.		Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measur	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
Day 2											
LW7.2	Low	2/7/2017	8:55	1.45	0.70	19.57	1816	7.33	Error ¹	8.96	98.5
LW6.7	Low	2/7/2017	9:13	0.73	0.40	18.25	2422	7.87	Error ¹	9.06	96.9
LW6.05	Low	2/7/2017	9:30	1.21	0.60	18.50	2115	8.00	Error ¹	9.18	98.8
LWC6.1_2 [t/ss]	Low	2/7/2017	9:18	1.38	0.69	20.82	1131	8.24	3.5	8.22	92.2
LWC6.1_1 [t/ss]	Low	2/7/2017	8:45	1.75	0.88	18.21	1845	7.70	0.1	8.19	87.5
GLWC6.1_3 [t/ss]	Low	2/7/2017	9:25	1.94	0.96	18.47	1790	7.60	0.0	8.33	89.3
GLWC6.1_4 [t/ss]	Low	2/7/2017	10:30	2.60	1.30	18.67	2157	7.60	4.5	8.00	86.3
LW5.9	Low	2/7/2017	9:50	0.80	0.40	15.42	2293	8.00	4.8	9.43	95.0
LW5.3	Low	2/7/2017	9:45	3.00	1.00	18.31	2275	7.96	2.1	9.02	96.6
LW5.3	Low	2/7/2017	9:50	3.00	2.90	18.32	2274	7.94	2.9	8.96	96.0
LW4.95	Low	2/7/2017	10:45	1.95	1.00	18.67	2276	8.22	2.1	9.76	105.3
GLW4.9	Low	2/7/2017	10:50	2.30	1.20	18.46	2267	8.06	1.8	9.09	97.6
GLW4.85	Low	2/7/2017	9:42	1.40	0.70	19.68	2804	7.88	4.1	5.20	62.0
GLW4.4	Low	2/7/2017	10:06	4.40	2.30	18.50	2341	7.93	1.1	9.00	96.0
LW4.1	Low	2/7/2017	10:32	0.60	0.30	18.59	2372	7.98	0.6	8.90	96.0
LW3.85	Low	2/7/2017	10:07	1.00	0.50	19.35	2446	8.35	0.0	10.92	119.1
GLW3.78	Low	2/7/2017	9:30	1.33	0.67	18.48	2470	8.07	4.2	9.10	98.1
LW3.75	Low	2/7/2017	10:38	1.75	0.88	19.34	2450	8.29	1.0	10.30	112.3
LWC3.7 [t/ss]	Low	2/7/2017	10:26	0.83	0.42	20.81	3494	7.94	2.1	5.34	60.5
LW3.4	Low	2/7/2017	11:09	1.08	0.54	19.43	2486	8.39	0.2	9.40	103.0
LW7.2	Mid	2/7/2017	10:55	1.64	0.80	18.66	1866	8.01	Error ¹	10.37	115.7
LW6.05	Mid	2/7/2017	11:20	1.25	0.60	19.08	2168	8.12	Error ¹	10.41	113.0
LW4.95	Mid	2/7/2017	13:25	2.30	1.20	19.40	2270	8.30	4.0	9.17	100.2
GLW4.4	Mid	2/7/2017	14:11	2.50	1.30	19.35	2446	8.20	0.6	9.40	103.0
LW3.4	Mid	2/7/2017	14:35	1.30	0.60	19.30	2439	8.32	4.4	9.20	101.0
LW7.2	High	2/7/2017	14:02	1.80	0.90	21.75	1761	7.92	2.4	10.05	115.0
LW6.7	High	2/7/2017	14:25	1.28	0.60	21.26	1998	8.24	2.2	10.17	115.3
LW6.05	High	2/7/2017	14:48	1.44	0.70	20.93	2015	8.35	3.4	10.24	115.5
LWC6.1_2 [t/ss]	High	2/7/2017	14:55	1.40	0.70	21.93	1098	8.20	1.1	8.07	92.5
LWC6.1_1 [t/ss]	High	2/7/2017	14:41	1.50	0.80	18.46	1886	7.47	0.0	8.21	88.1
GLWC6.1_3 [t/ss]	High	2/7/2017	14:58	1.75	0.90	18.70	1839	7.50	0.0	8.22	88.5

Location ID	Targeted	Date and	Гime	Total	Sample	Temperature	Spec. Cond.	mII.	Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measure	ment	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
GLWC6.1_4 [t/ss]	High	2/7/2017	16:07	2.70	1.30	18.94	2185	7.66	3.4	7.80	84.6
LW5.9	High	2/7/2017	15:27	1.13	0.60	17.62	2196	8.19	9.8	9.36	98.7
LW5.3	High	2/7/2017	15:45	3.51	1.20	20.40	2190	8.25	3.7	8.84	98.6
LW5.3	High	2/7/2017	15:50	3.51	2.40	20.40	2188	8.25	3.8	8.82	98.4
LW4.95	High	2/7/2017	16:30	2.46	1.20	20.24	2201	8.27	4.5	8.71	97.0
GLW4.9	High	2/7/2017	16:45	2.80	1.40	20.16	2198	8.25	3.6	8.66	99.7
GLW4.85	High	2/7/2017	15:42	1.60	0.80	20.13	2649	8.06	2.4	2.10	29.0
GLW4.4	High	2/7/2017	16:06	2.40	1.20	19.78	2364	8.25	1.2	8.80	97.0
LW4.1	High	2/7/2017	16:20	0.90	0.40	19.49	2405	8.22	1.3	8.50	93.0
LW3.85	High	2/7/2017	15:47	1.17	0.58	20.03	2532	8.45	2.3	9.77	108.1
GLW3.78	High	2/7/2017	16:30	2.42	1.21	19.78	2572	8.26	1.3	8.92	98.8
LW3.75	High	2/7/2017	16:17	2.00	1.00	20.02	2520	8.38	2.6	9.10	100.9
LWC3.7 [t/ss]	High	2/7/2017	16:05	1.25	0.63	21.85	3880	7.34	0.1	4.13	47.7
LW3.4	High	2/7/2017	16:58	1.33	0.67	19.88	2539	8.34	2.5	9.02	99.8

Loostion ID	Targeted	Date and	Time	Total	Sample	Temperature	Spec. Cond.	ml I	Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measur	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
Day 3											
LW7.2	Low	2/8/2017	8:45	1.46	0.70	20.41	1798	7.64	0.5	8.80	98.1
LW6.7	Low	2/8/2017	9:03	0.63	0.30	19.12	2295	7.79	1.7	9.28	101.1
LW6.05	Low	2/8/2017	9:35	1.17	0.50	19.46	2112	7.92	0.5	9.79	107.2
LWC6.1_2 [t/ss]	Low	2/8/2017	9:54	1.20	0.60	20.61	1053	8.13	1.1	8.19	97.9
LWC6.1_1 [t/ss]	Low	2/8/2017	9:45	1.70	0.90	18.62	1857	7.74	0.7	8.58	98.3
GLWC6.1_3 [t/ss]	Low	2/8/2017	10:05	2.30	1.20	18.82	1793	7.32	1.6	8.04	93.1
GLWC6.1_4 [t/ss]	Low	2/8/2017	11:15	2.50	1.30	18.98	1879	7.51	1.9	Error ²	Error ²
LW5.9	Low	2/8/2017	10:33	0.80	0.40	16.66	2275	7.75	4.3	9.43	104.9
LW5.3	Low	2/8/2017	10:00	3.05	1.00	19.21	2432	7.91	1.8	9.44	103.0
LW5.3	Low	2/8/2017	10:03	3.05	2.00	19.22	2432	7.92	1.9	9.45	103.1
LW4.95	Low	2/8/2017	10:30	2.28	1.10	19.32	2426	8.09	2.0	9.76	106.6
GLW4.9	Low	2/8/2017	10:50	2.49	1.20	19.05	2409	8.00	4.8-6.0	9.01	98.0
GLW4.85	Low	2/8/2017	9:45	1.30	0.60	19.40	2619	7.69	1.4	7.00	76.0
GLW4.4	Low	2/8/2017	10:07	2.30	1.10	19.29	2354	7.98	1.4	9.22	100.7
LW4.1	Low	2/8/2017	10:22	0.70	0.40	19.21	2383	7.95	1.2	8.87	96.2
LW3.85	Low	2/8/2017	9:23	1.00	0.50	19.93	2210	8.27	2.4	10.59	117.0
GLW3.78	Low	2/8/2017	10:03	1.00	0.50	19.59	2239	8.11	8.3	8.81	96.7
LW3.75	Low	2/8/2017	9:53	1.17	0.80	19.86	2213	8.24	0.4	9.59	105.7
LWC3.7 [t/ss]	Low	2/8/2017	9:42	0.92	0.46	20.97	3144	7.42	1.3	5.35	60.8
LW3.4	Low	2/8/2017	10:27	1.00	0.50	19.93	2247	8.30	0.7	8.75	96.8
LW7.2	Mid	2/8/2017	11:07	1.65	0.80	21.67	1858	8.34	1.6	10.69	122.3
LW6.05	Mid	2/8/2017	12:35	1.51	0.80	21.18	2121	8.30	1.7	11.15	126.5
LW4.95	Mid	2/8/2017	13:05	2.39	1.20	20.35	2472	8.22	3.5	9.58	106.8
GLW4.4	Mid	2/8/2017	13:47	2.40	1.30	20.58	2428	8.17	1.1	9.68	108.0
LW3.4	Mid	2/8/2017	14:15	1.17	0.58	20.99	2798	8.43	3.5	8.81	99.6
LW7.2	High	2/8/2017	14:40	1.80	0.90	23.11	1742	8.28	3.0	9.92	116.4
LW6.7	High	2/8/2017	15:02	1.24	0.60	22.26	2079	8.21	4.8	9.98	115.4
LW6.05	High	2/8/2017	15:36	1.42	0.70	22.46	1988	8.29	1.7	9.78	113.4
LWC6.1_1 [t/ss]	High	2/8/2017	14:39	1.40	0.70	18.94	1611	6.86 ³	Error ²	Error ²	Error ²
LWC6.1_2 [t/ss]	High	2/8/2017	14:50	1.30	0.70	20.63	1085	7.77	Error ²	Error ²	Error ²
GLWC6.1_3 [t/ss]	High	2/8/2017	15:00	1.95	1.00	19.29	1515	7.30	Error ²	Error ²	Error ²

Location ID	Targeted	Date and	Time	Total	Sample	Temperature	Spec. Cond.	mШ	Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measure	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
GLWC6.1_4 [t/ss]	High	2/8/2017	16:05	1.90	1.00	19.30	1639	7.49	Error ²	Error ²	Error ²
LW5.9	High	2/8/2017	15:37	1.20	0.60	18.86	1834	7.87	Error ²	Error ²	Error ²
LW5.3	High	2/8/2017	15:45	3.64	1.20	21.63	2352	8.21	3.6	9.00	102.9
LW5.3	High	2/8/2017	15:50	3.64	2.40	21.65	2347	8.21	3.7	8.99	102.9
LW4.95	High	2/8/2017	16:20	2.65	1.30	21.45	2355	8.21	3.6	8.81	100.5
GLW4.9	High	2/8/2017	16:35	2.85	1.40	21.28	2371	8.20	2.3	8.70	98.9
GLW4.85	High	2/8/2017	16:00	1.60	0.80	20.96	2540	7.92	2.1	7.40	79.0
GLW4.4	High	2/8/2017	16:21	2.50	1.30	20.91	2414	8.31	1.2	8.80	99.0
LW4.1	High	2/8/2017	16:33	0.85	0.40	20.59	2451	8.28	0.7	8.50	95.3
LW3.85	High	2/8/2017	16:01	1.08	0.54	21.30	2311	8.44	1.8	9.33	106.0
GLW3.78	High	2/8/2017	16:37	2.75	1.38	20.73	2331	8.21	0.5	8.03	90.6
LW3.75	High	2/8/2017	16:28	2.00	1.00	21.19	2311	8.37	0.9	8.42	95.5
LWC3.7 [t/ss]	High	2/8/2017	16:17	1.17	0.54	22.31	3658	7.45	2.9	3.93	46.4
LW3.4	High	2/8/2017	17:00	1.25	0.63	20.90	2329	8.32	3.4	8.42	95.0

Location ID	Targeted	Date and	Time	Total	Sample	Temperature	Spec. Cond.		Turbidity	Dissol	ved Oxygen
Location ID	Flow	of Measur	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рН	(NTU)	mg/L	% saturation
Day 4											
LW7.2	Low	2/9/2017	8:56	1.46	0.70	20.68	1782	7.43	0.5	9.55	107.1
LW6.7	Low	2/9/2017	9:11	0.71	0.30	19.46	2270	7.82	5.5	9.67	106.0
LW6.05	Low	2/9/2017	9:31	1.18	0.50	19.63	2055	7.93	0.4	9.85	108.5
LWC6.1_2 [t/ss]	Low	2/9/2017	9:20	1.10	0.55	22.89	1007	8.21	Error ²	Error ²	Error ²
LWC6.1_1 [t/ss]	Low	2/9/2017	9:15	2.00	1.00	18.87	1821	8.25	Error ²	Error ²	Error ²
GLWC6.1_3 [t/ss]	Low	2/9/2017	9:25	2.38	1.19	19.02	1793	7.62	Error ²	Error ²	Error ²
GLWC6.1_4 [t/ss]	Low	2/9/2017	10:19	2.63	1.31	19.47	1844	7.41	Error ²	Error ²	Error ²
LW5.9	Low	2/9/2017	9:49	0.83	0.42	16.58	2205	7.83	Error ²	Error ²	Error ²
LW5.3	Low	2/9/2017	10:00	3.08	1.00	19.34	2262	7.94	1.7	9.27	101.1
LW5.3	Low	2/9/2017	10:03	3.08	2.00	19.34	2260	7.95	2.5	9.29	101.4
LW4.95	Low	2/9/2017	10:35	2.09	1.00	19.55	2259	8.13	2.1	9.71	106.5
GLW4.9	Low	2/9/2017	10:50	2.35	1.20	19.31	2250	8.01	1.9	9.10	99.3
GLW4.85	Low	2/9/2017	9:58	1.40	0.70	19.40	2727	7.47	14.2	6.40	70.0
GLW4.4	Low	2/9/2017	10:22	2.25	1.10	19.60	2388	8.05	1.2	9.40	103.0
LW4.1	Low	2/9/2017	10:36	0.65	0.30	19.50	2408	8.04	0.6	9.20	100.0
LW3.85	Low	2/9/2017	10:25	1.00	0.50	20.80	2256	8.40	1.9	11.52	129.6
GLW3.78	Low	2/9/2017	11:03	0.58	0.29	21.24	2293	8.35	1.6	9.05	103.4
LW3.75	Low	2/9/2017	10:53	0.92	0.46	20.70	2260	8.36	0.1	10.21	114.6
LWC3.7 [t/ss]	Low	2/9/2017	10:49	0.80	0.40	21.41	3212	7.47	1.1	5.45	62.4
LW3.4	Low	2/9/2017	11:50	1.00	0.50	21.06	2304	8.41	1.5	8.74	98.9
LW7.2	Mid	2/9/2017	10:52	1.61	0.80	22.04	1771	8.34	3.4	11.15	128.2
LW6.05	Mid	2/9/2017	12:00	1.32	0.60	21.44	2117	8.21	0.3	9.93	113.1
LW4.95	Mid	2/9/2017	12:30	2.19	1.10	20.58	2309	8.22	2.7	9.36	105.5
GLW4.4	Mid	2/9/2017	13:10	2.40	1.20	20.60	2449	8.28	0.8	10.00	112.0
LW3.4	Mid	2/9/2017	13:25	1.00	0.50	21.58	2328	8.47	2.8	8.68	99.1
LW7.2	High	2/9/2017	14:41	1.80	0.90	23.64	1665	8.33	6.0	9.89	117.2
LW6.7	High	2/9/2017	15:04	1.22	0.60	22.97	1924	8.30	5.7	10.30	117.5
LW6.05	High	2/9/2017	15:23	1.42	0.70	23.00	1879	8.35	6.0	9.91	116.2
LWC6.1_2 [t/ss]	High	2/9/2017	14:50	1.58	0.79	21.31	1001	8.24	Error ²	Error ²	Error ²
LWC6.1_1 [t/ss]	High	2/9/2017	14:34	2.13	1.06	19.27	1856	7.62	Error ²	Error ²	Error ²
GLWC6.1_3 [t/ss]	High	2/9/2017	14:54	2.27	1.14	19.34	1826	7.68	Error ²	Error ²	Error ²

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Location ID	Targeted	Date and Time		Total	Sample	Temperature	Spec. Cond.	рН	Turbidity	Dissolved Oxygen	
Location ib	Flow	of Measur	ement	Depth (ft)	Depth (ft)	(°C)	(µS/cm)	рп	(NTU)	mg/L	% saturation
GLWC6.1_4 [t/ss]	High	2/9/2017	15:50	3.25	1.63	19.45	1897	7.58	Error ²	Error ²	Error ²
LW5.9	High	2/9/2017	15:23	1.48	0.74	19.43	1994	8.15	Error ²	Error ²	Error ²
LW5.3	High	2/9/2017	15:15	3.35	1.10	22.25	2159	8.25	3.7	8.86	102.5
LW5.3	High	2/9/2017	15:18	3.35	2.20	22.25	2157	8.25	4.1	8.87	102.5
LW4.95	High	2/9/2017	15:40	2.45	1.20	22.09	2168	8.28	4.2	8.75	100.9
GLW4.9	High	2/9/2017	15:49	2.89	1.40	21.88	2196	8.25	4.0	8.57	98.4
GLW4.85	High	2/9/2017	15:15	1.60	0.80	21.43	2558	8.11	5.1	7.70	87.0
GLW4.4	High	2/9/2017	15:42	2.50	1.30	21.40	2451	8.38	1.3	8.90	102.0
LW4.1	High	2/9/2017	16:00	0.90	0.40	21.10	2487	8.36	2.3	8.60	98.0
LW3.85	High	2/9/2017	15:39	1.17	0.58	21.69	2394	8.46	1.1	9.57	109.7
GLW3.78	High	2/9/2017	16:30	2.58	1.29	21.21	2397	8.28	2.7	8.51	96.6
LW3.75	High	2/9/2017	16:05	1.67	0.83	21.63	2356	8.42	0.8	8.83	101.0
LWC3.7 [t/ss]	High	2/9/2017	15:54	1.17	0.58	22.03	3270	7.46	0.6	5.31	61.7
LW3.4	High	2/9/2017	16:48	1.25	0.63	21.45	2379	8.36	9.3	8.15	92.9

Notes:

- 1) Measurement disqualified: Field team noted that turbidity probe is malfunctioning and was therefore not recorded.
- 2) Dissolved Oxygen and Tubidity probes sensors failed and therefore were not recorded.
- 3) Field team noted that pH reading seemed low at LWC6.1_1 on 2/8/2016.

Spec. Cond. - Specific Conductivity

LW - Prefix indicates historical locations that were also sampled in May 2016

GLW - Prefix indicates new grab locations

ft - feet

ID - identification

and at the second second second second

 $\mu \text{S/cm}$ - micro-Siemens per centimeter

NTU - Nephelometric Turbitiy Unit

mg/L - milligrams per Liter

°C - degrees Celsius

% - Percent

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

% saturation for dissolved oxygen is based on sample temperature and daily atmospheric barometric pressure (input during calibration)

Sample	Targeted Flow	Location ID	Date and			oordinates	Additional Information
Day	Flow		Sample Co	Direction	Northing	Easting	
Day 1	Low	LW7.2	2/6/2017	9:45	26735154.1764	828169.516523	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LW6.7	2/6/2017	10:15	26734766.8596	829555.863160	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LW6.05	2/6/2017	11:20	26734195.7184	832631.194936	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LWC6.1_1 [t/ss]	2/6/2017	9:45	36° 05' 09.7118" N	114° 59' 10.2496" W	Converted coordinates: 26733478.5980 UTM Northing, 832602.959035 UTM Easting
Day 1	Low	LWC6.1_2 [t/ss]	2/6/2017	10:00	36° 05' 09.3302" N	114° 59' 10.6786" W	Converted coordinates: 26733439.7965 UTM Northing, 832567.986184 UTM Easting
Day 1	Low	GLWC6.1_3 [t/ss]	2/6/2017	10:07	36° 05' 10.2830" N	114° 59' 10.7778" W	t/ss. Converted coordinates: 26733536.0886 UTM Northing, 832559.253154 UTM Easting
Day 1	Low	GLWC6.1_4 [t/ss]	2/6/2017	10:35	36° 05' 14.8717" N		t/ss. Converted coordinates: 26733999.9893 UTM Northing, 832542.666511 UTM Easting
Day 1	Low	LW5.9	2/6/2017	11:08	36° 05' 15.8894" N	114° 58' 59.9004" W	Converted coordinates: 26734108.4713 UTM Northing, 833448.50446 UTM Easting
Day 1	Low	LW5.3	2/6/2017	10:00	26734884.8696	836443.594463	Coordinates duplicated (shallow sample)
Day 1	Low	LW5.3	2/6/2017	10:35	26734884.8696	836443.594463	Coordinates duplicated (deep sample)
Day 1	Low	LW4.95	2/6/2017	11:30	26735811.1617	838356.807172	· · · · · · · · · · · · · · · · · · ·
Day 1	Low	GLW4.9	2/6/2017	11:15	26735748.9325	838930.751235	
Day 1	Low	GLW4.85	2/6/2017	10:22	26735901.5496	839338.536180	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	GLW4.4	2/6/2017	11:04	26736802.1895	841941.137930	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LW4.1	2/6/2017	11:20	26736833.1567	842708.315530	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LW3.85	2/6/2017	9:53	26737186.6278	843989.553781	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	GLW3.78	2/6/2017	10:45	26737396.7569	844398.532622	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LW3.75	02/06/17	10:25	26737672.9440	844386.046426	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LWC3.7 [t/ss]	02/06/17	10:16	26737590.0758	844557.400742	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Low	LW3.4	02/06/17	11:10	26738900.7254	845419.303874	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Mid	LW7.2	2/6/2017	12:10	26735154.1764	828169.516523	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Mid	LW6.05	2/6/2017	12:36	26734195.7184	832631.194936	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Mid	LW4.95	2/6/2017	13:20	26735811.1617	838356.807172	Coordinates not collected during high flow sampling. (Low flow coordinates duplicated).
Day 1	Mid	GLW4.4	2/6/2017	14:15	26736802.1895	841941.137930	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	Mid	LW3.4	02/06/17	14:46	26738900.7254	845419.303874	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW7.2	2/6/2017	14:30	26735154.1764	828169.516523	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW6.7	2/6/2017	15:00	26734766.8596	829555.863160	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW6.05	2/6/2017	15:26	26734195.7184	832631.194936	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LWC6.1_1 [t/ss]	2/6/2017	14:43	36° 05' 09.6713" N	114° 59' 10.2112" W	Converted coordinates: 26733474.5222 UTM Northing, 832606.13581 UTM Easting
Day 1	High	LWC6.1 2 [t/ss]	2/6/2017	14:55	36° 05' 09.3230" N		Converted coordinates: 26733439.0652 UTM Northing, 832567.465379 UTM Easting
Day 1	High	GLWC6.1_3 [t/ss]	2/6/2017	15:00	36° 05' 10.3201" N		t/ss. Converted coordinates: 26733539.8296 UTM Northing, 832557.539413 UTM Easting
Day 1	High	GLWC6.1_4 [t/ss]	2/6/2017	15:45	36° 05' 14.8717" N		t/ss. Converted coordinates: 26733999.9893 UTM Northing, 832542.666511 UTM Easting
Day 1	High	LW5.9	2/6/2017	15:18	36° 05' 15.8729" N		Converted coordinates: 26734106.8012 UTM Northing, 833448.243914 UTM Easting
Day 1	High	LW5.3	2/6/2017	16:00	26734891.4440	836452.228633	Coordinates duplicated (shallow sample)
Day 1	High	LW5.3	2/6/2017	16:10	26734891.4440	836452.228633	Coordinates duplicated (deep sample)
Day 1	High	LW4.95	2/6/2017	15:15	26735811.1617	838356.807172	Coordinates not collected during high flow sampling. (Low flow coordinates duplicated).
Day 1	High	GLW4.9	2/6/2017	15:00	26735748.9325	838930.751235	Coordinates not collected during high flow sampling. (Low flow coordinates duplicated).
Day 1	High	GLW4.85	2/6/2017	15:58	26735901.5496	839338.536180	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	GLW4.4	2/6/2017	16:19	26736802.1895	841941.137930	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW4.1	2/6/2017	16:42	26736833.1567	842708.315530	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW3.85	2/6/2017	16:03	26737186.6278	843989.553781	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	GLW3.78	2/6/2017	16:40	26737396.7569	844398.532622	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW3.75	02/06/17	16:30	26737672.9440	844386.046426	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LWC3.7 [t/ss]	02/06/17	16:20	26737590.0758	844557.400742	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 1	High	LW3.4	02/06/17	17:01	26738900.7254	845419.303874	Team without GPS (Stations Staked). Coordinates from December 2016.
Day 2	Low	LW7.2	2/7/2017	8:55	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.

Sample Day	Targeted Flow	Location ID	Date and		GPS Co	pordinates	Additional Information
Day	1 low		Sample Co	Mection	Northing	Easting	
Day 2	Low	LW6.7	2/7/2017	9:13	26734766.8596		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	Low	LW6.05	2/7/2017	9:30	26734195.7184		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	Low	LWC6.1_1 [t/ss]	2/7/2017	9:03	36° 05' 09.6804" N		Converted coordinates: 26733475.4227 UTM Northing, 832602.937489 UTM Easting
Day 2	Low	LWC6.1_2 [t/ss]	2/7/2017	9:20	36° 05' 09.2779" N		Converted coordinates: 26733434.5226 UTM Northing, 832570.365957 UTM Easting
Day 2	Low	GLWC6.1_3 [t/ss]	2/7/2017	9:30	36° 05' 10.3068" N		t/ss. Converted coordinates: 26733538.4896 UTM Northing, 832558.343782 UTM Easting
Day 2	Low	GLWC6.1_4 [t/ss]	2/7/2017	10:35	36° 05′ 14.8862″ N		t/ss. Converted coordinates: 26734001.4506 UTM Northing, 832541.861412 UTM Easting
Day 2	Low	LW5.9	2/7/2017	10:00	36° 05' 15.8602" N		Converted coordinates: 26734105.5172 UTM Northing, 833448.276457 UTM Easting
Day 2	Low	LW5.3	2/7/2017	9:45	26734888.1166	836458.754538	Coordinates duplicated (shallow sample)
Day 2	Low	LW5.3	2/7/2017	9:50	26734888.1166	836458.754538	Coordinates duplicated (deep sample)
Day 2	Low	LW4.95	2/7/2017	10:45	26735807.7765	838355.131651	
Day 2	Low	GLW4.9	2/7/2017	10:55	26735746.4400	838931.121641	
Day 2	Low	GLW4.85	2/7/2017	9:42	36° 05′ 33.05″ N	114° 57' 48.074" W	Converted coordinates: 26735880.6328 UTM Northing, 839332.388411 UTM Easting
Day 2	Low	GLW4.4	2/7/2017	10:18	36° 05' 41.922" N		Converted coordinates: 26736794.6167 UTM Northing, 841957.49863 UTM Easting
Day 2	Low	LW4.1	2/7/2017	10:39	36° 05' 42.272" N		Converted coordinates: 26736834.8277 UTM Northing, 842701.267355 UTM Easting
Day 2	Low	LW3.85	2/7/2017	10:12	26737239.7881	844063.690444	Waypoint recorded twice on GPS
Day 2	Low	LW3.85	2/7/2017	10:12	26737238.3288	844063.588410	Waypoint recorded twice on GPS
Day 2	Low	GLW3.78	2/7/2017	9:35	26737449.1036	844428.592273	
Day 2	Low	LW3.75	2/7/2017	10:45	26737663.5481	844381.142565	
Day 2	Low	LWC3.7 [t/ss]	2/7/2017	10:32	26737563.6343	844536.652300	Missing GPS Waypoint Data. Coordinates recorded in Field Notes
Day 2	Low	LW3.4	2/7/2017	11:11	26738904.2979	845421.736284	
Day 2	Mid	LW7.2	2/7/2017	10:55	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	Mid	LW6.05	2/7/2017	11:20	26734195.7184	832631.194936	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	Mid	LW4.95	2/7/2017	13:25	26735808.4507	838354.240905	
Day 2	Mid	GLW4.4	2/7/2017	14:11	36° 05' 42.060" N		Converted coordinates: 26736808.4698 UTM Northing, 841941.816113 UTM Easting
Day 2	Mid	LW3.4	2/7/2017	14:35	36° 06' 02.536" N	114° 56' 33.507" W	Converted coordinates: 26738901.7749 UTM Northing, 845432.254704 UTM Easting
Day 2	High	LW7.2	2/7/2017	14:02	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	High	LW6.7	2/7/2017	14:25	26734766.8596		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	High	LW6.05	2/7/2017	14:48	26734195.7184		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 2	High	LWC6.1_1 [t/ss]	2/7/2017	14:45	36° 05' 09.6760" N		Converted coordinates: 26733474.9959 UTM Northing, 832605.886671 UTM Easting
Day 2	High	LWC6.1_2 [t/ss]	2/7/2017	14:58	36° 05' 09.2632" N		Converted coordinates: 26733433.1309 UTM Northing, 832585.804986 UTM Easting
Day 2	High	GLWC6.1_3 [t/ss]	2/7/2017	15:06	36° 05' 10.2877" N		t/ss. Converted coordinates: 26733536.5543 UTM Northing, 832557.707253 UTM Easting
Day 2	High	GLWC6.1_4 [t/ss]	2/7/2017	16:10	36° 05' 14.9068" N		t/ss. Converted coordinates: 26734003.5002 UTM Northing, 832536.407232 UTM Easting
Day 2	High	LW5.9	2/7/2017	15:27	36° 05' 15.9842" N		Converted coordinates: 26734117.9763 UTM Northing, 833435.363045 UTM Easting
Day 2	High	LW5.3	2/7/2017	15:45	26734888.1251	836462.868375	Coordinates duplicated (shallow sample)
Day 2	High	LW5.3	2/7/2017	15:50	26734888.1251	836462.868375	Coordinates duplicated (deep sample)
Day 2	High	LW4.95	2/7/2017	16:30	26735809.7788	838354.715313	
Day 2	High	GLW4.9	2/7/2017	16:45	26735747.9453	838930.335881	
Day 2	High	GLW4.85	2/7/2017	15:42	26735882.3118	839339.757962	
Day 2	High	GLW4.4	2/7/2017	16:06	26736807.6416	841942.960761	
Day 2	High	LW4.1	2/7/2017	16:20	26736837.0435	842706.112122	
Day 2	High	LW3.85	2/7/2017	15:50	26737240.1667	844062.261969	
Day 2	High	GLW3.78	2/7/2017	16:35	26737449.1000	844425.674956	
Day 2	High	LW3.75	2/7/2017	16:25	26737665.6337	844381.800700	
Day 2	High	LWC3.7 [t/ss]	2/7/2017	16:10	26737564.7743	844533.517260	
Day 2	High	LW3.4	2/7/2017	17:00	26738904.4659	845421.394093	
Day 3	Low	LW7.2	2/8/2017	8:45	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.

Sample Day	Targeted Flow	Location ID	Date and Sample Co			pordinates	Additional Information
Day	Tiow		-	Jilection	Northing	Easting	
Day 3	Low	LW6.7	2/8/2017	9:03	26734766.8596		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	Low	LW6.05	2/8/2017	9:35	26734195.7184		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	Low	LWC6.1_1 [t/ss]	2/8/2017	9:45	36° 05' 09.6816" N		Converted coordinates: 26733475.5115 UTM Northing, 832597.642981 UTM Easting
Day 3	Low	LWC6.1_2 [t/ss]	2/8/2017	10:00	36° 05' 09.2809" N		Converted coordinates: 26733434.8266 UTM Northing, 832570.470791 UTM Easting
Day 3	Low	GLWC6.1_3 [t/ss]	2/8/2017	10:05	36° 05' 10.3140" N		t/ss. Converted coordinates: 26733539.2286 UTM Northing, 832560.120312 UTM Easting
Day 3	Low	GLWC6.1_4 [t/ss]		11:20	36° 05' 14.8944" N	114° 59' 10.9785" W	t/ss. Converted coordinates: 26734002.2679 UTM Northing, 832539.919416 UTM Easting
Day 3	Low	LW5.9	2/8/2017	10:35	36° 05' 15.9718" N		Converted coordinates: 26734116.783 UTM Northing, 833445.194803 UTM Easting
Day 3	Low	LW5.3	2/8/2017	10:00	26734887.8450	836462.156762	Coordinates duplicated (shallow sample)
Day 3	Low	LW5.3	2/8/2017	10:03	26734887.8450	836462.156762	Coordinates duplicated (deep sample)
Day 3	Low	LW4.95	2/8/2017	10:30	26735810.1853	838356.295691	
Day 3	Low	GLW4.9	2/8/2017	10:50	26735747.2766	838930.895591	
Day 3	Low	GLW4.85	2/8/2017	9:45	26735881.1461	839340.944968	
Day 3	Low	GLW4.4	2/8/2017	10:07	26736803.9428	841944.462727	
Day 3	Low	LW4.1	2/8/2017	10:22	26736832.0458	842707.967105	
Day 3	Low	LW3.85	2/8/2017	9:27	26737238.3288	844063.588500	Missing GPS Waypoint Data. Coordinates recorded in Field Notes
Day 3	Low	GLW3.78	2/8/2017	10:10	26737448.1991	844428.807824	
Day 3	Low	LW3.75	2/8/2017	9:57	26737667.1754	Error	GPS malfunction
Day 3	Low	LWC3.7 [t/ss]	2/8/2017	9:48	26737565.9731	844536.993959	
Day 3	Low	LW3.4	2/8/2017	10:30	26738904.5820	845421.363600	
Day 3	Mid	LW7.2	2/8/2017	11:07	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	Mid	LW6.05	2/8/2017	12:35	26734195.7184	832631.194936	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	Mid	LW4.95	2/8/2017	13:05	26735809.4675	838354.471875	
Day 3	Mid	GLW4.4	2/8/2017	13:47	26736803.1138	841944.901046	
Day 3	Mid	LW3.4	2/8/2017	14:18	26738907.3651	845419.535829	
Day 3	High	LW7.2	2/8/2017	14:40	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	High	LW6.7	2/8/2017	15:02	26734766.8596		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	High	LW6.05	2/8/2017	15:36	26734195.7184	832631.194936	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 3	High	LWC6.1_1 [t/ss]	2/8/2017	14:43	36° 05' 09.6956" N	114° 59' 10.2516" W	Converted coordinates: 26733476.9589 UTM Northing, 832602.804943 UTM Easting
Day 3	High	LWC6.1_2 [t/ss]	2/8/2017	14:53	36° 05' 09.2634" N		Converted coordinates: 26733433.051 UTM Northing, 832569.488557 UTM Easting
Day 3	High	GLWC6.1_3 [t/ss]	2/8/2017	15:00	36° 05' 10.3593" N		t/ss. Converted coordinates: 26733543.8155 UTM Northing, 832561.142742 UTM Easting
Day 3	High	GLWC6.1_4 [t/ss]		16:07	36° 05' 14.9361" N		t/ss. Converted coordinates: 26734006.6211 UTM Northing, 832562.176176 UTM Easting
Day 3	High	LW5.9	2/8/2017	15:41	36° 05' 15.9590" N		Converted coordinates: 26734115.4941 UTM Northing, 833446.07275 UTM Easting
Day 3	High	LW5.3	2/8/2017	15:45	26734889.1159	836461.533404	Coordinates duplicated (shallow sample)
Day 3	High	LW5.3	2/8/2017	15:50	26734889.1159	836461.533404	Coordinates duplicated (deep sample)
Day 3	High	LW4.95	2/8/2017	16:20	26735807.7306	838354.144120	
Day 3	High	GLW4.9	2/8/2017	16:35	26735747.8042	838931.327021	
Day 3	High	GLW4.85	2/8/2017	16:00	26735887.0946	839339.005339	
Day 3	High	GLW4.4	2/8/2017	16:21	26736805.6256	841942.107088	
Day 3	High	LW4.1	2/8/2017	16:33	26736834.8368	842707.586857	
Day 3	High	LW3.85	2/8/2017	16:05	26737240.4931	844061.666498	
Day 3	High	GLW3.78	2/8/2017	16:42	26737448.4917	844427.161173	
Day 3	High	LW3.75	2/8/2017	16:30	26737664.6701	844380.716056	
Day 3	High	LWC3.7 [t/ss]	2/8/2017	16:20	26737565.3143	844533.514635	
Day 3	High	LW3.4	2/8/2017	17:05	26738901.5134	845417.720544	
Day 4	Low	LW7.2	2/9/2017	8:56	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Low	LW6.7	2/9/2017	9:11	26734766.8596	829555.863160	Did not collect coordinates (Stations Staked). Coordinates from December 2016.

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Sample Day	Targeted Flow	Location ID	Date and			pordinates	Additional Information
Day	1100		•		Northing	Easting	
Day 4	Low	LW6.05	2/9/2017	9:31	26734195.7184	832631.194936	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Low	LWC6.1_1 [t/ss]	2/9/2017	9:10	36° 05' 09.6459" N	114° 59' 10.2078" W	Converted coordinates: 26733471.9556 UTM Northing, 832606.430628 UTM Easting
Day 4	Low	LWC6.1_2 [t/ss]	2/9/2017	9:25	36° 05' 09.3077" N		Converted coordinates: 26733437.5184 UTM Northing, 832567.507704 UTM Easting
Day 4	Low	GLWC6.1_3 [t/ss]	2/9/2017	9:32	36° 05' 10.2657" N		t/ss. Converted coordinates: 26733534.3536 UTM Northing, 832561.60299 UTM Easting
Day 4	Low	GLWC6.1_4 [t/ss]	2/9/2017	10:33	36° 05' 14.7784" N		t/ss. Converted coordinates: 26733990.5595 UTM Northing, 832543.397403 UTM Easting
Day 4	Low	LW5.9	2/9/2017	10:01	36° 05' 15.8657" N		Converted coordinates: 26734106.0985 UTM Northing, 833452.352009 UTM Easting
Day 4	Low	LW5.3	2/9/2017	10:00	26734889.0690	836463.610500	Coordinates duplicated (shallow sample)
Day 4	Low	LW5.3	2/9/2017	10:03	26734889.0690	836463.610500	Coordinates duplicated (deep sample)
Day 4	Low	LW4.95	2/9/2017	10:35	26735806.7716	838356.088342	
Day 4	Low	GLW4.9	2/9/2017	10:50	26735747.4928	838932.849656	
Day 4	Low	GLW4.85	2/9/2017	9:58	26735901.5496	839338.536180	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Low	GLW4.4	2/9/2017	10:22	26736802.1895	841941.137930	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Low	LW4.1	2/9/2017	10:38	26736833.1567		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Low	LW3.85	2/9/2017	10:30	26737240.8553	844063.666822	
Day 4	Low	GLW3.78	2/9/2017	11:28	26737449.2575	844429.193650	
Day 4	Low	LW3.75	2/9/2017	10:58	26737664.0159	844381.547420	
Day 4	Low	LWC3.7 [t/ss]	2/9/2017	10:48	26737565.0282	844536.931295	
Day 4	Low	LW3.4	2/9/2017	12:00	26738904.2733	845419.821918	
Day 4	Mid	LW7.2	2/9/2017	10:52	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Mid	LW6.05	2/9/2017	12:00	26734195.7184		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Mid	LW4.95	2/9/2017	12:30	26735808.4219	838354.430209	
Day 4	Mid	GLW4.4	2/9/2017	13:11	26736802.1895	841941.137930	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	Mid	LW3.4	2/9/2017	13:33	26738904.3412	845419.812700	
Day 4	High	LW7.2	2/9/2017	14:41	26735154.1764	828169.516523	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	High	LW6.7	2/9/2017	15:04	26734766.8596	829555.863160	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	High	LW6.05	2/9/2017	15:23	26734195.7184	832631.194936	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	High	LWC6.1_1 [t/ss]	2/9/2017	14:39	36° 05' 09.7005" N		Converted coordinates: 26733477.4345 UTM Northing, 832599.576399 UTM Easting
Day 4	High	LWC6.1_2 [t/ss]	2/9/2017	14:52	36° 05' 09.3136" N	114° 59' 10.6776" W	Converted coordinates: 26733438.1185 UTM Northing, 832568.07856 UTM Easting
Day 4	High	GLWC6.1_3 [t/ss]	2/9/2017	14:57	36° 05' 10.2903" N	114° 59' 10.7594" W	t/ss. Converted coordinates: 26733536.836 UTM Northing, 832560.75878 UTM Easting
Day 4	High	GLWC6.1_4 [t/ss]	2/9/2017	15:51	36° 05' 14.8989" N		t/ss. Converted coordinates: 26734002.6155 UTM Northing, 832522.410593 UTM Easting
Day 4	High	LW5.9	2/9/2017	15:27	36° 05' 15.8877" N		Converted coordinates: 26734108.2907 UTM Northing, 833447.102088 UTM Easting
Day 4	High	LW5.3	2/9/2017	15:15	26734890.5677	836465.120667	Coordinates duplicated (shallow sample)
Day 4	High	LW5.3	2/9/2017	15:18	26734890.5677	836465.120667	Coordinates duplicated (deep sample)
Day 4	High	LW4.95	2/9/2017	15:40	26735807.5360	838353.319647	
Day 4	High	GLW4.9	2/9/2017	15:53	26735747.9321	838931.861140	
Day 4	High	GLW4.85	2/9/2017	15:18	26735901.5496	839338.536180	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	High	GLW4.4	2/9/2017	15:44	26736802.1895		Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	High	LW4.1	2/9/2017	16:02	26736833.1567	842708.315530	Did not collect coordinates (Stations Staked). Coordinates from December 2016.
Day 4	High	LW3.85	2/9/2017	15:45	26737236.7156	844062.678307	
Day 4	High	GLW3.78	2/9/2017	16:30	26737445.4478	844427.814387	
Day 4	High	LW3.75	2/9/2017	16:11	26737662.7206	844379.987383	
Day 4	High	LWC3.7 [t/ss]	2/9/2017	16:00	26737562.6181	844536.418173	
Day 4	High	LW3.4	2/9/2017	16:55	26738902.1695	845423.273700	

Notes: ID - Identification

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

Sample ID				
(Append HH:MM-Interval)	Timing	QC Type	Date Sampled	Time
DAY 1		- I		
TEAM 1				
LW3.85-20170206-09:53-0.6	low flow		2/6/2017	9:53
GLW3.78-20170206-10:45-0.42	low flow		2/6/2017	10:45
LW3.75-20170206-10:25-0.83	low flow		2/6/2017	10:25
LWC3.7-20170206-10:16-0.33	low flow		2/6/2017	10:16
LW3.4-20170206-11:10-0.42	low flow		2/6/2017	11:10
LW3.4-20170206-14:46-0.63	mid flow		2/6/2017	14:46
LW3.85-20170206-16:03-0.58	high flow		2/6/2017	16:03
GLW3.78-20170206-16:40-0.96	high flow		2/6/2017	16:40
LW3.75-20170206-16:30-0.67	high flow		2/6/2017	16:30
LWC3.7-20170206-16:20-0.58	high flow		2/6/2017	16:20
LW3.4-20170206-17:01-0.7	high flow		2/6/2017	17:01
LW3.4-20170206-17:01-0.7-FD	high flow	FD	2/6/2017	17:01
LW3.85-20170206-1300-FB	9	FB	2/6/2017	
LW3.85-201702061300-EB		EB	2/6/2017	
TEAM 2		1 - LD	2/0/2011	
GLW4.85-20170206-10:22-0.6	low flow		2/6/2017	10:22
GLW4.4-20170206-11:04-1.1	low flow		2/6/2017	11:04
LW4.1-20170206-11:20-0.3	low flow		2/6/2017	11:20
GLW4.4-20170206-14:15-1.2	mid flow	+	2/6/2017	14:15
GLW4.85-20170206-15:58-0.6	high flow		2/6/2017	15:58
GLW4.4-20170206-16:19-1.3	high flow		1 1 1	16:19
LW4.1-20170206-16:42-0.6	high flow		2/6/2017	16:42
GLW4.1-20170206-16.42-0.6	nigh now	FB	2/6/2017	10.42
GLW4.4-20170206-14:55-FB		EB	2/6/2017	
		ED	2/6/2017	
TEAM 3 LW5.3-20170206-10:00-1.2	low flow shallow	1	0/0/0047	10:00
LW5.3-20170206-10.00-1.2	low flow deep		2/6/2017	
LW4.95-20170206-10.35-2.35	low flow		2/6/2017	10:35 11:30
GLW4.9-20170206-11:30-1:1	low flow		2/6/2017	11:15
			2/6/2017	
LW4.95-20170206-13:20-1.08	mid flow		2/6/2017	13:20
LW5.3-20170206-16:00-1.2	high flow shallow		2/6/2017	16:00
LW5.3-20170206-16:10-2.3	high flow deep		2/6/2017	16:10
LW4.95-20170206-15:15-1.1	high flow		2/6/2017	15:15
GLW4.9-20170206-15:00-1.5	high flow		2/6/2017	15:00
LW5.3-20170206-14:26-FB		FB	2/6/2017	
LW5.3-20170206-14:24-EB		EB w/pump	2/6/2017	
TEAM 4				
LWC6.1_1-20170206-09:45-0.58	low flow		2/6/2017	9:45
LWC6.1_2-20170206-10:00-0.8	low flow		2/6/2017	10:00
GLWC6.1_3-20170206-10:07-1.0	low flow		2/6/2017	10:07
GLWC6.1_4-20170206-10:35-1.1	low flow		2/6/2017	10:35
LW5.9-20170206-11:08-0.5	low flow		2/6/2017	11:08
LWC6.1_1-20170206-14:43-0.8	high flow		2/6/2017	14:43
LWC6.1_2-20170206-15:55-0.6	high flow		2/6/2017	15:55
GLWC6.1_3-20170206-15:00-0.9	high flow		2/6/2017	15:00
GLWC6.1_4-20170206-15:45-1.3	high flow		2/6/2017	15:45
GLWC6.1_4-20170206-15:45-1.3-FD	high flow	FD	2/6/2017	15:45
LW5.9-20170206-15:18-0.6	high flow		2/6/2017	15:18
LW5.9-20170206-14:23-EB		EB	2/6/2017	14:23

	Henderson, Nevada			
Sample ID (Append HH:MM-Interval)	Timing	QC Type	Date Sampled	Time
TEAM 5			<u> </u>	
LW7.2-20170206-09:45-0.8	low flow		2/6/2017	9:45
LW6.7-20170206-10:15-0.4	low flow		2/6/2017	10:15
LW6.05-20170206-11:20-0.6	low flow		2/6/2017	11:20
LW7.2-20170206-12:10-0.8	mid flow		2/6/2017	12:10
LW6.05-20170206-12:36-0.7	mid flow		2/6/2017	12:36
LW7.2-20170206-14:30-1.0	high flow		2/6/2017	14:30
LW7.2-20170206-14:30-1.0-FD	high flow	FD	2/6/2017	14:30
LW6.7-20170206-15:00-0.6	high flow		2/6/2017	15:00
LW6.05-20170206-15:26-0.7	high flow		2/6/2017	15:26
LW7.2-20170206-15:50-EB	3	EB	2/6/2017	15:50
DAY 2				
TEAM 1				
LW3.85-20170207-10:12-0.5	low flow		2/7/2017	10:12
GLW3.78-20170207-09:35-0.7	low flow		2/7/2017	9:35
LW3.75-20170207-10:45-0.9	low flow	1	2/7/2017	10:45
LWC3.7-20170207-10:32-0.4	low flow		2/7/2017	10:32
LW3.4-20170207-11:11-0.5-MS	low flow	MS	2/7/2017	11:11
LW3.4-20170207-11:11-0.5-MSD	low flow	MSD	2/7/2017	11:11
LW3.4-20170207-11:11-0.5	low flow	IVIOD	2/7/2017	11:11
LW3.4-20170207-11:11-0.5	mid flow		2/7/2017	14:35
LW3.85-20170207-14.33-0.6	high flow	+	2/7/2017	15:50
LW3.85-20170207-15.50-0.6 LW3.85-20170207-15:50-0.6-FD	high flow	FD	2/7/2017	15:50
GLW3.78-20170207-15.50-0.6-FD		FD	2/7/2017	16:35
	high flow		+ +	
LW3.75-20170207-16:25-1.0	high flow		2/7/2017	16:25
LWC3.7-20170207-16:10-0.6	high flow high flow	-	2/7/2017	16:10
LW3.4-20170207-17:00-0.7	riigii iiow		2/7/2017	17:00
TEAM 2 GLW4.85-20170207-09:42-0.7	low flow	1	0/7/0047	9:42
GLW4.4-20170207-09.42-0.7	low flow		2/7/2017	10:18
LW4.1-20170207-10:16-1.1		140	2/7/2017	
	low flow	MS	2/7/2017	10:39
LW4.1-20170207-10:39-0.3-MSD	low flow	MSD	2/7/2017	10:39
LW4.1-20170207-10:39-0.3	low flow		2/7/2017	10:39
GLW4.4-20170207-14:11-1.3	mid flow		2/7/2017	14:11
GLW4.4-20170207-14:11-1.3-FD	mid flow	FD	2/7/2017	14:11
GLW4.85-20170207-15:42-0.8	high flow	<u> </u>	2/7/2017	15:42
GLW4.85-20170207-15:42-0.8-FD	high flow	FD	2/7/2017	15:42
GLW4.4-20170207-16:06-1.2	high flow		2/7/2017	16:06
LW4.1-20170207-16:20-0.4	high flow		2/7/2017	16:20
TEAM 3				
LW5.3-20170207-09:45-1.0	low flow shallow		2/7/2017	9:45
LW5.3-20170207-09:50-2.0	low flow deep		2/7/2017	9:50
LW4.95-20170207-10:45-1.0	low flow		2/7/2017	10:45
GLW4.9-20170207-10:55-1.2-MS	low flow	MS	2/7/2017	10:55
GLW4.9-20170207-10:55-1.2-MSD	low flow	MSD	2/7/2017	10:55
GLW4.9-20170207-10:55-1.2	low flow		2/7/2017	10:55
LW4.95-20170207-13:25-1.2	mid flow		2/7/2017	13:25
LW5.3-20170207-15:45-1.2	high flow shallow		2/7/2017	15:45
LW5.3-20170207-15:50-2.4	high flow deep		2/7/2017	15:50
LW4.95-20170207-16:30-1.2	high flow		2/7/2017	16:30
LW4.95-20170207-16:30-1.2-FD	high flow	FD	2/7/2017	16:30
GLW4.9-20170207-16:45-1.4	high flow		2/7/2017	16:45

	Heriderson, Nevada			
Sample ID (Append HH:MM-Interval)	Timing	QC Type	Date Sampled	Time
TEAM 4	_	•		
LWC6.1_1-20170207-09:03-0.9	low flow		2/7/2017	9:09
LWC6.1_2-20170207-09:20-0.7	low flow		2/7/2017	9:20
GLWC6.1_3-20170207-09:30-1.0	low flow		2/7/2017	9:30
GLWC6.1_4-20170207-10:35-1.3	low flow		2/7/2017	10:35
LW5.9-20170207-10:00-0.4-MS	low flow	MS	2/7/2017	10:00
LW5.9-20170207-10:00-0.4-MSD	low flow	MSD	2/7/2017	10:00
LW5.9-20170207-10:00-0.4	low flow		2/7/2017	10:00
LWC6.1_1-20170207-14:45-0.8	high flow		2/7/2017	14:45
LWC6.1_2-20170207-14:58-0.7	high flow		2/7/2017	14:58
GLWC6.1_3-20170207-15:06-0.9	high flow		2/7/2017	15:06
GLWC6.1_3-20170207-15:06-0.9-FD	high flow	FD	2/7/2017	15:06
GLWC6.1_4-20170207-16:10-1.3	high flow		2/7/2017	16:10
LW5.9-20170207-15:27-0.6	high flow		2/7/2017	15:27
TEAM 5	19	1	2/1/2017	.0.2.
LW7.2-20170207-08:55-0.7	low flow		2/7/2017	8:55
LW6.7-20170207-00:33-0.4	low flow		2/7/2017	9:13
LW6.05-20170207-09:13-0.4	low flow	MS	2/7/2017	9:30
	low flow	MSD	+	
LW6.05-20170207-09:30-0.6-MSD	low flow	IVISD	2/7/2017 2/7/2017	9:30 9:30
LW6.05-20170207-09:30-0.6				
LW7.2-20170207-10:55-0.8	mid flow		2/7/2017	10:55
LW6.05-20170207-11:20-0.6	mid flow		2/7/2017	11:20
LW7.2-20170207-14:02-0.9	high flow		2/7/2017	14:02
LW6.7-20170207-14:25-0.6	high flow		2/7/2017	14:25
LW6.7-20170207-14:25-0.6-FD	high flow	FD	2/7/2017	14:25
LW6.05-20170207-14:48-0.7	high flow		2/7/2017	14:48
DAY 3 TEAM 1				
LW3.85-20170208-09:27-0.5	low flow		2/8/2017	9:27
	+	FD	+ +	
LW3.85-20170208-09:27-0.5-FD	low flow	FD	2/8/2017	9:27
GLW3.78-20170208-10:10-0.58	low flow		2/8/2017	10:10
LW3.75-20170208-09:57-0.8	low flow		2/8/2017	9:57
LWC3.7-20170208-09:48-0.5	low flow		2/8/2017	9:48
LW3.4-20170208-10:55-FB	low flow	FB	2/8/2017	10:55
LW3.4-20170208-10:30-0.5	low flow		2/8/2017	10:30
LW3.4-20170208-14:18-0.6	mid flow		2/8/2017	14:18
LW3.85-20170208-16:05-0.5	high flow		2/8/2017	16:05
GLW3.78-20170208-16:42-1.4	high flow		2/8/2017	16:42
LW3.75-20170208-16:30-1.0	high flow		2/8/2017	16:30
LWC3.7-20170208-16:20-0.5	high flow		2/8/2017	16:20
LW3.4-20170208-17:05-0.6	high flow		2/8/2017	17:05
TEAM 2	-			
GLW4.85-20170208-09:45-0.6	low flow		2/8/2017	9:45
GLW4.4-20170208-11:02-EB	low flow	EB	2/8/2017	11:02
GLW4.4-20170208-10:07-1.1	low flow		2/8/2017	10:07
LW4.1-20170208-11:12-FB	low flow	FB	2/8/2017	11:12
LW4.1-20170208-10:22-0.4	low flow		2/8/2017	10:22
LW4.1-20170208-10:22-0.4-FD	low flow	FD	2/8/2017	10:22
GLW4.4-20170208-13:47-1.2	mid flow		2/8/2017	13:47
GLW4.85-20170208-16:00-0.8	high flow		2/8/2017	16:00
GLW4.4-20170208-16:21-1.3	high flow		2/8/2017	16:21
LW4.1-20170208-16:33-0.4	high flow		2/8/2017	16:33

Henderson, Nevada								
Sample ID (Append HH:MM-Interval)	Timing	QC Type	Date Sampled	Time				
TEAM 3	'		1					
LW5.3-20170208-10:00-1.0	low flow shallow		2/8/2017	10:00				
LW5.3-20170208-10:03-2.0	low flow deep		2/8/2017	10:03				
LW4.95-20170208-11:06-EB	low flow	EB	2/8/2017	11:06				
LW4.95-20170208-10:30-1.1	low flow		2/8/2017	10:30				
GLW4.9-20170208-11:09-FB	low flow	FB	2/8/2017	11:00				
GLW4.9-20170208-10:50-1.2	low flow		2/8/2017	10:50				
LW4.95-20170208-13:05-1.2	mid flow		2/8/2017	13:05				
LW5.3-20170208-15:45-1.2	high flow shallow		2/8/2017	15:45				
LW5.3-20170208-15:50-2.4	high flow deep		2/8/2017	15:50				
LW4.95-20170208-16:20-1.3	high flow		2/8/2017	16:20				
GLW4.9-20170208-16:35-1.4	high flow		2/8/2017	16:35				
GLW4.9-20170208-16:35-1.4-FD	high flow	FD	2/8/2017	16:35				
TEAM 4		I .						
LWC6.1_1-20170208-11:40-EB	low flow	EB	2/8/2017	11:40				
LWC6.1_1-20170208-09:45-0.9	low flow		2/8/2017	9:45				
LWC6.1_2-20170208-10:00-0.6	low flow		2/8/2017	10:00				
GLWC6.1_3-20170208-10:05-1.2	low flow		2/8/2017	10:05				
GLWC6.1 4-20170208-10:35-1.3	low flow		2/8/2017	10:35				
GLWC6.1 4-20170208-10:35-1.3-FD	low flow	FD	2/8/2017	10:35				
LW5.9-20170208-11:45-FB	low flow	FB	2/8/2017	11:45				
LW5.9-20170208-10:35-0.4	low flow		2/8/2017	10:35				
LWC6.1_1-20170208-14:43-0.7	high flow		2/8/2017	14:43				
LWC6.1 2-20170208-14:53-0.7	high flow		2/8/2017	14:53				
GLWC6.1_3-20170208-15:00-1.0	high flow		2/8/2017	15:00				
GLWC6.1_4-20170208-16:07-1.0	high flow		2/8/2017	16:07				
LW5.9-20170208-15:41-0.6	high flow		2/8/2017	15:41				
TEAM 5	<u> </u>							
LW7.2-20170208-08:45-0.7	low flow		2/8/2017	8:45				
LW6.7-20170208-10:35-EB	low flow	EB	2/8/2017	10:35				
LW6.7-20170208-09:03-0.3	low flow		2/8/2017	9:03				
LW6.05-20170208-10:30-FB	low flow	FB	2/8/2017	10:30				
LW6.05-20170208-09:35-0.5	low flow	1.5	2/8/2017	9:35				
LW7.2-20170208-11:07-0.8	mid flow		2/8/2017	11:07				
LW6.05-20170208-12:35-0.8	mid flow		2/8/2017	12:35				
LW6.05-20170208-12:35-0.8-FD	mid flow	FD	2/8/2017	12:35				
LW7.2-20170208-14:40-0.9	high flow	1.5	2/8/2017	14:40				
LW6.7-20170208-15:02-0.6	high flow		2/8/2017	15:02				
LW6.05-20170208-15:36-0.7	high flow		2/8/2017	15:36				
DAY 4	Tilgit ilow	<u> </u>	2/0/2017	15.50				
TEAM 1								
LW3.85-20170209-10:30-0.5	low flow		2/9/2017	10:30				
	low flow	1	1					
GLW3.78-20170209-11:28-0.3	low flow	+	2/9/2017	11:28 10:58				
LW3.75-20170209-10:58-0.5 LWC3.7-20170209-10:48-0.4	low flow		2/9/2017 2/9/2017	10:58				
	low flow		+	12:00				
LW3.4-20170209-12:00-0.5		+	2/9/2017					
LW3.4-20170209-13:33-0.5	mid flow	ED	2/9/2017	13:33				
LW3.4-20170209-13:33-0.5-FD	mid flow	FD	2/9/2017	13:33				
LW3.85-20170209-15:45-0.6	high flow		2/9/2017	15:45				
GLW3.78-20170209-16:30-1.4	high flow		2/9/2017	16:30				
LW3.75-20170209-16:11-0.8	high flow		2/9/2017	16:11				
LWC3.7-20170209-16:00-0.6	high flow		2/9/2017	16:00				
LW3.4-20170209-16:55-0.6	high flow	1	2/9/2017	16:55				

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Table 12 Samples Collected: Discrete Sampling

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Sample ID (Append HH:MM-Interval)	Timing	QC Type	Date Sampled	Time				
TEAM 2								
GLW4.85-20170209-09:58-0.7	low flow		2/9/2017	9:58				
GLW4.4-20170209-10:22-1.1	low flow		2/9/2017	10:22				
LW4.1-20170209-10:38-0.3	low flow		2/9/2017	10:38				
GLW4.4-20170209-13:11-1.2	mid flow		2/9/2017	13:11				
GLW4.4-20170209-13:11-1.2-MS	mid flow	MS	2/9/2017	13:11				
GLW4.4-20170209-13:11-1.2-MSD	mid flow	MSD	2/9/2017	13:11				
GLW4.85-20170209-15:18-0.8	high flow		2/9/2017	15:18				
GLW4.4-20170209-15:44-1.3	high flow		2/9/2017	15:44				
LW4.1-20170209-16:02-0.4	high flow		2/9/2017	16:02				
LW4.1-20170209-16:02-0.4-FD	high flow	FD	2/9/2017	16:02				
TEAM 3			1					
LW5.3-20170209-10:00-1.0	low flow shallow		2/9/2017	10:00				
LW5.3-20170209-10:03-2.0	low flow deep		2/9/2017	10:03				
LW4.95-20170209-10:35-1.0	low flow	1	2/9/2017	10:35				
LW4.95-20170209-10:35-1.0-FD	low flow	FD	2/9/2017	10:35				
GLW4.9-20170209-10:50-1.2	low flow		2/9/2017	10:50				
LW4.95-20170209-12:30-1.1	mid flow		2/9/2017	12:30				
LW4.95-20170209-12:30-1.1-MS	mid flow	MS	2/9/2017	12:30				
LW4.95-20170209-12:30-1.1-MSD	mid flow	MSD	2/9/2017	12:30				
LW5.3-20170209-15:15-1.1	high flow shallow	62	2/9/2017	15:15				
LW5.3-20170209-15:18-1.2	high flow deep		2/9/2017	15:18				
LW4.95-20170209-15:40-1.2	high flow		2/9/2017	15:40				
GLW4.9-20170209-15:53-1.4	high flow		2/9/2017	15:53				
TEAM 4			+					
LWC6.1_1-20170209-09:10-1.0	low flow		2/9/2017	9:10				
LWC6.1_2-20170209-09:25-0.6	low flow		2/9/2017	9:25				
GLWC6.1_3-20170209-09:32-1.2	low flow		2/9/2017	9:32				
GLWC6.1_4-20170209-10:33-1.3	low flow		2/9/2017	10:33				
GLWC6.1_4-20170209-10:33-1.3-MS	low flow	MS	2/9/2017	10:33				
GLWC6.1_4-20170209-10:33-1.3-MSD	low flow	MSD	2/9/2017	10:33				
LW5.9-20170209-10:01-0.4	low flow		2/9/2017	10:01				
LWC6.1_1-20170209-14:39-1.1	high flow		2/9/2017	14:39				
LWC6.1_1-20170209-14:39-1.1-FD	high flow	FD	2/9/2017	14:39				
LWC6.1_2-20170209-14:52-0.8	high flow		2/9/2017	14:52				
GLWC6.1_3-20170209-14:57-1.1	high flow		2/9/2017	14:57				
GLWC6.1_4-20170209-15:51-1.6	high flow		2/9/2017	15:51				
LW5.9-20170209-15:27-0.7	high flow		2/9/2017	15:27				
TEAM 5	•	•	•					
LW7.2-20170209-08:56-0.7	low flow		2/9/2017	8:56				
LW6.7-20170209-09:11-0.3	low flow		2/9/2017	9:11				
LW6.05-20170209-09:31-0.5	low flow		2/9/2017	9:31				
LW6.05-20170209-10:40-FB	low flow	FB	2/9/2017	10:40				
LW7.2-20170209-10:52-0.8	mid flow		2/9/2017	10:52				
LW7.2-20170209-10:52-0.8-MS	mid flow	MS	2/9/2017	10:52				
LW7.2-20170209-10:52-0.8-MSD	mid flow	MSD	2/9/2017	10:52				
LW6.05-20170209-12:00-0.6	mid flow		2/9/2017	12:00				
LW7.2-20170209-14:41-0.9	high flow		2/9/2017	14:41				
LW7.2-20170209-14:41-0.9-FD	high flow	FD	2/9/2017	14:41				
LW6.7-20170209-15:04-0.6	high flow		2/9/2017	15:04				
LW6.05-20170209-15:23-0.7	high flow		2/9/2017	15:23				

Notes:

FD - field duplicate

FB - field blank

EB - equipment blank

MS - matrix spike

MSD - matrix spike duplicate

QC - quality control

Sample ID comprised of "Location"-"YYYYMMDD"-"Depth"-"QC type if applicable"

YYMMDD - YearMonthDay (example 20170209 is February 9, 2017)

Table 13 Analytical Program for Surface Water Samples

NERT Remedial Investigation, Downgradient Study Area, Henderson, Nevada

Analytes	Matrix	Analytical Method	Analytical Laboratory
Perchlorate	Water	EPA Method 314.0 ⁽¹⁾	TestAmerica (Irvine, CA)
Chlorate	Water	EPA Method 300.1	TestAmerica (Irvine, CA)
Chloride (2)	Water	EPA Method 300.0	TestAmerica (Irvine, CA)
Bromide (2)	Water	EPA Method 300.0	TestAmerica (Irvine, CA)
Total Dissolved Solids	Water	SM 2540C	TestAmerica (Irvine, CA)

Notes:

EPA = United States Environmental Protection Agency

SM = Standard Method

MDL = Method Detection Limit

All groundwater and surface water samples will be analyzed for the constituents listed above.

- 1) For this NERT RI Downgradient Study Area, field-filtering of surface water samples for perchlorate analysis is not required (NDEP 2015).
- 2) Although included in the analytical suite, consideration was given to removal of chloride and bromide from the sampling suite. The chloride and bromide results from the May 2016 grab sampling event did not provide usable information pertaining to potential groundwater discharge to the LVW.

Sources:

NDEP. 2015. Email from James Dotchkin, Chief Bureau of Industrial Site Cleanup, Nevada Division of Environmental Protection, re: Sterile Filtration Not Required for NERT Regional Groundwater RI Perchlorate Samples, November 18.

Table 14 Analytical Results: Sampling Event during USGS Seepage Study

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Location	Sample ID	Sample Date	Sample Time	Bromide (mg/L)	Chlorate (µg/L)	Chloride (mg/L)	Perchlorate (μg/L)	Total Dissolved Solids (mg/L)
LW7.2	LW7.2-20161208-1.0	12/8/2016	15:45	1.0	230	200	ND (<0.95)	1200
LW6.7	LW6.7-20161208-0.5	12/8/2016	15:10	2.0	64	240	ND (<0.95)	1400
LW6.05	LW6.05-20161208-0.5	12/8/2016	13:50	1.0	47	230	6.2 J	1400
GLWC6.1_3 [t/ss]	GLWC6.1_3-20161208-0.5	12/8/2016	12:20	0.32 J	120	200	1.7 J	1000
GLWC6.1_4 [t/ss]	GLWC6.1_4-20161208-0.5	12/8/2016	13:25	0.64 J	110	350	1.5 J	1500
LWC6.1_2 [t/ss]	LW6.1_2-20161208-0.5	12/8/2016	12:10	0.31 J	20	84	ND (<0.95)	620
LWC6.1_1 [t/ss]	LWC6.1_1-20161208-0.5	12/8/2016	11:48	1.2	160	230	ND (<0.95)	1200
LW5.9	LW5.9-20161208-0.5	12/8/2016	10:25	0.74	57	250	9.8	1400
LW5.3	LW5.3-20161208-1.0	12/8/2016	9:29	0.56 J	53	250	15 J	1400
LW5.3	LW5.3-20161208-2.5	12/8/2016	9:34	0.59 J	55	250	12 J	1400
LW4.95	LW4.95-20161208-0.7	12/8/2016	14:02	0.57	69	250	9.4	1400
GLW4.9	GLW4.9-20161208-1.1	12/8/2016	14:20	2.0	83	250	14	1400
GLW4.85	GLW4.85-20161208-0.8	12/8/2016	14:50	1.8	980	290	270	1600
GLW4.4	GLW4.4-20161208-1.1	12/8/2016	12:10	1.6	86	250	23	1400
LW4.1	LW4.1-20161208-0.2	12/8/2016	11:32	0.51	500	250	47 J	1400
LW3.85	LW3.85-20161208-0.3	12/8/2016	10:40	0.50	100	250	24 J	1400
LW3.85	LW3.85-20161208-0.3-FD	12/8/2016	10:40	0.54 J	96	250	25 J	1400
GLW3.78	GLW3.78-20161208-0.1	12/8/2016	10:12	0.79	190	250	41	1400
LW3.75	LW3.75-20161208-0.3	12/8/2016	9:12	0.79	92	250	20	1300
LWC3.7 [t/ss]	LWC3.7-20161208-0.6	12/8/2016	9:30	2.4 J	4300	490	1600	3300
LWC3.7 [t/ss]	LWC3.7-20161208-0.6-FD	12/8/2016	9:30	2.9	4300	490	1600	3200
LW3.4	LW3.4-20161208-0.5	12/8/2016	8:23	0.46 J	130	250	33 J	1400

ND - Not Detected above associated method detection limit

J - Estimated concentration between method detection limit and method reporting limit

μg/L - Micrograms per liter

mg/L - Milligrams per liter

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

ID - identification

Table 15 Analytical Results: Transect Sampling

Location	Sample ID	Sample Date	Sample Time	Bromide (mg/L)	Chlorate (µg/L)	Chloride (mg/L)	Perchlorate (µg/L)	Total Dissolved Solids (mg/L)
	·							
Transect T6.8								
T6.8_A	T6.8A-20170203-1.0	2/3/2017	9:13	1.3	51	250	ND (<0.95)	1500
T6.8_B	T6.8B-20170203-1.3	2/3/2017	9:25	1.6	59	270	ND (<0.95)	1700
T6.8_C	T6.8C-20170203-0.4	2/3/2017	9:32	1.8	73	290	1.6 J	1900
T6.8_D	T6.8D-20170203-0.9	2/3/2017	9:41	0.64	52	230	ND (<0.95)	1300
T6.8_E	T6.8E-20170203-0.7	2/3/2017	9:50	0.77	48	240	ND (<0.95)	1200
Transect T6.35								
T6.35_A	T6.35A-20170203-1.5	2/3/2017	09:32	0.31 J	55	260	18	1500
T6.35_B	T6.35B-20170203-1.0	2/3/2017	9:55	0.57	53	270	17	1600
T6.35_B	T6.35B-20170203-3.0	2/3/2017	9:44	0.32 J	56	270	18	1500
T6.35_C	T6.35C-20170203-1.0	2/3/2017	9:19	ND (<0.25)	57	270	18	1600
Transect T6								
T6_A	T6A-20170202-0.9	2/2/2017	9:00	ND (<0.50)	49	290	16	1500
T6_B	T6B-20170202-1.7	2/2/2017	9:05	ND (<0.50)	49	290	16	1500
T6_C	T6C-20170202-1.7	2/2/2017	9:13	ND (<0.50)	50	280	16	1500
T6_D	T6D-20170202-0.4	2/2/2017	9:18	ND (<0.50)	50	280	15	1500
Transect T5.3								
T5.3_A	T5.3A-20170202-1.4	2/2/2017	9:32	0.30 J	140	300	32	1500
T5.3_A	T5.3A-20170202-2.8	2/2/2017	9:37	ND (<0.50)	130	290	33	1500
T5.3_B	T5.3B-20170202-2.0	2/2/2017	10:13	ND (<0.50)	54	290	18	1500
T5.3_B	T5.3B-20170202-2.0-FD	2/2/2017	10:13	ND (<0.50)	55	290	18	1500
T5.3_C	T5.3C-2010202-1.2	2/2/2017	9:59	ND (<0.50)	51	290	17	1500
Transect T4.75							•	•
T4.75_A	T4.75A-20170201-1.3	2/1/2017	10:04	0.69 J	3100	360	820 J	2200
T4.75_A	T4.75A-20170201-1.3-FD	2/1/2017	10:04	0.71 J	3100	360	830 J	2200
T4.75_B	T4.75B-20170201-0.9	2/1/2017	10:13	0.59	94	260	23 J	1600
T4.75_C	T4.75C-20170201-2.2	2/1/2017	10:23	0.57	83	270	22 J	1600
T4.75_D	T4.75D-2017-201-1.5	2/1/2017	10:35	ND (<0.50)	35 J	350	420 J	2100
Transect T4.65	•	•					•	•
T4.65_A	T4.65A-20170131-0.7	1/31/2017	10:40	1.4	250	280	57 J	1500
T4.65_B	T4.65B-20170131-0.9	1/31/2017	10:50	1.8	210	260	51	1500
T4.65_B	T4.65B-20170131-0.9-FD	1/31/2017	10:50	1.7	210	270	51	1500
T4.65_C	T4.65C-20170131-1.3	1/31/2017	10:58	0.74 J	100	260	31	1500
T4.65_D	T4.65D-20170131-0.6	1/31/2017	11:06	1.7	78	260	30	1500
Transect T4.6	•			•	•	•	•	•
T4.6_A	T4.6A-20170131-0.3	1/31/2017	10:40	1.7	260	280	64 J	1600
T4.6_B	T4.6B-20170131-0.6	1/31/2017	10:47	1.6	210	280	57 J	1600
T4.6_B	T4.6B-20170131-0.6-FD	1/31/2017	10:47	1.6	220	280	56 J	1600
T4.6_C	T4.6C-20170131-0.8	1/31/2017	10:56	ND (<0.25)	100	280	30 J	1500
T4.6_D	T4.6D-20170131-0.8	1/31/2017	11:13	1.6	83	280	32 J	1500

Table 15 Analytical Results: Transect Sampling

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Location	Sample ID	Sample Date	Sample Time	Bromide (mg/L)	Chlorate (µg/L)	Chloride (mg/L)	Perchlorate (µg/L)	Total Dissolved Solids (mg/L)
Transect T4.2		•				, <u>v</u>		
T4.2_A	T4.2A-20170201-0.4	2/1/2017	09:55	0.60	260	260	66	1400
T4.2_B	T4.2B-20170201-1.0	2/1/2017	10:19	0.67 J	170	260	40	1400
T4.2_B	T4.2B-20170201-1.0-FD	2/1/2017	10:19	0.60	170	260	40	1400
T4.2_C	T4.2C-20170201-0.8	2/1/2017	10:35	0.58	88	260	27	1400
T4.2_D	T4.2D-20170201-1.0	2/1/2017	10:47	0.58	78	270	25	1400
Transect T3.8								
T3.8_A	T3.8A-20170130-0.4	1/30/2017	11:30	0.60 J	270	260	57 J	1400
T3.8_B	T3.8B-20170130-0.4	1/30/2017	11:37	0.59 J	210	260	45 J	1400
T3.8_C	T3.8C-20170130-0.4	1/30/2017	11:46	0.53 J	110	250	32 J	1400
T3.8_C	T3.8C-20170130-0.4-FD	1/30/2017	11:46	0.90 J	110	250	32 J	1400
T3.8_D	T3.8D-20170130-0.4	1/30/2017	11:55	ND (<0.50)	130	250	46 J	1500
Transect T3.75								
T3.75_A	T3.75A-20170130-0.9	1/30/2017	11:48	0.34 J	270	280	63 J	1400
T3.75_B	T3.75B-20170130-0.7	1/30/2017	11:53	0.33 J	210	280	51 J	1400
T3.75_C	T3.75C-20170130-0.6	1/30/2017	12:00	0.34 J	110	280	31	1400
T3.75_D	T3.75D-20170130-0.4	1/30/2017	12:09	ND (<0.50)	260	280	85	1500
Transect T3.5								
T3.5_A	T3.5A-20170202-0.2	2/2/2017	11:08	1.1	310	420	73	2700
T3.5_B	T3.5B-20170202-0.5	2/2/2017	11:13	0.64 J	430	280	140	1500
T3.5_B	T3.5B-20170202-0.5-FD	2/2/2017	11:13	ND (<0.50)	440	270	140	1500
T3.5_C	T3.5C-20170202-0.6	2/2/2017	11:22	ND (<0.50)	420	270	98	1600
T3.5_D	T3.5D-20170202-1.4	2/2/2017	12:00	ND (<0.50)	270	260	66	1500
T3.5_E	T3.5E-20170202-1.5	2/2/2017	12:07	ND (<0.50)	190	260	47	1500
T3.5_F	T3.5F-20170202-1.5	2/2/2017	12:34	0.84 J	140	260	38	1500
T3.5_F	T3.5F-20170202-4.0	2/2/2017	12:25	0.70	130	250	37	1500

ND - Not Detected above associated method detection limit

J - Estimated concentration between method detection limit and method reporting limit

μg/L - Micrograms per liter

mg/L - Milligrams per liter

ID - identification

1	0	Sample	Sample	Bromide	Chlorate	Chloride	Perchlorate	Total Dissolved
Location	Sample ID	Date	Time	(mg/L)	(µg/L)	(mg/L)	(µg/L)	Solids (mg/L)
Day 1								
Low Flow								
LW7.2	LW7.2-20170206-09:45-0.8	2/6/2017	9:45	ND (<0.25)	51	240	ND (<0.95)	1300
LW6.7	LW6.7-20170206-10:15-0.4	2/6/2017	10:15	0.30 J	53	250	ND (<0.95)	1400
LW6.05	LW6.05-20170206-11:20-0.6	2/6/2017	11:20	0.26 J	57	270	18	1400
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170206-10:07-1.0	2/6/2017	10:07	ND (<0.50)	100	230	ND (<0.95)	1000
GLWC6.1_4 [t/ss]	GLWC6.1_4-20170206-10:35-1.1	2/6/2017	10:35	ND (<0.50)	96	340	ND (<0.95)	1400
LWC6.1_1 [t/ss]	LWC6.1_1-20170206-09:45-0.58	2/6/2017	9:45	ND (<0.50)	98	250	ND (<0.95)	1100
LWC6.1_2 [t/ss]	LWC6.1_2-20170206-10:00-0.8	2/6/2017	10:00	ND (<0.50)	78	120	ND (<0.95)	690
LW5.9	LW5.9-20170206-11:08-0.5	2/6/2017	11:08	ND (<0.50)	71	260	21	1400
LW5.3	LW5.3-20170206-10:00-1.2	2/6/2017	10:00	2.3	56	260	17	1500
LW5.3	LW5.3-20170206-10:35-2.35	2/6/2017	10:35	1.9	56	260	16	1500
LW4.95	LW4.95-20170206-11:30-1.1	2/6/2017	11:30	1.6	79	270	20	1500
GLW4.9	GLW4.9-20170206-11:15-1.45	2/6/2017	11:15	1.7	87	260	23	1500
GLW4.85	GLW4.85-20170206-10:22-0.6	2/6/2017	10:22	0.91 J	4300	390	1100	2200
GLW4.4	GLW4.4-20170206-11:04-1.1	2/6/2017	11:04	0.61	99	250	28	1400
LW4.1	LW4.1-20170206-11:20-0.3	2/6/2017	11:20	0.50	220	260	51	1500
LW3.85	LW3.85-20170206-09:53-0.6	2/6/2017	9:53	1.7	130	260	36	1400
GLW3.78	GLW3.78-20170206-10:45-0.42	2/6/2017	10:45	1.5	220	270	54	1500
LW3.75	LW3.75-20170206-10:25-0.83	2/6/2017	10:25	1.4	110	270	30	1400
LWC3.7 [t/ss]	LWC3.7-20170206-10:16-0.33	2/6/2017	10:16	1.5	1500	330	550	1900
LW3.4	LW3.4-20170206-11:10-0.42	2/6/2017	11:10	1.5	180	270	53	1400
Mid Flow			<u>l</u>			L	1	<u>.</u>
LW7.2	LW7.2-20170206-12:10-0.8	2/6/2017	12:10	0.52	53	220	ND (<0.95)	1200
LW6.05	LW6.05-20170206-12:36-0.7	2/6/2017	12:36	0.46 J	60	240	13	1400
LW4.95	LW4.95-20170206-13:20-1.08	2/6/2017	13:20	0.73	70	240	20	1400
GLW4.4	GLW4.4-20170206-14:15-1.2	2/6/2017	14:15	0.51	93	260	33	1500
LW3.4	LW3.4-20170206-14:46-0.63	2/6/2017	14:46	0.54	160	260	53	1500
High Flow			<u>l</u>			L	1	<u>.</u>
LW7.2	LW7.2-20170206-14:30-1.0	2/6/2017	14:30	0.44 J	43	200	ND (<0.95)	1200
LW7.2	LW7.2-20170206-14:30-1.0-FD	2/6/2017	14:30	0.46 J	44	200	ND (<0.95)	1200
LW6.7	LW6.7-20170206-15:00-0.6	2/6/2017	15:00	0.36 J	44	200	ND (<0.95)	1200
LW6.05	LW6.05-20170206-15:26-0.7	2/6/2017	15:26	0.65	48	210	8.9	1400
GLWC6.1 3 [t/ss]	GLWC6.1 3-20170206-15:00-0.9	2/6/2017	15:00	0.42 J	110	250	1.1 J	1100
GLWC6.1 4 [t/ss]	GLWC6.1 4-20170206-15:45-1.3	2/6/2017	15:45	0.68 J	93	330	1.3 J	1400 J
GLWC6.1 4 [t/ss]	GLWC6.1 4-20170206-15:45-1.3-FD	2/6/2017	15:45	0.67 J	91	330	1.2 J	1400
LWC6.1_1 [t/ss]	LWC6.1_1-20170206-14:43-0.8	2/6/2017	14:43	0.45 J	110	250	ND (<0.95)	1100
LWC6.1 2 [t/ss]	LWC6.1 2-20170206-14:55-0.6	2/6/2017	14:55	0.36 J	91	140	ND (<0.95)	710
LW5.9	LW5.9-20170206-15:18-0.6	2/6/2017	15:18	0.50	54	240	6.7	1300
LW5.3	LW5.3-20170206-16:00-1.2	2/6/2017	16:00	ND (<0.50)	55	250	11	1400
LW5.3	LW5.3-20170206-16:10-2.3	2/6/2017	16:10	ND (<0.50)	61	250	12	1400
LW4.95	LW4.95-20170206-15:15-1.1	2/6/2017	15:15	ND (<0.50)	57	250	13	1500
GLW4.9	GLW4.9-20170206-15:10-1.5	2/6/2017	15:00	ND (<0.50)	71	260	21	1500
GLW4.85	GLW4.85-20170206-15:58-0.6	2/6/2017	15:58	0.75 J	3000	350	750	1900
GLW4.4	GLW4.4-20170206-16:19-1.3	2/6/2017	16:19	0.58	79	250	15	1400

Lasatian	Committee ID	Sample	Sample	Bromide	Chlorate	Chloride	Perchlorate	Total Dissolved
Location	Sample ID	Date	Time	(mg/L)	(µg/L)	(mg/L)	(µg/L)	Solids (mg/L)
LW4.1	LW4.1-20170206-16:42-0.3	2/6/2017	16:42	0.59	180	260	38	1500
LW3.85	LW3.85-20170206-16:03-0.58	2/6/2017	16:03	0.60	100	260	28 J	1500
GLW3.78	GLW3.78-20170206-16:40-0.96	2/6/2017	16:40	0.50	210	270	40	1500
LW3.75	LW3.75-20170206-16:30-0.67	2/6/2017	16:30	0.59	100	260	26 J	1400
LWC3.7 [t/ss]	LWC3.7-20170206-16:20-0.58	2/6/2017	16:20	ND (<1.25)	2500	410	880	2300
LW3.4	LW3.4-20170206-17:01-0.7	2/6/2017	17:01	0.50	130	260	38 J	1500
LW3.4	LW3.4-20170206-17:01-0.7-FD	2/6/2017	17:01	0.48 J	140	260	38 J	1500
Day 2	•	•				•	•	
Low Flow								
LW7.2	LW7.2-20170207-08:55-0.7	2/7/2017	8:55	0.40 J	58	210	ND (<0.95)	1200
LW6.7	LW6.7-20170207-09:13-0.4	2/7/2017	9:13	0.56 J	69	270	ND (<0.95)	1700
LW6.05	LW6.05-20170207-09:30-0.6	2/7/2017	9:30	0.50 J	51	250	18 J	1500
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170207-09:30-1.0	2/7/2017	9:30	ND (<0.25)	100	220	1.5 J	1100
GLWC6.1_4 [t/ss]	GLWC6.1_4-20170207-10:35-1.3	2/7/2017	10:35	ND (<0.50)	100	280	ND (<0.95)	1300
LWC6.1_1 [t/ss]	LWC6.1_1-20170207-09:03-0.9	2/7/2017	9:03	ND (<0.25)	98	270	1.3 J	660
LWC6.1_2 [t/ss]	LWC6.1_2-20170207-09:20-0.7	2/7/2017	9:20	ND (<0.25)	67	140	ND (<0.95)	1100
LW5.9	LW5.9-20170207-10:00-0.4	2/7/2017	10:00	0.26 J	56	300	17 J	1500
LW5.3	LW5.3-20170207-09:45-1.0	2/7/2017	9:45	0.98 J	57	260	19 J	1500
LW5.3	LW5.3-20170207-09:50-2.0	2/7/2017	9:50	1.7	59	260	20 J	1500
LW4.95	LW4.95-20170207-10:45-1.0	2/7/2017	10:45	1.5	79	260	24 J	1500
GLW4.9	GLW4.9-20170207-10:55-1.2	2/7/2017	10:55	1.4	94	270	28 J	1400
GLW4.85	GLW4.85-20170207-09:42-0.7	2/7/2017	9:42	1.0	3000	380	860 J	2100
GLW4.4	GLW4.4-20170207-10:18-1.1	2/7/2017	10:18	1.4	100	270	25 J	1400
LW4.1	LW4.1-20170207-10:39-0.3	2/7/2017	10:39	1.4	230	270	47 J	1500
LW3.85	LW3.85-20170207-10:12-0.5	2/7/2017	10:12	0.57 J	120	270	32 J	1400
GLW3.78	GLW3.78-20170207-09:35-0.7	2/7/2017	9:35	0.48 J	200	260	40	1400
LW3.75	LW3.75-20170207-10:45-0.9	2/7/2017	10:45	0.61 J	120	270	35 J	1400
LWC3.7 [t/ss]	LWC3.7-20170207-10:32-0.4	2/7/2017	10:32	0.72 J	1800	360	670 J	2100
LW3.4	LW3.4-20170207-11:11-0.5	2/7/2017	11:11	0.51 J	180	270	52 J	1400
Mid Flow	2.1.6.1.26.1.626.1.11.1.616	_,,,_0		0.0.0	.00		02.0	
LW7.2	LW7.2-20170207-10:55-0.8	2/7/2017	10:55	1.3	60	220	ND (<0.95)	1300
LW6.05	LW6.05-20170207-11:20-0.6	2/7/2017	11:20	1.5	63	250	17	1600
LW4.95	LW4.95-20170207-13:25-1.2	2/7/2017	13:25	ND (<0.25)	74	240	12	1500
GLW4.4	GLW4.4-20170207-14:11-1.3	2/7/2017	14:11	1.6	97	270	25	1500
GLW4.4	GLW4.4-20170207-14:11-1.3-FD	2/7/2017	14:11	1.2	96	270	25	1500
LW3.4	LW3.4-20170207-14:35-0.6	2/7/2017	14:35	0.62	170	270	42	1500
High Flow	2770.7 2077 0207 7 1.00 0.0	2,172011	1 1.00	0.02	170	2.0	12	1000
LW7.2	LW7.2-20170207-14:02-0.9	2/7/2017	14:02	1.1	44	210	ND (<0.95)	1200
LW6.7	LW6.7-20170207-14:02-0.9	2/7/2017	14:25	1.4	55	240	ND (<0.95)	1400
LW6.7	LW6.7-20170207-14:25-0.6 LW6.7-20170207-14:25-0.6-FD	2/7/2017	14:25	1.4	55	240	ND (<0.95)	1400
LW6.05	LW6.05-20170207-14:23-0.0-1 D	2/7/2017	14:48	1.2	50	250	6.0	1400
GLWC6.1_3 [t/ss]	GLWC6.1 3-20170207-15:06-0.9	2/7/2017	15:06	ND (<0.25)	100	260	ND (<0.95)	1100
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170207-15:06-0.9-FD	2/7/2017	15:06	ND (<0.25)	100	270	ND (<0.95)	1100
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170207-13.00-0.9-1 D	2/7/2017	16:10	0.31 J	92	350	ND (<0.95)	1300
LWC6.1_1 [t/ss]	LWC6.1 1-20170207-16.10-1.3	2/7/2017	14:45	ND (<0.25)	100	280	ND (<0.95)	1100
LVV CO. I_ I [V SS]	LVV CO. 1_1-2017 0207-14.43-0.0	2/1/2017	14.40	ND (<0.23)	100	200	IND (<0.93)	1100

Location	Sample ID	Sample	Sample	Bromide	Chlorate	Chloride	Perchlorate	Total Dissolved
Location	Sample ID	Date	Time	(mg/L)	(µg/L)	(mg/L)	(µg/L)	Solids (mg/L)
LWC6.1_2 [t/ss]	LWC6.1_2-20170207-14:58-0.7	2/7/2017	14:58	ND (<0.25)	47	110	ND (<0.95)	610
LW5.9	LW5.9-20170207-15:27-0.6	2/7/2017	15:27	0.30 J	55	280	10	1400
LW5.3	LW5.3-20170207-15:45-1.2	2/7/2017	15:45	0.25 J	54	280	11	1400
LW5.3	LW5.3-20170207-15:50-2.4	2/7/2017	15:50	0.25 J	52	280	9.6	1400
LW4.95	LW4.95-20170207-16:30-1.2	2/7/2017	16:30	0.26 J	63	270	13	1400
LW4.95	LW4.95-20170207-16:30-1.2-FD	2/7/2017	16:30	ND (<0.25)	59	270	12	1400
GLW4.9	GLW4.9-20170207-16:45-1.4	2/7/2017	16:45	0.32 J	77	280	17	1400
GLW4.85	GLW4.85-20170207-15:42-0.8	2/7/2017	15:42	0.29 J	1200	300	290	1600
GLW4.85	GLW4.85-20170207-15:42-0.8-FD	2/7/2017	15:42	0.32 J	1200	310	310	1600
GLW4.4	GLW4.4-20170207-16:06-1.2	2/7/2017	16:06	0.32 J	80	260	20 J	1400
LW4.1	LW4.1-20170207-16:20-0.4	2/7/2017	16:20	ND (<0.25)	160	280	38 J	1500
LW3.85	LW3.85-20170207-15:50-0.6	2/7/2017	15:50	0.70 J	110	250	31	1500
LW3.85	LW3.85-20170207-15:50-0.6-FD	2/7/2017	15:50	0.50 J	110	250	30	1500
GLW3.78	GLW3.78-20170207-16:35-1.2	2/7/2017	16:35	ND (<0.50)	200	260	48	1500
LW3.75	LW3.75-20170207-16:25-1.0	2/7/2017	16:25	0.55 J	110	250	27	1400
LWC3.7 [t/ss]	LWC3.7-20170207-16:10-0.6	2/7/2017	16:10	ND (<1.25)	2600	370	830	2200
LW3.4	LW3.4-20170207-17:00-0.7	2/7/2017	17:00	ND (<0.50)	140	250	39	1500
Day 3		_,,,_0		112 (10.00)				.000
Low Flow								
LW7.2	LW7.2-20170208-08:45-0.7	2/8/2017	8:45	ND (<0.25)	59	230	ND (<0.95)	1200
LW6.7	LW6.7-20170208-09:03-0.3	2/8/2017	9:03	ND (<0.50)	62	280	ND (<0.95)	1700
LW6.05	LW6.05-20170208-09:35-0.5	2/8/2017	9:35	ND (<0.50)	65	270	18	1500
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170208-10:05-1.2	2/8/2017	10:05	0.26 J	93	210	ND (<0.95)	1100
GLWC6.1 4 [t/ss]	GLWC6.1 4-20170208-10:35-1.3	2/8/2017	10:35	0.46 J	88	220	ND (<0.95)	1200
GLWC6.1_4 [t/ss]	GLWC6.1 4-20170208-10:35-1.3-FD	2/8/2017	10:35	0.25 J	89	230	ND (<0.95)	1100
LWC6.1_1 [t/ss]	LWC6.1_1-20170208-09:45-0.9	2/8/2017	9:45	0.39 J	100	220	ND (<0.95)	1100
LWC6.1_2 [t/ss]	LWC6.1 2-20170208-10:00-0.6	2/8/2017	10:00	ND (<0.25)	64	96	ND (<0.95)	630
LW5.9	LW5.9-20170208-10:35-0.4	2/8/2017	10:35	0.55	70	240	15	1500
LW5.3	LW5.3-20170208-10:00-1.0	2/8/2017	10:00	1.5	73	260	15	1400
LW5.3	LW5.3-20170208-10:03-2.0	2/8/2017	10:03	1.5	81	250	17	1400
LW4.95	LW4.95-20170208-10:30-1.1	2/8/2017	10:30	1.4	83	260	19	1400
GLW4.9	GLW4.9-20170208-10:50-1.1	2/8/2017	10:50	1.6	100	250	22	1400
GLW4.85	GLW4.85-20170208-09:45-0.6	2/8/2017	9:45	ND (<0.50)	1100	310	290	1600
GLW4.4	GLW4.4-20170208-10:07-1.1	2/8/2017	10:07	ND (<0.25)	120	270	27	1400
LW4.1	LW4.1-20170208-10:07-1.1	2/8/2017	10:07	ND (<0.25)	210	270	53	1400
LW4.1	LW4.1-20170208-10:22-0.4-FD	2/8/2017	10:22	ND (<0.50)	220	260	52	1400
LW3.85	LW3.85-20170208-09:27-0.5	2/8/2017	9:27	0.58 J	130	260	34	1400
LW3.85	LW3.85-20170208-09:27-0.5	2/8/2017	9:27	0.52 J	130	260	34	1500
GLW3.78	GLW3.78-20170206-09.27-0.5-FD	2/8/2017	10:10	0.62 J	210	260	52	1400
LW3.75	LW3.75-20170208-10:10-0.5	2/8/2017	9:57	0.62 J 0.56 J	120	260	26	1400
LWC3.7 [t/ss]	LWC3.7-20170208-09:57-0.8	2/8/2017	9:57	0.56 J 0.81 J	2000	340	570	2000
	LW3.4-20170208-09:48-0.5	2/8/2017	10:30	0.81 J 0.60 J	170	260	570	1500
LW3.4	LVV 3.4-20170208-10:30-0.5	2/8/2017	10:30	U.0U J	170	260	50	1500
Mid Flow	II WZ 2 20470200 44.07 0 0	0/0/0047	44.07	0.54	0.0	220	ND (.0.05)	1200
LW7.2	LW7.2-20170208-11:07-0.8	2/8/2017	11:07	0.54	86	220	ND (<0.95)	1300
LW6.05	LW6.05-20170208-12:35-0.8	2/8/2017	12:35	0.56	72	240	11 J	1500

Location	Sample ID	Sample	Sample	Bromide	Chlorate	Chloride	Perchlorate	Total Dissolved
Location	Sample ID	Date	Time	(mg/L)	(µg/L)	(mg/L)	(µg/L)	Solids (mg/L)
LW6.05	LW6.05-20170208-12:35-0.8-FD	2/8/2017	12:35	0.70 J	70	250	8.0 J	1500
LW4.95	LW4.95-20170208-13:05-1.2	2/8/2017	13:05	1.7	81	250	14	1400
GLW4.4	GLW4.4-20170208-13:47-1.2	2/8/2017	13:47	ND (<0.25)	110	260	27	1400
LW3.4	LW3.4-20170208-14:18-0.6	2/8/2017	14:18	1.7	180	260	46	1400
High Flow		•			•		•	
LW7.2	LW7.2-20170208-14:40-0.9	2/8/2017	14:40	ND (<0.25)	49	220	ND (<0.95)	1100
LW6.7	LW6.7-20170208-15:02-0.6	2/8/2017	15:02	0.33 J	55	250	ND (<0.95)	1400
LW6.05	LW6.05-20170208-15:36-0.7	2/8/2017	15:36	0.32 J	55	240	7.7	1400
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170208-15:00-1.0	2/8/2017	15:00	0.45 J	110	240	ND (<0.95)	1100
GLWC6.1_4 [t/ss]	GLWC6.1_4-20170208-16:07-1.0	2/8/2017	16:07	0.54	81	250	ND (<0.95)	1100
LWC6.1_1 [t/ss]	LWC6.1_1-20170208-14:43-0.7	2/8/2017	14:43	0.49 J	90	240	ND (<0.95)	1100
LWC6.1 2 [t/ss]	LWC6.1 2-20170208-14:53-0.7	2/8/2017	14:53	0.32 J	64	110	ND (<0.95)	590
LW5.9	LW5.9-20170208-15:41-0.6	2/8/2017	15:41	0.55	61	240	9.6	1300
LW5.3	LW5.3-20170208-15:45-1.2	2/8/2017	15:45	1.3	60	240	8.9	1400
LW5.3	LW5.3-20170208-15:50-2.4	2/8/2017	15:50	1.4	64	240	9.0	1400
LW4.95	LW4.95-20170208-16:20-1.3	2/8/2017	16:20	1.3	2000	240	11	1300
GLW4.9	GLW4.9-20170208-16:35-1.4	2/8/2017	16:35	1.4 J	84	240	15	1400
GLW4.9	GLW4.9-20170208-16:35-1.4-FD	2/8/2017	16:35	1.0 J	84	240	14	1400
GLW4.85	GLW4.85-20170208-16:00-0.8	2/8/2017	16:00	1.0	940	270	270	1600
GLW4.4	GLW4.4-20170208-16:21-1.3	2/8/2017	16:21	0.56	110	230	17	1400
LW4.1	LW4.1-20170208-16:33-0.4	2/8/2017	16:33	0.54	170	250	ND (<0.95)	1500
LW3.85	LW3.85-20170208-16:05-0.5	2/8/2017	16:05	1.4	130	260	24	1500
GLW3.78	GLW3.78-20170208-16:42-1.4	2/8/2017	16:42	1.5	190	260	46	1500
LW3.75	LW3.75-20170208-16:30-1.0	2/8/2017	16:30	1.5	110	260	23	1500
LWC3.7 [t/ss]	LWC3.7-20170208-16:20-0.5	2/8/2017	16:20	1.6 J	80	360	770	2200
LW3.4	LW3.4-20170208-17:05-0.6	2/8/2017	17:05	1.4	150	260	32	1500
Day 4	EW 9.4 2017 0200 17:00 0.0	2/0/2017	17.00	1.7	100	200	32	1000
Low Flow								
LW7.2	LW7.2-20170209-08:56-0.7	2/9/2017	8:56	1.1	71	230	ND (<0.95)	1300
LW6.7	LW6.7-20170209-09:11-0.3	2/9/2017	9:11	1.7	76	270	ND (<0.95)	1700
LW6.05	LW6.05-20170209-09:31-0.5	2/9/2017	9:31	0.77	69	240	19	1500
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170209-09:32-1.2	2/9/2017	9:32	0.39 J	87	230	ND (<0.95)	1100
GLWC6.1_4 [t/ss]	GLWC6.1_3-20170209-09.32-1.2	2/9/2017	10:33	0.45 J	71	250	ND (<0.95)	1100
LWC6.1 1 [t/ss]	LWC6.1 1-20170209-09:10-1.0	2/9/2017	9:10	0.43 J	88	240	ND (<0.95)	1100
LWC6.1_1 [t/ss]	LWC6.1 2-20170209-09:25-0.6	2/9/2017	9:25	0.41 J	50	100	ND (<0.95)	610
LW5.9	LW5.9-20170209-10:01-0.4	2/9/2017	10:01	0.60 J	74	260	15	1400
LW5.3	LW5.3-20170209-10:01-0.4	2/9/2017	10:00	0.56	67	240	22	1500
LW5.3	LW5.3-20170209-10:00-1:0	2/9/2017	10:00	ND (<0.50)	120	280	30	1400
LW4.95	LW4.95-20170209-10:03-2.0	2/9/2017	10:03	0.65	82	240	24	1400
LW4.95	LW4.95-20170209-10:35-1.0 LW4.95-20170209-10:35-1.0-FD	2/9/2017	10:35	0.65	86	240	23	1400
GLW4.95	GLW4.95-20170209-10:35-1.0-FD	2/9/2017	10:35	0.54	100	240	27	1400
GLW4.9 GLW4.85	GLW4.85-20170209-10:50-1.2	2/9/2017	9:58		1600	340	320	1600
			9:58	ND (<0.50) 0.52		250	26	
GLW4.4	GLW4.4-20170209-10:22-1.1	2/9/2017			120			1400
LW4.1	LW4.1-20170209-10:38-0.3	2/9/2017	10:38	0.28 J	230	290	40 28	1400
LW3.85	LW3.85-20170209-10:30-0.5	2/9/2017	10:30	ND (<0.50)	140	260	∠8	1400

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

Location	Sample ID	Sample	Sample	Bromide	Chlorate	Chloride	Perchlorate	Total Dissolved
Location	Sample ID	Date	Time	(mg/L)	(µg/L)	(mg/L)	(µg/L)	Solids (mg/L)
GLW3.78	GLW3.78-20170209-11:28-0.3	2/9/2017	11:28	ND (<0.50)	230	260	47	1400
LW3.75	LW3.75-20170209-10:58-0.5	2/9/2017	10:58	0.59	140	260	27	1400
LWC3.7 [t/ss]	LWC3.7-20170209-10:48-0.4	2/9/2017	10:48	ND (<0.50)	1800	360	670	2100
LW3.4	LW3.4-20170209-12:00-0.5	2/9/2017	12:00	ND (<0.50)	190	260	42	1400
Mid Flow								
LW7.2	LW7.2-20170209-10:52-0.8	2/9/2017	10:52	0.27 J	69	250	ND (<0.95)	1300
LW6.05	LW6.05-20170209-12:00-0.6	2/9/2017	12:00	0.30 J	74	290	14	1600
LW4.95	LW4.95-20170209-12:30-1.1	2/9/2017	12:30	0.27 J	91	290	22 J	1500
GLW4.4	GLW4.4-20170209-13:11-1.2	2/9/2017	13:11	0.62 J	140	270	31 J	1400
LW3.4	LW3.4-20170209-13:33-0.5	2/9/2017	13:33	ND (<0.50)	200	290	52	1500
LW3.4	LW3.4-20170209-13:33-0.5-FD	2/9/2017	13:33	ND (<0.50)	200	290	57	1500
High Flow								
LW7.2	LW7.2-20170209-14:41-0.9	2/9/2017	14:41	0.35 J	67	200	ND (<0.95)	1200
LW7.2	LW7.2-20170209-14:41-0.9-FD	2/9/2017	14:41	0.33 J	69	200	ND (<0.95)	1200
LW6.7	LW6.7-20170209-15:04-0.6	2/9/2017	15:04	0.71	66	220	ND (<0.95)	1400
LW6.05	LW6.05-20170209-15:23-0.7	2/9/2017	15:23	0.31 J	60	220	6.8	1400
GLWC6.1_3 [t/ss]	GLWC6.1_3-20170209-14:57-1.1	2/9/2017	14:57	ND (<0.25)	76	270	ND (<0.95)	1100
GLWC6.1_4 [t/ss]	GLWC6.1_4-20170209-15:51-1.6	2/9/2017	15:51	0.35 J	72	290	ND (<0.95)	1200
LWC6.1_1 [t/ss]	LWC6.1_1-20170209-14:39-1.1	2/9/2017	14:39	ND (<0.25)	79	280	ND (<0.95)	1200
LWC6.1_1 [t/ss]	LWC6.1_1-20170209-14:39-1.1-FD	2/9/2017	14:39	ND (<0.25)	81	280	ND (<0.95)	1100
LWC6.1_2 [t/ss]	LWC6.1_2-20170209-14:52-0.8	2/9/2017	14:52	ND (<0.25)	51	100	ND (<0.95)	590
LW5.9	LW5.9-20170209-15:27-0.7	2/9/2017	15:27	0.26 J	61	260	6.9	1300
LW5.3	LW5.3-20170209-15:15-1.1	2/9/2017	15:15	0.54	66	230	9.1	1300
LW5.3	LW5.3-20170209-15:18-2.2	2/9/2017	15:18	0.51	69	240	8.8	1400
LW4.95	LW4.95-20170209-15:40-1.2	2/9/2017	15:40	0.54	78	240	10	1400
GLW4.9	GLW4.9-20170209-15:53-1.4	2/9/2017	15:53	0.54	91	230	14	1400
GLW4.85	GLW4.85-20170209-15:18-0.8	2/9/2017	15:18	ND (<0.50)	900	300	180	1600
GLW4.4	GLW4.4-20170209-15:44-1.3	2/9/2017	15:44	ND (<0.50)	110	260	23	1500
LW4.1	LW4.1-20170209-16:02-0.4	2/9/2017	16:02	ND (<0.50)	160	270	36	1500
LW4.1	LW4.1-20170209-16:02-0.4-FD	2/9/2017	16:02	ND (<0.50)	170	260	35	1500
LW3.85	LW3.85-20170209-15:45-0.6	2/9/2017	15:45	ND (<0.50)	130	290	32	1500
GLW3.78	GLW3.78-20170209-16:30-1.4	2/9/2017	16:30	ND (<0.50)	200	370	43	1500
LW3.75	LW3.75-20170209-16:11-0.8	2/9/2017	16:11	ND (<0.50)	130	320	31	1500
LWC3.7 [t/ss]	LWC3.7-20170209-16:00-0.6	2/9/2017	16:00	ND (<1.25)	3100	460	1100	2500
LW3.4	LW3.4-20170209-16:55-0.6	2/9/2017	16:55	0.27 J	160	290	38	1500

ND - Not Detected above associated method detection limit

J - Estimated concentration between method detection limit and method reporting limit

μg/L - Micrograms per liter

mg/L - Milligrams per liter

t/ss - tributary/side stream; added for clarity and not part of actual Location ID

Table 17 Flux Estimates: Transect Sampling
NERT Remedial Investigation, Downgradient Study Area Henderson, Nevada

Transect	Date/Time	Perchlorate Concentration (µg/I) ^[1]	Representative Samples ^[2]	Non-representative Samples (perchlorate µg/L) [3]	Flow (cfs) ^[4]	Perchlorate Load (Flux) (lb/day)
T6.8	2/3/17 9:30	ND (<0.95) ^[5]	A, B, D, E	C(1.6J)	194	<1
T6.35	2/3/17 9:30	18	A,B,C,D	-	188	18
T6	2/2/17 9:15	15	A,B,C,D	-	174	15
T5.3	2/2/17 10:00	18	B,C	A(32 μg/l)	172	17
T4.75	2/1/17 10:15	23	B,C	A(820), D(420)	202	25
T4.65	1/31/17 11:00	31	C,D	A(57),B(51)	210	35
T4.6	1/31/17 11:00	31	C,D	A(64),B(57)	210	35
T4.2	2/1/17 10:30	26	C,D	A(66),B(40)	215	30
T3.8	1/30/17 11:45	32	С	A(57),B(45), D(46)	213	37
T3.75	1/30/17 12:00	31	С	A(63),B(51), D(85)	209	35
T3.5 ^[6]	2/2/17 12:15	43	E,F	A(73),B(140), C(98),D(66)	185	43

Notes:

μg/L - micrograms per liter cfs - cubic feet per second lb/day - pounds per day

ND - Not Detected above associated method detection limit

- J Estimated concentration between method detection limit and method reporting limit
- < less than
- 1) Sample concentration representative of the mixed waters near the center of the channel and is median of representative samples
- 2) Three to seven samples were collected across each transect, with sample "A" collected near the southern bank
- 3) Samples not included in representative concentration due to influence of nearby groundwater input
- 4) See text for explanation of flow used in flux estimates.
- 5) Perchlorate not detected. Detection limit shown and used in flux estimates.
- 6) This transect was originally T3.6 but the identification was changed to T3.5 during the field program.

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Table 18 Flux Estimates: Discrete Sampling

NERT Remedial Investigation, Downgradient Study Area Henderson, Nevada

	Low F	low Sampli	ing	Mid F	low Sampli	ng	High F	low Sampli	ng
Station	Perchlorate Concentration µg/L ^[1]	Flow (cfs) ^[2]	Perchlorate Load (Flux) (lb/day)	Perchlorate Concentration µg/L ^[1]	Flow (cfs) ^[2]	Perchlorate Load (Flux) (lb/day)	Perchlorate Concentration µg/L ^[1]	Flow (cfs) ^[2]	Perchlorate Load (Flux) (lb/day)
LW7.2	ND (<0.95) ^[3]	178	<1	ND (<0.95) ^[3]	262	<1.5	ND (<0.95) ^[3]	325	<2
LW6.7	ND (<0.95) ^[3]	180	<1				ND (<0.95) ^[3]	317	<2
LW6.05	18	184	18	14	239	18	7.3	319	12
LW5.9	16	191	16				8.3	346	15
LW5.3 ^[4]	18	214	21				9.4	346	17
LW4.95	23	209	25	17	293	26	12	341	22
GLW4.9	25	213	29				15	341	29
GLW4.4	27	207	30	27	315	45	19	344	33
LW3.85	34	205	37				30	347	56
LW3.75	28	205	31				27	350	50
LW3.4	51	203	57	52	309	75	38	347	71

Notes:

μg/L - micrograms per liter

cfs - cubic feet per second

lb/day - pounds per day

- < less than
- 1) Concentration of perchlorate is median concentrations from four days' of samples.
- 2) See text for explanation of flow used in flux estimates.
- 3) Perchlorate not detected. Detection limit shown and used in flux estimates.
- 4) Water depths at LW5.3 were greater than 3 feet; samples were collected near bottom and near top. The concentration presented is the median of all concentrations from four days' of samples.

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Appendix A

Daily Field Reports

60477365 October 2017

	D	AILI AC	114111	KEI OKI	L				
DATE:	December 9, 2016	Day:	S	M	T	W	Th	F	S
PROJECT NAME:	NERT Regional Groundwater RI	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow		
	Surface Water Sampling	Temp °F:	32 to 52						
SITES / LOCATIONS:	Los Voges Wash	Wind:	Still	Moderate	High	Direction:	NNE		
	Las vegas wasii	Humidity:	Dry	Moderate	Humid	Rain			
SITES / LOCATIONS:		Wind:	Still	Moderate			NNE		

PERSONNEL ON-SITE	Employer	Job Title
Ryan McCarthy	AECOM	Field Team Leader
C. Steve Howe	AECOM	Hydrologist
Rick Purdy	AECOM	Field
Clare Murphy-Hagan	AECOM	Field

VISITORS ON-SITE	Employer	Purpose of Visit	Time In	Time Out
Carlton Parker	NDEP	oversight		
Jon Wilson	USGS	Seepage sampling		

WORK COMPLETED

The field teams completed the one-day sampling event for the coordinated day with the USGS seepage study. Teams from AECOM were onsite at 07:30 and teams were off the water at 16:00.

Twenty samples were collected from 19 locations. The list of locations presented below.

Field duplicates were collected at two locations (LWC3.7 and LW3.85). A field blank was collected at LW3.4. An MS/MSD was collected at LW6.05. An equipment blank was collected at LW5.3 (where pump and tubing was needed).

LW3.4	GLW4.85	LWC6.1_2
LWC3.7	GLW4.9	GLW6.1_3
LW3.75	LW4.95	GLW6.1_4
GLW3.78	LW5.3	LW6.7
LW3.85	LW5.9	LW7.2
LW4.1	LW6.05	
GLW4.4	LWC6.1_1	

Carlton Parker from NDEP was at the LVW throughout the day, monitoring progress by both AECOM and the USGS who were on the LVW conducting their first seepage study. USGS was seen at a distance a few times. Steve Howe and Clare Murphy-Hagan talked with Jon Wilson of USGS when they met near Calico Ridge Weir.

LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED: Daily boat safety inspection completed. Daily health and safety briefing conducted.	SAFETY REQUIREMENTS HAVE BEEN MET Yes No

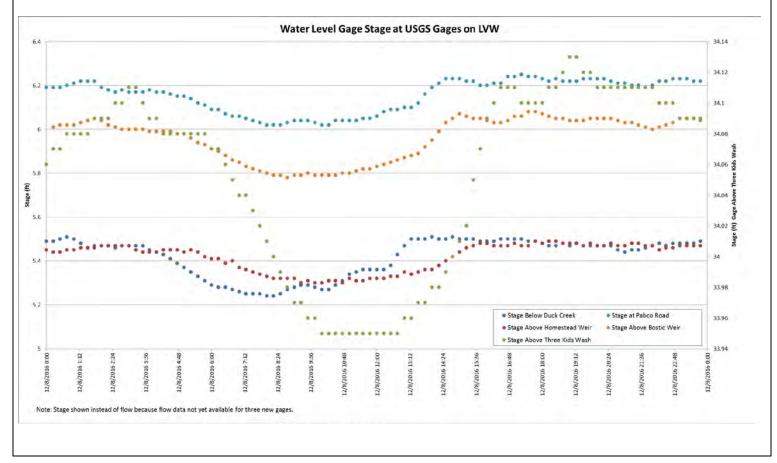
Equipment at the Site (includes Subcontractor supplied equipment):	Date Arrived	Date Removed
Canoe and sampling equipment (pump, YSI, etc)	12/08/2016	12/09/2016
	·	•

Material/Supplies Received at the Site:

None

Field Activities and Remarks Not Presented Above:

Flows were not held as was the original intent. The flows at all five gages on the LVW in the Study Area showed the diurnal fluctuation consistent with normal waste water operations and discharges.



Name: Ryan McCarthy Date: 12/08/2016

		DAl	ILY AC	TIVITY	REPORT	Γ					
DATE:	January 23, 20)17	Day:	S	M	Т	W	Th	F	S	
PROJECT NAME:	NERT Region Groundwater		Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
SITES / LOCATIONS:	LVW	Temp °F: Wind: Humidity:	Still Dry	Moderate Moderate	High Humid	Direction:					
					1	1					
	NNEL ON-SITE		AECOM	Em	ployer		E' 117	Job	Title		
Rick Purdy C. Steve Howe			AECOM AECOM				Field Team Hydrologist/	Field Te	am Lead	er	
C. 5.6.76 116 WC			TIECOM				Tiy drologist	Ticia Te	am Beau	<u> </u>	
VISITORS (N-SITE	F	Employer		Pu	rpose of	Visit	Tin	e In	Time O	ut
WORK COMPLETED	D										
Due to the rain and rising f land. In the hotel, the team					gages. The lo	cations for	the staff gages	and tran	sects we	re scouted	fron
iand. In the noter, the team	began construction of	me transduce	er stilling we	118.							
	LAS VEGAS HASH AT PABCO	RD NR HENDERSO	ON, NV								
2000	\wedge										
9 1000		\mathcal{N}									
ber											
Discharge, cubic feet per											
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00:00 06:00 12:00 Jan 22 Jan 22 Jan 2 2017 2017 2017	2 Jan 22 Jan 23 Jan	23 Jan 23 .	18:00 00:0 Jan 23 Jan 2 2017 2017	14							
	visional Data Subject to		2017 2017								
△ Median daily stati	stic (46 years) — Disch	narge		_							
LIST SAFETY ACTION	NS TAKEN TODAY/	SAFETY IN	SPECTION	NS CONDI	UCTED:				S	AFETY	
Kristen Durocher monitor variable flows. The flows								ınd	REQU HAVE	IREMENT BEEN MI	
									Yes	No	
Equipment at the Site (in	ncludes Subcontracto	r supplied eq	quipment):				Date Arriv	ved	Date	e Removed	i
					-				-		
Material/Supplies Receiv	red at the Site:										
Field Activities and Rem		Above:									
Management											

Name: Kristen Durocher

Date: 01/23/2017

				D.	AILY AC	TIVITY	REPORT	Γ					
DATE:		Janua	ary 24, 20)17	Day:	S	M	T	W	Th	F		S
PROJECT NAME:	Ī	NER Grou	RT Region	nal RI	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	-	GIOC	illuwater	KI	Temp °F:					_			
SITES / LOCATION	NS:	LVW at R	M3.8		Wind:	Still	Moderate	High	Direction:	NNW 1	0-15 mp	h	
					Humidity:	Dry	Moderate	Humid	Rain				
PE			Em	ployer			Job	Title					
Rick Purdy					AECOM				Field Team				
C. Steve Howe					AECOM				Hydrologist	/ Field Tea	ım Lead	er	
												,	
VICITO	DC O	NI CITE		I	Emmlosson		D.,		X7: a:4	T:	o T	T:	· O4
VISITO	KS U	N-511E			Employer		Pu	rpose of	VISIL	Tim	e in		e Out
WORK COMPLE													
The field team installe	d the s	stilling well	and trans	ducer at T.	3.8 and collect	ed initial da	ıta.						
													
	09419	753 LV HASI	1 ABV THR	EE KIDS HI	ASH BLM HENDE	RSON, NV							
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Discharge, cubic feet per			1										
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Jan 18	Jan 19	Jan 20	Jan 21	Jan 22	23 2	an Jan 4 25							
2017	2017	2017	2017	2017	2017 20 Revision		7						
				_		-							
△ Median d	aily s	tatistic (21 years)) — Disch	narge								
LIST SAFETY AC	TION	S TAKEN	TODAY/	SAFETY	INSPECTION	NS COND	UCTED:					AFETY	
Flows returned to a r	normal	pattern and	l were run	ning at ap	proximately th	e median st	atistic at Thre	ee Kids. No	rain in the		REQU		
immediate forecast.											HAVE Yes		
											res	I I	No
Equipment at the Si	ite (inc	ludes Subc	ontracto	r supplied	equipment):				Date Arri	ved	Date	e Remo	ved
					/					 			

Equipment at the Site (includes Subcontractor supplied equipment):	Date Arrived	Date Removed
Material/Supplies Received at the Site:		
Field Activities and Remarks Not Presented Above:		

Name: Kristen Durocher Date: 01/23/2017

DATE:	January 25, 2017	Day:	S	M	T	W	Th	F	S	
PROJECT NAME:	NERT Regional Groundwater RI	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	Groundwater Kr	Temp °F:			_					
SITES / LOCATIONS:	LVW at RM3.6 – 4.6	Wind:	Still	Moderate	High Humid	Direction:	NNW 10	IW 10-15 mph		
	L v w at Kivi3.0 – 4.0	Humidity:	Dry	Moderate	Rain					
PERSO	NNEL ON-SITE		Em	ployer			Job T	itle		
Rick Purdy		AECOM				Field Team				
C. Steve Howe		AECOM				Hydrologist/	Field Tear	m Leader		
VISITORS O	M SITE	Employer		Du	rpose of	Vicit	Time	In T	ime Out	
Harry van den Berg and		AECOM			agement s		10:40		:15	
Timily van den Berg and	1120011		1/14/11		71510	101.0				
The field team installed the but not activated.	stilling wells and transdu	cers and collected in	itial data a	t T3.6 and T3	75. The sti	lling well and	transducei	were insta	lled at T4.6	
LIST SAFETY ACTION	NS TAKEN TODAY/SAF	FETY INSPECTION	NS COND	UCTED:				SAFE REQUIRE HAVE BEI Yes	MENTS	
Equipment at the Site (in	cludes Subcontractor su	pplied equipment):				Date Arri	ved	Date Re	moved	
Material/Supplies Receiv	red at the Site:									
Field Activities and Rem		re:								
Name: Kristen Duroc	cher]	Date:	01/2	25/2017			

DATE:	January 26, 20	Day:	S	M	T	W	Th	F		S	
PROJECT NAME:	NERT Region Groundwater		Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	Groundwater	TCI	Temp °F:								
SITES / LOCATIONS:	LVW at RM4.6 – 6.	35	Wind:	Still	Moderate	High	Direction:	NNW 10-	-15 mph		
	E v vv at Idvi+.0 0.	33	Humidity:	Dry							
	NNEL ON-SITE		AECOM		ployer			Job T	itle		
Rick Purdy							Field Team				
C. Steve Howe	AECOM				Hydrologist/	Field Tear	n Leade	r			
VISITORS O	N-SITF		Employer		Pıı	rpose of	Vicit	Time	In	Tin	ne Out
Carmen Caceres-Schnel			AECOM			agement si		Tillic	. 111	1111	ne Out
	-		11200111		1/1611	.gement si			Į.		
WORK COMPLETED											
The field team installed the	stilling wells and trans	sducers and	l collected init	ial data at '	Γ4.65 and T6.	35. The tra	nsducer at T4	.6 was activ	vated.		
LIST SAFETY ACTION	IS TAKEN TODAY/	SAFETY I	NSPECTION	NS CONDI	UCTED:				SA REQUII HAVE E Yes	BEE	IENTS
Equipment at the Site (in	cludes Subcontractor	r supplied (equipment):				Date Arri	ved	Date	Rem	oved
Material/Supplies Receiv	ed at the Site:										
Field Activities and Rema	arks Not Presented A	bove:									
Name: Kristen Duroc	_		I	Date:	01/2	26/2017		_			

DATE:	January 27, 20	17	Day:	S	M	T	W	Th	F	S	
PROJECT NAME:	NERT Region Groundwater l		Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
CITES / LOCATIONS.			Temp °F:	*		NINIW 10	15 mmh				
SITES / LOCATIONS:	LVW at RM4.75 – 6	5.3	Humidity:	Dry	Moderate	Humid	Rain	NNW 10	-13 mpn		
				3							
	NNEL ON-SITE			Emj	ployer			Job 1	itle		
Rick Purdy			AECOM				Field Team				
C. Steve Howe		AECOM				Hydrologist/	Field Tear	n Leadei	•		
		_						1	_		
VISITORS ON-SITE			Employer		Pu	rpose of	Visit Time		e In	Time Out	
WORK COMPLETEI The field team installed the transducers.		nsducers and	d collected in	nitial data a	at T4.75 and	T5.3. This	completes the	e installatio	on of stil	ling wells and	
LIST SAFETY ACTION	NS TAKEN TODAY/	SAFETY IN	SPECTION	NS CONDI	UCTED:				REQUII	FETY REMENTS EEN MET No	
Equipment at the Site (in	cludes Subcontractor	r supplied ed	quipment):				Date Arri	ved	Date	Removed	
`											
Material/Supplies Receiv											
Field Activities and Rema	arks Not Presented A	bove:									

Name: Kristen Durocher

Date: 01/27/2017

		DII.			KLI OK	•					
DATE:	January 30, 20	17	Day:	S	M	T	W	Th	F		S
PROJECT NAME:	NERT Region		Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	Groundwater	KI	Temp °F:				•		•		
SITES / LOCATIONS:	LVW at RM3.75 – 3	2 0	Wind:	Still	Moderate	High	Direction:				
	L v w at KW15.75 – 3	0.0	Humidity:	Dry	Moderate	Rain					
PERGO	AND ON CURE		1		•				T		
	NNEL ON-SITE		AEGOM		ployer		E: 11m	Job	Title		
Rick Purdy C. Steve Howe			AECOM AECOM				Field Team Hydrologist/	E:-14 T	TJ		
	Rachel MacPhee						•	Field Lea	ım Lead	er	
			AECOM				Field Team Field Team				
Clare Murphy-Hagan			AECOM				rieid Team				
VISITORS (]	Employer		Pu	rpose of	Visit	Tim	e In	Tin	ne Out	
Carlton Parker	NDEP			Site visi		11:00		11:2			
WORK COMPLETE											
Two field teams worked to one depth was collected at QC samples were unintentic Plans for January 31, 2017	each of the four locationally not collected at	ons across the T3.75 and w	transects.	ed today.		ansects (T3	.75 and T3.8).	The water	er was sł	nallow	and only
LIST SAFETY ACTION	NS TAKEN TODAY/	SAFETY IN	SPECTION	NS COND	UCTED:				REQUI HAVE Yes	BEEN	IENTS
Equipment at the Site (in	cludes Subcontracto	r supplied ed	quipment):				Date Arri	ved	Date	Rem	oved
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \											
						<u>, </u>		L.			
Material/Supplies Receiv	red at the Site:										
Field Activities and Rem	arks Not Presented A	bove:									
Name: Kristen Duroc	cher]	Date:	01/3	0/2017_			

		DAIL	I AC	TIATIX	REPURI	L						
DATE:	January 31, 20	17	Day:	S	M	T	W	Th	F		S	
PROJECT NAME:	NERT Region	ai ···	eather:	Sunny	Partly Sunny	Cloudy	Rain	Snow				
	Groundwater I	Te	emp °F:						•			
SITES / LOCATIONS:	LVW at DM4.6. 4.4	5.5	Wind:	Still	Moderate	High	Direction:					
	LVW at RM4.6 – 4.0	Hui	midity:	Dry	Moderate	Humid	Rain					
PERSO	NNEL ON-SITE			Em	ployer		Job Title					
Rick Purdy		A	AECOM		<u> </u>		Field Team					
C. Steve Howe	A	AECOM				Hydrologist/	Field Tea	ım Leade	er			
Rachel MacPhee		A	AECOM				Field Team					
Clare Murphy-Hagan		A	AECOM				Field Team					
VISITORS C	ON-SITE	Em	ployer		Pu	rpose of	Visit	Tim	e In	Time	e Out	
Carlton Parker		DEP			Site visi	t	10:00		10:30			
FD and EB at T4.6 MS/MSD and FD at T4.65 Plans for February 1, 2017												
LIST SAFETY ACTION	NS TAKEN TODAY/	SAFETY INSP	ECTION	NS COND	UCTED:				REQUI HAVE Yes	BEEN I	ENTS MET	
Equipment at the Site (in	cludes Subcontractor	· supplied equip	oment):				Date Arriv	ved	Date	Remov	ved	
Material/Supplies Receiv												
Field Activities and Rem	arks Not Presented A	bove:										
Name: Kristen Duroc	her]	Date:	01/3	1/2017				

		DAI	LY AC	FIVITY	REPORT	Γ					
DATE:	February 1, 20	17	Day:	S	M	T	W	Th	F		S
PROJECT NAME:	NERT Region Groundwater		Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	Groundwater	NI .	Temp °F:			1	1				
SITES / LOCATIONS:	LVW at RM4.2 – 4.	75	Wind:	Still	Moderate	High	Direction:				
			Humidity:	Dry	Moderate	Humid	Rain				
PERSO	NNEL ON-SITE		Employer					Job	Title		
Rick Purdy			AECOM		-		Field Team				
C. Steve Howe			AECOM				Hydrologist/	Field Te	am Lead	er	
Rachel MacPhee			AECOM				Field Team				
Clare Murphy-Hagan			AECOM				Field Team				
VISITORS (ON-SITE	E	mployer		Pu	rpose of	Visit	Tin	e In	Tir	me Out
						- P					
WORK COMPLETED											
The field teams sampled a collected at each of the four QC samples were collected EB at T4.2 and T4.75 MS/MSD at T4.6 sample A FDs at T4.2B and T4.65A	r locations across the tr as follows:	ransects.					e water was s	snanow a	ind Only	one (uepiii was
Plans for February 2, 2017	include sampling and o	cross-sections	measurem	ents at T3.5	5, T5.3 and T6).					
								1			
LIST SAFETY ACTION	NS TAKEN TODAY/	SAFETY INS	SPECTION	NS COND	UCTED:				REQU	BEE	TY MENTS N MET No
Equipment at the Site (in	ncludes Subcontractor	r supplied eq	uipment):				Date Arriv	ved	Date	e Ren	noved
Material/Supplies Receiv		,									
Field Activities and Rem	arks Not Presented A	bove:									
Name: Kristen Duroc	cher					Date:	02/0	1/2017_			

		DAILY	ACTT	VITY	REPORT	Ľ					
DATE:	February 2, 20	17 E	Day:	S	M	T	W	Th	F		S
PROJECT NAME:	NERT Region Groundwater l		her: S	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	Ground water i	Temp					T				
SITES / LOCATIONS:	LVW at RM3.5 – 6	.		Still	Moderate	High	Direction:				
		Humid	lity:	Dry	Moderate	Humid	Rain				
PERSO	NNEL ON-SITE			Emi	oloyer			Job 7	Γ it le		
Rick Purdy	THE OIL BILL	AEC	COM	2,	510,701		Field Team				
C. Steve Howe		AEC	COM				Hydrologist/	Field Tea	m Leade	r	
Rachel MacPhee		AEC	COM				Field Team				
Clare Murphy-Hagan		AEC	COM				Field Team				
VISITORS (M CITE	Emplo	NE COM		Du	rpose of	Vicit	Time	o In	Tim	e Out
VISITORS)N-911E	Emplo	усі		1 0	i pose oi	V 151t	11111	e III	11111	e Out
WORK COMPLETED								I			
At T3.5, two depths were co QC samples were collected EBs at T3.5C and T5.3A (the EBs at T3.5A and T6A) FDs at T3.5B and T5.3B Note that the SWIP indicated from the SWIP. This does were named for the approximate plans for February 3, 2017 LIST SAFETY ACTION Rick Purdy (designated States) back strain hazard. Ricky	as follows: hese were collected with tes a transect T3.6. CC not affect the DQO of mate river mile location include sampling and collected NS TAKEN TODAY/ SO) conducted a mana	DCs and labels indithe program. The transect. cross-sections measures SAFETY INSPECT gement site visit. Lo	cated T3 ransect v urements TIONS opading ca	3.5. The was means the two	samples will sured where to remaining tr	remain increquired by	r the DQOs la Γ6.35 and T8. oted as a poter	ntial	he SWIF	P. The	transects Y ENTS
Equipment at the Site (in	ocludes Subcontractor	· cunnlied equinme	ent)•				Date Arri	ved	Date	Remo	oved
24mpment at the bite (II	Clades Susconii actor	зарриса сцирии					Date Alli	,	Dail	- TOIN	,,cu
								1			
Material/Supplies Receiv	red at the Site:										
Field Activities and Rem	arks Not Presented A	bove:									
Name: Kristen Duroc	her]	Date:	02/0	02/2017_		_	

		DAI	LY AC'	FIVITY	REPORT	Γ					
DATE:	February 3, 20	17	Day:	S	M	T	W	Th	F		S
PROJECT NAME:	NERT Region		Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow			
	Groundwater I	RI	Temp °F:		~,						
SITES / LOCATIONS:	LVW at RM6.35 – 6	0	Wind:	Still	Moderate	High	Direction:				
	L v w at Kivio.55 – 0	.o	Humidity:	Dry	Moderate	Humid	Rain				
PERSO	NNEL ON-SITE			Fm	ployer			Ioh	Title		
Rick Purdy	THEE OIL BILL		AECOM		proyer		Field Team	900	Titic		
C. Steve Howe			AECOM				Hydrologist/	Field Te	am Lead	er	
Rachel MacPhee			AECOM				Field Team				
Clare Murphy-Hagan			AECOM				Field Team				
VISITORS (ON-SITE	E	Employer		Pu	rpose of	Visit	Tin	ne In	Tin	ne Out
			•								
WORK COMPLETE	<u> </u>										
collected at each of the fiv LVW. No QC samples were collected. This completed the transected.	cted.			lepins were	conceted at	10.33B, ar	do only timee 3	amples v	vere con-		letoss the
LIST SAFETY ACTION	NS TAKEN TODAY/S	SAFETY INS	SPECTION	NS COND	UCTED:				REQU HAVE	BEEN	IENTS N MET
									Yes	1	No
Equipment at the Site (in	ncludes Subcontractor	supplied eq	uipment):				Date Arriv	ved	Date	Rem	oved
Material/Supplies Receive Field Activities and Rem		hovor									
Field Activities and Kem	iarks Not Freschied A	bove.									
Name: Kristen Duroc	cher					Date: _	02/0	3/2017_			

DATE:	February 6, 2017	Day:	S	M	T	W	Th	F	S
PROJECT NAME:	NERT Regional	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow		
Groundwater RI		Temp °F:							
SITES / LOCATIONS:	LVW ADM2 4 7.2	Wind:	Still	Moderate	High	Direction:	SW/SSW 25mph		
	LVW at RM3.4 – 7.2	Humidity:	Dry	Moderate	Humid	Rain			

PERSONNEL ON-SITE	Employer	Job Title
Rick Purdy	AECOM	Field Team/SSO
C. Steve Howe	AECOM	Hydrologist/ Field Team Leader
Rachel MacPhee	AECOM	Field Team
Clare Murphy-Hagan	AECOM	Field Team
Ryan McCarthy	AECOM	Field Team
Nicholas Pryor	AECOM	Field Team
Andrea Christian	AECOM	Field Team
Tate Yulga	AECOM	Field Team
Petros Paulos	AECOM	Field Team
James McCoy	AECOM	Field Team
Connor Gildea	AECOM	Field Team

VISITORS ON-SITE	Employer	Purpose of Visit	Time In	Time Out
Carlton Parker	NDEP	Site visit	10:20	10:30

WORK COMPLETED

Five field teams worked to complete the first day of discreet sampling. QC samples were collected as follows:

EBs were collected by each team associated with sampling at LW3.85, GLW4.4, LW5.3, LW5.9 and LW7.2.

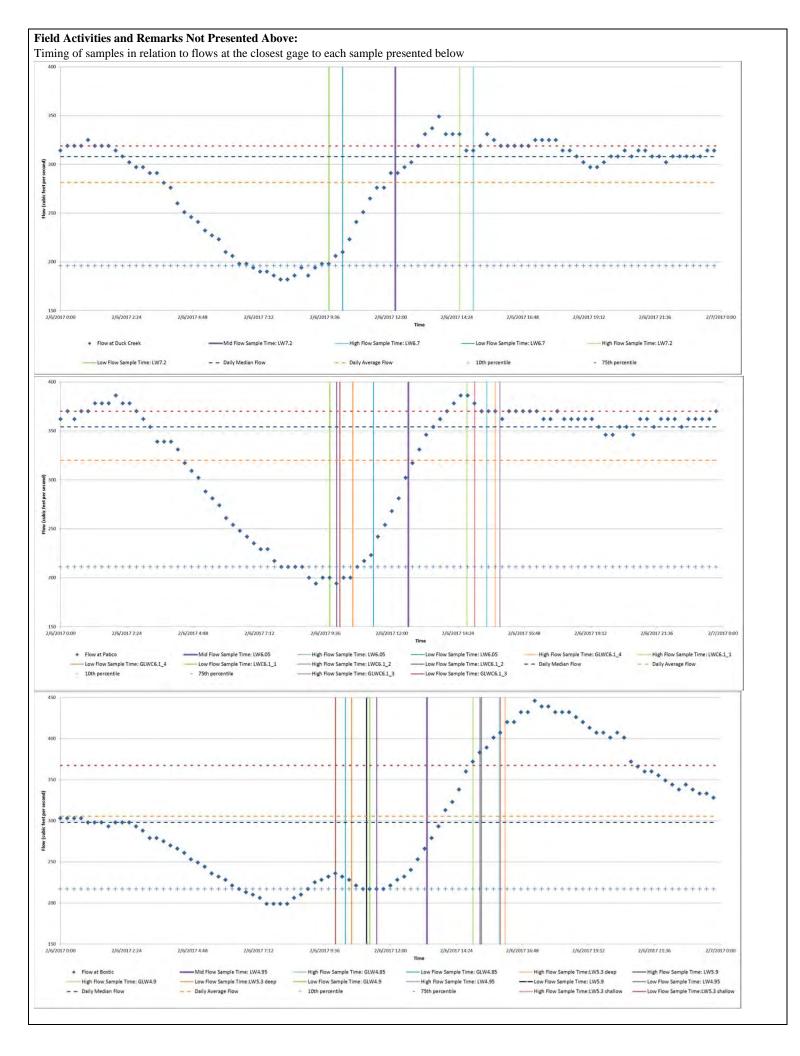
Three FBs were collected associated with sampling at LW3.85, GLW4.4 and LW5.3.

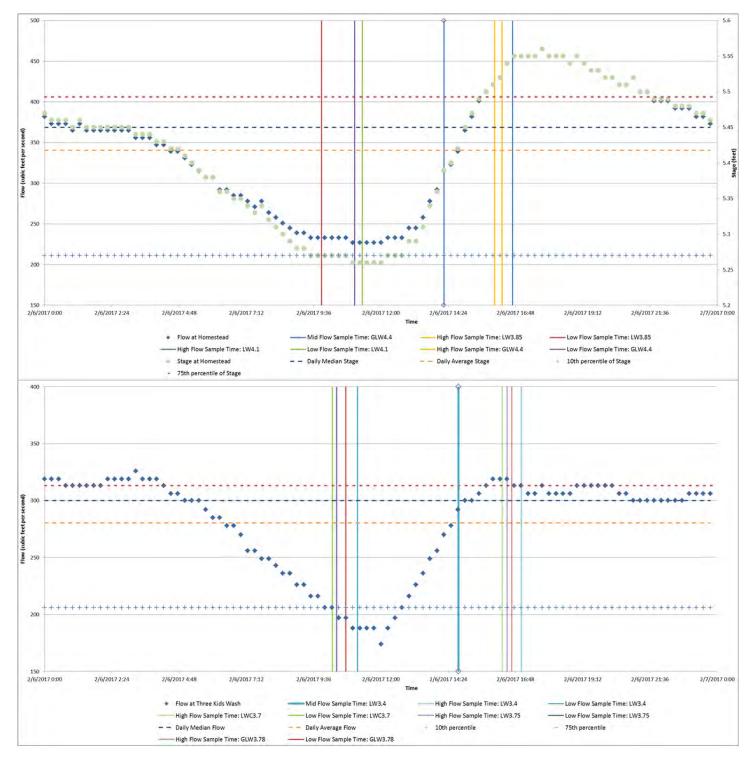
Three FDs were collected: LW3.4-20170206-17:01-0.7-FD, GLWC6.1_4-20170206-15:45-1.3-FD and LW7.2-20170206-14:30-1.0-FD.

Flow requirements were met for all locations with minor deviation at LW6.05 and LW6.7 low flow samples. The field teams are adjusting the sampling time to earlier to meet the lower 10th percentile of the flows. H&S briefings in the morning delayed the team (team leader is SSO).

LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED:	SAFE	ETY
	REQUIRE	EMENTS
	HAVE BE	EN MET
	Yes	No

Equipment at the Site (includes Subcontractor supplied equipment):	Date Arrived	Date Removed
Material/Supplies Received at the Site:		





Name: Kristen Durocher Date: _____02/06/2017_____

DATE:	February 7, 2017	Day:	S	M	T	W	Th	F	S
PROJECT NAME:	NERT Regional Groundwater RI	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow		
	Groundwater Ki	Temp °F:							
SITES / LOCATIONS:	LVW at RM3.4 – 7.2	Wind:	Still	Moderate	High	Direction:	SW/SSW	15-20mph	
	LV W at RIVI3.4 – 1.2	Humidity:	Dry	Moderate	Humid	Rain			

PERSONNEL ON-SITE	Employer	Job Title
Rick Purdy	AECOM	Field Team/SSO
C. Steve Howe	AECOM	Hydrologist/ Field Team Leader
Rachel MacPhee	AECOM	Field Team
Clare Murphy-Hagan	AECOM	Field Team
Ryan McCarthy	AECOM	Field Team
Nicholas Pryor	AECOM	Field Team
Andrea Christian	AECOM	Field Team
Tate Yulga	AECOM	Field Team
Petros Paulos	AECOM	Field Team
James McCoy	AECOM	Field Team
Connor Gildea	AECOM	Field Team

VISITORS ON-SITE	Employer	Purpose of Visit	Time In	Time Out

WORK COMPLETED

Five field teams worked to complete the second day of discreet sampling. QC samples were collected as follows:

Five FDs were collected: LW3.85-20170207-15:50-0.6-FD, GLW4.4-20170207-14:11-1.3-FD, GLW4.85-20170207-15:42-0.8-FD, GLWC6.7_3-20170207-15:06-0.9-FD and LW6.7-20170207-14:25-0.6-FD.

MS and MSD samples were collected at five locations associated with samples: LW3.4-20170207-11:11-0.5, LW4.1-20170207-10:39-0.3. GLW4.9-20170207-10:55-1.2, LW5.9-20170207-10:00-0.4 and LW6.05-20170207-09:30-0.6

Flow requirements were met for all locations with minor deviations in the timing of mid-flow samples (note that the samples were collected at the same approximate time as 2/6/17) at the following:

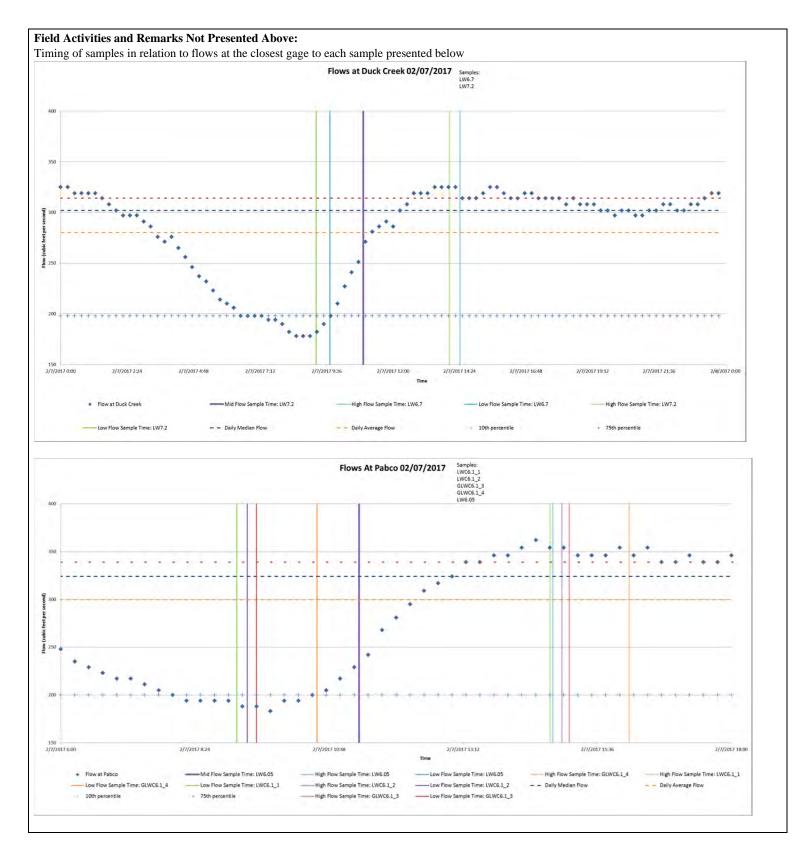
Slightly late at LW4.95, GLW4.4, LW3.4

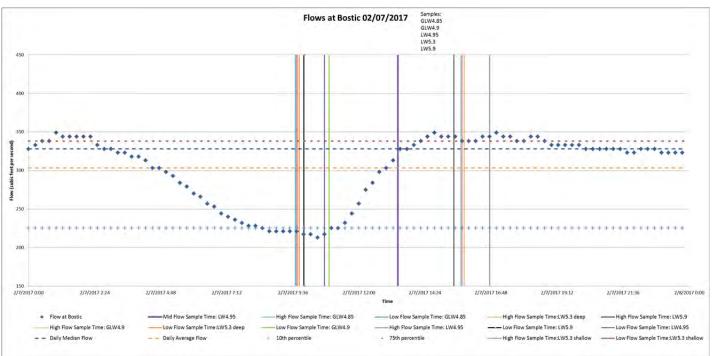
Slightly early at LW6.05

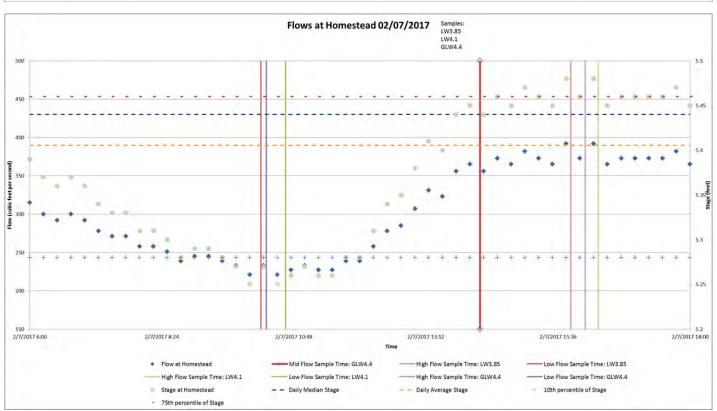
The gages are being monitored both in the office and in the field (new staff gages). The teams will work to sample mid-flow at specific gage targets.

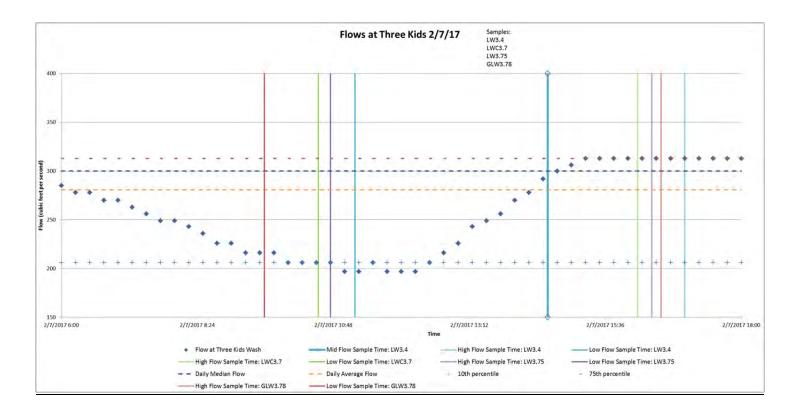
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED:	SAFI REQUIRI HAVE BE	EMENTS
	Yes	No

Equipment at the Site (includes Subcontractor supplied equipment):	Date Arrived	Date Removed
Material/Supplies Received at the Site:		









			,		_				
DATE:	February 8, 2017	Day:	S	M	T	W	Th	F	S
PROJECT NAME:	NERT Regional Groundwater RI	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow		
	Groundwater Ki	Temp °F:							
SITES / LOCATIONS:	LVW at RM3.4 – 7.2	Wind:	Still	Moderate	High	Direction:	ENE 0-10	mph	
	L V W at KIVI3.4 – 1.2	Humidity:	Dry	Moderate	Humid	Rain			

PERSONNEL ON-SITE	Employer	Job Title
Rick Purdy	AECOM	Field Team/SSO
C. Steve Howe	AECOM	Hydrologist/ Field Team Leader
Rachel MacPhee	AECOM	Field Team
Clare Murphy-Hagan	AECOM	Field Team
Ryan McCarthy	AECOM	Field Team
Nicholas Pryor	AECOM	Field Team
Andrea Christian	AECOM	Field Team
Tate Yulga	AECOM	Field Team
Petros Paulos	AECOM	Field Team
James McCoy	AECOM	Field Team
Connor Gildea	AECOM	Field Team

VISITORS ON-SITE	Employer	Purpose of Visit	Time In	Time Out

WORK COMPLETED

Five field teams worked to complete the third day of discreet sampling. QC samples were collected as follows:

Four EBs were collected associated with GLW4.4, LW4.95, LWC6.1_1 and LW6.7.

Five FDs were collected: LW3.85-20170208-09:27-0.5-FD, LW4.1-20170208-10:22-0.4-FD, GLW4.9-20170208-16:35-1.4-FD, GLWC4.1_4-20170208-10:35-1.3-FD, and LW6.05-20170208-12:35-0.8-FD.

Five FBs were collected associated with LW3.4-20170208-10:55, LW4.1-20170208-11:12, GLW4.9-20170208-11:09, LW5.9-20170208-11:45 and LW6.05-20170208-10:30.

Flow requirements were met for all locations with minor deviations in the timing of mid-flow samples. Flows were being monitored but the rise in flow followed a very steep curve and samples were collected within 30 minutes generally of actual mid flows at the following:

Slightly late at LW6.05, LW4.95, GLW4.4, LW3.4

The low flow was slightly early at LWC3.7 and the field team will sample this location 30 minutes or so later today.

LW5.9 low flow was sampled a little late and this will adjusted.

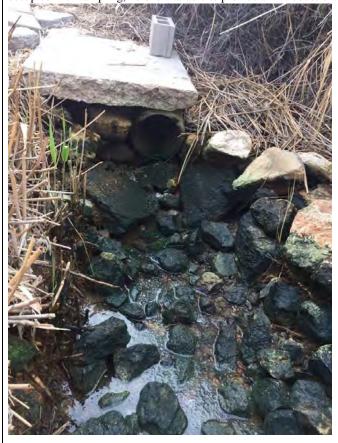
The gages are being monitored both in the office and in the field (new staff gages). The teams will work to sample low and mid-flow at specific gage targets.

LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED:	SAFETY
	REQUIREMENTS
	HAVE BEEN MET
	Yes No

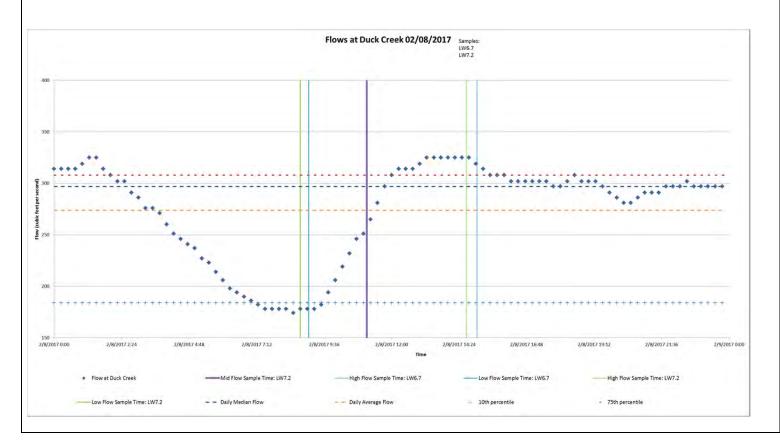
Equipment at the Site (includes Subcontractor supplied equipment):	Date Arrived	Date Removed
Material/Supplies Received at the Site:		

Field Activities and Remarks Not Presented Above:

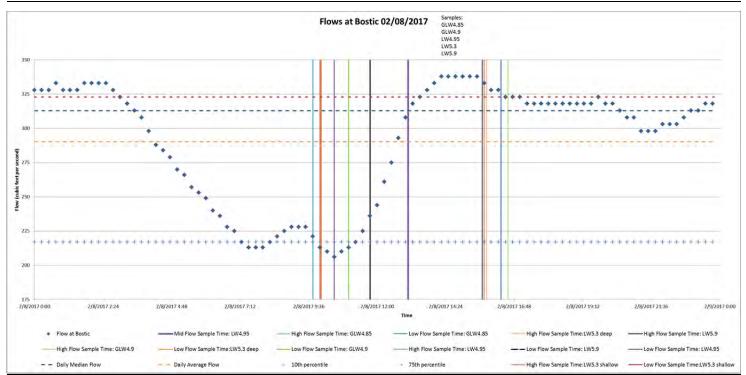
It was noted that the NERT outfall was not flowing. During sampling teams noticed a group of men examining the outfall area. Since the teams were occupied with sampling, no one was able to provide an introduction. The men left soon after arriving.

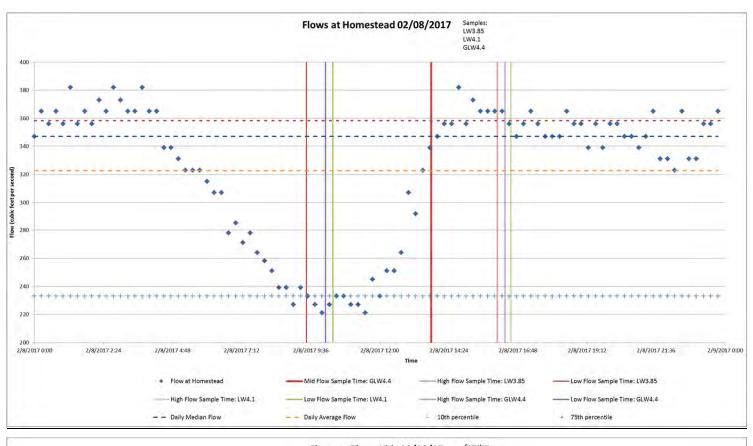


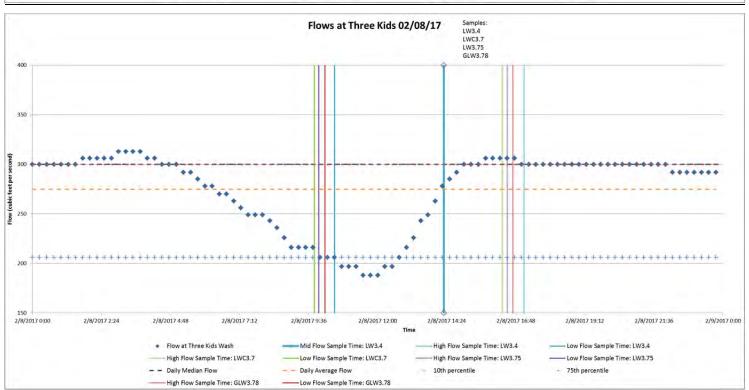
Timing of samples in relation to flows at the closest gage to each sample presented below











Name Volates Describes	D. (02/00/2017	
Name: Kristen Durocher	Date:	02/08/2017	

			,		_				
DATE:	February 9, 2017	Day:	S	M	T	W	Th	F	S
PROJECT NAME:	NERT Regional Groundwater RI	Weather:	Sunny	Partly Sunny	Cloudy	Rain	Snow		
	Groundwater Ki	Temp °F:							
SITES / LOCATIONS:	LVW at RM3.4 – 7.2	Wind:	Still	Moderate	High	Direction:	ENE 0-10	mph	
	L V W at KIVI3.4 – 1.2	Humidity:	Dry	Moderate	Humid	Rain			

PERSONNEL ON-SITE	Employer	Job Title
Rick Purdy	AECOM	Field Team/SSO
C. Steve Howe	AECOM	Hydrologist/ Field Team Leader
Rachel MacPhee	AECOM	Field Team
Clare Murphy-Hagan	AECOM	Field Team
Nicholas Pryor	AECOM	Field Team
Andrea Christian	AECOM	Field Team
Tate Yulga	AECOM	Field Team
Petros Paulos	AECOM	Field Team
James McCoy	AECOM	Field Team
Connor Gildea	AECOM	Field Team

VISITORS ON-SITE	Employer	Purpose of Visit	Time In	Time Out
Carlton Parker and JD Dotchin	NDEP	observations		

WORK COMPLETED

Five field teams worked to complete the fourth and final day of discreet sampling. QC samples were collected as follows:

Five FDs were collected: LW3.4-20170209-13:33-0.5-FD, LW4.1-20170209-16:02-0.4-FD, LW4.95-20170209-10:35-1.0-FD, LWC6.1_1-20170209-14:39-1.1-FD, and LW7.2-20170209-14:41-0.9-FD.

Four MS and MSDs were collected: GLW4.4-20170209-13:11-1.2-MS & GLW4.4-20170209-13:11-1.2-MSD, LW4.95-20170209-12:30-1.1-MS & LW4.95-20170209-12:30-1.1-MSD, GLWC6.1_4-20170209-10:33-1.3-MSD, and LW7.2-20170209-10:52-0.8-MS & LW7.2-20170209-10:52-0.8-MSD.

One FB was collected associated with LW6.05-20170209-10:40.

The QC requirements for the program were met.

180 samples were collected.

9 (5%) EBs were collected

9 (5%) FBs were collected

9 (5%) MS and MSDs were collected

19 (10.6%) FDs were collected

Flow requirements were met for all locations.

The teams are demobilizing on the 2/10/17 and will return all equipment including 5 canoes, 5 YSI instruments, 5 GPS units. The remaining equipment will be sent to appropriate offices.

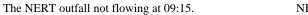
Carlton Parker and JD Dotchin were seen at several locations along the LVW. Rick Purdy talked with Carlton Parker about the lack of flow in the NERT outfall. The outfall was dry on Wednesday morning due to operations being temporarily suspended at the treatment facility due to lack of ethanol.

Two employees of the Bureau of Reclamation were at the LVW but no formal conversation was exchanged between them and AECOM staff.

LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED:	SAFETY
	REQUIREMENTS
	HAVE BEEN MET
	Yes No

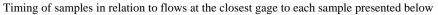
Equipment at the Site (includes Subcontractor supplied equipment):	Date Arrived	Date Removed
Material/Supplies Received at the Site:		

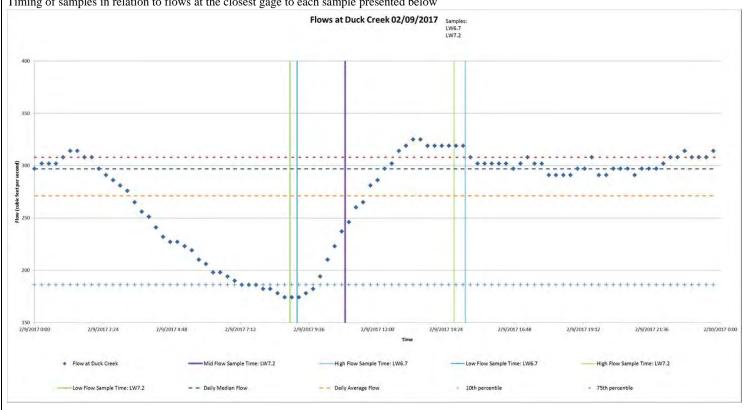
Field Activities and Remarks Not Presented Above:

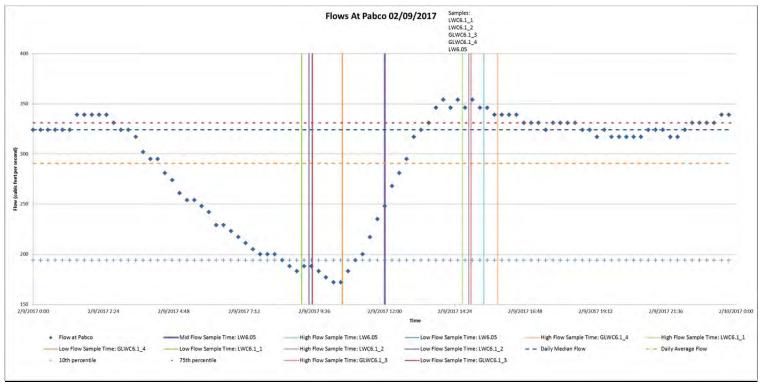


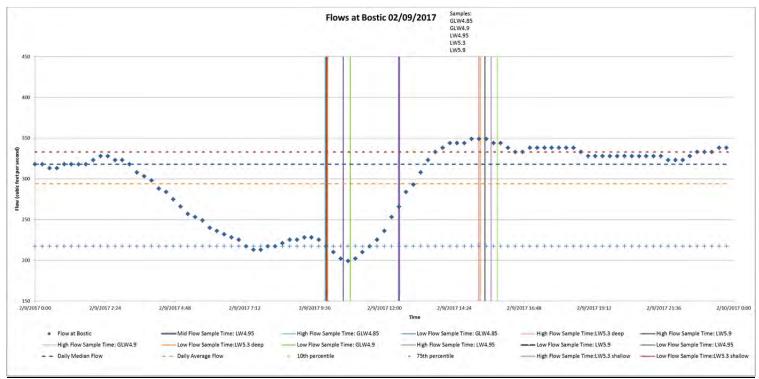
NERT outfall flowing at 15:05

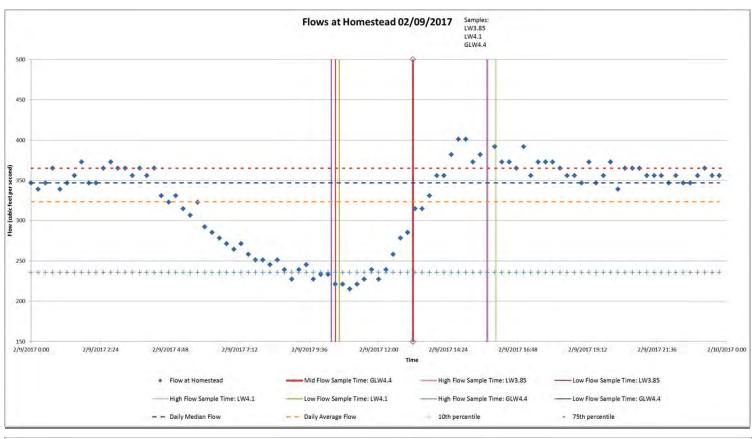


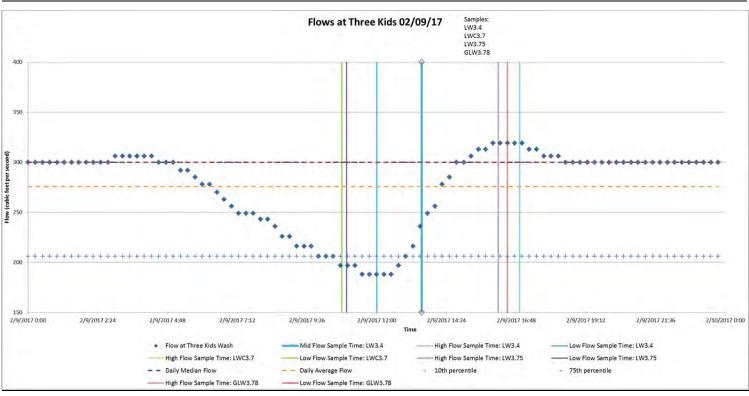












Name: Kristen Durocher Date: _____02/09/2017_____

Appendix B

Daily Health and Safety Sheets

60477365 October 2017

ob Location:	W	WASH	Date: ¿Z & L	12.8	16
AECOM Site Supervisor:	1 Site		Person Conducting Tailgate Meeting:		Jens 7
AECOM Site Supervisor Phone:	COM Site AFCOM Safety Officer C				
ist activities to be pe oday:	rformed	SW SAMPLING	OD WATER		
Muster Point:	P	Anco Paviner	Spill Kit Location:	-	-
First Aid Kit Location:	E	acu teur	Fire Extinguisher Locat	ion: -	-
Have all personnel re	viewed and	understand the site-specific safet	ty plan?		☑ Yes ☐ No*
Are current Pre-Job I understood by all?	Hazard Asse	ssments in place for each of the	tasks to be performed today	and	✓Yes □ No*
					☐ Yes ☐ No* ☑ N/A
Are any required per Identify required per	mits in place	for the applicable tasks to be pen	rformed today and understo	od by all?	Yes No* No*
		am confirmed understanding of the	e work, hazards, and contro	ols/	☑Yes ☐ No*
Have work areas bee	en properly o	ordoned-off to protect workers, s	ite staff, and the public?		Yes No* N/A
		mpleted, documented, and review			Yes No* No*
Do all site workers up notifying the AECOM	nderstand in	jury/ intervention reporting require visor of any injury near miss, unsa	ements including immediate	ely ervation?	Yes □ No*
* if No, then we	ork cannot be	performed until corrective action is co	ompleted and documented.	or radiotry	
Topics covered					
in today's tailgate	- cours				
meeting:	- FOO	17 624			
	- ware	ne .			
	- Peac	ENDRES			
	- SAMP	2001 DOWN			
Other Items Discus	sed Today:	2.	Ston	Nork Aut	hority & Obligation
			- top	- VIN AUL	IVILLA CE CONCIATION

hazard or additional mitigation not recorded on the THA

* All employees will stop the job and reassess a task. hazards, and mitigations, and then amend the THA as

* All employees will be alerted to any changes in

personnel or conditions at the worksite.

needed.

Out & Fit

Out & Fit

Out & Fit

In & Fit

In & Fit

T_ 0730

SITE WORKERS (Including AECOM Contractors and Subcontractors): By signing here, you are stating the following: You have been involved in reviewing the THAs and understand the hazards and control measures associated with each task you are about to perform. * You understand the permit to work requirements applicable to the work you are about to perform (if it includes permitted activities). * You are aware that no tasks or work (that is not risk-assessed) is to be performed. * You are aware of your authority and obligation to 'Stop Work'. I arrived and departed fit for duty: * You are physically and mentally fit for duty. * You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely. *You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or fatigue issue you may have to the AECOM Supervisor. * You signed-out uninjured unless you have otherwise informed the AECOM Supervisor. Initials & Sign In Initials & Sign **Print Name & Company Out Time** Time Signature In & Fit Out & Fit In & Fit Out & Fit In & Fit Out & Fit

(Attach additional Site Worker sign-in/out sheets if peeded)

Accou

Rick Purny

Name	Company Name	Arrival Time	Departure Time	Signature
1011				
To be completed once	activities for the day have be	en concluded	1:	
Were there any Incidents,	Near Misses or Observations?	☐ Yes ☐ No	If yes, details:	
Were there any 'Stop Work	t' interventions?	☐ Yes ☐ No	If yes, details:	
Were there any areas for improvement noted?		☐ Yes ☐ No	If yes, details:	
At the conclusion of the day, the job site is being left in a safe condition and there were no reports of injury or first aid.		☐ Yes ☐ No	AECOM Supervisor S	ignature

Telephone Number:	Charles Howe	
Name of Vessel:	Big Red	
Registration No.:	3	
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable	Led Canoe feature:	
Rafts/Dinghies: Number:	Size: Color:	
Radio: Type:	Frequencies Monitored:	
Number of persons onboard:	2	
Name: Age:	Address & Telephone:	
C. She Have 5	3 603-520-0169	
Clare In-Hum 2	6 503-318-5970	
117 0		
Engine Type: H.	P.: Normal Fuel Supply (days):	
Survival equipment on board:	check as appropriate)	
Life Jackets	Flares Smoke Signals	
Medical Kit	EPIRB Paddles	
Anchor	Loran/Gps	
Trip: In and a	it of the Las Vegas Wash as needed	
Date & Time of Departure:	12/8/16 0800	
Departure From:	Shore	
Departure To:	Shore	
Expected to arrive by: 160	In no case later than:	

Telephone Number:		Ryan McCo	ecthy
Name of Vessel:		Mellow Yel	well
Registration No.:			
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing iden	tifiable feature:	Yellow Ca	noe
Rafts/Dinghies: Number:	: Size:	Color:	
Radio: Type:	Freque	ncies Monitored:	WA
Number of persons onbo	pard:	\	
Name:	Age:	Address & Telephone:	
Ryan McCarthy	37	603-770-49	45
Ryan Molarthy Rick Rivery	53	781-883-642	35
Engine Type:	H.P.: No	ormal Fuel Supply (days):	
Survival equipment on b	oard: (check as app	ropriate)	
Life Jackets	ſ	Flares	Smoke Signals
Medical Kit	Г	EPIRB	Paddles
Anchor	ı	Loran/Gps	Г
Alterior		Loraniaps	
Trip: In and) out of	the Las Vegas	Wash as needed
Date & Time of Departur	re:	12/8/16 0800	
Departure From:		Shore	
Departure To:		Shore	
Expected to arrive by:	600 In no c	ase later than: 1630	

Daily Tailgate Meeting	tina	Mee	ate	Tailo	Daily	I
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S3AM-209-FM5

Job Location:	Las V	egas Wash, Henderson, NV	Date:	1/23/	12 - 1/27/12
AECOM Site Supervisor:	Steve	Ca. 11. December Conduction			ard Purdy
AECOM Site Supervisor Phone	COM Site AFCOM Settle Officer			ardy 781-883-6425	
ist activities to be p oday:	bermohad	Transect SW Sampling	in LVWDiscree	t Loca	tion SW Sampling in LV
Muster Point:		PABCO Pavilion area	Spill Kit Location:		N/A
First Aid Kit Location	n.	In vehicles	Fire Extinguisher Locati	on.	N/A
lave all personnel	reviewed an	d understand the site-specific safety	plan?		Yes No
		sessments in place for each of the ta		and	ØYes □No*
	ractor have	hezard assessments (e.g., THA, JS/	A JHA) for their activities?		Yes No* No.
	imits in plac	be for the applicable tasks to be perfe		d by all	
Have all members of mitigation?	ØYes □ No*				
	en properly	cordoned-off to protect workers, site	staff, and the public?		☐Yes ☐No MNA
		completed, documented, and reviews		1 1	Yes No WNA
notifying the AECO	M Site Supe	injury/ intervention reporting requirent ervisor of any injury near miss, unsafe e performed until corrective action is con-	condition or hazard obser	vation?	☑Yes □No
Topics covered in today's tailgate meeting:	-Workin -Heat/Co	o, fall hazards g in/around water old exposure g in low light			
Other Items Discu	ssed Today	K.			ority & Obligation
POG			* All employees will : concerned or uncert	stop the ain abou	job any time anyone is it safety.
· SECIME		net i ne e	* All employees will a hazard or additional	stop the mitigatio	job if anyone identifies a in not recorded on the THA.
- Co-Siza	M DHAL	weelbes.	* All employees will be personnel or condition	oe alerte	d to any changes in
			* All employees will s	stop the	job and reassess a task, I then amend the THA as

Daily Tailgate Meeting	Daily	Tailgate	Meeting
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					S3AM-209-F
Job Location:	Las	Vegas Wash, Henderson, NV	Date:	1=	30-17
AECOM Site Supervisor	Stev	e Howe	Person Conducting Tailgate Meeting:	Richard Purdy	
Supervisor Phone	ECOM Site 603-520-0169		AECOM Safety Officer Name & Phone	R. Pu	rdy 781-883-6425
List activities to be today:	performed	X Transect SW Samplin	ng in LVWDiscreen	Locat	ion SW Sampling in L
Muster Point		PABCO Pavilion area	Spill Kit Location:		N/A
First Aid Kit Location	on:	In vehicles	Fire Extinguisher Location	on:	N/A
		nd understand the site-specific safe			K Yes □ No*
Are current Pre-Joi understood by all?	Hazard A	ssessments in place for each of the	tasks to be performed today	and	⊠ Yes □ No*
Does each subcon	tractor have	hazard assessments (e.g., THA, JS	SA, JHA) for their activities?	-	Yes No No
Are any required po- identify required pe-	ermits in pla	ace for the applicable tasks to be per permit #s:	formed today and understoo		Yes No No No
Have all members mitigation?	ØYes □ No*				
Have work areas b	een proper	y cordoned-off to protect workers, si	te staff, and the public?		Yes No WNA
		completed, documented, and review			Yes No No
Do all site workers notifying the AECO	understand M Site Sun	injury/ intervention reporting require ervisor of any injury near miss, unsa	ments including immediately	ration?	Yes No.
Topics covered in today's taligate meeting:	-Workin -Heat/C -Workin	p, fall hazards ng in/around water old exposure ng in low light			
Other Items Discu	esed Toda	NT.	Stop Wo	rk Auth	ority & Obligation
Sales ments triated	7036		* All employees will a concerned or uncerti	stop the ain abou	job any time anyone is t safety. lob if anyone identifies a
			* All employees will to personnel or condition	mitigation at the stop the	n not recorded on the THA. d to any changes in

Felephone Number:	602 520	0100
Name of Vessel:	Bic Red	0169
Registration No.:	NA NA	
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable featu	red Old Town (Discoury 169
Rafts/Dinghies: Number:		
Radio: Type:	Frequencies Monitored:	
lumber of persons onboard:		
lame: Age:	Address & Telephone:	
lactel Madhee 2	7 978 - 811	- 943G
Steve Home 5	4 603 52	0-0169
ngine Type: H.P.:	Normal Fuel Supply (days):	
urvival equipment on board: (check	as appropriate)	
Life Jackets	Flares	Smoke Signals
Medical Kit	EPIRB	Paddles
Anchor	Loran/Gps	·
A cross tran	sect at	
e & Time of Departure: \/>\.	17 10:70	
earture From: 1/31/	17 11:30	
arture To: T4,69	5 to T4.65	

Daily	Tailgate	Meeting	

1000000	1			-	\$3AM-209-FI
Job Location.	Las V	egas Wash, Henderson, NV	Date:	1-3	1-17
AECOM Site Supervisor	Steve	Steve House Person Conducting			rd Purdy
AECOM Site Supervisor Phone	AEGOM Ste 603 520 0150				rdy 781-883-6425
List activities to be today:	performed	✓ Transect SW Sampling			on SW Sampling in LV
Muster Point		PABCO Pavilion area	Spill Kit Location		N/A
First Aid Kit Locat	ion:	In vehicles	Fire Extinguisher Locatio	-	i/A
Have all personne	reviewed an	d understand the site-specific safety	onlan?		10/ 0
Are current Pre-Jo	b Hazard Ass	essments in place for each of the ta	sks to be neclamed today	and	☐Yes ☐ No*
The second second second				nio.	Yes No.
ton any required a	tractor have t	nazard assessments (e.g., THA, JSA	A, JHA) for their activities?		☐ Yes ☐ No* ☒ N/A
dentify required po	ermits in prac ermits and pe	e for the applicable tasks to be performit #s	ormed today and understood	by all?	Yes No NA
lave all members mitigation?	of the work to	ern confirmed understanding of the	work, hazards, and controls	1	Yes No
tave work areas b	een properly	cordoned-off to protect workers, site	and the matter	-	
tave equipment cl	hecks been co	impleted, documented, and reviewe	and the public?		☐Yes ☐ No. ☐NA
30 all site workers.	understand in	iurul Intermedian reputles as a	Contract of the Contract of th	-	Yes No NA
THE PARTY AND PERSONS ASSESSED.	THE WHITE SHIPPER	visor of any injury near miss, unsafe performed with corrective action is comp	Committee on house of the	ation?	Yes No.
	the latest and the	be universe many consective action at com-	oleted and documented.		
Topics covered in today's taligate neeting	-Working -Heat/Col	fall hazards in/around water d exposure in low light) 4 × 114 = = =		The I

Other Items Discussed Today:	Stop Work Authority & Obligation		
· waveled poles	* All employees will stop the job any time anyone is concerned or uncertain about safety.		
DOL BULTS / ROCK PACK	 All employees will stop the job if anyone identifies a hazard or additional mitigation not recorded on the THA. 		
	* All employees will be alerted to any changes in personnel or conditions at the worksite		
	* All employees will stop the job and reassess a task, hazards, and mitigations, and then amend the THA as needed		

THE REAL PROPERTY AND THE

Telephone Number:	(781) 883	6425
Name of Vessel:	V. 11	01)
Registration No.:	NA AIS	514-R031181
Description of Vessel: Type: Make; Color of Hull/Trim: Most distinguishing identifiable	Yellow Cande We-No-Nah	14-R031189 North Fork
Rafts/Dinghies: Number:/	A Size:Color:	
Radio: Type:	Frequencies Monitored:	
Number of persons onboard:		
lame: Age:	Address & Telephone:	
Ricklud	53 781 883-6	6425
Jare Might Hage	n 26 503 318	
ngine Type: NA H.P.	: Normal Fuel Supply (days):	
urvival equipment on board: (ch	neck as appropriate)	
Life Jackets	Flares	Smoke Signals
Medical Kit	EPIRB	Paddles
Anchor	Loran/Gps	thou sole
Transect T	4.2 on Las Vegas	s lidish
e & Time of Departure:	2/1/17 930	
arture From:	South Rock	
arture To:	North Rose	A

Telephone Number:	GO3 SãO O16	7
Name of Vessel:	By Red	
Registration No.:	AISIT ROISS	oury 169
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:	ow Town Disc	
Rafts/Dinghies: Number: Number: A Size:	Color:	
Radio: Type: Frequ	encies Monitored:	
Number of persons onboard:		
Name: Age:	Address & Telephone:	
Radel Madhee 27	978-877-9436	
CStee Hore 54	603-520-0169	
Engine Type:H.P.:I	Normal Fuel Supply (days):	
Survival equipment on board: (check as ap	propriate)	
Life Jackets	Flares	Smoke Signals
Medical Kit	EPIRB	Paddles
Anchor	Loran/Gps	Throw rope
Trip: Transect 4,75		
Date & Time of Departure:	2/1/17 930	
Departure From:	South Sank	
Departure To:	north bank	
Expected to arrive by: 12 '.00 In no	case later than: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	

Daily Tailgate Meeting

S3AM-209-FM5

Job Location	Las V	egas Wash, Henderson, NV	/ Date:	2-1	-17
AECOM Site Supervisor	Steve Howe		Person Conducting Tailgate Meeting	Richard Purdy	
AECOM Site Supervisor Phone:	603-520-0169		AECOM Safety Officer Name & Phone:	R. Purdy 781-883-6425	
List activities to be today:	performed	Transect SW Sample	ing in LVWDiscree	t Locat	ion SW Sampling in LVV
Muster Point		PABCO Pavilion area	Spill Kit Location		N/A
First Aid Kit Location	on	In vehicles	Fire Extinguisher Locat	ion:	N/A
Have all personnel	reviewed and	d understand the site-specific sa	fety plan?		☑ Yes ☐ No*
Are current Pre-Joi understood by all?	h Hazard Ass	essments in place for each of the	e tasks to be performed today	y and	Yes □ No*
Does each subcon	tractor have f	nazard assessments (e.g., THA,	JSA, JHA) for their activities?		Yes No No NA
Are any required policy requir		e for the applicable tasks to be p	erformed today and understo	od by all	Yes No. X N/A
ACCOUNT OF THE PARTY OF THE PAR		sam confirmed understanding of	the work, hazards, and contri	ols/	☐Yes ☐ No*
				☐ Yes ☐ No. ☐ N/A	
Have equipment ch	necks been o	ompleted, documented, and revi	ewed?		☐Yes ☐ No* ☐ N/A
notifying the AECC	M Site Super	njury/intervention reporting requirvisor of any injury near miss, un a performed until corrective action is	safe condition or hazard obse	ervation?	Yes □ No*
Topics covered in today's tailgate meeting:	-Working -Heat/Co	s, fall hazards g in/around water sld exposure H-1074 g in low light			
Other Items Discu	seed Today		Stop V	Vork Aut	hority & Obligation
Oniel Itellia Diact	and roday			II stop th	e job any time anyone is
			* All employees w	all stop th	e job if anyone identifies a tion not recorded on the THA.
				ill be aler	ted to any changes in the worksite.
		All employees will stop the job and reassess a task.			

needed.

Telephone Number:		761 CG7 (V)	25
Name of Vessel:		781 883 G4	2
Registration No.:		Mellow Yellow	
		AIS14-RO.	31187
Description of Vessel: Type:		We-No-Nah A	bithfork
Make: Color of Hull/Trim:		Yellow Canoe	
Most distinguishing ider	ntifiable feature:	Tevio .	
Rafts/Dinghies: Number	r: Size:	Color:	
Radio: Type:	Freque	ncies Monitored:	
Number of persons onb	oard:		
Name:	Age:	Address & Telephone:	
Rick Purdy	53	781 883 640	25
Care Mush He	icen 26	503 318 597	
//	3		
Engine Type: NA	H.P.: No	ormal Fuel Supply (days):	
Survival equipment on b	oard: (check as app	ropriate)	
Life Jackets	Г	Flares	Smoke Signals
			- Committee Cignals
Medical Kit	L	EPIRB	Paddles
Anchor	Г	Loran/Gps	PH. man
Alicio		Loranicopo	Thou rolle
Trip: Trans	eds TS	13 + T6,0	
Date & Time of Departure	»:	2/2/17 0845	
Departure From:		T5.3 0845.	-0930
Departure To:		T 6,0 0945.	1100
Expected to arrive by:	lo no ca	se later than: 13	W 00

Telephone Number:	603 520 0169
Name of Vessel:	By Red
Registration No.:	ATC17 R013341
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:	old Town Discory 169 red cande
Rafts/Dinghies: Number: Number: Number:	Color:
Radio: Type: Frequ	encies Monitored:
Number of persons onboard:	
Name: Age:	Address & Telephone:
Radiel Madhee 27	978-877-9436
C. Stre Home 54	603-520-0169
Engine Type: H.P.:	Normal Fuel Supply (days):
Survival equipment on board: (check as ap	propriate)
Life Jackets	Flares Smoke Signals
Medical Kit	EPIRB Paddles
Anchor	Loran/Gps To throw rope
Trip: Las Vegas Wash	Transacts 6,0 and 3.6
Date & Time of Departure:	2/2/17 0845
Departure From:	T60 0845-0930
Departure To:	T3.C 0945-1100
Expected to arrive by: [1 00] In no	case later than: 1300

Daily Tailgate Meeting

Job Location	Las Ve	egas Wash, Henderson, NV	Date:	2.	2-17
AECOM Site	Steve Howe		Person Conducting Tailgate Meeting	Richard Purdy	
AECOM Site Supervisor Phone:	603-5	20-0169	AECOM Safety Officer Name & Phone:	R. Purdy 781-883-6425	
List activities to be p today:	erformed	✓Transect SW Sampling	in LVWDiscree	t Loca	ation SW Sampling in LVW
Muster Point:		PABCO Pavilion area	Spill Kit Location.		N/A
First Aid Kit Location	1 1	In vehicles	Fire Extinguisher Locati	on:	N/A
Have all personnel r	eviewed and	understand the site-specific safety	plan?		☑Yes ☐No*
A CONTRACTOR OF THE PARTY OF TH	-	essments in place for each of the ta	the state of the s	and	☑Yes ☐ No*
	ractor have h	azard assessments (e.g., THA, JS/	A, JHA) for their activities?		☐ Yes ☐ No* ☒ N/A
Are any required per identify required per		e for the applicable tasks to be perf	ormed today and understoo	od by a	II? ☐ Yes ☐ No* ☒ N/A
		ern confirmed understanding of the	work, hazards, and contro	15/	✓Yes □No*
STATE OF THE OWNER, TH	en properly	cordoned-off to protect workers, site	e staff, and the public?		☐Yes ☐No* ☐NA
Have equipment ch	ecks been o	impleted, documented, and reviewe	ed?		Yes No No NA
notifying the AECOI	M Site Super	njury/ intervention reporting requirer rvisor of any injury near miss, unsafe performed until corrective action is con-	e condition or hazard obser	y rvation	? ☐Yes ☐ No*
ir ryo, then i	YORK CAPITION DE	performed until corrective action is con	pleted and documented.		
Topics covered in today's taligate meeting	-Working -Heat/Co	, fall hazards g in/around water ld exposure g in low light			
Other Items Discu					thority & Obligation
· maybe	Hou	grand island.	* All employees will	tain ab	

personnel or conditions at the worksite.

* All employees will stop the job if anyone ident tes a hazard or additional miligation not recorded on the THA * All employees will be alerted to any changes in

* All employees will stop the job and reassess a task. hazards, and mitigations, and then amend the TRA as

Telephone Number:		781 8	83 6425		
Name of Vessel:		Mellon	Yellow		
Registration No.:		AISI	4-R031189		
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing ident		We No Nah Northfork Yellow canoe			
Rafts/Dinghies: Number:	// Size:	Color:			
Radio: Type:	Freque	ncies Monitored: _			
Number of persons onbo	pard:				
Name:	Age:	Address & Telep	phone:		
Rick Purdy	53	781	883 6425		
Clare M-H	26	503	318 5970		
Engine Type:	H.P.:1	Normal Fuel Supply	/ (days):		
Survival equipment on b	ooard: (check as ap	propriate)			
Life Jackets		Flares	Smoke Signals		
Medical Kit		EPIRB	Paddles		
Anchor		Loran/Gps	from rope		
Trip: Transec	× T6	35 0	Las Vegas Wash		
Date & Time of Departu	ire:	2/3/1	0830		
Departure From:			Rd weir		
Departure To:		River Mile 6.35			
Expected to arrive by:_	1000_In no	case later than:	<u> </u>		

Telephone Number:	603 520-0169			
Name of Vessel:	By Red			
Registration No.:	ATS 17 RO13391			
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:	Old Town Discours 169 Red Curve			
Rafts/Dinghies: Number: Number: Size:	Color:			
Radio: Type:Frequ	encies Monitored:			
Number of persons onboard:				
Name: Age:	Address & Telephone:			
Star Home 54	603 520 0169			
Rachel Machee 27	978 877 9436			
Engine Type: H.P.:	Normal Fuel Supply (days):			
Survival equipment on board: (check as a	ppropriate)			
Life Jackets	Flares Smoke Signals			
Medical Kit	Paddles			
Anchor	Loran/Gps throw rope			
Trip: Transect 6.8	at Ouck Creek Conflore Wer			
Date & Time of Departure:	2/3/17 0900			
Departure From:	Duck Creek Wein			
Departure To:	Ruer Mile 6.8			
Expected to arrive by: 960 In n	o case later than: 1200			

Daily Tailgate N	leet	ing
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t-t-t	1			_	S3AM-209-FM
Job Location:	Las Ve	egas Wash, Henderson, NV	Date:	2-	3-17
AECOM Site Supervisor:	Steve Howe		Person Conducting Tailgate Meeting:	Richard Purdy	
AECOM Site Supervisor Phone:	603-5	20-0169	AECOM Safety Officer Name & Phone:	R. P	urdy 781-883-6425
List activities to be p oday;	erformed	✓ Transect SW Sampling	g in LVWDiscree	t Loca	tion SW Sampling in LV
Muster Point:	1	PABCO Pavilion area	Spill Kit Location:		N/A
First Aid Kit Location	: 1	n vehicles	Fire Extinguisher Locati	Fire Extinguisher Location: N/A	
lave all personnel n	eviewed and	understand the site-specific safety	plan?		Yes No
Are current Pre-Job understood by all?	Hazard Asse	essments in place for each of the ta	asks to be performed today	and	☑Yes ☐ No*
Does each subcontra	actor have h	azard assessments (e.g., THA, JS	A, JHA) for their activities?		Yes No X N/A
	mits in place	for the applicable tasks to be perf		od by a	II? ☐ Yes ☐ No* ☒ N/A
Have all members o mitigation?	the work te	am confirmed understanding of the	work, hazards, and contro	is/	☑Yes ☐ No*
Have work areas be	en properly	cordoned-off to protect workers, sit	e staff, and the public?		☐ Yes ☐ No* ☑ N/A
		empleted, documented, and review			Yes No* N/A
Do all site workers u	nderstand in	njury/ intervention reporting requirer visor of any injury near miss, unsaf	ments including immediatel e condition or hazard obse	y rvation	Yes No
* if No, then w	ork cannot be	performed until corrective action is con	npleted and documented.		
Topics covered in today's tailgate meeting:	-Working -Heat/Co	, fall hazards ; in/around water ld exposure pinlowlight d of week cong to locations	stocence		
Other Items Discu	ssed Today:		Stop W	ork Au	thority & Obligation
- 61117011	+ +	chouse eeon	* All employees will concerned or uncer		ne job any time anyone is

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself, you'll be sure that everything is on board and in good working order. Your passengers will appreciate knowing you're concerned about boating safety.

Float plan--let a friend or relative know when you're leaving, where you're going, when you expect to return, what to do if you don't, and a description of your boat

Registration certificate or documentation

Personal Flotation Devices (wearable and throw able)--USCG approved, good condition, readily accessible, assigned and fitted

Fire Extinguishers--right number, size, and class for boat; charged, not corroded, nozzle clear, bracketed, readily accessible

Visual Distress Signals--current dates on flares, proper number, batteries good if lights or EPIRB

Anchors and Line--adequate anchor for bottom, adequate line for water depth

Bilge device --bilge pump operable, alternative bailing device available

Watch or clock--operable

Bright flashlight or searchlight

Navigation lights --tested and operable, spare bulbs

Batteries--fully charged, encased in plastic boxes or terminals covered, securely fastened down

Sound-producing device--horn, whistle appropriate for boat

Alternate propulsion--paddle or oar

First Aid Kit

Tools, spare outboard prop and lock nut

Compass

Weather Radio

2-6-17 Tate+ Ugive

Boat Safety Checklist

knowing you're concerned about boating safety.
Float planlet a friend or relative know when you're leaving, where you're going, when you expect to return, what to do if you don't, and a description of your boat
Registration certificate or documentation
Personal Flotation Devices (wearable and throw able)USCG approved, good condition, readily accessible, assigned and fitted
Fire Extinguishersright number, size, and class for boat; charged, not corroded, nozzle clear, bracketed, readily accessible
Visual Distress Signalscurrent dates on flares, proper number, batteries good if lights or EPIRB
Anchors and Lineadequate anchor for bottom, adequate line for water depth
Bilge devicebilge pump operable, alternative bailing device available
Watch or clockoperable
Bright flashlight or searchlight
Navigation lightstested and operable, spare bulbs
Batteriesfully charged, encased in plastic boxes or terminals covered, securely fastened down
Sound-producing devicehorn, whistle appropriate for boat
Alternate propulsionpaddle or oar
First Aid Kit
First Aid Kit Tools, spare outboard prop and lock nut
Compass
Sunscreen
Weather Radio

reti	Float planlet a friend or relative know when you're leaving, urn, what to do if you don't, and a description of your boat	where you're going, when you expect to
Γ	Registration certificate or documentation	
acc	Personal Flotation Devices (wearable and throw able)USCG tessible, assigned and fitted	approved, good condition, readily
┌ bra	Fire Extinguishersright number, size, and class for boat; clacketed, readily accessible	narged, not corroded, nozzle clear,
Γ	Visual Distress Signalscurrent dates on flares, proper num	per, batteries good if lights or EPIRB
A	Anchors and Lineadequate anchor for bottom, adequate lin	e for water depth
Γ	Bilge devicebilge pump operable, alternative bailing device	e available
D	Watch or clockoperable	
1	Bright flashlight or searchlight	
Γ	Navigation lightstested and operable, spare bulbs	
Γ	Batteriesfully charged, encased in plastic boxes or termina	ls covered, securely fastened down
7	Sound-producing devicehorn, whistle appropriate for boat	
7	Alternate propulsionpaddle or oar	21
7	First Aid Kit	2/4/7
Γ	Tools, spare outboard prop and lock nut	Marion YEllow
٢	Compass	MELLOW YELLOW R. MUARGHY
7	Sunscreen	
Γ	Weather Radio	

Telephone Number:	603 770 4945
Name of Vessel:	Mellon Yellon
Registration No.:	
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:	We No Nah Northfork Yellow canoe
Rafts/Dinghies: Number: A Size:	Coi
Radio: Type:Frequ	encies Monit ed:
Number of persons onboard:	
Name: Age:	Address & Telephone
Ryan McCarthy 37	603 770 4945
Connor Giller 27	781 439 7762
Engine Type: //A H.P.:	Normal Fuel upply (day::
Survival equipment on board: (check as ap	propriate)
Life Jackets	Flares Smoke Signals
Medical Kit	EPIRE Paddles
Anchor	and tributery near labor Road wer
Trip: Las Vegas Wash	and tributery near Pasco Read Wer
Date & Time of Departure:	2/6/17/ 0800
Departure From:	Pusco Raw
Departure To:	LWS.9 and GLWCG.1_4
Expected to arrive by: 1500 In no	case later 1000

Telephone Number:	503 318 5970
Name of Vessel:	By Red
Registration No.:	133 1960
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:	Old Town Discovery 169 red cance
Rafts/Dinghies: Number: Magazine	Co
Radio: Type: Frequ	encies Mor d:
Number of persons onboard:	
Name: Age:	Address Telephone:
Oare Mirohy-Hom 26	503 318 5970
Tate Yulga 24	GS1 301 9260
Engine Type: WA H.P.:	Normal F. pply (days
Survival equipment on board: (check as ap	ppropriate)
Life Jackets	Flare . Smoke Signals
Medical Kit	Paddles
Anchor	10. 25 Thourage
Trip: Cas Vecas V	vash
Date & Time of Departure:	Palso Road Weir
Departure From:	2/6/17 0800
Departure To:	stations LWS13, LW4,95 GLW4,9
Expected to arrive by: V500 In no	case later to 12 1700

Telephone Number:	781-883-642S	
Name of Vessel:	Oceans 11	
Registration No.:		
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:	Old Town Piscolery 169 red canoe	
Rafts/Dinghles: Number: Size:	Col	
Radio: Type: Frequ	uencies Mon ed:	
Number of persons onboard:		
Name: Age:	Addres 5 Felephone	
Roc Puray 54	781-883-6425	200 Par 10 P
Mick Pryor 37	805-200-7839	
Control de		
Engine Type:H.P.:	Normal Fuer Toply (da)	
Survival equipment on board: (check as ap	ppropriate)	
Life Jackets	Flar d Smoke Signals	
Medical Kit	FPIFF Proddles	
Anchor	Loran os throw no	رعا
Trip: Lay Veras W	vash	
Date & Time of Departure:	2/6/17 0800	
Departure From:	Pasco Row Werr	
Departure To:	Stations LW7,2, LW6,7	
Expected to arrive by: \(\sigma \sigma \sigma \) In no	case later = n:\700	

Daily Tailga	eting			S3AM-209-FM5		
Job Location:	Location: Las Vegas Wash, Henderson, NV		Date:	2-	6.17	
AECOM Site Supervisor:		e Howe	Person Conducting Tailgate Meeting:	Richard Purdy		
AECOM Site Supervisor Phone:	603	-520-0169	AECOM Safety Officer Name & Phone:	R. Pu	rdy 781-883-6425	
List activities to be pertoday:	erformed	Transect SW Sampling	in LVWDiscree	t Locati	ion SW Sampling in LVW	
Muster Point:		PABCO Pavilion area	Spill Kit Location:]	N/A	
First Aid Kit Location	:	In vehicles	Fire Extinguisher Location	on: l	N/A	
Have all personnel re	eviewed a	and understand the site-specific safety	plan?		Yes □ No*	
Are current Pre-Job		ssessments in place for each of the ta		and	☑ Yes ☐ No*	
understood by all? Does each subcontra	actor have	e hazard assessments (e.g., THA, JSA	A, JHA) for their activities?		☐ Yes ☐ No* ☒ N/A	
Are any required per	mits in pla	ace for the applicable tasks to be perfo		od by all?	Yes No* X N/A	
Have all members of mitigation?	the work	team confirmed understanding of the	work, hazards, and control	ls/	✓Yes □ No*	
	en proper	ly cordoned-off to protect workers, site	staff, and the public?		☐ Yes ☐ No* ☐ N/A	
Have equipment che	cks been	completed, documented, and reviewe	d?		V Yes □ No* □ N/A	
notifying the AECON	Site Sur	d injury/ intervention reporting requirent pervisor of any injury near miss, unsafe	e condition or hazard obser	y vation?	✓ Yes □ No*	
* if No, then w	ork cannot	be performed until corrective action is com	pleted and documented.			
Topics covered in today's tailgate meeting: -Slip, trip, fall hazards -Working in/around water -Heat/Cold exposure -Working in low light						
		7				
Other Items Discus	sed Toda	ıy:	Stop W	ork Auth	ority & Obligation	
- see attacked sheet			* All employees will stop the job any time anyone is concerned or uncertain about safety.			
ے ہوں ط			* All employees will hazard or additional	l stop the al mitigati	e job if anyone identifies a on not recorded on the THA.	
			* All employees will personnel or condit	* All employees will be alerted to any changes in personnel or conditions at the worksite.		
		* All employees wil	* All employees will stop the job and reassess a task, hazards, and mitigations, and then amend the THA as			

Daily Tailgate Meeting (S3AM-209-FM5)
Revision 5 December 15, 2016
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0

SITE WORKERS (Including AECOM C * You have been involved in reviewing the TH perform. * You understand the permit to work requirem * You are aware that no tasks or work (that is * You are aware of your authority and obligati I arrived and departed fit for duty: * You are physically and mentally fit for duty. * You are not under the influence of any type * You are aware of your responsibility to immediate to the AECOM Supervisor. * You signed-out uninjured unless you have of	As and understand the sents applicable to the not risk-assessed) is on to 'Stop Work'. of medication, drugs, ediately report any illr	e work y to be p or alconess, inj	rds and control ou are about erformed. hol that could ury (regardles	to perform (affect your ass of where of	associate	ed with each tas	sk you are a	about to
Print Name & Company			nature		and the second second second	s & Sign In Time		& Sign Time
Ren Para da	Tr.	1010	9)		& Fit	Out	& Fit
. Swang arecom	2	1/0	<u>.</u>	(0 જિલ			90
Note Pager ARCON	he	1			Joe	& Fit		& Fit
James McCoy AECON	1 Im	1	ng		In පීලල	& Fit	Out	& Fit
Petus Paulos AFCUX	n brogo	~	-			& Fit	Out	& Fit
Tate Yulga AEror		20	/ /		10,410	& Fit	Out	& Fit
FYAN MYADAHI	SW	In	My			& Fit	Out	& Fit
(Attach additional Site Worker sign-ii	n/out sheets if needed	1)			-			
SITE VISITOR / SITE REPRESENT								
	pany Name	Arri	val Time	Departur	e Time		Signature	
To be completed once activities for	or the day have b	een c	oncluded					
Were there any Incidents, Near Misses or Observations? Yes Yes								
Were there any 'Stop Work' interventions	?		☐ Yes ☐ No	If yes, d	letails:			
Were there any areas for improvement noted?			☐ Yes	If yes, d	If yes, details:			
At the conclusion of the day, the job site is being left in a safe condition and there were no reports of injury or first aid.		Yes □ No	AECOM	AECOM Supervisor Signature:				
fore Murphy Hogen Ph	The Ha	-		080		C Store	be	Gira
Daily Tailgate Meeting (S3AM-209-F/66) Revision 5 December 15, 2016 PRINTED COPIES ARE UNCONTRO	CONTROLLE	D COP	Y IS AVAILA	BLE ON CO	MPANY I	NTRANET	ok	2 of 2
hadred Undless	all	_		080 080	20	1	1200) —

retu	Float planlet a friend or relative know when you're leaving, where you're going, when you expect to rn, what to do if you don't, and a description of your boat
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acce	Personal Flotation Devices (wearable and throw able)USCG approved, good condition, readily essible, assigned and fitted
r brac	Fire Extinguishersright number, size, and class for boat; charged, not corroded, nozzle clear, cketed, readily accessible
Г	Visual Distress signalscurrent dates on flares, proper number, batteries good if lights or EPIRB
TC/	Anchors and Lineadequate anchor for bottom, adequate line for water depth
Γ	Bilge devicebilge punp operable, alternative bailing device available
N	Watch or clockoperable
Г	Bright flashlight or searchlight
_	Navigation lightstested and operable, spare bulbs
Γ	Batteriesfully charged, encased in plastic boxes or terminals covered, securely fastened down
1	Sound-producing devicehorn, whistle appropriate for boat
-/	Alternate propulsionpaddle or oar
TT/	First Aid Kit
Γ'	Tools, spare outboard prop and lock nut
Γ	Compass (P)
	Sunscreen
Γ	Weather Radio

2-7-17 Tate+Claire

Boat Safety Checklist

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourse you'll be sure that everything is on board and in good working order. Your passengers will apprecial knowing you're concerned about boating safety.
Float planlet a friend or relative know when you're leaving, where you're going, when you expect to return, what to do if you don't, and a description of your boat
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Bilge devicebilge pump operable, alternative bailing device available
Watch or clockoperable
Bright flashlight or searchlight
Navigation lightstested and operable, spare bulbs
Batteriesfully charged, encased in plastic boxes or terminals covered, securely fastened down
Sound-producing devicehorn, whistle appropriate for boat
Alternate propulsionpaddle or oar
First Aid Kit
Tools, spare outboard prop and lock nut Jan Marian
Compass
Sunscreen
□ Weather Radio

retu	Float planlet a friend or relative know when you're leaving, where irn, what to do if you don't, and a description of your boat	you're going, when you expect to
Γ	Registration certificate or documentation	
acce	Personal Flotation Devices (wearable and throw able)USCG approvessible, assigned and fitted	ved, good condition, readily
┌ brad	Fire Extinguishersright number, size, and class for boat; charged, cketed, readily accessible	not corroded, nozzle clear,
Γ	Visual Distress Signalscurrent dates on flares, proper number, bat	teries good if lights or EPIRB
	Anchors and Lineadequate anchor for bottom, adequate line for wa	ater depth
Γ	Bilge devicebilge pump operable, alternative bailing device availa	ble
<u></u>	Watch or clockoperable	
Γ	Bright flashlight or searchlight	
Γ	Navigation lightstested and operable, spare bulbs	
Γ	Batteriesfully charged, encased in plastic boxes or terminals cover	red, securely fastened down
P	Sound-producing devicehorn, whistle appropriate for boat	
7	Alternate propulsionpaddle or oar	
W	First Aid Kit	2/11.2
٣	Tools, spare outboard prop and lock nut	2/7/17 Mélian Terion C. MCCAETAY
Γ	Compass	MELLON TELON
7	Sunscreen	R. MCCARTAY
Γ	Weather Radio	C/A

Telephone Number:	508-318	3-5970	ST James Na				
Name of Vessel:			-				
Registration No.:	-		-				
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing ide	Rool	Reple In	side				
Rafts/Dinghies: Numb	er: Siz	zeCo	-	N/A			
Radio: Type:	F	require es Mc	-d	A/A			
Number of persons or	nboard: Z						
Name:	Age:	Add es.	Telephone:				
ChreMH	26	280	College St	Lawsler, MEC	74243	503-318	5970
Tak Y			0				
Season - Schwarzening with remail					722	a v sa	
Engine Type:	H.P.:	Normal Fu	apply (days):	N/2	4		
Survival equipment or	n board: (check	as appropriate)					
Life Jackets		Fan		Smoke	e Signals		
Medical Kit		L Fbit		⊘ Paddle	es		
Anchor		L Lora	,58			_	
Trip:		-		- 0		ж 2 р	
Annualistic and a community of the control of the c	hura: 7/7/	12	-	2 80 0	Cart Service Balling	manufacture mondaments (Mill. 1997)	
Date & Time of Depart	22.	-		-		1 Total - 18	
Departure From: LM	213 & EW	1214,15			el de l'as	O -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0	
Departure To:		1				22 3 6	
Expected to arrive by:	5pm	In no case later	· ·			I chiasia i	

Telephone Number: 781 - 863 - 6425					
Name of Vessel:					
Registration No.:					
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature: Old Hown Discovery 169 Canoe					
Rafts/Dinghies: Number	: Size:	Color:			
Radio: Type:	A Freque	ncies Monitored:	_		
Number of persons onbe	oard: 7				
Name:	Age:	Address & Telephone:			
Rick Perily	53	781-883-642	2		
Midelyor	37	805-200-783	39		
	es, iliqual a rese	en e			
			- 4		
Engine Type: H.P.: Normal Fuel Supply (days):					
Survival equipment on board: (check as appropriate)					
Life Jackets	j	Flares	Smoke Signals		
Medical Kit	I	EPIRB	Paddles		
Anchor	J	Loran/Gps	thour rope		
Trip: Las Vegas Worth Rive Mile Co.05 to 7,20					
Date & Time of Departure: 2/7 0800					
Departure From: Pasco (Coad)					
Departure To:	er a harrer to a some	Duck Crock	Onfleree		
Expected to arrive by:	\$00 In no c	ase later than: 1700	THE SECURITION OF A P. LEWIS MICHIGAN AND A STATE OF THE P.		

Telephone Number:	781.439.	.7762	
Name of Vessel:	Mellow /ell		
Registration No.:			
Description of Vessel: Type: Make: Color of Hull/Trim: Most distinguishing identifiable feature:		DE-NO-NAH Northfork	
Rafts/Dinghies: Number:Size:	Cols		
Radio: Type: Cell Change Free	quencies Mor ed:	_	
Number of persons onboard: 2			
Name: Age:	Address elephone:		
Connor Colden 27	781-4	139-7262	. 24 8 8 8 8 8
Ryan McCarthy 38	603 520-	6169	
Engine Type: (Saddle H.P.:)	Normal Fue apply (days):		
Survival equipment on board: (check as	appropriate)		
Life Jackets	Flare	Smok e Signals	
Medical Kit	EPIR	Paddles	
Anchor	Lora ps		
Trip: Multiple locations	in wash		
Date & Time of Departure:		3 33 MACEST, SMACES C	2 1 ********************************
Departure From: Shore		2.00.204900303	
Departure To: Wash		S SAR A SAR A	ngay was war w
Expected to arrive by: 0830 In r	no case later to in: 4000	1600	
Connor Gilden	(9-(3	A 2/7/17 0	718

Daily Tailga	te Meeting
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Daily Tailga	e Me	eting			S3AM-209-FM5			
Job Location:	Las	Vegas Wash, Henderson, NV	Date:	.7.17				
AECOM Site Supervisor:	Stev	e Howe	Person Conducting Tailgate Meeting:	ard Purdy				
AECOM Site Supervisor Phone:	603	-520-0169	AECOM Safety Officer Name & Phone:	urdy 781-883-6425				
List activities to be petoday:	rformed	Transect SW Sampling	in LVWDiscreet Location SW Sampling in LVW					
Muster Point:		PABCO Pavilion area	Spill Kit Location:	N/A				
First Aid Kit Location		In vehicles	Fire Extinguisher Locati	N/A				
Have all personnel re	viewed a	and understand the site-specific safety	plan?	☑Yes ☐ No*				
Are current Pre-Job I understood by all?	✓ Yes □ No*							
Does each subcontra	☐ Yes ☐ No* ☒ N/A							
Are any required per Identify required per	II? ☐ Yes ☐ No* ☒ N/A							
		team confirmed understanding of the	work, hazards, and contro	ls/	✓Yes □ No*			
	en proper	ly cordoned-off to protect workers, site	staff, and the public?		☐ Yes ☐ No* ☑ N/A			
Have equipment che	cks been	completed, documented, and reviewe	d?		✓Yes □ No* □ N/A			
Do all site workers un notifying the AECOM	Yes □ No*							
		be performed until corrective action is com						
meeting:	-Worki	ip, fall hazards ng in/around water Cold exposure ng in low light AA wool	u by 5pm					
			C4 W					
Other Items Discuss	sed loga	y:	* All employees will stop the job any time anyone is					
			concerned or uncertain about safety.					
		* All employees will stop the job if anyone identifies a hazard or additional mitigation not recorded on the THA.						
			* All employees wi personnel or cond	* All employees will be alerted to any changes in personnel or conditions at the worksite.				
				* All employees will stop the job and reassess a task, hazards, and mitigations, and then amend the THA as needed.				

Daily Tailgate Meeting (S3AM-209-FM5)
Revision 5 December 15, 2016
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SITE WORKERS (including AECOM Contractors and Subcontractors): By signing here, you

- * You have been involved in reviewing the THAs and understand the hazards and control measures associated with each task you are about to
- You understand the permit to work requirements applicable to the work you are about to perform (if it includes permitted activities).
- * You are aware that no tasks or work (that is not risk-assessed) is to be performed.
- * You are aware of your authority and obligation to 'Stop Work'.

I arrived and departed fit for duty:

- * You are physically and mentally fit for duty.

 You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely. You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or fatigue issue you may have to the AECOM Supervisor. You signed-out uninjured unless you have otherwise informed the AECOM Supervisor. 														
Print Name & Con	ise informed the AECOM Supervisor. N Signature				Initials & Sign In Time		Initials & Sign Out Time							
Clare Murphy Hagar	the Manual Control of the Manual Control of the Manual Control of the Control of				08		Out & Fit							
Nich Payer AE	rea	F			0830		Out & Fit							
Tate Yulga	Juste Unlan				1n & Fit (9831)		Out & Fit							
Rice Pressy	rend			_	In & Fit のとろう		Out & Fit							
Tate Yulgar Rice Poesey Ryan Maray (+000) (1)					In & Fit		Out & Fit							
(romis Cold	(G-C)			In & Fit 0 多 フ ク		Out & Fit								
(Attach additional Site t	Worker sign Fill Jour)	(Attach additional Site Worker sign-in/out sheets if needed) SITE VISITOR / SITE REPRESENTATIVE										
Name Compan						re Time								
Hamo	Compan	y Name	Arrival T	ime	Departure	e Time		Signature						
1341110	Compan	y Name	Arrival T	ime	Departure	e Time		Signature						
Name	Compan	y Name	Arrival T	ime	Departure	e Time		Signature						
	Compan	y Name	Arrival T	ime	Departure	e Time		Signature						
To be completed once a	ctivities for th	ne day have b			Departure	e Time		Signature						
	ctivities for th	ne day have b		uded:	Departure			Signature						
To be completed once a	ctivities for the	ne day have b	peen conc	uded:		letails:		Signature						
To be completed once a Were there any Incidents, Ne	ectivities for the ear Misses or Observentions?	ne day have boservations?	peen conc	luded: (es No	If yes, de	etails:		Signature						
To be completed once a Were there any Incidents, Ne Were there any 'Stop Work' i	ectivities for the par Misses or Objective Mis	ne day have to be	peen conc	uded:	If yes, d	letails:	isor Signature							

Petros Paulos
Daily Tailgate Meeting (S3AM-209-FM5)
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	+Clair C		CZY/A
2/9/17	Boat Safety	Checklist	

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself,

you' knov	If be sure that everything is on board and in good working order. Your passengers will appreciate ving you're concerned about boating safety.
	Float planlet a friend or relative know when you're leaving, where you're going, when you expect to rn, what to do if you don't, and a description of your boat
~	Registration certificate or documentation
acce	Personal Flotation Devices (wearable and throw able)USCG approved, good condition, readily ssible, assigned and fitted
r brac	Fire Extinguishersright number, size, and class for boat; charged, not corroded, nozzle clear, keted, readily accessible
Γ	Visual Distress Signalscurrent dates on flares, proper number, batteries good if lights or EPIRB
~ /	/ Anchors and Lineadequate anchor for bottom, adequate line for water depth
Γ	Bilge devicebilge pump operable, alternative bailing device available
√	Watch or clockoperable
~ /	Bright flashlight or searchlight
Γ	Navigation lightstested and operable, spare bulbs
√/	Batteriesfully charged, encased in plastic boxes or terminals covered, securely fastened down
	Sound-producing devicehorn, whistle appropriate for boat
~	Alternate propulsionpaddle or oar
Γ	First Aid Kit
Γ	Tools, spare outboard prop and lock nut
Г	Compass
r/	Sunscreen
Г	Weather Radio

Boat Safety Checklist

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself, you'll be sure that everything is on board and in good working order. Your passengers will appreciate knowing you're concerned about boating safety.

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Γ	Registration certificate or documentation					
acce	Personal Flotation Devices (wearable and throw able)USG essible, assigned and fitted	CG approved, good condition, readily				
┌ brac	Fire Extinguishersright number, size, and class for boat; keted, readily accessible	charged, not corroded, nozzle clear,				
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J	Watch or clockoperable					
Γ	Bright flashlight or searchlight					
Γ	Navigation lightstested and operable, spare bulbs					
Γ	Batteriesfully charged, encased in plastic boxes or termi	nals covered, securely fastened down				
<i></i>	, Sound-producing devicehorn, whistle appropriate for boo	at				
	Alternate propulsionpaddle or oar					
K	First Aid Kit	MEllon Tellon				
Γ	Tools, spare outboard prop and lock nut	MELLON YELLON				
P	Compass	ZAA '				
7	Sunscreen	2/8/17				
Ø	Weather Radio Cell Phon					

TEAM 5

Boat Safety Checklist

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself, you'll be sure that everything is on board and in good working order. Your passengers will appreciate knowing you're concerned about boating safety.

Float plan--let a friend or relative know when you're leaving, where you're going, when you expect to return, what to do if you don't, and a description of your boat

Registration certificate or documentation

Personal Flotation Devices (wearable and throw able)--USCG approved, good condition, readily accessible, assigned and fitted

Fire Extinguishers--right number, size, and class for boat; charged, not corroded, nozzle clear, bracketed, readily accessible

Visual Distress Signals--current dates on flares, proper number, batteries good if lights or EPIRB

Anchors and Line--adequate anchor for bottom, adequate line for water depth

Bilge device --bilge pump operable, alternative bailing device available

Watch or clock--operable

Bright flashlight or searchlight

Navigation lights --tested and operable, spare bulbs

Batteries--fully charged, encased in plastic boxes or terminals covered, securely fastened down

Sound-producing device--horn, whistle appropriate for boat

Alternate propulsion--paddle or oar

First Aid Kit

Tools, spare outboard prop and lock nut

Compass

Sunscreen

Weather Radio

Name of vessel's operator:	Clare Mustry- Hagan				
Telephone Number:	Clare Munty-Hagen 503-318 5970				
Name of Vessel:					
Registration No.:	NA				
Description of Vessel: Type:	012 town Discoury 169 red canse				
Make: Color of Hull/Trim	red cano				
Most distinguishing identifiable feature:					
Rafts/Dinghies: Number: Zize: Color:					
Radio/Communication Type: Cell Phones					
Number of persons onboard: 2					
Name:	Age: Address & Telephone:				
Clare Murphy- Hagan	26 503-318-5970				
Clare Murphy- Hagan Tate Yulga	25 6SI 301 9260				
Engine Type: H.P.: Normal Fuel Supply (days)	<u></u>				
Survival equipment on board: (check as appropriate)					
Life Jackets Flares	Smoke Signals				
Medical Kit	Paddles				
Anchor Loran/GPS	Life Ring				
Trip: Las Vezas Wash Mr M	nle 4,90 to 5,3				
Date & Time of Departure: 02/8 0800					
Departure From: Posco Road	Departure To:				
Expected to arrive by: 1630 In no case later than: 1750					
Date & Time of Arrival:	Boat Lead Signature at Arrival:				

		0	\ Q \ \ \ \ .		
Name of vessel's operator:		10	ick ludy		
Telephone Number:					
Name of Vessel:					
Registration No.:			. 0		
Description of Vessel:		01	d Town Discovery 69 canoe		
Type: Make:		0.	الما ما م		
Color of Hull/Trim		16	o arioc		
Most distinguishing identifiable feature:					
Rafts/Dinghies: Number: Number: Color: _	_				
Radio/Communication Type: NA	cell phor	عه			
Number of persons onboard: 2					
Name:		Age:	Address & Telephone:		
Rick Purd			781-883-6425		
Rick Purdy Nick Pryor		37	805-200-7839		
<i>\</i>		-			
		-			
Engine Type: A H.P.: Norm	nal Fuel Supply (days):			
Survival equipment on board: (check as appropriate and appropr	riate)				
	Flares		Smoke Signals		
Life Jackets	Tial Co		,		
Medical Kit	☐ _{EPIRB}		Paddles		
	「 Loran/GPS		Life Ring		
Anchor					
Trip: Las Vegas Wash	rver	mile	6.05 to 7.2		
Date & Time of Departure:		_			
Departure From: Pasco Rocu			arture To: RM 7,2		
Expected to arrive by: 1605 In no case later than: 1700					
	2/8/17	Boat Le	ad Signature at Arrival:		

Name of vessel's operator:	Ryan Mc Carthy			
Telephone Number:	603 770 4945			
Name of Vessel:	Mellow /ellow			
Registration No.:				
Description of Vessel: Type: Make: Color of Hull/Trim Morth Fork Most distinguishing identifiable feature:	Vellow (ance 16, 9'			
Rafts/Dinghies: Number: Size: Color:				
Radio/Communication Type: Cell Phone				
Number of persons onboard:				
Name:	Age: Address & Telephone:			
Ryan Mc Carthy	38 G03-770-4945			
Connos Gilder	27 781-439-7762			
Engine Type: H.P.: Normal Fuel Supply (days)	·			
Survival equipment on board: (check as appropriate)	_			
Life Jackets Flares	Smoke Signals			
Medical Kit Ferre	Paddles			
Anchor Loran/GPS	Life Ring			
Trip: Multiple Locations in wash				
Date & Time of Departure: 2/8/17				
Departure From: Shore	Departure To:			
Expected to arrive by: In no case later than:				
Date & Time of Arrival: 218/17	Boat Lead Signature at Arrival:			

Americas

Daily Tailga	te Mee	ting			S3AM-209-FM5
Job Location:	Las Vo	egas Wash, Henderson, NV	Date:	1-	8・1子
AECOM Site Supervisor:		Howe	Person Conducting Tailgate Meeting:	Rich	nard Purdy
AECOM Site Supervisor Phone:	603-520-0169		AECOM Safety Officer Name & Phone:	R. Purdy 781-883-6425	
List activities to be pertoday:	erformed	Transect SW Samplin	g in LVWDiscree	t Loca	ation SW Sampling in LVW
Muster Point: PABCO Pavilion area Spill Kit Location: N/A				N/A	
First Aid Kit Location: In vehicles		Fire Extinguisher Location	Fire Extinguisher Location: N		
Have all personnel reviewed and understand the site-specific safety plan? ☐ Yes ☐ No*					
Are current Pre-Job Hazard Assessments in place for each of the tasks to be performed today and understood by all?					✓Yes □ No*
Does each subcontra	actor have h	nazard assessments (e.g., THA, J	SA, JHA) for their activities?		☐ Yes ☐ No* ☒ N/A
Are any required permits in place for the applicable tasks to be performed today and understood by all? Identify required permits and permit #s: Yes No					II? ☐ Yes ☐ No* 🗓 N/A
		eam confirmed understanding of the	e work, hazards, and control	ls/	☑Yes ☐ No*
Have work areas bee	en properly	cordoned-off to protect workers s	ite staff, and the public?		Tyes TNo* TN/A

Topics covered in today's tailgate meeting:	-Slip, trip, fall hazards -Working in/around water -Heat/Cold exposure -Working in low light - where could - hegh would	
---	---	--

Have equipment checks been completed, documented, and reviewed?

Do all site workers understand injury/ intervention reporting requirements including immediately

notifying the AECOM Site Supervisor of any injury near miss, unsafe condition or hazard observation?

* if No, then work cannot be performed until corrective action is completed and documented.

Other Items Discussed Today:	Stop Work Authority & Obligation
-Bees	* All employees will stop the job any time anyone is concerned or uncertain about safety.
- SUNBLOCK	* All employees will stop the job if anyone identifies a hazard or additional mitigation not recorded on the THA.
	* All employees will be alerted to any changes in personnel or conditions at the worksite.
	* All employees will stop the job and reassess a task, hazards, and mitigations, and then amend the THA as needed.

Daily Tailgate Meeting (S3AM-209-FM5)
Revision 5 December 15, 2016
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Yes No* NA

Yes No*

SITE WORKERS (Including AECOM Contractors and Subcontractors): By signing here, you are stating the following: You have been involved in reviewing the THAs and understand the hazards and control measures associated with each task you are about to perform. You understand the permit to work requirements applicable to the work you are about to perform (if it includes permitted activities). You are aware that no tasks or work (that is not risk-assessed) is to be performed. You are aware of your authority and obligation to 'Stop Work'. I arrived and departed fit for duty: You are physically and mentally fit for duty. You are not under the influence of any type of medication, drugs, or alcohol that could affect your ability to work safely. You are aware of your responsibility to immediately report any illness, injury (regardless of where or when it occurred), or fatigue issue you may have to the AECOM Supervisor.								
Print Name & Company Signature Initials & Sign In Unitials & Sign In Out Time Out Time								
RRVERY AT	15 com	E		\geq		In & Fit		Out & Fit
R NUMBERY AC	w	R	7	1		In 07.	& Fit	Out & Fit
Care Kurphy- Jacan	AKCOU		\\`.	Ax	/		& Fit	Out & Fit
Hickory AB	10 ·~	NL		1			& Fit	Out & Fit
Conner G. W.		0	-	A			& Fit	Out & Fit
Tate Yulga		2	e,	2/1/1	in)	~	& Fit	Out & Fit
(Attach additional Site)				7,11 50		0 7	12	
SITE VISITOR / SITE RE Name	PRESENTATI Compan		Arri	val Time	Damad			
		,	_ ^,,,,	varrinte	Departur	e i ime		Signature
							1/ 1	
To be completed once a	ctivities for th	e day have b	een c	oncluded.			- 1	
Were there any Incidents, Ne	ear Misses or Ob	eservations?		☐ Yes ☐ No	If yes, d	etails:		
Were there any 'Stop Work' interventions? Yes No If yes, details:								
,	nici ventions :							
Were there any areas for imp		?			If yes, d	letails:	,	- 1 + 2
	rovement noted	ing left in a saf	е	□ No □ Yes	If yes, d		isor Signature	
Were there any areas for imp At the conclusion of the day, condition and there were no r	the job site is be reports of injury of AFZoM	ing left in a safe or first aid.	Ist-	No Yes No O	If yes, d AECON	I Supervi	C.Seve	How

2-9-17 Tate + Claire Toute Mulya Boat Safety Checklist

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself, you'll be sure that everything is on board and in good working order. Your passengers will appreciate knowing you're concerned about boating safety.

retu	Float planlet a friend or relative know when you're leaving, where you're going, when you expect to rn, what to do if you don't, and a description of your boat
10/	Registration certificate or documentation
acce	Personal Flotation Devices (wearable and throw able)USCG approved, good condition, readily essible, assigned and fitted
┌ brac	Fire Extinguishersright number, size, and class for boat; charged, not corroded, nozzle clear, cketed, readily accessible
Γ	Visual Distress Signalscurrent dates on flares, proper number, batteries good if lights or EPIRB
~	Anchors and Lineadequate anchor for bottom, adequate line for water depth
Γ	Bilge devicebilge pump operable, alternative bailing device available
1	Watch or clockoperable
Γ	Bright flashlight or searchlight
Γ	Navigation lightstested and operable, spare bulbs
Γ	Batteriesfully charged, encased in plastic boxes or terminals covered, securely fastened down
Γ	Sound-producing devicehorn, whistle appropriate for boat
K /	Alternate propulsionpaddle or oar
7/	First Aid Kit
Γ	Tools, spare outboard prop and lock nut
Γ	Compass
√	Sunscreen
Γ	Weather Radio

Connut & James (74) 2/4/17 Boat Safety Checklist

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself, you'll be sure that everything is on board and in good working order. Your passengers will appreciate knowing you're concerned about boating safety.

Float plan--let a friend or relative know when you're leaving, where you're going, when you expect to return, what to do if you don't, and a description of your boat

 \sqrt{M} Registration certificate or documentation

Personal Flotation Devices (wearable and throw able)--USCG approved, good condition, readily accessible, assigned and fitted

Fire Extinguishers--right number, size, and class for boat; charged, not corroded, nozzle clear, bracketed, readily accessible

Visual Distress Signals--current dates on flares, proper number, batteries good if lights or EPIRB

Anchors and Line--adequate anchor for bottom, adequate line for water depth

Bilge device --bilge pump operable, alternative bailing device available

Watch or clock--operable

Right flashlight or searchlight

Navigation lights --tested and operable, spare bulbs

Batteries--fully charged, encased in plastic boxes or terminals covered, securely fastened down

K Sound-producing device--horn, whistle appropriate for boat

Alternate propulsion--paddle or oar

First Aid Kit

Tools, spare outboard prop and lock nut

Compass

Weather Radio

Boat Safety Checklist

Keep this page with your boat, ready for inspection. By using this checklist, or one fine-tuned by yourself, you'll be sure that everything is on board and in good working order. Your passengers will appreciate knowing you're concerned about boating safety.

Float plan--let a friend or relative know when you're leaving, where you're going, when you expect to return, what to do if you don't, and a description of your boat

AT

Registration certificate or documentation

Personal Flotation Devices (wearable and throw able)--USCG approved, good condition, readily accessible, assigned and fitted

Fire Extinguishers--right number, size, and class for boat; charged, not corroded, nozzle clear, bracketed, readily accessible

Visual Distress Signals--current dates on flares, proper number, batteries good if lights or EPIRB

Anchors and Line--adequate anchor for bottom, adequate line for water depth

Bilge device --bilge pump operable, alternative bailing device available

Watch or clock--operable

Bright flashlight or searchlight

Navigation lights --tested and operable, spare bulbs

Batteries--fully charged, encased in plastic boxes or terminals covered, securely fastened down

Sound-producing device--horn, whistle appropriate for boat

Alternate propulsion--paddle or oar

First Aid Kit

Tools, spare outboard prop and lock nut

Compass

Sunscreen

Weather Radio

Milalia

Name of vessel's operator: Connor Cilde	
Telephone Number: 781. 439. 7762	
Name of Vessel: Wellow Yellow	
Registration No.:	
Description of Vessel: Yellow 16' (anoc Type: We-No-No No No Make: "/ Color of Hull/Trim Yellow Most distinguishing identifiable feature:	
Rafts/Dinghies: Number: Size: Color:	
Radio/Communication Type: Cell Phone	
Number of persons onboard: 2	
Name:	Age: Address & Telephone:
Connor Colden	27 781-439.7762
Connor Golden James McCoy	24 507-828-0760
Engine Type: H.P.: Normal Fuel Supply (days)	s):
Survival equipment on board: (check as appropriate)	
Life Jackets Flares	Smoke Signals
7 Medical Kit Ferri	Paddles
Anchor Loran/GPS	Life Ring
Trip: From Shore	
Date & Time of Departure:	
Departure From: Las Vegas Wesn	Departure To: Las Veges Wash
Expected to arrive by: 1730 In no case later than: 1800	
Date & Time of Arrival: 1730 2/9//7	Boat Lead Signature at Arrival:

Name of vessel's operator: Ricue Ricus		
Telephone Number: 181. 843 6425		
Name of Vessel: OCEANS II		
Registration No.:		
Description of Vessel:		
Type: RED OUD TOWNE CAUDE Color of Hull/Trim		
Most distinguishing identifiable feature:		
Rafts/Dinghies: Number: Size: Color: Ø		
Radio/Communication Type:		
Number of persons onboard: 2		
Name:	Age:	Address & Telephone:
RICL PURST	53	WARETIES MA 79 883647
NICE PRYOR	37	CAMARINO CA 885 200 7839
Engine Type: H.P.: Normal Fuel Supply (days)	·	-
Survival equipment on board: (check as appropriate)		
Life Jackets		ンを Smoke Signals
Medical Kit EPIRB		Paddles
Anchor Loran/GPS		Life Ring
Trip: SAMPLING C DUCK CRUTER	w	318
Date & Time of Departure: 2/9/12 0830		
Departure From: PAS CO	Depa	arture To: DUCK CREEK TEM 7-2
Expected to arrive by: In no case later than:		
Date & Time of Arrival: 219/17 1600	Boat Lea	ad Signature at Arrival:

The same of the sa	The second secon
Name of vessel's operator: Clare & Murghy-Hagon	Tate Yulga
Telephone Number: 503-318-5970	· ·
Name of Vessel:	
Registration No.:	
Description of Vessel: Cavo-C Type: Make: Color of Hull/Trim	
Rafts/Dinghies: Number: Size: Color:	
Radio/Communication Type: NJA Cell P	hone
Number of persons onboard: 2	
Name:	Age: Address & Telephone:
C. Murphy-Hagor T. Yulga	26
T. Yula	24
J	
Engine Type: H.P.: Normal Fuel Supply (days):
Survival equipment on board: (check as appropriate)	_
Life Jackets Flares	Smoke Signals
☐ Medical Kit ☐ EPIRB	Paddles
Anchor Loran/GPS	Life Ring
Trip:	
Date & Time of Departure: 2/9/2017 0930	
Departure From:	Departure To:
Expected to arrive by: 1700 In no case later than: 173	<u> </u>
Date & Time of Arrival: 2/9/2017 1700	Boat Lead Signature at Arrival:
The Control of the Co	11 11 m

Americas

Daily	Tailgate	Meeting	

S3AM-209-FM5

Daily railiga				0071111 200 1 11110									
Job Location:	Las V	Vegas Wash, Henderson, NV	Date:	2-9-17									
AECOM Site Supervisor:	Steve	e Howe	Person Conducting Tailgate Meeting:	Richard Purdy									
AECOM Site Supervisor Phone:	603-	-520-0169	AECOM Safety Officer Name & Phone:	R. Purdy 781-883-6425									
List activities to be p today:	erformed	Transect SW Samplin	ng in LVWDiscree	et Location SW Sampling in LVW									
Muster Point:		PABCO Pavilion area	Spill Kit Location:	N/A									
First Aid Kit Location	n:	In vehicles	Fire Extinguisher Locati	ion: N/A									
Have all personnel r	eviewed ar	nd understand the site-specific safe	ety plan?	Yes No*									
	re current Pre-Job Hazard Assessments in place for each of the tasks to be performed today and												
Does each subcontr	pes each subcontractor have hazard assessments (e.g., THA, JSA, JHA) for their activities?												
Identify required per	Obes each subcontractor have hazard assessments (e.g., THA, JSA, JHA) for their activities? Are any required permits in place for the applicable tasks to be performed today and understood by all? Identify required permits and permit #s:												
Have all members of mitigation?	f the work	team confirmed understanding of the	he work, hazards, and contro	ols/									
Have work areas be	en properly	ly cordoned-off to protect workers, s	site staff, and the public?	☐ Yes ☐ No* ☑ N/A									
		completed, documented, and revie		✓ Yes □ No* □ N/A									
		I injury/ intervention reporting requir pervisor of any injury near miss, uns											
		be performed until corrective action is c		•									
Topics covered	-Slip tri	ip, fall hazards											
in today's tailgate meeting:	-	ng in/around water											
		Cold exposure											
1		ng in low light											
	- Berz	5											
	_ cev	mpracescy											
		1		H.									
in an area and a second a second and a second a second and a second and a second and a second and a second an		/											
Other Items Discus	sed Today		ork Authority & Obligation										
	ll stop the job any time anyone is rtain about safety.												
		,	hazard or additiona	Il stop the job if anyone identifies a al mitigation not recorded on the THA.									
_			* All employees wi personnel or condi	Il be alerted to any changes in itions at the worksite.									
/		1 . 1	* All employees wi hazards, and mitig needed.	ll stop the job and reassess a task, ations, and then amend the THA as									

Daily Tailgate Meeting (S3AM-209-FM5)
Revision 5 December 15, 2016
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SITE WORKERS (including AECOM Contrative You have been involved in reviewing the THAs are perform. You understand the permit to work requirements You are aware that no tasks or work (that is not rive You are aware of your authority and obligation to a larrived and departed fit for duty: You are physically and mentally fit for duty. You are not under the influence of any type of meyou are aware of your responsibility to immediate have to the AECOM Supervisor. You signed-out uninjured unless you have others.	applicable to the isk-assessed) is to 'Stop Work'. edication, drugs, cely report any illnesses.	work you be poor alcohors, inju	ou are about erformed. nol that could ury (regardles	ol measures to perform (if affect your a ss of where o	associate	d with each task	vities).							
Print Name & Company	/		ature			& Sign In Time	Initials & Sign Out Time							
RICK PURDY LECON	TEH	N			In OX	& Fit	Out & Fit							
Connos Cillo AEcon	1	7	91			& Fit	Out & Fit							
Nick Pryor AECOM					In	8 Fit	Out & Fit							
James McCoy 4 toon June 0330														
Tate Vulga AE(OM Juty Julya 0830														
Clare Murphy-Havan AXM		1	ang,			& Fit	Out & Fit							
(Attach additional Site Worker sign-in/out	sheets if needed				00	1								
SITE VISITOR / SITE REPRESENTATI														
Name Compan	y Name	Arri	val Time	Departure	e Time		Signature							
To be completed once activities for th	e day have b	een d	oncluded											
Were there any Incidents, Near Misses or Ob			☐ Yes ☑ No	If yes, d	letails:	3 17								
Were there any 'Stop Work' interventions?			☐ Yes ☑ No	If yes, d	letails:									
Were there any areas for improvement noted	?		☐ Yes ☑ No	If yes, d	letails:									
At the conclusion of the day, the job site is be condition and there were no reports of injury of	eing left in a safe or first aid.	8	✓ Yes	AECON	Supervi	isor Signature								
ANDRIA CHRISTIAN AECON C SCVC HOLL ACO/ Daily Tailgate Meeting (S3AM-209-FM5) Revision 5 December 15, 2016	u Ch	El Ke	ita	083	OK		04,500							
Petras Paulos AECON	D. CONTROLLE	D COF	Y IS AVAILA	ABLE ON CO	OMPANY	INTRANET.	2 of 2							
Rachel Mnoller AR	on	1	19		28	30)							

Appendix C

Calibration Logs

60477365 October 2017

NERT Water Quality Sonde Calibration Sheet

				Calibration	1					Po	ost Ca	librati	on
YSI		lot number	expiration date	calibration standard	re initial	ading adjusted	date	time	initials	initial reading	temp	time	initials
	- 2	FZ15-18	8.518	pH 7.0	7.00	-	12.316	C740	Fil				
	ઇ	FZC2 03	7-20-18	pH 4.0	403			*********		4-10	14.16	IGIGO	120
		=ZZ5.16	6.17.17	pH 10.0	10.01	_				10.06		1_	
		F126-12	6.28.18	Cond. 1409	1312	1411				1351	1300	L	1
				DO %		ter reading				_			
		F237.01	9.7.21	Turbidity 0.0	2.2	-c 3				_			
				Turbidity 123.0									

		20203030	Po	st Ca	libratio	on						
YSI	lot number	expiration date	calibration standard		ading adjusted	date	time	initials	initial reading	temp	time	initials
			pH 7.0									
			pH 4.0									
			pH 10.0		A							
			Cond.							9		
			DO %	barome	ter reading							
			Turbidity 0.0									
			Turbidity 123.0				4					

112000 U73411X

Bre 732-1 mm am 7220 pm

AECOM

INSTRUMENT NUMBER

Date & Resi Air tempera Solution Te Inst. Barom Pressure C	eture: Imperature: setric Press	L("HG):	AM AM	13.0	5,3	PM PM PM	17.10 14.1 7.65	Call	ibration	sck	Initials: Time: Initials: Time:	3	7 100 10915 1030	ltaria)									
1	STANDA RD #1	STANDA RD#2	STANDA RD#3				CALI	BRATION	INFORM	MATION	ircie res	CHE	25.45	iteria)				ľ					
Paramete	Units	Stan	Solut	Stan	Readi	Differ	Stan	Solut	Stan	Readi	Differ	Stan	Solut	Stan dard	Readi	Differ	Stan	Solut ion	Stan dard	Readi	Differ		
DO	%set	100	14.24	8	100.8	3,4	0 mg/L	_	NA .	_		×	NA	NA .	NA	NA .	NA	NA	NA	NA	NA		
pH	S.U.	7.00	1273	703	700	0.0	4.00	13.05	3.98	4,00	0.02	10.00	1269	9.93	4.99	0.07	-			Cal or Ci (circle)			
turb	ntu	0	13.09	6,0	0.0	1,0	NA .	NA .	NA .	3	NA	24	ž	NA.	NA	NA .	NA	NA	NA	NA.	NA.		
cond	µe/cm	1409	M.35	ENA	1411	\$4	N	NA .	NA	NA	NA	NA	NA	NA	NA	NA	1409	NA	NA Cal				
END OF DAY		CALIBRA TION	A section								END OF	DAY CHEC	K REQUIRE	The second	19370	4			51.59C9051-W				
Paramete r	Units	Standard value @	Solution/ Air	Standard Correctio	Reading	Differenc		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Reqmnt				
DO	%sat / mg/L	100	*	mg/L	mg/L	46	mg/L	*	mg/L		DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation	± 5	mg/L		
DO	mg/L	0	NA.	NA .	_			DO	mg/L	0.0	≤ 0,50 but ≥ 0	change DO		DO	mg/L	0.0		s	0.50 mg/L but	≥0			
рН	S.U.	7.0	1412	J	7.04	6.04		рΗ	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		pH	S.U.	7,0 Temp. Adj.			±03				
ORP	mV	231	-					ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard		± 10.0					
cond	µe/cm	1409	NA	NA .	1404	5		sp. Cond.	us/*cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/cm	Specified standard		± 5%					
Turbidity	NTU	0	N	A	-0			• ORP is	checked (*	RUN" mode)	instead of ca check	äbrated. Onl fails criteria	y calibrated	(CALIBRATE	E" mode) wh	nen			n for one ins errors, initia		r sheet		



AECOM

INSTRUMENT NUMBER

Air tempe Solution 1 Inst. Baro		14.("HG):	AI	16	136	PM \PM \PM	8.11	C. C.	rial Number	DATE:	Initials: Time: (Initials: Time:		7 12 10 08										
	STANDA RD #1	STANDA RD #2	STANDA RD #3	-			CAL	BRATIO	INFORM	AATION (circle res		ide of cri	(eria)									
Paramete r	Units	Stan dard	Solut	Stan dard	Readi	Differ	Stan	Solut	Stan	Readi	Differ	Stan	Solut	Stan	Readi	Differ	Stan	Solut	Stan	Readi	Differ		
DO	%set	100	14.39	3	95,9		0 mg/L	ion	dard	ng	ence	NA	NA NA	dard NA	ng NA	ence NA	dard	NA	dard	ng NA	ence NA		
рН	S.U.	7.00	16,75	709	700	0,09	4.00	ماهما	4.07	3,99	0,68	10.00	16.60	489	9,99	0.10	oville a	State Office Service	15.007.00	ar riskud	Calact		
turb	nlu	0	16.57	0.3	0.0	0.3	NA	NA.	, NA	, NA	NA	NA .	NA	NA	HA	NA .	NA	NA.	NA.	NA	(circle)		
cond	µs/cm	1409	16.77	NA.	1910	1	NA.	, NA	NA	NA	NA	NA	MA	NA	NA.	NA .	1409	- NA	NA -	and live	Cal or Ca		
END OF DAY		CALIBRA TION		HE-HOVE-		*******		i			END OF	DAY CHEC	K REQUIRE	MEHTS	Carlo Carlo			and the same	Section 1		(circle)		
Paramete r	Units	Standard value @	Solution/ Air	Standard Correctio	Reading	Differenc		Paramete r	Units	Standard	Reqmnt.	Action	8	Paramete r	Units	Standard			Regmet.				
DO	%sat / mg/L	100	19.50	mg/L	97.Z	*	mg/L	*	mg/L		DO	mg/L	O ₂ Solubility	±0.2	change DO		00	mg/L	100 % Saturation	15	5 mg/L		
DO	mg/L	0	NA	NA .	19.91			DO	mg/L	0.0	≤ 0,50 but ≥ 0	change DO		00	mg/t.	0.0			0.50 mg/L but	20			
рН	S.U.	7,0	17.72	6.97	Xa			pН	8.U.	7/4/10 Temp.	±0.06	recalibrat e		pH	S.U.	7.0 Temp. Adj.			±03				
ORP	.mV_	231						ORP	mV	Specified standard	± 10.0	calibrate*		ORP	m∨	Specified standard		±100					
cond	µs/cm	1409	NA .	MA .	pery			sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/cm	Specified standard		15%					
Turbidity	NTU	0	N.	K - gata	1,8			*- ORP is	checked (*R	IUN' mode) i	nstead of ca check f	ibrated. Only ails criteria	y calibrated (CALIBRATI	mode) wh	m			on for one in				

CALIBRATIO	N SN#	740204 HEC	7				100 Dec	Pos	ST CALE	BRATIC	W
Lot No & Explore		Parameter	Initial	Reading	Date			Reading	-	Time	Instale
NA	719,9mHq	00%	92,7% 127	94.8 961	2/3/17	0815	CMYS	94.5%	22,25	1055	CNH
FOSS-18 2/24/21	ON NTJ	Turbility	0.6	0.0	2/3/17	0818	CMA	-0.3	18.42	Market St.	_
E336-05 12/4/17	1409	Spec Cond	1414	1409	2/3/17			1345		1058	CMA
F064-20 3/14/18	4.0	PH	3,98	4.00	2/3/17			7994	20.41	1103	CHA
F287-06 10/17/17	10.0	Ha	9.98	10,00	2/3/17			34.02	20.00	1124	cm
F034-09 2/18/18	×7.0	PH	7.03	7,00	2/3/17				20.24	11/17	CMA
			1997.	-	-		- 0		1 20,50	11115	and

* MANY Redid DO% Cal @855 720.6 unity Initial Reading is 98.5% (9.722) post cal 94.8% (9.332)

XX USI handset theore freezery other coliforation point 2 of 3 point pt calibration. Solution has been to turn offerd on handret and do last point (7.0ptl) as a one point calibration.

AECOM

as vegas INSTRUMENT NUMBER Site Name / TO# / Job# rface water sampling **Field Activity** Manufacture/Model: 090100736 Air temperature: Serial Number: Solution Temperature: AM PM CALIBRATION DATE: 8,557 MA Inst. Barometric Press.("HG): 7278 PM Initials: M Calibration Pressure Corrected / Source: AM Initials: TM Calibration Check Time:

	STANDA RD #1	STANDA RD #2	STANDA RD #3									СН	ECK						r constitution	- 5.5	Section 1					
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Diffe					
DO	%sat	100	61°F	94.7	95,2	.05	NA	NA	NA	NA L f (2)	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA .	NA					
рН	S.U	7.00	15.05	7.04	7.00	04	4.00	200	3.87	de		10.00	14.45	9.78	9.97		NA	NÁ	NA	NA	NA					
Turbidity	NTU	0.0	द्धक	2.6	0.0	7.6	NA	NA .	NA	NA	NA	NA	NA	NA .	NA.	NA	,NA	NA .	NA (NA	NA					
Conductiv ity	µs/cm	1409	70.54	1498	1409	89	NA	NA	, NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					
END OF DAY		CALIBRA TION							e2e e 1 10 % #6	1	END O	DAY CHEC	K REQUIRE	EMENTS		A SECTION										
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Reqmnt.							
DO	%sat / mg/L	100	6305		0.0 *	6 Querl			DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation		± 5	mg/L						
рН	S.U.	7.0	38,15	,	7,0	NA	;	DO	mg/L	0.0	≤ 0,50 but ≥ 0	change DO		DO	mg/L	0.0		\$	0.50 mg/L bi	ut≥0						
Conductiv	µs/cm	1409	21,74		807	NA	<i>f</i>	рН	S.U.	7/4/10 Temp	± 0.05	recalibrat e		рН	S.U.	7.0 Temp. Adj.			± 0.3	×						
Turbidity	NTU	0.0	713		0.0	NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard		7-33-00	± 10,0							
								sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/°cm	Specified standard			± 5%							
								- ORP is	checked ("F	RUN* mode)	nstead of ca check	librated, Onl fails criteria	JL y calibrated	("CALIBRAT	E" mode) wh		0.0000000000000000000000000000000000000	Non-tale accounting		strument pe	re					

10 23.42 9.92

Water Quality Calibration Log

AECOM

Site Name	/ TO# / Job	14	LV:	Wash											Γ		INST	RUMEN	T NUMBE	R			
Solution To	Air temperature: Solution Temperature: Inst. Barometric Press.("HG): Pressure Corrected / Source: AM						2 Ca	anufacture/k rial Number ALIBRATION hilbration	r: I DATE:	YSI 6 07 H3 Q - Initials: Time: Initials:	920 7-1 PP 9:1	+7 7 1 + <i>PP</i>		j. P. te	Petros aulos am 2								
			[]				CAL	IBRATION	INFOR	MATION (circle res												
	STANDA RD #1	RD #2	STANDA RD #3						Inta	(Gr.		СН	ECK	WHY	calia	<u> </u>							
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut	Stand	-Readi	Differ ence	Stan dard	Solut ion	Stari dard	-Readi	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence		
00	%sat	100		1049	95.0	9.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	N	NA	NA					
pН	S.U	7.00	F034-09 21/8/18	7.10	7.02	0.08	4.00	F069-20 3/14/19		4.00	0.09	10.00	F287-66	9.82	9.97	6.15	NA NA NA NA				\$		
Turbidity	NTU	0.0	2/24/2	1.9	0.1	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	N	NA .	NA	ž	ž		
Conductiv	μs/cm	1409		1.36	1.410	0.044	NA	NA	NA	NA	NA	NA	NA	NA	NA	8	NA	NA	NA	ž	NA.		
END OF DAY		CALIBRA TION									END O	F DAY CHEC	K REQUIRE	MENTS					20-6-16276				
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Regmnt.				
DO	%sat / mg/L	100	22.91		93.2*	mg/L			DO	mg/L	O ₂ Solubility	± 0,2	change DO		DO	mg/L	100 % Saturation		±5	mg/L	12		
рН	S.U.	7.0	23.10		7.06	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤ 0	.50 mg/L but	≥0			
Conductiv	µs/cm	1409	23.2/),	1.380	NA		рН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		рН	S.U.	7.0 Temp. Adj.		±0.3					
Turbidity	NTU	0.0	23.26		25	NA .		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard		± 10.0					
					0,8			sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/*cm	Specified standard			± 5%				
$\rho_{\mathcal{H}}$		40	23.18	4	4.06			* - ORP is	checked (*F	RUN" mode) i	nstead of ca check	librated, Only	y calibrated ("CALIBRATE	* mode) wh	en			for one ins	trument per	sheet		

Pen only; line-out errors, initial and date

Site Name		b#	<u></u>	os Vez	W ca	ech			lanufacture	/Model:	WK -	I 691	7 M				INS	TRUMEN	T NUMB	ER	
Air tempe	rature;			M 13	13%	Sanph"			erial Numb				10								
Solution 1	emperatur	e:			517	PM	1000	200	ALIBRATIO			7/17						1			
	metric Pre		A	107.1	0.4 m	- Alleria Control	770.		alibration	N DATE:	Initials:	220,563	١.					1			
	Corrected /		A	127.2	D,4 W	- AM	7 20,	7 mm Ha	alibration		Time:	083									
			-					رــــــ	alibration C	hack	Initials:	TY									
			-						anbranon	, , , con	Time:	173	30								
			9				2544/10000						900 Y411					1.500			
		Υ			73 184		CAL	IBRATIO	N INFOR	MATION	circle re	The state of the s	ediconstr	neria)							
	STANDA RD #1	STANDA RD #2	STANDA RD #3									СН	IECK								
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut ion	Stard	Readi	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence
DO	%sat	100	14.65	94.2	94.9	0.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA .	NA
pН	su	7.00	15/15	7.01	7.00	0.01	4.00	15,64	4.21	4,00	0.21	10.00	15.56	10.00	10,00	0	NA .	NA	NA .	NA .	NA .
Turbidity	NTU	• 0.0	15.57	0.9	0.0	0.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA
Conductiv	µs/cm	1409	15.69	1330	1409	79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA
END OF DAY		CALIBRA	Ded-					-			END O	F DAY CHEC	K REQUIRE	MENTS							
Paramete r	Units	Standard value @	Solution	Timp	Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Reqmnt.		
DO	%sat / mg/L	100	98.0	19.38	%	mg/L			DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation		±5	mg/L	
рН	S.U.	7.0	707	21.00		NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤0	.50 mg/L bu	1≥0	
Conductiv	µs/cm	1409	1446	20,28		NA		рН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		ρΗ	S.U.	7.0 Temp, Adj.			± 0.3		
ity Turbidity	NTU	00	20.9	20,40		NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard		V	± 10.0	P	
								sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e	Samuellon Laborat	sp. Cond.	us/*cm	Specified standard			± 5%		
							Ĭ	- ORP is	checked (*R	UN" mode) ir		ibrated. Only ails criteria	calibrated (*	CALIBRATE*	mode) whe	en		information y; line-out e		strument pe	rsheet

TEAM 4

Ryan & (onno) Water Quality Calibration Log

AECOM

Site same / 108 / Job# INSTRUMENT NUMBER LV Wash Field Activity B920 JZ Manufacture/Model: Air en querature: AMO810:60°F U8420 4X Serial Number: AMSRE below PM See below CALIBRATION DATE: Inst. Barometric Press.("HG): AM 08701 718.6 Calibration CM Pressure Corrected / Source: 1 0810 Time: Calibration Check Initials: Cole Time: CALIBRATION INFORMATION (circle results outside of criteria) STANDA STANDA STANDA RD #1 RD #2 RD #3 Paramete Differ Stan Solut Initial Calib Readi Differ Stan Solut Stan Readi Differ Stan Solut Stan Readi Differ Stan Solut Stan dard Readi rated dard dard ion dard dard ence ion dard ence ence dard ion ng ng DO %sat NA NA NA NA DH SU 7.00 NA 17 4.00 391 12.47 9.81 NA 7.17 4.0 ,09 70 12.91 10.0 7.06 NTU Turbidity 00 NA NA NA NA NA NA Conductiv 1409 ,409 NA NA NA NA NA NA NA NA NA 308 ,006 rty **END OF DAY CHECK REQUIREMENTS** END OF CALIBRA TION DAY Difference Paramete Units Standard Paramete Standard Solution/ Reading Regmnt Action Paramete Units Standard Regmnt, value @ mg/L %sat / DO 100 % mg/L ± 0.2 6.24 93.6 DO DO mg/L ±5 mg/L Solubility mg/L Saturation change ≤ 0.50 but DO 0.0 6.927.12 NA mg/L DO mg/L pH S.U. 7.0 0.0 ≤ 0.50 mg/L but ≥ 0 DO 7/4/10 recalibrat pH S.U. ± 0.05 7.0 Temp NA Conductiv µs/cm 1409 Temp. pH S.U. ± 0.3 e Adj. 7.06 Specified Specified ORP m٧ NA ± 10.0 calibrate* 0.0 ORP ± 10.0 Turbidity mV standard standard 1250-17 1203-03 1203-03 1204-103 Specified Recalibrat sp. Cond. Specified 0.0 Hg sp. Cond. us/°cm ± 5% * - ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when 1-20-18 Record information for one instrument per sheet Pen only; line-out errors, initial and date Const. £335-05 F055-18 \$12/4/17 ચારમાસ

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	FAM	5
	CATANI	-

10.0 FM5-B

6/20/n

9.99

Water Quality Calibration Log

Site Name	/ TO# / Job		NDE	9.											r		INST	RUMENT	NUMBE	R	7
Field Activ	rity			mu We	eter Som	ohn		M	nufacture/N	Model:	KIE G	-Karles	Wes	41/481	k .			1			
Air temper	ature:		AM			PM		Se	rial Number	r:	Oca 4 1	t /N	5/4/					No	S/N CEANS		
Solution T	emperature	:	AW	1		PM		c	ALIBRATION	DATE:	21-117		417					1 1			3
Inst. Baron	metric Pres	s.("HG):	AN	יוין		PM 7	12.6	C	dibration		Initials:	NP.						Pos	CEANS	T"	
Pressure (Corrected /	Source:	AW	4 <i>1</i>		PM	1				Time: 0	7:42						1	200 - 20 - 20 - 20 - 20 - 20 - 20 - 20		
								C.	alibration Ch	neck	Initials:										
			-								Time:							<u></u>			
							CAL	IBRATIO	N INFORI	MATION (circle res	ults outs	ide of cn	iteria)							
	STANDA RD#1	STANDA RD #2	STANDA RD #3						calibate	1			edibat	No. of the Australia Control							
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut ion	Stan dark	Readi ng	Differ ence	Stan dard	Solut ion	Stan dand	Readi ng	Differ ence	Stan dard	Solut	Stan dard	Readi ng	Differ ence
∞	%sat	100	NA	91.8	93.7		NA	NA	NA	NA	NA.	NA .	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH.	SU	7.00	F12-20	3.99	4.00		400	1775-B	7.01	7.02		10.00	5175-13 C/15/17	(0.00	999	77.	NA	NA	NA	NA	NA.
Turbidity	NTU	0.0	हात-छै प्राप्तिशि	3.9	-0.1		NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA
Conquary	usion	1409	F11371	1365	1409		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	MA.	NA	. NA
END OF DAY		CALIBRA TION									END O	F DAY CHEC	K REQUIRI	EMENTS							
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Regmnt.		
00	%sa/ mgl	100	23.23		76.5*	mg/L			00	mg/L	O ₂ Solubility	± 0.2	change DO		100	mg/L	100 % Saturation		±5:	mg/L	
рн	SU	7.0	F172-18 60018		1.01	NA		DO	mg/L	00	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		s 0	1.50 mg/L but	≥0	
Conquery	µs/cm	1409	F113-11 4/25/2		1333	NA		рН	S.U.	7/4/10 Temp	± 0.05	recalibrat e		pH	S.U.	7.0 Temp. Adj.			±03		
Turoday	NTU	00	4/2/2		-0.2	NA		ORP	mV	Specified standard	± 10 0	calibrate*		ORP	тV	Specified standard		750	±100		
p#		40	6/27/8	N 0	4.03			sp Cond	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	usfcm	Specified standard			±5%	M = 2/2 = -8/2	
•			61271	Ŋ.	7.00			*-ORP	is checked (RUN" mode)	instead of ca check	alibrated Onl fails ontena	y calibrated	(CALIBRAT	E' mode) wh	en	0.00		n for one ins		sheet

TEAM 1

Water Quality Calibration Log

Site Name	/ TO# / Job		[as	SV	coc	চ											INST	RUMENT	NUMBE	R	
Field Activ	ity		Si	1180	0 .	2	15	15			YSI	7 /AF	OMD	5				1			
Air temper	ature:		AN		V V	/cete		upling Ma			000	100 7	36	307				1			
Solution T	emperature	•	AN		ebe		639		rial Number		776	117	U								
	metric Pres		AM	4 7 7	8,5				LIBRATION	N DATE:	US	F/M									
	Corrected /	M CALL	A		617	PM T	728	<u>5</u> c	libration		Initials:	9900									
sout was the tree has a	erren ikalik adalah di	0704 ST. T. T. T.				PM			***		Initials:	72						1			
			-					Ca	libration Cl	neck	-	180	_								
			-								Time:	100									
		1	1				CAL	IBRATIO	N INFORI	MATION (circle res	ults outs	ide of cri	iteria)							
	STANDA RD #1	STANDA RD #2	STANDA RD #3									CHE	ECK					Partie and the same of the sam			
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan	Solut	Stan	Readi	Differ ence	Stan dard	Solut	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ
DO	%sat	100	63°F	96.3	95.9	0.4	NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA	N	NA	NA	NA	NA	NA
рН	S.U.	7.00	22011	7,05	7,00	0.05	4.00	01.55	3.99	4,00	100	10.00	25.05	9.91	9.99	80,0	NA	NA	NA	NA	NA
Turbidity	NTU	0.0	CC.46	0.3	0.0	0.3	NA	NA	NA -	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductiv	µs/cm	1409	8,55	1528	1409	119	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA	NA.	NA
END OF DAY		CALIBRA TION									END O	DAY CHEC	K REQUIRE	MENTS							
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Reqmnt.		
DO	%sat / mg/L	100	630F	D.	95.7	4.3mg/L			DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation		±5	mg/L	
рН	S.U	7.0	C5.13		7.09	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		s	0.50 mg/L bu	ıt≥0	
Conductiv	µs/cm	1409	TZBI		1405	NA		рН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		рН	S.U.	7.0 Temp. Adj.			± 0.3		
Turbidity	NTU	0.0	72.79		0.7	NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0	e commente de la commente del commente del commente de la commente del commente de la commente de la commente del commente de la commente de	
								sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond	l. us/cm	Specified standard			± 5%		
								* ORP is	checked (*	RUN* mode)	instead of ca check	alibrated. On fails criteria	ly calibrated	("CALIBRA"	TE' mode) w	hen			ion for one li ut errors, init	200000000000000000000000000000000000000	er sheet

				1 . ,	1	.1											12/19/19	Augusta Maria de			
Site Name	/ TO# / Jobs	#		* ,	WO										1		INST	RUMEN	T NUMBI	ER	
Field Activ	ity			Craf	Sany	, te	- Viv	Mar	nufacture/M	lodel:	YSI	692	0		n.	12	, .	ı			
Air temper	ature:		AM	- 10		PM		Ser	ial Number:		076	100	147		Peti	ros la	ulos Z St				
Solution T	emperature	:	AM			PM		CAI	LIBRATION	DATE:	λ	-8-	77'		to]	51	4.1.			
Inst. Baror	netric Press	s.("HG):	AM	72	4.7	PM 7	13.7	Cal	ibration		Initials:	PP		- Annual Company	141	AMI O	0,	EUR			
Pressure (Corrected /	Source:	AM	I		PM	1				Time:	9:1	7					1			
			-					Cal	ibration Ch	eck	Initials:	PP						1			
			U.					20.00			Time:	17:1	2								
À							CAL	IBRATION	INFORM	MATION (circle res	ults outs	ide of cri	teria\							
d e	STANDA RD #1	STANDA RD #2	STANDA RD #3			3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7						СНЕ									
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence
DO	%sat	100		94.2	95.6	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
рН	S.U.	7.00	2/18/18	7.12	7.01	0.11	4.00	F069-20.	3.91	4.00	0.03	10.00	10/17/17	9.79	9.96	0.17	NA	NA	NA	NA	NA .
Turbidity	NTU	0.0	2625-18	1.8	0.0	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA /	NA.	NA	NA.	NA .
Conductiv	he/cw	1409	E335-6	1.32	1.48	0.034	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA .	NA NA	NA	NA .	NA
END OF DAY		CALIBRA						-			END O	DAY CHEC	K REQUIRE	MENTS					Error Land	(m) + (1/2/27 + 1/4/2)	Manual Property
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Regmnt.		
DO	%sat / mg/L	100	20:61		47.7%	mg/L			DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation	(± 5	mg/L	
pН	S.U.	7.0	21.2		7.05	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤(0.50 mg/L bu	1≥0	
Conductiv ity	µs/cm	1409	22.31		1.404	NA		рН	S.U.	7/4/10 Temp.	± 0,05	recalibrat e		pН	S.U.	7.0 Temp. Adj.			± 0.3		
Turbidity	NTU	0.0	22.12		-0.7	NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0		
PM		4.0	B)	1.94	400	7		sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/*cm	Specified standard			± 5%		
*		10.0	21	70 (1,00			•-ORP is	checked (*	RUN" mode)	instead of ca check	librated. Onl fails criteria	y calibrated	CALIBRATE	" mode) whe	en	Comment of the Control of the Contro		n for one in: errors, initia	strument per	sheet

AECOM

Site Name / TO# / Job# Field Activity 451 6920 Manufacture/Model: AM 60 Air temperature: 66329 Serial Number: Solution Temperature: AM PM CALIBRATION DATE: Inst. Barometric Press.("HG): AM PM Calibration Pressure Corrected / Source: AM PM Time: 0900 **Calibration Check** Initials:

INSTRUMENT NUMBER

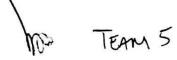
	STANDA RD #1	STANDA RD #2	STANDA RD #3	725.	6							CHE	СК								
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ
DO	%sat	100	15.80	93.1			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	N	NA	NA
рН	S.U	7.00	1732	7.007	-6,99		4 00	18.20	3.76	4.00		10.00	17.72	9.96	9,99		NA	NA	×	NA :	NA
Turbidity	ити	0.0	15.62	0.0			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductiv	µs/cm	1409	15.42	1308			NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	N	NA	NA
END OF DAY		CALIBRA TION									END O	DAY CHEC	K REQUIRE	MENTS							
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Regmnt.		
ро	%sat / mg/L	100	99.5	22.12	- %	mg/L			DO	mg/L	O ₂ Solubility	±02	change DO		DO	mg/L	100 % Saturation		± 5	mg/L	
рН	su	7.0	7.06	20.26		NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤0	.50 mg/L bu	d > 0	
Conductiv	µs/cm	1409		2030		NA		ρН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		pH	S.U.	7.0 Temp. Adj.			± 0.3		100
Turbidity	ити	0.0		23.30		NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0		
		THE REAL PROPERTY.						sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/cm	Specified standard			± 5%		

" – ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when check fails criteria

Record information for one instrument per sheet Pen only; line-out errors, initial and date

(อกกอง ุ ฿ ฟุลก Water Quality Calibration Log

Site Name /		•		s V	egus	Way	n										INS	TRUMEN	IT NUMB	ER	
Field Activi	ty				Samp			Ma	nufacture/	Model:	YSI	650	WD>								
Air tempera			-	085	5:60° F	F 9M		Se	rial Numbe	r:	U81	2044						1			
Solution Te			_AN	Jee	polow	PM			LIBRATION	DATE:	2/8										
Inst. Baron			(2.0 c)		724.0		Vii	Ca	libration		Initials:	CME		-							
Pressure C	orrected / :	source:		A		PM	1		libration Cl	hack	Time:	0900 (M	C.								
			-			-			ilbration of	neen.	Time:	162									_
			-								3345435										
			·				CAL	IBRATION	INFOR	MATION (circle res			iteria)							
	STANDA RD #1	STANDA RD #2	STANDA RD #3									СН	ECK			E CARGO			11 C. W		
Paramete	Units	Stan	Solut	Initial	Calib	Differ	Stan	Solut	Stan	Readi	Differ	Stan	Solut	Stan	Readi	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	
r	%sat	dard 100	ion	Readi	rated	ence	NA NA	NA NA	NA	ng NA	NA	NA NA	NA	NA	NA	NA.	NA	NA	NA	NA	
DO	765all	100	16.06	95.8	99.7	3.1	4.444177	1		L. (3)				5 0 0 0 1 d	المدردددر			NA	NA .	NA .	4
рН	S.U	7.00	14.93	7.17	7	J.	4.00	15.32	4.0	4.0	0	10.00	1426	9.86	(0.00)	.14	NA .	NA .			
Turbidity	NTU	0.0	16.13	1	1	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Conductiv	µs/cm	1409	15.18	139k	1.409	, 6(1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	, NA	NA	NA	
END OF		CALIBRA	200000000000000000000000000000000000000	1.5 [0							END O	DAY CHEC	K REQUIR	EMENTS					8		
DAY		TION			20.	D.W		Paramete	Units	Standard	Reqmnt.	Action		Paramete	Units	Standard		-	Regmnt		_
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		r	Units	Canalia	, , , , , , , , , , , , , , , , , , ,	2.0.1021	1	7				_		~	
DO	%sat / mg/L	100	13.46	0.0	%	mg/L			DO	mg/L	O _z Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation		± 5	mg/L	
рН	s.u	7.0	15:87	7.01		NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤(0.50 mg/L bu	t≥0	7
Conductiv	µs/cm	1409	18.85	1,225		NA		рН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		рН	S.U.	7.0 Temp. Adj.			± 0.3		
Turbidity	NTU	0.0	14.17			NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0	100	
<u> </u>		Lot		j	Dule			sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/cm	Specified standard			± 5%		
n St.	E	[27] .	٠١٦		8(24)	17		ORP is	checked (*F	RUN" mode)	instead of ca check	librated. Onl ails criteria	y calibrated	("CALIBRAT	E" mode) wh	en				strument po	
1	F	a15.	18		8/15	(18											Denote de	1	1	* .	
7.0	Pa	02 - 1	63		1/201	18															
	E2.	m ~())		21201	17															



Site Name / TO# / Job#

NDEP

Water Quality Calibration Log

AECOM

INSTRUMENT NUMBER

Field Activ	rity		5	artau	シート	Gal	Sam	DI- h Ma	anufacture/	Model:	424	630	as WI	3 M				l N	~ < 1.	1	
Air temper	rature:		AN	u (6.78			0.79		rial Numbe	r:	No 31		en's I					1 19	0 5/2 0 EN N	•	
Solution T	emperature	: :	AM	ď		PM			ALIBRATIO	N DATE:	2/8/1	٦						1"	7/2.5	IS II	
Inst. Baron	metric Pres	s.("HG):	All	4 724. (i i	PM ~	121	Ca	libration		Initials:	NP						1 '	CHAI	. , -	
Pressure (Corrected /	Source:	Al	M /		PM	1				Time:	01:10						1			
								Ca	libration C	heck	Initials:	H						ı			
											Time: 1	6:25									
							CAL	IBRATIO!	N INFOR	MATION (circle res	sults out:	side of cr	iteria)							
	STANDA RD#1	STANDA RD #2	STANDA RD#3				- OAL				0,, 0,0, 10, 10, 10, 10, 10, 10, 10, 10,		IECK								
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence
DO	%sat	100	-	95.3	75.4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA
рН	su	7.00	Fn2-18 6/29/18		7.00		4.00	6/172-20 6/17/14	4.00	4.06		10.00	F175-13 6/28/17	10.00	9.94		NA	NA .	N	NA	NA .
Turbidity	NTU	0.0	FICT-03	-1.3	0.6		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA NA	NA
Conductiv	µs/cm		F113-11 4/25/18		1409		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA .
END OF DAY		CALIBRA	l l						Ver-		END O	F DAY CHE	CK REQUIRE	MENTS							
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Reqmnt.		
DO	%sat / mg/L	100			97.7*	mg/L			DO	mg/L	O _z Solubility	± 0.2	change DO membran		DO	mg/L	100 % Saturation		±51	ng/L	
рН	su	7.0	21.32		7.14	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤0	50 mg/L but	≥0	
Conductiv	µs/cm	1409	21.71		1419	NA		рН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		pН	S.U.	7.0 Temp. Adj.			± 0.3		
Turbidity	NTU	0.0	12.17		-0.3	NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0		
PH		4.0	21.76		4,0			sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/*cm	Specified standard			±5%		
V			21.40	•	9.87			* – ORP is	checked (*I	RUN* mode)		librated. On fails criteria	ly calibrated	("CALIBRATE	" mode) whe	en	CHICAGO MANUALITA		for one ins rrors, initial	trument per and date	sheet

Site Name	/ TO# / Job		L	,V 1	wash	N rat					2 2 0						INST	RUMENT	NUMBE	R	
Inst. Baro	20150	s.("HG):	AM AM AM	7	wash bson 27.8	PM PM	7/4.	Ser CA Cal	nufacture/Milal Number: LIBRATION libration LIBration Ch	DATE:	Initials: Time: Initials: Time:	69.8 3408, 9-1 9-1 9-2 9-2 1/12	17	(teria)	P	etros, Bache	Paulos (
	STANDA	STANDA	STANDA				UAL	DIAMO					ECK								
Paramete	RD #1 Units	RD #2 Stan dard	RD #3 Solut	Initial Readi	Calib rated	Differ ence	Stan	Solut	Stan dard	Readi ng	Differ	Stan dard	Solut ion	Stan dard	Readi ng	Differ	Stan dard	Solut	Stan dard	Readi ng	Differ ence
DO	%sat	100	15.11	96.1	96.1	0	NA	NA /	NA PA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ş	NA	NA
рН	s.u.	7.00	F0340	7.50	6.99	0.51	4.00	3.97	4.0	F06 ⁹ 74 3/14/18	0.03	10.00	F 287-	99.96	10.00	6.04	NA	8	NA.	NA	NA
Turbidity	NTU	0.0	105-18 2/4/2/	0.3	0.1	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA .	NA
Conductiv	µs/cm	1409	E,335-00	i.389	1.41	0.022	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA	NA .	NA
END OF DAY		CALIBRA TION					_				END O	F DAY CHEC	K REQUIRE	MENTS							*
Paramete r	Units	Standard value @	Solution/ Air	Long	Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Regmnt.) 2
DO	%sat / mg/L	260	20.75		89.7%	mg/L			DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation		±51	mg/L	
рН	S.U.	7.0	24.19		7.03	. NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO	شر	DO	mg/L	0.0		≤ 0.	50 mg/L but	≥0	
Conductiv	µs/cm	1409	24.20		1.391	NA		ρН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		pH	S.U.	7.0 Temp. Adj			± 0.3		
ity Turbidity	NTU	0.0	23.92		29	NA NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0		
	- Maria		p. 10		Pro	Irmed	}	sp. Cond.	us/°cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/°cm	Specified standard			± 5%		
PIH	<u> </u>	40	77.7-	_	2.4	PALYE	}	*- ORP is	s checked ("F	RUN" mode) i	inslead of ca check	alibrated. On fails criteria	ly calibrated	("CALIBRAT	E" mode) wi	nen			n for one ins errors, initia	trument per	sheet
	ş	10.0	23.73 23.41		3.98																



Site Name	/ TO# / Job	*	Las	s Vea	as Wo	Sh											INST	RUMEN	T NUMBE	R	
Field Activi	ity				som		SW	Mar	ufacture/M	odel:	451	6920	N.).				1			
Air temper	ature:		AM	31-11-		PM		Seri	al Number	19 1	HF0							1			
Solution Te	emperature	:	AM			PM		CAL	IBRATION	DATE:		/17	•	i i							Ì
Inst. Baron	netric Pres	s.("HG):	AM	723	3,9	PM		Cali	bration	12	Initials:	AC/	CSH								
Pressure C	orrected /	Source:	AM			PM	ī			-59	Time:		•					ı			
								Cal	ibration Ch	eck	Initials:			•				1			
			8 -3-3							0	Time:										
							CAL	IBRATION	INFORM	MATION (ircle res	ults outs	ide of cri	teria)							
	STANDA RD #1	STANDA RD #2	STANDA RD #3									СНЕ	W12-000-								
Paramete r	Units	Stan dard	Solut Ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence
DO	%sat	100		95,0	95.4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NÅ	NA.	NA .
pН	S.U	7.00	7.00	7.09	7.00		4.00	4.00	3,91	4.00		10.00	10,00	9.84	9.97		NA .	NA	NA .	NA .	NA .
Turbidity	NTU	0,0	0.0	-2.0	0,0		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductiv ity	µs/cm	1409	1409	1404	1410		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
END OF DAY		CALIBRA TION									END OF	DAY CHEC	K REQUIRE	MENTS							
Paramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Regmnt.	Action	8	Paramete r	Units	Standard			Reqmnt.		
DO	%sat / mg/L	100	20.1€		44*	8,5°L			DO	mg/L	O ₂ Solubility	± 0.2	change DO		DO	mg/L	100 % Saturation		±5	mg/L	
рН	S.U.	7.0	2197		7.10	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO		DO	mg/L	0.0		≤0).50 mg/L but	.≥0	
Conductiv	µs/cm		21.83		1475	NA		рН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		рН	S.U.	7.0 Temp. Adj.			± 0.3		
Turbidity	NTU	0.0	2(9	1	-la	NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0		
		JI.						sp. Cond.	us/fcm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/°cm	Specified standard			± 5%		
								ORP is	checked (*I	RUN" mode)	nstead of ca check	librated. Only fails criteria	y calibrated (*CALIBRAT	E* mode) wh	en	The second second second		n for one in	strument pe	r sheet

AECOM

Team ! Lowis & Clarke

Site Name /	TO# / Job#		25	11,,,,	Was	N											INST	RUMEN	T NUMBE	R	Ì
Field Activit	у	1.5	Di	MAS			20	Manu	ıfacture/Mo	odel:	15I/	6920	717								1
Air tempera	ture:		AM	14-0	= OV	Sanpline	-1 10		l Number:	-	663		VC								1
Solution Te	mperature:		AM	12010	912.20	PM	0.19		IBRATION I	DATE:		12017		5							
Inst. Barom	etric Press	.("HG):	AM	725	5 mg Ha	PM S	19.9	. / Calil	oration	-	Initials:	CMH									1
Pressure C	orrected / S	Source:	AM	1600	J WHILL THE	PM 7	<u>- </u>	4m 17g		-	Time: /	782/)					1			-
						<u> </u>		Calii	bration Cho	-ck	Initials:	CALL									1
			W - 0.00444-							2	Time:	Civiri						100			
I	STANDA RD#1	STANDA RD #2	STANDA	3000	÷		CALI	BRATION	INFORM	IATION (c	ircle resu	ults outsi CHE		teria)		신 영양도			50 - 1000	er 4 m = 4	
Paramete	Units	Stan dard	RD #3 Solut	Initial Readi	Calib	Differ	Stan	Solut	Stan	Readi ng	Differ	Stan	Solut	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence
DO	%sat	100 -	17.38	9.31	95,7 9,13	103 * 0.18	NA	NA NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA N
pН	S.U.	7 00	1308	7.05	7,00	0.05	4 00	17.36	3,98	4.00	0.02	10 00	17.55	9,91	9,99	0.08	NA	NA	NA	NA	NA T
Turbidity	NTU	00	14.79			+0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductiv	µs/cm	1409	17.07	1525		116	NA .	NA	NA	NA .	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA .
END OF DAY		CALIBRA		* Chec	K 7,00	Bler C	el and	reading	7.01	@ 17	. 85 Ka	F DAY CHEC	K REQUIRE	F	The state of the				4	-	
Paramete	Units	Standard value @	Solution/ Air		Reading	Differenc e	ē	Paramete r	Units	Standard	Requint.	Action		Paramete r	Units	Standard		**	Reqmnt.		
DO	%sat / mg/L	100	20.50	95.861	95.5 %	mg/L			DO	mg/L	O ₂ Solubility	102	change DO manubran		DO	mg/L	100 % Saturation		**	s mg/L	
рН	S.U.	7.0	20.98		7.03	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO membran		DO	mg/L	0.0		≤	0.50 mg/L bi	ut ≤ 0	
Conductiv	µs/cm	1409	21,05	4	1408	NA		рН	su	7/4/10 Temp	± 0 05	recalibrat e		рН	S.U.	7 0 Temp. Adj			±03		
Turbidity	NTU	00	24.24	ph	0.6	NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10 0		
L	1	1		Transaction 1 III				sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp Cond	us/cm	Specified standard			± 5%		•1
									s checked ('RUN' mode)	check	alibrated On fails criteria	y calibrated		TE mode) wh	4	The Assessment of Section 1981		on for one in t errors, initi	strument pe al and date	r sheet

Water Quality Calibration Log

ite Name /	TO# / Jobs	•	de	5 V	स्व	25				/					Γ		INST	RUMEN	NUMBE	R	
ield Activi	ity		Si	, fa	cell		Sal	molines	nufacture/k	Aodel:	VST	650	311	15	*						
Air tempera			AM		F	PM			rial Number		17/	101	78)								
	emperature		AM	300	6	Sloww		CA	LIBRATION	DATE:	2-9	-17									
	netric Press Corrected / S	-14-10-12-12-12-12-12-12-12-12-12-12-12-12-12-	AM	100	.6	PM >	18.	7 Cal	libration		Initials:	500									
ressure c	onected 7	source.	AM			PM	ı			ĺ		845						1			
			-					Cal	libration Ch	neck	Initials:	127						1			
			-									503									
$\overline{}$	STANDA	STANDA	12				CAL	IBRATION	INFOR	MATION (circle res			teria)							
	RD #1	RD #2	STANDA RD #3									CHE	ECK .						S SOMEWAY S		- F (40)
Paramete r	Units	Stan dard	Solut ion	Initial Readi	Calib rated	Differ ence	Stan dard	Solut	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence	Stan dard	Solut ion	Stan dard	Readi ng	Differ ence
DO	%sat	100	505	0.0	0.0	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
рН	S.U.	7 00	15,5/	702	7.00	50.0	4.00	15.53	4.09	4.00		10.00	14.78	9.00	0.0		NA	NA	NA	NA	NA
Turbidity	NTU	0.0	Err-	Total A		->	NA	NA	NA	NA.	NA	NA	N	NA	NA .	NA	NA	NA	NA	NA	NA
Conductiv	µs/cm	1409	15.8	1245	1409	164	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA	NA	NA	NA	NA	NA
END OF DAY		CALIBRA TION									END OF	DAY CHEC	K REQUIRE	MENTS							
aramete r	Units	Standard value @	Solution/ Air		Reading	Differenc e		Paramete r	Units	Standard	Reqmnt.	Action		Paramete r	Units	Standard			Reqmnt.		
DO	%sat / mg/L	100	17.36		0.6*	O,C ^{mo/L}			DO	mg/L	O ₂ Solubility	± 0.2	change DO membran		DO	mg/L	100 % Saturation	_	±	5 mg/L	
рН	S.U.	7.0	19.12		7.17	NA		DO	mg/L	0.0	≤ 0.50 but ≥ 0	change DO membran		DO	mg/L	0.0		≤	0.50 mg/L b	ut≥0	
Conductiv	µs/cm	1409	18.94		1.395	NA		pН	S.U.	7/4/10 Temp.	± 0.05	recalibrat e		рH	S.U.	7.0 Temp. Adj.			± 0.3		
Turbidity	NTU	0.0	Erro			➤ NA		ORP	mV	Specified standard	± 10.0	calibrate*		ORP	mV	Specified standard			± 10.0		
			•					sp. Cond.	us/cm	Specified standard	± 5%	Recalibrat e		sp. Cond.	us/°cm	Specified standard			± 5%		
								• – ORP is	checked (*	RUN" mode)		librated. Onl fails criteria	y calibrated	("CALIBRAT	E" mode) wh	nen				nstrument p	

AECOM

INSTRUMENT NUMBER Site Name / TO# / Job# Manufacture/Model: **Field Activity** Serial Number: Air temperature: CALIBRATION DATE: Solution Temperature: AM 724.1 Inst. Barometric Press ("HG): Calibration PM Time: 11:80 Pressure Corrected / Source: Initials: Calibration Check CALIBRATION INFORMATION (circle results outside of criteria) STANDA STANDA STANDA RD #1 RD #2 **RD#3** Readi Differ Solut Differ Stan Stan Readi Differ Stan Solut Solut Differ Solut Stan Readi Paramete Units Stan dard ng dard ion ence dard dard ng dard dard ence Readi rated ion ng dard ion NA NA NA NA NA NA NA 100 93.6 95.4 NA DO %sat P112-22 F175-13 NA F172-18 NA NA NA 10 00 10.00 4.00 4.02 4.00 pH SU RICEL 6281.7 7.00 6/29/19 NA NA NA NA NA NA NA NA NA -0.9 NTU Turbidity NA NA NA NA 1460 1409 us/cm Conductiv END OF DAY CHECK REQUIREMENTS CALIBRA END OF TION DAY Standard Action Paramete Standard Reqmnt. Paramete Units Regmnt. Reading Difference Solution/ Paramete Standard value @ 100 % change mg/L DO mg/L ±5 mg/L DO mg/L %sat / Saturation 100 Solubility DO mg/L ≤ 0.50 but change DO mg/L ≤ 0.50 mg/L but ≥ 0 00 DO mg/L DO 7.07 ≥0 70 SU pH 7.0 Temp. 7/4/10 recalibrat ±03 SU ± 0 05 S.U. 1381 Temp. Conductiv 1409 us/cm Specified Specified calibrate' ORP ± 100 ORP ± 10.0 standard NTU Turbidity Recalibrat Specified Specified sp Cond ± 5% sp. Cond. standard

. - ORP is checked ("RUN" mode) instead of calibrated. Only calibrated ("CALIBRATE" mode) when

check fails criteria

ph 4.0 Finz 20 4.09
6127/18

PH 10.0 F175-13 9.95
6/28/17

Scanned by CamScanner

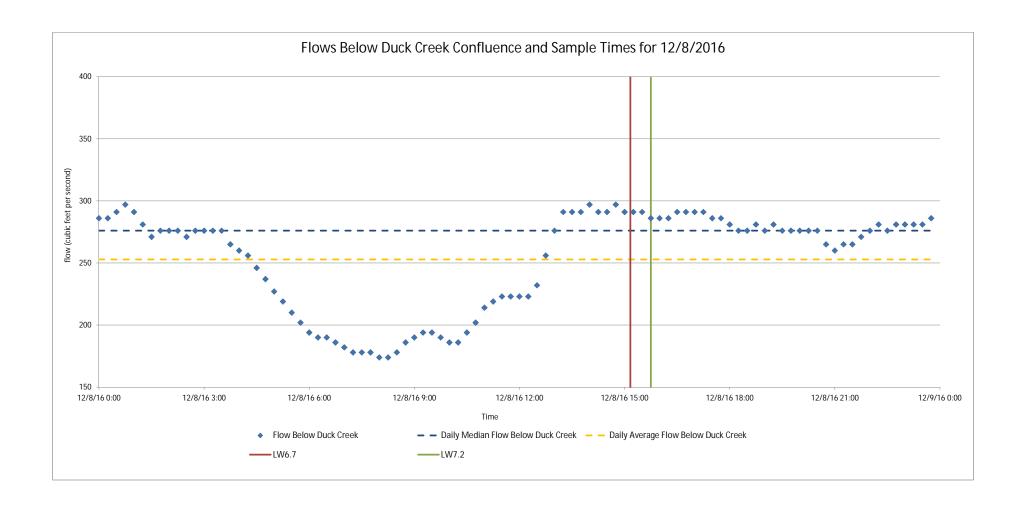
Record information for one instrument per sheet

Pen only; line-out errors, initial and date

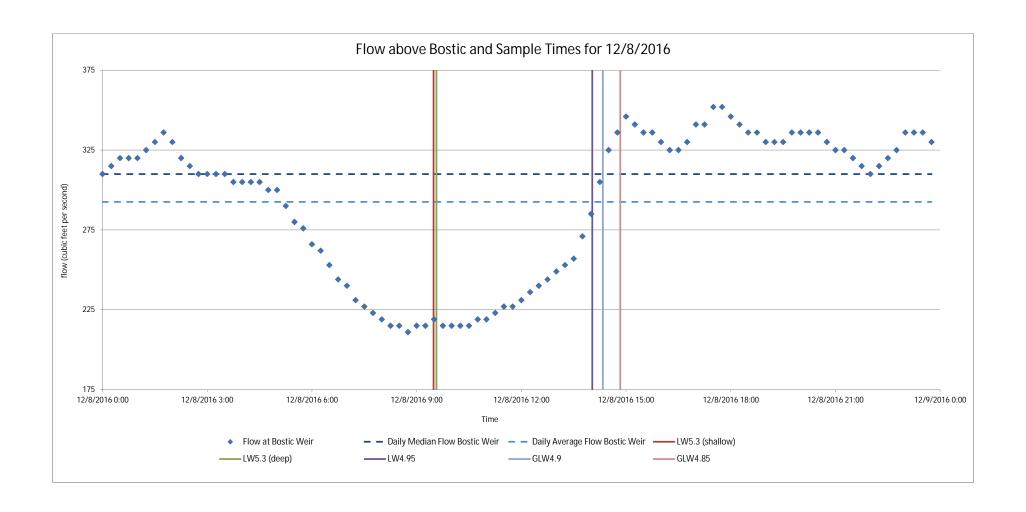
Appendix D

Sample Times and Flows

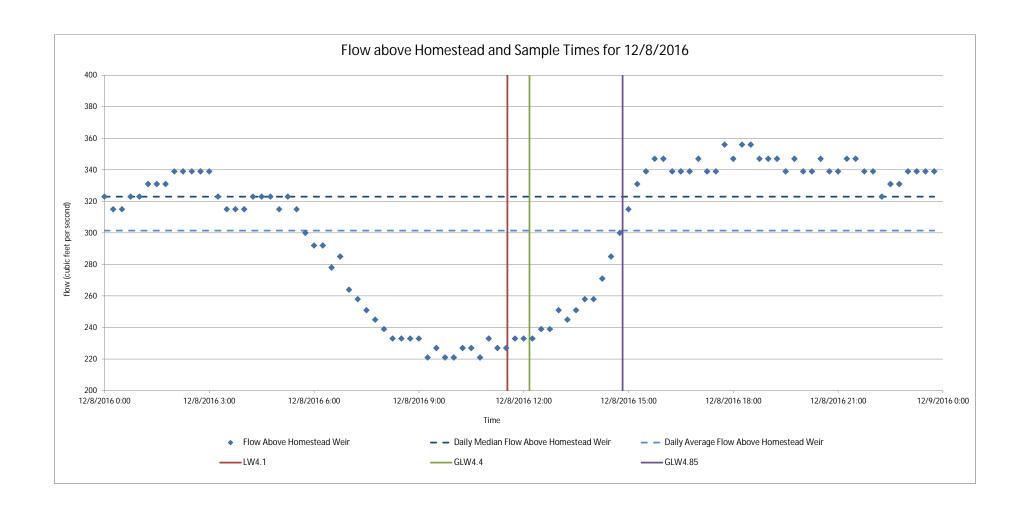
Appendix D-1 USGS Coordination Sampling December 8, 2016 NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



Appendix D-1 USGS Coordination Sampling December 8, 2016 NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

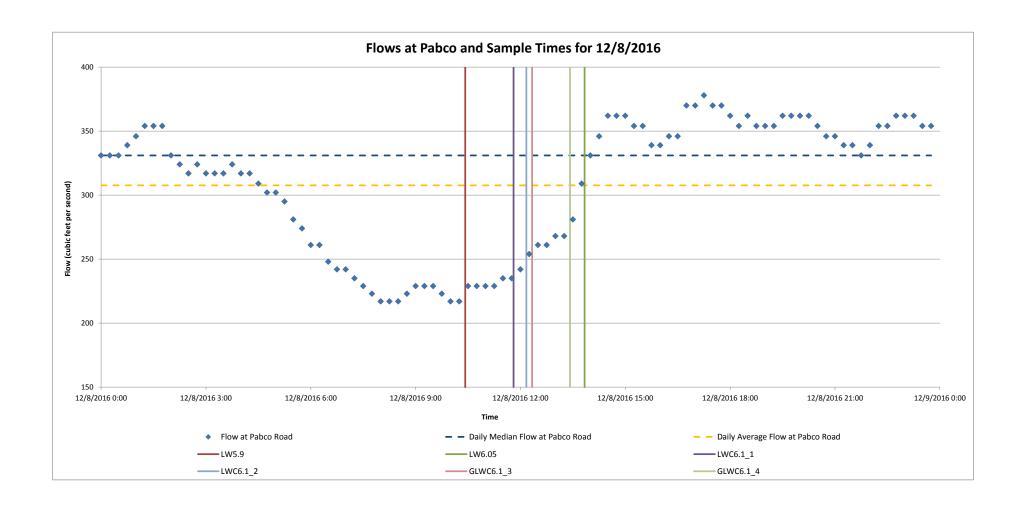


Appendix D-1 USGS Coordination Sampling December 8, 2016 NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



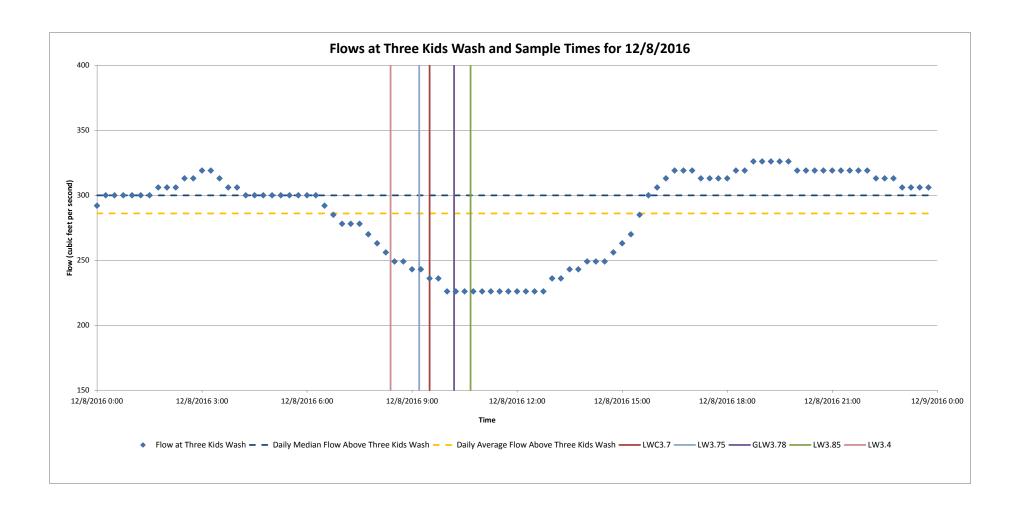
Appendix D-1 USGS Coordination Sampling December 8, 2016

NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada

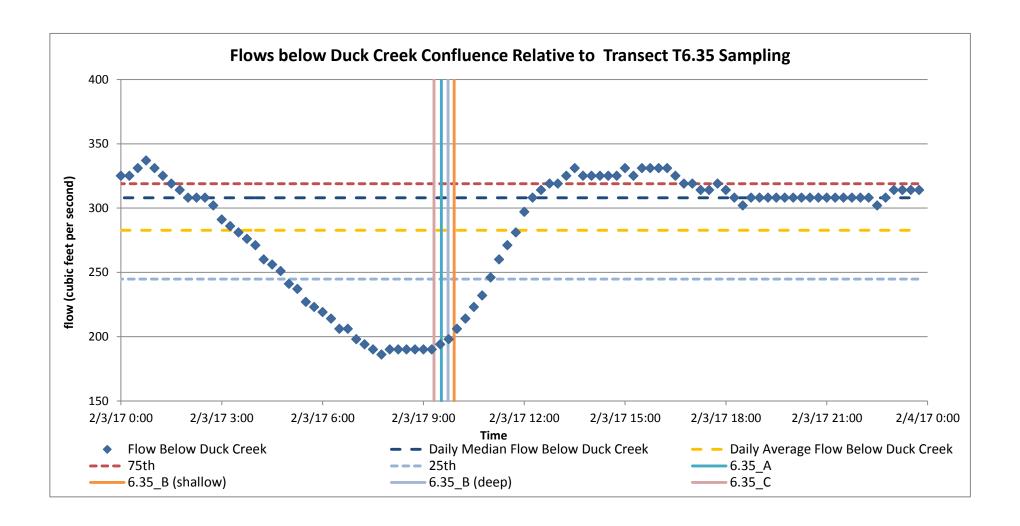


Appendix D-1 USGS Coordination Sampling December 8, 2016

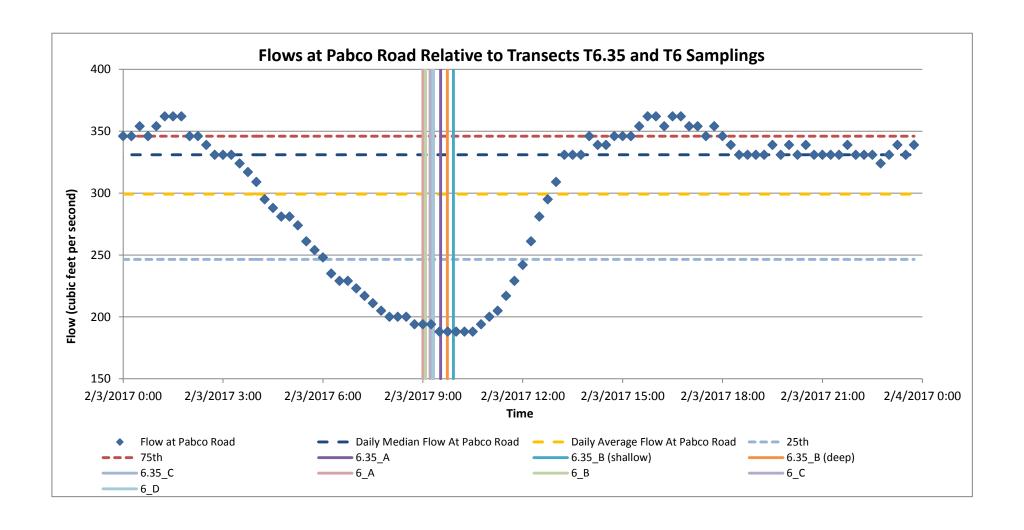
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



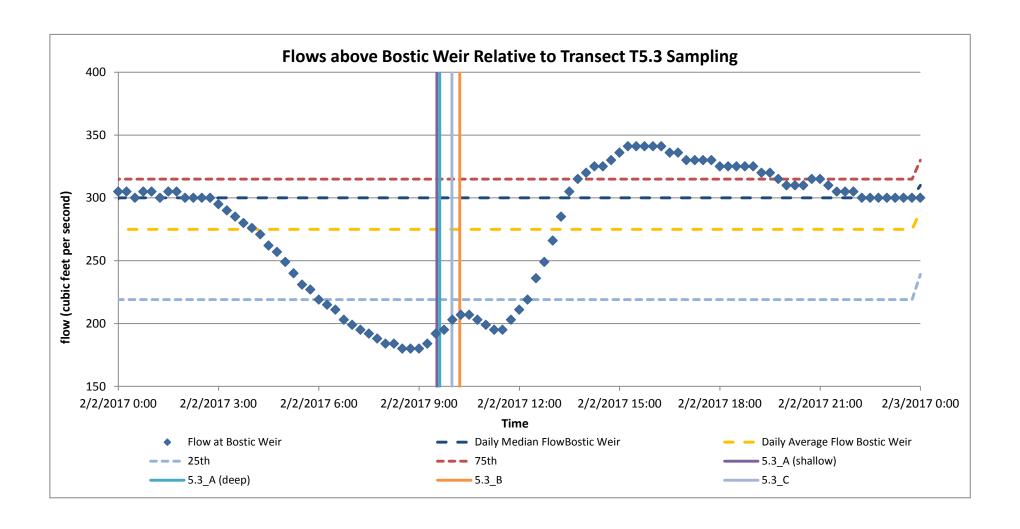
Appendix D-2 Transect Sampling January 30 - February 3, 2017 NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



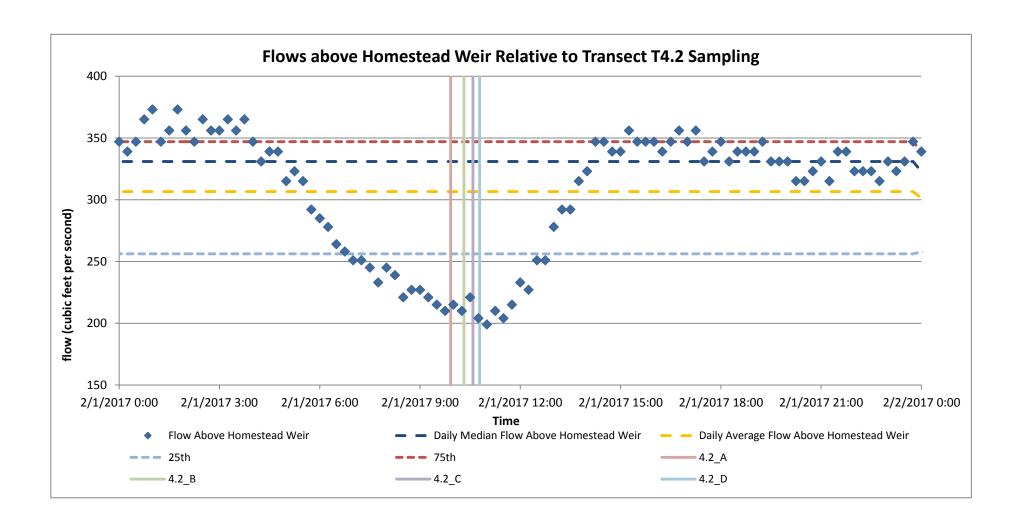
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



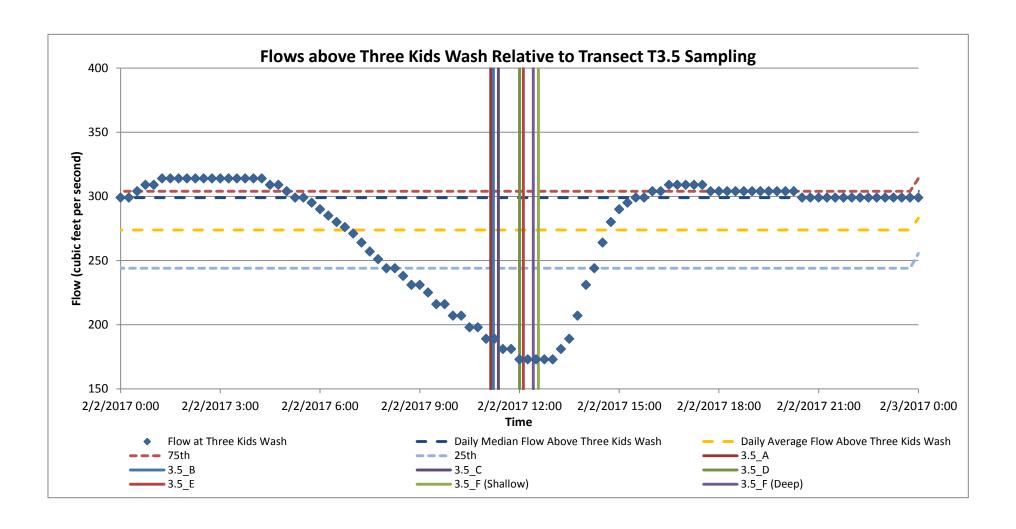
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



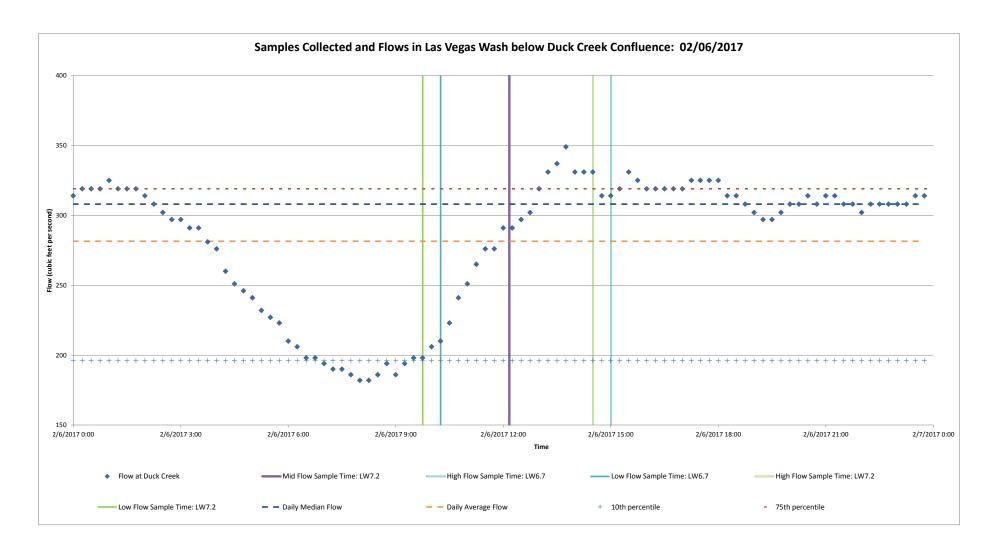
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



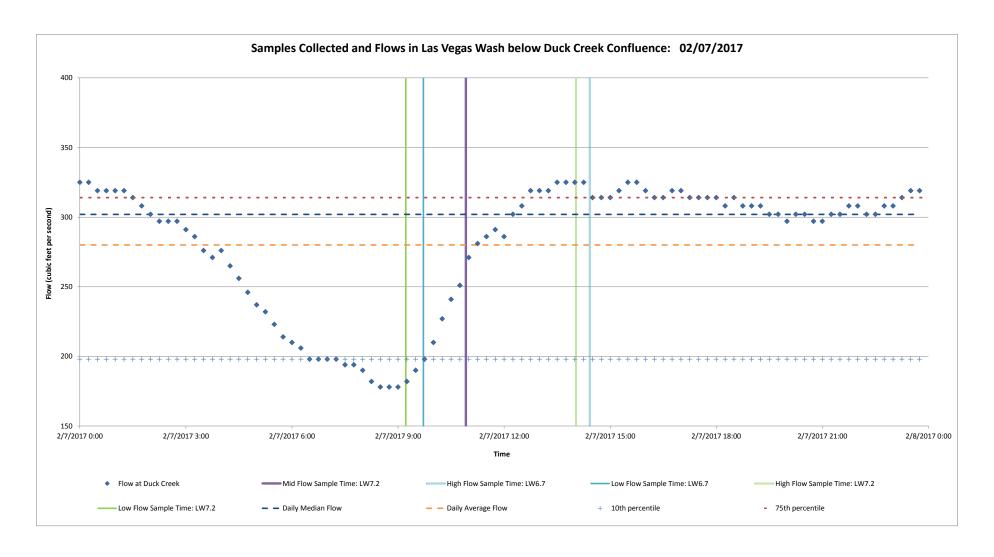
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



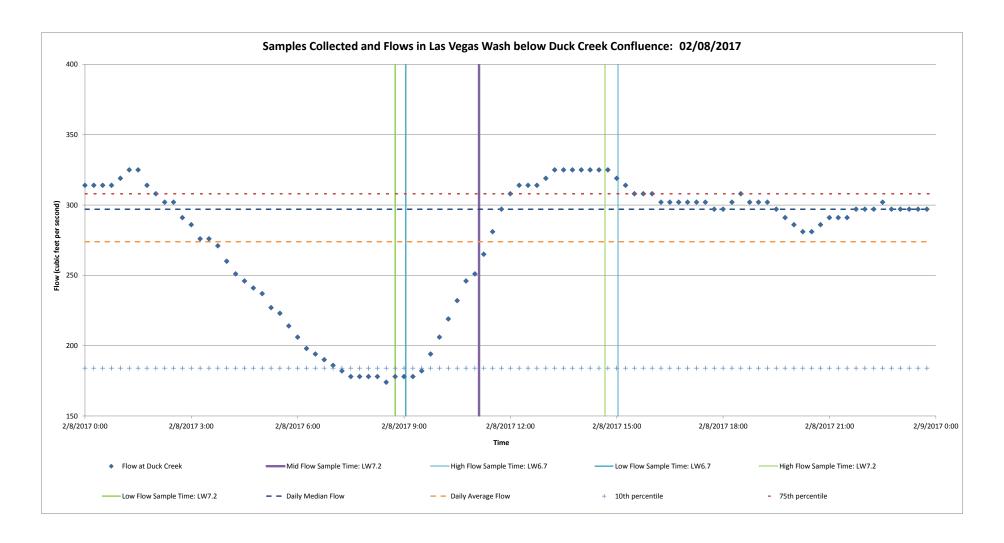
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



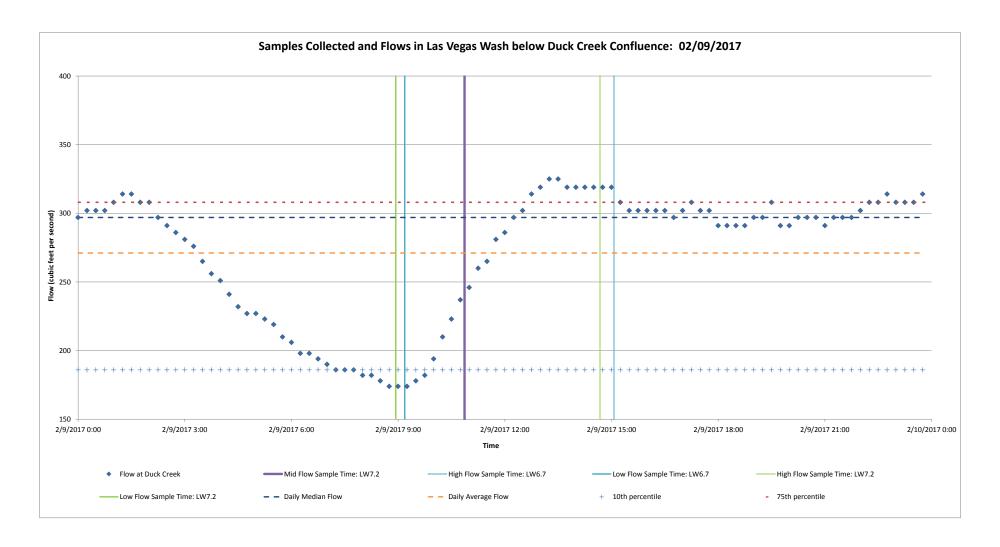
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



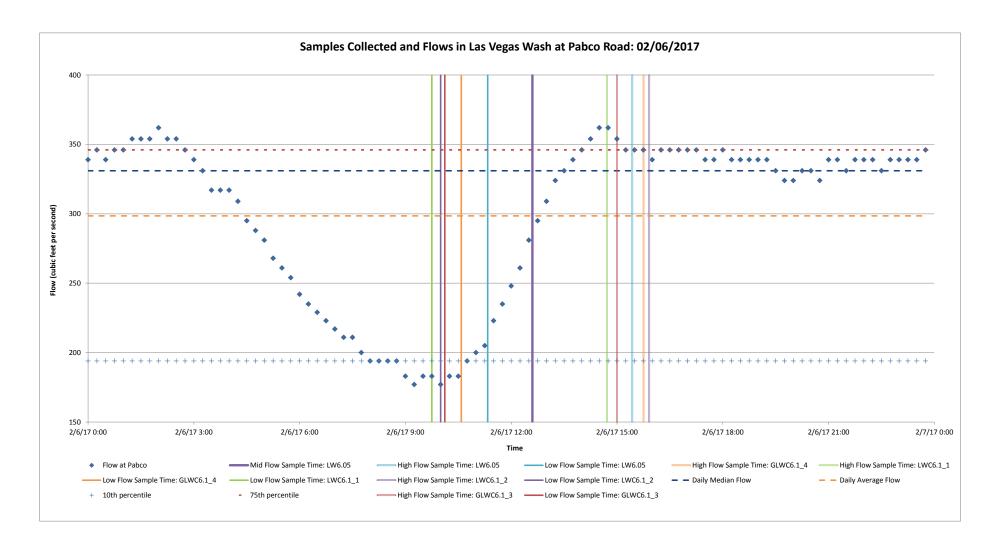
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



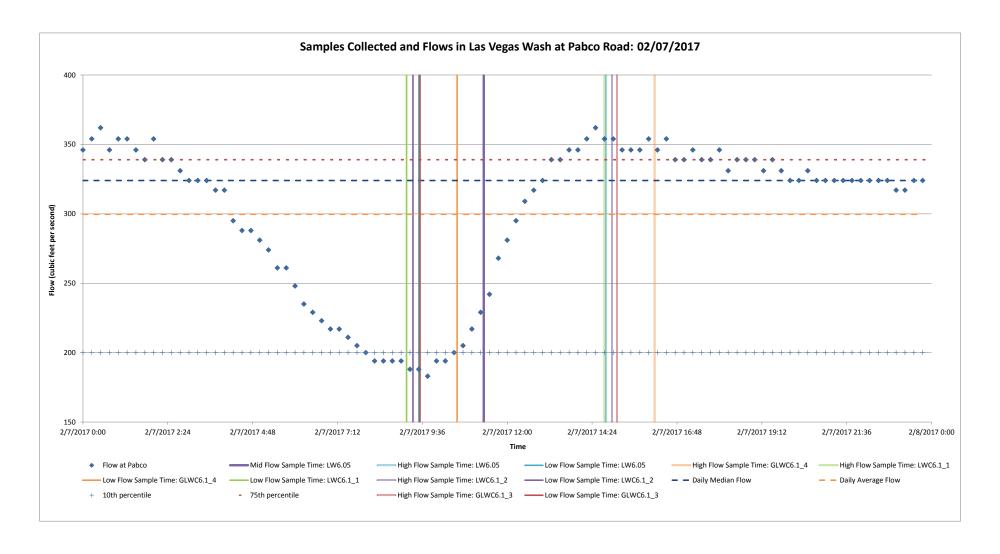
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



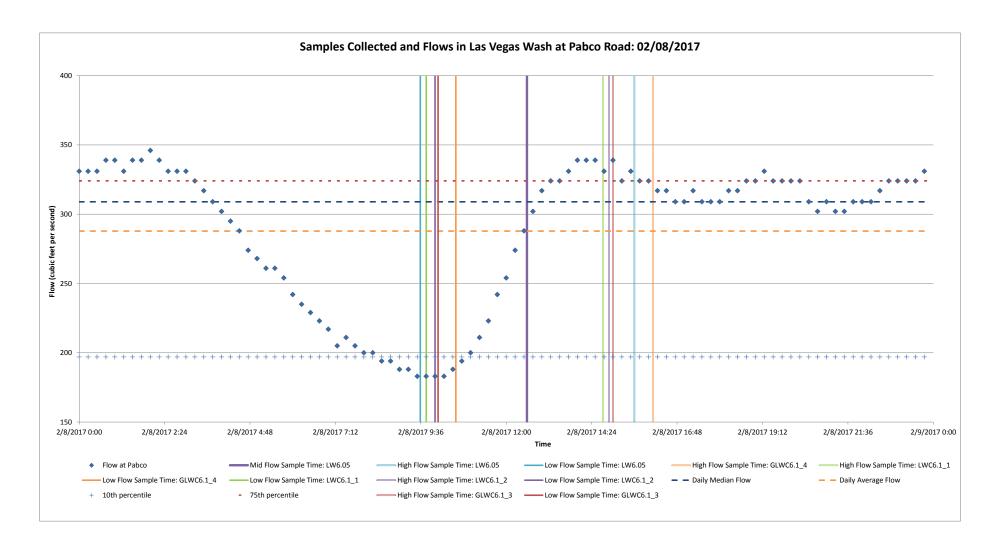
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



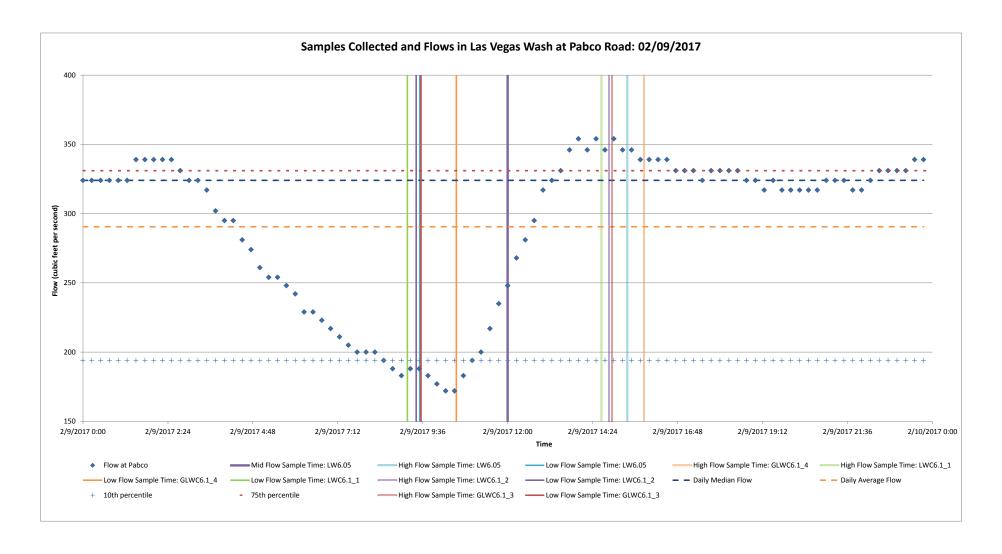
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



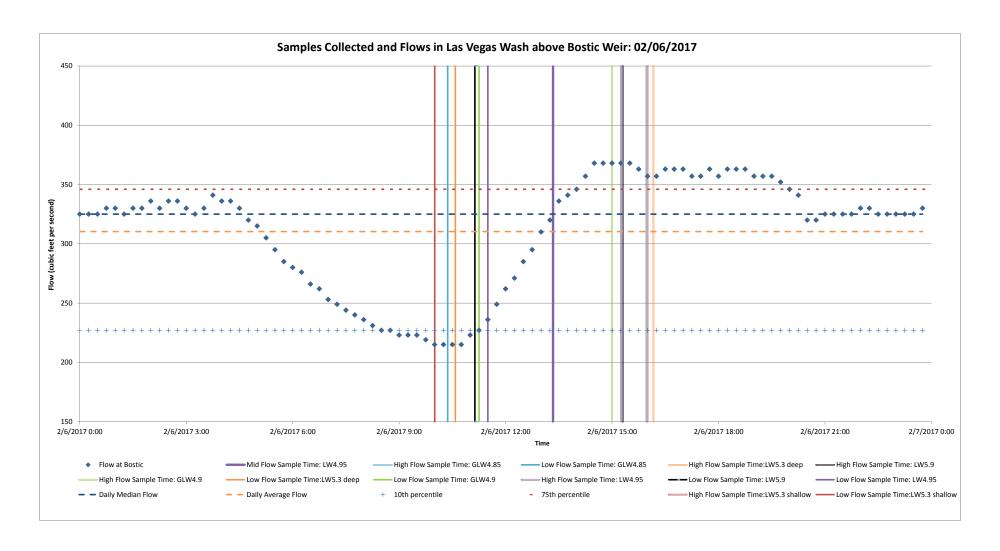
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



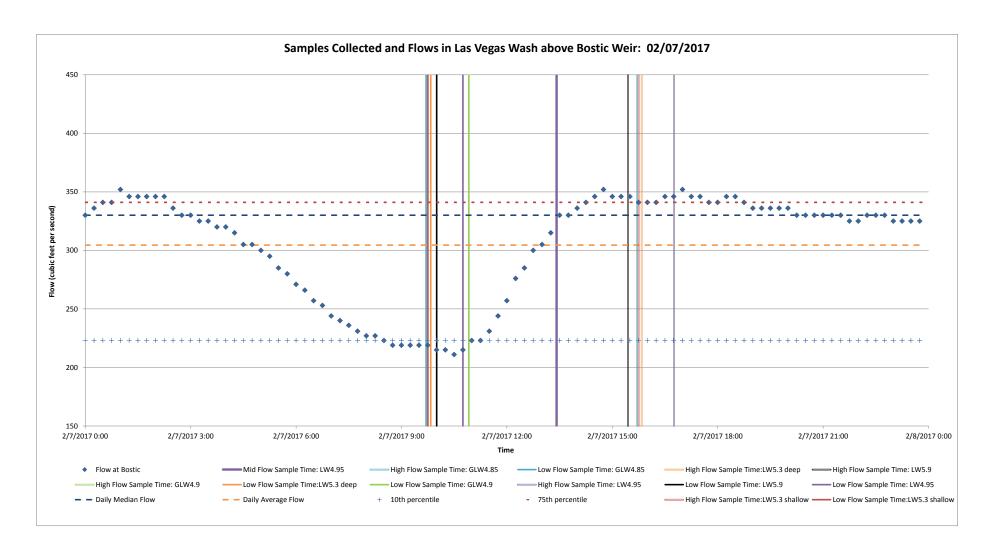
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



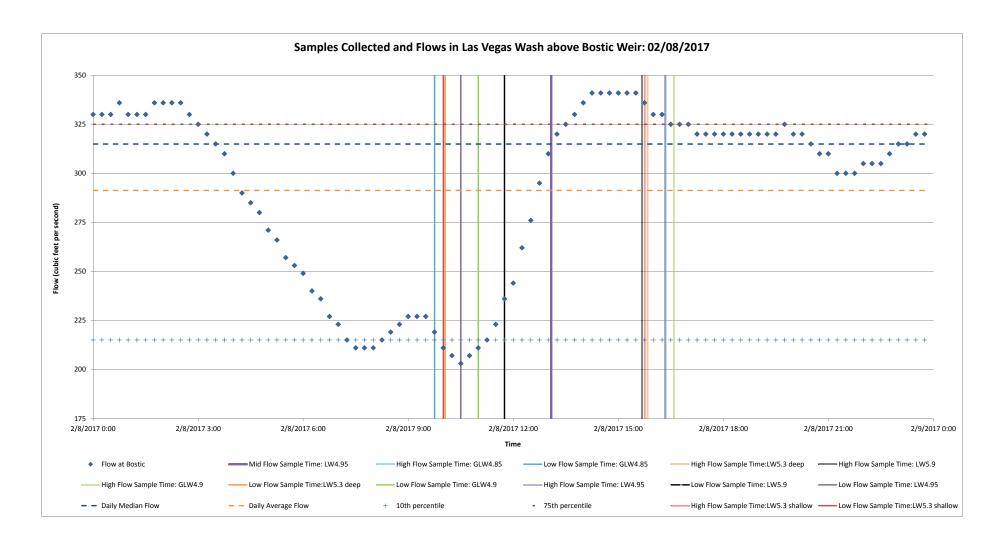
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



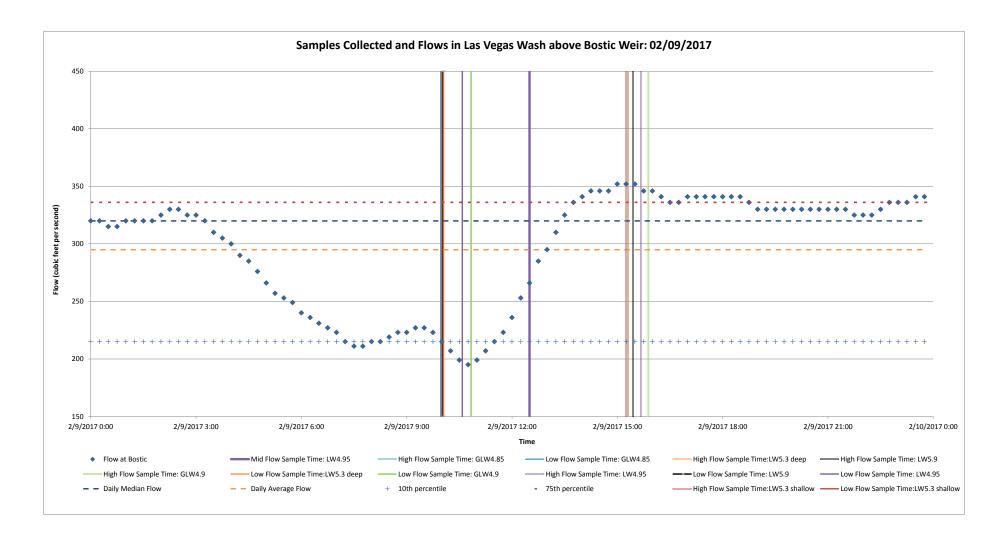
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



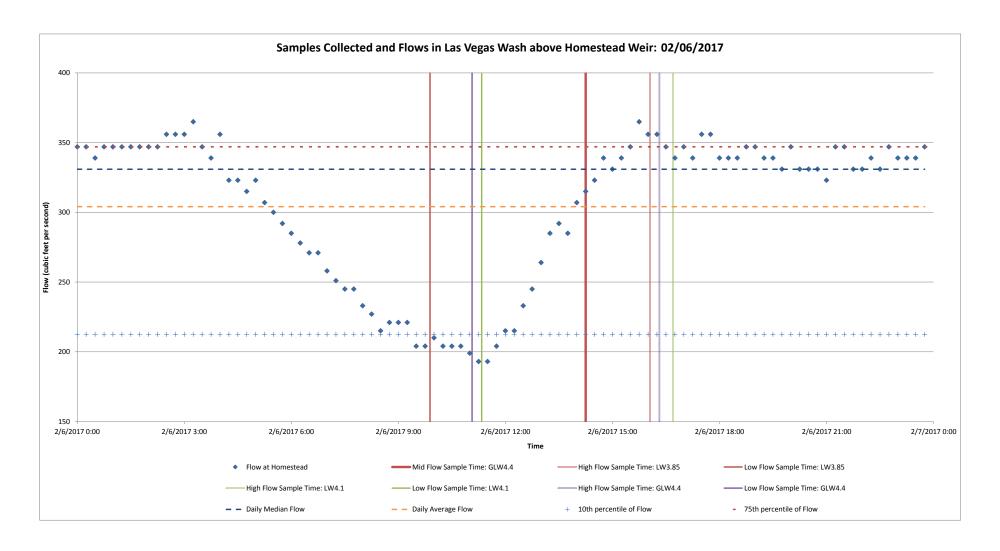
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



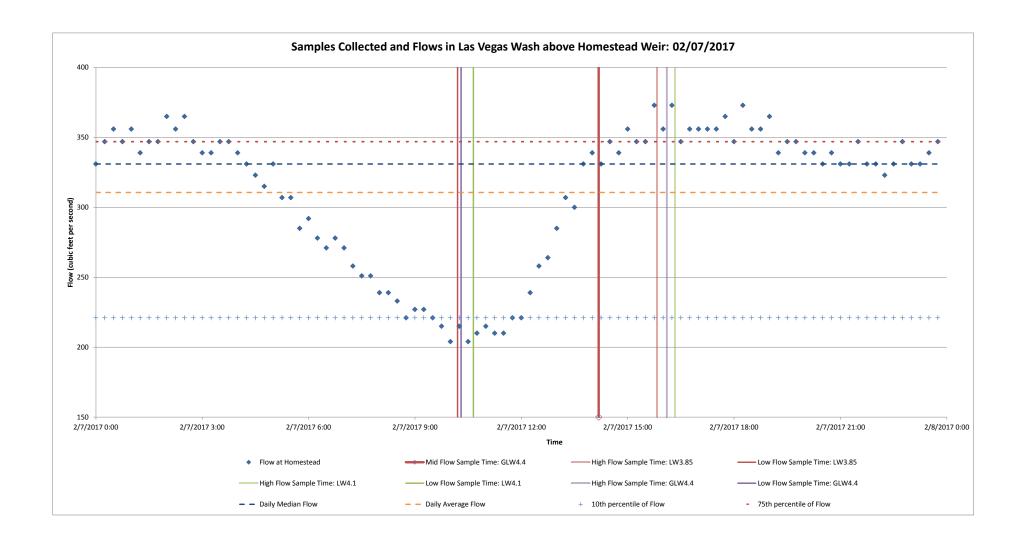
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



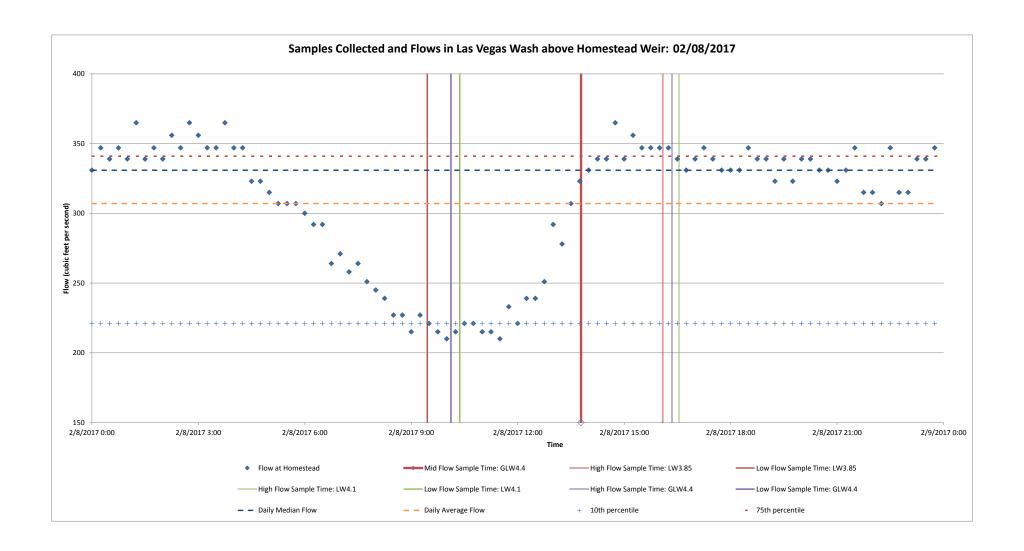
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



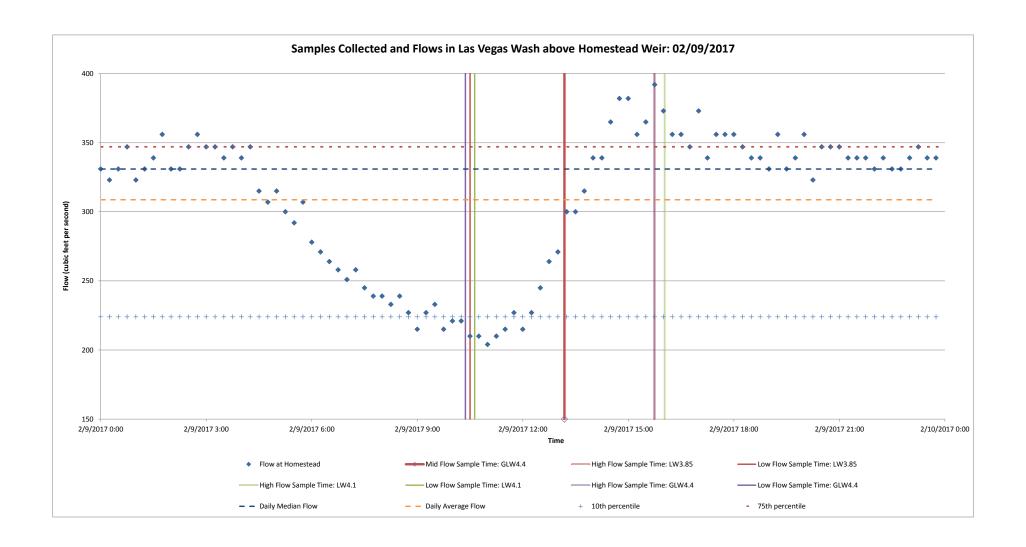
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



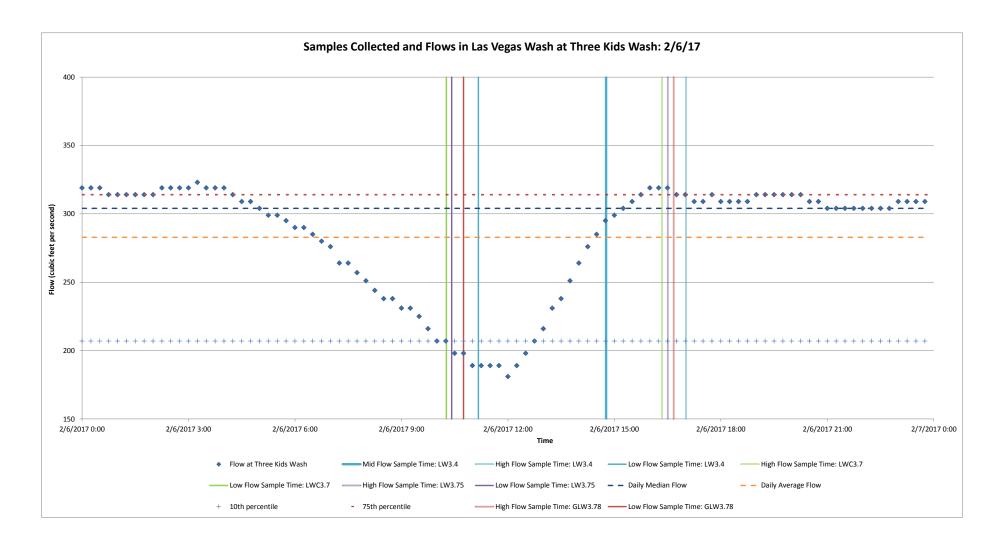
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



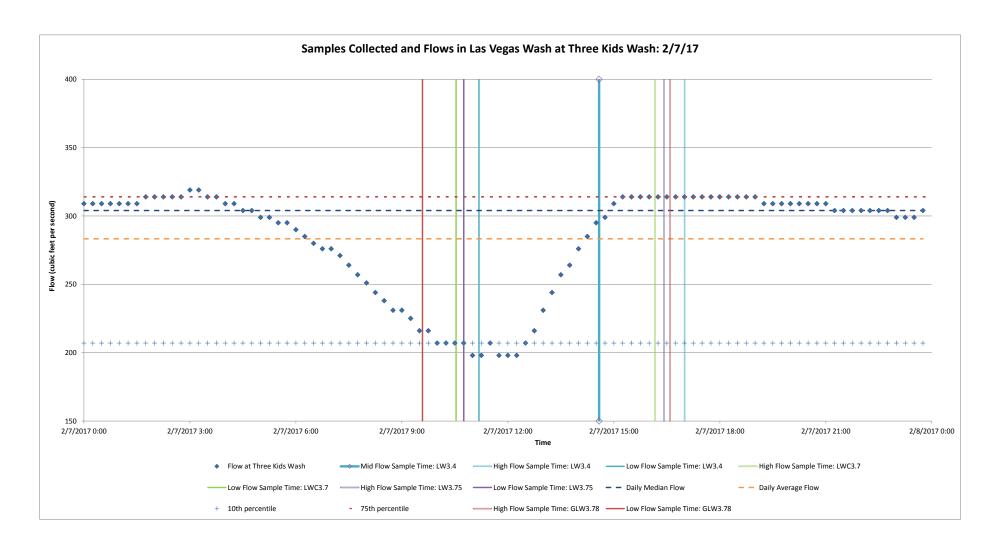
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



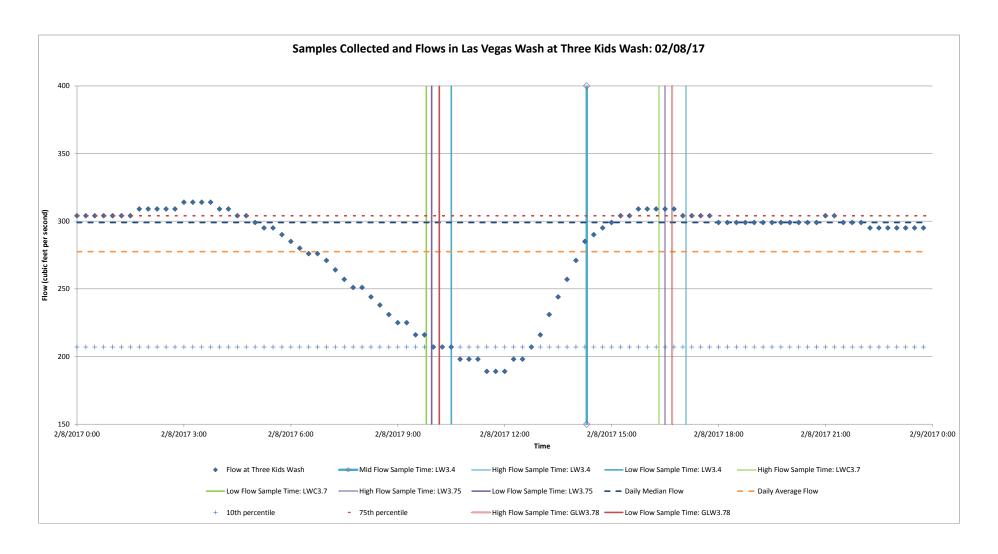
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



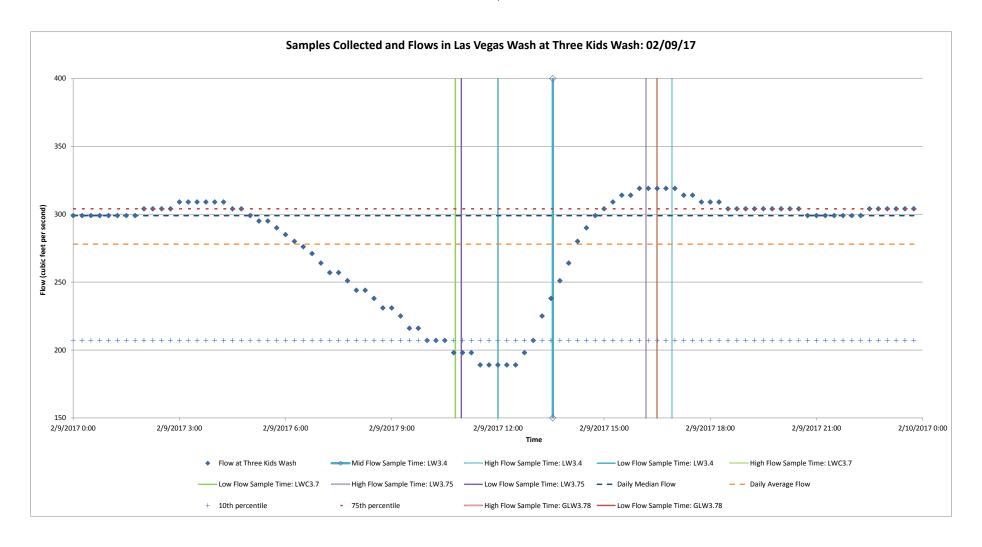
NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



NERT Remedial Investigation - Downgradient Study Area Henderson, Nevada



Appendix E

Laboratory Reports

(See Attached Files)

AECOM

CHAIN OF CUSTODY RECORD

Page 1 of 3

Client/Project Name: NDEP/NERT	Project Loca			-				Analysis	s Requ	ested		Container T P - Plastic	Preservation 1 - HCt, 4"		
Project Number: 60477365 2015-151B-01	Field Logbo	ok No.:		T				A - Amber C G Clear G V - VOA Via O Other E Encore	lass	2 - H2SO4, 4° 3 - HNO3, 4° 4 - NaOH, 4° 5 - NaOH/ZnAC, 4° 6 - Na2S2O3, 4°					
Sampler (Print Name)/(Affiliation):		stody Tape	Nos.:		·	olids (Stand	Total dissolved solids (Standard Method [SM] 2540C) Chlorate (EPA Method 300.1)	Method 300	fethod 300	A Method	Matrix Codes. DW - Drinking Water S - Soit				
Signature:	Send Resul	ts/Report to:		TAT:				l dissolved sc nod [SM] 254	l dissolved so nod [SM] 254 rate (EPA M	Chlorate (EPA M	Chloride (EPA Method 300.0)	Bromide (EPA Method 300.0)	Perchlorate (EPA Method 314.0	WW - Waste GW - Ground SW - Surfact ST - Storm V W - Water	water dwater e Water
Field Sample No./Identification	Date	Time	СОМР	GRAB	Matrix	Field Filtered	Tota	25	Bror		Perc 314	Lab I.D.		Remarks	
LW5.9. 20161263 -0.5	12.816	1025		-	೨ ೪೦ ೯೯	NA	1	1	1	1	1		2 80	rays	
FLW3 78 . 12 10 1208 . C.1	12.8.16	1012		-	1 400	NA	-	-	-	1	-		2		
wis-75-20161208.03	12.8.16	0912		-	SO	NA	1	1	1	1	-		Z		
Liu4.95. 2016/208-0.7	128.16	1402		-	92	NA	1	1	1	١	1		2		
Luic 3-7-20161208-0.6	12.8.16	C530		-	02	NA	1	1	1	~	1		2	1	
LWC3.7. 20161208.06.1	-0,5.8.1P	0930		-	SD	NA	J	1	1	1	1		2 1		
LWE-1- Z- 20161208. 05	12816	1210		-	SD.	NA		-	1	1	1		2 180	rruzs	
we 6-121-20161208.05	12-8-16	1148		-	90 -	NA	J	1	1	1	1		2		
1-1-80213102-6-1-	12-8-16	1420		_	S D	NA	1	1	1	1	1		2		
Luc 4.4-22161208:1-1	12-3-16	1210			1 50	NA	1	1	1	1	1		2		
120 - 501 1105 - 59.4 mm	128.16	1450		-	500	NA	1	1	1	1	1		2		
					Sample Contain	ner (Size/Mat'l)									
						Preserv.	4°	4	•	+	4				
Relinquished by: (Print Name)/(Affiliation Signature:	Date:				t Name)/(Affiliati	Date:		Test	America	oratory (C	Destination):				
Relinquished by: (Print Name)/(Affiliation	Date:		Signature: Received by: (Print Name)/(Affiliation) Signature:				Date: Time:	Irvine	, , UA				-		
Signature: Relinquished by: (Print Name)/(Affiliation) Date:		Receive	d by: (Prin	t Name)/(Affiliati	on)	Date:		Samp	ole Shipp			T -	Temp blank	
Signature:	Time.		Signatur	e:			Title.		UPS	FedE	x Cour	ier Other		Yes No	

Serial No.

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			M

CHAIN OF CUSTODY RECORD

Page 7 of 3

Client/Project Name: NDEP/NERT	Project Location: Las Vegas Wash							nalysis	Reques	ted		Container Type P - Plastic A - Amber Gla G - Clear Gla	ass	<u>Preservation</u> 1 – HOI, 4* 2 – H25O4, 4* 3 – HNO3, 4*			
Project Number: 60477365 2015-151B-01	Field Logboo	Id Logbook No.:							(0.00	(00.0)	D	V - VOA Vial O - Other E - Encore		4 - NBOH, 4° 5 - NBOH/ZnAc, 4° 6 - NBZSZO3, 4° 7 - 4°			
Sampler (Print Name)/(Affiliation):	Chain of Cus	Custody Tape Nos.:						Method 30	Method 3	Method 3	PA Metho	Matrix Codes: DW - Drinking WW - Wastey	g Water	ter S – Soli SL – Sludge			
Signature:	Send Result Kristen Dur			TAT:		Total dissolved solids (Standard Method [SM] 2540C)	Chlorate (EPA Method 300.1)	Chloride (EPA Method 300.0)	Bromide (EPA Method 300.0)	Perchlorate (EPA Method 314.0	GW - Ground SW - Surface ST - Storm W W - Water	Water					
Field Sample No./Identification	Date	Time	СОМР	GRAB	Matrix	Field Filtered	Tota	5	ਰ	Bro	Per 314	Lab I.D.		Remarks			
LW6-4-26161208.05	12.8.16	1510		1	SWSD,	NA	-	_	-	_			2	Purrues			
Lui 7.2. Zille1206.1.0	12-8 16	1545		1	30	NA	1	1	/	1	/		1	1			
LW41 . 20161208. C.Z	128.16			~	99-	NA	J	1	/	1	1			N.			
LW3.4.20161208.015		6823		1	- GD	NA	1	-	-	,	1						
LW3.4. 2016/208-0.5 F	= 12.8.K	1425		1	98	NA	1	1	1	1	1						
LW 5.3 - 2016/208.1.0. E	B1286	1420		1	SD	NA	V	1	1	1	/						
wx-85. 20161208.0-3	12-3.16	1040		1	SD	NA	1	1	~	1							
w3. 85-20161264-0.3.	FD 12.5.16	CYOI		1	50	NA	1	1	1		/						
WS. 3 - ZEIE1204 110	12-3-16	0934		1	SD	NA	1	1	~	1	,						
w5-3.12161208-2-5	12.8.16	0929		/	SD-	NA	1	1	1	1	1		12	-			
13.05. SCIEIZOS- 0.5	12 8 K	1350		1	5W	PL	1	~	1	1	1		6	BOTTLES MS/WSY			
					Sample Contai	iner (Size/Mat'l)											
						Preserv.	40		4°	4	4						
Relinquished by: (Print Name)/(Affiliation	on) Date:			Received by: (Print Name)/(Affiliation) Signature: Received by: (Print Name)/(Affiliation) Signature:					Tes	t America		(Destination)	:				
Signature: Relinquished by: (Print Name)/(Affiliation	on) Date:	-	-					-	livir	e, CA							
Signature:	Time:																
Relinquished by: (Print Name)/(Affiliation	on) Date:		Receive	ed by: (Pr	int Name)/(Affilia	ition)	Date:		Sar	nple Ship	oped Via		-	Temp blank			
Signature:	Time:		Signatu	ıre:			Time:		UP	S Fed	Ex C	ourier Oth	er	Yes No			

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CHAIN OF CUSTODY RECORD

Page 3 of 3

Client/Project Name: NDEP/NERT	Project Loc		A	Analysis	Reque	sted		Container Tyr P - Plastic A Amber Gl G - Clear Gla	1 - HCI 4" 2 - H2SO4, 4"				
Project Number: 60477365 2015-151B-01		十十二					ndard	0.1)	(00.00)	(0.001	b	V - VOA Vial O - Other E - Encore	4 - NaOH, 4° 5 - NaOH/ZnAc, 4° 6 - Na2S2O3, 4° 7 - 4°
Sampler (Print Name)/(Affiliation):	Chain of Cu	ustody Tape	Nos.:			solids (Sta 540C)	1ethod 300	Method 3	Method 3	A Metho	Matrix Codes DW ~ Drinking	g Water S – Soil	
Signature:	Send Resu Kristen Du	lts/Report to:		TAT:			Total dissolved solids (Standard Method [SM] 2540C)	Chlorate (EPA Method 300.1)	Chloride (EPA Method 300.0)	Bromide (EPA Method 300.0)	Perchlorate (EPA Method 314.0	WW - Waster GW - Ground SW - Surface ST - Storm W W - Water	water SD - Sediment Water SO - Solid
Field Sample No./Identification	Date	Time	СОМР	GRAB	Matrix	Matrix Field Filtered		SE CE	Chic	Bror	Perc 314	Lab I.D.	Remarks
-ade					~ 30~	NA							
WCC. 1. 4-20141208.00	12846	1325		V	5W 50	NA	-	-	~	-	~		2 FUTTLES
wich. 1.3 ZUK1208 05				/	3W80	NA	1	/	_	1	1		2 Bornus
					SO	NA							
		1			SD	NA							
					1	NA		19)			
					SD)	NA			1				
				10000	Sp	NA		/					
					(SD	NA	<						1 /16
					SD	NA							- n
					<			1 -					1
					Sample Contain	er (Size/Mat'l)	**************************************						
						Preserv.	4°	4	o	4	4		
Retinquished by: (Print Name)/(Affiliation	Date:		Receive	d by: (Prir	nt Name)/(Affiliation	on)	Date:		Anal			Destination):	1
Signature:	Time:		Signature: Received by: (Print Name)/(Affiliation)				Time:		10000000	America			
Relinquished by: (Print Name)/(Affiliation) Date:						Date:		iivun	e, CA			
Signature:	Time:		Signatu	re:			Time:						
Relinquished by: (Print Name)/(Affiliation	Date:	0			t Name)/(Affiliation	on)	Date:			1.6:			
Signature:	Time:		Signatur	e:			Time:		Sam	ple Ship		rier Other	Temp blank Yes No

TestAmerica Irvine

17461 Derian Ave Suite 100

Chain of Custody Record

Test	Am	eri	ca

THE LEADER IN ENVIRONMENTAL TESTING

Irvine, CA 92814-5817	FIG. 6.	_		_				Carrie	er Track	ing Not	11.		-			The same of the sa				
Phone (949) 261-1022 Fax (949) 260-3297	Sampler:			Lab Mat	a, Pati	ty						1					Page.			
Client Information	C. Steve Howe	_	_	E-Mi	ait		@testamericainc.com									-	Page			
Client Contact Carmen Caceres-Schneil	Phone: (805) 764-4031			patt	ly.mata	a@tes	tame	ricaino				_					Job #:			
Company									An	alysi	s Re	ques	ted	_		-	Preservat	ion Cod	es:	
AECOM, Inc.	Due Date Requested	f:										1					A-HCL		M - Hexarie	
Address: 1220 Avenida Acaso									1						1		B - NaOH		N - None O - AsNaO2	
City	TAT Requested (day	10 Day	s														C - Zn Ace D - Nitric A	cid	P-Na204S	
Camarillo State, Zip.																	E - NaHSO F - MeOH	4	Q - Na2SO3 R - Na2S2O3	
CA, 93012			-	_													G - Amohio		S - H2SO4 T - TSP Dode	
Phone:	PO#: 74770 and 7477	1			0	lorat										- 3	H - Ascerbi	Acid	U - Acetone	any a see
805-764-4031 Email	WO#:		1000	1000	N I	erch la										2	J-DI Wate		V-MCAA W-ph.4-5	
carmen.caceres-schnell@aecom.com	Project #:		-	_	- 8	404										alne	L-EDA		Z - other (spec	ify)
Project Name: NERT Surface Water	60477365-2015	151B			9	1										ont	Others			
Sito:	SSOW#:				due	C, Br										ofe			Maria Maria	
NERT - Downgradient Study Area				M-toles	Spo	300	5									ber				
			Sample	Matrix (w-water,	Itter	SQ.	280									Nun				
		Sample	Type (C=comp,	S-solid, G-wasteloli,	BB	MC-TDS,	8									otal				
Sample Identification R-(3)13	Sample Date	Time	G=grab)	BT-Tissue, A-Al	1) 1	· ·	8				-						Spe	cial ins	structions/No	ote:
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17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Phone (949) 261-1022 Fax (949) 260-3297							-													THE LEADER IN EN	NVIRONMENTAL TEST
Client Information	Sampler: C. Steve Howe				ab PM: lata, F	Patty							C	arrier T	rackin	g No(s)				COC No:	
Carmen Caceres-Schnoll	Phone: (805) 764-4031			E-	Mail:				de alea			-	1							Page: Page	
Company: AECOM, Inc.	(000) 104-400		-	Pe	atty.m	ata@	jiest	amer	icaino					4-	4					Job #:	1
Address: 1220 Avenida Acaso	Due Date Reques	ted:			100				_	An	alysi	SK	equ	este		T	T		Make	Preservation Code	es:
City:	TAT Requested (d	lays):			-8															A - HCL B - NaOH	M - Hexane N - None
Camarillo State, Zip:		10 Da	ays												1				The second	C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
CA, 93012 Phone:			100							1					1				36	E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
805-764-4031 Email:	PO #: 74770 and 747	71			5		orate			1					1				1	G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrat
carmen.caceres-schnell@aecom.com	WO #:	1			or NC	0	Perchi					1		1					10		U - Acetone V - MCAA
Project Name: NERT Surface Water	Project #: 60477365-201	5.151B			Cyes	18	314.0-1				1		-	1		-			tainer		W - ph 4-5 Z - other (specify)
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poise			AL SER			Sam	ple	Disp	osal	(Afe	ee ma	y be	ass	esse	d if s	ampl	es a	e ret	aine	ed longer than 1 n	month)
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Reinquished by:	Date/Time:	Company	200			ved by			-			100		1			-		Company		
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17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record



Carrier Tracking No(s) Mata, Patty C. Steve Howe Client Information Page E-Mail Client Contact patty.mata@testamericainc.com Page Carmen Caceres-Schnell (805) 764-4031 inh# **Analysis Requested** AECOM, Inc. Preservation Codes: Due Date Requested: 1220 Avenida Acaso A - HCL N - None TAT Requested (days): B - NaOH O-AsNeO2 10 Days C - Zn Acetate Camarillo P - Na204S D - Nitric Acid State, Zip. Q - Na2SO3 E - NaHSO4 R - Na2S2O3 CA, 93012 F - MeOH G - Amchlor S - H2SO4 Phone H - Ascorbic Acid T - TSP Dodecahydrate 74770 and 74771 805-764-4031 U - Acetone I-Ice Email J - DI Water V-MCAA carmen.caceres-schnell@aecom.com K-EDTA W - ph 4-5 Z - other (specify) L-EDA 60477365-2015.151B NERT Surface Water SSOW# NERT - Downgradient Study Area Matrix Sample (W=water, Type Sample (C=comp, O=waste/oil. Special Instructions/Note: Sample Date Time G=grab) Sample Identification Preservation Code: N X X T4 6A-2017 0133 G 0.3 1040 1.30.17 X T4.6B-2017 0131 W 1.31.17 1047 G 0.6 X W 9 T4.6C-2017 0131 G .0.8 1-31-17 1056 W X T4.6D-2017 0131 G 0.8 1113 1.31-12 W X T4.0E-2017 (0) 31 1-31-17 T4-68 W X 1-51.17 1047 TOAR- 20170131-0-6-FD XX TL-44 - 20178131 - EB W 1-31.17 1000 XX T4.6A G W X G W W X X G W Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Disposal By Lab XI Archive For Non-Hazard Flammable Skin Imitant Poison B Unknown Radiological Return To Client Deliverable Requested: I, II, III, IV, Other (specify): Level II Special Instructions/QC Requirements Method of Shipment Time: Empty Kit Relinquished by Company 1.37.17 1515 AECOM Company Date/Time: Relinquished by Company Received by: Date/Time: Relinquished by: Cooler Temperature(s) °C and Other Remarks Custody Seals Intact: Custody Seal No.: Δ Yes Δ No

Page CA 30814-5817	C	chain c	of Cusi	loay R	eco	ro.						
Phone (MR) 261-1022 Fm (DM) 280-1297 Client Information	C Street House				c. Chitty				Carrie Training these		COC NO.	
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TestAmerica Irvine 17451 Derian Ave State 100 Irvine: CA 52614-5817 Phone (949) 261-1022 Fax (949) 260-3297	0	Chain	of Cus	tody F	Reco	rd										TestA	merico
Client Information	C. Steve Howe			Mad	s. Party						-	Fracting	AMERICAN III	_	T	CCC No	
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Irvine, CA 92614-5617 Phone (949) 261-1022 Fax (949) 266-3297	Total Control			Lab P	Petty				Castler Tracking	1444		X No.	
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Continued Cont	Client Information	C. Steve Howe	16 10		and the second second	a, Pat	у.				Carrie	Tokking No	(N)		AN III	
Analysis Requested	Crievy Contact	Phone:					files	farrier	latina en	-					Page	
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Phone (949) 261-1022 Fax (949) 260-3297	Sampler;	_	-	Lab	a, Pat				Carrie	er Tracking Notal		COC No.	
Client Information	C. Steve Howe	_	-	E-M	e			1570				Page	
Carmen Caceres-Schneil	(805) 764-4031		_	pat	y mate	Qtes	tame	ricainc com				Page Job #	
AECOM, Inc.					_	_	_	Analysi	s Reques	ted		Preservation Code	s;
1220 Avenida Acaso Cer	Due Date Request	e#			ш	Ш		VIIII I				A-HCL	M-He N-No
Camarillo	TAT Requested (d.	ays): 10 Da	vs	-	ш	ш			1.4.2		1 100	B - NaOH C - Zn Acetada D - Náric Acet	Q-As
State, Zip. CA, 93012		-			ш	ш						E-MaHSO4 F-MaOH	Q-M R-M S-H2
Phone: 805-764-4031 Emai:	PO # 74770 and 747	71			6	lorato						G - America H - Ascertic Acid	T-TB
Carmen caceres-schneil@aecom.com	WO W				or N	Parcel					2	J-DI Weter	U - Ac V - M W - pl Z - pt
Project Name: NERT Surface Water	Freject #. 60477365-2015	. 151B			e (Yes	314.6			11		ntaine	L-EDA	Z+oth
Site: NERT - Downgradient Study Area	SSOWA				Samp	Q, B.	Horate				olco	Other:	
Sample Identification	Sample Date	Sample	Sample Type (C=comp, G=grab)	Matrix (pressure, 2-solid Cressulation, 25-Dance, Andre	Field Filtered S	2540C-TDS, 308	300.18_280 - CH				Total Number	Special In	struct
ompre recrimentation				tion Code:	X	N	L		1				
T5.3A-2017 020Z - 1.4	1-2-17	0932	G	W	N	X	×				2		
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T5.38-2017 OZOZ .Z-O.FD	2-2-17	1013	G	W	N	X	X				2		
T5.3C-2017 0 202 -1-2	2-2-17	0959	G	W	N	×	X				Z		
T5:30-2017	-	-	G	W	N	×	×				X		
T-6-8E-2047	_	-	G	W	N	X	X				×	4	
TS 3A-20170202 -1-4-EB	2-2-12	1530	G	W	N	×	X				2		
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Possible Hazard Identification Non-Hazard Flammable Skin Initiant Deliverable Requested: I, II, III, IV, Other (specify): Level II	Poison B Unkn	own 🖵	Rediologica/				Retun	posal (A fee m n To Client ructions/QC Rec	Disp	osal By Lab	es are retain	ned longer than 1 hive For	Mo
Deliverable responsibled by:		Date:			Tim					Mercus of Ships	mare		
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17461 Derian Ave Suite 100

Test	Am	e	
	- named a	MARKENITA	AL TESTING

17461 Derian Ave Suite 100 Irvine, CA 92614-5817	CI	nain o	f Custo	bay Re	COI	u						-			-	No:	-
Phone (949) 261-1022 Fax (949) 260-3297	Sampler:	-	-	Lub PM Mata,	Patty						Carrie	r Treckin	No(s):		Pag		
Client Information	C. Steve Howe	_	-	E-Med		Landa		inc co	m						Pa	ge	$\overline{}$
Carmen Caceres-Schnell	(805) 764-4031		_	patty.	mata@	testar	merica								Job		
Company: AECOM, Inc.					_	_	-	A	nalys	IS K	ques	teu	1		Pre	eservation Codes:	
Address	Due Date Requested			7				1		1					A	- HCL M - Hext - NaOH N - None	
1220 Avenida Acaso City:	TAT Requested (days	E	7 -												C	- Zn Acetate O - AsN	BO2
Camarillo		10 Day	5										1		E	- NaHSO4 Q - Na2	903
State, Zip: CA, 93012												11			G	- Amchior S - H25	O4 Dodecarrydrate
Phone:	PO#: 74770 and 74771					orate										- Ice U - Ace	tone
805-764-4031 Email:	WO#:			-	S No	the state of										J - DI Water V - MC	4-5
carmen.caceres-schnell@aecom.com		_			es o	603			11			11				L-EDA Z-oth	or (specify)
Project Name: NERT Surface Water	Project #: 60477365-2015.1	51B		_ \	S of	1, 34			1				1	1	Cou	Other:	
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NERT - Downgradient Study Area			No.	Matrix	Spa	300-CI,	5						1		Numbe		
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ossible Hazard Identification	ant Poison B Unkno		Radiologica				Retu	m To	Client			Disposi	al By L	ab	A	rchive For	Months
	ant Poison B Unkno	1000	(dujoiogies			Spec	ial Ins	tructio	ns/QC	Req	uirem						
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rvine, CA 92614-5817 Phone (949) 261-1022 Fax (949) 260-3297	-	Chain o				-		-		C	errier Tracking	g No(s):		COC No.	
	Sampler			Lab PA Mata	Patty					_				Pagit:	
Client Information	C. Steve Howe			E-Mail	mata@	Dtesta	merica	inc.co	m					Page	
Carmen Caceres-Schnell	(805) 784-4031		_	peny	THURS	-				is Requ	ested				_
empany: NECOM, Inc.		*	_				-	T	Ilaiyo	T T			1 1	Preservation Codes:	
ddress:	Due Date Requeste	ed:													- Hexane - None
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ate, Zip: A, 93012														O America S	Na25203 H2SO4
M, 93012	PO#					at o							11	H - Ascorbic Acid T -	TSP Dodecahydra Acetone
05-764-4031	74770 and 7477		_	- 1	8	100			1 1		11			J - Di Water V	- MCAA
mait	WO #.	-		-	0 50	5			1 1						- ph 4-5 other (specify)
oyect Name:	Project # 60477365-2015	151R			2	34						11		Other:	
ERT Surface Water	SSOW#:	,1516		-	1	C, 99,	ate		11					5 Owner.	
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		and the	Туре	(Wewster, Seattle, Ownestatol),	E de	P. I	JOO. 18_25D							7	
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5.8A 2017FB @2215		Name of Street, or other Persons		W	N	×	x							2	
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8.8C-2017 0203 -0,4	2-3-17	0932	G	W	N	×	X	+	-	-	+	++	+	2	
6.8D-2017 0203 - 0.9	2.3.17	941	G+	W	N	×	X		-			+		2	_
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ossible Hazard Identification	olson B Unkr	-	Radiologica				Return	To C	lient		Disposal B	y Lab	(X)	Archive For	Months
Non-Hazard Flammable Skin Irritant F	oison B Unki	iown /	tabiologica		5	Specia	Instru	uction	s/QC R	equireme	ents:				
eliverable Requested: I, II, III, IV, Other (specify): Level II		To the second		-	Tim	-					Meth	od of Shipm	ent:		
mpty Kit Relinquished by:	-	Date:	-	Townson.	tim	100	mined b	10	_					A	Company
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And the state of t	Date/Time:		1,0	Company		Re	delved b					Date	/Time:		Company
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Custody Seals Intact: Custody Seal No.:				-		Cz	oler Ten	mperati.	rein) C	and Other	Dornarky-				

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



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Client Information	Sampler: C. Steve Howe			Mat		atty							ľ	arrier r	IBUAH	y nota	J.		- [CCC 140.	
Client Information Client Contact:	Phone:			E-Ma									٦							Page: Page	
Carmen Caceres-Schnell Company:	(805) 764-4031			patt	y.ma	ata@	testa	meri	cainc.				_	_	-					Job#:	,
AECOM, Inc.										Ana	alysis	s R	equ	este	d	_	_	_		Preservation Code	
Address; 1220 Avenida Acaso	Due Date Requeste	ed:			100														3	A - HCL	M - Hexane
City:	TAT Requested (da				1								1			1				B - NaOH	N - None O - AsNaO2
Camarillo State, Zip:	ł	10 Da	ys		遊					1							1			C - Zn Acetate D - Nitric Acid	P - Na2O4S
CA, 93012					300					1	- 1				1				1	E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
Phone: 805-764-4031	PO #: 74770 and 7477	71					age	1	- 1				1	1			1	Ш		G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
Email:	WO #:				2											1			3	I - Ice J - DI Water	U - Acetone V - MCAA
carmen.caceres-schnell@aecom.com Project Name;	Project #;				- ŝ	0 1	314.0-Pe	- 1	- 1										ners	K - EDTA L - EDA	W - ph 4-5 Z - other (specify)
NERT Surface Water Site:	60477365-2015	5.151B			Ş							1		1	1	1			윤	Other:	2 out (spoury)
NERT - Downgradient Study Area	SSOW#:				E		Ç, B,	lorat											5	Julei.	
,			Sample	Matrix	ğ	30	, 300-CI,	300.1B_28D - Chlorate						1					Number	•	
*			Туре	(W-water, S-solid,	Filte		2540C-TDS,	182	-	ı									Ž	ľ	
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O-wasts/oil, BT=Tissue, A=Air)	Fleid		2540	20.1											Total	Special Ins	structions/Note:
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Possible Hazard Identification	on B Unkno	🖵	adiological			Sam	nple l	Disp	osal (To Cli	A fe	e maj	y be	ass	esse	d if s	ampl	es ar	e reta	ine	d longer than 1 r	month)
Non-Hazard Flammable Skin Irritant Poisce Deliverable Requested: I, II, III, IV, Other (specify): Level II	n B — Unkno	own K	adiological		-	Spe	cial Ir	nstru	ctions	ent /QC	Requi		-Disp	osal	By L	ab	_	A	rchiv	ve For	Months
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16 1 TELOW	26	(1 1 (650	AECOM			7	10	M								1//	11	1		17 1650
Relinquished by:	Date/Time: Company						Receil	ved by	r.							Date	/Time	•	•		Company
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Custody Seals Intact: Custody Seal No.: Δ Yes Δ No	Custody Seal No.:							r Tem	perature	e(s) °	C and C	Other	Rema	rks:							

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



Client Information	Sampler: C. Steve Howe		ab PM:								Ca	mer Tr	ackin	g No(s	i.		COC No.				
Client Contact:	Phone:				Mata, I E-Mail:	Patty	_						-						Page:		
Carmen Caceres-Schnell Company:	(805) 764-4031				atty.m	nata@	test	lame	ricain	c.cor	n								Page		
AECOM, Inc.					Т					An	alysi	s Re	aue	stec	1				Job #		
Address: 1220 Avenida Acaso	Due Date Reques	ted:			12.81	寶			П		1	T	1	T	Τ	T	П	T	Preservation C	odes:	
City: Camarillo	TAT Requested (d		LANCE TO SERVICE OF THE PARTY O		2000					1				1				5	A - HCL B - NaOH	M - Herane N - None	
State, Ztp: CA, 93012	1	10 Da	ays		(180) (180)	1770				-				1					C - Zn Acetate D - Nieric Add E - Nat-SO4	0 - ANNISO2 P - NISO3 G - NISOS	
CA, 93012 Phone: 805-764-4031	PO#: 74770 and 747	71			100	S. Meselly	2												F - MeOH G - Amortica H - Ascorbic Acid	R - Na2S2O3 S - H2SO4 T - TSP Dodec	
Emait. carmen.caceres-schnell@aecom.com	WO#:				⊣ §	3	ercho.			1						П			I-los	U - Acetone V - MCAA	anycrate
Project Name: NERT Surface Water	Project #: 60477365-2015	5.151B			<u>ا</u> ق	Se (105/270)	34.04		-							П		talners	K-EDTA L-EDA	W-ph 4-5 Z-other (specif	fy)
Ste: NERT - Downgradient Study Area	SSOW#:				T T T	200	5	lorate								П		of con	Other:		
		Sample	Sample Type (C=comp,	(W-water,	d Filtered S	र माठामा हो है।	2640C-TDS, 300-Cl, Br, 314.0-Perchlor	300.1B_28D - Chlorate										Number			
Sample Identification	Sample Date	Time	G=grab)	ET-Tissue, A-			-	_		1		2.5	1000	-				Total	Special la	nstructions/No	te:
LW3.4-20170206-14 : 46 - 0.63 ×	9-0 NO.		The section of the	ation Code	X	Y - Y -	-	L		2 &	262	200	22	22	22	200		X	200	Complete Services	N. (5-11)
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison	B Unknow	vn □ _{Ra}	diological				'Retu	um 7	o Clie	ent		-Di	SDOS	sed if	san	nples	are re	taine	d longer than 1 ve For	month) Months	\neg
Deliverable Requested: I, II, III, IV, Other (specify): Level II					19	Speci	al Ins	struc	tions/	QC F	Require	emen	ts:					Jun		_ monuts	\dashv
Empty Kit Relinquished by:			Tim									Vecnox	of S	hpmer	t				\dashv		
We was	Date/Time Compa							Z	AW	1					1	2/	1/1	7	150	Corresp	\dashv
telinquished by:	Date/Time: Con						ceive	d by:								Cate/Tr	ne		,,,,	Company	\dashv
elinquished by:	Date/Time:						ceive	d by:							1	TetsC	ne.			Company	\dashv
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No	tody Seal No.:							[empe	erature((s) °C	and Oth	er Ren	narks:							1	\dashv

17461 Derian Ave Suite 100 Irvine, CA 92614-5817 Phone (949) 261-1022 Feet



Sampler: C. Steve Howe					attv						Ca	arrier Tr	racking	No(s)			COC No:	
Phone:			E	-Mail:		-4			_		7						Page:	
(805) 764-4031			p	aπy.ma	ata@te	stam	erical			_				-			Job #:	
	1							A	nalys	sis R	(equ	estec	d_	_		_		
Due Date Requeste	ed;			58.5												25	V8	es: M - Hexane
TAT Requested (da		iys		100												200	B - NaOH C - Zn Acetate	N - None O - AsNaO2
		•==															E - NaHSO4	P - Ne2O4S Q - Ne2SO3 R - Ne2S2O3
PO#: 74770 and 7477	71				orate											7	G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
WO #:				- S	erchi.											0.10	I - Ice J - DI Water	U - Acetone V - MCAA
Project #:	151D			38	14.04						1					e die	K - EDTA L - EDA	W - ph 4-5 Z - other (specify)
SSOW#:	.1316			- eldma		orate										9.0	Other:	
Sample Date	Sample Time	Sample Type (C=comp, G=grab)	(W=water, 8=solid, 0=waste/ol	eld Filte	2540C-TDS, 300-C	300.1B_28D - Chi										Number	Special Ins	structions/Note:
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Date/Time:			Company		Rec	eived	by:							Date/	îme:			Company
	C. Steve Howe Phone: (805) 764-4031 Due Date Requeste TAT Requested (de PO #: 74770 and 7477 WO #: Project #: 60477365-2015 SSOW#: Sample Date 2/6/17 2/6/17 2/6/17 2/6/17	C. Steve Howe Phone: (805) 764-4031 Due Date Requested: TAT Requested (days): 10 Da PO#: 74770 and 74771 WO #: Project #: 60477365-2015.151B SSOW#: Sample Date Time 2/6/17 1/:55 (2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 2/6/17 1/:720 Date: Date: Date:	C. Steve Howe Phone: (805) 764-4031 Due Date Requested: TAT Requested (days): 10 Days PO #: 74770 and 74771 WO #: Project #: 60477365-2015.151B SSOW#: Sample Type (C=comp, G=grab) Preserve (2/6/17	C. Steve Howe Phone: (805) 764-4031 Due Date Requested: TAT Requested (days): 10 Days PO #: 74770 and 74771 WO #: Project #: 60477365-2015.151B SSOW#: Sample Type (C=comp, G=grab) ST-Tissus, A-Preservation Code (2/6/17 14:5\$ G W (2/6/17 1	C. Steve Howe	C. Steve Howe	C. Steve Howe	C. Steve Howe Phone: (805) 764-4031 Due Date Requested: TAT Requested (days): 10 Days Project #: 60477365-2015.151B Sample Time Sample Gegrab) Preservation Code: 2/6/17 14:58 G W N X X X 2/6/17 14:58 G W N X X X 2/6/17 14:50 G W N X X X 2/6/17 14:50 G W N X X X 2/6/17 10:72 G W N X X X 2/6/17 10:72 G W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G	C. Steve Howe Phone: (805) 764-4031 Due Date Requested: TAT Requested (days): 10 Days POS: 74770 and 74771 WO #: Project #: 60477365-2015.151B SSOWW: Sample Time Sample G-grab) Preservation Code Preservation Code Preservation Code TYPE 2/6/17 IV:58 G W N X X X 2/6/17 IV:70 G W N X X X C 2/6/17 IV:70 G W N X X X C 2/6/17 IV:70 G W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W N X X X G W W W X X X G W W W X X X G W W W X X X G W W W X X X G W W W X X X G W W W X X X G W W W W X X X G W W	C. Steve Howe Prone: (805) 764-4031 Due Date Requested: TAT Requested (days): 10 Days Post: 74770 and 74771 Wo 8: Project #: 60477365-2015.151B SSOW: Sample Date Time Sample Comp, Cagrab) Preservation Code: C. 2/6/17 C. 2/	C. Steve Howe Phone: [805) 764-4031 Due Date Requested: TAT Requested (days): 10 Days PO #: 74770 and 74771 WO #: Sample Time Sample C=comp, arealid, german, poly and po	C. Steve Howe Phone: E-Mait Patty mata@lestamericainc.com Analysis Requested:	C. Stave Howe Phone: E-Mail: patty: mata@testamericainc.com	C. Steve Howe	C. Steve Howe	C. Steve Howe	C. Steve Howe Mata, Patty Company Company	C. Stove Howe Mate Patty Page

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																				THE LEADER IN E	NVIRONMENTAL TEST
Client information	Sampler: C. Steve Howe			N	ab PM: Nata, Pa	tty							Car	rrier T	rackir	ng No(s):			COC No:	
Client Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031		9.9	_	-Mail: atty.mat	a@te	stam	nerica	inc.c	om			L							Page: Page	
Company: AECOM, Inc.									A	nal	vsis	Re	que	ste	d					Job#:	
Address: 1220 Avenida Acaso	Due Date Request	ed:	-		Name of		T	T	T	T	T	Τ	T	T	T	T	T		(C ₊)(1	Preservation Cod	ies: M - Hexane
City: Camarillo State, Zip:	TAT Requested (d	10 Da	iys									1							7	B - NaOH C - Zn Acetate	N - None O - AsNaO2
508. 93012 Phone:							1				١.									D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3
mail:	PO #: 74770 and 747	71			(0	lorate								1						G - Amchlor H - Ascorbic Acid I - Ice	S - H2SO4 T - TSP Dodecahydr
carmen.caceres-schnell@aecom.com	WO #:				N N	Br, 314.0-Perchlo								1					90	J - DI Water	U - Acetone V - MCAA
Project Name:	Project #:					3		1							1					K-EDTA L-EDA	W - ph 4-5 Z - other (specify)
NERT Surface Water	60477365-2015 SSOW#:	.151B				5										1	1		onta	Other:	
NERT - Downgradient Study Area	SSOVV#.				E IS	300-CI, B	Chlorat												of contain		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W-water, 3-solid, G-waste/oli, BT-Tissue, A-/	old Filte	2540C-TDS, 300	300.1B_28D - Ch												Total Number	Special In:	structions/Note:
Control of the Contro	基金の		Preserva	tion Code		(N	L		1	3.5	拉器	V1.67 342.47					なる	14.45 2.65	\times	No. of States	Constitution of the consti
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Possible Hazard Identification Non-Hazard Flammable Skin Imitant	Poison B Unknow	vn □ _{Rs}	diological			-R	eturr	1 To C	Client	t	L	\neg_{Di}	ispos	sed i	if sa	mple	s are	retai XI _{Arc}	inec chiv	d longer than 1 n	nonth) _ Months
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Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cool	er Ten	nperatu	ure(s)	°C and	d Othe	er Ren	narks:								

17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Carrier Tracking No(s): COC No: **Client Information** C. Steve Howe Mata, Patty Client Contact: E-Mail: Page: Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com AECOM, Inc. **Analysis Requested** Address: Preservation Codes: Due Date Requested: 1220 Avenida Acaso TAT Requested (days): B - NaOH N - None Camarillo O - AsNaO2 10 Days C - Zn Acetate State, Zip: D - Nitric Acid P - Na2O4S CA, 93012 E - NaHSO4 Q - Na2SO3 Phone: F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 805-764-4031 74770 and 74771 T - TSP Dodecahydrate H - Ascorbic Acid 1-Ice U - Acetone carmen.caceres-schnell@aecom.com J - DI Water V - MCAA Project Name: K-EDTA W - ph 4-5 **NERT Surface Water** L-EDA Z - other (specify) 60477365-2015.151B NERT - Downgradient Study Area Matrix Sample Type (C=comp, Sample Sample Identification Sample Date Time G=grab) aT-Tissue, A-Al Special Instructions/Note: Preservation Code: N 26 LW5.3-20170206- 14 2/6/17 14:26 G W X X LW5.3-20170206- 14 24 -EB 2/6/17 14:24 G W X X 15 GLW4.9-20170206- 11 - 1.45 2/6/17 1115 G W X X 30 LW4.95-20170206-11 1.10 2/6/17 11:30 G W X X 00 LW5.3-20170206- 10 2/6/17 G W 1.2 10:00 X X 35 W5.3-20170206- 10 2.35 2/6/17 G W 10:35 X X G W X X G W X X G W X X G W X X W X Possible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Non-Hezard Flammable Skin Irritant Poison B Unknown Radiological Return To Client Disposal By Lab Deliverable Requested: I, II, III, IV, Other (specify): Level II Special Instructions/QC Requirements: Empty Kit Relinquished by: Date: Time: 1650 AECOM 1650 Relinquished by: Company Relinquished by: Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

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



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Client Information Client Contact:	C. Steve Howe			Ma	ta, Pa	itty							Ĭ	11101 1	rackii	9 110	•,			COC NO.		
Carmen Caceres-Schnell Company:	Phone: (805) 764-4031	l		E-M pat	ali: ty.mat	ta@te	stam	nericai	inc.c	om			7							Page: Page		
AECOM, Inc.				•	T				_,	Anal	10 10	. D.		ne to	<u>д</u>					Job #:		_
Address: 1220 Avenida Acaso	Due Date Reques	ted:			80 1	201	Т	Т	Ť	T	y Bit	T	T	7810	-	\top	Т		7.4	Preservation Cod	ies:	_
City:	TAT Requested (d	lavel-					1					1	1			1				A - HCL	M - Hexane	
Camarillo State, Zip:		10 Da	ays						1			1	1							B - NaOH C - Zn Acetate	N - None O - AsNaO2	
CA, 93012									1	1		1	1	1	1	1		1		D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3	
Phone: 805-764-4031	PO#: 74770 and 747	7,				# a						1	1			1				F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4	
Email:	WO#:	/1			3	hor					1	ı			1		1			H - Ascorbic Acid I - Ice	T - TSP Dodecahyo	rate
carmen.caceres-schnell@aecom.com Project Name:					ō	a d							1	1	1	1	1 1		2	J - DI Water	V-MCAA	
NERT Surface Water	Project #: 60477365-2015	5.151B			٤	Br, 314.0-Pe						1	1				П			K - EDTA L - EDA	W - ph 4-5 Z - other (specify)	
Site: NERT - Downgradient Study Area	SSOW#:				ald like	A	orate			١.									1,00	Other:		
	ay	Y.L.	Sample	Matrix	Space	S, 300-CI,	300.1B_28D - Chlorate												uper of			
			Type	(W-water,	E	2540C-TDS,	1 2 N										П		Number			
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O-waste/oil, BY-Tissue, A-Air)		9	90.1	1 1										5	Total	Special In	-t	
San				ation Code:	W	O N	-	1025/ 1025/		25-9/	建 契	288	12.7	8, 3	81.	1:00	tini i	King P	뒭	Special Ins	structions/Note:	Syndi
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Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Pois	. D	754	. 4:-1-		Sa	mple	Dis	posal	(A	fee n	nay	be a	sses	sed	if sa	mple	s are	retai	ned	d longer than 1 m	nonth)	-
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Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cool	er Ten	mperatu	Jre(s)	°C and	Oth	er Rer	marks	Ċ								ᅥ

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



	Sampler: C. Steve Howe				PM: ta, P	attv		_					Ca	rier Tr	acking	No(s)			С	COC No		
Client Contact:	Phone:		_	E-M		alty						-	1							age:		_
Carmen Caceres-Schnell	(805) 764-4031			pat	ty, ma	ata@	testa	amer	icainc.	com			\perp							Page		
AECOM, Inc.					П					Ana	lysis	Re	que	stec					1	50 s .		
1220 Avenida Acaso	Due Date Requeste	d:				and the second				T	Ť	Τ	Ť	Τ				T		reservation Code		
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State, Zip:		10 Day	/5		П	-	- 1					ı									O - AsNaO2 P - Na2O4S	
CA, 93012 Phone:					П	-	- 1	- 1				1						-			Q - Na2SO3 R - Na2S2O3	
805-764-4031	PO #: 74770 and 7477	1			٦.		ate					1		l					G	3 - Amchlor	S - H2SO4 T - TSP Dodecah	nydrate
Email: carmen.caceres-schnell@aecom.com	WO #:				e (Yes or No	_	Br, 314.0-Perchio	- 1				1							1:	- Ice	U - Acetone V - MCAA	
Project Name:	Project #:				- 8	or No	3	- 1				1			Ш	- 1		2	K	- EDTA	W - ph 4-5	
NERT Surface Water	60477365-2015	.151B				(Yes	¥			1		1						į	1		Z - other (specify	,
NERT - Downgradient Study Area	SSOW#:				Samp	SD (Y	Q,	lorate										oj jo	3 0	ther:		
			Sample Type	Matrix (w-weter	Itered (MS/MSD	DS, 300	300.1B_28D - Chlorate										Total Number of containers				
		Sample	(C=comp,	8=solid, O=waste/oil,	탈	Perform	2540C-TDS,	뿔'			1	1		l				2	1			
Sample Identification	Sample Date	Time		BT-Tissue, A-Al	飐	اعًا		ğ		100		-	4 907777					٩	Ļ	Special Inst	ructions/Not	te:
LW6.05-20170206- 15 : 26 - 0.7		_		tion Code:	X	X	N	L	1.25	42	45.	100	3 5, 3	2.2	2.7	1.0		- 12	4		1107	No. of Co.
	2/6/17	15:26	G	W	N	Н	X	X	+	-	-	-	-	_		\dashv	_	2				
0.0	2/6/17	15:00	G	w	N	Ш	X	×	\perp	4	\perp	┸		-4	Ш			2				
LW7.2-20170206-14:30 - 1.0	2/6/17	14:30	G	W	N	Ц	X	X										Z				
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			G	W	N	Ц	х	х				L						91 01	3			
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			G	w	N	Ш	X	X										60	Strong.			
			G	W	N	Ш	X	X										i,	The second			
Possible Hazard Identification						San	ple	Disp	osal (A fe	e ma	y be	asse	ssed	if sa	mple	s are i	retaii	ned	longer than 1 m	onth)	
Non-Hazard Flammable Skin Irritant Poiso	n B —Unkno	wn R	adiological			600	Re	eturn	To Cl	ent	_	_	Dispo	osal E	y Lat	,	LX	Arci	hive	For	Months	
Deliverable Requested: I, II, III, IV, Other (specify): Level II					_		Ciai	msur	uctions	<i>i</i> ųc	Requ	irem	ents:									
Empty Kit Relinquished by:		Date:			Ti	me:								Met	nod of	Shipm	ent.					
Relinquished by:	Date/Time:			Company AECOM			Recei	ived b	y:							Date/	Time:				Company	
Relinquished by:	Date/Time:			Company			Rece	ived b	y:							Date	Time				Company	
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Custody Seals Intact: Custody Seal No.:						-	Coole	er Ten	nperatu	'e(s) °	'C and (Other	Remai	ks:					_			
Δ Yes Δ No																						

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



	Sampler:				b PM:								Car	rier Tra	cking	No(s):				COC No:		
	C. Steve Howe Phone:				lata, f Mail:	Patty	у			_	_		-						H	Page:		
Carmen Caceres-Schnell	(805) 764-4031					nata	@tes	tame	ricainc.	com			1							Page		
Company: AECOM, Inc.					Ť						alysis	Re	que	sted					T	Job#:		
Address: 1220 Avenida Acaso	Due Date Requeste	d:			1	100			П	T	Ť	T	Ť				Т	T	- 1	Preservation Code		
City:	TAT Requested (da				-												- 1		- 1	A - HCL B - NaOH	M - Hexane N - None	
Camarillo State, Zip:		10 Da	ys			data	1	Ш						П	- 1				- 1	C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S	
CA, 93012												1								E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3	
Phone: 805-764-4031	PO #: 74770 and 7477	1			\exists		orate							П					- 1		S - H2SO4 T - TSP Dode	ecahydrate
Email: carmen.caceres-schnell@aecom.com	WO #:				٦ž		Ē	Ш				1		Ш				١.	. І.	I - Ice J - DI Water	U - Acetone V - MCAA	
Project Name:	Project #:				⊣કુ	or No)	ş	П				1		Ш	- 1		- 1	containers		K - EDTA L - EDA	W - ph 4-5 Z - other (spe-	cifv)
NERT Surface Water Site:	60477365-2015	.151B				768	Š	١. ١									- 1	puta		Other:	(-,-	
NERT - Downgradient Study Area	SSOW#:				Sample (Yes or No	SDO	300-Cl, Br, 314.0-Perchlor	300.1B_28D - Chlorate						Ш				10	5 I	ruier.		
			Sample	Matrix	Ę	MS/N	ωí	D . C										Number				
		Sample	Type (C=comp,	(W-water S-solid, O-waste/oi		Perform	2640C-TDS,	B_24		1		ŀ						Ž				
Sample Identification	Sample Date	Time		BT=Tissue, A	ر (الا الا	Pe	2640	300.1		1								Total	3	Special Ins	tructions/h	lote:
The second secon		X		ation Code		$ \overline{} $	N	L				1 200						\triangleright	◂	1 Charles		
LW6.05-20170206- 12 : 36 - 0.7	2/6/17	12:36	G	w	N		х	х		\perp								2	2			
LW7.2-20170206-12:10 - 0.8	2/6/17	12:10	G	w	N		x	х		\perp								2	-			
×	2/6/17	ik .	G	w	N		x	\vdash		\perp	\perp								She cal			
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Possible Hazard Identification						Sa	mple	Disp	oosal (A fe	e may	be	asses	sed i	fsan	nples	are r	etair	nea	longer than 1 m	nonth)	
Non-Hazard Flammable Skin Irritant Poise	on B Unkno	wn R	adiological			ļ.,	R	etum	To Cli	ent	D	_	Dispo	sal By	Lab		LX	Arch	hive	For	_ Months	
Deliverable Requested: I, II, III, IV, Other (specify): Level II								instr	uctions	iQC	Requi	reme	ents:									
Empty Kit Relinquished by:		Date:			Т	ime:								Metho	od of S	hipme	nt					
Relinquished by:	Date/Time:			Company AECOM			Reci	eived b	y;							Date/T	ime:				Company	
Relinquished by:	Date/Time:			Company			Rec	eived b	oy:							Date/T	ime:				Company	
Relinquished by:	Date/Time:			Company			Rec	eived t	oy:						\dashv	Date/T	ime.				Company	
Custody Seals Intact: Custody Seal No.:							C∞	ler Ter	nperatur	e(s) °	C and C	ther F	Remark	s:								
Δ Yes Δ No																						

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

Chain of Custody Record

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		-		_

COC No: Carrier Tracking No(s) Client Information C. Steve Howe Mata, Patty E-Mail: Carmen Caceres-Schnell (805) 764-4031 patty.mata@testamericainc.com Company: AECOM, Inc. **Analysis Requested** A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic;
I - Ice
J - DI Water
K - EDTA
L - EDA 1220 Avenida Acaso M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dode U - Acetone 10 Days CA, 93012 Phone: 805-764-4031 PO#: 74770 and 74771 Project #: 60477365-2015.151B NERT Surface Water NERT - Downgradient Study Area Sample Type (C=comp, G=grab) Matrix Perform Z 2540C:1 Sample Time Special Instructions/Note: Sample Identification Sample Date 2 N LW7 2-20170206- 15 2/6/17 15:50 G w x x N 20 хх w 2 LW6.05-20170206- 11 -0.6 2/6/17 11:20 G N x x _- 0.4 w 2 2/6/17 10:15 G N 45 0.8 x x w LW7.2-20170206- 09 : 2/6/17 09:45 G 2 x x G w N х W X G N х G W X N w x X G N w х G X w N G x x W N G x x Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Month
Special Instructions/QC Requirements: Skin Irritant Poison B Unknown Radiologica Non-Hazard Flammable Months able Requested: I, II, III, IV, Other (specify): Level II Empty Kit Relinquished by: eceived by: Company ler Temperature(s) °C and Other Remarks: Custody Seals Intact: Custody Seal No.: Δ Yes Δ No

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



Client Information	Sampler: C. Steve Howe			Lab F Mata		attv							Ca	rrier Tr	acking	No(s):			COC No:	
Client Contact:	Phone:			E-Ma	il:				0 500	_			┥.						Page:	
Carmen Caceres-Schnell	(805) 764-4031			patty	y.ma	ta@t	testa	ameri	icain	c.con	n	_	\perp						Page Job #:	
Company: AECOM, Inc.					ı					An	alys	is R	eque	stec	1				500 W.	
Address: 1220 Avenida Acaso	Due Date Requeste	ed:				100	Т	Т		\neg	Ť	Т				П			Preservation Cod	
City: Camarillo State, Zip: CA, 93012	TAT Requested (da	ays): 10 Da	iys		100000000000000000000000000000000000000	-													A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3
Phone: 805-764-4031	PO#: 74770 and 747	71			٥	Stainter Side	lorate												G - Amchlor H - Ascorbic Acid I - Ice	S - H2SO4 T - TSP Dodecahydrate U - Acetone
Email: carmen.caceres-schnell@aecom.com	WO #:				N TO SE	₃ .		- 1	- 1	- [2	J - DI Water K - EDTA	V - MCAA W - ph 4-5
Project Name: NERT Surface Water	Project #: 60477365-2015	5.151B			le (Yes	es or h	, 314.0-Pen	_										containe	L - EDA	Z - other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				amb	SO	Ď,	lorat				1						0	·	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp,	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Field Filtered	Perform MS/MSD (Yes or No)	2540C-TDS, 300-Cl,	300.1B_28D - Chlor										Total Number	Special In:	structions/Note:
Sample Identification	Sample Date		Preserv	ation Code:	X		_	L	. Z 8	4	316.	(0) (4) (4)	9 5 6		Access Access		13	X	La California	San Parkers Name
LW3.75-20170206- 16 : 30 - 0.67	2/6/17	16:30	G	w	N	7	x	х										2		
LWC3.7-20170206- 16 : 20 - 0.58	2/6/17	16:70	G	w	N	2	x	х									\perp	2		
GLW3.78-20170206- 16 40 - 0.96	2/6/17	16:40	G	w	N	;	x	X	_			1	_				1	2		
LW3.85-20170206- 16 : 03 - 0.58	2/6/17	16:03	G	w	N		×	X							Ш			2		
LW3.4-20170206-17 : 01 - 0.7	2/6/17	17:01	G	w	N	2	×	X	_	1		\perp	_		Ц		\perp	2		
LW3.4-20170206- 17 : 01 -0.7 FD	2/6/17	1701	G	w	N		×	X	_	_	_	1			- , "		\perp	2		
			G	w	N	-	+	X	4	\perp		1					\perp			
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			G	w	N		x	X	1	1		1					\perp			
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poise	on B Unkno	wn 🖵	adiological		٦				osal To C		ee ma	be	asse Dispo	ssed osal E	if sai ly Lab	mples	s are r	etaine Archi	ed longer than 1 i	month) Months
Non-Hazard	III GIIKIIO				1	Speci	ial Ir	nstru	ction	s/QC	Requ									
Deliverable Requested: I, II, III, IV, Other (specify). 2010.		Date:			Tim	e:	_	_				-		Meth	od of	Shipme	ent:			
Empty Kit Relinquished by:		Date.		Company			eceiv	red by	:	-				_	-	Date/	ſime:			Company
Relinquished by:	Date/Time:			AECOM				ed by						_	_	Date/	Time:			Company
Relinquished by:	Date/Time:			Company												Date/				Company
Relinquished by:	Date/Time:			Company		R	eceiv	ed by								J				
Custody Seals Intact: Custody Seal No.:						С	ooler	Temp	peratu	re(s) °	°C and	Other	Remar	ks:						
A Yes A No.													_	_	_	_				

TestAmerica Irvine TestAmerica 17461 Derian Ave Suite 100 **Chain of Custody Record** Phone (949) 261-1022 Fax (949) 260-3297 Sampler: C. Steve Howe Client Information Mata, Patty E-Mail: Page: Page Job# Carmen Caceres-Schnell (805) 764-4031 atty.mata@testamericainc.com Company: AECOM, Inc. **Analysis Requested** 1220 Avenida Acaso City: Camarillo State, Zip: CA, 93012 10 Days Phone: 805-764-4031 PO#: 74770 and 74771 2640C-TDS, 300-CI, Br, 314.0-Perchlorate 300.18_28D - Chlorate carmen.caceres-schnell@aecom Project Name: NERT Surface Water J - DI Water K - EDTA L - EDA Project #: 60477365-2015.151B NERT - Downgradient Study Area Matrix Type Sample Identification Sample Date Special Instructions/Note: N L LW5.9-20170206- 14 2 2/6/17 14:23 G W X 90 LW5.9-20170206-2/6/17 11:08 G W х x 2 LWC6.1_1-20170206-_ 09 45 - 0.58 2/6/17 09:45 G W х x 2 LWC6.1_2-20170206-_ |O Z.O -_ 2/6/17 10:00 G W х x 2 07 - 1.0 LWC6.1_3-20170206-__\O w 2/6/17 10:07 G x x 2 GLWC 6.1_3-20170206-10:07-1 WC6.1_4-20170206-___LO w 2/6/17 10:35 G x x 2 GLNC6-1_4-20170206-10:35-1.1 W N G x x W N G x x N W x x G N W G x x W G x x Sample Disposal (A fee may be assessed if samples are retained long Return To Client Disposal By Lab Archive For Special Instructions/QC Requirements: Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Imitant ☐ Poison B ☐ Unknown Deliverable Requested: I, II, III, IV, Other (specify): Level II mpty Kit Relinquished by: ate/Time AECOM

ler Temperature(s) °C and Other Remarks

Custody Seal No.:

Δ Yes Δ No

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



Client Information	Sampler: C. Steve Howe			Lab Ma	РМ: ta, Pat	ty						Cam	er Trac	king N	O(\$):		COC No	E		
Client Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031			E-M	ail:							1					Page: Page			
Company:	(003) 764-4031			pat	ty.mata	@les	tame	ricainc	.com			_	_				Job #			
AECOM, Inc.									Ana	lysis	s Re	ques	ted							
Address: 1220 Avenida Acaso	Due Date Requeste	ed:				- well		П	Т		T						Preser A - HCL	vation C		
City: Camarillo	TAT Requested (de				11	1											B - NaC	Н	M - Hexane N - None	
State, Zip:	-	10 Da	ys		H	-											C - Zn A D - Nitri	c Acid	O - AsNaO2 P - Na2O4S	
CA, 93012 Phone:					11	1						11		- 1			E - NaH F - MeC		Q - Na2SO3 R - Na2S2O3	
805-764-4031	PO#: 74770 and 747	71			ا ـ ٦	i i						П					G - Amo	chlor orbic Acid	S - H2SO4 T - TSP Dode	canydrate
Email: carmen.caceres-schnell@aecom.com	WO#:				- (S)	Br, 314.0-Perchiorate	4					П		- 1			J-Ice J-DIW	ater	U - Acetone V - MCAA	•
Project Name:	Project #:				- 8 3	4						П					K-EDT	A	W - ph 4-5 Z - other (spec	-4.1
NERT Surface Water	60477365-2015	5.151B			ا ا	1 5			1			П		-			Other:		2 - ouver (spec	-i.y.)
NERT - Downgradient Study Area	SSOW#:				Field Filtered Sample (Yes or Perform MSMSD (Yes or NO)	, i	Chlorate					П					K-EDT L-EDA Other:			
			Sample	Matrix	Pe S	300-CI						Н								
			Туре	(W-water,	₽ E	2540C-TDS,	300.1B_28D					П		- 1			[
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	S=solid, O=waste/oil, BT=Tissue, A=Ak	Perfo	8	90.1					П	- 1			3		Snecial	Instructions/N	lote:
				ation Code:		N		EST E	3 2	3 13	V DUS	- 31	1.00		2 23	Š	\	pecia.	Tisa acaonsii	ulla etchi
LW5.9-20170206-15 : 18 - 0.6	2/6/17	12:18	G	w	N	×	х		T				T	T		1	L			
WC6.1_1-20170206- <u>IY</u> : <u>Y3</u> - 0.8	2/6/17	14:43	G	w	N	x	x							T		7	2			
WC6.1_2-20170206-14 : 55 - 0.6	2/6/17	14:55	G	w	N	x	х							T		7	2 14:	55		
LWC6.1_3-20170206 15 : 00 - 0.9	2/6/17	15:00	G	w	N	×	x									1	ZGWC	61-3	20170206-15	:00-09
LWC6.1_4-2017020615 : 45 1.3	2/6/17	15:45	G	w	N	x	x		\perp							1	Zawc	6.1_4	2017020675	5.45-1.3
LWC6.1_4-20170206 \S : 45 -1.3 FD	2/6/17	15:45	G	w	N	x	x		\perp			Ш				1	2 GLW	J6.1_4	-20170206-	5:45-1.7
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Possible Hazard Identification Non-Hazard □ Flammable □ Skin Imitant □ Po	ion P Unka	D	adiological		ľ		e Disi	To Ci	A re	e ma	y be a	sses	sed if sal By	sam	ples ar	e retai	ined long	er than		
Deliverable Requested: I, II, III, IV, Other (specify): Level II	DISON B OTHER	, , ,	aulological		s	pecia	Instr	uctions	JQC	Requ	ireme	nts:	заг Ву	Lab		Arc	thive For_		Months	
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Relinquished by:	Date/Time:	Dute.		Company	1	9177	eived t	DY:					····cu ···		ate/Time				Company	
				AECOM																
Relinquished by:	Date/Time:			Company							L			Company						
telinquished by:	Date/Time:			Company	Received by Date/Time						L			Company						

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

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THE LEADER	IN ENVI	BUNNEN	AL 7551	INC

	Sampler:				ab PM:							_	Can	rier Tra	king f	Vo(s):			COC No:	
Client Information	C. Steve Howe				Mata, F	atty	1						┛							
Client Contact:	Phone:				-Mail:		<u> </u>						1						Page: Page	
Carmen Caceres-Schneil	(805) 764-4031			P	atty.m	ata(@test	tame	ricaino	.com	1						_	_	Job#:	
Client Information Client Contact Carmen Caceres-Schnell Company: AECOM, Inc. Address:										Ana	alysi	s Re	que	sted						
Address: 1220 Avenida Acaso	Due Date Requeste	d:				and the same of			П	Т		Т							Preservation Cod A - HCL	es: M - Hexane
City: Camarillo	TAT Requested (da				┪	farmily.								П					B - NaOH C - Zn Acetate	N - None O - AsNaO2
CATION TO THE PROPERTY OF T	1	10 Da	ys			de ation				-				Ш					D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
CA, 93012 Phone:	PO#:				4	am's dutes		Ш		-									F - MeOH G - Amchior	R - Na2S2O3 S - H2SO4
805-764-4031 Email:	74770 and 7477	1			_ - §	A Market	lorat			-									H - Ascorbic Acid	T - TSP Dodecahydrate U - Acetone
carmen.caceres-schnell@aecom.com	WO #:				Į,	(ON	Perch							П	- 1			2	J - DI Water K - EDTA	V-MCAA W-ph 4-5
Project Name: NERT Surface Water	Project #: 60477365-2015	.151B			ڠ	\$ Of	34.0			-		1		Н	- 1			containers	L - EDA	Z - other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				를	D (Ye	, B,	orate									1	of cor	Other:	
		Sample	Sample Type (C=comp,	Matrix (W-water S-solld, O-waste/ol	FIE	form MS/MS	2540C-TDS, 300-Cl, Br, 314.0-Perchlorat	300.1B_28D - Chlorate										al Number		
Sample Identification	Sample Date	Time		BT=Tissue, A-		Per	254	30										Total	Special Ins	structions/Note:
and the state of t	\sim	\times	Preserva	ation Code	X	X	N	L	1000 P	12 6	3 23	100	2.0		100	100	I 5.3	X	S. Salasta	
GLW4.9-20170206-15 : 00 - 1.5	2/6/17	15:00	G	w	N		х	х										2		= ==
LW4.95-20170206-15 : 15 - 1.1	2/6/17	15.15	G	w	N		х	х										2		
LW5.3-20170206-16:00 - 1.2	2/6/17	16:00	G	w	N		х	х					- 7					2		
LW6.3 20170206 FU	2/6/17		- 8	W	N		^	^		士	士				+			2	- AC 2/6/1	7
LW5.3-20170206- 16 10 - 2.3	2/6/17	16:10	G	w	N		x	х										2	145-3-16- A	K 2/6/17
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Possible Hazard Identification □ Non-Hazard □ Flammable □ Skin Irritant □ Poisc	n B Unkno	wn 🖵 Ri	adiological			San	nple □ _{Ré}	Disp etum	osal (To Cli	A fe	e may	be a	isses	sed if sal By	sam	ples a	are ret	aine	ed longer than 1 r	month) Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II	.,								uctions		Requi	reme	nts:	заг Бу	Lau			reniv	re ror	_ MONTHS
Empty Kit Relinquished by:		Date:			Tir	me:				_	_	-		Metho	of St	ipment	:			
Relinquished by:	Date/Time:			Company AECOM			Recei	ived by	y:						C	ate/Tin	ne:			Company
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Relinquished by:	Date/Time:			Company			Recei	ived b	y:						C	ate/Tin	ne:			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Coole	er Tem	peratur	e(s) °(C and O	ther R	emarks	Ľ				_		

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

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THE LEADER IN		OMMENT	

	Sampler: C. Steve Howe			Lab	PM: ta, Pa	attu						(Carrier	Tracking	No(s):			COC No:	
Client Information Client Contact:	Phone:			E-M		atty		_		_		-						Page:	
Carmen Caceres-Schnell	(805) 764-4031					ta@	testa	mer	icainc.	com								Page	
Company: AECOM, Inc.			•		T		,				Ivsis	Requ	Jest	ed				Job#:	
Address: 1220 Avenida Acaso	Due Date Requeste	d:			h		Т	П	Т	Τ	T	П	T	Т	П		Т	Preservation Code	s:
City:	TAT Requested (da	ys):			41	4						П			11			A - HCL B - NaOH	M - Hexane N - None
Camarillo State, Zip:		10 Day	ys		П	of carbon		- 1				П	- 1		Ш			C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
CA, 93012 Phone:					┚╽	de. de						П	-			- [E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
805-764-4031	PO#: 74770 and 7477	1				100	eter			1									S - H2SO4 T - TSP Dodecahydrate
Email: carmen.caceres-schnell@aecom.com	WO #:				텒	6	E P	- 1		1		Н						I - Ice J - DI Water	U - Acetone V - MCAA
Project Name: NERT Surface Water	Project #:					Ž	\$			1							containers		W - ph 4-5 Z - other (specify)
Site:	60477365-2015 SSOW#:	.1518			뷀	Zes Z	. B	#		1		Н					cont	Other:	
NERT - Downgradient Study Area					- S	MSD	Ď,	- Chlorate									br of		
			Sample	Matrix (w-water,	Field Filtered Sample (Yes or	MS/	2540C-TDS, 300-Cl, Br, 314.0-Perchlorat	92									Total Number		
		Sample	Type (C=comp,	S=solid, O=waste/oil,	틸	Light.	5	300.18_280		1							Is N		
Sample Identification	Sample Date	Time		BT=Tissue, A=Al	順	۵	_		2018	\perp		2270000 000		100	Service Inc.	79 1. 199	L.	Special Ins	tructions/Note:
and the second s		\sim	Mary Control of the C	tion Code:	X	X	N	L	100	il hu	di basi	Acres 6	Les Su		24.0	24 1.2	X		
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GLW 4.85-20170206-15:58 - 0.6	2/6/17	15:58	G	W	N	-	-	X		1	_	Ш	\perp		Ш			GLW4.85-201	10706-15:58-0.6
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Possible Hazard Identification						Sar	nple	Disp	osal (A fe	e may	be as	sess	ed if sa	mples	are re	taine	ed longer than 1 n	nonth)
Non-Hazard Flammable Skin Imitant Poiso	n B Unkno	wn 🗏	adiological						To Cli			Dis	spose	By La	b	رنکا	Archi	ve For	_ Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II						Spe	ecial I	nstru	ictions	/QC	Requi	rement	S:						
Empty Kit Relinquished by:		Date:			Tir	ne:							ľ	lethod o	Shipme				
Relinquished by:	Date/Time:			Company AECOM			Recei	ved b	y:						Date/T	ime:			Company
Relinquished by:	Date/Time:			Company			Recei	ved b	y:						Date/T	ime.			Company
Relinquished by:	Date/Time:			Company			Recei	ived b	y:						Date/T	ime.			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Coole	er Tem	peratur	e(s) °(C and O	ther Ren	narks:						

17461 Derian Ave Suite 100 Irvine. CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Sampler: Carrier Tracking No(s): COC No: Client Information C. Steve Howe Mata, Patty Client Contact: E-Mail: Page: Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com Job #: AECOM, Inc. **Analysis Requested** Address: Preservation Codes: Due Date Requested: 1220 Avenida Acaso M - Hexane TAT Requested (days): B - NaOH N - None Camarillo O - AsNaO2 10 Days C - Zn Acetate P - Na2O4S State, Zip: D - Nitric Acid E - NaHSO4 Q - Na2SO3 CA, 93012 R - Na2S2O3 F - MeOH Phone: S - H2SO4 G - Amchior 805-764-4031 2640C-TDS, 300-Cl, Br, 314.0-Perchlorate T - TSP Dodecahydrate 74770 and 74771 H - Ascorbic Acid U - Acetone I - Ice V - MCAA J - DI Water carmen.caceres-schnell@aecom.com of containers W - ph 4-5 K - EDTA Project Name: Z - other (specify) L-EDA NERT Surface Water 60477365-2015.151B 300.1B_28D - Chlorate NERT - Downgradient Study Area Matrix Sample (W-water, S=solid, O=waste/oil, Type Sample (C=comp, Special Instructions/Note: Sample Identification Sample Date Time G=grab) BT=Tissue, A=Al Preservation Code: N L W4.95-20170207- 3 25 2/7/17 13:25 W X X G X G W G W X X G W X X X. X G W G W X X G W X X W X X G G W X X W X G X G W Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Return To Client Disposal By Lab Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Archive For Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Date: Time: ethod of Shipment: Empty Kit Relinquished by: Company Received by: Date/Time: Relinquished by: Company AECOM Company Received by: Relinquished by: Date/Time: Company Relinquished by: Company Received by: Date/Time: Date/Time: Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																			THE LEADER IN EN	VIRONMENTAL TESTING
Client Information	Sampler: C. Steve Howe			Lab Mat	PM: a, P	atty							C	arrier T	racking	No(s):			COC No:	
Client Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031			E-Ma		ata@	gtest	tame	ricaino	c.cor	m								Page: Page	
Company: AECOM, Inc.					Т					Δn	alvs	is R	eau	este	d				Job #:	
Address: 1220 Avenida Acaso	Due Date Request	ed:				Ankal					la.ye	1	1	T					Preservation Cod	es: M - Hexane
City: Camarillo State, Zip: CA, 93012 Phone: 805-764-4031	TAT Requested (da	10 Da	ys				ıte											CHEST CONTRACTOR	B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor	N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4
Email: carmen.caceres-schnell@aecom.com	74770 and 747 WO#:	71			- Q		rchlora												H - Ascorbic Acid I - Ice J - DI Water	T - TSP Dodecahydrate U - Acetone V - MCAA
Project Name: NERT Surface Water Site:	Project #: 60477365-2015 SSOW#:	5.151B			ple (Yes o	(Yes or No)	3r, 314.0-Pe	e e										containers	K - EDTA L - EDA Other:	W - ph 4-5 Z - other (specify)
NERT - Downgradient Study Area	000VIII.				Sam) as	ņ	lora										5		
Sample Identification	Sample Date	Sample Time		Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air	Field Filtered	Perform MS/MSD	2540C-TDS, 300-Cl, Br, 314.0-Perchlorate	300.1B_28D - Chlorate										Total Number	Special Ins	structions/Note:
	\sim	><	Preserva	ation Code:	X	X	N	L.										X		collections of
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LW6.7-20170207- <u>14: 25</u> - 0.6	2/7/17	14:25	G	w	N	4	х	X				11.01	400	-0.50				2		4
LW6.7-20170207- 19 : 25 - 0.6 FD	2/7/17	14:25	G	w	N	7	х	x					T					2		
LW7.2-20170207- <u>14:02</u> -0.9	2/7/17	14:02	Ģ	w	N	1	х	х		40 dd		4 2	3		8			2		
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Pois	on B Unkno	own 🖳	adiological			_	\neg R	etum	To C uction	lient			J _{Disp}	osal	i if sa By La	mples	are re	tain Arch	ed longer than 1 r	month) _ Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II						ope	Gai	msut	uction	S/QC	Req	uirer	nents							
Empty Kit Relinquished by:		Date:			Tin	100000								Ме	thod of	Shipme	nt:			
Relinquished by:	Date/Time:			Company AECOM				ived b								Date/T	ime:			Company
Relinquished by:	Date/Time:			Company			Rece	ived b	y:							Date/T	ime:			Company
Relinquished by:	Date/Time:			Company			Rece	eived b	y;							Date/T	ime:			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Coole	er Ten	nperatu	ıre(s)	°C and	Othe	r Rema	rks:						

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																			VIRONMENTAL TESTING
Client Information	Sampler: C. Steve Howe				PM: ta, P	atty							Carrie	Trackin	ng No(s)	C		COC No:	
Client Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031			E-M pat		ata@	test	ameri	icainc.	.com								Page: Page	
Company: AECOM, Inc.				•	T					Anal	veis	Req	iest	ed				Job #:	
Address: 1220 Avenida Acaso	Due Date Request	ed:								T	1		T	T				Preservation Code	
City: Camarillo	TAT Requested (da	iys): 10 Da	vs		11								1					A - HCL B - NaOH C - Zn Acetate	M - Hexane N - None O - AsNaO2
State, Zip: CA, 93012			-			and the same							-					D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3
Phone: 805-764-4031	PO#: 74770 and 7477	1		•	ွ	. Transpla	lorate											G - Amchlor	S - H2SO4 T - TSP Dodecahydrate U - Acetone
Email: carmen.caceres-schnell@aecom.com	WO #:				o N	<u>o</u>	erch		- 1								2	J - DI Water	V - MCAA
Project Name: NERT Surface Water	Project #: 60477365-2015	.151B			e (Yes	es or N	, 314.0-Perchio										containe		W - ph 4-5 Z - other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				amp	کاوچ	Ci, Br,	lorate					-				5	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefoll, BT=Tissue, A=Alr	Field Filtered S	Perform MS/MSD (Yes or No)	2540C-TDS, 300-CI,	300.1B_28D - Chlorate									Total Number	Special Ins	structions/Note:
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Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Imitant ☐ Poiso	n B Unkno	wn 🖵 Ra	adiological				Re	tum 7	o Clie	ent	L	Dis	oosai	d if sa By La	ample b	s are re	taine Archi	ed longer than 1 m	nonth) _ Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II					\$	Spec	ial Ir	nstruc	tions/	QC R	equire	ments	:						
Empty Kit Relinquished by:		Date:			Tim	V/0000							М	ethod of	Shipm	ent:			
Relinquished by:	Date/Time:			Company AECOM		R	eceiv	ed by:							Date/	Time:			Company
Relinquished by:	Date/Time:			Company		R	eceiv	ed by:							Date/	Time:			Company
elinquished by:	Date/Time:			Company		R	eceiv	ed by:							Date/	Time:			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						С	ooler	Temp	erature((s) °C a	nd Oth	er Rem	arks:			- 11			A.2

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297										_				Carr	ier Tr	acking	No(s)	:	_	-	COC No:	
Client Information	Sampler: C. Steve Howe				PM: ata, Pa	attv								Carr	-01 If	woning	, 10(3)					
Client Information Client Contact:	Phone:			E-M	/ail:	•	_							1							Page: Page	
Carmen Caceres-Schnell	(805) 764-4031			pa	tty.ma	ata@	test	ame	ricain	ic.co	m			_					_	_	Job #:	
Company: AECOM, Inc.										A	naly	sis	Rec	ues	stec	<u> </u>	_	_	_		D	
Address:	Due Date Requeste	d:				13															Preservation Code	M - Hexane
1220 Avenida Acaso City:					-	***												1			A - HCL B - NaOH	N - None
Camarillo	TAT Requested (da	ys): 10 Da	ys						Ш							1	1	1			C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
State, Zip:	1		•		12	1														1 - 1	E - NaHSO4	Q - Na2SO3 R - Na2S2O3
CA, 93012 Phone:	PO #:				-11	-									1						F - MeOH G - Amchlor	S - H2SO4
805-764-4031	74770 and 7477	1			ွ	1	lora													-	H - Ascorbic Acid	T - TSP Dodecahydrate U - Acetone
Email:	WO#:				or No	ွ	314.0-Perchlo													2	J - DI Water	V - MCAA W - ph 4-5
carmen.caceres-schnell@aecom.com Project Name:	Project #:		_		- %	or No)	9													line	K - EDTA L - EDA	Z - other (specify)
NERT Surface Water	60477365-2015	.151B			٥	Š	ř.													ont	Other:	
Site: NERT - Downgradient Study Area	SSOW#:				Samp	MS/MSD (Yes	CI, Br,	Chlorate												rofc		
	8		Sample	Matrix	- B	4S/M	, 300-CI,													Number		
			Туре	(Wowater, Sesolid,		Ē	2540C-TDS,	300.1B_28D														
		Sample	(C=comp,	O=waste/oil,	흥	Perform	ğ	1.00												Total	Special Ins	structions/Note:
Sample Identification	Sample Date	Time	G=grab)	ation Code:		\	N.	6 6 1 1	858	3476	144	問答	301.0	200	1		#255	那時	200	∇	并加州市市市市市市	The second secon
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GLWC6.1_3-20170207 15 : 06 - 0.9	2/7/17	12:06	G	w	N	7	Х	X	\perp								_			2		
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	n B Unkno	wn R	adiological		_				To			١.	D	ispo	sal B	y La	b		إلكنا	\rchi	ve For	_ Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II						Spe	ciai	instr	uction	ns/Q	C Re	quire	emen	its:								
Empty Kit Relinquished by:		Date:			Tin										Meti	nod of	Shipn	nent:				
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Relinquished by:	Date/Time:			Company		\dashv	Rece	ived t	oy:				_				Date	Time	:			Company
Custody Seals Intact: Custody Seal No.:		conficuency	7.00				Coole	er Ter	nperat	ure(s) °C a	nd Ott	ner Re	mark	s:		1_					
Δ Yes Δ No																,w						American annual

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



Client Information	Sampler: C. Steve Howe				b PM: ata, P)atti							Carrie	Trackin	g No(s):			COC No:	
Client Information Client Contact:	Phone:				dia, r Mail:	ally						_	1				ŀ	Page:	
Carmen Caceres-Schnell Company:	(805) 764-4031			2000		ata@	Dtest	tamer	ricainc	.com								Page	
Company: AECOM, Inc.	4				Ť		,				lysis	Rec	west	ed				Job#:	
Address:	Due Date Requeste	d;				(-)			$\overline{}$		Tysis	T			П	П		Preservation Codes	:
1220 Avenida Acaso City:	TAT D							H		- 1		1			11		- 1	A - HCL N	1 - Hexane
Camarillo	TAT Requested (da	ys): 10 Dav	ue					П			1					- 1 1			N - None
State, Zip:	i	IO Da	ys					ш				1				- 1 1			0 - AsNaO2 2 - Na2O4S
CA, 93012							ı	ш				1			1 1	- 1 - 1			- Na2SO3
Phone: 805-764-4031	PO#:				7		te								\perp	- 1 - 1			R - Na2S2O3 S - H2SO4
Email:	74770 and 7477 WO#:	/1				1	314.0-Perchlorate	П			1				1 1	- 1 - 1			- TSP Dodecahydrate
carmen.caceres-schnell@aecom.com	VVO #.				I Z	ြ	erch	ш											J - Acetone / - MCAA
Project Name:	Project #:				— š	(Yes or No)	å	ш											V - ph 4-5
NERT Surface Water	60477365-2015	.151B			3	98	314										횰		- other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				Sampl	SD (Y	.Cl, Br,	Chlorate								- 1 - 1	5	Other:	
			Sample	Matrix	Per	MS/M	2540C-TDS, 300-CI,	5									Number		
			Type	(W=water, S=solid.	뽎		-TDS	300.1B_28D -		-		1 1				- 1 - 1	킾		
Samula Idanéssian		Sample	(C=comp,	O=waste/oil,		Perform	4 BC	5		-							Total		
Sample Identification	Sample Date	Time	G=grab)	BT=Tissue, A=A	_	F)		-	PHI286 30	F-0.192 (3501)	SAC BUSINE	1 (120.07)	851745 N	C20 95.53	S 81-075 80	era skritar	S	Special Inst	ructions/Note:
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LW3.75-20170207-16 : 25 - 1.0	2/7/17	16:25	G	w	N	1.	X	X		\perp	_		\perp	4		$\overline{}$	2		
LWC3.7-20170207-16:10 - 0.6	2/7/17	16:10	G	w		4	X	X		\perp						_	2		
GLW3.78-20170207-16 35 - 1.2	2/7/17	16:35	G	W	N	7	Х	х		\perp							2		
LW3.85-20170207-15 : 50 - 0.6	2/7/17	15:50	G	w	_	,	X	x									2		
LW3.85-20170207- 15 : 50 .0.6 FD	2/7/17	15:50	G	w	N	1	X	x									2		
LW3.4-20170207- 17 : 00 - 0.7	2/7/17	17:00	G	w	N	11	X	x									2		
	A.		G	W	N		X	x											
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			G	W	N		X	х								30.00	80.00		
Possible Hazard Identification						Sa	mple	Disp	oosal	(A fe	e may	be a	ssess	ed if s	amples	are ret	aine	d longer than 1 m	onth)
Non-Hazard Flammable Skin Irritant Poise	on B Unkno	own LR	adiological				\square_R	Return	To C	lient			ispos	al By L	ab	\square A	rchiv	ve For	Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II						Spe	ecial	Instr	uction	s/QC	Requi	reme	nts:						
Empty Kit Relinquished by:		Date:			Ti	me:								Method o	of Shipme	nt:			
Relinquished by:	Date/Time:			Company	_	_	Rece	eived b	ov:			-			Date/T		_		Company
				AECOM															
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Relinquished by:	Date/Time:			Company			Rec	eived t	oy:						Date/T	ime:			Company
Custody Seals Intact: Custody Seal No.:							Coo	ler Ter	nperatu	re(s) °	C and C	Other Ro	marks		-		170		
Δ Yes Δ No							_												

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



	Sampler:				ab PM								(Carrier	Trackin	g No(s):		COC No:	
Client Information Client Contact:	C. Steve Howe Phone:			100	nata, -Mail:	Patty	<u>y</u>						\dashv						Page:	
Carmen Caceres-Schnell	(805) 764-4031					mata	@tes	tame	ericai	nc.co	m	V2418							Page	
Company: AECOM, Inc.										A	naly	sis F	Requ	este	ed				Job#:	
Address: 1220 Avenida Acaso	Due Date Requeste	d:					4.000												Preservation Co	
City:	TAT Requested (da	ys):			\dashv	4		1											A - HCL B - NaOH	M - Hexane N - None
Camarillo State Zin	4	10 Da	ys			1													C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
State, Zip: CA, 93012																1			E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
Phone: 805-764-4031	PO#: 74770 and 7477	'1			\prod_{i}		orate												G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate U - Acetone
Email: carmen.caceres-schnell@aecom.com	WO #:				2	No.	e7.					- 1						١,	J - Ice J - DI Water	V - MCAA
Project Name: NERT Surface Water	Project #:	94.4.19.190.100					9.		П									aneuletuo	K - EDTA L - EDA	W - ph 4-5 Z - other (specify)
NERT Surface Water Site:	60477365-2015 SSOW#:	.151B			1	38	ř.,3		П									į	Other:	
NERT - Downgradient Study Area	330 111 .				Sample (Vec	ISD (Ď,	hlora	Ш									100		
			Sample	Matrix (w-water,		MS/M	2540C-TDS, 300-Cl, Br, 314.0-Perchlorate	300.1B_28D - Chlorate						1				Numbe		
		Sample	Type (C=comp,	Sesolid		Perform	S.	5										Total		
Sample Identification	Sample Date	Time	G=grab)	BT=Tissue, A=	Alr) II	ē	-	-			-			resident to the same			ACCESSE 107	- 15	Special Ir	nstructions/Note:
and the second s	\sim	\times	Self-read-processing	ation Code	_	¥Χ	N	L						2		Second .	ALC: U	-	ES TROSPERIOR	TOTAL STATE OF THE
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LW4.95-20170207- <u>16 : 30 </u> - 1.2	2/7/17	16:30	G	w	N	+	_	x	Ц			_	\perp		\perp			2		
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			G	W	N	100	X	X										1	\$ 86	
Possible Hazard Identification	n B Unknow	🗅	ndiological			Sai	mple	Disp	posal To C	(A1	fee m	ay be	ass	esse	d if sa	mple	s are	retair	ed longer than 1	
□ Non-Hazard □ Flammable □ Skin Irritant □ Poisc Deliverable Requested: I, II, III, IV, Other (specify): Level II	n B — Unkno	WI RE	diological		_				uction			uiren	Disp	osal	By La	b		Arch	nive For	Months
•		Data			IT															
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Relinquished by:	Date/Time:			Company AECOM				ived b								Date	Time:		_	Company
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Refinquished by:	Date/Time:			Company			Rece	ived b	oy:							Date	Time:			Company
Custody Seals Intact: Custody Seal No.:							Cool	er Ten	nperat	ure(s)	°C and	Other	r Rema	arks:		_	_			
Δ Yes Δ No												22.00								

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



Client Information	Sampler: C. Steve Howe					attv							С	arrier	Trackii	y No(s)		ľ	COC No	
tient Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031			I - Ice																	
Company:	(003) 704-4031		·	patt	y,ma T	ta@	lest	amer	icaino					-							
AECOM, Inc.	10									An	alys	is R	lequ	este	d				4		
1220 Avenida Acaso	Due Date Requested	1 ;			П														- 1		
ory: Camarillo	TAT Requested (day				11				- 1	- 1	- 1	- 1	- 1	-					- 1	B - NaOH N	I - None
State, Zip: CA, 93012	1	10 Day	/\$		П														1	D - Nitric Acid P E - NaHSO4 Q	- Na2O4S - Na2SO3
Phone: 805-764-4031	PO#: 74770 and 7477	1			וֱ		orate												- 1	G - Amchlor S	
Emait: carmen,caceres-schnell@aecom.com	WO#:				킪	٦	erch!			- 1							11				
Project Name: NERT Surface Water	Project #: 60477365-2015	.151B			(Yes		314.0-P												tainers	K-EDTA V	V - ph 4-5 ! - other (specify)
Sre: NERT - Downgradient Study Area	SSOW				ample		CI, Br,	lorate			-								of con	Other:	
		Sample	Sample Type (C=comp,	(w-water,	eld Filtered S	rform MS/M	40C-TDS, 300-	0.1B_28D - Ch													
Sample Identification	Sample Date	Time			低	ů	_		SAMO	00-200	82% X	PAGE 1	4475 W	100	COM SHO	100 95-20	10 (270.50)	2000	빍	Special Inst	ructions/Note:
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Possible Hazard Identification						Sa	mpl	e Dis	posa	I(A	fee r	nay	be as	sess	ed ii	sam	ples a	re ret	ain	ed longer than 1 n	nonth)
Non-Hazard Flammable Skin Imitant Political Deliverable Requested: I, II, III, IV, Other (specify): Level II	son B Unkn	own 🖵	Radiological		-	Sn	ecia	Return	n To	Clien	CR	- L	Di	spos	al By	Lab		LXLA	rchi	ive For	Months
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Empty Kit Relinquished by:		Date:		10	Т	ime:									Metho		0900100000000				
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Relinquished by:	Date/Time:			Company			Red	ceived	by:							C	ate/Tim	o ;			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Со	oler Te	mper	ature(s	°C a	nd Ot	her Re	marks	:						
Δ 162 Δ 140							┸														

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Chain of Custody Record



arrier Tracking No(s): COC No: C. Steve Howe Mata, Patty Client Information Page Client Contact: Page (805) 764-4031 patty.mata@testamericainc.com Carmen Caceres-Schnell Job # Company: **Analysis Requested** AECOM, Inc. Preservation Codes: Address: Due Date Requested: 1220 Avenida Acaso A - HCL M - Heyane B - NaOH N - None TAT Requested (days): O - AsNaO2 C - Zn Acetate Camarillo 10 Days D - Nitric Acid P - Na2O4S State Zip: Q - Na2SO3 E - NaHSO4 CA, 93012 F - MeOH R - Na2S2O3 Phone: S - H2SO4 G - Amchlor 2640C-TDS, 300-Cl, Br, 314.0-Perchlorate 805-764-4031 H - Ascorbic Acid T - TSP Dodecahydrate 74770 and 74771 I - Ice U - Acetone Email: NO #: V - MCAA J - DI Water carmen.caceres-schnell@aecom.com Total Number of containers K - EDTA W - ph 4-5 Project Name: L - EDA Z - other (specify) **NERT Surface Water** 60477365-2015.151B Other: NERT - Downgradient Study Area Matrix Sample Type S-solld, (C=comp, Sample Special Instructions/Note: Sample Identification Sample Date Time G=grab) BT-Tissue, A-A Preservation Code: N 2 GLW4.4-20170207- 14 : 11 - 1.3 W X 2/7/17 14:11 G NN X 2/7/17 GLW4.4-20170207-14:11-1.3 FD G W 14:11 G W X X X X G W X X G W X G W X W G X G X W X X G W X X W G W X X Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Disposal By Lab Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Return To Client Archive For Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Date: Time: lethod of Shipment: Empty Kit Relinquished by: Company Received by: Date/Time: Date/Time: Company Relinquished by: AECOM Company Received by: Date/Time: Date/Time: Company Relinquished by: Relinquished by: Date/Time: Received by: Date/Time: Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297				_													April 4		* *.
Client Information Client Contact:	Sampler: C. Steve Howe			Lab Mat	PM: ta, Pa	thy						Carrie	r Tracking	No(s):		C	COC No:		
Client Contact: Carmen Caceres-Schnell	Phone:			E-Ma	ail:					-12-12-2		1					Page:		
Company:	(805) 764-4031			patt	y.ma	ta@t	esta	amerio	cainc.c	com							Page lob #:		
AECOM, Inc. Address:									A	Analy	sis R	eques	ted	- Carlos					
1220 Avenida Acaso	Due Date Requeste	ed:			П			T	T						TT	1	Preservation Cod		
City: Camarillo	TAT Requested (da	ays):			11					1 1		\perp					A - HCL B - NaOH	M - Hexane N - None	
State, Zip:	1	10 Da	ys		П	2.5	1					11					C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S	
CA, 93012 Phone:					П												E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3	
805-764-4031	PO #: 74770 and 747	71			1.1	1	rate										G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahy	vdrate
Email:	WO #:				1 ₂	_ =										- 1	l - Ice	U - Acetone V - MCAA	yarate
carmen.caceres-schnell@aecom.com Project Name:	Project #:				S or	S S	Per									# ×	J - DI Water K - EDTA	W - ph 4-5	
NERT Surface Water Site:	60477365-2015	5.151B			٤	(Yes or	Br, 314.0-Pe			11					1	19	L - EDA	Z - other (specify)	
NERT - Downgradient Study Area	SSOW#:				amp	ا ع	, B	orate							100		Other:		
Sample Identification	Sample Date	Sample Time		Matrix (w-water, S-solid, O-wastefoll, BT-Tissue, A-Air	Field Filtered S	-	2540C-	300.1B_28D - Chlorate							Total Number of		Special Ins	structions/Note	e:
111111111111111111111111111111111111111		\sim	1000	tion Code:	X	7	N	L	- 1		No.		4 2 3		1 2	4		708	
LW3.4-20170207-11 : 11 - 0.5 MS	2/7/17	11:10	G	W	1	-	х	X			nud is				2	4			
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LW3.4-20170207-11:11-0.	2/7/17	11:11	G	w	N	1 3	x	X							2	2			
LW3.75-20170207-10 : 45 - 0.9	2/7/17	10:45	G	w	N	1)	x	X							2				
LWC3.7-20170207-10 : 32 - 0.4	2/7/17	10:32	G	W	N	1	x	X							2	工			
GLW3.78-20170207- <u>09</u> : <u>35</u> -0.7	2/7/17	09:35	G	W	N)	x	x							2	1			
LW3.85-20170207- 10 : 12 - 0.5	2/7/17	10:12	G	W	N I	1)	×	x							2	-			
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Possible Hazard Identification	- 🗖		adiological		S	amp	le L	Dispo	sal (A	fee m	ay be	assess	ed if sa	mples a	re retair	ned	longer than 1 r	nonth)	
Non-Hazard Flammable Skin Irritant Poise Deliverable Requested: I, II, III, IV, Other (specify): Level II	on B — Unkno	wn R	alological		S	peci	al In	turn i	o Clier	nt C Rec	uirem	Disposa	l By Lai	<u> </u>	[X] _{Arcl}	hive	For	_ Months	
										10 1101	- Turiorii								
Empty Kit Relinquished by:		Date:			Time			- dell'	_			M	lethod of	Shipment:					
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Relinquished by:	Date/Time:		C	Company		Re	eceiv	ed by:						Date/Time		_		Company	-
Relinquished by:	Date/Time:			Company		Re	eceiv	ed by:					-	Date/Time	9:	_		Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Co	ooler	Tempe	erature(s	s) °C and	Other F	Remarks:		l		_			\dashv

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Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Carrier Tracking No(s): COC No: Sampler: C. Steve Howe Mata, Patty Client Information age: Client Contact: E-Mail: (805) 764-4031 Page Carmen Caceres-Schnell patty.mata@testamericainc.com Job #: AECOM, Inc. **Analysis Requested** Preservation Codes: Address: Due Date Requested: 1220 Avenida Acaso M - Hexane A - HCL TAT Requested (days): B - NaOH N - None Camarillo C - Zn Acetale O - AsNaO2 10 Days P - Na2O4S State, Zip: D - Nitric Acid Q - Na2SO3 E - NaHSO4 CA, 93012 R - Na2S2O3 F - MeOH Phone: S - H2SO4 G - Amchlor Perform MS/MSD (Yes or No) 2540C-TDS, 300-CI, Br, 314.0-Perchlorate 805-764-4031 74770 and 74771 T - TSP Dodecahydrate H - Ascorbic Acid U - Acetone Email: 1 - Ice V - MCAA J - DI Water carmen.caceres-schnell@aecom.com W - ph 4-5 K - EDTA Project Name: Project #: Z - other (specify) L - EDA **NERT Surface Water** 60477365-2015.151B Other: SSOW#: 300.1B_28D - Chlorate NERT - Downgradient Study Area Total Number of Matrix Sample (W=water, Type S=solid, O=waste/oi Sample (C=Comp Special Instructions/Note: Sample Identification Sample Date Time G=grab) Preservation Code: N 0.3 MS LW4.1-20170207- 10 2 X 2/7/17 10:39 G X 2 LW4.1-20170207-_ 10 0.3 MSD X X 2/7/17 10:39 G W 39 LW4.1-20170207- 10 _- 0.3 2/7/17 10:39 G W X X 2 2 -1.1 GLW4.4-20170207- 10 2/7/17 10:18 G W X X 42 - 0.7 2 X W GLW4.85-20170207- 09 2/7/17 09:42 G X X G W X X G W X G W X X X W G W X G X W G Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Skin Irritant Poison B Unknown Radiological Disposal By Lab Return To Client Archive For Non-Hazard Flammable Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Time: Method of Shipment: Empty Kit Relinquished by: 1330 Company (/) 1300 AECOM Company Relinquished by: Date/Time: Company Received by: Date/Time: Relinquished by: Company Custody Seal No.: Custody Seals Intact: Cooler Temperature(s) °C and Other Remarks: 5.9.0 Δ Yes Δ No

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Filone (949) 261-1022 Fax (949) 260-3297	Sampler:			Lab	DM.		-										_			. 1.
Client Information Client Contact:	C. Steve Howe			Mat	a, Pa	atty						Č	arrier I r	acking No	D(s):		C	COC No:		
Carmen Caceres-Schnell Company:	Phone: (805) 764-4031			E-M pat		ta@	test	tame	ricaino	.com								Page: Page		
AECOM, Inc. Address:										Ana	lysis	Requ	estec	ı				Job #:		
1220 Avenida Acaso	Due Date Requeste	d:			T				П	T	Ť	Πİ	T	П	\top	П	寸	Preservation Co	des:	
City: Camarillo	TAT Requested (da				11	1												A - HCL B - NaOH	M - Hexan N - None	
State, Zip: CA, 93012 Phone:		10 Day	ys		П	-											1	C - Zn Acetate D - Nitric Acid E - NaHSO4	O - AsNa0 P - Na2O4 Q - Na2S0	4S O3
805-764-4031	PO #: 74770 and 7477	"1			11		ate										0	F - MeOH G - Amchlor	R - Na2S2 S - H2SO4	4
Email: carmen.caceres-schnell@aecom.com	WO #:	•			or No	No)	314.0-Perchiora										1	H - Ascorbic Acid - Ice J - DI Water	U - Aceton V - MCAA	
Project Name: NERT Surface Water	Project #: 60477365-2015	.151B				S or	314.0-P									aine	# K	K - EDTA - EDA	W - ph 4-5 Z - other (s	5
Site: NERT - Downgradient Study Area	SSOW#:				ᄀᅙ	څ	ď,	- Chlorate								of cont	0	other:		
Sample Identification	Sample Date	Sample Time		Matrix (W=water, S=solid, O=waste/oll, BT=Tissue, A=Ali	Field Filtered S	Perform MS/MSD	2540C-TDS, 300-CI,	300.1B_28D								Total Number o	Number	Special In	struction	s/Note:
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GLW4.9-20170207- 10 55 _ 1.7 MSD	2/7/17	10:55	G	w	N	X	Х	х								2	2			
GLW4.9-20170207-10 : 55 - 1.Z	2/7/17	10:55	G	W	N	N	Х	X								2	2			
LW4.95-20170207-10 : 45 - 1.0	2/7/17	10:45	G	w	N	N	х	х								2	2			-
LW5.3-20170207- 09 : 45 - 1.0	2/7/17	09:45	G	w	N	4	х	X								2	2			
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		a James a	G	W	N		Х	Х												
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	0		G	W	N		X	x							Ja T					
			G	W	N		X	×									T			
			G	w	N	-0.9	X	X									1			
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poise Deliverable Requested: I, II, III, IV, Other (specify): Level II	on B Unkno	own 🖳	adiological			- 7	RE	eturn	10 CI	ent	may b	[→] Disp	essed i osal By	f samp / Lab	les are	retain XI _{Arch}	ned i	longer than 1	month) Months	
		Date:			Tim		_						Metho	od of Ship	ment:					
Empty Kit Relinquished by: Relinquished by:	Date/Time:		.20	Company			Recei	ived by	y: /	,	,			Dat	le/Time:		_		Comes	
Relinquished by:	2/7/20	017 15	5.50	AECOM Company		F	Recei	ived by	y:		メ				2 · 7 ·	17		1330	Company	
Section and	Date/Time:			Company		-	Pare:	ived by	r										Company	
Refinquished by:				очтрану										Dai	te/Time:				Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						C	Coole	er Tem	perature	e(s) °C a	and Othe	r Remar	ks:	8						

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



Client Information	Sampler: C. Steve Howe			Lab	PM: la, Pa	atty					_			Carr	rier Tr	ackin	g No	s):	-	-	coc	No:			
Client Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031			E-M	ail:	,					200		_	1							Page				
Company: AECOM, Inc.	(550) (51 100)			pat	ly,ma	ita@	lesi	lame	ricain					<u></u>		98		-			Job i				
Address: c 1220 Avenida Acaso	Due Date Requeste	ed:			╁	Micr		_		Ar	naly	sis	Rec	que	stec	<u>+</u>	_	_	_	_	Pre	servation	Code	es:	
City: Camarillo	TAT Requested (da	avel.																			A-1	HCL		M - Hexane	е
State, Zip:	1	10 Da	ys																1		C-2	NaOH Zn Acetate		N - None O - AsNaO	
CA, 93012 Phone:					П														1	150	E-1	Nitric Acid NaHSO4		P - Na2O4: Q - Na2SO	03
805-764-4031	PO #: 74770 and 747	71			11		ate														G-/	MeOH Amchlor		R - Na2S20 S - H2SO4	1
Email: carmen.caceres-schnell@aecom.com	WO #:				- (S	_	rchlor										1				1-10			U - Acetone	
Project Name: NERT Surface Water	Project #:				res or	or No	4.0-Pe										1			ners	J-D	Nater DTA		V - MCAA W - ph 4-5	
Site: NERT - Downgradient Study Area	60477365-2015 SSOW#:	5.151B			- ld	(Yes	Br, 31	2												containers	L · E			Z - other (s	pecity)
Sowngradient Study Area			one in		Sam	MSD	, CI,	Chlora												ठ	1				
			Sample Type	Matrix (W=water, S=solid,	Filtered	Perform MS/MSD (Yes or No)	2540C-TDS, 300-Cl, Br, 314.0-Perchlorate	300.1B_28D - Chlorate												Number					
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O=wastefoil,	Field	Perfo	2540C	300.1												Total		Specia	ıl Ins	tructions	s/Note:
WE CONTRACTOR TO THE PROPERTY OF THE PROPERTY		\rightarrow	Preserv	ation Code:		X	N	ĵĽ:	132 124	#14R			规		73	14.5	(3.6) (2.1)	31	W.M.	Ź	25	St. Challen	of an appropriate	Gliniana.	mercan 30
LW5.9-20170207- 10 : 60 - 0.4 MS	2/7/17	10:00	G	W	N		X	X												2					
LW5.9-20170207- 10 : 00 - 0.4 MSD	2/7/17	10:00	G	w	N	X	X	X												2					
LW5.9-20170207- 10 : 00 - 0.4	2/7/17	10:00	G	w	N	2	х	х											Т	Z				-	
LWC6.1_1-20170207- 09 : 03 - 0.9	2/7/17	09:03	G	w	N	4	х	х							1			T		2					
LWC6.1_2-2017020709 : 20 - 0.7	2/7/17	09:20	G	w	N	2	х	х												2			-		
GLWC6.1_3-20170207-09:30 - 1.0	2/7/17	9:30	G	w	N	N	х	х			T						T			Z	_	-			
GLWC6.1_4-20170207-10 : 35 - 1.3	2/7/17	10:35	G	w	N	N	X	X											200	2		- 1 (m)			
			G	w	N		х	х												100					
			G	w	N		х	х											\vdash	-			_		
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Possible Hazard Identification				-		Sam	ple	Disp	osal	(Af	ee m	ay E	e as	ses	sed	if sa	mpl	es a	re re	taine	ed lor	nger than	n 1 m	onth)	
Non-Hazard Flammable Skin Irritant Pois Deliverable Requested: I, II, III, IV, Other (specify): Level II	son B Unkno	own R	adiological			100	$\neg R\epsilon$	eturn	To C	lient		_	_Di.	spos	al B	y La	b		X)	rchi	ive Fo	r		_ Months	
		- ·					Jaii	msire	uction	is/QC	Rec	uire	men												
Empty Kit Relinquished by:	Date/Time:	Date:		Company	Tim	75.0	Pacai	ived b	_	_				100	Meth	od of									
Relinquished by:	2/7/1	17 13	30	AECOM				Ĺ.,	1		.5	8					Date 2	· 7	17		13	330	1	Company TA	
Relinquished by:	Date/Time:			Company		F	Recei	ived b	y:								Date	/Time	:				7	Company	
Relinquished by:	Date/Time:			Company		R	Recei	ived b	y:					_			Date	/Time	ι:				-	Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						c	Coole	r Tem	peratu	re(s) °	°C and	Othe	er Ren	narks	:	3	1.8	-							
						_		,			_	-			-	_				_					

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297	Sampler:			Lab P	M:		_					C	arrier	Tracking	No(s):			COC No:	
Client Information Client Contact:	C. Steve Howe Phone:			Mata	-	tty												Page:	
Carmen Caceres-Schnell	(805) 764-4031			E-Ma patty		ta@t	esta	americ	cainc	.com		_ 1						Page	
Company: AECOM, Inc.					П						lveis	Requ	iest	ed				Job#:	
Address: 1220 Avenida Acaso	Due Date Requeste	d:				1	Т	Т	Т	T	1,010	T	T		П			Preservation Cod	les:
City:	TAT Requested (da				11		- 1						- 1			1 1		A - HCL	M - Hexane N - None
Camarillo	IAI Requested (da	ys): 10 Day	ys		Ш						1		-			11		B - NaOH C - Zn Acetate	O - AsNaO2
State, Zip: CA, 93012 Phone:					П								1					D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3
805-764-4031	PO#: 74770 and 7477	1			1		ate								11	\perp		G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
Email:	WO #:	•			ŝ		당											I - Ice	U - Acetone V - MCAA
carmen.caceres-schnell@aecom.com Project Name:	D-1				Š	or No)	- F						1				S S	J - DI Water K - EDTA	W - ph 4-5
NERT Surface Water	Project #: 60477365-2015	.151B			اعْ	So	314.0-Perchlorate			- [Ì			containers	L - EDA	Z - other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				Sample	٤		lorate									of con	Other:	
Sample Identification	Sample Date	Sample Time		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air	Field Filtered	Perform MS/MSD	_	300.1B_28D - Chlorate									Total Number	Special In:	structions/Note:
	\rightarrow	><	Preserva	tion Code:	X	X	N	L	1		3 100		1	100			X	William III	(V. V. Horney)
LW6.05-20170207- 09 : 30 - 0.6 MS	2/7/17	09:30	G	W	N	Y	х	X									2		
LW6.05-20170207- 01 : 30 - 0.6 MSD	2/7/17	09:30	G	W	N	Y	х	X								-	2		
LW6.05-20170207-09 30 0.6	2/7/17	09:30	G	W	N	-	X	X									2		
LW6.7-20170207-09:13 - 0.4	2/7/17	9:13	G	W	N		X	X									2		
LW7.2-20170207-08:55-0.7	2/7/17	08:55	G	W	N	N	×	X								1	2		
		Marie and the	G	W	N		Х	X											
			G	W	N		x	X											
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			G	W	N		x	X											
			G	W	N		х	х											
Possible Hazard Identification						Sam	ple	Disp	osal	(Afe	e may	be ass	sess	ed if sa	mples	are reta	ine	ed longer than 1	month)
Non-Hazard Flammable Skin Irritant	ison B Unkno	wn R	adiological		4	Cnoc	Re	eturn	To C	lient	Dami	Dis _D	posa	I By La	b	\square Ar	chiv	ve For	Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II						Spec	Jai i	i i Su u	Clions	S/QC	Requi	rements	S:						
Empty Kit Relinquished by:	700 M	Date:			Tin					_			M	lethod of	Shipmen				
Relinquished by:	Date/Time: 2/7/17	13.3	60	Company AECOM				ved by	/	-	?.	3			Date/Tir	ne: - 19 - / !:	7	1370	Company
Relinquished by:	Date/Time:			Company		F	Recei	ved by	,						Date/Tir	ne:			Company
Relinquished by:	Date/Time:			Company		F	Recei	ved by	r.						Date/Tir	ne:			Company
Custody Seals Intact: Custody Seal No.:																			

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																					
Client Information	Sampler: C. Steve Howe				PM: ita, P	atty							Carrie	r Trackir	ng No(s)):		С	COC No:		
Client Contact: Carmen Caceres-Schnell	Phone: (805) 764-4031			E-M		ata@	Dtest	ame	ricainc.	com									Page: Page		
Company: AECOM, Inc. Address:					T						lysis	Rea	uest	ed					Job#:		
Address:	Due Date Requeste	d:			+					Alla	lysis	T	1		T	TT	T	T _P	Preservation Cod	les:	
1220 Avenida Acaso												1 1	- 1			П		Į,	A - HCL	M - Hexane	•
City: Camarillo State, Zip:	TAT Requested (da	ys): 10 Da	ys		7													E	B - NaOH C - Zn Acetate	N - None O - AsNaO: P - Na2O45	
CA, 93012 Phone:																		E	D - Nitric Acid E - NaHSO4 F - MeOH	Q - Na2SO R - Na2S20	3 O3
805-764-4031 Email:	PO#: 74770 and 7477	1] -		lorate										1	Н	G - Amchlor H - Ascorbic Acid		decahydrate
carmen.caceres-schnell@aecom.com	WO #:				or N	(o)	Perchi											- 1	I - Ice J - DI Water K - EDTA	U - Acetone V - MCAA W - ph 4-5	•
Project Name: NERT Surface Water	Project #: 60477365-2015	.151B			و کروه	s or	314.0-										a contract of	Talne	L - EDA	Z - other (s	pecify)
Site: NERT - Downgradient Study Area	SSOW#:				ample	SD (Ye	CI, Br,	lorate									3	ğ Ot	Other:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp,	Matrix (W=water, S=solld, O=waste/oil, BT=Tissue, A=A	ield Filtered	Perform MS/MSD (Yes or No)	2540C-TDS, 300-CI, Br, 314.0-Perchlorate	300.1B_28D - Chlorate									PadmiN lesson	lotal Number of containers	Special Ins	etructions	/Note:
and the state of t	Sample Date	<u>"/</u> \		2 2	F		3	7	5 3	7		1		- 1	+	Special IIIs	Structions	Mote.			
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Possible Hazard Identification						Sar	. WO.	0.00	osal (A fee	e mav	be as	sess	ed if s	amnle	S 270	rotai		longer than 1		
Non-Hazard Flammable Skin Irritant Poiso	n B Unkno	wn \square_R	adiological				\neg R	eturn	To Cli	ent		Dis	posa	l By La	ah ab		Arc	nea :hive	For	month) Months	
Deliverable Requested: I, II, III, IV, Other (specify): Level II						Spe	ecial	Instru	uctions	/QC F	Requir	ement	S:								
Empty Kit Relinquished by:		Date:			Tir	me:	D						N	lethod o							
Relinquished by Audut	Date/Time: 2/7/20	13'	30	Company AECOM			(ived b	-/-		كوسي					Time:	7		1330	Company	
Relinquished by:	Date/Time:			Company				ived b	•						Date	/Time:				Company	
Relinquished by:	Date/Time:			Company			Rece	ived b	y:						Date	/Time:				Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Coole	er Tem	perature	e(s) °C	and Ot	her Rem	arks:	25							

17461 Derian Ave Suite 100 Irvine, CA 92614-5817 Phone (949) 261-1022 Fee: (6



1 Hone (949) 261-1022 Fax (949) 260-3297																					THE LEADER IN EN	VINONMENT	WE LESTING
Client Information Client Cortact	Sampler: C. Steve Howe	ı		Ma	b PM: lata, f		y							Can	rier Tra	acking) No(s):			COC No:		
Carmen Caceres-Schnell	Phone: (805) 764-4031	ı			Mail: atty.m	nata(@tes	stame	ericai	nc.cc	om			1_							Page: Page		
ACCOM, Inc.										A	naly	sis	Re	que	sted	-					Job#		
1220 Avenida Acaso City	Oue Date Request	.ed:			12.20			\Box	T					T	Π			T		- 1	Preservation Code		
Camarillo State, Zip:	TAT Requested (da	days): 10 Da	avs		100	1															A - HCL B - NaOH C - Zn Acetate	M - Hexane N - None O - AsNaO2	
State, Zp: CA, 93012 Phone:	7		,-		The second																D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3	
Email:	PO #: 74770 and 747	/71			一個組織	18.00	orate													1		R - Na2S2O3 S - H2SO4 T - TSP Dode	
carmen.caceres-schnell@aacom.com	WO#:				7 ₹		Perchi	'													I - Ice J - Di Water	U - Acetone V - MCAA	,
Project Name: NERT Surface Water Site:	Project #: 60477365-2015	5.151B			Z (X 68	SCOR!	314.0-1													containers		W - ph 4-5 Z - other (spe	acify)
Site: NERT - Downgradient Study Area	SSOW#:				- James		CI, Br,	lorate												of con	Other:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W-water, S-solid, O-waste/oil, BT-Tissue, A-Alr	Field Filtered S	1. f.o. (1.5)	2540C-TDS, 300-(300.1B_28D - Chlor												Total Number o	Special Ins	tructions/	Note:
A STATE OF THE PARTY OF THE PAR			Preserva	ation Code:	_	\boxtimes	_	+	透透	618	2.0		1000 1000	30				B2-75		X	A The section	Company and the second	man per participation
LW3.4-20170208-10:55 - FB	2/8/17	10:55	G	w	Z	7	х	х												2			
LW3.4-20170208-10:30 - 0.5	2/8/17	10:50	G	w	N	2	х	х												2			
LWC3.7-20170208- 09 : 48 - 0.5	2/8/17	09:48	G	w	N	7	х	х					20						_	2			
LW3.75-20170208-09:57-0.8	2/8/17	09:57	G	w.	N	2	х	x				in a control								2			
GLW3.78-20170208-10:10 0.5	2/8/17	10:10	G	w	N	7	X	х											-	2			
LW3.85-20170208- 09 27 - 0.5		09:27	G	w	N	2	х	х												2			
LW3.85-20170208- 09 : 27 - 0.5 FD	2/8/17	09:27	G	w	N	7	x	x												2			
		'	G	w	N		X	х											200				
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			G	W	N	-	X	x											1	1			
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poiss Deliverable Requested: I, II, III, IV, Other (specify): Level II	on B Unkno	wn 🖳	Radiological				-Re	(etum	1 To C	lient	t	_	—'Di	ispas	sed i sal By	f sai / Lat	mple b	s are	x reta	ine	ed longer than 1 m	nonth) _ Months	
		To also			197		Clan	insuu	JCtion	IS/Lic	C Req	quire	men	ts:									
Empty Kit Relinquished by: Relinquished by:	IDete/fime:	Date:		Company	Tim	me:	Rece	eived by	w.	_			_		Metho	of S	Shipm	ent:	_				
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Relinquished by:	Date/Time;			Company		\dashv	Rece	elved by	Y:	_								/Time:	_			•	
Custody Seals Intact: Custody Seal No.:										ure(s)	°C and	d Oth	er Rei	marks	E .			-	-			Company	
Δ Yes Δ No													_										-

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Frione (949) 261-1022 Fax (949) 260-3297																		THE LEADER IN CH	IVIRONMEN	TAL TESTING				
Client Information Client Contact:	Sampler: C. Steve Howe				ab PM: //ata, F	atty		25						Ca	rrier T	rackir	ng No	(s):			9	COC No:		
Carmen Caceres-Schnell Company:	Phone: (805) 764-4031			90	-Mail: atty.m	ata@	gtest	tame	ericai	inc.c	om			1								Page: Page		
AECOM, Inc.					Ť					A	nal	ysis	Re	que	ste	d					Ī	Job #:		
1220 Avenida Acaso	Due Date Request	ed;			K.	纖			T	T	Τ	T	T	Ť	T	T		T		报	136	Preservation Cod		
Сиу: Camarillo	TAT Requested (d	ays): 10 Da	we																			A - HCL B - NaOH C - Zn Acetate	M - Hexane N - None O - AsNaO	
State, Zip: CA, 93012 Phone;		10 00	iyə		(C)	数												1		0		D - Nitric Acid E - NaHSO4	P - Na2O45 Q - Na2SO	S 3
805-764-4031	PO#: 74770 and 747	71					orate									1				4		F - MeOH G - Amchlor H - Ascorbic Acid	R - Na2S20 S - H2SO4 T - TSP Do	
Email: carmen.caceres-schnell@aecom.com	WO #:				or No	(0	erchio													200	9 1	l - Ice J - DI Water	U - Acetone V - MCAA	•
Project Name: NERT Surface Water	Project #: 60477365-201	5.151B			CYes.)/Ox	14.0													containers	1	K - EDTA L - EDA	W - ph 4-5 Z - other (s	
Site: NERT - Downgradient Study Area	SSOWN:				ample	D)U	Cl, Br,	orate								l				ofcont		Other:		
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The state of the s		\gg	Preserv	ation Code	X	X	Ñ	西	熟	1	2		1	聯盟	號	鄉	13	100	建設	X		Shirt water	- William Charles	- march 214
LW4.1-20170208- <u> </u>	. 2/8/17	11:12	G	. w	N	2	X	X												2				
GLW4.4-20170208-11 : 0Z - EB	2/8/17	11:02	G	w	N	2	x	X	3											2				
LW4.1-20170208-10:22 - 0.4	2/8/17	10:22	G	W	N	7	x	X												2				
GLW4.85-20170208- 09 : 45 - 0.6	2/8/17	09:45	G	W.	N	N	х	X									1			2	2			
GLW4.4-20170208-10:07-1.1	2/8/17	FO:07	G	w	N	N	х	X									T		1	2				
LW4.1-20170208-10:22-0.4	2/8/17	10:22	G	w	N	7	X	X	7 1					4 - 4			Г			2				-
		k	G	w	N		X	X	1 12	A 10										100				-
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Pois Deliverable Requested: I, II, III, IV, Other (specify): Level II	on B Unkno	own 🖳	adiological			11-11-02	,,,	luiii	To (14	20.	_)/enc	ssed sal E	if s	amp ab	les a	are re	etain	ned	l longer than 1 r	month) _ Months	
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17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																	THE LEADER IN ER	NVIRONMENTAL TESTING			
Client Information	Sampler: C. Steve Howe			Lab f Mat		atty							Ca	arrier 1	Frackir	ng No(s):			COC No:	
Carmen Caceres-Schnell	Phone: (805) 764-4031			E-Ma patt		ata@	test	tamei	ricaino	com:										Page: Page	
Company: AECOM, Inc. Address:										Ana	ılysis	s R	eque	este	d					Job #:	
1220 Avenida Acaso	Due Date Request	ed:			13						Ť		Ť						SMr.	Preservation Cod	es: M - Hexane
City: Camarillo State, Zip:	TAT Requested (da	ays): 10 Da	ys		2883														S. 5. 18.	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid	N - None . O - AsNaO2 P - Na2O4S
CA, 93012 Phone:	PO#:																			E - NaHSO4 F - MeOH G - Amchlor	Q - Na2SO3 R - Na2S2O3 S - H2SO4
805-764-4031 . Email:	74770 and 7477 WO#:	71			(O)		hlorat				1									H - Ascorbic Acid	T - TSP Dodecahydrate U - Acetone
carmen.caceres-schnell@aecom.com Project Name:					\$ OF	0	Perc								ŀ				673	J - DI Water K - EDTA	V - MCAA W - ph 4-5
NERT Surface Water	Project #: 60477365-2015	5.151B			3		314.0-P						1						contain	L - EDA	Z - other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				ampi	i,	C, B,	lorate				1.				1			o Co	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w-water, 8=solid, 0=waste/oll, BT=Tissue, A=Air)	Field Filtered	4 7 101 1	2540C-TDS, 300-CI,	300.1B_28D - Chlo											Total Number	Special Ins	structions/Note:
The state of the s		>	Preserva	tion Code:	X	\times	N	數院		游 納	金融金			1	16	1000 2000 2000	1	100	\times	The Contract	と 大学の とうしょう かんかん かんかん
GLW4.9-20170208- <u> ; 0⁹ -</u> FB	2/8/17	11:09	G _.	W	N	N	x	x											2		16
LW4.95-20170208- <u>[]</u> EB	2/8/17	11:06	G	W	N	N	X	x											2		
GLW4.9-20170208-10 50 - 1.Z	2/8/17	10:50	G	W	Νį	N	X	x											2		
LW4.95-20170208-10:30 - 1.1	2/8/17	10:30	G	W	N	h	x	x						3			-		2		
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poiso	n B Unkno	wn . Re	adiological	÷		. 100	¬'Re	ətum	osal (To Cla ctions	ent		ш	Dispo	ssec osal l	i if s a By La	mpl b	es ai	e ret	aine rchiv	d longer than 1 n	n onth) _ Months
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17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Frione (949) 261-1022 Fax (949) 260-3297																				THE LEADER IN EN	AIHOHME	INC IESTING		
Client Information Client Contact:	Sampler: C. Steve Howe				la, P	atty								Carr	rier Tr	acking	No(s):			C	COC No:		
Carmen Caceres-Schnell Company:	Phone: (805) 764-4031			E-M pat		ata@	gtes	tame	ericai	nc.cc	m											Page: Page		
AECOM, Inc. Address:					Τ					Α	naly	sis	Req	ue	stec	i					J	Job #:		
1220 Avenida Acaso	Due Date Requeste	d:			4.2		O.		Γ		Γ					Γ	Г		Τ	5	3	Preservation Cod		
City: Camarillo	TAT Requested (da	ys): 10 Day	18		1					i										200	à E	A - HCL B - NaOH C - Zn Acetate	M - Hexane N - None O - AsNaO	
State, Zīp: CA, 93012		10 04																			D E	D - Nitric Acid E - NaHSO4	P - Na2O45 Q - Na2SO	S 3
Phone: 805-764-4031	PO#: 74770 and 7477	'1			1		orate														1	F - MeOH G - Amchlor H - Ascorbic Acid	R - Na2S20 S - H2SO4 T - TSP Do	
Email: carmen.caceres-schnell@aecom.com	WO#:				ا ا	-10	erchic													100	9	I - Ice J - DI Water	U - Acetone V - MCAA	•
Project Name: NERT Surface Water	Project #: 60477365-2015	.151B			38	(NOSORNO)	314.0-Pe													alner		K - EDTA L - EDA	W - ph 4-5 Z - other (s	
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17461 Derian Ave Suite 100 Irvine, CA 92614-5817 Phone (949) 261-1022 Fax (949) 260-3297



Client Information	Sampler: C. Steve Howe				PM:	Patty						•		Сап	ier Tra	cking	g No(s) :		_	COC No:	*	_
Client Contact: Carmen Caceres-Schnell	Phone:			E-M	Aail:	Ė		4													Page: Page		
Company: AECOM, Inc.	(805) 764-4031			pai	ty.m	атас	ytes	tame	ericain				_					_			Job #:		_
Address:	Due Date Request	ed:		_	2252	12.31				Ai	nalys	sis	Req	ues	sted	_	Т	_	T	(0)	Preservation Co	des:	-
1220 Avenida Acaso City: Camarillo									Ш		П						1				A - HCL	M - Hexane	
Camarillo State, Zip:	TAT Requested (d	ays): 10 Da	iys						Ш												B - NaOH C - Zn Acetate	N - None O - AsNaO2	
CA, 93012 Phone:					2000														1		D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3	
805-764-4031	PO#: 74770 and 747	71			1000		rate			- 1										6.0	G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydra	ite
Email: Carmen.caceres-schnell@aecom.com	WO #:				- 2		erchio			-									1		I - Ice J - DI Water	U - Acetone V - MCAA	
Project Name: NERT Surface Water	Project #:				- Se	5	314.0-P													ainer	K - EDTA L - EDA	W - ph 4-5 Z - other (specify)	
Site:	60477365-2015 SSOW#:	5.151B			- 휠	Ç.	Br, 3	ate		-		-		- 1						cont	Other:		
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Non-Hazard Flammable Skin Irritant Poisc	n B — Unkno	wn Re	aioiogicai		-	Spec	Rei	tum nstru	To Cli	ent IQC	Regu	irer	Disp	oosa	l By	Lab			A	rchiv	re For	Months	ᅵ
F	Special Instructions/QC Requirement												latha	1 - 1 1	Shipm								
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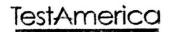
17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Client Information	Sampler: C. Steve Howe				ab PM: lata, l		_			-		-		Carr	ier Tra	acking	No(s	3):			COC No:	
Client Information Client Contact:	Phone:			E	-Mail:	•						-	-								Page:	
Company:	(805) 764-4031			р	atty.n	nata(@tes	tame	ericain	C.CO	m			_		_					Page Job #:	
Carmen Caceres-Schnell Company: AECOM, Inc. Address:										A	nalys	sis	Req	ues	ted					_		
1220 Avenida Acaso	Due Date Request	ed:			1		Γ														Preservation Cod	M - Hexane
City: Camarillo	TAT Requested (d	ays): 10 Da	iys		100															10	B - NaOH C - Zn Acetate	N - None O - AsNaO2
State, Zīp: CA, 93012 Phone:					THE SECOND				П												D - Nitric Acid E - NaHSO4 F - MeOH	P - Na2O4S Q - Na2SO3 R - Na2S2O3
R05-764-4031 Email:	PO #: 74770 and 747	71			16		orate														G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydra
carmen.caceres-schnell@aecom.com	WO #:				Ž	0,10	Perch		Н			-	- 1							2	I - Ice J - DI Water K - EDTA	U - Acetone V - MCAA W - ph 4-5
Project Name: NERT Surface Water	Project #: 60477365-2015	151B			3		Br, 314.0-Perchlorate													containers	L-EDA	Z - other (specify)
Site: NERT - Downgradient Study Area	SSOW#:				- Normal	300		lorate				1								of con	Other:	
Sample Identification	Sample Date Sample Date Sample Type (C=comp, G=grab) ST-Tissue, A-Ab) Preservation Code: Sample Date Sam																			Total Number	Special Ins	structions/Note:
A 78 CL. The Control of the Control	Sample Date Time G=grab) BT-Tisue, Ar										接		AT A		節	110. 1750	越		200	$\overline{\mathbf{x}}$	bedenther	
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Possible Hazard Identification Non-Hazard Flammable Skin Imitant Po	ison B Unkno	wn 🗀 Re	adiological				-Re	etum	To CI	lient	ee ma		Dis	nos	ed it al By	Sai Lab	mple	s ar	reta XI _A	ine chi\	l ed longer than 1 n ve For	nonth) _ Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II							Ciai	i isti t	JCHOTE	si Qi	Requ	ulrei	ments									
Empty Kit Relinquished by:		Date:	:25	Company	Tir	ne:	Race	ved b	V:						Metho	d of S	Shipm		_			
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Custody Seals Intact: Custody Seal No.: Δ Yes Δ No.												Othe	r Rem	arks:				- 1				The formation

17461 Derian Ave Suite 100 Irvine. CA 92614-5817

Chain of Custody Record



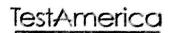
Phone (949) 261-1022 Fax (949) 260-3297 COC No: Carrier Tracking No(s) Client Information C. Steve Howe Mata, Patty Client Contact: Page Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com Company. AECOM, Inc. **Analysis Requested** Address Due Date Requested: Preservation Codes: 1220 Avenida Acaso A - HCL B - NaOH M - Hexane TAT Requested (days): N - None Camarillo 10 Days 0 - AsNa02 C - Zn Acetate State, Zip P - Na204S D - Nitric Acid CA, 93012 Q - Na2SO3 E - NaHSO4 Phone F - MeOH R - Na2S2O3 S-H2504 805-764-4031 G - Ametrior 2540C-TDS, 300-Cl, Br, 314.0-Perchlorate 74770 and 74771 H - Ascorbic Acid T - TSP Dodecatrydrate I-loe U - Acetone carmen.caceres-schnell@aecom.com V - MCAA J - DI Water MS/MSD (Yes or No) Project Name: K-EDTA W-ph 4-5 L-EDA Z - other (specify) **NERT Surface Water** 60477365-2015.151B SSOW# Other: NERT - Downgradient Study Area 5 Matrix Sample Type S-solld, Sample (C=comp. Sample Identification Sample Date Time G=grab) Special instructions/Note: Preservation Code: N LW6.05-20170208- 15 36 - 0.7 15:36 2/8/17 G W X X 02 LW6.7-20170208-0.6 112 2/8/17 15:02 G W X X 40 . LW7.2-20170208- 14 14:40 W NX 2/8/17 G X G W X X G W X X G W X X G W X X W G X X G W X X G W X X X X Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Time: Empty Kit Relinquished by Method of Shipment AECOM Company Received by: 8:15am Company Relinquished by: Received by Date/Time: Company Custody Seal No.: Custody Seals Intact: Cooler Temperature(s) *C and Other Remarks A Yes A No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297				•															
Client Information Client Contact	Sampler: C. Steve Howe				PM:	attv	,					725	Carrie	er Tracki	ng No(s):			COC No:	
Carmen Caceres-Schooll	Phone: (805) 764-4031			200	Aail:	-1-6												Page:	
AECOM, Inc.	(000) 104-4031			ра	tty.m	aia	ytes	stame	ericain									Page Job#:	
Address 1220 Avenida Acaso	Due Date Request	ed:			+		_	_	1	An	alysis	Req	ues	ted			┯┦	Preservation Code	es:
City:																		A - HCL	M - Hexane
Camarillo	TAT Requested (d	ays): 10 Da	vs		7		1											B - NaOH C - Zn Acetate	N - None O - AsNaO2
State, Zip: CA, 93012		10 00	,,,,															D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
Phone. 805-764-4031 Email:	PO#: 74770 and 747	71			1_		rate				1							F - MeOH G - Amchlor H - Ascorbic Acid	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate
carmen.caceres-schnell@aecom.com	WO #:				- S	_	314.0-Perchlorate											I - Ice J - Di Water	U - Acelone V - MCAA
Project Name NERT Surface Water	Project #:				-se	or No)	4.0-Pe									1	ners	K - EDTA L - EDA	W - ph 4-5 Z - other (specify)
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NERT - Downgradient Study Area					Sam			Chlorate			1	1 1					o Jo	O.Her.	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)		Field Filtered	Perform MS/MSD	2540C-TDS, 300-CI,	300.1B_28D - CI									Total Number	Special Ins	structions/Note:
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LWC3.7-20170208-16:20 - 0.5	2/8/17	16:20	G	w	N	2	х	х		100			100		15	7	2		
GLW3.78-20170208-16:47-1.4	2/8/17	16:42	G	w	N	2	X	х							100		2		
LW3.85-20170208-16:05 0.5	2/8/17	16:05	G	w	N	2	Х	х			7.3	7		100	9 2		2		
			G	w	N		X	х		200		7			177				
	F		G	w	N		X	х	7 8	30	7					7			
			G	w	N		x	×		1		7.3							
		la de la constante de la const	G	w	N		X	x						0 9			7.3		
			G	w	N		x	x				31			10 (Se) 12	100	0.00		
			G	w	N	in Saud	x	x				200			- 10 CF 1		- S		
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poisc	on B Unkno	wn Re	adiological			San	nple	Disp	To C	(A fe	e may	be as	sess	ed if s	amples	s are ret	taine	d longer than 1 n	
Deliverable Requested: I, II, III, IV, Other (specify): Level II						Spe	cial	Instru	uction	s/QC	Requir	ement	sposa s:	al By L	aD	A	rchiv	ve For	_ Months
Empty Kit Relinquished by:		Date:	-		Tin	ne:	-						ı	Method o	of Shipme	ent;		772-0	
Relinquished by: Auto 1 1	Date/Time:	7 0		Company AECOM			Rece	ived b	y: OX	11	1	1		-	Date/1	ime:		1-	Company
Refinquished by:	Date/Time:	90		Company			Rece	ived b	y:	0	Cer	0	2		Date/T	ime:	1/0	8:15 m	Company
Reinquished by:	Date/Time:			Company		-	Rece	ived b	ıy;		-				Date/T	ime:		0	Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Coole	er Tem	nperatu	re(s) °C	and Ot	her Rem	narks:						

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																	
Client Information Client Contact	Sampler C. Steve Howe				ь РИ lata, F	ally						Carrier	Tracking	No(s)		COC No	
Client Contact Carmen Caceres-Schnell	Phone:			E-	Mai											Page	
Company	(805) 764-4031			pa	atly.m	ata@t	estar	nerica	inc.co	m						Page Job #	
AECOM, Inc.									Ar	nalysi	s Req	ueste	d				
1220 Avenida Acaso	Due Date Request	ed:			T		Т	T							П	Preservation Co	
City: Camarillo State, Zip:	TAT Requested (d	ays): 10 Da	ıys		7									ı		A - HCL 8 - NaOH C - Zn Acetale	M - Hexana N - None O - AMAO2
CA, 93012 Phone:									11			1	II			D - Natric Acid E - NatriSO4 F - MeOH	P - Na2046 O - Na2603 R - Na26203
805-764-4031 Emait.	PO# 74770 and 747	71			ြ	1					1 1					G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecatnydrate
carmen.caceres-schnell@aecom.com	WO #.				or N	(o)			1				1 1		,	J - Ice J - DI Water	U - Acetone V - MCAA
NERT Surface Water	Project # 60477365-2015	5.151B			Cyes	s or No)					11		11		containers	K - EDTA L - EDA	W - ph 4-5 Z - other (specify)
ରୀତ: NERT - Downgradient Study Area	SSOW#				ample	E à	1 2								o con	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)		Field Filtered S	Perform MS/MSD									Total Number of	Special Ir	estructions/Note;
111 12		$\geq \leq$	Preserv	ation Code:	\square	X			5.0	1	1000		100 mm	231	\sim		The same of the sa
LW3.4-20170208-14:18 - 0.6	2/8/17	14:18	G	W	N	NX	×								2		
			G	w	N	×	×				k i	-					-
			G	w	N	×	X					4	To Service	1986			
			G	w	N	×	X					4					
			G	w	N	×	X						11-02	A Late	19 P		
			G	w	N	×	X										
			G	w	N	×	x				100	50.0					
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			G	w	N	x	x								138		
			G	w	N	x	x		2	- 100 mg		25 17		100			
			G	W	N	x	100							7			
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poiso Deliverable Requested: I, II, III, IV, Other (specify): Level II	n B Unknov	vn 🗀 Ra	diological		- 6		<i>tetur</i>	n To C	lient		be ass Disp ements	oosal P	if samp y Lab	oles are	retaine O _{Archi}	i ed longer than 1 i ve For	month) _ Months
Empty Kit Relinquished by:	ļc	Date:			Time		-					6077 	od of Shi	pment:			
	Date/Timer Z/9/20	17 MR		Company AECOM		Rec	eived	by:	7	1 -	Q			ote/Time:			Company
Relinquished by:	Date/Time:	1 00		Company		Rec	eived I	by:	-	Ls.	0		Da	ste/Time:		9/17	Company
delinquished by	Date/Time:			Company		Rec	eived I	by:					Da	te/Time:	-	3:15am	Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Coo	er Tei	mperatu	ire(s) °C	and Ot	ner Rema	irks					

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297							litera.										,		-	
Client Information Client Contact	Sampler C. Steve Howe			Lab P Mata	PM: la, Pa	atty							Carrier T	racking h	Vo(s)		COC No			
Carmen Caceres-Schnell Company	Phone. (805) 764-4031			E-Ma	nit:		tost	lameri	icainc	c.com							Page: Page			
AECOM, Inc.									-		lysis	Rea	uesto	d			Job #			
Address 1220 Avenida Acaso City	Due Date Requeste				\mathbf{H}	Т	П	\Box	Т	T	195.2			П		П	Preservatio			
Camarillo State, Zip	TAT Requested (da	ays): 10 Da	ays		11				1					11			A - HCL B - NaOH C - Zn Acetar	1	M - Hexane N - None O - AsNaO2	
CA, 93012 Phone.																	D - Nitric Acid E - NaHSO4	d f	P - Na2045 Q - Na2503	3
805-764-4031 Email	PO#. 74770 and 7477	71			2		orate										F - MeOH G - Amchlor H - Ascorbic		R • Na2S2O S • H2SO4 T • TSP Dod	03 decahydrate
carmen.caceres-schnell@aecom.com Project Name	WO#				or No	Q Q	Perchi									2	I - Ice J - DI Water	,	U - Aceton e V - MCAA	rice.ry.
NERT Surface Water Site:	Project #. 60477365-2015	5.151B			e (Yes	es or No)	314.0-									container	K - EDTA L - EDA		W - ph 4-5 Z - other (sp	secify)
NERT - Downgradient Study Area	SSOW#				Sample	SD (Ye	CI, Br,	lorate								of cont				
Sample Identification	Sample Date	Sample Time		Matrix (W-water, 3-solld, 0-wasteroll, BT-Tissue, A-Ahr)	Field Filtered S			300.1B_28D - Chlorate		2 100						Total Number o		cial Inst	tructions	:/Note:
LW4.1-20170208-16 33 - 0.4	2/8/17	16:33	Preserva	ation Code:	X	_	_	L X	1	2	0.13	200	45			X	CA THE SHIP	A STATE OF STATE OF	A A STATE OF THE S	- 新田市小
GLW4.4-20170208- 6 21 - 1.3	2/8/17	16:21	G	1965	7 7			X	+			(* 14 c	-		4/2	2				
GLW4.85-20170208-16:00 - 0.8	2/8/17	16:00			N		-	×	+	-	+	3 1	+	1 4 5		2				
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			G	200	N	-		x	-		+		04	1 - 24	1 3 6 7	7 8 7	PRIOR	1712	EAN	ALYSIS
			G	w	N	150		x	1	-			to be	7 7	1		04:3	,00°-C	1, Br	; AND
			G	w	N	1	x	x						1000			1000	14.0	- YERC	CHLORATI
			G	w	N	9	х	x		3	9 / -	2 7 7		1 1 2		1 13	(rus)	1C CL	EAR	BOTTLE)
			G	W	N	1	x	x				5.7	100	3 7 7		PP.		- 757		
			G	w	N		х	X		3.2	1 100			1 179						
			G	w	N	175		x	ers i		107					3 2	ž.			
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poiso Deliverable Requested: I, II, III, IV, Other (specify): Level II	n B Unkno	wn R	adiological				VE	ztuiii i	10 CII	ient	Require	—Dis	lezons	d if san By Lab	nples ar	re retain	ed longer th	nan 1 m	onth) Months	
Empty Kit Relinquished by:		Date:			Time	Major.				_			Ме	thod of S	hipment:			-		
		2017 0	18:15	Company AECOM		R	eceiv	ved by:	9	7	10		1		Date/Time	2/	2/12	ľ	Company	
Relinquished by: *	Date/Time:		C	Company		R	eceiv	ived by:	6	-		7	-	<u> </u>	Date/Time	2/-	7/17 3:15an		Company	
	Date/Time:		C	Company		R	eceiv	ived by:	:						Date/Time		11200		Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						c	ooler	r Temp	peratur	e(s) °C	and Oth	ver Ren	narks;			-				

17461 Denan Ave Suite 100 tryine. CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 COC No Carrier Tracking No(s): C Steve Howe Mata, Patty Client Information E-Mail hone Client Contact Page patty.mata@testamericainc.com (805) 764-4031 Carmen Caceres-Schnell Company **Analysis Requested** AECOM, Inc. Preservation Codes: Address Due Date Requested: A - HCL B - NaOH M - Hexane 1220 Avenida Acaso N - None TAT Requested (days): O - AsNaO2 C - Zn Acetate Camarillo 10 Days P - Na204S D - Nitric Acid Q - Na2SO3 E - NaHSO4 State, Zip R - Na2S2O3 CA, 93012 F - MeOH 5 - H2SO4 G - Amchlor Phone T - TSP Dodecahydrate 2540C-TDS, 300-CI, Br, 314.0-Perchlorate H - Ascorbic Acid 74770 and 74771 805-764-4031 IJ - Acetone 1 - Ice V - MCAA J - DI Water W - ph 4-5 K-EDTA carmen.caceres-schnell@aecom.com Z - other (specify) L - EDA Project Name NERT Surface Water 60477365-2015 151B NERT - Downgradient Study Area Matrix Sample (W-water, Type S-solid, (C=comp, Sample Special Instructions/Note: Sample Date Time G=grab) | BT-Tissue, A-Alt Sample Identification N Preservation Code: GLW4.4-20170208- 13 47 1.2 X X W 2/8/17 G 13:47 X X G W X X G W X X G W W X X G X X G W X X G W X X W G X X G W X X W G W X X Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Imitant Poison B Unknown Radiological Return To Client Disposal By Lab Archive For Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Method of Shipment: Time: Date: Empty Kit Relinquished by: Company Relinquished by: AECOM Company Received by Relinquished by Date/Time: Received by: Date/Time: lelinquished by Cooler Temperature(s) °C and Other Remarks: Custody Seal No .: Custody Seals Intact: A Yes A No

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



Client Information	Sampler C. Steve Howe												Can	rier Trac	king No	o(s):		Ì	COC No:		
Client Information Client Contact.	Phone:	- 1		E	-Mail:	Patty	_					-	1						Page:		
Carmen Caceres-Schnell Company	(805) 764-4031			р	atty.n	nata@	@tes	tame	ricain	c.com	1		_	-			-	-	Page Job#:		
AECOM, Inc.					- 1					Ana	alysi	s Re	que	sted							
Address. 1220 Avenida Acaso	Due Date Requeste	ed:			寸			Г			T	T			\neg				Preservation Co	des: M - Hexane	
City Camarillo State, Zip CA, 93012	TAT Requested (da	ys): 10 Da	ys			*2!													A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH	N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3	
Phone 805-764-4031	PO #: 74770 and 7477	'1			٦	-	orate										$ \ $		G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecah	hydrate
Email carmen.caceres-schnell@aecom.com	WO #:				Ž	2	erch								- 1				I - Ice J - DI Water	U - Acetone V - MCAA	
Project Name NERT Surface Water Site:	Project #: 60477365-2015	.151B			e (Yes	es or No)	, 314.0-P											containers	K - EDTA L - EDA Other:	W - ph 4-5 Z - other (specify	0
NERT - Downgradient Study Area	SSOW#:				ame	βÖ	CI, B	lorate							-			9 0	Other.		
		Sample	Sample Type (C=comp,	Matrix (W=water, S=solid, O=waste/oil	Filte	Perform MS/MS	2540C-TDS, 300-CI, Br, 314.0-Perchlorate	300.1B_28D - Chlorate										Total Number			
Sample Identification	Sample Date	Time	G=grab)		-/-	٤					-	50 No.			_	100		빍	Special In	structions/Not	te:
13 05		_	- 14	ation Code	_	Ϋ́	N	L	2 10	+	1 18	- 4	1,000		6 6	12.5	-	4	A SCHOOL MORNING	STATE BOOK TO	
LW4.95-20170208- <u>13</u> : 05 - 1.2	2/8/17	13:05	G	W	N	14	Х	X		J.			cu i	- 1			. 7	2			
			G	W	N		X	х								Tarra T	£ 6				-54 1
			G	W	N		X	X	3	100				2+ 11		A 1000		(0)			
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			G	W	N		X	×		4								100			
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			G	w	N		X	X								200		18.00			
			G	W	N		X	X		8				A.			4771 01 2	W			
Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poisc Deliverable Requested: I, II, III, IV, Other (specify): Level II	on B Unknow	wn 🖵 Re	adiological				Re	eturn	To Cli	ent	Require	Di	sposa	ed if s al By L	ab.	les are	retai XI _{Arc}	hive	d longer than 1 i	month) _ Months	
Empty Kit Relinquished by:		Date:			Tir	me:		-					-	Method	of Ship	ment		_			
Relinquished by / / / / /	Date/Time:/_		1.15	Company AECOM			Recei	ved by	70	201	en	2		P (788		e/Time:	190	1	2/2	Company	-
Relinquished by	2/01/201 Date/Time:							ved by	:	C	en	0	3	an trac	Date	e/Time:	2		1/17	Company	
Relinquished by:	Date/Time:	· ·		Company	_		Recei	ved by	r.						Date	e/Time:		8	:15am	Company	
						-	Coole	r Tem	neraliza	Ve) °C	and Oth	w De-	ander:								
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No										(3) 0	and Off	ren ren	HEI KS.								

17461 Derian Ave Suite 100

Irvine, CA 92614-5817 Phone (949) 261-1022 Fax (949) 260-3297



Client Information	Sampler: C. Steve Howe				PM: ta, Pat	tv						Car	ner Tra	cking No	(s)	-1	COC No:	
Client Contact Carmen Caceres-Schnell	Phone (805) 764-4031			E-M	lait ty.mat	, a@te	etam	oricai	nc co	m							Page: Page	4
Company AECOM, Inc.				pat	ly.mai	عاري اد	Stati	iciicai			eie R	eque	sted				Job #:	
Address 1220 Avenida Acaso	Due Date Requeste	ed:			$\dagger \tau$	Т	Т	$\overline{}$		lalys	13 10	T				T	Preservation C	odes:
Camarillo State, Zip CA, 93012	TAT Requested (da	iys): 10 Da	ys		11												A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3
Phone 805-764-4031	PO#: 74770 and 7477	71				ofer											F - MeOH G - Amchlor H - Ascorbic Acid	R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate
Email: carmen.caceres-schnell@aecom.com	WO#				or N	Perchic										2	I - Ice	U - Acetone V - MCAA W - ph 4-5
Project Name NERT Surface Water Site.	Project #: 60477365-2015	.151B			tered Sample (Yes or	314.0							Ш			otalne	L - EDA	Z - other (specify)
NERT - Downgradient Study Area	SSOW#				Samp	C B	hlorate									00 00	Other:	
		Sample	Sample Type (C=comp,	Matrix (w-water, 5=sold, 0=waste/oll,	Field Filtered	2540C-TDS, 300-Cl. Br. 314.0-Perchlorate	300.1B_28D - Chlorate									Total Number of containers		
Sample Identification	Sample Date	Time		BT=Tissue, A=Al	朱	N N	_	P 2.5	ga.	719	77	-(%)	200	-		×	Special	Instructions/Note:
LW5.9-20170208- 15 : 41 - 0.6	2/8/17	15:41	G	w	NI	1										2		
LWC6.1_1-20170208-14 : 43 - 0.7	2/8/17	14:43	G	w	N) x	×						100			2		
LWC6.1_2-20170208-14 : 53 - 0.7	2/8/17	14:53	G	w	N) x	×									Z		
GLWC6.1_3-20170208-15 : 00 - 1.0	2/8/17	15:00	G	w	ИГ	X	X									2		
GLWC6.1_4-20170208-16 : 07 - 1.0	2/8/17	16:07	G	w	И Г) ×	x		6				1		- 1 N	2		
			G	w	N	×	X									100		
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			G G	w	N	×	-		2 5				6-10	i.	26.245 S			
Possible Hazard Identification		0.000		- "	1.43	100	F 11/0	100	I (A	fee m	ay be	asses	sed it	samo	les are	retain	ed longer than	1 month)
Non-Hazard Flammable Skin Irritant Poiss Deliverable Requested: I, II, III, IV, Other (specify): Level II	on B Unkno	own 🖵	adiological		Sample Disposal (A fee may b Return To Client Special Instructions/QC Requirer						100	Dispo	sal By	Lab	С	Arch	ive For	Months
2000 (200 - 100 C 1 - 100 C 1 - 100 C 100		Date:			Time:						•		Metho	d of Ship	ment-			
Empty Kit Relinquished by: Relinquished by:	2/9/201		15	Company	1		ceived	by C	77	.1	2	0			te/Time:	_	16113	Company
Reinquished by Reinquished by	2/9/001 Date/Time:	1 00	13	AECOM Company	-	Re	ceived	l by:	14		-		1	Da	te/Time	<i>2/</i>	-1/14	Company
Relinquished by:	Date/Time:			Company		Re	ceived	l by:	-		-			Da	te/Time:		1:12	Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No								empera	Aure(s)	°C and	d Other	Remark	s:					

17461 Derian Ave Suite 100 Irvine. CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Carrier Tracking No(s): Sampler Mata, Patty C. Steve Howe Client Information Page E-Mail: Client Contact Page patty.mata@testamericainc.com (805) 764-4031 Carmen Caceres-Schnell Job# **Analysis Requested** Company AECOM, Inc. Preservation Codes: Due Date Requested: Address M - Hexane 1220 Avenida Acaso B - NaOH N - None TAT Requested (days): O - AsNaO2 C - Zn Acetate 10 Days P - Na2O4S Camarillo D - Nitric Acid E - NaHSO4 Q - Na2SO3 State, Zip. R - Na2S2O3 F - MeOH CA, 93012 S - H2SO4 G - Amchlor T - TSP Dodecahydrate Phone: 2540C-TDS, 300-Cl, Br, 314.0-Perchlorate H - Ascorbic Acid 74770 and 74771 U - Acetone 805-764-4031 I - Ice V - MCAA J - DI Water W - ph 4-5 carmen.caceres-schnell@aecom.com K - EDTA Z - other (specify) L - EDA Project # Project Name 60477365-2015.151B **NERT Surface Water** Other: 5 NERT - Downgradient Study Area Total Number Matrix Sample (W-water, Type S=solld, Sample (C=comp, Special Instructions/Note: Sample Date Sample Identification Time G=grab) BT=Tissue, A=Air) Preservation Code: 2 X GLW4 9-20170208-35 2/8/17 16:35 G 2 N X W X 35 - 1.4 FD 2/8/17 16:35 G GLW4.9-20170208- 6 2 N X X W 20 - 1.3 2/8/17 16:20 G LW4.95-20170208- 16 N X X 15:45 G W 45 - 1.2 2/8/17 LW5.3-20170208-W X X 15:50 G 50 - 2.4 2/8/17 LW5.3-20170208- 15 X X W G X X W G X X W G W X X G X X G W W G Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Disposal By Lab Possible Hazard Identification Archive For Return To Client Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Method of Shipment: Time: Empty Kit Relinquished by: Company Company 2/9/17 Relinquished by: **AECOM** Received by: Date/Time: 8:15 an Relinquished by: Date/Time: Received by: Company Date/Time: Relinquished by: Cooler Temperature(s) °C and Other Remarks: Custody Seals Intact: Custody Seal No .: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



Hone (949) 261-1022 Fax (949) 260-3297	9) 260-3297 Sampler. Lab PM:							-		_			C	arrier	Track	ing No	(s):			0	COC No:		
Client Information Client Contact:	C. Steve Howe			0,000	ita, P	atty							4							ī	Page:		
Carmen Casses Cabani	Phone: (805) 764-4031				lail: ttv.m:	ata@	Dtes	tame	ricainc	.con	n									1	Page		
Company: AECOM, Inc.	(000) 704 4001				Ť						alys	ie F	Pari	iest	ed					ŀ	Job #:	7,123	
Address	Due Date Requeste	d:			┿				П	$\frac{2}{1}$	alys	1		1	T	T	T		T	1	Preservation Code	s:	
1220 Avenida Acaso City					┙					-					- 1			1	-			M - Hexane N - None	
Camarillo	TAT Requested (da	ys): 10 Da	vs			Ι.						- 1			- 1				1	- 1	C - Zn Acetate	O - AsNaO2 P - Na2O4S	
State, Zip: CA, 93012			,-		П		1			1		- 1									E - NaHSO4	Q - Na2SO3	
Phone	PO#:				-	П									- 1						G - Amchior	R - Na2S2O3 S - H2SO4	l desta
805-764-4031 Email	74770 and 7477	1 1			ୢ୷		lorat												1		I - Ice	T - TSP Dodec U - Acetone	canyorate
carmen.caceres-schnell@aecom.com	WO #:				o N	(ON	er t			-	- 1			-	1						J - DI Water K - FDTA	V - MCAA W - ph 4-5	
Project Name:	Project #:				ട	2	14.0-1					-									L - EDA	Z - other (spec	cify)
NERT Surface Water Site	60477365-2015 SSOW#	.151B			를	ζes	Br, 3	ate							-					00	Other:		
NERT - Downgradient Study Area					Sampl	4SD	ο̈́	hlora												5			
			Sample	Matrix	Filtered	MS/	2540C-TDS, 300-Cl, Br, 314.0-Perchlorate	300.1B_28D - Chlorate		-									1				
		Commis	Туре	(W=water, S=solid,	E	Perform	5	IB_2			0.0								1	Z			
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O=waste/oil, BT=Tissue, A=A	Fied (*	Perf	2540	300.											1	<u> </u>	Special Ins	tructions/N	lote:
	><	$\geq \leq$	Preserva	tion Code:	X	\boxtimes	N	L		1	1	_		_	1	1	_	_	-	¥	Philipped and the second	ACHTE PERSON	
LW3 4-20170209- 13 : 33 - 0.5	2/9/17	13:33	G	W	N	N	X	X						1	\perp		\perp		2	_			
LW3.4-20170209- 13 33 - 0.5 FD	2/9/17	13:33	G	W	N	4	X	X		\perp				\perp					1	2			
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			G	W	N		X	X															
			G	W	N		X	- A. L.															
Possible Hazard Identification		[act]				Sai	mple	Dis	posal	(Af	ee m	ay b	e ass	sess	ed if	sam	ples	are i	retai	ine	d longer than 1 r		
Skin Irritant Poiso	on B Unkno	wn R	adiological		_		Return To Client Disposal By Lab Archi								chiv	re For	_ Months						
Deliverable Requested I, II, III, IV, Other (specify): Level II					-						77.04	unoi											
Empty Kit Relinquished by:		Date:		Company	Ti	ime:		eived t	nur .	71	11			ľ	Aethod								
Relinquished by: Olf Out		1017 C	853	AECOM						(1)	K								7 -	10	1.17 8:55	Company	
Relinquished by:	Date/Time:		Company					eived t								C	ate/Ti	me:				Company	
Relinquished by	Date/Time:			Company			Rece	eived l	by:							C	ate/Ti	me:				Company	
Custody Seals Intact: Custody Seal No.:							Coo	ler Ter	mperatu	re(s)	°C and	Othe	r Rem	arks:									
Δ Yes Δ No							_					-	_					_					

17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 COC No. Carrier Tracking No(s): Mata, Patty C. Steve Howe Client Information Page Client Contact Page patty.mata@testamericainc.com (805) 764-4031 Carmen Caceres-Schnell # doL Company **Analysis Requested** AECOM, Inc. Preservation Codes: Address: Due Date Requested: M - Hexane 1220 Avenida Acaso N - None B - NnOH TAT Requested (days): O - AsNaO2 C - Zn Acetato Camarillo 10 Days P - Nn2O45 D - Nitric Acid State, Zip Q - Na2SO3 E - NaHSO4 R - Na2S2O3 CA, 93012 F - MeOH S - H2SO4 Phone G - Amchlor T - TSP Dodecahydrate H - Ascorbic Acid 805-764-4031 74770 and 74771 2540C-TDS, 300-C1, Br, 314.0-Perchlor U - Acetone 1 - Ice V-MCAA J - DI Water Other: carmen.caceres-schnell@aecom.com W - ph 4-5 Z - other (specify) Project Name: **NERT Surface Water** 60477365-2015.151B 70 NERT - Downgradient Study Area **Total Number** Matrix Sample (W-water, Type S-solld, Sample (C=comp, Special Instructions/Note: Sample Date Time G=grab) Sample Identification Preservation Code: N 00 W 1 X X 12 -0.5 2/9/17 G LW3.4-20170209-00:51 58 10:58 G W 11 11 X LW3.75-20170209- 10 0.5 2/9/17 NH 2 48 - 0.4 10:48 W X X LWC3.7-20170209- LO 2/9/17 G X 4N G W X 2 28 - 0.3 2/9/17 11:28 GLW3.78-20170209- 11 2/9/17 10:30 G W NN X X 2 30 - 0.5 LW3.85-20170209-G W X X G W X X X G W X G W X X G W X X G W X Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For Months Deliverable Requested: I, II, III, IV, Other (specify): Level II Special Instructions/QC Requirements: Time: Empty Kit Relinquished by: Method of Shipment: Company relinquished by: 2 10-17 8:50 AECOM Company Received by Relinquished by: Company Date/Time: Company Received by: Date/Time: Relinquished by: Custody Seal No: Custody Seals Intact: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Carrier Tracking No(s): Client Information Mata, Patty C. Steve Howe Client Contact Page Phone E-Mail: Carmen Caceres-Schnell Page patty.mata@testamericainc.com (805) 764-4031 Company AECOM, Inc. **Analysis Requested** Address. Preservation Codes: Due Date Requested: 1220 Avenida Acaso M - Hexane A-HCL N - None B - NaOH TAT Requested (days): 0 - AsNaO2 Camanilo C - Zn Acetate 10 Days P - Na2O4S D - Nitric Acid State, Zip 0 - Na2SO3 F - NaHSO4 CA, 93012 R - Na2S2O3 F - MeOH Phone S-H2SO4 G - Amchior T - TSP Dodecahydrate 2640C-TDS, 300-Cl, Br, 314.0-Perchlorate 805-764-4031 H - Ascorbic Acid 74770 and 74771 U - Acetone 1-ice V-MCAA J - Di Water carmen.caceres-schnell@aecom.com containors W-ph 4-5 K-EDTA Project Name Z - other (specify) L-EDA Project # NERT Surface Water 60477365-2015.151B Other: NERT - Downgradient Study Area Total Number of Matrix Sample Type S=solid, Sample (C=comp, Special Instructions/Note: Sample Identification Sample Date Time G=grab) ST-Tissee, A-A Preservation Code: NX X W LW3.75-20170209- 16 11 -0.8 2/9/17 16:11 NNX 2 W х LWC3 7-20170209- 16 00 -0.6 2/9/17 16:00 W NH X 30_-1.4 2/9/17 W:30 X GLW3.78-20170209- 16 2 45 W NN X 0.6 15:45 G X 2/9/17 W3.85-20170209-NNX G W X 55 2/9/17 16:55 - 0.6 W3.4-20170209-X G W X W X X G x X G W х W G X G W X X W Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Disposal By Lab Return To Client Archive For Months Deliverable Requested: I, II, III, IV, Other (specify). Level II Special Instructions/QC Requirements: Method of Shipment Date: Time: Empty Kit Relinquished by: 2 · 10 · 17 Received by Percusted by AECOM Received by Date/Time: Company Seiranted by Company Received by: Date/Time: Company peir quisted by Custody Seal No. Cooler Temperature(s) *C and Other Remarks: Custody Seals Intact A YES A NO

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



Clicate (949) 261-1022 Fax (949) 260-3297	Sampler:			Lab P						_		_	Car	ner Tra	cking N	lo(s):			COC No:	
Client Information Client Contact	C. Steve Howe			Mata E-Mai		tty							4						Page:	
Carmen Caceres-Schnell	(805) 764-4031					a@t	esta	merio	cainc.	com									Page	
Company AECOM, Inc.					Г					Ana	ılysis	s Re	eque	stec	1				Job #:	
Address 1220 Avenida Acaso	Due Date Requested	1:			T	T	Т	Т		T	Ť	T	Ť	T				T	Preservation Co	odes: M - Hexane
City Camarillo	TAT Requested (day	/s):			ł١	-	-												A - HCL B - NaOH	N - None
State, Zip		10 Day	rs .		П	-1	- 1			1									C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
CA, 93012 Phone					П		-			1									E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
805-764-4031	PO #: 74770 and 7477	1			11		rate			1									G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
Email	WO#:				12														I - Ice J - DI Water	U - Acetone V - MCAA
carmen.caceres-schnell@aecom.com	Drainet #				ss or	§	0-Per		- 1	-								1	K-EDTA	W - ph 4-5 Z - other (specify)
NERT Surface Water	Project #: 60477365-2015.	.151B			3	es or	314.			-								nietano	L - EDA	2 - Other (specify
Site NERT - Downgradient Study Area	SSOW#:					SD (Y	2540C-TDS, 300-Cl, Br, 314.0-Perchlorate	lorate										1 7	5	
			Sample	Matrix	pare	MS/M	3,300	300.1B_28D - Chlorate										1	Special	
		/	Туре	(W-water, S-solid,	E	Perform	ST.	B_28										1		
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O-wastefoll,	Fiel (*	Perfe	25400	300.1										1	Special	Instructions/Note:
		><	Preservat		X	\boxtimes	N	L	3		1	2 2		1		1				and applicable to
LW6.05-20170209-15 23 - 0.7	2/9/17	15:23	G	W	N	7	X	x										2	2	
LW6.7-20170209-15 04 0.6	2/9/17	15:04	G	w	N	12	X	x										:	2	
LW7 2-20170209- 14 . 41 - 0.9	2/9/17	14:41	G	w	N	7	X	х										-	2	
LW7.2-20170209- 14 91 - 0.9 FD	2/9/17	14:41	G	W	N	4	X	X											2	
			G	W	N		X	X												
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			G	W	N		х	×			4									
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			G	W	N	0	x	0.000												
Possible Hazard Identification						Sa	mpl	e Dis	posa	I (A	fee n	nay L	be as	sess	ed if s	amp	les ar	ret	ained longer tha	n 1 month)
Skin Irritant Poison B Unknown Additional							- J	Retur	n To	Clier	nt C D-		Di.	sposa	l By L	ab	L	XI _A	rchive For	Months
Deliverable Requested: I, II, III, IV, Other (specify): Level II								ii inst	ructio	ns/C	lC Re	quire	emen	2000						
Empty Kit Relinquished by:	Date:				Ţ	ime:	0.7	ook :s -	b.A	,				•	Method					
Relinquished by All Lite	Date/Time: 2/10/2	017 (0855	AECOM				ceived	(Da	te/Time	16	17 8:55	Company
Reinquished by	Date/Time:			Company			Re	ceived	by:							Da	te/Time			Company
Relinquished by	Date/Time:			Company			Re	ceived	i by:							Da	te/Time	:		Company
Custody Seals Intact Custody Seal No.:					_	_	Co	ooler T	empera	ature(s) °C a	nd Ott	her Re	marks:				_		
A Yes A No													_	_						

17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 COC No: Carrier Tracking No(s) Client Information Mata, Patty C. Steve Howe Client Contact Phone: Page Carmen Caceres-Schnell patty.mata@testamericainc.com (805) 764-4031 AECOM, Inc. **Analysis Requested** Preservation Codes: Address Due Date Requested: 1220 Avenida Acaso M - Hexane N - None B - NaOH TAT Requested (days): O - AsNaO2 Camarillo C - Zn Acetate 10 Days P - Na2O4S D - Nitric Acid State, Zip Q - Na2SO3 E - NaHSO4 CA, 93012 R - Na2S2O3 F - MeOH S - H2SO4 Phone G - Amchlor T - TSP Dodecahydrate 805-764-4031 2540C-TDS, 300-CI, Br, 314.0-Perchlorate H - Ascorbic Acid 74770 and 74771 U - Acetone 1 - Ice V - MCAA J - DI Water carmen.caceres-schnell@aecom.com Field Filtered Sample (Yes or Perform MS/MSD (Yes or No) W - ph 4-5 K-EDTA Z - other (specify) Project Name L-EDA NERT Surface Water 60477365-2015.151B Other: NERT - Downgradient Study Area Total Number of Matrix Sample (W-water, Type S=solld. Sample (C=comp, Special Instructions/Note: Sample Identification Time G=grab) BT-Tissue, A-Al Sample Date Preservation Code: N 53 W NN X X GLW4.9-20170209- 15 -1.4 2/9/17 15:53 NN 2 X 40 W X LW4.95-20170209- 15 2/9/17 15:40 G - 1.2 2 X LW5.3-20170209- 15 15:15 G W X 2/9/17 - 1.1 15:18 G W X X 2 LW5.3-20170209-__IS 18 2/9/17 - 2.2 X X W G X G W X G W X X X G W X G W X X W X G X G W X Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown
Deliverable Requested: I, II, III, IV, Other (specify): Level II Return To Client Archive For Disposal By Lab Months Special Instructions/QC Requirements: Time: Method of Shipment: Date: Empty Kit Relinquished by: Received by: Relinquished by AECOM Company Received by: Relinquished by Received by: Date/Time: Date/Time: Retinquished by Cooler Temperature(s) °C and Other Remarks Custody Seal No.: Custody Seals Intact:

I COLMINELIUA II VIII C

17461 Derian Ave Suite 100 Irvine. CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Sampler COC No Carrier Tracking No(s): Client Information C. Steve Howe Mata, Patty Client Contact Phone E-Mail: Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com Company AECOM, Inc. **Analysis Requested** Address Preservation Codes: Due Date Requested: 1220 Avenida Acaso M - Hexane A - HCL City: TAT Requested (days): N - None B - NaOH Camarillo O - AsNaO2 10 Days C - Zn Acetate State, Zip: P - Na2O4S D - Nitric Acid CA, 93012 Q - Na2SO3 E - NaHSO4 R - Na2S2O3 F - MeOH Phone: G - Amchior S - H2SO4 805-764-4031 2540C-TDS, 300-Cl, Br, 314.0-Perchlorate T - TSP Dodecahydrate 74770 and 74771 H - Ascorbic Acid U - Acetone WO # 1 - Ice V - MCAA carmen.caceres-schnell@aecom.com J - DI Water W - ph 4-5 K-EDTA Project Name: Project #: Z - other (specify) NERT Surface Water L-EDA 60477365-2015.151B Perform MS/MSD (Yes Other: NERT - Downgradient Study Area 7 Total Number Matrix Sample Type S-solid. Sample (C=comp Special Instructions/Note: Sample Identification Sample Date Time G=grab) BT=Tissue, A=Al Preservation Code: LW4.95-20170209- 12 30 2 -1.1 W X 2/9/17 12:30 G 30 1.1 MS LW4.95-20170209- 17 2/9/17 12:30 G W X X 30 LW4.95-20170209- 12 1.1 MSD 2 G W X 2/9/17 14 12:30 X N G W X X X G W X G W x X G W X X G W X X G X W X G W X X W Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Return To Client Disposal By Lab Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Time: Date: Method of Shipment Empty Kit Relinquished by 2/10/2017 0855 Company AECOM Company Relinquished by Date/Time: Received by: Relinquished by: Custody Seals Intact: Custody Seal No .: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine. CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Sampler: COC No: Carrier Tracking No(s): Client Information C. Steve Howe Mata, Patty Client Contact E-Mail: Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com Job #: AECOM, Inc. **Analysis Requested** Address Preservation Codes: Due Date Requested: 1220 Avenida Acaso M - Hexane A - HCL TAT Requested (days): N - None B - NaOH Camarillo O - AsNaO2 10 Days C - Zn Acetate State, Zip. P - Na2O4S D - Nitric Acid CA, 93012 Q - Na2SO3 E - NaHSO4 R - Na2S2O3 Phone F - MeOH S - H2SO4 G - Amchlor 805-764-4031 2540C-TDS, 300-Cl, Br, 314.0-Perchlorate 74770 and 74771 T - TSP Dodecahydrate H - Ascorbic Acid U - Acetone 1 - Ice carmen.caceres-schnell@aecom.com V-MCAA J - DI Water Project Name. K - EDTA W - ph 4-5 Z - other (specify) NERT Surface Water L-EDA 60477365-2015.151B NERT - Downgradient Study Area Total Number of Matrix Sample (W-water, Type S-solid, O-waste/oil, Sample (C=Comp. Sample Identification Sample Date Time G=grab) Special Instructions/Note: 81-Tissue, A-Al Preservation Code: LW5.9-20170209- 15 27 -0.7 15:27 2/9/17 X G W 2 X 2 LWC6.1_1-20170209- 14 39 -).1 14:39 2 2/9/17 G W X X - I. I FD LWC6.1_1-20170209-_ \U 14:39 2 2/9/17 G W X N X LWC6.1_2-20170209- 14 -0.8 X 2/9/17 G W 14:52 GLWC6.1_3-20170209-_14 G W NN X - 1.(2/9/17 14:57 X 2 51 GLWC6.1_4-20170209-__IS -1.6 2/9/17 15:51 G W X X G W X X G W X X G X W X G W X X W G Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Disposal By Lab Return To Client Archive For Months Deliverable Requested: I, II, III, IV, Other (specify): Level II Special Instructions/QC Requirements: Time: Empty Kit Relinquished by: Received Martz Date/Time: 2/10/2017 0855 Company Relinquished by Company **AECOM** Company Received by Relinquished by: Date/Time: Company Received by: Date/Time: Relinquished by Company Custody Seal No.: Custody Seals Intact: Cooler Temperature(s) °C and Other Remarks Δ Yes Δ No

17461 Denan Ave Suite 100 Irvine, CA 92614-5817



Phone (949) 261-1022 Fax (949) 260-3297																		
Client Information	Sampler: C. Steve Howe				PM: ta, Pa	tty						Carrie	er Tracki	ng No(s)			COC No:	
Client Information Client Contact Carmen Caceres-Schnell Company	Phone (805) 764-4031			E-M	lait	•	etam	ericair	oc con	n		1					Page: Page	
Company AECOM, Inc.				Ipo	T T		Jan	Cricali		alysi	ic Do		tod				Job#:	
Address 1220 Avenida Acaso	Due Date Requeste	d;	-		╁	$\overline{}$	$\overline{}$	Т		alysi	5 Ke	ques	Teu		П	Т	Preservation Cod	es:
City	TAT Requested (da	vs):			41												A - HCL B - NaOH	M - Hexane N - None
City Camanilio State, Zip	, , , , , ,	10 Da	ys														C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S
CA, 93012 Phone					П												E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
805-764-4031 Email	PO #: 74770 and 7477	1			7_1	9											G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate
carmen.caceres-schnell@aecom.com	WO #.				2	ر ا يَوْ											I - Ice J - DI Water	U - Acetone V - MCAA
Project Name. NERT Surface Water	Project #				Sample (Yes or	(Yes or No) Br. 314.0.Perchlorate										liners		W - ph 4-5 Z - other (specify)
Site:	60477365-2015 SSOW#	.1518			- lale	Se L	e e									containe	Other:	
NERT - Downgradient Study Area	-				San	S/MSD	Chlorate		-							0		
			Sample Type	Matrix (wewster,	lltere											Total Number		
Sample Identification	Samuela Data	Sample	(C=Comp,	S=solid, O=waste/oil,	Fleid F	2540C-TDS	300.1B_28D									tal N		
comple activities on	Sample Date	Time		BT=Tissue, A=AI	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	N N	_	\vdash	-	+	-	Н	-			×	Special In:	structions/Note:
LW5.9-20170209-10 :01 -0,4	2/9/17	10:01	G	w	N	J×	_			\top	\top			\top		2		NO SOCIAL DESIGNATION OF THE PROPERTY OF THE P
LWC5.1_1-20170209- <u>09</u> : <u>10</u> -1,0	2/9/17	09:10	G	w	NO	-	×						\top	\Box	1	2		
LWC6.1_2-20170209-09:25 - 0.6	2/9/17	09:25	G	w	N	JX	×									2		
GLWC6.1_3-20170209- <u>69</u> :32 - 1.2	2/9/17	09:32	G	w	N) ×	×						80			2		
GLWC6.1_4-20170209100 : 33 -1.3	2/9/17	10:33	G	w	N	J×	×									2		
GLWC6.1_4-20170209[0 : 33 _ 1.3 _MS	2/9/17	10:33	G	W	N	1 ×	×									2		
GLWC6.1_4-2017020910 : 33 - 1.3 MSD	2/9/17	10:33	G	w	N	1 ×	×									2		
			G	W	N	×	×											•
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Pois	on B Dunko	,,,, D	adiological		5	Samp	le Dis	sposal n To ((Af	ee ma	y be a	ssess	sed if s	sample	s are re	taine	ed longer than 1 i	month)
Deliverable Requested: I, II, III, IV, Other (specify): Level II	OI D OIKIN	, A	autological		-	Specia	al Ins	ruction	ns/QC	Requ	ireme	<i>ispos</i> nts:	al By L	ab		Archi	ive For	_ Months
Empty Kit Relinquished by:		Date:			Tim								Method	of Shipm	ent	_		
Relinquished by Auditur	Date/Time 2/W/2	0.7 A	855	Company		Re	ceived	by:	_		2			Date	Time:	(Company
Relinquished by	Date/Time:	017 9	027	AECOM Company		Re	ceived	by:	0	20	2			Date/	[10]	/ 7	8:55a	_
Relinguished by	Date/Time:							•										Company
				Company		Ke	eceived	Dy:						Date/	I ime			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Co	oler T	empera	ture(s)	°C and	Other R	emarks						
							-			-						_		

17461 Derian Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 Sampler COC No: Carrier Tracking No(s) **Client Information** C. Steve Howe Mata, Patty Client Contact: Page: E-Mail: Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com AECOM, Inc. Analysis Requested Address Preservation Codes: Due Date Requested: 1220 Avenida Acaso A - HCL TAT Requested (days): N - None B - NaOH Camarillo O - AsNaO2 C - Zn Acetate 10 Days State, Zip: P - Na204S D - Nitric Acid O - Na2SO3 CA, 93012 E - NaHSO4 R - Na2S2O3 F - MeOH S - H2SO4 G - Amchlor 805-764-4031 2540C-TDS, 300-CI, Br, 314.0-Perchlorate T - TSP Dodecahydrate 74770 and 74771 H - Ascorbic Acid Email U - Acetone 1 - Ice carmen.caceres-schnell@aecom.com J - DI Water V-MCAA W-ph 4-5 K-EDTA Project #: Z - other (specify) NERT Surface Water L - EDA 60477365-2015.151B Other: NERT - Downgradient Study Area **Total Number** Matrix Sample (Wawater, Type S=solid, O=waste/oil, Sample (C=Comp. Sample Identification Special Instructions/Note: Sample Date Time G=grab) | BT-Tissue, A-Alr) Preservation Code: N LW4.1-20170209- 16 02 0.4 X X 2/9/17 16:02 G W - 0.4 FD LW4.1-20170209- 16 2 2/9/17 6:02 G W X X -1,3 15:44 GLW4.4-20170209- 15 2/9/17 XX G W - 0.8 GLW4.85-20170209- 15 12:18 2/9/17 G W NA X X 2 X G W X X G W X G W X X W X G X G W X X X W G X W Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Return To Client Archive For Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Time: ethod of Shipment: Empty Kit Relinquished by: Relinquished by: AECOM 2/10/17 8.550 ompany Relinquished by: Date/Time: Company Received by: Date/Time: Company Relinquished by Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817 **Chain of Custody Record**



Phone (949) 261-1022 Fax (949) 260-3297

Client Information	Sampler: C. Steve Howe		-		eb PM: lata, F	2attu							С	arrier T	racking	No(s)				COC No:		
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17461 Derian Ave Suite 100 Irvine. CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297 COC No. Sampler Carrier Tracking No(s): Client Information C. Steve Howe Mata, Patty Client Contact Phone E-Mail Page: Carmen Caceres-Schnell (805) 764-4031 Page patty.mata@testamericainc.com Company AECOM, Inc. **Analysis Requested** Address. Preservation Codes: Due Date Requested: 1220 Avenida Acaso M - Hexane B - NaOH N - None TAT Requested (days): Camarillo O - AsNaO2 C - Zn Acetate 10 Days P - Na2O4S State, Zip D - Nitric Acid Q - Na2SO3 CA, 93012 E - NaHSO4 R - Na25203 F - MeOH Phone S-H2504 G - Amchior 805-764-4031 T - TSP Dodecahydrate 2540C-TDS, 300-Cl, Br, 314.0-Perchlorate 74770 and 74771 H - Ascorbic Acid II - Acetone I - Ice V - MCAA J - DI Water carmen.caceres-schnell@aecom.com W - ph 4-5 K-EDTA Project Name Z - other (specify) L-EDA **NERT Surface Water** 60477365-2015.151B Other: SSOW# 300.1B_28D - Chlorate NERT - Downgradient Study Area 6 Total Number Matrix Sample Type Sample (C=comp. Special Instructions/Note: Sample Identification Sample Date Time G=grab) BT=Tissue, A=A Preservation Code: N 11 Z GLW4.4-20170209- 13 X X W -1.2 2/9/17 13:11 G 11 1. Z MS X Z G W X GLW4.4-20170209-2/9/17 13:11 13 11 - 1. Z MSD NY X X G W GLW4.4-20170209-2/9/17 13:11 X X G W G W X X G W X X X G W X W X G X X G W X G W X X X G W Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Skin Irritant Poison B Unknown Radiological Disposal By Lab Archive For Return To Client Non-Hazard Flammable Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Time: Method of Shipment Empty Kit Relinquished by: Company 2/10/2017 0855 2/10/17 Company 8:550 AECOM Company Received by: Relinquished by Date/Time: Received by: Date/Time: Company Relinquished by Cooler Temperature(s) °C and Other Remarks: Custody Seal No.: Custody Seals Intact: Δ Yes Δ No

17461 Derian Ave Suite 100 Irvine, CA 92614-5817



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17461 Denan Ave Suite 100

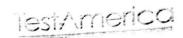
Chain of Custody Record

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Irvine, CA 92614-5817 Phone (949) 261-1022 Fax (949) 260-3297 COC No arrier Tracking No(s) Client Information C. Steve Howe Mata, Patty Client Contact E-Mail Page hone Page Carmen Caceres-Schnell (805) 764-4031 patty.mata@testamericainc.com Company AECOM, Inc. **Analysis Requested** Preservation Codes: Address Due Date Requested: 1220 Avenida Acaso M - Hexane N - None B - NaOH TAT Requested (days): O - AsNaO2 C - Zn Acetate Camarillo 10 Days P - Na2045 D - Nitric Acid State, Zip. Q - Na2503 E - NaHSO4 CA, 93012 R - Na25203 F - MeOH S - H2504 Phone G - Amchlor T - TSP Dodecahydrate 805-764-4031 H - Ascorbic Acid 74770 and 74771 U - Acetone I - Ice Email V - MCAA J - DI Water carmen.caceres-schnell@aecom.com W - ph 4-5 Total Number of containers K-EDTA Z - other (specify) L-EDA **NERT Surface Water** 60477365-2015.151B Other: NERT - Downgradient Study Area Matrix Sample (W-water, Type S=solid, O=waste/oil, Sample (C=comp Special Instructions/Note: Sample Identification Sample Date Time G=grab) Preservation Code: 50 GLW4.9-20170209- 10 2/9/17 G W X X - 1.7 10:50 35 X LW4.95-20170209- 10 G W N X - 1.0 2/9/17 10:35 2 35 X LW4.95-20170209- 10 - 1.0 FD 2/9/17 10:35 G W X 2 X 00 G W X 2/9/17 10:00 LW5.3-20170209- 10 - 1.0 X X 2 03 2/9/17 10:03 G W - 2.0 LW5.3-20170209- 10 X X G W X X G W G W X X G W X X X G W X G W X X Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Archive For Disposal By Lab Return To Client Months Special Instructions/QC Requirements: Deliverable Requested: I, II, III, IV, Other (specify): Level II Time: Method of Shipment: Date: Empty Kit Relinquished by: 2/10/2017 0855 Company 2/10/17 8:550 AECOM Company Received by: Relinquished by: Company Received by: Date/Time: Date/Time: Relinquished by: Cooler Temperature(s) °C and Other Remarks: Custody Seal No.: Custody Seals Intact: Δ Yes Δ No

17461 Denan Ave Suite 100 Irvine, CA 92614-5817

Chain of Custody Record



Phone (949) 261-1022 Fax (949) 260-3297

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Appendix F

Data Validation Summary Report

60477365 October 2017

Data Validation Summary Report December 2016 - March 2017 Surface Water Sampling

NERT Remedial Investigation – Downgradient Study Area Nevada Environmental Response Trust Site Henderson, Nevada

Environment

Final





Environment

Data Validation Summary ReportDecember 2016 - March 2017 Surface Water Sampling

Final

Prepared By Lily Bayati

Lily Bayati

Reviewed By Chad Roper, PhD, CEM #2428

AECOM

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Appendices

Appendix A - Notification Letter from Test America to AECOM

Appendix B - Notification Email from AECOM to NDEP

AECOM iii

List of Acronyms

DQO Data Quality Objective

EB Equipment Blank

EPA Environmental Protection Agency

FB Field Blank

LCS/LCSD Laboratory Control Sample / Laboratory Control Sample Duplicate

MDL Method Detection Limit

MS/MSD Matrix Spike / Matrix Spike Duplicate

NDEP Nevada Division of Environmental Protection

NERT Nevada Environmental Response Trust

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

1.0 Introduction

This data validation summary report has been prepared by AECOM to assess the validity and usability of laboratory analytical data for samples collected during December 2016-March 2017 as part of the Surface Water Sampling in the Downgradient Study Area of the Nevada Environmental Response Trust (NERT) site in Henderson, Nevada. Samples were collected during this period in accordance with AECOM's *Surface Water Investigation Plan* (SWIP, December 2016). This plan divided the collected samples into three groups: those samples coordinated with the USGS Seepage Study, a set of Transect surface water samples, and a set of Discrete surface water samples. The data assessment was performed by AECOM under their April 7, 2016, Quality Assurance Project Plan (QAPP) and included the collection and analyses of the following samples:

- One hundred-ninety-nine (199) Discrete surface water samples (including 17 field duplicates), nine equipment blanks and nine field blanks;
- 55 Transect surface water samples (including seven field duplicates), six equipment blanks and three field blanks: and
- 22 surface water samples coordinated with the USGS seepage study (including two field duplicates), one field blank and one equipment blank.

All samples were analyzed for the following:

- Chloride, and Bromide (Anions) by EPA Method 300.0,
- Chlorate by EPA Method 300.1B,
- Perchlorate by EPA Method 314.0, and
- Total Dissolved Solids (TDS) by Standard Method 2540C.

Laboratory analytical services were provided by TestAmerica Laboratories, Inc. (Irvine, California). The samples were grouped into sample delivery groups (SDGs). **Table 1** (included at the end of this document) is a cross-reference table listing each sample, analysis, SDG, collection date, laboratory sample identification, matrix, and validation level. **Table 2** (included at the end of this document) is a reference table that identifies the QC elements reviewed for each validation level per method, as applicable.

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, dated April 13, 2009. These requirements were modified via email from James Dotchin dated March 9, 2017. Consistent with the NDEP requirements as modified, 100 percent of the analytical data were validated according to EPA Stage 2A data validation.

The analytical data were evaluated for QA/QC based on the following documents: AECOM's QAPP Downgradient Study Area, Henderson, Nevada, Revision, dated April 2016; NDEP's Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas, dated January 5 2012; EPA's Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, dated September 2016; and EPA's SW 846 Third Edition, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015). 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 PARCCS criterion. 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 DQOs. Qualitative PARCCS criteria are also summarized in this section.

1.1 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 medium.

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, method blanks, laboratory control samples/laboratory control sample duplicates (LCS/LCSDs), and matrix spike/matrix spike duplicates (MS/MSDs).

Before conducting the PARCCS evaluation, the analytical data were reviewed and validated according to the QAPP (AECOM 2016), Functional Guidelines (EPA 2016), and EPA SW 846 Test Methods (EPA 2015). During the data review process, the following list of qualifiers were used for results not meeting the acceptance criteria as applicable:

- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
- U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation
- UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- DNR Do Not Report A more appropriate result is reported from another analysis or dilution.
- None indicates the data were 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 qualifiers is listed below:

R > J and UJ The R qualifier will always take precedence over the J qualifier.

J > J+ or J- A non-biased (J) qualifier will always supersede biased (J+ or J-) qualifier because it is not possible to assess the direction of the potential bias.

J = J+ plus J- Adding biased (J+, J-) qualifier with opposite signs will result in a nonbiased qualifier (J).

Table 3 (Included at the end of this document) lists the reason codes used. Reason codes explain why qualifiers have been applied and identify possible limitations of data use. Reason codes are cumulative except when one of the qualifier is R then only the reason code associated to the R qualifier will be used.

Table 4 (Included at the end of this document) presents all results after all qualifiers and any associated reason codes have been applied.

Once the data are reviewed and qualified according to the 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- Measures the reproducibility of repetitive measurements. It is strictly defined as the degree of mutual agreement among independent measurements as the result of repeated application of the sample process under similar conditions.

Analytical precision is a measurement of the variability associated with duplicate or replicate analyses of the same sample in the laboratory and is determined by analysis of laboratory quality control samples, such as duplicate control samples (LCSD), field-designated matrix spike duplicates (MSD), or sample duplicates. If the recoveries of analytes in the specified control samples are comparable within established laboratory control limits, then precision is within limits.

Total precision is a measurement of the variability associated with the entire sampling and analytical process. It is determined by analysis of duplicate or replicate field samples and measures variability introduced by both the laboratory and field operations. Field duplicate samples are analyzed to assess field and analytical precision.

Duplicate results are assessed using the relative percent difference (RPD) between duplicate measurements. If the RPD for laboratory quality control samples exceeds the laboratory's statistically determined acceptance ranges, data will be qualified as described in the applicable validation procedure. If the RPD between primary and duplicate field samples exceeds 30 percent for water samples, data will be qualified as described in the applicable validation procedure. The RPD will be calculated as follows:

 $RPD = (D1-D2)/\{1/2(D1+D2)\} \times 100$

Where:

D1 is the smaller of the two observed values and

D2 is the larger of the two observed values

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 may be reported in either the primary or duplicate samples at levels below the practical quantitation limit (PQL) or non-detected. As these values are considered to be estimates, RPD exceedances from these duplicate pairs do not suggest a significant impact on the data quality. Field duplicate RPDs are presented in detail in **Table 5** (included at the end of this document).

Accuracy- The degree of agreement between a measurement and an accepted reference or "true" value, includes a combination of random error (precision) and systematic error (bias) components of both sampling and analytical operations. Accuracy of measurement data will be assessed through the use of LCS/LCSDs, and site specific matrix spikes (MSs) and MSDs. Accuracy is expressed as the percent recovery (%R). If the percent recovery is determined to be outside of acceptance criteria specified by the previously noted documents, data will be qualified as described in the applicable validation procedure. Spike recoveries outside of 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.

The calculation of percent recovery (%R) is provided below:

 $%R = (A-B)/C \times 100$

where:

A is the measured value of the spiked sample B is the measured value of the unspiked sample, C is the true value of the spike solution added.

Field accuracy is assessed through the analysis of field blanks and equipment. Analysis of these blanks will monitor errors associated with the sampling process, possible field-related contamination, and sample handling. The DQO for EBs is that all values are less than the reporting limit for each target constituent. If contamination is reported in the either the FBs or EBs, data will be qualified as described in the applicable validation procedure.

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 detection of compounds in the blank samples identifies 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 an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank shall be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process and shall be included in every analytical batch.

EBs consists 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 measures efficiency of the decontamination procedure. EBs were collected and analyzed for all target analytes.

FBs 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. FBs 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's Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas (NDEP 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, volatilization, and chemical degradation. In

accordance with EPA guidance (EPA 2016), sample results for analyses that were performed after the method holding time but less than two times the method holding time (if any) would be qualified as estimated (J- or UJ), and sample results for analyses that were performed after two times the method holding time would be qualified as rejected (R).

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 data sets can be compared with confidence only when precision, accuracy, and representativeness are known.

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. As specified in the project DQOs, the goal for completeness for target analytes in each analytical fraction is 90 percent.

Percent completeness (%C) is calculated using the following equation:

$$%C = (T - R)/T \times 100$$

Where:

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, and PQLs presented in the QAPP are achieved and that target analytes can be detected at concentrations necessary to support the DQOs. The method detection limits (MDLs) represent the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. Sample quantitation limits (SQLs) are adjusted MDL values that reflect sample specific actions, such as dilutions or varying aliquot sizes. PQLs are the lowest level at which the entire analytical system gives a recognizable signal and acceptable calibration point for the analyte. The laboratory is required to report detected analytes down to the MDL for this project. The laboratory uses a formatter that reports estimated values down to the MDL. In addition, sample results are compared to method blank and FB results to identify potential effects of laboratory background and field procedures on sensitivity.

The following sections present a review of QC data for wet chemistry analyses (bromide, chloride, chlorate, perchlorate, and TDS).

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2.0 Results

A total of 250 primary water samples, 26 field duplicates, 13 FBs, and 16 EBs were analyzed for chloride and bromide by EPA Method 300.0; chlorate by EPA Method 300.1B; perchlorate by EPA Method 314.0; and TDS by Standard Method 2540C. Overall, based on this data validation covering the QC parameters listed below, the data as qualified are useable for their intended purpose. 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 Surrogate

Surrogate (dichloroacetic acid) recoveries were evaluated for chlorate analysis by EPA Method 300.1B. All surrogate percent recoveries met the acceptance criteria as stated in the QAPP.

2.1.2 MS/MSD Samples

Matrix spike (MS) and matrix spike duplicate (MSD) sample analyses were performed on project samples. All percent recoveries (%R) and RPDs were within QC limits with the following exceptions:

Method	Analyte	Sample	MS/MSD	RPD	Qualified Samples	Qualifier
			(%R)			
EPA 300.0	Bromide	GLWC6.1_4-20170206-	198/199	0	None	NA
		10:35-1.1				
EPA 314.0	Perchlorate	LW3.4-20170207-11:11-0.5	175/174	0	LW3.4-20170207-11:11-0.5	J+
					LW3.75-20170207-10:45-0.9	
					LWC3.7-20170207-10:32-0.4	
					LW3.85-20170207-10:12-0.5	
		LW6.05-20170207-09:30-0.6	148/148	0	LW6.05-20170207-09:30-0.6	
		LW4.1-20170207-10:39-0.3	170/168	1	LW4.1-20170207-10:39-0.3	
					GLW4.4-20170207-10:18-1.1	
					GLW4.85-20170207-09:42-0.7	
		LW5.9-20170207-10:00-0.4	125/127	1	LW5.9-20170207-10:00-0.4	
					LWC6.1_1-20170207-09:03-0.9	
					LWC6.1_2-20170207-09:20-0.7	
					GLWC6.1_3-20170207-09:30-1.0	
					GLWC6.1_4-20170207-10:35-1.3	
		GLW4.9-20170207-10:55-1.2	149/149	0	GLW4.9-20170207-10:55-1.2	
			- 1,7, - 1,7		LW4.95-20170207-10:45-1.0	
					LW5.3-20170207-09:45-1.0	
					LW5.3-20170207-09:50-2.0	
		LW3.75-20170206-16:30-0.67	146/149	1	LW3.75-20170206-16:30-0.67	
					LW3.85-20170206-16:03-0.58	
					LW3.4-20170206-17:01-0.7	
		LW4 1 20170207 16:20 0 4			LW3.4-20170206-17:01-0.7-FD	1
		LW4.1-20170207-16:20-0.4	164/169	2	LW4.1-20170207-16:20-0.4 GLW4.4-20170207-16:06-1.2	
		L W. 4.05 20170200 12 20 1 1	1 41 /1 4 4			1
		LW4.95-20170209-12:30-1.1	141/144	2	LW4.95-20170209-12:30-1.1	

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Method	Analyte	Sample	MS/MSD (%R)	RPD	Qualified Samples	Qualifier
EPA 314.0	Perchlorate	GLW4.4-20170209-13:11-1.2	145/144	0	GLW4.4-20170209-13:11-1.2	.J+
L111311.0	referriorate	T3.8B-20170130-0.4	188/190	0	T3.8A-20170130-0.4	-
		20170120 011	100/190	U	T3.8B-20170130-0.4	
					T3.8C-20170130-0.4	
					T3.8C-20170130-0.4-FD	
					T3.8D-20170130-0.4	
		T4.65A-20170131-0.7	141/138	1	T4.65A-20170131-0.7	
		T4.6C-20170131-0.8	168/169	0	T4.6A-20170131-0.3	
					T4.6B-20170131-0.6	
					T4.6C-20170131-0.8	
					T4.6D-20170131-0.8	
					T4.6B-20170131-0.6-FD	
		T4.75B-20170201-0.9	148/150	1	T4.75A-20170201-1.3	
		14.73B 20170201 0.9	140/130	1	T4.75A-20170201-1.3-FD	
					T4.75B-20170201-0.9	
					T4.75C-20170201-2.2	
					T4.75D-2017-201-1.5	
		LW6.05-20161208-0.5	142/143	0	LW4.1-20161208-0.2	
					LW3.4-20161208-0.5	
					LW3.85-20161208-0.3	
					LW3.85-20161208-0.3-FD	
					LW5.3-20161208-1.0	
					LW5.3-20161208-2.5	
					LW6.05-20161208-0.5	
					GLWC6.1_4-20161208-0.5	
		ble sample result is non-detect			GLWC6.1_3-20161208-0.5	

Notes: NA – Not Applicable, sample result is non-detect and the potential bias is high.

2.1.3 LCS/LCSD Samples

LCSs were prepared and analyzed at the proper frequency for each analysis. All LCS and LCSD recoveries reported and RPDs between the results (for applicable analytical batches) met acceptance criteria as stated in the QAPP.

2.1.4 Laboratory Duplicate Samples

Laboratory duplicate samples were evaluated for TDS analysis by SM 2540c. All laboratory duplicate RPDs met the acceptance criteria as stated in the QAPP.

2.1.5 Field Duplicate Samples

Field duplicate samples were collected at a frequency of 10 percent (%). There were 26 field duplicates taken for 250 samples. Field duplicate RPDs are presented in detail in **Table 5** (included at the end of this document). Acceptable field and analytical precision was demonstrated for all field duplicate pairs with the exceptions listed in the following table.

Field Duplicate Pair	Analyte	RPD	Qualifier
LW6.05-20170208-12:35-0.8/ LW6.05-20170208-12:35-0.8-FD	Perchlorate	32	J
GLW4.9-20170208-16:35-1.4/ GLW4.9-20170208-16:35-1.4FD	Bromide	33	
T3.8C-20170130-0.4/ T3.8C-20170130-0.4-FD	Bromide	52	
Note: Field Duplicate RPD was comparted to a criteria of <30%			•

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2.1.6 Analyte Quantitation and Target Identification

All analytes reported and the detection limits obtained comply with project specifications. All dilutions were appropriate.

2.2 Representativeness

2.2.1 Sample Preservation and Holding Times

All samples were collected and preserved appropriately, and all analyses were performed within the methodspecified holding times. All analyses were performed as requested on the chain of custodies. The laboratory reported all requested analyses and the deliverable data reports were complete.

2.2.2 Blanks

Method blanks, 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, qualifiers were assigned for the chemical analytical data during data validation 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 non-detect (U) at the PQL.

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.

<u>No Action</u> 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 Blanks

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed. Target analytes were not detected in associated method blanks.

2.2.2.2 EBs and FBs

Target analytes were either not detected in EBs and FBs or did not require data qualification.

2.3 Comparability

The laboratory used standard analytical methods for all of the analyses. In all cases, the SQLs attained were at or below the PQLs. Target compounds detected below the PQLs are qualified (J) by the laboratory and should be considered estimated. The comparability of the data is regarded as acceptable.

2.4 Completeness

The completeness level attained for metal field samples was 100 percent; no results were rejected.

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.

AECOM 3-1

3.0 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.

On June 23, 2017, TestAmerica notified AECOM by phone that their certification for perchlorate analysis in non-potable water lapsed during the period from October 27, 2016 to June 21, 2017. Phone notification was followed by a letter dated July 24, 2017 (**Appendix A**). All analyses conducted related to the *Surface Water Investigation Plan* (SWIP, December 2016) were conducted during the lapse. AECOM provided phone notice to NDEP on June 27, 2017 and email notice to NDEP on July 20, 2017 (**Appendix B**).

Our Quality Assurance Project Plan (QAPP) states "The laboratories used for chemical surface water and groundwater testing will be certified by the State of Nevada for the analysis of interest." Once AECOM was aware of this deviation, we began our investigation.

Data usability in regards to the data quality objectives for the perchlorate data included in the SWI Tech Memo was unaffected for the following reasons:

- TestAmerica maintained their drinking water certification for perchlorate (by the same method- 314.0)
 with the State of Nevada and maintained their certification as an environmental laboratory from the State
 of Nevada throughout the affected period.
- The analytical method (314.0) used for the analysis was accredited by other states with similar accreditation requirements as the State of Nevada.
- 3. Standard Operating Procedures, Instrumentation, Standards, and Staff performing the perchlorate analysis remained the same throughout the affected period.
- 4. Accreditation was restored June 21, 2017 including the successful completion of a performance test.

In conclusion, it is our opinion that the data are valid for their intended use and that no additional qualifiers are warranted.

Corrective actions for this deviation are as follows:

- AECOM will require the labs to provide proof of current certification for each of the analytical methods when we place the order. Current certification will be confirmed by the Analytical Task Leader or Investigation Task Leader prior to samples being shipped for analysis.
- 2. TestAmerica renewed their certification as soon as they were aware of the lapse. To prevent any future occurrences of certification lapses, TestAmerica will be checking their annual scope of accreditation against what was applied for and what was on the scope the previous year. Any discrepancies would be investigated and resolved within 30 days (or less) of the issuance of the scope.

AECOM 4-1

4.0 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.

4.1 Precision and Accuracy

Precision and accuracy were evaluated using data quality indicators such as calibration, surrogate, MS/MSD, duplicate, LCS/LCSD, and FD. The precision and accuracy of the data set were considered acceptable after incorporation of validation-qualified results.

4.2 Representativeness

All surrogate, MS/MSD, duplicate, LCS, and FD percent recoveries and RPDs, met acceptance criteria with the exceptions noted in the above sections.

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 incorporation of validation-qualified results.

4.3 Comparability

Sampling frequency requirements were met in obtaining necessary EBs, FBs, and FDs. 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. Additionally, because all samples in this data set were collected and analyzed under similar prescribed conditions, the data within this set are considered to be comparable.

4.4 Completeness

All results are considered to be valid; the analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the project is 100% (The percentage completeness met the 90-percent DQO goal). Additionally, because all samples in this data set were collected and analyzed under similar prescribed conditions, the data within this set are considered to be comparable.

4.5 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, calibration blanks, EBs, and FBs did not affect sensitivity.

AECOM 5-1

5.0 Conclusions and Recommendations

The analytical data quality assessment for the water sample laboratory analytical results generated during surface water sampling from December 2016 - March 2017 in the Downgradient Study Area of the NERT site in Henderson, Nevada, established that the overall project requirements and completeness levels were met. No results were rejected. Sample results that were found to be estimated (J) are usable for limited purposes only. Although the laboratory used had a temporary lapse in their certification for perchlorate in non-potable water, this deviation was investigated and found to have no impact on data quality (see Section 3.0, Appendices A & B). Corrective actions are being implemented to insure that this deviation does not occur in the future. Based upon the EPA Stage 2A data validation, all other results are considered to be valid and usable for their intended purpose.

AECOM 6-1

6.0 References

AECOM. 2016. Quality Assurance Project Plan, Downgradient Study Area, Henderson, Nevada (QAPP), Revision. April 17.

Environmental Protection Agency (EPA). 2016. Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. August.

——.2015. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015).

Nevada Division of Environmental Protection (NDEP). 2009. Data Verification and Validation Requirements - Supplement established for the BMI Plant Sites and Common Areas Projects, Henderson, Nevada. April 13.

——. 2012. Revised Guidance on Qualifying Data due to Blank Contamination for the BMI Complex and Common Areas. January 5.

Tables

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
			Samples c	oordinated with	the USGS Se	eepage Study					
4401688961	GLW3.78-20161208-0.1	440-168896-2	W	12/08/16		Stage 2A	X	X	X	Х	X
4401688961	GLW4.4-20161208-1.1	440-168896-10	W	12/08/16		Stage 2A	X	X	Х	Х	X
4401688961	GLW4.85-20161208-0.8	440-168896-11	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	GLW4.9-20161208-1.1	440-168896-9	W	12/08/16		Stage 2A	Х	Х	Х	Х	X
4401688961	GLWC6.1_3-20161208-0.5	440-168896-24	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	GLWC6.1_4-20161208-0.5	440-168896-23	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW3.4-20161208-0.5	440-168896-15	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW3.4-20161208-0.5-FB	440-168896-16	W	12/08/16	FB	Stage 2A	Х	Х	Х	Х	Х
4401688961	LW3.75-20161208-0.3	440-168896-3	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW3.85-20161208-0.3	440-168896-18	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW3.85-20161208-0.3-FD	440-168896-19	W	12/08/16	DUP	Stage 2A	Х	Х	Х	Х	Х
4401688961	LW4.1-20161208-0.2	440-168896-14	W	12/08/16	_	Stage 2A	Х	Х	Х	Х	Х
4401688961	LW4.95-20161208-0.7	440-168896-4	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW5.3-20161208-1.0	440-168896-20	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW5.3-20161208-1.0-EB	440-168896-17	W	12/08/16	EB	Stage 2A	X	X	X	X	X
4401688961	LW5.3-20161208-2.5	440-168896-21	W	12/08/16		Stage 2A	X	X	X	X	X
4401688961	LW5.9-20161208-0.5	440-168896-1	W	12/08/16		Stage 2A	X	X	X	X	X
4401688961	LW6.05-20161208-0.5	440-168896-22	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW6.1_2-20161208-0.5	440-168896-7	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW6.7-20161208-0.5	440-168896-12	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LW7.2-20161208-1.0	440-168896-13	W	12/08/16		Stage 2A	Х	X	Х	Х	Х
4401688961	LWC3.7-20161208-0.6	440-168896-5	W	12/08/16		Stage 2A	Х	Х	Х	Х	Х
4401688961	LWC3.7-20161208-0.6-FD	440-168896-6	W	12/08/16	DUP	Stage 2A	Х	Х	Х	Х	Х
4401688961	LWC6.1 1-20161208-0.5	440-168896-8	W	12/08/16	_	Stage 2A	Х	Х	Х	Х	Х
			Т	ransect Surface	e Water Sam						
4401751531	T3.8A-20170130-0.4	440-175153-1	W	01/30/17		Stage 2A	Х	Х	Х	Х	Х
4401751531	T3.8A-20170130-FB	440-175153-2	W	01/30/17	FB	Stage 2A	Х	Х	Х	Х	Х
4401751531	T3.8B-20170130-0.4	440-175153-3	W	01/30/17		Stage 2A	Х	Х	Х	Х	Х
4401751531	T3.8C-20170130-0.4	440-175153-4	W	01/30/17		Stage 2A	Х	Х	Х	Х	Х
4401751531	T3.8C-20170130-0.4-FD	440-175153-5	W	01/30/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401751531	T3.8D-20170130-0.4	440-175153-6	W	01/30/17		Stage 2A	Х	Х	Х	Х	Х
4401751541	T3.75A-20170130-0.9	440-175154-1	W	01/30/17		Stage 2A	Х	Х	Х	Х	Х
4401751541	T3.75A-20170130-EB	440-175154-5	W	01/30/17	EB	Stage 2A	Х	Х	Х	Х	Х
4401751541	T3.75B-20170130-0.7	440-175154-2	W	01/30/17		Stage 2A	X	X	X	X	X
4401751541	T3.75C-20170130-0.6	440-175154-3	W	01/30/17		Stage 2A	X	X	X	X	X
4401751541	T3.75D-20170130-0.4	440-175154-4	W	01/30/17		Stage 2A	X	X	X	X	X
4401752491	T4.65A-20170131-0.7	440-175249-1	W	01/31/17		Stage 2A	X	X	X	X	X
4401752491	T4.65B-20170131-0.9	440-175249-2	W	01/31/17		Stage 2A	X	X	X	X	X
4401752491	T4.65B-20170131-0.9-FD	440-175249-3	W	01/31/17	DUP	Stage 2A	X	X	X	X	X
4401752491	T4.65C-20170131-1.3	440-175249-4	W	01/31/17		Stage 2A	X	X	X	X	X
4401752491	T4.65D-20170131-0.6	440-175249-5	W	01/31/17		Stage 2A	X	X	X	X	X

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401752731	T4.6A-20170131-0.3	440-175273-1	W	01/31/17		Stage 2A	X	X	X	X	X
4401752731	T4.6A-20170131-EB	440-175273-6	W	01/31/17	EB	Stage 2A	X	X	X	X	X
4401752731	T4.6B-20170131-0.6	440-175273-2	W	01/31/17		Stage 2A	Х	Х	X	Х	X
4401752731	T4.6B-20170131-0.6-FD	440-175273-5	W	01/31/17	DUP	Stage 2A	X	X	X	Х	X
4401752731	T4.6C-20170131-0.8	440-175273-3	W	01/31/17		Stage 2A	X	X	X	X	X
4401752731	T4.6D-20170131-0.8	440-175273-4	W	01/31/17		Stage 2A	X	Х	X	Х	X
4401753881	T4.2A-20170201-0.4	440-175388-1	W	02/01/17		Stage 2A	Х	Х	Х	Х	X
4401753881	T4.2A-20170201-0.4-EB	440-175388-2	W	02/01/17	EB	Stage 2A	Х	Х	Х	Х	X
4401753881	T4.2B-20170201-1.0	440-175388-6	W	02/01/17		Stage 2A	X	X	X	X	X
4401753881	T4.2B-20170201-1.0-FD	440-175388-3	W	02/01/17	DUP	Stage 2A	Х	Х	Х	Х	X
4401753881	T4.2C-20170201-0.8	440-175388-4	W	02/01/17		Stage 2A	Х	Х	Х	Х	X
4401753881	T4.2D-20170201-1.0	440-175388-5	W	02/01/17		Stage 2A	X	Х	Х	Х	X
4401755201	T4.75A-20170201-1.3	440-175520-1	W	02/01/17		Stage 2A	X	Х	Х	Х	X
4401755201	T4.75A-20170201-1.3-FD	440-175520-2	W	02/01/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401755201	T4.75B-20170201-0.9	440-175520-3	W	02/01/17		Stage 2A	Х	Х	Х	Х	Х
4401755201	T4.75B-20170201-EB	440-175520-6	W	02/01/17	EB	Stage 2A	Х	Х	Х	Х	Х
4401755201	T4.75C-20170201-2.2	440-175520-4	W	02/01/17		Stage 2A	Х	Х	Х	Х	Х
4401755201	T4.75D-2017-201-1.5	440-175520-5	W	02/01/17		Stage 2A	X	Х	Х	Х	X
4401755961	T5.3A-20170202-1.4	440-175596-1	W	02/02/17		Stage 2A	Х	Х	Х	Х	X
4401755961	T5.3A-20170202-1.4-EB	440-175596-5	W	02/02/17	EB	Stage 2A	X	Х	Х	Х	X
4401755961	T5.3A-20170202-2.8	440-175596-6	W	02/02/17		Stage 2A	Х	Х	Х	Х	Х
4401755961	T5.3B-20170202-2.0	440-175596-2	W	02/02/17		Stage 2A	Х	Х	Х	Х	Х
4401755961	T5.3B-20170202-2.0-FD	440-175596-3	W	02/02/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401755961	T5.3C-2010202-1.2	440-175596-4	W	02/02/17		Stage 2A	Х	Х	Х	Х	X
4401755981	T3.5A-20170202-0.2	440-175598-1	W	02/02/17		Stage 2A	X	Х	Х	Х	X
4401755981	T3.5A-20170202-FB	440-175598-2	W	02/02/17	FB	Stage 2A	X	Х	Х	Х	X
4401755981	T3.5B-20170202-0.5	440-175598-3	W	02/02/17		Stage 2A	X	Х	Х	Х	X
4401755981	T3.5B-20170202-0.5-FD	440-175598-4	W	02/02/17	DUP	Stage 2A	X	Х	Х	Х	X
4401755981	T3.5C-20170202-0.6	440-175598-5	W	02/02/17		Stage 2A	Х	Х	Х	Х	X
4401755981	T3.5C-20170202-0.6-EB	440-175598-6	W	02/02/17	EB	Stage 2A	Х	Х	Х	Х	X
4401755981	T3.5D-20170202-1.4	440-175598-7	W	02/02/17		Stage 2A	X	X	X	X	X
4401755981	T3.5E-20170202-1.5	440-175598-8	W	02/02/17		Stage 2A	X	X	X	Х	X
4401755981	T3.5F-20170202-1.5	440-175598-9	W	02/02/17		Stage 2A	X	X	X	X	X
4401755981	T3.5F-20170202-4.0	440-175598-10	W	02/02/17		Stage 2A	Х	Х	Х	Х	X
4401756011	T6A-20170202-0.9	440-175601-1	W	02/02/17		Stage 2A	X	X	X	X	X
4401756011	T6A-20170202-FB	440-175601-2	W	02/02/17	FB	Stage 2A	Х	X	X	X	X
4401756011	T6B-20170202-1.7	440-175601-3	W	02/02/17		Stage 2A	Х	X	X	X	X
4401756011	T6C-20170202-1.7	440-175601-4	W	02/02/17		Stage 2A	Х	X	X	X	X
4401756011	T6D-20170202-0.4	440-175601-5	W	02/02/17		Stage 2A	Х	X	Х	Х	Х
4401756311	T6.8A-20170203-1.0	440-175631-1	W	02/03/17		Stage 2A	Х	X	Х	Х	Х
4401756311	T6.8B-20170203-1.3	440-175631-2	W	02/03/17		Stage 2A	Х	X	Х	Х	X
4401756311	T6.8C-20170203-0.4	440-175631-3	W	02/03/17		Stage 2A	Х	X	Х	Х	X

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401756311	T6.8D-20170203-0.9	440-175631-4	W	02/03/17		Stage 2A	Х	Х	Х	X	Х
4401756311	T6.8E-20170203-0.7	440-175631-5	W	02/03/17		Stage 2A	Х	Х	X	Х	Х
4401756321	T6.35A-20170203-1.5	440-175632-1	W	02/03/17		Stage 2A	Х	Х	Х	Х	Х
4401756321	T6.35B-20170203-1.0	440-175632-2	W	02/03/17		Stage 2A	Χ	Х	Х	X	Х
4401756321	T6.35B-20170203-3.0	440-175632-4	W	02/03/17		Stage 2A	X	Х	Х	Х	X
4401756321	T6.35C-20170203-1.0	440-175632-3	W	02/03/17		Stage 2A	Х	Х	Х	Х	X
				Discrete Surface	e Water Sam	oles					
4401758651	GLW4.9-20170206-11:15-1.45	440-175865-3	W	02/06/17		Stage 2A	Χ	Х	Х	Х	X
4401758651	LW4.95-20170206-11:30-1.1	440-175865-4	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401758651	LW5.3-20170206-10:00-1.2	440-175865-5	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401758651	LW5.3-20170206-10:35-2.35	440-175865-6	W	02/06/17		Stage 2A	Х	Х	Х	Х	X
4401758651	LW5.3-20170206-14:24-EB	440-175865-2	W	02/06/17	EB	Stage 2A	Х	Х	Х	Х	Х
4401758651	LW5.3-20170206-14:26-FB	440-175865-1	W	02/06/17	FB	Stage 2A	Х	Х	Х	Х	Х
4401758671	LW3.4-20170206-14:46-0.63	440-175867-1	W	02/06/17		Stage 2A	X	X	X	X	X
4401758681	GLW4.4-20170206-14:15-1.2	440-175868-1	W	02/06/17		Stage 2A	X	X	X	X	X
4401758691	LW4.95-20170206-13:20-1.08	440-175869-1	W	02/06/17		Stage 2A	X	X	X	X	X
4401758701	GLW4.4-20170206-11:04-1.1	440-175870-4	W	02/06/17		Stage 2A	X	X	X	X	X
4401758701	GLW4.4-20170206-14:55-FB	440-175870-1	W	02/06/17	FB	Stage 2A	X	X	X	X	X
4401758701	GLW4.4-20170206-14:58-EB	440-175870-2	W	02/06/17	EB	Stage 2A	X	X	X	X	X
4401758701	GLW4.85-20170206-10:22-0.6	440-175870-5	W	02/06/17		Stage 2A	X	X	X	X	X
4401758701	LW4.1-20170206-11:20-0.3	440-175870-3	W	02/06/17		Stage 2A	X	X	X	X	X
4401758721	GLW3.78-20170206-10:45-0.42	440-175872-6	W	02/06/17		Stage 2A	X	X	X	X	X
4401758721	LW3.4-20170206-11:10-0.42	440-175872-3	W	02/06/17		Stage 2A	X	X	X	X	X
4401758721	LW3.75-20170206-10:25-0.83	440-175872-4	W	02/06/17		Stage 2A	X	X	X	X	X
4401758721	LW3.85-20170206-09:53-0.6	440-175872-7	W	02/06/17		Stage 2A	X	X	X	X	X
4401758721	LW3.85-20170206-13:00-FB	440-175872-1	W	02/06/17	FB	Stage 2A	X	X	X	X	X
4401758721	LW3.85-20170206-13:05-EB	440-175872-2	W	02/06/17	EB	Stage 2A	X	X	X	X	X
4401758721	LWC3.7-20170206-10:16-0.33	440-175872-5	W	02/06/17		Stage 2A	X	X	X	X	X
4401759871	GLW4.9-20170206-15:00-1.5	440-175987-1	W	02/06/17		Stage 2A	X	X	X	X	X
4401759871	LW4.95-20170206-15:15-1.1	440-175987-2	W	02/06/17		Stage 2A	X	X	X	X	X
4401759871	LW5.3-20170206-16:00-1.2	440-175987-3	W	02/06/17		Stage 2A	X	X	X	X	X
4401759871	LW5.3-20170206-16:10-2.3	440-175987-4	W	02/06/17		Stage 2A	X	X	X	X	X
4401759891	GLWC6.1 3-20170206-10:07-1.0	440-175989-5	W	02/06/17		Stage 2A	X	X	X	X	X
4401759891	GLWC6.1_4-20170206-10:35-1.1	440-175989-6	W	02/06/17		Stage 2A	X	X	X	X	X
4401759891	LW5.9-20170206-11:08-0.5	440-175989-2	W	02/06/17		Stage 2A	X	X	X	X	X
4401759891	LW5.9-20170206-14:23-EB	440-175989-1	W	02/06/17	EB	Stage 2A	X	X	X	X	X
4401759891	LWC6.1_1-20170206-09:45-0.58	440-175989-3	W	02/06/17		Stage 2A	X	X	X	X	X
4401759891	LWC6.1 2-20170206-10:00-0.8	440-175989-4	W	02/06/17		Stage 2A	X	X	X	X	X
4401759921	GLW4.4-20170206-16:19-1.3	440-175992-3	W	02/06/17	 	Stage 2A	X	X	X	X	X
4401759921	GLW4.4-20170206-10.19-1.3	440-175992-2	W	02/06/17	+	Stage 2A	X	X	X	X	X
4401759921	LW4.1-20170206-16:42-0.3	440-175992-2	W	02/06/17		Stage 2A Stage 2A	X	X	X	X	X
4401759921	GLWC6.1 3-20170206-15:00-0.9	440-175994-4	W	02/06/17	+	Stage 2A	X	X	X	X	X
4401709941	GLVVC0.1_3-201/0200-15:00-0.9	440-170994-4	VV	02/00/17		Stage ZA	^	^	^	^	^

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SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401759941	GLWC6.1_4-20170206-15:45-1.3	440-175994-5	W	02/06/17		Stage 2A	Χ	X	X	X	X
4401759941	GLWC6.1_4-20170206-15:45-1.3-FD	440-175994-6	W	02/06/17	DUP	Stage 2A	X	X	X	Х	X
4401759941	LW5.9-20170206-15:18-0.6	440-175994-1	W	02/06/17		Stage 2A	X	X	X	Х	X
4401759941	LWC6.1_1-20170206-14:43-0.8	440-175994-2	W	02/06/17		Stage 2A	X	X	X	X	X
4401759941	LWC6.1_2-20170206-14:55-0.6	440-175994-3	W	02/06/17		Stage 2A	X	Х	X	Х	Х
4401760741	GLW3.78-20170207-09:35-0.7	440-176074-4	W	02/07/17		Stage 2A	X	Х	X	X	X
4401760741	LW3.4-20170207-11:11-0.5	440-176074-1	W	02/07/17		Stage 2A	X	Х	X	Х	X
4401760741	LW3.75-20170207-10:45-0.9	440-176074-2	W	02/07/17		Stage 2A	X	Х	X	Х	X
4401760741	LW3.85-20170207-10:12-0.5	440-176074-5	W	02/07/17		Stage 2A	X	X	Х	Х	X
4401760741	LWC3.7-20170207-10:32-0.4	440-176074-3	W	02/07/17		Stage 2A	X	X	X	Х	X
4401760761	LW6.05-20170207-09:30-0.6	440-176076-1	W	02/07/17		Stage 2A	X	X	X	Х	X
4401760761	LW6.7-20170207-09:13-0.4	440-176076-2	W	02/07/17		Stage 2A	Х	Х	Х	Х	X
4401760761	LW7.2-20170207-08:55-0.7	440-176076-3	W	02/07/17		Stage 2A	X	Х	Х	Х	Х
4401760781	GLW4.4-20170207-10:18-1.1	440-176078-2	W	02/07/17		Stage 2A	X	Х	Х	Х	Х
4401760781	GLW4.85-20170207-09:42-0.7	440-176078-3	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760781	LW4.1-20170207-10:39-0.3	440-176078-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760791	LW6.05-20170207-11:20-0.6	440-176079-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760791	LW7.2-20170207-10:55-0.8	440-176079-2	W	02/07/17		Stage 2A	Х	Х	Х	Х	X
4401760801	GLWC6.1 3-20170207-09:30-1.0	440-176080-4	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760801	GLWC6.1_4-20170207-10:35-1.3	440-176080-5	W	02/07/17		Stage 2A	X	Х	Х	Х	X
4401760801	LW5.9-20170207-10:00-0.4	440-176080-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760801	LWC6.1_1-20170207-09:03-0.9	440-176080-2	W	02/07/17		Stage 2A	X	Х	Х	Х	X
4401760801	LWC6.1 2-20170207-09:20-0.7	440-176080-3	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760821	GLW4.9-20170207-10:55-1.2	440-176082-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760821	LW4.95-20170207-10:45-1.0	440-176082-2	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760821	LW5.3-20170207-09:45-1.0	440-176082-3	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401760821	LW5.3-20170207-09:50-2.0	440-176082-4	W	02/07/17		Stage 2A	X	Х	Х	Х	X
4401762381	LW6.05-20170206-11:20-0.6	440-176238-2	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401762381	LW6.7-20170206-10:15-0.4	440-176238-3	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401762381	LW7.2-20170206-09:45-0.8	440-176238-4	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401762381	LW7.2-20170206-15:50-EB	440-176238-1	W	02/06/17	EB	Stage 2A	X	Х	Х	Х	X
4401762431	GLW3.78-20170206-16:40-0.96	440-176243-3	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401762431	LW3.4-20170206-17:01-0.7	440-176243-5	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401762431	LW3.4-20170206-17:01-0.7-FD	440-176243-6	W	02/06/17		Stage 2A	Х	Х	Х	Х	Х
4401762431	LW3.75-20170206-16:30-0.67	440-176243-1	W	02/06/17		Stage 2A	X	X	X	X	X
4401762431	LW3.85-20170206-16:03-0.58	440-176243-4	W	02/06/17		Stage 2A	X	X	X	X	X
4401762431	LWC3.7-20170206-16:20-0.58	440-176243-2	W	02/06/17		Stage 2A	X	X	X	X	X
4401762481	LW6.05-20170206-15:26-0.7	440-176248-1	W	02/06/17		Stage 2A	X	X	X	X	X
4401762481	LW6.7-20170206-15:00-0.6	440-176248-2	W	02/06/17		Stage 2A	X	X	X	X	X
4401762481	LW7.2-20170206-14:30-1.0	440-176248-3	W	02/06/17		Stage 2A	X	X	X	X	X
4401762481	LW7.2-20170206-14:30-1.0-FD	440-176248-4	W	02/06/17		Stage 2A	X	X	X	X	X
4401762531	LW6.05-20170206-12:36-0.7	440-176253-1	W	02/06/17		Stage 2A	X	X	X	X	X

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401762531	LW7.2-20170206-12:10-0.8	440-176253-2	W	02/06/17		Stage 2A	X	X	X	X	X
4401763631	GLW3.78-20170208-10:10-0.5	440-176363-5	W	02/08/17		Stage 2A	X	X	X	Х	X
4401763631	LW3.4-20170208-10:30-0.5	440-176363-2	W	02/08/17		Stage 2A	X	X	X	Х	X
4401763631	LW3.4-20170208-10:55-FB	440-176363-1	W	02/08/17	FB	Stage 2A	Χ	X	X	X	X
4401763631	LW3.75-20170208-09:57-0.8	440-176363-4	W	02/08/17		Stage 2A	X	Х	X	Х	Х
4401763631	LW3.85-20170208-09:27-0.5	440-176363-6	W	02/08/17		Stage 2A	X	Х	X	X	X
4401763631	LW3.85-20170208-09:27-0.5-FD	440-176363-7	W	02/08/17	DUP	Stage 2A	Х	Х	X	Х	Х
4401763631	LWC3.7-20170208-09:48-0.5	440-176363-3	W	02/08/17		Stage 2A	Х	Х	X	Х	Х
4401763641	GLW4.4-20170208-10:07-1.1	440-176364-5	W	02/08/17		Stage 2A	X	Х	Х	Х	X
4401763641	GLW4.4-20170208-11:02-EB	440-176364-2	W	02/08/17	EB	Stage 2A	X	Х	Х	Х	X
4401763641	GLW4.85-20170208-09:45-0.6	440-176364-4	W	02/08/17		Stage 2A	X	Х	Х	Х	X
4401763641	LW4.1-20170208-10:22-0.4	440-176364-3	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763641	LW4.1-20170208-10:22-0.4-FD	440-176364-6	W	02/08/17	DUP	Stage 2A	Х	Х	Х	Х	X
4401763641	LW4.1-20170208-11:12-FB	440-176364-1	W	02/08/17	FB	Stage 2A	Х	Х	Х	Х	X
4401763671	GLW4.9-20170208-10:50-1.2	440-176367-3	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763671	GLW4.9-20170208-11:09-FB	440-176367-1	W	02/08/17	FB	Stage 2A	Х	Х	Х	Х	Х
4401763671	LW4.95-20170208-10:30-1.1	440-176367-4	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763671	LW4.95-20170208-11:06-EB	440-176367-2	W	02/08/17	EB	Stage 2A	Х	Х	Х	Х	Х
4401763671	LW5.3-20170208-10:00-1.0	440-176367-5	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763671	LW5.3-20170208-10:03-2.0	440-176367-6	W	02/08/17		Stage 2A	Х	Х	Х	Х	X
4401763681	LW6.05-20170208-09:35-0.5	440-176368-3	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763681	LW6.05-20170208-10:30-FB	440-176368-1	W	02/08/17	FB	Stage 2A	Х	Х	Х	Х	X
4401763681	LW6.7-20170208-09:03-0.3	440-176368-4	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763681	LW6.7-20170208-10:35-EB	440-176368-2	W	02/08/17	EB	Stage 2A	Х	Х	Х	Х	Х
4401763681	LW7.2-20170208-08:45-0.7	440-176368-5	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763701	GLWC6.1 3-20170208-10:05-1.2	440-176370-6	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763701	GLWC6.1_4-20170208-10:35-1.3	440-176370-7	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763701	GLWC6.1 4-20170208-10:35-1.3-FD	440-176370-8	W	02/08/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401763701	LW5.9-20170208-10:35-0.4	440-176370-3	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763701	LW5.9-20170208-11:45-FB	440-176370-1	W	02/08/17	FB	Stage 2A	Х	Х	Х	Х	Х
4401763701	LWC6.1_1-20170208-09:45-0.9	440-176370-4	W	02/08/17		Stage 2A	X	Х	Х	Х	Х
4401763701	LWC6.1 1-20170208-11:40-EB	440-176370-2	W	02/08/17	EB	Stage 2A	Х	Х	Х	Х	X
4401763701	LWC6.1 2-20170208-10:00-0.6	440-176370-5	W	02/08/17		Stage 2A	Х	Х	Х	Х	Х
4401763711	LW4.95-20170207-13:25-1.2	440-176371-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763731	LW3.4-20170207-14:35-0.6	440-176373-1	W	02/07/17		Stage 2A	X	X	X	X	X
4401763741	GLW4.4-20170207-14:11-1.3	440-176374-1	W	02/07/17		Stage 2A	X	X	X	X	X
4401763741	GLW4.4-20170207-14:11-1.3-FD	440-176374-2	W	02/07/17	DUP	Stage 2A	X	X	X	X	X
4401763751	LW6.05-20170208-12:35-0.8	440-176375-1	W	02/08/17	-	Stage 2A	X	X	X	X	X
4401763751	LW6.05-20170208-12:35-0.8-FD	440-176375-2	W	02/08/17	DUP	Stage 2A	X	X	X	X	X
4401763751	LW7.2-20170208-11:07-0.8	440-176375-3	W	02/08/17	-	Stage 2A	X	X	X	X	X
4401763761	LW6.05-20170207-14:48-0.7	440-176376-1	W	02/07/17		Stage 2A	X	X	X	X	X
4401763761	LW6.7-20170207-14:25-0.6	440-176376-2	W	02/07/17	1	Stage 2A	X	X	X	X	X

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401763761	LW6.7-20170207-14:25-0.6-FD	440-176376-3	W	02/07/17	DUP	Stage 2A	Χ	X	X	X	X
4401763761	LW7.2-20170207-14:02-0.9	440-176376-4	W	02/07/17		Stage 2A	Х	Х	X	Х	X
4401763801	GLW4.4-20170207-16:06-1.2	440-176380-2	W	02/07/17		Stage 2A	X	X	Х	Х	X
4401763801	GLW4.85-20170207-15:42-0.8	440-176380-3	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763801	GLW4.85-20170207-15:42-0.8-FD	440-176380-4	W	02/07/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401763801	LW4.1-20170207-16:20-0.4	440-176380-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763821	GLW4.9-20170207-16:45-1.4	440-176382-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763821	LW4.95-20170207-16:30-1.2	440-176382-2	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763821	LW4.95-20170207-16:30-1.2-FD	440-176382-3	W	02/07/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401763821	LW5.3-20170207-15:45-1.2	440-176382-4	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763821	LW5.3-20170207-15:50-2.4	440-176382-5	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763841	GLW3.78-20170207-16:35-1.2	440-176384-3	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763841	LW3.4-20170207-17:00-0.7	440-176384-6	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763841	LW3.75-20170207-16:25-1.0	440-176384-1	W	02/07/17		Stage 2A	Х	Х	Х	Х	Х
4401763841	LW3.85-20170207-15:50-0.6	440-176384-4	W	02/07/17		Stage 2A	X	X	X	X	X
4401763841	LW3.85-20170207-15:50-0.6-FD	440-176384-5	W	02/07/17	DUP	Stage 2A	X	X	X	X	X
4401763841	LWC3.7-20170207-16:10-0.6	440-176384-2	W	02/07/17	20.	Stage 2A	X	X	X	X	X
4401763901	GLWC6.1 3-20170207-15:06-0.9	440-176390-4	W	02/07/17		Stage 2A	X	X	X	X	X
4401763901	GLWC6.1 3-20170207-15:06-0.9-FD	440-176390-5	W	02/07/17	DUP	Stage 2A	X	X	X	X	X
4401763901	GLWC6.1 4-20170207-16:10-1.3	440-176390-6	W	02/07/17		Stage 2A	X	X	X	X	X
4401763901	LW5.9-20170207-15:27-0.6	440-176390-1	W	02/07/17		Stage 2A	X	X	X	X	X
4401763901	LWC6.1_1-20170207-14:45-0.8	440-176390-2	W	02/07/17		Stage 2A	X	X	X	X	X
4401763901	LWC6.1 2-20170207-14:58-0.7	440-176390-3	W	02/07/17		Stage 2A	X	X	X	X	X
4401764851	GLW4.4-20170208-13:47-1.2	440-176485-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401764881	GLWC6.1 3-20170208-15:00-1.0	440-176488-4	W	02/08/17		Stage 2A	X	X	X	X	X
4401764881	GLWC6.1 4-20170208-16:07-1.0	440-176488-5	W	02/08/17		Stage 2A	X	X	X	X	X
4401764881	LW5.9-20170208-15:41-0.6	440-176488-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401764881	LWC6.1_1-20170208-14:43-0.7	440-176488-2	W	02/08/17		Stage 2A	X	X	X	X	X
4401764881	LWC6.1 2-20170208-14:53-0.7	440-176488-3	W	02/08/17		Stage 2A	X	X	X	X	X
4401764961	LW4.95-20170208-13:05-1.2	440-176496-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401765001	LW3.4-20170208-14:18-0.6	440-176500-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401765011	LW6.05-20170208-15:36-0.7	440-176501-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401765011	LW6.7-20170208-15:02-0.6	440-176501-2	W	02/08/17		Stage 2A	X	X	X	X	X
4401765011	LW7.2-20170208-14:40-0.9	440-176501-3	W	02/08/17		Stage 2A	X	X	X	X	X
4401765051	GLW4.4-20170208-16:21-1.3	440-176505-2	W	02/08/17		Stage 2A	X	X	X	X	X
4401765051	GLW4.85-20170208-16:00-0.8	440-176505-3	W	02/08/17	1	Stage 2A	X	X	X	X	X
4401765051	LW4.1-20170208-16:33-0.4	440-176505-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401765081	GLW4.9-20170208-16:35-1.4	440-176508-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401765081	GLW4.9-20170208-16:35-1.4-FD	440-176508-2	W	02/08/17	DUP	Stage 2A	X	X	X	X	X
4401765081	LW4.95-20170208-16:20-1.3	440-176508-3	W	02/08/17	20.	Stage 2A	X	X	X	X	X
4401765081	LW5.3-20170208-15:45-1.2	440-176508-4	W	02/08/17		Stage 2A	X	X	X	X	X
4401765081	LW5.3-20170208-15:50-2.4	440-176508-5	W	02/08/17		Stage 2A	X	X	X	X	X

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401765101	GLW3.78-20170208-16:42-1.4	440-176510-4	W	02/08/17		Stage 2A	X	X	X	X	X
4401765101	LW3.4-20170208-17:05-0.6	440-176510-1	W	02/08/17		Stage 2A	X	X	X	X	X
4401765101	LW3.75-20170208-16:30-1.0	440-176510-2	W	02/08/17		Stage 2A	Х	Х	X	Х	X
4401765101	LW3.85-20170208-16:05-0.5	440-176510-5	W	02/08/17		Stage 2A	X	X	X	Х	X
4401765101	LWC3.7-20170208-16:20-0.5	440-176510-3	W	02/08/17		Stage 2A	X	X	X	Х	X
4401766401	GLW4.9-20170209-15:53-1.4	440-176640-1	W	02/09/17		Stage 2A	Х	Х	X	Х	X
4401766401	LW4.95-20170209-15:40-1.2	440-176640-2	W	02/09/17		Stage 2A	Х	Х	Х	Х	X
4401766401	LW5.3-20170209-15:15-1.1	440-176640-3	W	02/09/17		Stage 2A	Х	Х	Х	Х	X
4401766401	LW5.3-20170209-15:18-2.2	440-176640-4	W	02/09/17		Stage 2A	X	X	Х	Х	X
4401766411	GLW4.4-20170209-15:44-1.3	440-176641-3	W	02/09/17		Stage 2A	Х	Х	Х	Х	X
4401766411	GLW4.85-20170209-15:18-0.8	440-176641-4	W	02/09/17		Stage 2A	Х	Х	Х	Х	X
4401766411	LW4.1-20170209-16:02-0.4	440-176641-1	W	02/09/17		Stage 2A	Х	Х	Х	Х	X
4401766411	LW4.1-20170209-16:02-0.4-FD	440-176641-2	W	02/09/17	DUP	Stage 2A	Х	Х	Х	Х	X
4401766421	LW3.4-20170209-13:33-0.5	440-176642-1	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766421	LW3.4-20170209-13:33-0.5-FD	440-176642-2	W	02/09/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401766431	GLW3.78-20170209-16:30-1.4	440-176643-3	W	02/09/17		Stage 2A	Х	Х	Х	Х	X
4401766431	LW3.4-20170209-16:55-0.6	440-176643-5	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766431	LW3.75-20170209-16:11-0.8	440-176643-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401766431	LW3.85-20170209-15:45-0.6	440-176643-4	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766431	LWC3.7-20170209-16:00-0.6	440-176643-2	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766441	LW6.05-20170209-15:23-0.7	440-176644-1	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766441	LW6.7-20170209-15:04-0.6	440-176644-2	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766441	LW7.2-20170209-14:41-0.9	440-176644-3	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766441	LW7.2-20170209-14:41-0.9-FD	440-176644-4	W	02/09/17	DUP	Stage 2A	Х	Х	Х	Х	Х
4401766451	LW4.95-20170209-12:30-1.1	440-176645-1	W	02/09/17	_	Stage 2A	Х	Х	Х	Х	Х
4401766461	GLWC6.1 3-20170209-09:32-1.2	440-176646-4	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766461	GLWC6.1 4-20170209-10:33-1.3	440-176646-5	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766461	LW5.9-20170209-10:01-0.4	440-176646-1	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766461	LWC6.1 1-20170209-09:10-1.0	440-176646-2	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х
4401766461	LWC6.1 2-20170209-09:25-0.6	440-176646-3	W	02/09/17		Stage 2A	X	X	X	X	X
4401766471	GLWC6.1 3-20170209-14:57-1.1	440-176647-5	W	02/09/17		Stage 2A	X	X	X	X	X
4401766471	GLWC6.1_4-20170209-15:51-1.6	440-176647-6	W	02/09/17		Stage 2A	X	X	X	X	X
4401766471	LW5.9-20170209-15:27-0.7	440-176647-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401766471	LWC6.1_1-20170209-14:39-1.1	440-176647-2	W	02/09/17		Stage 2A	X	X	X	X	X
4401766471	LWC6.1 1-20170209-14:39-1.1-FD	440-176647-3	W	02/09/17	DUP	Stage 2A	X	X	X	X	X
4401766471	LWC6.1 2-20170209-14:52-0.8	440-176647-4	W	02/09/17		Stage 2A	X	X	X	X	X
4401766481	GLW4.4-20170209-10:22-1.1	440-176648-3	W	02/09/17	†	Stage 2A	X	X	X	X	X
4401766481	GLW4.85-20170209-09:58-0.7	440-176648-2	W	02/09/17	1	Stage 2A	X	X	X	X	X
4401766481	LW4.1-20170209-10:38-0.3	440-176648-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401766491	LW6.05-20170209-09:31-0.5	440-176649-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401766491	LW6.05-20170209-10:40-FB	440-176649-2	W	02/09/17	FB	Stage 2A	X	X	X	X	X
4401766491	LW6.7-20170209-09:11-0.3	440-176649-3	W	02/09/17	'	Stage 2A	X	X	X	X	X

Table 1 Sample Cross Reference NERT RI Downgradient Study Area Henderson, Nevada

SDG	Client Sample ID	Lab Sample ID	Matrix	Sample Date	QC Type	Validation Level	Bromide (E300)	Chlorate (E300.1)	Chloride (E300)	Perchlorate (E314.0)	Total Dissolved Solids (SM2540C)
4401766491	LW7.2-20170209-08:56-0.7	440-176649-4	W	02/09/17		Stage 2A	X	X	X	X	Χ
4401766501	GLW4.9-20170209-10:50-1.2	440-176650-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401766501	LW4.95-20170209-10:35-1.0	440-176650-2	W	02/09/17		Stage 2A	X	X	X	X	X
4401766501	LW4.95-20170209-10:35-1.0-FD	440-176650-3	W	02/09/17	DUP	Stage 2A	X	X	X	X	X
4401766501	LW5.3-20170209-10:00-1.0	440-176650-4	W	02/09/17		Stage 2A	X	X	X	X	X
4401766501	LW5.3-20170209-10:03-2.0	440-176650-5	W	02/09/17		Stage 2A	X	X	X	X	X
4401766521	LW6.05-20170209-12:00-0.6	440-176652-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401766521	LW7.2-20170209-10:52-0.8	440-176652-2	W	02/09/17		Stage 2A	X	X	Х	X	X
4401766531	GLW4.4-20170209-13:11-1.2	440-176653-1	W	02/09/17		Stage 2A	X	X	Х	X	X
4401767151	GLW3.78-20170209-11:28-0.3	440-176715-4	W	02/09/17		Stage 2A	X	X	Х	X	X
4401767151	LW3.4-20170209-12:00-0.5	440-176715-1	W	02/09/17		Stage 2A	X	X	X	X	X
4401767151	LW3.75-20170209-10:58-0.5	440-176715-2	W	02/09/17		Stage 2A	Х	Х	X	Х	Х
4401767151	LW3.85-20170209-10:30-0.5	440-176715-5	W	02/09/17		Stage 2A	Х	Х	X	Х	Х
4401767151	LWC3.7-20170209-10:48-0.4	440-176715-3	W	02/09/17		Stage 2A	Х	Х	Х	Х	Х

Table 2 Validation Elements NERT Downgradient Study Area Henderson, Nevada

Stage 2A	All Analyses
Sample Receipt & Technical Holding Time	
Laboratory Blanks	
Field Blanks	$\sqrt{}$
Surrogate Spikes	
Matrix Spike (MS), Matrix Spike Duplicate (MSD)	
Laboratory Duplicate (DUP)	
Laboratory Control Sample (LCS)/ Laboratory Control Sample Duplicate (LCSD)	V
Field Duplicate	
Project Quantitation Limits (QL)	
Multiple Results for One Sample	$\sqrt{}$
Overall Data Usability Assessment	

Notes:

V = Reviewed

n/a = Not applicable to method or not performed during this sampling event

-- = Not applicable for Stage 2B review

Table 3 Qualification Codes and Definitions NERT Downgradient Study Area Henderson, Nevada

Reason Code	Explanation
а	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 laboratory 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)
С	qualified due to calibration problems
ср	qualified due to insufficient ingrowth (radiochemical only)
dc	dual column confirmation %D exceeded
е	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)
I	qualified due to LCS recoveries
ld	qualified due to laboratory duplicate imprecision (matrix duplicate, MSD, LCSD)
m	qualified due to matrix spike recoveries
nb	qualified due to negative laboratory blank contamination (nondetect results only)
nd	qualified due to non-detected target analyte
0	other
р	qualified as a false positive due to contamination during shipping
pН	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< td=""></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
х	qualified due to low % solids
Z	qualified due to ICS results

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualifi	
0.50	Sample ID	Date		Analyte ID	•	Result	Qualifier		. ~-	J	Qualifier	Code	Definition	Find	ing
					Samples coordinated w		Seepage Stu	_				T			
4401688961	GLW3.78-20161208-0.1	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401688961	GLW3.78-20161208-0.1	12/8/2016	E300	24959-67-9	Bromide	0.79		0.25	0.50	mg/l					
4401688961	GLW3.78-20161208-0.1	12/8/2016	E300.1	14866-68-3	Chlorate	190		20.00	40	ug/l					
4401688961	GLW3.78-20161208-0.1	12/8/2016	E314.0	14797-73-0	Perchlorate	41		0.95	4.0	ug/l					
4401688961	GLW3.78-20161208-0.1	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	GLW4.4-20161208-1.1	12/8/2016	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401688961	GLW4.4-20161208-1.1	12/8/2016	E300	24959-67-9	Bromide	1.6		0.50	1.0	mg/l					
4401688961	GLW4.4-20161208-1.1	12/8/2016	E300.1	14866-68-3	Chlorate	86		20.00	40	ug/l					
4401688961	GLW4.4-20161208-1.1	12/8/2016	E314.0	14797-73-0	Perchlorate	23		0.95	4.0	ug/l					
4401688961	GLW4.4-20161208-1.1	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	GLW4.85-20161208-0.8	12/8/2016	E300	16887-00-6	Chloride	290		0.50	50	mg/l					
4401688961	GLW4.85-20161208-0.8	12/8/2016	E300	24959-67-9	Bromide	1.8		0.50	1.0	mg/l					
4401688961	GLW4.85-20161208-0.8	12/8/2016	E300.1	14866-68-3	Chlorate	980		50.00	100	ug/l					
4401688961	GLW4.85-20161208-0.8	12/8/2016	E314.0	14797-73-0	Perchlorate	270		4.75	20	ug/l					
4401688961	GLW4.85-20161208-0.8	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l					
4401688961	GLW4.9-20161208-1.1	12/8/2016	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401688961	GLW4.9-20161208-1.1	12/8/2016	E300	24959-67-9	Bromide	2.0		0.50	1.0	mg/l					
4401688961	GLW4.9-20161208-1.1	12/8/2016	E300.1	14866-68-3	Chlorate	83		20.00	40	ug/l					
4401688961	GLW4.9-20161208-1.1	12/8/2016	E314.0	14797-73-0	Perchlorate	14		0.95	4.0	ug/l					
4401688961	GLW4.9-20161208-1.1	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	GLWC6.1_3-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	200		0.25	25	mg/l					
4401688961	GLWC6.1_3-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	0.32	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	GLWC6.1_3-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	120		20.00	40	ug/l					
4401688961	GLWC6.1_3-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	1.7	J	0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	GLWC6.1_3-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1000		5.00	10	mg/l					
4401688961	GLWC6.1_4-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	350		0.50	50	mg/l					
4401688961	GLWC6.1_4-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	0.64	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	GLWC6.1_4-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l					
4401688961	GLWC6.1_4-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	1.5	J	0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	GLWC6.1_4-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401688961	LW3.4-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401688961	LW3.4-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	0.46	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	LW3.4-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	130		20.00	40	ug/l					
4401688961	LW3.4-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	33		0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW3.4-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l			•		
4401688961	LW3.4-20161208-0.5-FB	12/8/2016	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401688961	LW3.4-20161208-0.5-FB	12/8/2016	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401688961	LW3.4-20161208-0.5-FB	12/8/2016	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401688961	LW3.4-20161208-0.5-FB	12/8/2016	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401688961	LW3.4-20161208-0.5-FB	12/8/2016	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401688961	LW3.75-20161208-0.3	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401688961	LW3.75-20161208-0.3	12/8/2016	E300	24959-67-9	Bromide	0.79		0.25	0.50	mg/l					
4401688961	LW3.75-20161208-0.3	12/8/2016	E300.1	14866-68-3	Chlorate	92		20.00	40	ug/l					
4401688961	LW3.75-20161208-0.3	12/8/2016	E314.0	14797-73-0	Perchlorate	20		0.95	4.0	ug/l					
4401688961	LW3.75-20161208-0.3	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l					
4401688961	LW3.85-20161208-0.3	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					1
4401688961	LW3.85-20161208-0.3	12/8/2016	E300	24959-67-9	Bromide	0.50		0.25	0.50	mg/l					+
4401688961	LW3.85-20161208-0.3	12/8/2016	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l					+
4401688961	LW3.85-20161208-0.3	12/8/2016	E314.0	14797-73-0	Perchlorate	24		0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW3.85-20161208-0.3	12/8/2016	⊑ 314.0	14/9/-/3-0	Percniorate	24		0.95	4.0	ug/I	J+	m	matrix spike %R	142/143	%

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualific	
4401688961	LW3.85-20161208-0.3	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400	Quannon	5.00	10	mg/l	quamo	0000	Dominion	1 1110	mig
4401688961	LW3.85-20161208-0.3-FD	12/8/2016	E300	16887-00-6	Chloride	250		0.50	50	mg/l					_
4401688961	LW3.85-20161208-0.3-FD	12/8/2016	E300	24959-67-9	Bromide	0.54	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	LW3.85-20161208-0.3-FD	12/8/2016	E300.1	14866-68-3	Chlorate	96		20.00	40	ug/l	-				
4401688961	LW3.85-20161208-0.3-FD	12/8/2016	E314.0	14797-73-0	Perchlorate	25		0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW3.85-20161208-0.3-FD	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW4.1-20161208-0.2	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401688961	LW4.1-20161208-0.2	12/8/2016	E300	24959-67-9	Bromide	0.51		0.25	0.50	mg/l					
4401688961	LW4.1-20161208-0.2	12/8/2016	E300.1	14866-68-3	Chlorate	500		50.00	100	ug/l					
4401688961	LW4.1-20161208-0.2	12/8/2016	E314.0	14797-73-0	Perchlorate	47		0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW4.1-20161208-0.2	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW4.95-20161208-0.7	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401688961	LW4.95-20161208-0.7	12/8/2016	E300	24959-67-9	Bromide	0.57		0.25	0.50	mg/l					
4401688961	LW4.95-20161208-0.7	12/8/2016	E300.1	14866-68-3	Chlorate	69		20.00	40	ug/l					
4401688961	LW4.95-20161208-0.7	12/8/2016	E314.0	14797-73-0	Perchlorate	9.4		0.95	4.0	ug/l					
4401688961	LW4.95-20161208-0.7	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW5.3-20161208-1.0	12/8/2016	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401688961	LW5.3-20161208-1.0	12/8/2016	E300	24959-67-9	Bromide	0.56	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	LW5.3-20161208-1.0	12/8/2016	E300.1	14866-68-3	Chlorate	53		20.00	40	ug/l					
4401688961	LW5.3-20161208-1.0	12/8/2016	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW5.3-20161208-1.0	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW5.3-20161208-1.0-EB	12/8/2016	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401688961	LW5.3-20161208-1.0-EB	12/8/2016	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401688961	LW5.3-20161208-1.0-EB	12/8/2016	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401688961	LW5.3-20161208-1.0-EB	12/8/2016	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401688961	LW5.3-20161208-1.0-EB	12/8/2016	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401688961	LW5.3-20161208-2.5	12/8/2016	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401688961	LW5.3-20161208-2.5	12/8/2016	E300	24959-67-9	Bromide	0.59	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	LW5.3-20161208-2.5	12/8/2016	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l					
4401688961	LW5.3-20161208-2.5	12/8/2016	E314.0	14797-73-0	Perchlorate	12		0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW5.3-20161208-2.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l			•		
4401688961	LW5.9-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401688961	LW5.9-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	0.74		0.25	0.50	mg/l					
4401688961	LW5.9-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	57		20.00	40	ug/l					
4401688961	LW5.9-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	9.8		0.95	4.0	ug/l					
4401688961	LW5.9-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW6.05-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	230		0.25	25	mg/l					
4401688961	LW6.05-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	1.0		0.25	0.50	mg/l					
4401688961	LW6.05-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	47		20.00	40	ug/l					
4401688961	LW6.05-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	6.2	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	142/143	%
4401688961	LW6.05-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW6.1_2-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	84		0.25	10	mg/l					
4401688961	LW6.1_2-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	0.31	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401688961	LW6.1_2-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	20		10.00	20	ug/l					
4401688961	LW6.1_2-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401688961	LW6.1_2-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	620		5.00	10	mg/l					
4401688961	LW6.7-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	240		0.50	50	mg/l					
4401688961	LW6.7-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	2.0		0.50	1.0	mg/l					
4401688961	LW6.7-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	64		20.00	40	ug/l					
4401688961	LW6.7-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				1	

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualific	ation
	Sample ID	Date		Analyte ID	,	Result	Qualifier			Units	Qualifier	Code	Definition	Find	ing
4401688961	LW6.7-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401688961	LW7.2-20161208-1.0	12/8/2016	E300	16887-00-6	Chloride	200		0.25	25	mg/l					
4401688961	LW7.2-20161208-1.0	12/8/2016	E300	24959-67-9	Bromide	1.0		0.25	0.50	mg/l					
4401688961	LW7.2-20161208-1.0	12/8/2016	E300.1	14866-68-3	Chlorate	230		20.00	40	ug/l					
4401688961	LW7.2-20161208-1.0	12/8/2016	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401688961	LW7.2-20161208-1.0	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
4401688961	LWC3.7-20161208-0.6	12/8/2016	E300	16887-00-6	Chloride	490		1.25	100	mg/l					
4401688961	LWC3.7-20161208-0.6	12/8/2016	E300	24959-67-9	Bromide	2.4	J	1.25	2.5	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401688961	LWC3.7-20161208-0.6	12/8/2016	E300.1	14866-68-3	Chlorate	4300		1000.00	2000	ug/l					
4401688961	LWC3.7-20161208-0.6	12/8/2016	E314.0	14797-73-0	Perchlorate	1600		19.00	80	ug/l					
4401688961	LWC3.7-20161208-0.6	12/8/2016	SM2540C	TDS	Total Dissolved Solids	3300		5.00	50	mg/l					
4401688961	LWC3.7-20161208-0.6-FD	12/8/2016	E300	16887-00-6	Chloride	490		1.25	100	mg/l					
4401688961	LWC3.7-20161208-0.6-FD	12/8/2016	E300	24959-67-9	Bromide	2.9		1.25	2.5	mg/l					
4401688961	LWC3.7-20161208-0.6-FD	12/8/2016	E300.1	14866-68-3	Chlorate	4300		1000.00	2000	ug/l					
4401688961	LWC3.7-20161208-0.6-FD	12/8/2016	E314.0	14797-73-0	Perchlorate	1600		19.00	80	ug/l					
4401688961	LWC3.7-20161208-0.6-FD	12/8/2016	SM2540C	TDS	Total Dissolved Solids	3200		5.00	50	mg/l					
4401688961	LWC6.1_1-20161208-0.5	12/8/2016	E300	16887-00-6	Chloride	230		0.25	25	mg/l					
4401688961	LWC6.1_1-20161208-0.5	12/8/2016	E300	24959-67-9	Bromide	1.2		0.25	0.50	mg/l					
4401688961	LWC6.1_1-20161208-0.5	12/8/2016	E300.1	14866-68-3	Chlorate	160		20.00	40	ug/l					
4401688961	LWC6.1_1-20161208-0.5	12/8/2016	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401688961	LWC6.1_1-20161208-0.5	12/8/2016	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
					sults from Transect Surfa		mples								
4401751531	T3.8A-20170130-0.4	1/30/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401751531	T3.8A-20170130-0.4	1/30/2017	E300	24959-67-9	Bromide	0.60	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401751531	T3.8A-20170130-0.4	1/30/2017	E300.1	14866-68-3	Chlorate	270		50.00	100	ug/l					
4401751531	T3.8A-20170130-0.4	1/30/2017	E314.0	14797-73-0	Perchlorate	57		0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751531	T3.8A-20170130-0.4	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751531	T3.8A-20170130-FB	1/30/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401751531	T3.8A-20170130-FB	1/30/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401751531	T3.8A-20170130-FB	1/30/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401751531	T3.8A-20170130-FB	1/30/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401751531	T3.8A-20170130-FB	1/30/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401751531	T3.8B-20170130-0.4	1/30/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401751531	T3.8B-20170130-0.4	1/30/2017	E300	24959-67-9	Bromide	0.59	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401751531	T3.8B-20170130-0.4	1/30/2017	E300.1	14866-68-3	Chlorate	210		50.00	100	ug/l					
4401751531	T3.8B-20170130-0.4	1/30/2017	E314.0	14797-73-0	Perchlorate	45	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751531	T3.8B-20170130-0.4	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751531	T3.8C-20170130-0.4	1/30/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401751531	T3.8C-20170130-0.4	1/30/2017	E300	24959-67-9	Bromide	0.53		0.25	0.50	mg/l	J	f	FD RPD >30%	52	%
4401751531	T3.8C-20170130-0.4	1/30/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l					
4401751531	T3.8C-20170130-0.4	1/30/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751531	T3.8C-20170130-0.4	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751531	T3.8C-20170130-0.4-FD	1/30/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401751531	T3.8C-20170130-0.4-FD	1/30/2017	E300	24959-67-9	Bromide	0.90		0.25	0.50	mg/l	J	f	FD RPD >30%	52	%
4401751531	T3.8C-20170130-0.4-FD	1/30/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l					
4401751531	T3.8C-20170130-0.4-FD	1/30/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751531	T3.8C-20170130-0.4-FD	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751531	T3.8D-20170130-0.4	1/30/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401751531	T3.8D-20170130-0.4	1/30/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401751531	T3.8D-20170130-0.4	1/30/2017	E300.1	14866-68-3	Chlorate	130		50.00	100	ug/l					

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualific	
4401751531	T3.8D-20170130-0.4	1/30/2017	E314.0	14797-73-0	Perchlorate	46		0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751531	T3.8D-20170130-0.4	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					- 17
4401751541	T3.75A-20170130-0.9	1/30/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401751541	T3.75A-20170130-0.9	1/30/2017	E300	24959-67-9	Bromide	0.34	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401751541	T3.75A-20170130-0.9	1/30/2017	E300.1	14866-68-3	Chlorate	270		50.00	100	ug/l		- 1			
4401751541	T3.75A-20170130-0.9	1/30/2017	E314.0	14797-73-0	Perchlorate	63		0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751541	T3.75A-20170130-0.9	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751541	T3.75A-20170130-EB	1/30/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401751541	T3.75A-20170130-EB	1/30/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401751541	T3.75A-20170130-EB	1/30/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401751541	T3.75A-20170130-EB	1/30/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401751541	T3.75A-20170130-EB	1/30/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401751541	T3.75B-20170130-0.7	1/30/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401751541	T3.75B-20170130-0.7	1/30/2017	E300	24959-67-9	Bromide	0.33	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401751541	T3.75B-20170130-0.7	1/30/2017	E300.1	14866-68-3	Chlorate	210		50.00	100	ug/l					
4401751541	T3.75B-20170130-0.7	1/30/2017	E314.0	14797-73-0	Perchlorate	51		0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401751541	T3.75B-20170130-0.7	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751541	T3.75C-20170130-0.6	1/30/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401751541	T3.75C-20170130-0.6	1/30/2017	E300	24959-67-9	Bromide	0.34	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401751541	T3.75C-20170130-0.6	1/30/2017	E300.1	14866-68-3	Chlorate	110		50.00	100	ug/l					
4401751541	T3.75C-20170130-0.6	1/30/2017	E314.0	14797-73-0	Perchlorate	31		0.95	4.0	ug/l					
4401751541	T3.75C-20170130-0.6	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401751541	T3.75D-20170130-0.4	1/30/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l					
4401751541	T3.75D-20170130-0.4	1/30/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401751541	T3.75D-20170130-0.4	1/30/2017	E300.1	14866-68-3	Chlorate	260		50.00	100	ug/l					
4401751541	T3.75D-20170130-0.4	1/30/2017	E314.0	14797-73-0	Perchlorate	85		0.95	4.0	ug/l					
4401751541	T3.75D-20170130-0.4	1/30/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401752491	T4.65A-20170131-0.7	1/31/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401752491	T4.65A-20170131-0.7	1/31/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l					
4401752491	T4.65A-20170131-0.7	1/31/2017	E300.1	14866-68-3	Chlorate	250		50.00	100	ug/l					
4401752491	T4.65A-20170131-0.7	1/31/2017	E314.0	14797-73-0	Perchlorate	57	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	188/190	%
4401752491	T4.65A-20170131-0.7	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l	-				
4401752491	T4.65B-20170131-0.9	1/31/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401752491	T4.65B-20170131-0.9	1/31/2017	E300	24959-67-9	Bromide	1.8		0.50	1.0	mg/l					
4401752491	T4.65B-20170131-0.9	1/31/2017	E300.1	14866-68-3	Chlorate	210		50.00	100	ug/l					
4401752491	T4.65B-20170131-0.9	1/31/2017	E314.0	14797-73-0	Perchlorate	51		0.95	4.0	ug/l					
4401752491	T4.65B-20170131-0.9	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401752491	T4.65B-20170131-0.9-FD	1/31/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401752491	T4.65B-20170131-0.9-FD	1/31/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0	mg/l					
4401752491	T4.65B-20170131-0.9-FD	1/31/2017	E300.1	14866-68-3	Chlorate	210		50.00	100	ug/l					
4401752491	T4.65B-20170131-0.9-FD	1/31/2017	E314.0	14797-73-0	Perchlorate	51		0.95	4.0	ug/l					
4401752491	T4.65B-20170131-0.9-FD	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401752491	T4.65C-20170131-1.3	1/31/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401752491	T4.65C-20170131-1.3	1/31/2017	E300	24959-67-9	Bromide	0.74	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>1-</td></pql<>	-	1-
4401752491	T4.65C-20170131-1.3	1/31/2017	E300.1	14866-68-3	Chlorate	100	1	50.00	100	ug/l	-				
4401752491	T4.65C-20170131-1.3	1/31/2017	E314.0	14797-73-0	Perchlorate	31		0.95	4.0	ug/l					
4401752491	T4.65C-20170131-1.3	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401752491	T4.65D-20170131-0.6	1/31/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401752491	T4.65D-20170131-0.6	1/31/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0	mg/l					
4401752491	T4.65D-20170131-0.6	1/31/2017	E300.1	14866-68-3	Chlorate	78		20.00	40	ug/l					

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualific	
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Find	ing
4401752491	T4.65D-20170131-0.6	1/31/2017	E314.0	14797-73-0	Perchlorate	30		0.95	4.0	ug/l					+
4401752491	T4.65D-20170131-0.6	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					+
4401752731	T4.6A-20170131-0.3	1/31/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401752731	T4.6A-20170131-0.3	1/31/2017	E300	24959-67-9	Bromide	1.7		0.25	0.50	mg/l					+
4401752731	T4.6A-20170131-0.3	1/31/2017	E300.1	14866-68-3	Chlorate	260		50.00	100	ug/l			.: " 0/D	100/100	
4401752731	T4.6A-20170131-0.3	1/31/2017	E314.0	14797-73-0	Perchlorate	64		0.95	4.0	ug/l	J+	m	matrix spike %R	168/169	%
4401752731	T4.6A-20170131-0.3	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l					+
4401752731	T4.6A-20170131-EB	1/31/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401752731	T4.6A-20170131-EB	1/31/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					+
4401752731	T4.6A-20170131-EB	1/31/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401752731	T4.6A-20170131-EB	1/31/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401752731	T4.6A-20170131-EB	1/31/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401752731	T4.6B-20170131-0.6	1/31/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401752731	T4.6B-20170131-0.6	1/31/2017	E300	24959-67-9	Bromide	1.6		0.25	0.50	mg/l					
4401752731	T4.6B-20170131-0.6	1/31/2017	E300.1	14866-68-3	Chlorate	210		50.00	100	ug/l					
4401752731	T4.6B-20170131-0.6	1/31/2017	E314.0	14797-73-0	Perchlorate	57		0.95	4.0	ug/l	J+	m	matrix spike %R	168/169	%
4401752731	T4.6B-20170131-0.6	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l					
4401752731	T4.6B-20170131-0.6-FD	1/31/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401752731	T4.6B-20170131-0.6-FD	1/31/2017	E300	24959-67-9	Bromide	1.6		0.25	0.50	mg/l					
4401752731	T4.6B-20170131-0.6-FD	1/31/2017	E300.1	14866-68-3	Chlorate	220		50.00	100	ug/l					
4401752731	T4.6B-20170131-0.6-FD	1/31/2017	E314.0	14797-73-0	Perchlorate	56		0.95	4.0	ug/l	J+	m	matrix spike %R	168/169	%
4401752731	T4.6B-20170131-0.6-FD	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l					
4401752731	T4.6C-20170131-0.8	1/31/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401752731	T4.6C-20170131-0.8	1/31/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401752731	T4.6C-20170131-0.8	1/31/2017	E300.1	14866-68-3	Chlorate	100		50.00	100	ug/l					
4401752731	T4.6C-20170131-0.8	1/31/2017	E314.0	14797-73-0	Perchlorate	30	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	168/169	%
4401752731	T4.6C-20170131-0.8	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401752731	T4.6D-20170131-0.8	1/31/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					
4401752731	T4.6D-20170131-0.8	1/31/2017	E300	24959-67-9	Bromide	1.6		0.25	0.50	mg/l					
4401752731	T4.6D-20170131-0.8	1/31/2017	E300.1	14866-68-3	Chlorate	83		20.00	40	ug/l					
4401752731	T4.6D-20170131-0.8	1/31/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l	J+	m	matrix spike %R	168/169	%
4401752731	T4.6D-20170131-0.8	1/31/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l					
4401753881	T4.2A-20170201-0.4	2/1/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401753881	T4.2A-20170201-0.4	2/1/2017	E300	24959-67-9	Bromide	0.60		0.25	0.50	mg/l					
4401753881	T4.2A-20170201-0.4	2/1/2017	E300.1	14866-68-3	Chlorate	260		50.00	100	ug/l					
4401753881	T4.2A-20170201-0.4	2/1/2017	E314.0	14797-73-0	Perchlorate	66		1.90	8.0	ug/l					
4401753881	T4.2A-20170201-0.4	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401753881	T4.2A-20170201-0.4-EB	2/1/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401753881	T4.2A-20170201-0.4-EB	2/1/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401753881	T4.2A-20170201-0.4-EB	2/1/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401753881	T4.2A-20170201-0.4-EB	2/1/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401753881	T4.2A-20170201-0.4-EB	2/1/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401753881	T4.2B-20170201-1.0	2/1/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401753881	T4.2B-20170201-1.0	2/1/2017	E300	24959-67-9	Bromide	0.67	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401753881	T4.2B-20170201-1.0	2/1/2017	E300.1	14866-68-3	Chlorate	170		50.00	100	ug/l					
4401753881	T4.2B-20170201-1.0	2/1/2017	E314.0	14797-73-0	Perchlorate	40		0.95	4.0	ug/l					
4401753881	T4.2B-20170201-1.0	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401753881	T4.2B-20170201-1.0-FD	2/1/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l			· ·		
4401753881	T4.2B-20170201-1.0-FD	2/1/2017	E300	24959-67-9	Bromide	0.60		0.25	0.50	mg/l					
4401753881	T4.2B-20170201-1.0-FD	2/1/2017	E300.1	14866-68-3	Chlorate	170		50.00	100	ug/l			-		

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualific	cation
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Find	ing
4401753881	T4.2B-20170201-1.0-FD	2/1/2017	E314.0	14797-73-0	Perchlorate	40		0.95	4.0	ug/l					
4401753881	T4.2B-20170201-1.0-FD	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401753881	T4.2C-20170201-0.8	2/1/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401753881	T4.2C-20170201-0.8	2/1/2017	E300	24959-67-9	Bromide	0.58		0.25	0.50	mg/l					
4401753881	T4.2C-20170201-0.8	2/1/2017	E300.1	14866-68-3	Chlorate	88		20.00	40	ug/l					
4401753881	T4.2C-20170201-0.8	2/1/2017	E314.0	14797-73-0	Perchlorate	27		0.95	4.0	ug/l					
4401753881	T4.2C-20170201-0.8	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401753881	T4.2D-20170201-1.0	2/1/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					
4401753881	T4.2D-20170201-1.0	2/1/2017	E300	24959-67-9	Bromide	0.58		0.25	0.50	mg/l					
4401753881	T4.2D-20170201-1.0	2/1/2017	E300.1	14866-68-3	Chlorate	78		20.00	40	ug/l					
4401753881	T4.2D-20170201-1.0	2/1/2017	E314.0	14797-73-0	Perchlorate	25		0.95	4.0	ug/l					
4401753881	T4.2D-20170201-1.0	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401755201	T4.75A-20170201-1.3	2/1/2017	E300	16887-00-6	Chloride	360		0.50	50	mg/l					
4401755201	T4.75A-20170201-1.3	2/1/2017	E300	24959-67-9	Bromide	0.69	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401755201	T4.75A-20170201-1.3	2/1/2017	E300.1	14866-68-3	Chlorate	3100		500.00	1000	ug/l					
4401755201	T4.75A-20170201-1.3	2/1/2017	E314.0	14797-73-0	Perchlorate	820		9.50	40	ug/l	J+	m	matrix spike %R	148/150	%
4401755201	T4.75A-20170201-1.3	2/1/2017	SM2540C	TDS	Total Dissolved Solids	2200		5.00	20	mg/l					
4401755201	T4.75A-20170201-1.3-FD	2/1/2017	E300	16887-00-6	Chloride	360		0.50	50	mg/l					
4401755201	T4.75A-20170201-1.3-FD	2/1/2017	E300	24959-67-9	Bromide	0.71	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401755201	T4.75A-20170201-1.3-FD	2/1/2017	E300.1	14866-68-3	Chlorate	3100		500.00	1000	ug/l					
4401755201	T4.75A-20170201-1.3-FD	2/1/2017	E314.0	14797-73-0	Perchlorate	830		9.50	40	ug/l	J+	m	matrix spike %R	148/150	%
4401755201	T4.75A-20170201-1.3-FD	2/1/2017	SM2540C	TDS	Total Dissolved Solids	2200		5.00	20	mg/l			•		
4401755201	T4.75B-20170201-0.9	2/1/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401755201	T4.75B-20170201-0.9	2/1/2017	E300	24959-67-9	Bromide	0.59		0.25	0.50	mg/l					
4401755201	T4.75B-20170201-0.9	2/1/2017	E300.1	14866-68-3	Chlorate	94		20.00	40	ug/l					
4401755201	T4.75B-20170201-0.9	2/1/2017	E314.0	14797-73-0	Perchlorate	23	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	148/150	%
4401755201	T4.75B-20170201-0.9	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l			•		
4401755201	T4.75B-20170201-EB	2/1/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					
4401755201	T4.75B-20170201-EB	2/1/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401755201	T4.75B-20170201-EB	2/1/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401755201	T4.75B-20170201-EB	2/1/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401755201	T4.75B-20170201-EB	2/1/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401755201	T4.75C-20170201-2.2	2/1/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					
4401755201	T4.75C-20170201-2.2	2/1/2017	E300	24959-67-9	Bromide	0.57		0.25	0.50	mg/l					
4401755201	T4.75C-20170201-2.2	2/1/2017	E300.1	14866-68-3	Chlorate	83		20.00	40	ug/l					
4401755201	T4.75C-20170201-2.2	2/1/2017	E314.0	14797-73-0	Perchlorate	22		0.95	4.0	ug/l	J+	m	matrix spike %R	148/150	%
4401755201	T4.75C-20170201-2.2	2/1/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l			'		
4401755201	T4.75D-2017-201-1.5	2/1/2017	E300	16887-00-6	Chloride	350		0.50	50	mg/l					
4401755201	T4.75D-2017-201-1.5	2/1/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401755201	T4.75D-2017-201-1.5	2/1/2017	E300.1	14866-68-3	Chlorate	35	J	20.00	40	ug/l	J	sp	Detect <pql< td=""><td>-</td><td>1-</td></pql<>	-	1-
4401755201	T4.75D-2017-201-1.5	2/1/2017	E314.0	14797-73-0	Perchlorate	420		9.50	40	ug/l	J+	m	matrix spike %R	148/150	%
4401755201	T4.75D-2017-201-1.5	2/1/2017	SM2540C	TDS	Total Dissolved Solids	2100		5.00	20	mg/l					
4401755961	T5.3A-20170202-1.4	2/2/2017	E300	16887-00-6	Chloride	300		0.25	25	mg/l					
4401755961	T5.3A-20170202-1.4	2/2/2017	E300	24959-67-9	Bromide	0.30	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401755961	T5.3A-20170202-1.4	2/2/2017	E300.1	14866-68-3	Chlorate	140		50.00	100	ug/l	-	-1			
4401755961	T5.3A-20170202-1.4	2/2/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l					_
4401755961	T5.3A-20170202-1.4	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					_
4401755961	T5.3A-20170202-1.4-EB	2/2/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					+
4401755961	T5.3A-20170202-1.4-EB	2/2/2017	E300	24959-67-9	Bromide	0.25	Ü	0.25	0.50	mg/l					+
4401755961	T5.3A-20170202-1.4-EB	2/2/2017	E300.1	14866-68-3	Chlorate	10.00	Ü	10.00	20	ug/l					+

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NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Finding
4401755961	T5.3A-20170202-1.4-EB	2/2/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401755961	T5.3A-20170202-1.4-EB	2/2/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401755961	T5.3A-20170202-2.8	2/2/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401755961	T5.3A-20170202-2.8	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755961	T5.3A-20170202-2.8	2/2/2017	E300.1	14866-68-3	Chlorate	130		50.00	100	ug/l				
4401755961	T5.3A-20170202-2.8	2/2/2017	E314.0	14797-73-0	Perchlorate	33		0.95	4.0	ug/l				
4401755961	T5.3A-20170202-2.8	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755961	T5.3B-20170202-2.0	2/2/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401755961	T5.3B-20170202-2.0	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755961	T5.3B-20170202-2.0	2/2/2017	E300.1	14866-68-3	Chlorate	54		20.00	40	ug/l				
4401755961	T5.3B-20170202-2.0	2/2/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0	ug/l				
4401755961	T5.3B-20170202-2.0	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755961	T5.3B-20170202-2.0-FD	2/2/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401755961	T5.3B-20170202-2.0-FD	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755961	T5.3B-20170202-2.0-FD	2/2/2017	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l				
4401755961	T5.3B-20170202-2.0-FD	2/2/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0	ug/l				
4401755961	T5.3B-20170202-2.0-FD	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755961	T5.3C-2010202-1.2	2/2/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401755961	T5.3C-2010202-1.2	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755961	T5.3C-2010202-1.2	2/2/2017	E300.1	14866-68-3	Chlorate	51		20.00	40	ug/l				
4401755961	T5.3C-2010202-1.2	2/2/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0	ug/l				
4401755961	T5.3C-2010202-1.2	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755981	T3.5A-20170202-0.2	2/2/2017	E300	16887-00-6	Chloride	420		0.50	50	mg/l				
4401755981	T3.5A-20170202-0.2	2/2/2017	E300	24959-67-9	Bromide	1.1		0.50	1.0	mg/l				
4401755981	T3.5A-20170202-0.2	2/2/2017	E300.1	14866-68-3	Chlorate	310		50.00	100	ug/l				
4401755981	T3.5A-20170202-0.2	2/2/2017	E314.0	14797-73-0	Perchlorate	73		0.95	4.0	ug/l				
4401755981	T3.5A-20170202-0.2	2/2/2017	SM2540C	TDS	Total Dissolved Solids	2700		5.00	20	mg/l				
4401755981	T3.5A-20170202-FB	2/2/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401755981	T3.5A-20170202-FB	2/2/2017	E300	24959-67-9	Bromide	0.25	Ü	0.25	0.50	mg/l				
4401755981	T3.5A-20170202-FB	2/2/2017	E300.1	14866-68-3	Chlorate	10.00	Ü	10.00	20	ug/l				
4401755981	T3.5A-20170202-FB	2/2/2017	E314.0	14797-73-0	Perchlorate	0.95	Ü	0.95	4.0	ug/l				
4401755981	T3.5A-20170202-FB	2/2/2017	SM2540C	TDS	Total Dissolved Solids	5.00	Ü	5.00	10	mg/l				
4401755981	T3.5B-20170202-0.5	2/2/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l				
4401755981	T3.5B-20170202-0.5	2/2/2017	E300	24959-67-9	Bromide	0.64	J	0.50	1.0	mg/l	J	SD	Detect <pql< td=""><td></td></pql<>	
4401755981	T3.5B-20170202-0.5	2/2/2017	E300.1	14866-68-3	Chlorate	430	·	50.00	100	ug/l		- Op	201001 11 42	
4401755981	T3.5B-20170202-0.5	2/2/2017	E314.0	14797-73-0	Perchlorate	140		1.90	8.0	ug/l				
4401755981	T3.5B-20170202-0.5	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401755981	T3.5B-20170202-0.5-FD	2/2/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l				
4401755981	T3.5B-20170202-0.5-FD	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755981	T3.5B-20170202-0.5-FD	2/2/2017	E300.1	14866-68-3	Chlorate	440		50.00	100	ug/l				
4401755981	T3.5B-20170202-0.5-FD	2/2/2017	E314.0	14797-73-0	Perchlorate	140		1.90	8.0	ug/l				
4401755981	T3.5B-20170202-0.5-FD	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401755981	T3.5C-20170202-0.6	2/2/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l				
4401755981	T3.5C-20170202-0.6	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755981	T3.5C-20170202-0.6	2/2/2017	E300.1	14866-68-3	Chlorate	420	Ü	50.00	100	ug/l				
4401755981	T3.5C-20170202-0.6	2/2/2017	E314.0	14797-73-0	Perchlorate	98		0.95	4.0	ug/l				
4401755981	T3.5C-20170202-0.6	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l				
4401755981	T3.5C-20170202-0.6 T3.5C-20170202-0.6-EB	2/2/2017	E300	16887-00-6	Chloride	0.53		0.25	0.50	mg/l				
4401755981	T3.5C-20170202-0.6-EB	2/2/2017	E300	24959-67-9	Bromide	0.33	U	0.25	0.50	mg/l				
	T3.5C-20170202-0.6-EB	2/2/2017	E300.1		Chlorate	10.00	U	10.00	20					
4401755981	13.5U-ZU1/UZUZ-U.0-EB	2/2/2017	E300.1	14866-68-3	Chiorate	10.00	U	10.00	20	ug/l				1

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NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Finding
4401755981	T3.5C-20170202-0.6-EB	2/2/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401755981	T3.5C-20170202-0.6-EB	2/2/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401755981	T3.5D-20170202-1.4	2/2/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401755981	T3.5D-20170202-1.4	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755981	T3.5D-20170202-1.4	2/2/2017	E300.1	14866-68-3	Chlorate	270		50.00	100	ug/l				
4401755981	T3.5D-20170202-1.4	2/2/2017	E314.0	14797-73-0	Perchlorate	66		0.95	4.0	ug/l				
4401755981	T3.5D-20170202-1.4	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755981	T3.5E-20170202-1.5	2/2/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401755981	T3.5E-20170202-1.5	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401755981	T3.5E-20170202-1.5	2/2/2017	E300.1	14866-68-3	Chlorate	190		50.00	100	ug/l				
4401755981	T3.5E-20170202-1.5	2/2/2017	E314.0	14797-73-0	Perchlorate	47		0.95	4.0	ug/l				
4401755981	T3.5E-20170202-1.5	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755981	T3.5F-20170202-1.5	2/2/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401755981	T3.5F-20170202-1.5	2/2/2017	E300	24959-67-9	Bromide	0.84	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401755981	T3.5F-20170202-1.5	2/2/2017	E300.1	14866-68-3	Chlorate	140		50.00	100	ug/l				
4401755981	T3.5F-20170202-1.5	2/2/2017	E314.0	14797-73-0	Perchlorate	38		0.95	4.0	ug/l				
4401755981	T3.5F-20170202-1.5	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401755981	T3.5F-20170202-4.0	2/2/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401755981	T3.5F-20170202-4.0	2/2/2017	E300	24959-67-9	Bromide	0.70		0.25	0.50	mg/l				
4401755981	T3.5F-20170202-4.0	2/2/2017	E300.1	14866-68-3	Chlorate	130		50.00	100	ug/l				
4401755981	T3.5F-20170202-4.0	2/2/2017	E314.0	14797-73-0	Perchlorate	37		0.95	4.0	ug/l				
4401755981	T3.5F-20170202-4.0	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401756011	T6A-20170202-0.9	2/2/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401756011	T6A-20170202-0.9	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401756011	T6A-20170202-0.9	2/2/2017	E300.1	14866-68-3	Chlorate	49		20.00	40	ug/l				
4401756011	T6A-20170202-0.9	2/2/2017	E314.0	14797-73-0	Perchlorate	16		0.95	4.0	ug/l				
4401756011	T6A-20170202-0.9	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401756011	T6A-20170202-FB	2/2/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401756011	T6A-20170202-FB	2/2/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401756011	T6A-20170202-FB	2/2/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401756011	T6A-20170202-FB	2/2/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401756011	T6A-20170202-FB	2/2/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401756011	T6B-20170202-1.7	2/2/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401756011	T6B-20170202-1.7	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401756011	T6B-20170202-1.7	2/2/2017	E300.1	14866-68-3	Chlorate	49		20.00	40	ug/l				
4401756011	T6B-20170202-1.7	2/2/2017	E314.0	14797-73-0	Perchlorate	16		0.95	4.0	ug/l				
4401756011	T6B-20170202-1.7	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401756011	T6C-20170202-1.7	2/2/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l				
4401756011	T6C-20170202-1.7	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401756011	T6C-20170202-1.7	2/2/2017	E300.1	14866-68-3	Chlorate	50		20.00	40	ug/l				
4401756011	T6C-20170202-1.7	2/2/2017	E314.0	14797-73-0	Perchlorate	16		0.95	4.0	ug/l				
4401756011	T6C-20170202-1.7	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401756011	T6D-20170202-0.4	2/2/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l				
4401756011	T6D-20170202-0.4	2/2/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401756011	T6D-20170202-0.4	2/2/2017	E300.1	14866-68-3	Chlorate	50		20.00	40	ug/l				
4401756011	T6D-20170202-0.4	2/2/2017	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l				
4401756011	T6D-20170202-0.4	2/2/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401756311	T6.8A-20170203-1.0	2/3/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401756311	T6.8A-20170203-1.0	2/3/2017	E300	24959-67-9	Bromide	1.3		0.25	0.50	mg/l				
4401756311	T6.8A-20170203-1.0	2/3/2017	E300.1	14866-68-3	Chlorate	51		20.00	40	ug/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

Add Analysis Tell Analysis Code Definition Finding Analysis Code Definition Code Definition Code Definition Code Code	000	Client	Sample		Client		Lab	Lab	001	DOI		Validator	Reason	Reason Code	Qualification
Hebrit Post Till Bas 20170203-1 2232017 8300 8887-0-6 Total Dissolved Soldis 1500 5.00 5.00 91 mgli Hebrit Post Hebr	SDG	Sample ID	Date	Method	Analyte ID	Analyte	Result	Qualifier	SQL	PQL	Units	Qualifier	Code	Definition	Finding
Heart Fig. 88-2017 1920-31-3 23/2017 E300 16987-06 Chonde 270 0.50 50 mgl Heart Hear	4401756311	T6.8A-20170203-1.0	2/3/2017	E314.0	14797-73-0		0.95	U	0.95	4.0	ug/l				
Heart Press		T6.8A-20170203-1.0		SM2540C		Total Dissolved Solids			5.00		mg/l				
Heart Fig. Heart Heart															
Heart Tell Fig.					24959-67-9				0.50		mg/l				
Heart Fig. Post Total Dissolved Solids T700	4401756311	T6.8B-20170203-1.3	2/3/2017	E300.1	14866-68-3		59		20.00	40	ug/l				
Heart Fig. Heart Heart	4401756311	T6.8B-20170203-1.3	2/3/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
Heart Fig. Fig. Heart 4401756311	T6.8B-20170203-1.3	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1700		5.00	20	mg/l					
Heart Telescont Telescon	4401756311	T6.8C-20170203-0.4	2/3/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
H401765811 T.6.6.2-0170203-0.4 23/2017 E314.0 14797/3-0 Perchlorate 1.6 J	4401756311	T6.8C-20170203-0.4	2/3/2017	E300	24959-67-9	Bromide	1.8		0.50	1.0	mg/l				
#401756311 T.6.B.C.20170203-0.4 22/32017 E300 1885-0.06 Chloride 230 0.25 25 mg/l	4401756311	T6.8C-20170203-0.4	2/3/2017	E300.1	14866-68-3	Chlorate	73		20.00	40	ug/l				
H401756311 T6.BD-20170203-0.9 2/3/2017 E300. 16887-00-6 Chloride 230 0.25 25 mg/l	4401756311	T6.8C-20170203-0.4	2/3/2017	E314.0		Perchlorate	1.6	J	0.95	4.0		J	sp	Detect <pql< td=""><td></td></pql<>	
4401756311 T6.8D-20170203-0.9 2/3/2017 E300.1 24896-0.9 Bromide 0.64 0.25 0.50 mg/l	4401756311	T6.8C-20170203-0.4	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1900		5.00	20	mg/l				
H401756311 TE.B.D-20170203-0.9 23/2017 E310.1 14866-88-3 Chlorate 52 2.0.00 40 ugl		T6.8D-20170203-0.9		E300		Chloride	230				mg/l				
HA01756311 T6.8D-20170203-0.9 23/2017 S014.0 147977-30 Perchlorate 0.95 U 0.95 4.0 u.gh HA01756311 T6.8E-20170203-0.7 23/2017 E300 16.887-00-6 Chloride 240 0.25 25 mg/l HA01756311 T6.8E-20170203-0.7 23/2017 E300 12.959-6.79 Bromide 0.77 0.25 0.50 mg/l HA01756311 T6.8E-20170203-0.7 23/2017 E300 12.959-6.79 Bromide 0.77 0.25 0.50 mg/l HA01756311 T6.8E-20170203-0.7 23/2017 E300 14.866-68-3 Chlorate 48 20.00 40 u.gh HA01756311 T6.8E-20170203-0.7 23/2017 E310.1 14.986-68-3 Chlorate 48 20.00 40 u.gh HA01756311 T6.8E-20170203-0.7 23/2017 E310.0 14.987-73.0 Perchlorate 0.95 U 0.95 4.0 u.gh HA01756311 T6.8E-20170203-0.7 23/2017 E300 E3887-00-6 Chloride 260 0.25 25 mg/l HA01756321 T6.35A-20170203-1.5 23/2017 E300 24.959-6.79 Bromide 0.31 J 0.25 0.50 mg/l J sp Detect <pol -="" 14.966-68-3="" 20.00="" 2017="" 23="" 40="" 4401756321="" 55="" chlorate="" e30.2="" e301.1="" e301.2="" e3<="" ha01756321="" t6.35a-20170203-1.5="" td="" u.gh="" =""><td>4401756311</td><td>T6.8D-20170203-0.9</td><td>2/3/2017</td><td>E300</td><td>24959-67-9</td><td>Bromide</td><td>0.64</td><td></td><td>0.25</td><td>0.50</td><td>mg/l</td><td></td><td></td><td></td><td></td></pol>	4401756311	T6.8D-20170203-0.9	2/3/2017	E300	24959-67-9	Bromide	0.64		0.25	0.50	mg/l				
HA01756311 T6.80-20170203-0.9 2/3/2017 E300. 16887-0.0-6 Choinde 240 0.25 25 mg/l	4401756311	T6.8D-20170203-0.9		E300.1		Chlorate			20.00		ug/l				
HA017F68311 T6.8E-20170203-0.7 23/2017 E300 16887-0.6 Chloride 240 0.25 2.5 mg/l	4401756311	T6.8D-20170203-0.9	2/3/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
HA01768311 T6.8E-20170203-0.7 23/2017 E300. 24959-67-9 Bromide 0.77 0.25 0.50 mg/l	4401756311	T6.8D-20170203-0.9	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
HA01756311 T6.8E-20170203-0.7 2/3/2017 E300.1 14866-88-3 Chlorate 48 2.0.00 40 upl	4401756311	T6.8E-20170203-0.7	2/3/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
HA01756311 T6.8E-20170203-0.7 23/2017 E314.0 L1797-73-0 Perchlorate 0.95 U 0.95 4.0 ugh	4401756311	T6.8E-20170203-0.7	2/3/2017	E300	24959-67-9	Bromide	0.77		0.25	0.50	mg/l				
4401756311 T6.8E-20170203-1.5 23/2017 E300 16887-00-6 Chloride 260 0.25 25 mg/l	4401756311	T6.8E-20170203-0.7	2/3/2017	E300.1	14866-68-3	Chlorate	48		20.00	40	ug/l				
HADD	4401756311	T6.8E-20170203-0.7	2/3/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401756321 T6.35A-20170203-1.5 23/2017 E300. 24959-67-9 Bromide D.31 J D.25 D.50 mg/l J sp Detect < PQL - 4401756321 T6.35A-20170203-1.5 23/2017 E300. 14866-68-3 Chlorate 55 D.20.0 40 ug/l - 4401756321 T6.35A-20170203-1.5 23/2017 E314.0 14797-73-0 Perchlorate 18 D.95 4.0 ug/l - 4401756321 T6.35A-20170203-1.0 23/2017 E300. 16887-00-6 Chlorate D.57 D.25 D.50 mg/l - 4401756321 T6.35B-20170203-1.0 23/2017 E300. 16887-00-6 Chlorate D.57 D.25 D.50 mg/l - 4401756321 T6.35B-20170203-1.0 23/2017 E300. 14866-68-3 Chlorate D.57 D.25 D.50 mg/l - 4401756321 T6.35B-20170203-1.0 23/2017 E300. 14866-68-3 Chlorate D.57 D.25 D.50 mg/l - 4401756321 T6.35B-20170203-1.0 23/2017 E300. 14866-68-3 Chlorate D.57 D.25 D.50 mg/l - 4401756321 T6.35B-20170203-1.0 23/2017 E300. 14866-68-3 Chlorate D.57 D.25 D.50 mg/l - 4401756321 T6.35B-20170203-1.0 23/2017 E300. E3007 4401756311	T6.8E-20170203-0.7	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
4401756321 T6.35A-20170203-1.5 23/2017 E300 24959-67-9 Bromide 0.31 J 0.25 0.50 mg/l J sp Detect <pql -="" td="" ="" <=""><td>4401756321</td><td>T6.35A-20170203-1.5</td><td>2/3/2017</td><td>E300</td><td>16887-00-6</td><td>Chloride</td><td>260</td><td></td><td>0.25</td><td>25</td><td>mg/l</td><td></td><td></td><td></td><td></td></pql>	4401756321	T6.35A-20170203-1.5	2/3/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
Hadd Triss21 T6.35A.2017(2020-1.5 2/3/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l	4401756321	T6.35A-20170203-1.5	2/3/2017	E300	24959-67-9	Bromide	0.31	J	0.25	0.50		J	sp	Detect <pql< td=""><td></td></pql<>	
Adul756321	4401756321	T6.35A-20170203-1.5	2/3/2017	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l				
4401756321 T6.35B-20170203-1.0 2/3/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l	4401756321	T6.35A-20170203-1.5	2/3/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0	ug/l				
4401756321 T6.35B-20170203-1.0 23/2017 E300 18887-00-6 Chloride 270 0.25 25 mg/l	4401756321	T6.35A-20170203-1.5	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
Hard	4401756321	T6.35B-20170203-1.0	2/3/2017	E300	16887-00-6	Chloride	270		0.25	25					
4401756321 T6.35B-20170203-1.0 2/3/2017 E314.0 14797-73-0 Perchlorate 17 0.95 4.0 ug/l	4401756321	T6.35B-20170203-1.0	2/3/2017	E300	24959-67-9	Bromide	0.57		0.25	0.50	mg/l				
4401756321 T6.35B-20170203-1.0 2/3/2017 SM2540C TDS Total Dissolved Solids 1600 5.00 10 mg/l 4401756321 T6.35B-20170203-3.0 2/3/2017 E300 24959-67-9 Bromide 0.32 J 0.25 2.5 mg/l J sp Detect < PQL	4401756321	T6.35B-20170203-1.0	2/3/2017	E300.1	14866-68-3	Chlorate	53		20.00	40	ug/l				
4401756321 T6.35B-20170203-3.0 2/3/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l J 4401756321 T6.35B-20170203-3.0 2/3/2017 E300.1 14866-68-3 Chlorate 56 20.00 40 ug/l 9 Perchlorate 1 2 0.25 0.50 mg/l J sp Detect <pql< td=""> -<td>4401756321</td><td>T6.35B-20170203-1.0</td><td>2/3/2017</td><td>E314.0</td><td>14797-73-0</td><td>Perchlorate</td><td>17</td><td></td><td>0.95</td><td>4.0</td><td>ug/l</td><td></td><td></td><td></td><td></td></pql<>	4401756321	T6.35B-20170203-1.0	2/3/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0	ug/l				
4401756321 T6.35B-20170203-3.0 2/3/2017 E300.1 14866-68-3 Chlorate 56 20.00 40 ug/l 4401756321 T6.35B-20170203-3.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l 4401756321 T6.35B-20170203-3.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l 4401756321 T6.35B-20170203-3.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l 4401756321 T6.35B-20170203-3.0 2/3/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E300.1 14866-68-3 Chlorate 57 20.00 40 ug/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E300.1 14866-68-3 Chlorate 57 20.00 40 ug/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 T6.35C-20170203-1.0 2/3/2017 E300 E8887-00-6 Chloride 270 0.50 5.0 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 23 0.95 4.0 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-80-3 Chlorate 270 0.50 50 mg/l	4401756321	T6.35B-20170203-1.0	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l				
A401756321 T6.35B-20170203-3.0 2/3/2017 E300.1 14866-68-3 Chlorate 56 20.00 40 ug/l A401756321 T6.35B-20170203-3.0 2/3/2017 E314.0 1479773-0 Perchlorate 18 0.95 4.0 ug/l A401756321 T6.35B-20170203-3.0 2/3/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l A401756321 T6.35C-20170203-1.0 2/3/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l A401756321 T6.35C-20170203-1.0 2/3/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l A401756321 T6.35C-20170203-1.0 2/3/2017 E300.1 14866-68-3 Chlorate 57 20.00 40 ug/l A401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 147977-30 Perchlorate 18 0.95 4.0 ug/l A401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 4401756321	T6.35B-20170203-3.0	2/3/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					
4401756321 T6.35B-20170203-3.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l	4401756321	T6.35B-20170203-3.0	2/3/2017	E300	24959-67-9	Bromide	0.32	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401756321 T6.35B-20170203-3.0 2/3/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l	4401756321	T6.35B-20170203-3.0	2/3/2017	E300.1	14866-68-3	Chlorate	56		20.00	40	ug/l				
4401756321 T6.35B-20170203-3.0 2/3/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l	4401756321	T6.35B-20170203-3.0	2/3/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0	ug/l				
4401756321 T6.35C-20170203-1.0 2/3/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E300.1 14866-68-3 Chlorate 57 20.00 40 ug/l 4401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l 4401756321 T6.35C-20170203-1.0 2/3/2017 SM2540C TDS Total Dissolved Solids 1600 5.00 10 mg/l Results from Discrete Surface Water Samples 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300 24959-67-9 Bromide 1.7 0.50 50 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug	4401756321	T6.35B-20170203-3.0	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
A401756321 T6.35C-20170203-1.0 2/3/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l	4401756321	T6.35C-20170203-1.0	2/3/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l				
A401756321 T6.35C-20170203-1.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l	4401756321	T6.35C-20170203-1.0	2/3/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50					
T6.35C-20170203-1.0 2/3/2017 E314.0 14797-73-0 Perchlorate 18 0.95 4.0 ug/l	4401756321	T6.35C-20170203-1.0	2/3/2017	E300.1	14866-68-3	Chlorate	57		20.00	40	ug/l				
Total Dissolved Solids 1600 5.00 10 mg/l	4401756321	T6.35C-20170203-1.0	2/3/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0					
Results from Discrete Surface Water Samples	4401756321	T6.35C-20170203-1.0	2/3/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10					
4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E314.0 14797-73-0 Perchlorate 23 0.95 4.0 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l 4401758651 LW4.95-20170206-11:30-1.1 2/6/2017 E300 16887-00-6 Chloride 270 0.50 50 mg/l								mples							
4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E314.0 14797-73-0 Perchlorate 23 0.95 4.0 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l 4401758651 LW4.95-20170206-11:30-1.1 2/6/2017 E300 16887-00-6 Chloride 270 0.50 50 mg/l	4401758651	GLW4.9-20170206-11:15-1.45	2/6/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E300.1 14866-68-3 Chlorate 87 20.00 40 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E314.0 14797-73-0 Perchlorate 23 0.95 4.0 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l 4401758651 LW4.95-20170206-11:30-1.1 2/6/2017 E300 16887-00-6 Chloride 270 0.50 50 mg/l	4401758651	GLW4.9-20170206-11:15-1.45	2/6/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0					
4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 E314.0 14797-73-0 Perchlorate 23 0.95 4.0 ug/l 4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l 4401758651 LW4.95-20170206-11:30-1.1 2/6/2017 E300 16887-00-6 Chloride 270 0.50 50 mg/l	4401758651		2/6/2017	E300.1		Chlorate	87								
4401758651 GLW4.9-20170206-11:15-1.45 2/6/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l 4401758651 LW4.95-20170206-11:30-1.1 2/6/2017 E300 16887-00-6 Chloride 270 0.50 50 mg/l										4.0					
4401758651 LW4.95-20170206-11:30-1.1 2/6/2017 E300 16887-00-6 Chloride 270 0.50 50 mg/l															
				E300	16887-00-6										
	4401758651	LW4.95-20170206-11:30-1.1	2/6/2017	E300	24959-67-9	Bromide	1.6		0.50	1.0	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
4404750054	Sample ID	Date	F200.4	Analyte ID	-	Result	Qualifier	00.00	40	/1	Qualifier	Code	Definition	Finding
4401758651	LW4.95-20170206-11:30-1.1	2/6/2017	E300.1	14866-68-3	Chlorate	79		20.00	40	ug/l				
4401758651 4401758651	LW4.95-20170206-11:30-1.1	2/6/2017	E314.0 SM2540C	14797-73-0 TDS	Perchlorate Total Dissolved Solids	20 1500		0.95	4.0	ug/l				
4401758651	LW4.95-20170206-11:30-1.1 LW5.3-20170206-10:00-1.2	2/6/2017 2/6/2017	E300	16887-00-6	Chloride	260		5.00 0.50	50	mg/l				
4401758651			E300	24959-67-9				0.50	1.0	mg/l				
	LW5.3-20170206-10:00-1.2	2/6/2017			Bromide	2.3				mg/l				
4401758651	LW5.3-20170206-10:00-1.2	2/6/2017	E300.1	14866-68-3	Chlorate	56		20.00	40	ug/l				
4401758651	LW5.3-20170206-10:00-1.2	2/6/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0	ug/l				
4401758651	LW5.3-20170206-10:00-1.2	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401758651	LW5.3-20170206-10:35-2.35	2/6/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401758651	LW5.3-20170206-10:35-2.35	2/6/2017	E300	24959-67-9	Bromide	1.9		0.50	1.0	mg/l				
4401758651	LW5.3-20170206-10:35-2.35	2/6/2017	E300.1	14866-68-3	Chlorate	56		20.00	40	ug/l				
4401758651	LW5.3-20170206-10:35-2.35	2/6/2017	E314.0	14797-73-0	Perchlorate	16		0.95	4.0	ug/l				
4401758651	LW5.3-20170206-10:35-2.35	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401758651	LW5.3-20170206-14:24-EB	2/6/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401758651	LW5.3-20170206-14:24-EB	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401758651	LW5.3-20170206-14:24-EB	2/6/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401758651	LW5.3-20170206-14:24-EB	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401758651	LW5.3-20170206-14:24-EB	2/6/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401758651	LW5.3-20170206-14:26-FB	2/6/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401758651	LW5.3-20170206-14:26-FB	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401758651	LW5.3-20170206-14:26-FB	2/6/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401758651	LW5.3-20170206-14:26-FB	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401758651	LW5.3-20170206-14:26-FB	2/6/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401758671	LW3.4-20170206-14:46-0.63	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401758671	LW3.4-20170206-14:46-0.63	2/6/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l				
4401758671	LW3.4-20170206-14:46-0.63	2/6/2017	E300.1	14866-68-3	Chlorate	160		20.00	40	ug/l				
4401758671	LW3.4-20170206-14:46-0.63	2/6/2017	E314.0	14797-73-0	Perchlorate	53		0.95	4.0	ug/l				
4401758671	LW3.4-20170206-14:46-0.63	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401758681	GLW4.4-20170206-14:15-1.2	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401758681	GLW4.4-20170206-14:15-1.2	2/6/2017	E300	24959-67-9	Bromide	0.51		0.25	0.50	mg/l				
4401758681	GLW4.4-20170206-14:15-1.2	2/6/2017	E300.1	14866-68-3	Chlorate	93		20.00	40	ug/l				
4401758681	GLW4.4-20170206-14:15-1.2	2/6/2017	E314.0	14797-73-0	Perchlorate	33		0.95	4.0	ug/l				
4401758681	GLW4.4-20170206-14:15-1.2	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401758691	LW4.95-20170206-13:20-1.08	2/6/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401758691	LW4.95-20170206-13:20-1.08	2/6/2017	E300	24959-67-9	Bromide	0.73		0.25	0.50	mg/l				
4401758691	LW4.95-20170206-13:20-1.08	2/6/2017	E300.1	14866-68-3	Chlorate	70		20.00	40	ug/l				
4401758691	LW4.95-20170206-13:20-1.08	2/6/2017	E314.0	14797-73-0	Perchlorate	20		0.95	4.0	ug/l				
4401758691	LW4.95-20170206-13:20-1.08	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401758701	GLW4.4-20170206-11:04-1.1	2/6/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401758701	GLW4.4-20170206-11:04-1.1	2/6/2017	E300	24959-67-9	Bromide	0.61		0.25	0.50	mg/l				
4401758701	GLW4.4-20170206-11:04-1.1	2/6/2017	E300.1	14866-68-3	Chlorate	99		20.00	40	ug/l				
4401758701	GLW4.4-20170206-11:04-1.1	2/6/2017	E314.0	14797-73-0	Perchlorate	28		0.95	4.0	ug/l				
4401758701	GLW4.4-20170206-11:04-1.1	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401758701	GLW4.4-20170206-14:55-FB	2/6/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401758701	GLW4.4-20170206-14:55-FB	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401758701	GLW4.4-20170206-14:55-FB	2/6/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401758701	GLW4.4-20170206-14:55-FB	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401758701	GLW4.4-20170206-14:55-FB	2/6/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401758701	GLW4.4-20170206-14:58-EB	2/6/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401758701	GLW4.4-20170206-14:58-EB	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

Mod1789701 GLWA4-29170206-14-68-68 282017 E30.01 14886-89-3 Chorate 0.95 U 0.00 20 ugh 4401789701 GLWA4-29170206-14-68-68 282017 E30.01 T18977-70 Christope 0.95 U 0.95 L0 ugh 4401789701 GLWA4-29170206-14-68-68 282017 E30.01 T18977-70 Christope 0.95 U 0.90 U 0.00 D mgl Foreign Christope 0.95 U 0.90 U	SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding
6401758701 GLWA-420170206-1456EB 280017 80500 200017 80500 1889-0-0 1889	4401758701			E300.1		Chlorate			10.00	20	ua/l	Qualifici	Oouc	Deminion	i manig
4401787071 GLWA-420170206-1436-68 280017 8001 8887-0-6 Chloride 390 U								_		-					
	4401758701			SM2540C			5.00	Ü							
4401758701 GLW48-520170206-1022-0.6 2602017 5300 14866-69.3 Chlorate 4300 500.0 100 ug 4401758701 GLW48-520170206-1022-0.6 2602017 S302017 S302017	4401758701	GLW4.85-20170206-10:22-0.6	2/6/2017	E300	16887-00-6	Chloride	390		0.50	50					
4601758701 CLW4.85-20170206-1022-0.6 2802017 E314.0 14797-73-0 Perchorate 110.0 19.00 80 vall	4401758701	GLW4.85-20170206-10:22-0.6	2/6/2017	E300	24959-67-9	Bromide	0.91	J	0.50	1.0		J	sp	Detect <pql< td=""><td></td></pql<>	
Hebris March September	4401758701	GLW4.85-20170206-10:22-0.6	2/6/2017	E300.1	14866-68-3	Chlorate	4300		500.00	1000	ug/l				
4401758701 W.4.1.20170206-1120-0.3 2602017 E300 4996-67-9 Brimsle D50 0.25 25 mgl	4401758701	GLW4.85-20170206-10:22-0.6	2/6/2017	E314.0	14797-73-0	Perchlorate	1100		19.00	80	ug/l				
4401758701 LW4.1-20170206-112-0-0.3 26/2017 E3001 14966-68-3 Chlorate 20 20.0 40 ygl	4401758701	GLW4.85-20170206-10:22-0.6	2/6/2017	SM2540C	TDS	Total Dissolved Solids	2200		5.00	20	mg/l				
Hoffs8701 LW4.1-20170206-1120-0.3 2862017 E300.1 14866-8-3 Chlorate E20 E20.0 40 ugl Hoffs8701 LW4.1-20170206-1120-0.3 2862017 E314.0 14797-7-30 Perchlorate E31.0	4401758701	LW4.1-20170206-11:20-0.3	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
H401758701 LW41-20170206-1120-0.3 28/2017 E3140 14797-73-0 Perchlorate 51 0.95 4.0 up1 M401758701 LW41-20170206-1045-0.42 28/2017 E300 18887-0.06 Chloride 270 0.25 2.5 mg/l M401758721 GLW3.78-20170206-1045-0.42 28/2017 E300 28/996-7.9 Bromide 1.5 0.25 0.50 mg/l M401758721 GLW3.78-20170206-1045-0.42 28/2017 E300 28/996-7.9 Bromide 1.5 0.25 0.50 mg/l M401758721 GLW3.78-20170206-1045-0.42 28/2017 E300 14866-8-3 Chlorate 220 220,00 40 up1 M401758721 GLW3.78-20170206-1045-0.42 28/2017 E300 18887-0.06 Chloride 270 0.25 5.5 mg/l M401758721 UW3.4-20170206-1045-0.42 28/2017 E300 E3	4401758701	LW4.1-20170206-11:20-0.3	2/6/2017	E300	24959-67-9	Bromide	0.50		0.25	0.50	mg/l				
4401758721 LWA1-20170206-112-0-32 26/2017 E300 188F-0-6 Chloride 270 0.25 25 mg/l		LW4.1-20170206-11:20-0.3		E300.1		Chlorate	220			40	ug/l				
4401758721 GLW378-20170206-1045-042 26/2017 E300 16887-09-6 Chloride 270 0.25 25 mg/h	4401758701	LW4.1-20170206-11:20-0.3	2/6/2017	E314.0		Perchlorate	51		0.95	4.0	ug/l				
4401758721 GLW3.78-20170206-1045-042 28(2017 E3001 C3001 C											mg/l				
4401758721 GLW3.78-20170206-1046-042 28(2017 E300.1 14866-68-3 Chlorate 220 20.00 40 u.gl 4401758721 GLW3.78-20170206-1046-042 28(2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l 4401758721 LW3.4-20170206-111-04.2 28(2017 E300 E887-00-6 Chlorate 1.5 0.25 5.00 mg/l 4401758721 LW3.4-20170206-111-04.2 28(2017 E300 E887-00-6 Chlorate 1.5 0.25 5.00 mg/l 4401758721 LW3.4-20170206-111-04.2 28(2017 E300.1 E300 E887-00-6 Chlorate 1.5 0.25 5.00 mg/l 4401758721 LW3.4-20170206-111-04.2 28(2017 E301.1 14866-68-3 Chlorate LW3.4-20170206-111-04.2 28(2017 E301.1 14866-68-3 Chlorate LW3.4-20170206-111-04.2 28(2017 E301.1 14806-68-3 Chlorate LW3.4-20170206-111-04.2 28(2017 E301.1 14806-68-3 Chlorate LW3.7-20170206-1025-08.3 28(2017 E300.2 E300.1 E3						Chloride	270				mg/l				
4401758721 GLW3.78-20170206-104-50-42 26/2017 5314.0 14797-73-0 Perchlorate 54 0.95 4.0 upl 4401758721 LW3.4-20170206-11-10-042 26/2017 5300 16887-00-6 Chloride 270 0.25 25 mpl 4401758721 LW3.4-20170206-11-10-042 26/2017 5300 16887-00-6 Chloride 270 0.25 25 mpl 4401758721 LW3.4-20170206-11-10-042 26/2017 5300 14886-68-3 Chlorate 150 0.25 0.50 mpl 4401758721 LW3.4-20170206-11-10-042 26/2017 5300 14886-68-3 Chlorate 180 20.00 40 upl 4401758721 LW3.4-20170206-11-10-042 26/2017 5314.0 14797-73-0 Perchlorate 53 0.95 4.0 upl 4401758721 LW3.4-20170206-11-10-042 26/2017 5300 16887-00-6 Chloride 270 0.25 25 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 16887-00-6 Chloride 270 0.25 25 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.7-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.8-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.4 0.25 0.50 mpl 4401758721 LW3.8-5-20170206-10-26-83 26/2017 5300 24958-67-9 Bromide 1.7 0.50 0.00 40 upl 4401758721 LW3.8-5-20170206-10-33.0 26/2017 5300 24958-67-9 Bromide 1.7 0.50 1.0 mpl 4401758721 LW3.8-5-20170206-10-33.0 26/2017 5300 24958-67-9 Bromide 1.7 0.50 0.00 mpl 4401758721 LW3.8-5-20170206-0-33.0 26/2017 5300 24/2058-67-9 Bromide 1.7 0.50 0.00 mpl 440175872															
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A401758721 LW3.4-20170206-11-10-0.42 26/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ugh A401758721 LW3.4-20170206-11-10-0.42 26/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l A401758721 LW3.75-20170206-1025-0.83 26/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l A401758721 LW3.75-20170206-1025-0.83 26/2017 E300 24959-67-9 Bromide 1.4 0.25 0.50 mg/l A401758721 LW3.75-20170206-1025-0.83 26/2017 E300 E300.7 E300 E300.7 E300 E300.7 E300 E300.7 E3															
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Adu1758721 LW3.75-20170206-10.25-0.83 26/2017 E300 14886-0-6 Chloride 270 0.25 25 mg/l															
4401758721 LW3.75-20170206-10.25-0.83 2/6/2017 E300 2495-967-9 Bromide 1.4 0.25 0.50 mg/l															
A401758721 LW3.75-20170206-10:25-0.83 26/2017 E300.1 14866-68-3 Chlorate 11.0 20.00 40 ug/l															
A401758721 LW3.75-20170206-10:25-0.83 2/6/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l															
A401758721 LW3.85-20170206-09:53-0.6 2/6/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l															
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Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	-	Result	Qualifier				Qualifier	Code	Definition	Finding
4401759871	GLW4.9-20170206-15:00-1.5	2/6/2017	E300.1	14866-68-3	Chlorate	71		20.00	40	ug/l				
4401759871	GLW4.9-20170206-15:00-1.5	2/6/2017	E314.0	14797-73-0	Perchlorate	21		0.95	4.0	ug/l				
4401759871	GLW4.9-20170206-15:00-1.5	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401759871	LW4.95-20170206-15:15-1.1	2/6/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l				
4401759871	LW4.95-20170206-15:15-1.1	2/6/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401759871	LW4.95-20170206-15:15-1.1	2/6/2017	E300.1	14866-68-3	Chlorate	57		20.00	40	ug/l				
4401759871	LW4.95-20170206-15:15-1.1	2/6/2017	E314.0	14797-73-0	Perchlorate	13		0.95	4.0	ug/l				
4401759871	LW4.95-20170206-15:15-1.1	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401759871	LW5.3-20170206-16:00-1.2	2/6/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l				
4401759871	LW5.3-20170206-16:00-1.2	2/6/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401759871	LW5.3-20170206-16:00-1.2	2/6/2017	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l				
4401759871	LW5.3-20170206-16:00-1.2	2/6/2017	E314.0	14797-73-0	Perchlorate	11		0.95	4.0	ug/l				
4401759871	LW5.3-20170206-16:00-1.2	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401759871	LW5.3-20170206-16:10-2.3	2/6/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l				
4401759871	LW5.3-20170206-16:10-2.3	2/6/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401759871	LW5.3-20170206-16:10-2.3	2/6/2017	E300.1	14866-68-3	Chlorate	61		20.00	40	ug/l				
4401759871	LW5.3-20170206-16:10-2.3	2/6/2017	E314.0	14797-73-0	Perchlorate	12		0.95	4.0	ug/l				
4401759871	LW5.3-20170206-16:10-2.3	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401759891	GLWC6.1_3-20170206-10:07-1.0	2/6/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l				
4401759891	GLWC6.1_3-20170206-10:07-1.0	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401759891	GLWC6.1_3-20170206-10:07-1.0	2/6/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l				
4401759891	GLWC6.1_3-20170206-10:07-1.0	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759891	GLWC6.1_3-20170206-10:07-1.0	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1000		5.00	10	mg/l				
4401759891	GLWC6.1_4-20170206-10:35-1.1	2/6/2017	E300	16887-00-6	Chloride	340		0.50	50	mg/l				
4401759891	GLWC6.1_4-20170206-10:35-1.1	2/6/2017	E300	24959-67-9	Bromide	0.50	UF1	0.50	1.0	mg/l		m	matrix spike %R	198/199 %
4401759891	GLWC6.1_4-20170206-10:35-1.1	2/6/2017	E300.1	14866-68-3	Chlorate	96		20.00	40	ug/l				
4401759891	GLWC6.1_4-20170206-10:35-1.1	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759891	GLWC6.1_4-20170206-10:35-1.1	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401759891	LW5.9-20170206-11:08-0.5	2/6/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401759891	LW5.9-20170206-11:08-0.5	2/6/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401759891	LW5.9-20170206-11:08-0.5	2/6/2017	E300.1	14866-68-3	Chlorate	71		20.00	40	ug/l				
4401759891	LW5.9-20170206-11:08-0.5	2/6/2017	E314.0	14797-73-0	Perchlorate	21		0.95	4.0	ug/l				
4401759891	LW5.9-20170206-11:08-0.5	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401759891	LW5.9-20170206-14:23-EB	2/6/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401759891	LW5.9-20170206-14:23-EB	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401759891	LW5.9-20170206-14:23-EB	2/6/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401759891	LW5.9-20170206-14:23-EB	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759891	LW5.9-20170206-14:23-EB	2/6/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401759891	LWC6.1_1-20170206-09:45-0.58	2/6/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401759891	LWC6.1_1-20170206-09:45-0.58	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401759891	LWC6.1 1-20170206-09:45-0.58	2/6/2017	E300.1	14866-68-3	Chlorate	98		20.00	40	ug/l				
4401759891	LWC6.1_1-20170206-09:45-0.58	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759891	LWC6.1_1-20170206-09:45-0.58	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401759891	LWC6.1_2-20170206-10:00-0.8	2/6/2017	E300	16887-00-6	Chloride	120		0.25	25	mg/l				
4401759891	LWC6.1_2-20170206-10:00-0.8	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401759891	LWC6.1 2-20170206-10:00-0.8	2/6/2017	E300.1	14866-68-3	Chlorate	78		20.00	40	ug/l				
4401759891	LWC6.1_2-20170206-10:00-0.8	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759891	LWC6.1 2-20170206-10:00-0.8	2/6/2017	SM2540C	TDS	Total Dissolved Solids	690		5.00	10	mg/l				
4401759921	GLW4.4-20170206-16:19-1.3	2/6/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
					23	0.58	1	0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	-	Result	Qualifier				Qualifier	Code	Definition	Finding
4401759921	GLW4.4-20170206-16:19-1.3	2/6/2017	E300.1	14866-68-3	Chlorate	79		20.00	40	ug/l				
4401759921	GLW4.4-20170206-16:19-1.3	2/6/2017	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l				
4401759921	GLW4.4-20170206-16:19-1.3	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401759921	GLW4.85-20170206-15:58-0.6	2/6/2017	E300	16887-00-6	Chloride	350		0.50	50	mg/l			Data at DOI	
4401759921	GLW4.85-20170206-15:58-0.6	2/6/2017	E300	24959-67-9	Bromide	0.75	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759921	GLW4.85-20170206-15:58-0.6	2/6/2017	E300.1	14866-68-3	Chlorate	3000		500.00	1000	ug/l				
4401759921	GLW4.85-20170206-15:58-0.6	2/6/2017	E314.0	14797-73-0	Perchlorate	750		19.00	80	ug/l				
4401759921	GLW4.85-20170206-15:58-0.6	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1900		5.00	20	mg/l				
4401759921	LW4.1-20170206-16:42-0.3	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401759921	LW4.1-20170206-16:42-0.3	2/6/2017	E300	24959-67-9	Bromide	0.59		0.25	0.50	mg/l				
4401759921	LW4.1-20170206-16:42-0.3	2/6/2017	E300.1	14866-68-3	Chlorate	180		20.00	40	ug/l				
4401759921	LW4.1-20170206-16:42-0.3	2/6/2017	E314.0	14797-73-0	Perchlorate	38		0.95	4.0	ug/l				
4401759921	LW4.1-20170206-16:42-0.3	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401759941	GLWC6.1_3-20170206-15:00-0.9	2/6/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l			5 50.	
4401759941	GLWC6.1_3-20170206-15:00-0.9	2/6/2017	E300	24959-67-9	Bromide	0.42	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	GLWC6.1_3-20170206-15:00-0.9	2/6/2017	E300.1	14866-68-3	Chlorate	110	_	20.00	40	ug/l				
4401759941	GLWC6.1_3-20170206-15:00-0.9	2/6/2017	E314.0	14797-73-0	Perchlorate	1.1	J	0.95	4.0	ug/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	GLWC6.1_3-20170206-15:00-0.9	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401759941	GLWC6.1_4-20170206-15:45-1.3	2/6/2017	E300	16887-00-6	Chloride	330	_	0.50	50	mg/l				
4401759941	GLWC6.1_4-20170206-15:45-1.3	2/6/2017	E300	24959-67-9	Bromide	0.68	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	GLWC6.1_4-20170206-15:45-1.3	2/6/2017	E300.1	14866-68-3	Chlorate	93		20.00	40	ug/l				
4401759941	GLWC6.1_4-20170206-15:45-1.3	2/6/2017	E314.0	14797-73-0	Perchlorate	1.3	J	0.95	4.0	ug/l				
4401759941	GLWC6.1_4-20170206-15:45-1.3	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	GLWC6.1_4-20170206-15:45-1.3-FD	2/6/2017	E300	16887-00-6	Chloride	330		0.50	50	mg/l				
4401759941	GLWC6.1_4-20170206-15:45-1.3-FD	2/6/2017	E300	24959-67-9	Bromide	0.67	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	GLWC6.1_4-20170206-15:45-1.3-FD	2/6/2017	E300.1	14866-68-3	Chlorate	91		20.00	40	ug/l				
4401759941	GLWC6.1_4-20170206-15:45-1.3-FD	2/6/2017	E314.0	14797-73-0	Perchlorate	1.2	J	0.95	4.0	ug/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	GLWC6.1_4-20170206-15:45-1.3-FD	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401759941	LW5.9-20170206-15:18-0.6	2/6/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401759941	LW5.9-20170206-15:18-0.6	2/6/2017	E300	24959-67-9	Bromide	0.50		0.25	0.50	mg/l				
4401759941	LW5.9-20170206-15:18-0.6	2/6/2017	E300.1	14866-68-3	Chlorate	54		20.00	40	ug/l				
4401759941	LW5.9-20170206-15:18-0.6	2/6/2017	E314.0	14797-73-0	Perchlorate	6.7		0.95	4.0	ug/l				
4401759941	LW5.9-20170206-15:18-0.6	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
4401759941	LWC6.1_1-20170206-14:43-0.8	2/6/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401759941	LWC6.1_1-20170206-14:43-0.8	2/6/2017	E300	24959-67-9	Bromide	0.45	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	LWC6.1_1-20170206-14:43-0.8	2/6/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l				
4401759941	LWC6.1_1-20170206-14:43-0.8	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759941	LWC6.1_1-20170206-14:43-0.8	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401759941	LWC6.1_2-20170206-14:55-0.6	2/6/2017	E300	16887-00-6	Chloride	140		0.25	25	mg/l				
4401759941	LWC6.1_2-20170206-14:55-0.6	2/6/2017	E300	24959-67-9	Bromide	0.36	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401759941	LWC6.1_2-20170206-14:55-0.6	2/6/2017	E300.1	14866-68-3	Chlorate	91		20.00	40	ug/l				
4401759941	LWC6.1_2-20170206-14:55-0.6	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401759941	LWC6.1_2-20170206-14:55-0.6	2/6/2017	SM2540C	TDS	Total Dissolved Solids	710		5.00	10	mg/l				
4401760741	GLW3.78-20170207-09:35-0.7	2/7/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401760741	GLW3.78-20170207-09:35-0.7	2/7/2017	E300	24959-67-9	Bromide	0.48	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401760741	GLW3.78-20170207-09:35-0.7	2/7/2017	E300.1	14866-68-3	Chlorate	200		20.00	40	ug/l				
4401760741	GLW3.78-20170207-09:35-0.7	2/7/2017	E314.0	14797-73-0	Perchlorate	40		0.95	4.0	ug/l				
4401760741	GLW3.78-20170207-09:35-0.7	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401760741	LW3.4-20170207-11:11-0.5	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l				
4401760741	LW3.4-20170207-11:11-0.5	2/7/2017	E300	24959-67-9	Bromide	0.51		0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualific	ation
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Find	ing
4401760741	LW3.4-20170207-11:11-0.5	2/7/2017	E300.1	14866-68-3	Chlorate	180		20.00	40	ug/l					
4401760741	LW3.4-20170207-11:11-0.5	2/7/2017	E314.0	14797-73-0	Perchlorate	52	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	174/175	%
4401760741	LW3.4-20170207-11:11-0.5	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401760741	LW3.75-20170207-10:45-0.9	2/7/2017	E300	16887-00-6	Chloride	270	_	0.50	50	mg/l					
4401760741	LW3.75-20170207-10:45-0.9	2/7/2017	E300	24959-67-9	Bromide	0.61	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401760741	LW3.75-20170207-10:45-0.9	2/7/2017	E300.1	14866-68-3	Chlorate	120		20.00	40	ug/l					
4401760741	LW3.75-20170207-10:45-0.9	2/7/2017	E314.0	14797-73-0	Perchlorate	35		0.95	4.0	ug/l	J+	m	matrix spike %R	174/175	%
4401760741	LW3.75-20170207-10:45-0.9	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401760741	LW3.85-20170207-10:12-0.5	2/7/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401760741	LW3.85-20170207-10:12-0.5	2/7/2017	E300	24959-67-9	Bromide	0.57	J	0.50	1.0	mg/l					
4401760741	LW3.85-20170207-10:12-0.5	2/7/2017	E300.1	14866-68-3	Chlorate	120		20.00	40	ug/l					
4401760741	LW3.85-20170207-10:12-0.5	2/7/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l	J+	m	matrix spike %R	174/175	%
4401760741	LW3.85-20170207-10:12-0.5	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401760741	LWC3.7-20170207-10:32-0.4	2/7/2017	E300	16887-00-6	Chloride	360		0.50	50	mg/l					
4401760741	LWC3.7-20170207-10:32-0.4	2/7/2017	E300	24959-67-9	Bromide	0.72	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401760741	LWC3.7-20170207-10:32-0.4	2/7/2017	E300.1	14866-68-3	Chlorate	1800		200.00	400	ug/l					
4401760741	LWC3.7-20170207-10:32-0.4	2/7/2017	E314.0	14797-73-0	Perchlorate	670		9.50	40	ug/l	J+	m	matrix spike %R	174/175	%
4401760741	LWC3.7-20170207-10:32-0.4	2/7/2017	SM2540C	TDS	Total Dissolved Solids	2100		5.00	20	mg/l					
4401760761	LW6.05-20170207-09:30-0.6	2/7/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401760761	LW6.05-20170207-09:30-0.6	2/7/2017	E300	24959-67-9	Bromide	0.50	J	0.50	1.0	mg/l					
4401760761	LW6.05-20170207-09:30-0.6	2/7/2017	E300.1	14866-68-3	Chlorate	51		20.00	40	ug/l					
4401760761	LW6.05-20170207-09:30-0.6	2/7/2017	E314.0	14797-73-0	Perchlorate	18	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	148/148	%
4401760761	LW6.05-20170207-09:30-0.6	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401760761	LW6.7-20170207-09:13-0.4	2/7/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401760761	LW6.7-20170207-09:13-0.4	2/7/2017	E300	24959-67-9	Bromide	0.56	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401760761	LW6.7-20170207-09:13-0.4	2/7/2017	E300.1	14866-68-3	Chlorate	69		20.00	40	ug/l					
4401760761	LW6.7-20170207-09:13-0.4	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401760761	LW6.7-20170207-09:13-0.4	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1700		5.00	20	mg/l					
4401760761	LW7.2-20170207-08:55-0.7	2/7/2017	E300	16887-00-6	Chloride	210		0.25	25	mg/l					
4401760761	LW7.2-20170207-08:55-0.7	2/7/2017	E300	24959-67-9	Bromide	0.40	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401760761	LW7.2-20170207-08:55-0.7	2/7/2017	E300.1	14866-68-3	Chlorate	58		20.00	40	ug/l					
4401760761	LW7.2-20170207-08:55-0.7	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401760761	LW7.2-20170207-08:55-0.7	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
4401760781	GLW4.4-20170207-10:18-1.1	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					
4401760781	GLW4.4-20170207-10:18-1.1	2/7/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l					
4401760781	GLW4.4-20170207-10:18-1.1	2/7/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l					
4401760781	GLW4.4-20170207-10:18-1.1	2/7/2017	E314.0	14797-73-0	Perchlorate	25		0.95	4.0	ug/l	J+	m	matrix spike %R	170/168	%
4401760781	GLW4.4-20170207-10:18-1.1	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401760781	GLW4.85-20170207-09:42-0.7	2/7/2017	E300	16887-00-6	Chloride	380		0.50	50	mg/l					
4401760781	GLW4.85-20170207-09:42-0.7	2/7/2017	E300	24959-67-9	Bromide	1.0		0.50	1.0	mg/l					
4401760781	GLW4.85-20170207-09:42-0.7	2/7/2017	E300.1	14866-68-3	Chlorate	3000		500.00	1000	ug/l					
4401760781	GLW4.85-20170207-09:42-0.7	2/7/2017	E314.0	14797-73-0	Perchlorate	860		9.50	40	ug/l	J+	m	matrix spike %R	170/168	%
4401760781	GLW4.85-20170207-09:42-0.7	2/7/2017	SM2540C	TDS	Total Dissolved Solids	2100		5.00	20	mg/l					
4401760781	LW4.1-20170207-10:39-0.3	2/7/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401760781	LW4.1-20170207-10:39-0.3	2/7/2017	E300	24959-67-9	Bromide	1.4		0.50	1.0	mg/l					
4401760781	LW4.1-20170207-10:39-0.3	2/7/2017	E300.1	14866-68-3	Chlorate	230		20.00	40	ug/l					
4401760781	LW4.1-20170207-10:39-0.3	2/7/2017	E314.0	14797-73-0	Perchlorate	47	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	170/168	%
4401760781	LW4.1-20170207-10:39-0.3	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401760791	LW6.05-20170207-11:20-0.6	2/7/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401760791	LW6.05-20170207-11:20-0.6	2/7/2017	E300	24959-67-9	Bromide	1.5		0.50	1.0	mg/l					

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SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualific	
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Find	ing
4401760791	LW6.05-20170207-11:20-0.6	2/7/2017	E300.1	14866-68-3	Chlorate	63		20.00	40	ug/l					
4401760791	LW6.05-20170207-11:20-0.6	2/7/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0	ug/l					
4401760791	LW6.05-20170207-11:20-0.6	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l					
4401760791	LW7.2-20170207-10:55-0.8	2/7/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l					
4401760791	LW7.2-20170207-10:55-0.8	2/7/2017	E300	24959-67-9	Bromide	1.3		0.25	0.50	mg/l					
4401760791	LW7.2-20170207-10:55-0.8	2/7/2017	E300.1	14866-68-3	Chlorate	60		20.00	40	ug/l					
4401760791	LW7.2-20170207-10:55-0.8	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401760791	LW7.2-20170207-10:55-0.8	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l					
4401760801	GLWC6.1_3-20170207-09:30-1.0	2/7/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l					
4401760801	GLWC6.1_3-20170207-09:30-1.0	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401760801	GLWC6.1_3-20170207-09:30-1.0	2/7/2017	E300.1	14866-68-3	Chlorate	100	_	20.00	40	ug/l					
4401760801	GLWC6.1_3-20170207-09:30-1.0	2/7/2017	E314.0	14797-73-0	Perchlorate	1.5	J	0.95	4.0	ug/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401760801	GLWC6.1_3-20170207-09:30-1.0	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l					
4401760801	GLWC6.1_4-20170207-10:35-1.3	2/7/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l					
4401760801	GLWC6.1_4-20170207-10:35-1.3	2/7/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401760801	GLWC6.1_4-20170207-10:35-1.3	2/7/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l					
4401760801	GLWC6.1_4-20170207-10:35-1.3	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401760801	GLWC6.1_4-20170207-10:35-1.3	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l					
4401760801	LW5.9-20170207-10:00-0.4	2/7/2017	E300	16887-00-6	Chloride	300		0.25	25	mg/l					
4401760801	LW5.9-20170207-10:00-0.4	2/7/2017	E300	24959-67-9	Bromide	0.26	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401760801	LW5.9-20170207-10:00-0.4	2/7/2017	E300.1	14866-68-3	Chlorate	56		20.00	40	ug/l					
4401760801	LW5.9-20170207-10:00-0.4	2/7/2017	E314.0	14797-73-0	Perchlorate	17	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	125/127	%
4401760801	LW5.9-20170207-10:00-0.4	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401760801	LWC6.1_1-20170207-09:03-0.9	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					
4401760801	LWC6.1_1-20170207-09:03-0.9	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401760801	LWC6.1_1-20170207-09:03-0.9	2/7/2017	E300.1	14866-68-3	Chlorate	98		20.00	40	ug/l					
4401760801	LWC6.1_1-20170207-09:03-0.9	2/7/2017	E314.0	14797-73-0	Perchlorate	1.3	J	0.95	4.0	ug/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401760801	LWC6.1_1-20170207-09:03-0.9	2/7/2017	SM2540C	TDS	Total Dissolved Solids	660		5.00	10	mg/l					
4401760801	LWC6.1_2-20170207-09:20-0.7	2/7/2017	E300	16887-00-6	Chloride	140		0.25	25	mg/l					
4401760801	LWC6.1_2-20170207-09:20-0.7	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					
4401760801	LWC6.1_2-20170207-09:20-0.7	2/7/2017	E300.1	14866-68-3	Chlorate	67		20.00	40	ug/l					
4401760801	LWC6.1_2-20170207-09:20-0.7	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401760801	LWC6.1_2-20170207-09:20-0.7	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l					
4401760821	GLW4.9-20170207-10:55-1.2	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					
4401760821	GLW4.9-20170207-10:55-1.2	2/7/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l					
4401760821	GLW4.9-20170207-10:55-1.2	2/7/2017	E300.1	14866-68-3	Chlorate	94		20.00	40	ug/l					
4401760821	GLW4.9-20170207-10:55-1.2	2/7/2017	E314.0	14797-73-0	Perchlorate	28	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	149/149	%
4401760821	GLW4.9-20170207-10:55-1.2	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401760821	LW4.95-20170207-10:45-1.0	2/7/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401760821	LW4.95-20170207-10:45-1.0	2/7/2017	E300	24959-67-9	Bromide	1.5		0.50	1.0	mg/l					
4401760821	LW4.95-20170207-10:45-1.0	2/7/2017	E300.1	14866-68-3	Chlorate	79		20.00	40	ug/l					
4401760821	LW4.95-20170207-10:45-1.0	2/7/2017	E314.0	14797-73-0	Perchlorate	24		0.95	4.0	ug/l	J+	m	matrix spike %R	149/149	%
4401760821	LW4.95-20170207-10:45-1.0	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401760821	LW5.3-20170207-09:45-1.0	2/7/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401760821	LW5.3-20170207-09:45-1.0	2/7/2017	E300	24959-67-9	Bromide	0.98	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td><u> -</u></td><td><u> </u>-</td></pql<>	<u> -</u>	<u> </u> -
4401760821	LW5.3-20170207-09:45-1.0	2/7/2017	E300.1	14866-68-3	Chlorate	57		20.00	40	ug/l					
4401760821	LW5.3-20170207-09:45-1.0	2/7/2017	E314.0	14797-73-0	Perchlorate	19		0.95	4.0	ug/l	J+	m	matrix spike %R	149/149	%
4401760821	LW5.3-20170207-09:45-1.0	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401760821	LW5.3-20170207-09:50-2.0	2/7/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401760821	LW5.3-20170207-09:50-2.0	2/7/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0	mg/l					

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client	Analyte	Lab	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualific	
4401760821	LW5.3-20170207-09:50-2.0	2/7/2017	E300.1	14866-68-3	Chlorate	Result 59	Qualifier	20.00	40	ug/l	Qualifier	Code	Definition	Find	ing
4401760821	LW5.3-20170207-09:50-2.0	2/7/2017	E314.0	14797-73-0	Perchlorate	20		0.95	4.0	ug/l	J+	m	matrix spike %R	149/149	%
4401760821	LW5.3-20170207-09:50-2.0	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l	J+	111	matrix spike /orc	143/143	70
4401762381	LW6.05-20170206-11:20-0.6	2/6/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					+
4401762381	LW6.05-20170206-11:20-0.6	2/6/2017	E300	24959-67-9	Bromide	0.26	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td><td>+</td></pql<>		+
4401762381	LW6.05-20170206-11:20-0.6	2/6/2017	E300.1	14866-68-3	Chlorate	57	3	20.00	40	ug/l		зр	Delect CI QL		+
4401762381	LW6.05-20170206-11:20-0.6	2/6/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0	ug/l					+
4401762381	LW6.05-20170206-11:20-0.6	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					+
4401762381	LW6.7-20170206-11:20-0.6	2/6/2017	E300	16887-00-6	Chloride	250		0.25	25						+
4401762381	LW6.7-20170206-10:15-0.4	2/6/2017	E300	24959-67-9	Bromide	0.30	J	0.25	0.50	mg/l mg/l	J	SD	Detect <pql< td=""><td></td><td>+</td></pql<>		+
4401762381	LW6.7-20170206-10:15-0.4	2/6/2017	E300.1	14866-68-3	Chlorate	53	J	20.00	40	ug/l	J	sp	Delect < PQL		
4401762381	LW6.7-20170206-10:15-0.4	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0						+
4401762381	LW6.7-20170206-10:15-0.4	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400	U	5.00	10	ug/l					+
4401762381	LW7.2-20170206-10.13-0.4 LW7.2-20170206-09:45-0.8	2/6/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					+
4401762381	LW7.2-20170206-09:45-0.8	2/6/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					+-
4401762381					Chlorate		U			mg/l					+-
	LW7.2-20170206-09:45-0.8	2/6/2017	E300.1 E314.0	14866-68-3		51 0.95	U	20.00 0.95	40	ug/l					
4401762381 4401762381	LW7.2-20170206-09:45-0.8	2/6/2017	SM2540C	14797-73-0 TDS	Perchlorate		U	5.00	4.0	ug/l					+-
	LW7.2-20170206-09:45-0.8	2/6/2017			Total Dissolved Solids	1300	U			mg/l					+
4401762381	LW7.2-20170206-15:50-EB	2/6/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l					+
4401762381	LW7.2-20170206-15:50-EB	2/6/2017	E300	24959-67-9	Bromide	0.25		0.25	0.50	mg/l					+
4401762381	LW7.2-20170206-15:50-EB	2/6/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					+
4401762381	LW7.2-20170206-15:50-EB	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					+
4401762381	LW7.2-20170206-15:50-EB	2/6/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					+
4401762431	GLW3.78-20170206-16:40-0.96	2/6/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					+
4401762431	GLW3.78-20170206-16:40-0.96	2/6/2017	E300	24959-67-9	Bromide	0.50		0.25	0.50	mg/l					4
4401762431	GLW3.78-20170206-16:40-0.96	2/6/2017	E300.1	14866-68-3	Chlorate	210		20.00	40	ug/l					
4401762431	GLW3.78-20170206-16:40-0.96	2/6/2017	E314.0	14797-73-0	Perchlorate	40		0.95	4.0	ug/l					
4401762431	GLW3.78-20170206-16:40-0.96	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401762431	LW3.4-20170206-17:01-0.7	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401762431	LW3.4-20170206-17:01-0.7	2/6/2017	E300	24959-67-9	Bromide	0.50		0.25	0.50	mg/l					
4401762431	LW3.4-20170206-17:01-0.7	2/6/2017	E300.1	14866-68-3	Chlorate	130		20.00	40	ug/l					4
4401762431	LW3.4-20170206-17:01-0.7	2/6/2017	E314.0	14797-73-0	Perchlorate	38		0.95	4.0	ug/l	J+	m	matrix spike %R	146/149	%
4401762431	LW3.4-20170206-17:01-0.7	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401762431	LW3.4-20170206-17:01-0.7-FD	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401762431	LW3.4-20170206-17:01-0.7-FD	2/6/2017	E300	24959-67-9	Bromide	0.48	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>┷</td></pql<>	-	┷
4401762431	LW3.4-20170206-17:01-0.7-FD	2/6/2017	E300.1	14866-68-3	Chlorate	140		20.00	40	ug/l					
4401762431	LW3.4-20170206-17:01-0.7-FD	2/6/2017	E314.0	14797-73-0	Perchlorate	38		0.95	4.0	ug/l	J+	m	matrix spike %R	146/149	%
4401762431	LW3.4-20170206-17:01-0.7-FD	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401762431	LW3.75-20170206-16:30-0.67	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401762431	LW3.75-20170206-16:30-0.67	2/6/2017	E300	24959-67-9	Bromide	0.59		0.25	0.50	mg/l					
4401762431	LW3.75-20170206-16:30-0.67	2/6/2017	E300.1	14866-68-3	Chlorate	100	<u> </u>	20.00	40	ug/l					4
4401762431	LW3.75-20170206-16:30-0.67	2/6/2017	E314.0	14797-73-0	Perchlorate	26	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	146/149	%
4401762431	LW3.75-20170206-16:30-0.67	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					4
4401762431	LW3.85-20170206-16:03-0.58	2/6/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					4
4401762431	LW3.85-20170206-16:03-0.58	2/6/2017	E300	24959-67-9	Bromide	0.60		0.25	0.50	mg/l					4
4401762431	LW3.85-20170206-16:03-0.58	2/6/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l					
4401762431	LW3.85-20170206-16:03-0.58	2/6/2017	E314.0	14797-73-0	Perchlorate	28		0.95	4.0	ug/l	J+	m	matrix spike %R	146/149	%
4401762431	LW3.85-20170206-16:03-0.58	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401762431	LWC3.7-20170206-16:20-0.58	2/6/2017	E300	16887-00-6	Chloride	410		1.25	100	mg/l					
4401762431	LWC3.7-20170206-16:20-0.58	2/6/2017	E300	24959-67-9	Bromide	1.25	U	1.25	2.5	mg/l					

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	-	Result	Qualifier				Qualifier	Code	Definition	Finding
4401762431	LWC3.7-20170206-16:20-0.58	2/6/2017	E300.1	14866-68-3	Chlorate	2500		500.00	1000	ug/l				
4401762431	LWC3.7-20170206-16:20-0.58	2/6/2017	E314.0	14797-73-0	Perchlorate	880		19.00	80	ug/l				
4401762431	LWC3.7-20170206-16:20-0.58	2/6/2017	SM2540C	TDS	Total Dissolved Solids	2300		5.00	20	mg/l				
4401762481	LW6.05-20170206-15:26-0.7	2/6/2017	E300	16887-00-6	Chloride	210		0.25	25	mg/l				
4401762481	LW6.05-20170206-15:26-0.7	2/6/2017	E300	24959-67-9	Bromide	0.65		0.25	0.50	mg/l				
4401762481	LW6.05-20170206-15:26-0.7	2/6/2017	E300.1	14866-68-3	Chlorate	48		20.00	40	ug/l				
4401762481	LW6.05-20170206-15:26-0.7	2/6/2017	E314.0	14797-73-0	Perchlorate	8.9		0.95	4.0	ug/l				
4401762481	LW6.05-20170206-15:26-0.7	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401762481	LW6.7-20170206-15:00-0.6	2/6/2017	E300	16887-00-6	Chloride	200	_	0.25	25	mg/l				
4401762481	LW6.7-20170206-15:00-0.6	2/6/2017	E300	24959-67-9	Bromide	0.36	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401762481	LW6.7-20170206-15:00-0.6	2/6/2017	E300.1	14866-68-3	Chlorate	44		20.00	40	ug/l				
4401762481	LW6.7-20170206-15:00-0.6	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401762481	LW6.7-20170206-15:00-0.6	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401762481	LW7.2-20170206-14:30-1.0	2/6/2017	E300	16887-00-6	Chloride	200		0.25	25	mg/l				
4401762481	LW7.2-20170206-14:30-1.0	2/6/2017	E300	24959-67-9	Bromide	0.44	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401762481	LW7.2-20170206-14:30-1.0	2/6/2017	E300.1	14866-68-3	Chlorate	43		20.00	40	ug/l				
4401762481	LW7.2-20170206-14:30-1.0	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401762481	LW7.2-20170206-14:30-1.0	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401762481	LW7.2-20170206-14:30-1.0-FD	2/6/2017	E300	16887-00-6	Chloride	200		0.25	25	mg/l				
4401762481	LW7.2-20170206-14:30-1.0-FD	2/6/2017	E300	24959-67-9	Bromide	0.46	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401762481	LW7.2-20170206-14:30-1.0-FD	2/6/2017	E300.1	14866-68-3	Chlorate	44		20.00	40	ug/l				
4401762481	LW7.2-20170206-14:30-1.0-FD	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401762481	LW7.2-20170206-14:30-1.0-FD	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401762531	LW6.05-20170206-12:36-0.7	2/6/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401762531	LW6.05-20170206-12:36-0.7	2/6/2017	E300	24959-67-9	Bromide	0.46	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401762531	LW6.05-20170206-12:36-0.7	2/6/2017	E300.1	14866-68-3	Chlorate	60		20.00	40	ug/l				
4401762531	LW6.05-20170206-12:36-0.7	2/6/2017	E314.0	14797-73-0	Perchlorate	13		0.95	4.0	ug/l				
4401762531	LW6.05-20170206-12:36-0.7	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401762531	LW7.2-20170206-12:10-0.8	2/6/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l				
4401762531	LW7.2-20170206-12:10-0.8	2/6/2017	E300	24959-67-9	Bromide	0.52		0.25	0.50	mg/l				
4401762531	LW7.2-20170206-12:10-0.8	2/6/2017	E300.1	14866-68-3	Chlorate	53		20.00	40	ug/l				
4401762531	LW7.2-20170206-12:10-0.8	2/6/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401762531	LW7.2-20170206-12:10-0.8	2/6/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401763631	GLW3.78-20170208-10:10-0.5	2/8/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401763631	GLW3.78-20170208-10:10-0.5	2/8/2017	E300	24959-67-9	Bromide	0.62	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763631	GLW3.78-20170208-10:10-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	210		20.00	40	ug/l				
4401763631	GLW3.78-20170208-10:10-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	52		0.95	4.0	ug/l				
4401763631	GLW3.78-20170208-10:10-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763631	LW3.4-20170208-10:30-0.5	2/8/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401763631	LW3.4-20170208-10:30-0.5	2/8/2017	E300	24959-67-9	Bromide	0.60	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763631	LW3.4-20170208-10:30-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	170		20.00	40	ug/l				
4401763631	LW3.4-20170208-10:30-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	50		0.95	4.0	ug/l				
4401763631	LW3.4-20170208-10:30-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401763631	LW3.4-20170208-10:55-FB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763631	LW3.4-20170208-10:55-FB	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763631	LW3.4-20170208-10:55-FB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763631	LW3.4-20170208-10:55-FB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763631	LW3.4-20170208-10:55-FB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	Ü	5.00	10	mg/l				
4401763631	LW3.75-20170208-09:57-0.8	2/8/2017	E300	16887-00-6	Chloride	260	-	0.50	50	mg/l				
4401763631	LW3.75-20170208-09:57-0.8	2/8/2017	E300	24959-67-9	Bromide	0.56	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
4401763631	Sample ID	Date 2/8/2017	E300.1	14866-68-3	Chlorate	Result 120	Qualifier	20.00	40	ua/l	Qualifier	Code	Definition	Finding
4401763631	LW3.75-20170208-09:57-0.8 LW3.75-20170208-09:57-0.8	2/8/2017	E300.1	14797-73-0	Perchlorate	26		0.95	4.0	ug/l ug/l				
4401763631	LW3.75-20170208-09:57-0.8	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10					
4401763631	LW3.85-20170208-09:27-0.5	2/8/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401763631	LW3.85-20170208-09:27-0.5	2/8/2017	E300	24959-67-9	Bromide	0.58	J	0.50	1.0	mg/l mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763631	LW3.85-20170208-09:27-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	130	J	20.00	40	ug/l	J	sp	Delect <fql< td=""><td></td></fql<>	
4401763631	LW3.85-20170208-09:27-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	34		0.95	4.0	ug/l				
4401763631	LW3.85-20170208-09:27-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763631	LW3.85-20170208-09:27-0.5 LW3.85-20170208-09:27-0.5-FD	2/8/2017	E300	16887-00-6	Chloride	260		0.50	50					
4401763631	LW3.85-20170208-09:27-0.5-FD	2/8/2017	E300	24959-67-9	Bromide	0.52	.I	0.50	1.0	mg/l mg/l	J	SD	Detect <pql< td=""><td></td></pql<>	
4401763631	LW3.85-20170208-09:27-0.5-FD	2/8/2017	E300.1	14866-68-3	Chlorate	130	J	20.00	40	ug/l	J	Sp	Delect CFQL	
4401763631	LW3.85-20170208-09:27-0.5-FD	2/8/2017	E314.0	14797-73-0	Perchlorate	34		0.95	4.0	ug/l				
4401763631	LW3.85-20170208-09:27-0.5-FD	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401763631	LWC3.7-20170208-09:48-0.5	2/8/2017	E300	16887-00-6	Chloride	340		0.50	50	mg/l				
4401763631	LWC3.7-20170208-09:48-0.5	2/8/2017	E300	24959-67-9	Bromide	0.81	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763631	LWC3.7-20170208-09:48-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	2000	J	200.00	400	ug/l	<u> </u>	зр	Detect <1 QL	
4401763631	LWC3.7-20170208-09:48-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	570		9.50	400	ug/l				
4401763631	LWC3.7-20170208-09:48-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	2000		5.00	20	mg/l				
4401763641	GLW4.4-20170208-10:07-1.1	2/8/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l				
4401763641	GLW4.4-20170208-10:07-1.1	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763641	GLW4.4-20170208-10:07-1.1	2/8/2017	E300.1	14866-68-3	Chlorate	120	U	20.00	40	ug/l				
4401763641	GLW4.4-20170208-10:07-1.1	2/8/2017	E314.0	14797-73-0	Perchlorate	27		0.95	4.0	ug/l				
4401763641	GLW4.4-20170208-10:07-1.1	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763641	GLW4.4-20170208-11:02-EB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763641	GLW4.4-20170208-11:02-EB	2/8/2017	E300	24959-67-9	Bromide	0.25	Ü	0.25	0.50	mg/l				
4401763641	GLW4.4-20170208-11:02-EB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	Ü	10.00	20	ug/l				
4401763641	GLW4.4-20170208-11:02-EB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	Ü	0.95	4.0	ug/l				
4401763641	GLW4.4-20170208-11:02-EB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	Ü	5.00	10	mg/l				
4401763641	GLW4.85-20170208-09:45-0.6	2/8/2017	E300	16887-00-6	Chloride	310		0.50	50	mg/l				
4401763641	GLW4.85-20170208-09:45-0.6	2/8/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401763641	GLW4.85-20170208-09:45-0.6	2/8/2017	E300.1	14866-68-3	Chlorate	1100		100.00	200	ug/l				
4401763641	GLW4.85-20170208-09:45-0.6	2/8/2017	E314.0	14797-73-0	Perchlorate	290		4.75	20	ug/l				
4401763641	GLW4.85-20170208-09:45-0.6	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l				
4401763641	LW4.1-20170208-10:22-0.4	2/8/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l				
4401763641	LW4.1-20170208-10:22-0.4	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763641	LW4.1-20170208-10:22-0.4	2/8/2017	E300.1	14866-68-3	Chlorate	210		20.00	40	ug/l				
4401763641	LW4.1-20170208-10:22-0.4	2/8/2017	E314.0	14797-73-0	Perchlorate	53		0.95	4.0	ug/l				
4401763641	LW4.1-20170208-10:22-0.4	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763641	LW4.1-20170208-10:22-0.4-FD	2/8/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401763641	LW4.1-20170208-10:22-0.4-FD	2/8/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401763641	LW4.1-20170208-10:22-0.4-FD	2/8/2017	E300.1	14866-68-3	Chlorate	220		20.00	40	ug/l				
4401763641	LW4.1-20170208-10:22-0.4-FD	2/8/2017	E314.0	14797-73-0	Perchlorate	52		0.95	4.0	ug/l				
4401763641	LW4.1-20170208-10:22-0.4-FD	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763641	LW4.1-20170208-11:12-FB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763641	LW4.1-20170208-11:12-FB	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763641	LW4.1-20170208-11:12-FB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763641	LW4.1-20170208-11:12-FB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763641	LW4.1-20170208-11:12-FB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401763671	GLW4.9-20170208-10:50-1.2	2/8/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401763671	GLW4.9-20170208-10:50-1.2	2/8/2017	E300	24959-67-9	Bromide	1.6		0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
SDG	Sample ID	Date	Wethou	Analyte ID	Analyte	Result	Qualifier		FUL	Units	Qualifier	Code	Definition	Finding
4401763671	GLW4.9-20170208-10:50-1.2	2/8/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l				
4401763671	GLW4.9-20170208-10:50-1.2	2/8/2017	E314.0	14797-73-0	Perchlorate	22		0.95	4.0	ug/l				
4401763671	GLW4.9-20170208-10:50-1.2	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763671	GLW4.9-20170208-11:09-FB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763671	GLW4.9-20170208-11:09-FB	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763671	GLW4.9-20170208-11:09-FB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763671	GLW4.9-20170208-11:09-FB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763671	GLW4.9-20170208-11:09-FB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401763671	LW4.95-20170208-10:30-1.1	2/8/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401763671	LW4.95-20170208-10:30-1.1	2/8/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l				
4401763671	LW4.95-20170208-10:30-1.1	2/8/2017	E300.1	14866-68-3	Chlorate	83		20.00	40	ug/l				
4401763671	LW4.95-20170208-10:30-1.1	2/8/2017	E314.0	14797-73-0	Perchlorate	19		0.95	4.0	ug/l				
4401763671	LW4.95-20170208-10:30-1.1	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763671	LW4.95-20170208-11:06-EB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763671	LW4.95-20170208-11:06-EB	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763671	LW4.95-20170208-11:06-EB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763671	LW4.95-20170208-11:06-EB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763671	LW4.95-20170208-11:06-EB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401763671	LW5.3-20170208-10:00-1.0	2/8/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401763671	LW5.3-20170208-10:00-1.0	2/8/2017	E300	24959-67-9	Bromide	1.5		0.25	0.50	mg/l				
4401763671	LW5.3-20170208-10:00-1.0	2/8/2017	E300.1	14866-68-3	Chlorate	73		20.00	40	ug/l				
4401763671	LW5.3-20170208-10:00-1.0	2/8/2017	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l				
4401763671	LW5.3-20170208-10:00-1.0	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763671	LW5.3-20170208-10:03-2.0	2/8/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l				
4401763671	LW5.3-20170208-10:03-2.0	2/8/2017	E300	24959-67-9	Bromide	1.5		0.50	1.0	mg/l				
4401763671	LW5.3-20170208-10:03-2.0	2/8/2017	E300.1	14866-68-3	Chlorate	81		20.00	40	ug/l				
4401763671	LW5.3-20170208-10:03-2.0	2/8/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0	ug/l				
4401763671	LW5.3-20170208-10:03-2.0	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763681	LW6.05-20170208-09:35-0.5	2/8/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l				
4401763681	LW6.05-20170208-09:35-0.5	2/8/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401763681	LW6.05-20170208-09:35-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	65		20.00	40	ug/l				
4401763681	LW6.05-20170208-09:35-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	18		0.95	4.0	ug/l				
4401763681	LW6.05-20170208-09:35-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401763681	LW6.05-20170208-10:30-FB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763681	LW6.05-20170208-10:30-FB	2/8/2017	E300	24959-67-9	Bromide	0.25	Ü	0.25	0.50	mg/l				
4401763681	LW6.05-20170208-10:30-FB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763681	LW6.05-20170208-10:30-FB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	Ü	0.95	4.0	ug/l				
4401763681	LW6.05-20170208-10:30-FB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	Ü	5.00	10	mg/l				
4401763681	LW6.7-20170208-09:03-0.3	2/8/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l				
4401763681	LW6.7-20170208-09:03-0.3	2/8/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401763681	LW6.7-20170208-09:03-0.3	2/8/2017	E300.1	14866-68-3	Chlorate	62		20.00	40	ug/l				
4401763681	LW6.7-20170208-09:03-0.3	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763681	LW6.7-20170208-09:03-0.3	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1700		5.00	20	mg/l				
4401763681	LW6.7-20170208-10:35-EB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763681	LW6.7-20170208-10:35-EB	2/8/2017	E300	24959-67-9	Bromide	0.25	Ü	0.25	0.50	mg/l				
4401763681	LW6.7-20170208-10:35-EB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	Ü	10.00	20	ug/l				
4401763681	LW6.7-20170208-10:35-EB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	Ü	0.95	4.0	ug/l				
4401763681	LW6.7-20170208-10:35-EB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	Ü	5.00	10	mg/l				
4401763681	LW7.2-20170208-08:45-0.7	2/8/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l				
4401763681	LW7.2-20170208-08:45-0.7	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
0170001	<u>L</u>	LIGILOTI	_000	_ 1000 07 0	Didiliad	0.20		0.20	0.00	1119/1		l		

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding
4401763681	LW7.2-20170208-08:45-0.7	2/8/2017	E300.1	14866-68-3	Chlorate	59	Qualifier	20.00	40	ug/l	Qualifier	Code	Deminion	riliulity
4401763681	LW7.2-20170208-08:45-0.7	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763681	LW7.2-20170208-08:45-0.7	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401763701	GLWC6.1 3-20170208-10:05-1.2	2/8/2017	E300	16887-00-6	Chloride	210		0.25	25	mg/l				
4401763701	GLWC6.1 3-20170208-10:05-1.2	2/8/2017	E300	24959-67-9	Bromide	0.26	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763701	GLWC6.1 3-20170208-10:05-1.2	2/8/2017	E300.1	14866-68-3	Chlorate	93		20.00	40	ug/l			20.000 11 42	
4401763701	GLWC6.1 3-20170208-10:05-1.2	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	GLWC6.1 3-20170208-10:05-1.2	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401763701	GLWC6.1 4-20170208-10:35-1.3	2/8/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l				
4401763701	GLWC6.1_4-20170208-10:35-1.3	2/8/2017	E300	24959-67-9	Bromide	0.46	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763701	GLWC6.1_4-20170208-10:35-1.3	2/8/2017	E300.1	14866-68-3	Chlorate	88		20.00	40	ug/l			20.000 11 42	
4401763701	GLWC6.1 4-20170208-10:35-1.3	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	GLWC6.1 4-20170208-10:35-1.3	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401763701	GLWC6.1 4-20170208-10:35-1.3-FD	2/8/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l				
4401763701	GLWC6.1 4-20170208-10:35-1.3-FD	2/8/2017	E300	24959-67-9	Bromide	0.25	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763701	GLWC6.1 4-20170208-10:35-1.3-FD	2/8/2017	E300.1	14866-68-3	Chlorate	89		20.00	40	ug/l	<u> </u>			
4401763701	GLWC6.1 4-20170208-10:35-1.3-FD	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	GLWC6.1 4-20170208-10:35-1.3-FD	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401763701	LW5.9-20170208-10:35-0.4	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401763701	LW5.9-20170208-10:35-0.4	2/8/2017	E300	24959-67-9	Bromide	0.55		0.25	0.50	mg/l				
4401763701	LW5.9-20170208-10:35-0.4	2/8/2017	E300.1	14866-68-3	Chlorate	70		20.00	40	ug/l				
4401763701	LW5.9-20170208-10:35-0.4	2/8/2017	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l				
4401763701	LW5.9-20170208-10:35-0.4	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401763701	LW5.9-20170208-11:45-FB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763701	LW5.9-20170208-11:45-FB	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763701	LW5.9-20170208-11:45-FB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763701	LW5.9-20170208-11:45-FB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	LW5.9-20170208-11:45-FB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401763701	LWC6.1 1-20170208-09:45-0.9	2/8/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l				
4401763701	LWC6.1 1-20170208-09:45-0.9	2/8/2017	E300	24959-67-9	Bromide	0.39	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763701	LWC6.1 1-20170208-09:45-0.9	2/8/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l				
4401763701	LWC6.1 1-20170208-09:45-0.9	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	LWC6.1 1-20170208-09:45-0.9	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401763701	LWC6.1 1-20170208-11:40-EB	2/8/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401763701	LWC6.1_1-20170208-11:40-EB	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763701	LWC6.1_1-20170208-11:40-EB	2/8/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l				
4401763701	LWC6.1_1-20170208-11:40-EB	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	LWC6.1_1-20170208-11:40-EB	2/8/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l				
4401763701	LWC6.1_2-20170208-10:00-0.6	2/8/2017	E300	16887-00-6	Chloride	96		0.25	10	mg/l				
4401763701	LWC6.1_2-20170208-10:00-0.6	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763701	LWC6.1_2-20170208-10:00-0.6	2/8/2017	E300.1	14866-68-3	Chlorate	64		20.00	40	ug/l				
4401763701	LWC6.1_2-20170208-10:00-0.6	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763701	LWC6.1_2-20170208-10:00-0.6	2/8/2017	SM2540C	TDS	Total Dissolved Solids	630		5.00	10	mg/l				
4401763711	LW4.95-20170207-13:25-1.2	2/7/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401763711	LW4.95-20170207-13:25-1.2	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763711	LW4.95-20170207-13:25-1.2	2/7/2017	E300.1	14866-68-3	Chlorate	74		20.00	40	ug/l				
4401763711	LW4.95-20170207-13:25-1.2	2/7/2017	E314.0	14797-73-0	Perchlorate	12		0.95	4.0	ug/l				
4401763711	LW4.95-20170207-13:25-1.2	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401763731	LW3.4-20170207-14:35-0.6	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l				
4401763731	LW3.4-20170207-14:35-0.6	2/7/2017	E300	24959-67-9	Bromide	0.62		0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition		ification nding
4401763731	LW3.4-20170207-14:35-0.6	2/7/2017	E300.1	14866-68-3	Chlorate	170	Qualifici	20.00	40	ug/l	Qualifici	Oouc	Deminion		lulig
4401763731	LW3.4-20170207-14:35-0.6	2/7/2017	E314.0	14797-73-0	Perchlorate	42		0.95	4.0	ug/l					
4401763731	LW3.4-20170207-14:35-0.6	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401763741	GLW4.4-20170207-14:11-1.3	2/7/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401763741	GLW4.4-20170207-14:11-1.3	2/7/2017	E300	24959-67-9	Bromide	1.6		0.50	1.0	mg/l					
4401763741	GLW4.4-20170207-14:11-1.3	2/7/2017	E300.1	14866-68-3	Chlorate	97		20.00	40	ug/l					
4401763741	GLW4.4-20170207-14:11-1.3	2/7/2017	E314.0	14797-73-0	Perchlorate	25		0.95	4.0	ug/l					
4401763741	GLW4.4-20170207-14:11-1.3	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401763741	GLW4.4-20170207-14:11-1.3-FD	2/7/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401763741	GLW4.4-20170207-14:11-1.3-FD	2/7/2017	E300	24959-67-9	Bromide	1.2		0.50	1.0	mg/l					
4401763741	GLW4.4-20170207-14:11-1.3-FD	2/7/2017	E300.1	14866-68-3	Chlorate	96		20.00	40	ug/l					
4401763741	GLW4.4-20170207-14:11-1.3-FD	2/7/2017	E314.0	14797-73-0	Perchlorate	25		0.95	4.0	ug/l					
4401763741	GLW4.4-20170207-14:11-1.3-FD	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401763751	LW6.05-20170208-12:35-0.8	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401763751	LW6.05-20170208-12:35-0.8	2/8/2017	E300	24959-67-9	Bromide	0.56		0.25	0.50	mg/l					
4401763751	LW6.05-20170208-12:35-0.8	2/8/2017	E300.1	14866-68-3	Chlorate	72		20.00	40	ug/l					
4401763751	LW6.05-20170208-12:35-0.8	2/8/2017	E314.0	14797-73-0	Perchlorate	11		0.95	4.0	ug/l	J	f	FD RPD >30%	32	%
4401763751	LW6.05-20170208-12:35-0.8	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401763751	LW6.05-20170208-12:35-0.8-FD	2/8/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l					
4401763751	LW6.05-20170208-12:35-0.8-FD	2/8/2017	E300	24959-67-9	Bromide	0.70	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401763751	LW6.05-20170208-12:35-0.8-FD	2/8/2017	E300.1	14866-68-3	Chlorate	70		20.00	40	ug/l					
4401763751	LW6.05-20170208-12:35-0.8-FD	2/8/2017	E314.0	14797-73-0	Perchlorate	8.0		0.95	4.0	ug/l	J	f	FD RPD >30%	32	%
4401763751	LW6.05-20170208-12:35-0.8-FD	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401763751	LW7.2-20170208-11:07-0.8	2/8/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l					
4401763751	LW7.2-20170208-11:07-0.8	2/8/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l					
4401763751	LW7.2-20170208-11:07-0.8	2/8/2017	E300.1	14866-68-3	Chlorate	86		20.00	40	ug/l					
4401763751	LW7.2-20170208-11:07-0.8	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401763751	LW7.2-20170208-11:07-0.8	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l					
4401763761	LW6.05-20170207-14:48-0.7	2/7/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401763761	LW6.05-20170207-14:48-0.7	2/7/2017	E300	24959-67-9	Bromide	1.2		0.25	0.50	mg/l					
4401763761	LW6.05-20170207-14:48-0.7	2/7/2017	E300.1	14866-68-3	Chlorate	50		20.00	40	ug/l					
4401763761	LW6.05-20170207-14:48-0.7	2/7/2017	E314.0	14797-73-0	Perchlorate	6.0		0.95	4.0	ug/l					
4401763761	LW6.05-20170207-14:48-0.7	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401763761	LW6.7-20170207-14:25-0.6	2/7/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401763761	LW6.7-20170207-14:25-0.6	2/7/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l					
4401763761	LW6.7-20170207-14:25-0.6	2/7/2017	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l					
4401763761	LW6.7-20170207-14:25-0.6	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401763761	LW6.7-20170207-14:25-0.6	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401763761	LW6.7-20170207-14:25-0.6-FD	2/7/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401763761	LW6.7-20170207-14:25-0.6-FD	2/7/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l					
4401763761	LW6.7-20170207-14:25-0.6-FD	2/7/2017	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l					
4401763761	LW6.7-20170207-14:25-0.6-FD	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401763761	LW6.7-20170207-14:25-0.6-FD	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401763761	LW7.2-20170207-14:02-0.9	2/7/2017	E300	16887-00-6	Chloride	210		0.25	25	mg/l					
4401763761	LW7.2-20170207-14:02-0.9	2/7/2017	E300	24959-67-9	Bromide	1.1		0.25	0.50	mg/l					
4401763761	LW7.2-20170207-14:02-0.9	2/7/2017	E300.1	14866-68-3	Chlorate	44		20.00	40	ug/l					
4401763761	LW7.2-20170207-14:02-0.9	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401763761	LW7.2-20170207-14:02-0.9	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
4401763801	GLW4.4-20170207-16:06-1.2	2/7/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401763801	GLW4.4-20170207-16:06-1.2	2/7/2017	E300	24959-67-9	Bromide	0.32	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualific	
4401763801	GLW4.4-20170207-16:06-1.2	2/7/2017	E300.1	14866-68-3	Chlorate	80	Qualifier	20.00	40	ug/l	Qualifier	Code	Deminion	Fillu	iiig
4401763801	GLW4.4-20170207-16:06-1.2	2/7/2017	E314.0	14797-73-0	Perchlorate	20		0.95	4.0	ug/l	J+	m	matrix spike %R	164/169	%
4401763801	GLW4.4-20170207-10:00-1:2	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l	J+	- "	manix spike /or	104/103	-/0
4401763801	GLW4.85-20170207-15:42-0.8	2/7/2017	E300	16887-00-6	Chloride	300		0.25	25	mg/l					+
4401763801	GLW4.85-20170207-15:42-0.8	2/7/2017	E300	24959-67-9	Bromide	0.29	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td><td>+</td></pql<>		+
4401763801	GLW4.85-20170207-15:42-0.8	2/7/2017	E300.1	14866-68-3	Chlorate	1200		100.00	200	ug/l		эр	DOICOL VI QL		
4401763801	GLW4.85-20170207-15:42-0.8	2/7/2017	E314.0	14797-73-0	Perchlorate	290		4.75	200	ug/l					
4401763801	GLW4.85-20170207-15:42-0.8	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l					
4401763801	GLW4.85-20170207-15:42-0.8-FD	2/7/2017	E300	16887-00-6	Chloride	310		0.25	25	mg/l					
4401763801	GLW4.85-20170207-15:42-0.8-FD	2/7/2017	E300	24959-67-9	Bromide	0.32	.I	0.25	0.50	mg/l	J	SD	Detect <pql< td=""><td></td><td></td></pql<>		
4401763801	GLW4.85-20170207-15.42-0.8-FD	2/7/2017	E300.1	14866-68-3	Chlorate	1200	J	100.00	200	ug/l	J	ъp	Delect CFQL		_
4401763801	GLW4.85-20170207-15:42-0.8-FD	2/7/2017	E314.0	14797-73-0	Perchlorate	310		4.75	200	ug/l					+
4401763801	GLW4.85-20170207-15.42-0.8-FD	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l					+
4401763801	LW4.1-20170207-16:20-0.4	2/7/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					+
4401763801	LW4.1-20170207-10:20-0.4	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					+
4401763801	LW4.1-20170207-16:20-0.4	2/7/2017	E300.1	14866-68-3	Chlorate	160	U	20.00	40	ug/l					+
4401763801	LW4.1-20170207-16:20-0.4	2/7/2017	E314.0	14797-73-0	Perchlorate	38	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	164/169	%
4401763801	LW4.1-20170207-16:20-0.4	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500	FI	5.00	10	mg/l	JŦ	111	manix spike /or	104/109	/0
4401763821	GLW4.9-20170207-16:45-1.4	2/7/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l					+
4401763821	GLW4.9-20170207-16:45-1.4 GLW4.9-20170207-16:45-1.4	2/7/2017	E300	24959-67-9	Bromide	0.32	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td><td>+</td></pql<>		+
4401763821	GLW4.9-20170207-16.45-1.4 GLW4.9-20170207-16:45-1.4	2/7/2017	E300.1	14866-68-3	Chlorate	77	J	20.00	40	ug/l	J	sp	Delect < PQL		+
4401763821	GLW4.9-20170207-16:45-1.4 GLW4.9-20170207-16:45-1.4	2/7/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0						+
4401763821	GLW4.9-20170207-16.45-1.4 GLW4.9-20170207-16:45-1.4	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	ug/l mg/l					+
4401763821	LW4.95-20170207-16:30-1.2	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					+
4401763821	LW4.95-20170207-16.30-1.2	2/7/2017	E300	24959-67-9	Bromide	0.26	J	0.25	0.50	mg/l	J	20	Detect <pql< td=""><td></td><td>+</td></pql<>		+
4401763821	LW4.95-20170207-16.30-1.2	2/7/2017	E300.1	14866-68-3	Chlorate	63	J	20.00	40		J	sp	Delect < PQL		+
4401763821	LW4.95-20170207-16.30-1.2	2/7/2017	E314.0	14797-73-0	Perchlorate	13		0.95	4.0	ug/l ug/l					
4401763821	LW4.95-20170207-16.30-1.2	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					+
4401763821	LW4.95-20170207-16.30-1.2 LW4.95-20170207-16:30-1.2-FD	2/7/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					+
4401763821	LW4.95-20170207-16.30-1.2-FD	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l					+
4401763821	LW4.95-20170207-16.30-1.2-FD	2/7/2017	E300.1	14866-68-3	Chlorate	59	U	20.00	40						+
4401763821	LW4.95-20170207-16.30-1.2-FD	2/7/2017	E300.1	14797-73-0	Perchlorate	12		0.95	4.0	ug/l ug/l					+
4401763821	LW4.95-20170207-16:30-1.2-FD		SM2540C	TDS	Total Dissolved Solids	1400		5.00	10						+
4401763821	LW5.3-20170207-16:30-1.2-FD	2/7/2017 2/7/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l mg/l					+
4401763821	LW5.3-20170207-15:45-1.2	2/7/2017	E300	24959-67-9	Bromide	0.25	J	0.25	0.50		J	on.	Detect <pql< td=""><td></td><td>+</td></pql<>		+
4401763821	LW5.3-20170207-15:45-1.2	2/7/2017	E300.1	14866-68-3	Chlorate	54	J	20.00	40	mg/l	J	sp	Delect < PQL	-	-
4401763821	LW5.3-20170207-15:45-1.2	2/7/2017	E314.0	14797-73-0	Perchlorate	11		0.95	4.0	ug/l					+
4401763821	LW5.3-20170207-15:45-1.2	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	ug/l					+
4401763821	LW5.3-20170207-15:45-1.2 LW5.3-20170207-15:50-2.4	2/7/2017	E300	16887-00-6	Chloride	280		0.25		mg/l					+
4401763821	LW5.3-20170207-15:50-2.4 LW5.3-20170207-15:50-2.4	2/7/2017	E300	24959-67-9	Bromide	0.25	J	0.25	25 0.50	mg/l			Detect <pql< td=""><td></td><td>_</td></pql<>		_
							J			mg/l	J	sp	Delect <pql< td=""><td>-</td><td>+</td></pql<>	-	+
4401763821 4401763821	LW5.3-20170207-15:50-2.4 LW5.3-20170207-15:50-2.4	2/7/2017 2/7/2017	E300.1 E314.0	14866-68-3 14797-73-0	Chlorate	52 9.6		20.00 0.95	40	ug/l					+
					Perchlorate	9.6 1400			10	ug/l					+
4401763821	LW5.3-20170207-15:50-2.4	2/7/2017	SM2540C	TDS	Total Dissolved Solids			5.00	_	mg/l					
4401763841	GLW3.78-20170207-16:35-1.2	2/7/2017	E300	16887-00-6	Chloride	260	U	0.50	50	mg/l					
4401763841	GLW3.78-20170207-16:35-1.2	2/7/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					+
4401763841	GLW3.78-20170207-16:35-1.2	2/7/2017	E300.1	14866-68-3	Chlorate	200		20.00	40	ug/l					+
4401763841	GLW3.78-20170207-16:35-1.2	2/7/2017	E314.0	14797-73-0	Perchlorate	48		0.95	4.0	ug/l				1	+
4401763841	GLW3.78-20170207-16:35-1.2	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				1	+
4401763841	LW3.4-20170207-17:00-0.7	2/7/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l				1	+
4401763841	LW3.4-20170207-17:00-0.7	2/7/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l		1			

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

### A01759381 LVX3.42077007770-07-07 270717 E300 1479773-0 Percitorians 38 0.55 6.0 up Up Company Percitorians 38 401769381 LVX3.420770077-70-04.7 2770717 E300 1479773-0 Percitorians 38 0.55 6.0 up Up Company Percitorians 38 401769381 LVX3.420770077-70-04.7 2770717 E300 LVX3.750710077-1625-1.0 2770717 E300 LVX3.750710077-1625-1.0 2770717 E300 2455667-9 Escende 0.55 5.0 up Up Up LVX3.750710077-1625-1.0 2770717 E300 2455667-9 Escende 0.55 Up Up Up Up Up Up Up	SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
Heart Company Language La						•		Qualifier				Qualifier	Code	Definition	Finding
H401783841 LW3.4-20170207-1720-0-7 27/2017 Size 1687-0-6 Chonics 250 0.50 50 mg															
H401763841 LW3.75-20170207-1625-10 2772017 E300. 16867-06 Phorise 250 0.50 50 mgl															
H401783841 LW3.78-20170207-1626-10 27/2017 E300.1 14866-83 Chorate 110 2.0.0 4.0															
Heart Hear														Data at DOI	
H401763841 LW3.75-20170207-165-06 2772017 E314.0 14707-73-0 Perchinente 27 0.96 4.0 ugl								J				J	sp	Detect <pql< td=""><td></td></pql<>	
H401763841 LW3.85-20170207-155-0.6 27/2017 E300 1889-0.0 fo															
HA01763841 LW3.88-201702071-55-0-16 2772017 E300 24595-67-9 Bromide 0.70 J. 0.50 1.0 mg/s J. p. Detect.PQL - 4401763841 LW3.85-201702071-55-0-16 2772017 E300.1 14696-68-3 Chlorate 110 2.0.0 4.0 ug/s 1.0 mg/s 1.0															
HAD1763941 LW3.85-20170207-155-0-0.6 Z772017 E300 24959-67-9 Bromisle 0.70 J 0.50 1.0 mgl J sp Detect d*PQL CHA01763941 LW3.85-20170207-155-0-0.6 Z772017 E31-0.0 14967-73-0 Perchlorate 31 0.95 4.0 ugl CHA01763941 LW3.85-20170207-155-0-0.6 Z772017 E31-0.0 1497-73-0 Perchlorate 31 0.95 4.0 ugl CHA01763941 LW3.85-20170207-155-0-0.6 Z772017 E300 E887-0-0.6 CHA01863941 LW3.85-20170207-155-0-0.6 Z772017 E31-0.0 LY3.77-30 E887-0-0.6 LY3.78-20170207-155-0-0.6 Z772017 E300 E887-0-0.6 CHA01863941 LWC3.7-20170207-161-0-0.6 Z772017 E300 E887-0-0.6 CHA01863941 LWC3.7-20170207-161-0-0.6 Z772017 E300 E887-0-0.6 CHA01863941 LWC3.7-20170207-161-0-0.6 Z772017 E300 E888-0-0.6 CHA01863941 LWC3.7-20															
4401763941 LW3.85-20170207-155-0-0.6															
Add 1783841 LW3.85-20170207-155-0-0.6 2772017 E314.0 14797-73-0 Perchlorate 31 0.96 4.0 ugl								J				J	sp	Detect <pql< td=""><td></td></pql<>	
H401763841 LW3.85-20170207-15:0-0.6 2772017 E300 E3887-0-6 Chioride Chiori															
4401763841 LW3.85-20170207-1550-06-FD 2772017 E300 16887-00-6 Enonide D.50 J. 0.50 1.0 mg/l J. sp. Detect.PQL															
Add 1.00 1															
HAD1763841 LW3.85-20170207-1550-0.6FD Z7/Z017 E39.0.1 14866-86-3 Chlorate 110 20.00 40 upl HAD1763841 LW3.85-20170207-1550-0.6FD Z7/Z017 E39.0.1 Target Target															
HAD1783841 LW3.85-20170207-15:50-0.6-FD 277/2017 SM2540C TDS Total Dissolved Solids 1500 5.00 10 mg/l								J				J	sp	Detect <pql< td=""><td></td></pql<>	
4401763841															
A401763841 LWC3.7-201702071-61-0-0.6 2772017 E300 16887-0-6 Chloride 370 1.25 1.00 mg/l A401763841 LWC3.7-201702071-61-0-0.6 2772017 E300.1 14866-8-3 Chlorate 2600 500.00 1000 ug/l A401763841 LWC3.7-201702071-61-0-0.6 2772017 E310.1 14797-73-0 Perchiorate 830 19.00 80 ug/l A401763841 LWC3.7-201702071-61-0-0.6 2772017 E310.4 14797-73-0 Perchiorate 830 19.00 80 ug/l A401763901 GLWC6.1 3-201702071-61-0-0.6 2772017 E300 16887-0-0-6 Chlorate 2600 0.25 25 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 2485-8-7-9 Bromide 2.5 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 2485-8-7-9 Bromide 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 100 20.00 40 ug/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 100 20.00 40 ug/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 270 0.25 25 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 14866-8-3 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 18887-0-6 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-9 2772017 E300 18887-0-6 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-3 Chlorate 0.272017 E300 18887-0-6 Chlorate 0.25 U 0.25 0.50 mg/l A401763901 GLWC6.1 3-201702071-510-0-3 Chlorate 0.272017 E300 18887-0-6 Chlorate 0.25 U 0.25 0.50 mg/l															
Hard															
Hard															
Hadd Hadd Hadd LWC3.7-20170207-16:10-0.6 27/2017 SM2540C TDS Total Dissolved Solids 2000 5.00 20 mg/l								U							
Hadd															
4401763901 GLWC6.1 3-20170207-15:06-0.9 27/2017 E300 16887-00-6 Chloride 260 C.25 U. 0.25 C.50 mg/l															
Add1763901 GLWC6.1 3-20170207-15:06-0.9 277/2017 E300.1 14866-88-3 Chlorate 100 20.00 40 ugh															
Hard		_													
Add1763901 GLWC6.1, 3-20170207-15:06-0.9 277/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l		_						U							
4401763901 GLWC6.1_3-20170207-15:06-0.9 27/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l		_													
4401763901 GLWC6.1_3-20170207-15:06-0.9-FD 27/2017 E300 16887-00-6 Chloride 270 0.25 25 mg/l								U							
4401763901 GLWC6.1_3-20170207-15:06-0.9-FD 27/2017 E300. 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l		_													
4401763901 GLWC6.1_3-20170207-15:06-0.9-FD 277/2017 E300.1 14866-8-3 Chlorate 100 20.00 40 ug/l															
4401763901 GLWC6.1 3-20170207-15:06-0.9-FD 27/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l		_						U							
4401763901 GLWC6.1_3-20170207-15:06-0.9-FD 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l	4401763901	GLWC6.1_3-20170207-15:06-0.9-FD	2/7/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l				
4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E300 16887-00-6 Chloride 350 0.25 25 mg/l Sp Detect < PQL - 4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E300.1 14866-68-3 Chlorate 92 20.00 40 ug/l Sp Detect < PQL - 4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E300.1 14866-68-3 Chlorate 92 20.00 40 ug/l Sp Detect < PQL - 4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 U 0.95 4.0 ug/l Sp Detect < PQL - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 16887-00-6 Chlorate 280 0.25 25 mg/l Sp Detect < PQL - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 24959-67-9 Bromide 0.30 J 0.25 0.50 mg/l J sp Detect < PQL - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 24959-67-9 Bromide 0.30 J 0.25 0.50 mg/l J sp Detect < PQL - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l Sp Chlorate 2401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l Sp Chlorate 2401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l Sp Sp Sp Sp Sp Sp Sp S	4401763901	GLWC6.1_3-20170207-15:06-0.9-FD	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763901 GLWC6.1_4-20170207-16:10-1.3 277/2017 E300 24959-67-9 Bromide D.31 J D.25 D.50 mg/l J sp Detect < PQL - 4401763901 GLWC6.1_4-20170207-16:10-1.3 277/2017 E300.1 14866-68-3 Chlorate 92 D.00 40 ug/l D.401763901 GLWC6.1_4-20170207-16:10-1.3 Z77/2017 E314.0 14797-73-0 Perchlorate D.95 U D.	4401763901	GLWC6.1_3-20170207-15:06-0.9-FD	2/7/2017	SM2540C		Total Dissolved Solids	1100		5.00	10	mg/l				
4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E300.1 14866-68-3 Chlorate 92 20.00 40 ug/l 401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 401763901 Mg/l Mg/l 401763901 Mg/l	4401763901	GLWC6.1_4-20170207-16:10-1.3	2/7/2017	E300	16887-00-6	Chloride	350		0.25	25	mg/l				
4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401 4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 SM2540C TDS Total Dissolved Solids 1300 5.00 10 mg/l 4401 4401 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l	4401763901	GLWC6.1_4-20170207-16:10-1.3	2/7/2017	E300	24959-67-9	Bromide	0.31	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763901 GLWC6.1_4-20170207-16:10-1.3 2/7/2017 SM2540C TDS Total Dissolved Solids 1300 5.00 10 mg/l 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 24959-67-9 Bromide 0.30 J 0.25 0.50 mg/l J sp Detect <pql< th=""> - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 40 40 40 40 40 40 ug/l 40 40 40 40 40 ug/l 40</pql<>	4401763901	GLWC6.1_4-20170207-16:10-1.3	2/7/2017	E300.1	14866-68-3	Chlorate	92		20.00	40	ug/l				
4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l J sp Detect <pql< th=""> - - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l - - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l - 4401763901 LW5.9-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l - 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l - 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300</pql<>	4401763901	GLWC6.1_4-20170207-16:10-1.3	2/7/2017			Perchlorate	0.95	U	0.95	4.0	ug/l				
4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300 24959-67-9 Bromide 0.30 J 0.25 0.50 mg/l J sp Detect <pql< th=""> - - 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l Ug/l</pql<>	4401763901		2/7/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300.1 14866-68-3 Chlorate 100 20.00 40 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901<	4401763901	LW5.9-20170207-15:27-0.6	2/7/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l				
4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 E314.0 14797-73-0 Perchlorate 10 0.95 4.0 ug/l 4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300.1 14866-68-3 Chlorate 100 20.00 40 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l <td< td=""><td>4401763901</td><td>LW5.9-20170207-15:27-0.6</td><td>2/7/2017</td><td>E300</td><td>24959-67-9</td><td>Bromide</td><td>0.30</td><td>J</td><td>0.25</td><td>0.50</td><td>mg/l</td><td>J</td><td>sp</td><td>Detect <pql< td=""><td></td></pql<></td></td<>	4401763901	LW5.9-20170207-15:27-0.6	2/7/2017	E300	24959-67-9	Bromide	0.30	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401763901 LW5.9-20170207-15:27-0.6 2/7/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300.1 14866-68-3 Chlorate 100 20.00 40 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:45-0.8 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LW5.9-20170207-15:27-0.6	2/7/2017	E300.1	14866-68-3	Chlorate	55		20.00	40	ug/l				
4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 16887-00-6 Chloride 280 0.25 25 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300.1 14866-68-3 Chlorate 100 20.00 40 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LW5.9-20170207-15:27-0.6	2/7/2017	E314.0	14797-73-0	Perchlorate	10		0.95	4.0	ug/l				
4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E300.1 14866-68-3 Chlorate 100 20.00 40 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LW5.9-20170207-15:27-0.6	2/7/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401763901 LWC6.1_1-20170207-14:45-0.8 277/2017 E300.1 14866-68-3 Chlorate 100 20.00 40 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LWC6.1_1-20170207-14:45-0.8	2/7/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l				
4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LWC6.1_1-20170207-14:45-0.8	2/7/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l 4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LWC6.1_1-20170207-14:45-0.8	2/7/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l				
4401763901 LWC6.1_1-20170207-14:45-0.8 2/7/2017 SM2540C TDS Total Dissolved Solids 1100 5.00 10 mg/l 4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l	4401763901	LWC6.1_1-20170207-14:45-0.8	2/7/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0					
4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 16887-00-6 Chloride 110 0.25 25 mg/l		_													
	4401763901	LWC6.1_2-20170207-14:58-0.7	2/7/2017	E300	16887-00-6	Chloride	110		0.25	25					
4401763901 LWC6.1_2-20170207-14:58-0.7 2/7/2017 E300 24959-67-9 Bromide 0.25 U 0.25 0.50 mg/l		_	2/7/2017	E300			0.25	U	0.25	0.50					

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

MODIFICATION MODI	SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
4401758901 WC61_2_201702071-159-07 ZP/2017 E314.0 4797/3-0 Perchivate 0.96 U 0.06 4.0 upl	SDG	Sample ID	Date	Wethou	Analyte ID	Analyte	Result	Qualifier		FQL	Units	Qualifier	Code	Definition	Finding
4007784951 C.W.C.A. 2.00770207-14.56.0.7 2770017 8005400 500 500 500 500 500 600						Chlorate				40	ug/l				
4007764881 G.W.4.20170208-13-87-12 28/2017 E300 16887-00-B Chrone 260 0.25 25 mg/l		_					0.95	U							
4401746851 G. W44.20170208-1347-12 28/2017 E300 24959679 Bermide 0.25 U 0.25 0.50 mgl		_				Total Dissolved Solids									
4401748481 G.W.4.2-0170208-13-07-1 28/02017 E310.1 14987-73-0 Perchirorite 27 0.95 4.0 ugh															
4401764881 GLWA-420170208-1347-12 28/2017 E314.0 14/377-30 Perchorate 27 0.96 4.0 od	4401764851	GLW4.4-20170208-13:47-1.2	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
Ha01764851 GLWA 420170208-13047-12 28/2017 SM2540C TOS Toll Desched Soluts 1400 S.00 10 mpl	4401764851		2/8/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l				
44017464881 GLWG6.1.3-20170208-1500-1.0 28/2017 E300 1498-6-8-9 Bromde 0.45 J 0.25 25 mgl J Delect PQL	4401764851	GLW4.4-20170208-13:47-1.2	2/8/2017	E314.0	14797-73-0	Perchlorate	27		0.95	4.0	ug/l				
4401748881 GLWG6.1.3-20170208-1500-1.0 2862017 E300 14866-68-3 Chloride 1.0 G.00.0 1.0 upl	4401764851	GLW4.4-20170208-13:47-1.2	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401748881 GLWC6.1.3-20170208-15:00-1.0 28/82017 E300.1 14966-8-3 Chlorate 110 5:00 100 ugh 4401748881 GLWC6.1.3-20170208-15:00-1.0 28/82017 E300 1887-00-6 Chlorate 250 0.25 25 ugh 4401748881 GLWC6.1.4-20170208-16:07-1.0 28/82017 E300 1887-00-6 Chlorate 250 0.25 25 ugh 4401748881 GLWC6.1.4-20170208-16:07-1.0 28/82017 E300 24959-67-9 Bromide 0.54 0.25 0.50 ugh 4401748881 GLWC6.1.4-20170208-16:07-1.0 28/82017 E300 14966-68-3 Chlorate 14/97-73-0 Perchlorate 0.95 0.05 0.0 ugh 4401748881 GLWC6.1.4-20170208-16:07-1.0 28/82017 E314.0 14797-73-0 Perchlorate 0.95 0.05 0.0 ugh 4401748881 GLWC6.1.4-20170208-16:07-1.0 28/82017 E314.0 14797-73-0 Perchlorate 0.95 0.05 0.0 ugh 4401748881 LWS.9-20170208-16:07-1.0 28/82017 E314.0 14797-73-0 Perchlorate 0.95 0.0 0.05 4.0 ugh 4401748881 LWS.9-20170208-16:14-0.8 28/82017 E300.1 14966-8-3 Chlorate 24/95-97-9 Chlora	4401764881	GLWC6.1_3-20170208-15:00-1.0	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401748881 GLWC6.1 3-20170208-15:00-1.0 228/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l	4401764881	GLWC6.1_3-20170208-15:00-1.0	2/8/2017	E300	24959-67-9	Bromide	0.45	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
H401764881 GLWC6.1.4.20170208-1607-1.0 28/2017 E300 1888-90-6 Chioride 250 0.55 mg/l H401764881 GLWC6.1.4.20170208-1607-1.0 28/2017 E300 124958-97-9 Bromide 0.54 0.25 0.50 mg/l H401764881 GLWC6.1.4.20170208-1607-1.0 28/2017 E300.1 14866-8-3 Chioride 0.54 0.25 0.50 mg/l H401764881 GLWC6.1.4.20170208-1607-1.0 28/2017 E300.1 14797-73-0 Portibiorate 0.95 U. 0.95 4.0 ug/l H401764881 GLWC6.1.4.20170208-1607-1.0 28/2017 E301.0 14797-73-0 Portibiorate 0.95 U. 0.95 4.0 ug/l H401764881 LWS.9-20170208-1541-0.6 28/2017 E300.1 E300.1	4401764881		2/8/2017	E300.1		Chlorate	110		50.00	100	ug/l				
4401764881 G.W.CG.1.4-20170208-1607-10 28/2017 E300 16887-09-6 Chloride 250 0.25 25 mg/l	4401764881	GLWC6.1_3-20170208-15:00-1.0	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401764881 GLWC6.1, 420170208-1607-10		GLWC6.1_3-20170208-15:00-1.0	2/8/2017	SM2540C		Total Dissolved Solids				10	mg/l				
4401764881 GLWC6.1.4-20170208-1607-10 28/2017 E30.0 14866-683 Chlorate 81 2.0.0 40 ugh	4401764881	GLWC6.1_4-20170208-16:07-1.0	2/8/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401764881	4401764881	GLWC6.1_4-20170208-16:07-1.0	2/8/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l				
4401764881	4401764881	GLWC6.1_4-20170208-16:07-1.0	2/8/2017	E300.1	14866-68-3	Chlorate	81		20.00	40	ug/l				
A401764881	4401764881	GLWC6.1_4-20170208-16:07-1.0	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401764881	4401764881	GLWC6.1_4-20170208-16:07-1.0	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
A401764881	4401764881	LW5.9-20170208-15:41-0.6	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
HAD1764881 LWS.9-20170208-1443-0.6 2/8/2017 S28/2017 S28	4401764881	LW5.9-20170208-15:41-0.6	2/8/2017	E300	24959-67-9	Bromide	0.55		0.25	0.50	mg/l				
Add Total LWS.9-20170208-14:44-0.6 2/8/2017 E300 16887-00-6 E400 4401764881	LW5.9-20170208-15:41-0.6	2/8/2017	E300.1	14866-68-3	Chlorate	61		20.00	40	ug/l					
A401764881 LWC6.1.1-20170208-14.43-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l	4401764881	LW5.9-20170208-15:41-0.6	2/8/2017	E314.0	14797-73-0	Perchlorate	9.6		0.95	4.0	ug/l				
4401764881 LWC6.1 1.20170208-14.43-0.7 2/8/2017 E300 24959-67-9 Bromide 0.49 J 0.25 0.50 mg/l J sp Detect <pql -="" 0.25="" 0.32="" 0.50="" 0.95="" 07="" 1="" 1.0="" 1.20170208-14.43-0.7="" 1.7="" 1100="" 14797-73-0="" 14866-68-3="" 17="" 2="" 2.20170208-13.05-1.2="" 2.20170208-14.53-0.7="" 20.00="" 2017="" 25="" 250="" 4="" 4.0="" 40="" 401764881="" 4401764881="" 4401764961="" 4959-67-9="" 50="" 64="" 6887-00-6="" 8="" 81="" 9="" 90="" 950="" 950<="" 97-73-0="" 99-67-9="" <pql="" bromide="" chlorate="" chloride="" detect="" dissolved="" e300="" e310.1="" e314.0="" j="" l="" lw4.95-20170208-13.05-1.2="" lwc6.1="" mg="" perchlorate="" sm2540c="" solids="" sp="" td="" tds="" total="" u="" ug="" =""><td>4401764881</td><td>LW5.9-20170208-15:41-0.6</td><td>2/8/2017</td><td>SM2540C</td><td>TDS</td><td>Total Dissolved Solids</td><td>1300</td><td></td><td>5.00</td><td>10</td><td>mg/l</td><td></td><td></td><td></td><td></td></pql>	4401764881	LW5.9-20170208-15:41-0.6	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
HAD1764881 LWC6.1 1-20170208-14-43-0.7 2/8/2017 E300.1 14866-88-3 Chlorate 9.0 20.00 40 ugl 401764881 LWC6.1 1-20170208-14-43-0.7 2/8/2017 E314.0 14797-73-0 Perchiorate 0.95 U 0.95 4.0 ugl 4401764881 LWC6.1 1-20170208-14-43-0.7 2/8/2017 E300.1 E300	4401764881	LWC6.1_1-20170208-14:43-0.7	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
A401764881 LWC6.1 1-20170208-14:34-0.7 2/8/2017 E314.0 14797-73-0 Perchlorate 0.95 U 0.95 4.0 ug/l	4401764881	LWC6.1_1-20170208-14:43-0.7	2/8/2017	E300	24959-67-9	Bromide	0.49	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401764881 LWG6.1_2-20170208-14:43-0.7 2/8/2017 E300 16887-00-6 Chloride 1100 0.25 25 mg/l	4401764881	LWC6.1_1-20170208-14:43-0.7	2/8/2017	E300.1	14866-68-3	Chlorate	90		20.00	40	ug/l				
Add 4401764881	LWC6.1_1-20170208-14:43-0.7	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401764881 LWC6.1_2-20170208-14:53-0.7 2/8/2017 E300. 24959-67-9 Bromide 0.32 J 0.25 0.50 mg/l J sp Detect < PQL - 4401764881 LWC6.1_2-20170208-14:53-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 64 20.00 40 ug/l	4401764881	LWC6.1_1-20170208-14:43-0.7	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401764881 LWC6.1_2-20170208-14:53-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 64 20.00 40 ug/l	4401764881	LWC6.1_2-20170208-14:53-0.7	2/8/2017	E300	16887-00-6	Chloride	110		0.25	25	mg/l				
A401764881 LWC6.1	4401764881	LWC6.1_2-20170208-14:53-0.7	2/8/2017	E300	24959-67-9	Bromide	0.32	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
A401764881	4401764881	LWC6.1_2-20170208-14:53-0.7	2/8/2017	E300.1	14866-68-3	Chlorate	64		20.00	40	ug/l				
4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E300 16887-00-6 Chloride 250 0.50 50 mg/l 4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E300.1 14866-68-3 Chlorate 81 20.00 40 ug/l 401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E310.0 14797-73-0 Perchlorate 14 0.95 4.0 ug/l 401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E314.0 14797-73-0 Perchlorate 14 0.95 4.0 ug/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 <t< td=""><td>4401764881</td><td>LWC6.1_2-20170208-14:53-0.7</td><td>2/8/2017</td><td>E314.0</td><td>14797-73-0</td><td>Perchlorate</td><td>0.95</td><td>U</td><td>0.95</td><td>4.0</td><td>ug/l</td><td></td><td></td><td></td><td></td></t<>	4401764881	LWC6.1_2-20170208-14:53-0.7	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
A401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l	4401764881	LWC6.1_2-20170208-14:53-0.7	2/8/2017	SM2540C	TDS	Total Dissolved Solids	590		5.00	10	mg/l				
4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E300.1 14866-68-3 Chlorate 81 20.00 40 ug/l 4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E314.0 14797-73-0 Perchlorate 14 0.95 4.0 ug/l 401764961 LW4.95-20170208-13:05-1.2 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 16887-00-6 Chloride 260 0.50 5.00 mg/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 2.000 40 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 46 <td>4401764961</td> <td>LW4.95-20170208-13:05-1.2</td> <td>2/8/2017</td> <td>E300</td> <td>16887-00-6</td> <td>Chloride</td> <td>250</td> <td></td> <td>0.50</td> <td>50</td> <td>mg/l</td> <td></td> <td></td> <td></td> <td></td>	4401764961	LW4.95-20170208-13:05-1.2	2/8/2017	E300	16887-00-6	Chloride	250		0.50	50	mg/l				
4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 E314.0 14797-73-0 Perchlorate 14 0.95 4.0 ug/l 4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 14866-68-3 Chloride 1.7 0.50 1.0 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E314.0 14797-73-0 Perchlorate 46 0.95 4.0 ug/l 4401765011 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.05-20170208-15:36-0.7	4401764961	LW4.95-20170208-13:05-1.2	2/8/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0	mg/l				
4401764961 LW4.95-20170208-13:05-1.2 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l 401765001 Mg/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 401765001 Mg/l 401765001 Mg/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ug/l 401765001 Mg/l Mg/l 401765001 Mg/l Mg/l 401765001 Mg/l Mg/l<	4401764961	LW4.95-20170208-13:05-1.2	2/8/2017	E300.1	14866-68-3	Chlorate	81		20.00	40	ug/l				
4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E314.0 14797-73-0 Perchlorate 46 0.95 4.0 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l	4401764961	LW4.95-20170208-13:05-1.2	2/8/2017	E314.0	14797-73-0	Perchlorate	14		0.95	4.0	ug/l				
4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 16887-00-6 Chloride 260 0.50 50 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300 24959-67-9 Bromide 1.7 0.50 1.0 mg/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E314.0 14797-73-0 Perchlorate 46 0.95 4.0 ug/l 4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E314.0	4401764961	LW4.95-20170208-13:05-1.2	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E300.1 14866-68-3 Chlorate 180 20.00 40 ug/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E314.0 14797-73-0 Perchlorate 46 0.95 4.0 ug/l 401765001 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 401765011 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l 401765011 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 24959-67-9 Bromide 0.32 J 0.25 0.50 mg/l J sp Detect <pql< th=""> - - 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E314.0 14797-73-0 Perchlorate 7.7 0.95 4.0</pql<>	4401765001	LW3.4-20170208-14:18-0.6	2/8/2017	E300	16887-00-6	Chloride	260		0.50	50					
4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 E314.0 14797-73-0 Perchlorate 46 0.95 4.0 ug/l 401765001 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l Mg/l<	4401765001	LW3.4-20170208-14:18-0.6	2/8/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0	mg/l				
4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 401765011 Mg/l 401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l	4401765001	LW3.4-20170208-14:18-0.6	2/8/2017	E300.1	14866-68-3	Chlorate	180		20.00	40	ug/l				
4401765001 LW3.4-20170208-14:18-0.6 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l	4401765001	LW3.4-20170208-14:18-0.6	2/8/2017	E314.0	14797-73-0	Perchlorate	46		0.95	4.0	ug/l				
4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 16887-00-6 Chloride 240 0.25 25 mg/l J sp Detect <pql< th=""> - 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 24959-67-9 Bromide 0.32 J 0.25 0.50 mg/l J sp Detect <pql< td=""> - 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E314.0 14797-73-0 Perchlorate 7.7 0.95 4.0 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.7-20170208-15:02-0.6 2/8/2017 E300 16887-00-6 Chloride 250 0.25 25 mg/l</pql<></pql<>															
4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300 24959-67-9 Bromide 0.32 J 0.25 0.50 mg/l J sp Detect <pql< th=""> - 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E314.0 14797-73-0 Perchlorate 7.7 0.95 4.0 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.7-20170208-15:02-0.6 2/8/2017 E300 16887-00-6 Chloride 250 0.25 25 mg/l</pql<>															
4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E300.1 14866-68-3 Chlorate 55 20.00 40 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E314.0 14797-73-0 Perchlorate 7.7 0.95 4.0 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.7-20170208-15:02-0.6 2/8/2017 E300 16887-00-6 Chloride 250 0.25 25 mg/l								J				J	sp	Detect <pql< td=""><td></td></pql<>	
4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 E314.0 14797-73-0 Perchlorate 7.7 0.95 4.0 ug/l 4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.7-20170208-15:02-0.6 2/8/2017 E300 16887-00-6 Chloride 250 0.25 25 mg/l								-				-			
4401765011 LW6.05-20170208-15:36-0.7 2/8/2017 SM2540C TDS Total Dissolved Solids 1400 5.00 10 mg/l 4401765011 LW6.7-20170208-15:02-0.6 2/8/2017 E300 16887-00-6 Chloride 250 0.25 25 mg/l															
4401765011 LW6.7-20170208-15:02-0.6 2/8/2017 E300 16887-00-6 Chloride 250 0.25 25 mg/l															
	4401765011	LW6.7-20170208-15:02-0.6	2/8/2017	E300	24959-67-9	Bromide	0.33	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualification Finding
4401765011	LW6.7-20170208-15:02-0.6	2/8/2017	E300.1	14866-68-3	Chlorate	55	Qualifici	20.00	40	ug/l	Qualifier	Jour	Dominion	i iliulig
4401765011	LW6.7-20170208-15:02-0.6	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				-
4401765011	LW6.7-20170208-15:02-0.6	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765011	LW7.2-20170208-14:40-0.9	2/8/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l				
4401765011	LW7.2-20170208-14:40-0.9	2/8/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401765011	LW7.2-20170208-14:40-0.9	2/8/2017	E300.1	14866-68-3	Chlorate	49		20.00	40	ug/l				
4401765011	LW7.2-20170208-14:40-0.9	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401765011	LW7.2-20170208-14:40-0.9	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401765051	GLW4.4-20170208-16:21-1.3	2/8/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l				
4401765051	GLW4.4-20170208-16:21-1.3	2/8/2017	E300	24959-67-9	Bromide	0.56		0.25	0.50	mg/l				
4401765051	GLW4.4-20170208-16:21-1.3	2/8/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l				
4401765051	GLW4.4-20170208-16:21-1.3	2/8/2017	E314.0	14797-73-0	Perchlorate	17		0.95	4.0	ug/l				
4401765051	GLW4.4-20170208-16:21-1.3	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765051	GLW4.85-20170208-16:00-0.8	2/8/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l				
4401765051	GLW4.85-20170208-16:00-0.8	2/8/2017	E300	24959-67-9	Bromide	1.0		0.25	0.50	mg/l				
4401765051	GLW4.85-20170208-16:00-0.8	2/8/2017	E300.1	14866-68-3	Chlorate	940		50.00	100	ug/l				
4401765051	GLW4.85-20170208-16:00-0.8	2/8/2017	E314.0	14797-73-0	Perchlorate	270		4.75	20	ug/l				
4401765051	GLW4.85-20170208-16:00-0.8	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l				
4401765051	LW4.1-20170208-16:33-0.4	2/8/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401765051	LW4.1-20170208-16:33-0.4	2/8/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l				
4401765051	LW4.1-20170208-16:33-0.4	2/8/2017	E300.1	14866-68-3	Chlorate	170		50.00	100	ug/l				
4401765051	LW4.1-20170208-16:33-0.4	2/8/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401765051	LW4.1-20170208-16:33-0.4	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401765081	GLW4.9-20170208-16:35-1.4	2/8/2017	E300	16887-00-6	Chloride	240		0.50	50	mg/l				
4401765081	GLW4.9-20170208-16:35-1.4	2/8/2017	E300	24959-67-9	Bromide	1.4		0.50	1.0	mg/l	J	f	FD RPD >30%	33 %
4401765081	GLW4.9-20170208-16:35-1.4	2/8/2017	E300.1	14866-68-3	Chlorate	84		20.00	40	ug/l				
4401765081	GLW4.9-20170208-16:35-1.4	2/8/2017	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l				
4401765081	GLW4.9-20170208-16:35-1.4	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765081	GLW4.9-20170208-16:35-1.4-FD	2/8/2017	E300	16887-00-6	Chloride	240		0.50	50	mg/l				
4401765081	GLW4.9-20170208-16:35-1.4-FD	2/8/2017	E300	24959-67-9	Bromide	1.0		0.50	1.0	mg/l	J	f	FD RPD >30%	33 %
4401765081	GLW4.9-20170208-16:35-1.4-FD	2/8/2017	E300.1	14866-68-3	Chlorate	84		20.00	40	ug/l				
4401765081	GLW4.9-20170208-16:35-1.4-FD	2/8/2017	E314.0	14797-73-0	Perchlorate	14		0.95	4.0	ug/l				
4401765081	GLW4.9-20170208-16:35-1.4-FD	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765081	LW4.95-20170208-16:20-1.3	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401765081	LW4.95-20170208-16:20-1.3	2/8/2017	E300	24959-67-9	Bromide	1.3		0.25	0.50	mg/l				
4401765081	LW4.95-20170208-16:20-1.3	2/8/2017	E300.1	14866-68-3	Chlorate	2000		200.00	400	ug/l				
4401765081	LW4.95-20170208-16:20-1.3	2/8/2017	E314.0	14797-73-0	Perchlorate	11		0.95	4.0	ug/l				
4401765081	LW4.95-20170208-16:20-1.3	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
4401765081	LW5.3-20170208-15:45-1.2	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401765081	LW5.3-20170208-15:45-1.2	2/8/2017	E300	24959-67-9	Bromide	1.3		0.25	0.50	mg/l				
4401765081	LW5.3-20170208-15:45-1.2	2/8/2017	E300.1	14866-68-3	Chlorate	60		20.00	40	ug/l				
4401765081	LW5.3-20170208-15:45-1.2	2/8/2017	E314.0	14797-73-0	Perchlorate	8.9		0.95	4.0	ug/l				
4401765081	LW5.3-20170208-15:45-1.2	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765081	LW5.3-20170208-15:50-2.4	2/8/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401765081	LW5.3-20170208-15:50-2.4	2/8/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l				
4401765081	LW5.3-20170208-15:50-2.4	2/8/2017	E300.1	14866-68-3	Chlorate	64		20.00	40	ug/l				
4401765081	LW5.3-20170208-15:50-2.4	2/8/2017	E314.0	14797-73-0	Perchlorate	9.0		0.95	4.0	ug/l				
4401765081	LW5.3-20170208-15:50-2.4	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401765101	GLW3.78-20170208-16:42-1.4	2/8/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401765101	GLW3.78-20170208-16:42-1.4	2/8/2017	E300	24959-67-9	Bromide	1.5		0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	•	Result	Qualifier				Qualifier	Code	Definition	Finding
4401765101	GLW3.78-20170208-16:42-1.4	2/8/2017	E300.1	14866-68-3	Chlorate	190		20.00	40	ug/l				
4401765101	GLW3.78-20170208-16:42-1.4	2/8/2017	E314.0	14797-73-0	Perchlorate	46		0.95	4.0	ug/l				
4401765101	GLW3.78-20170208-16:42-1.4	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401765101	LW3.4-20170208-17:05-0.6	2/8/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401765101	LW3.4-20170208-17:05-0.6	2/8/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l				
4401765101	LW3.4-20170208-17:05-0.6	2/8/2017	E300.1	14866-68-3	Chlorate	150		20.00	40	ug/l				
4401765101	LW3.4-20170208-17:05-0.6	2/8/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l				
4401765101	LW3.4-20170208-17:05-0.6	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401765101	LW3.75-20170208-16:30-1.0	2/8/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401765101	LW3.75-20170208-16:30-1.0	2/8/2017	E300	24959-67-9	Bromide	1.5		0.25	0.50	mg/l				
4401765101	LW3.75-20170208-16:30-1.0	2/8/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l				
4401765101	LW3.75-20170208-16:30-1.0	2/8/2017	E314.0	14797-73-0	Perchlorate	23		0.95	4.0	ug/l				
4401765101	LW3.75-20170208-16:30-1.0	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401765101	LW3.85-20170208-16:05-0.5	2/8/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l				
4401765101	LW3.85-20170208-16:05-0.5	2/8/2017	E300	24959-67-9	Bromide	1.4		0.25	0.50	mg/l				
4401765101	LW3.85-20170208-16:05-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	130		20.00	40	ug/l				
4401765101	LW3.85-20170208-16:05-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	24		0.95	4.0	ug/l				
4401765101	LW3.85-20170208-16:05-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401765101	LWC3.7-20170208-16:20-0.5	2/8/2017	E300	16887-00-6	Chloride	360		1.25	100	mg/l				
4401765101	LWC3.7-20170208-16:20-0.5	2/8/2017	E300	24959-67-9	Bromide	1.6	J	1.25	2.5	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401765101	LWC3.7-20170208-16:20-0.5	2/8/2017	E300.1	14866-68-3	Chlorate	80		20.00	40	ug/l				
4401765101	LWC3.7-20170208-16:20-0.5	2/8/2017	E314.0	14797-73-0	Perchlorate	770		19.00	80	ug/l				
4401765101	LWC3.7-20170208-16:20-0.5	2/8/2017	SM2540C	TDS	Total Dissolved Solids	2200		5.00	20	mg/l				
4401766401	GLW4.9-20170209-15:53-1.4	2/9/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l				
4401766401	GLW4.9-20170209-15:53-1.4	2/9/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l				
4401766401	GLW4.9-20170209-15:53-1.4	2/9/2017	E300.1	14866-68-3	Chlorate	91		20.00	40	ug/l				
4401766401	GLW4.9-20170209-15:53-1.4	2/9/2017	E314.0	14797-73-0	Perchlorate	14		0.95	4.0	ug/l				
4401766401	GLW4.9-20170209-15:53-1.4	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401766401	LW4.95-20170209-15:40-1.2	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401766401	LW4.95-20170209-15:40-1.2	2/9/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l				
4401766401	LW4.95-20170209-15:40-1.2	2/9/2017	E300.1	14866-68-3	Chlorate	78		20.00	40	ug/l				
4401766401	LW4.95-20170209-15:40-1.2	2/9/2017	E314.0	14797-73-0	Perchlorate	10		0.95	4.0	ug/l				
4401766401	LW4.95-20170209-15:40-1.2	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401766401	LW5.3-20170209-15:15-1.1	2/9/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l				
4401766401	LW5.3-20170209-15:15-1.1	2/9/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l				
4401766401	LW5.3-20170209-15:15-1.1	2/9/2017	E300.1	14866-68-3	Chlorate	66		20.00	40	ug/l				
4401766401	LW5.3-20170209-15:15-1.1	2/9/2017	E314.0	14797-73-0	Perchlorate	9.1		0.95	4.0	ug/l				
4401766401	LW5.3-20170209-15:15-1.1	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
4401766401	LW5.3-20170209-15:18-2.2	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401766401	LW5.3-20170209-15:18-2.2	2/9/2017	E300	24959-67-9	Bromide	0.51		0.25	0.50	mg/l				
4401766401	LW5.3-20170209-15:18-2.2	2/9/2017	E300.1	14866-68-3	Chlorate	69		20.00	40	ug/l				
4401766401	LW5.3-20170209-15:18-2.2	2/9/2017	E314.0	14797-73-0	Perchlorate	8.8	1	0.95	4.0	ug/l				
4401766401	LW5.3-20170209-15:18-2.2	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401766411	GLW4.4-20170209-15:44-1.3	2/9/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401766411	GLW4.4-20170209-15:44-1.3	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766411	GLW4.4-20170209-15:44-1.3 GLW4.4-20170209-15:44-1.3	2/9/2017	E300.1	14866-68-3	Chlorate	110		20.00	40	ug/l				
4401766411	GLW4.4-20170209-15.44-1.3 GLW4.4-20170209-15:44-1.3	2/9/2017	E300.1	14797-73-0	Perchlorate	23		0.95	4.0	ug/l				
4401766411	GLW4.4-20170209-15:44-1.3 GLW4.4-20170209-15:44-1.3	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500	+	5.00	20	mg/l				
4401766411	GLW4.4-20170209-15:44-1.3 GLW4.85-20170209-15:18-0.8	2/9/2017	E300	16887-00-6	Chloride	300	+	0.50	50					
							U			mg/l				
4401766411	GLW4.85-20170209-15:18-0.8	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	-	Result	Qualifier				Qualifier	Code	Definition	Finding
4401766411	GLW4.85-20170209-15:18-0.8	2/9/2017	E300.1	14866-68-3	Chlorate	900		50.00	100	ug/l				
4401766411	GLW4.85-20170209-15:18-0.8	2/9/2017	E314.0	14797-73-0	Perchlorate	180		4.75	20	ug/l				
4401766411	GLW4.85-20170209-15:18-0.8	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l				
4401766411	LW4.1-20170209-16:02-0.4	2/9/2017	E300	16887-00-6	Chloride	270	U	0.50	50	mg/l				
4401766411	LW4.1-20170209-16:02-0.4	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766411	LW4.1-20170209-16:02-0.4	2/9/2017	E300.1	14866-68-3	Chlorate	160		20.00	40	ug/l				
4401766411	LW4.1-20170209-16:02-0.4	2/9/2017	E314.0	14797-73-0	Perchlorate	36		0.95	4.0	ug/l				
4401766411	LW4.1-20170209-16:02-0.4	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401766411	LW4.1-20170209-16:02-0.4-FD	2/9/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l				
4401766411	LW4.1-20170209-16:02-0.4-FD	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766411	LW4.1-20170209-16:02-0.4-FD	2/9/2017	E300.1	14866-68-3	Chlorate	170		20.00	40	ug/l				
4401766411	LW4.1-20170209-16:02-0.4-FD	2/9/2017	E314.0	14797-73-0	Perchlorate	35		0.95	4.0	ug/l				
4401766411	LW4.1-20170209-16:02-0.4-FD	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401766421	LW3.4-20170209-13:33-0.5	2/9/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401766421	LW3.4-20170209-13:33-0.5	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766421	LW3.4-20170209-13:33-0.5	2/9/2017	E300.1	14866-68-3	Chlorate	200		20.00	40	ug/l				
4401766421	LW3.4-20170209-13:33-0.5	2/9/2017	E314.0	14797-73-0	Perchlorate	52		0.95	4.0	ug/l				
4401766421	LW3.4-20170209-13:33-0.5	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401766421	LW3.4-20170209-13:33-0.5-FD	2/9/2017	E300	16887-00-6	Chloride	290		0.50	25	mg/l				
4401766421	LW3.4-20170209-13:33-0.5-FD	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766421	LW3.4-20170209-13:33-0.5-FD	2/9/2017	E300.1	14866-68-3	Chlorate	200		20.00	40	ug/l				
4401766421	LW3.4-20170209-13:33-0.5-FD	2/9/2017	E314.0	14797-73-0	Perchlorate	57		0.95	4.0	ug/l				
4401766421	LW3.4-20170209-13:33-0.5-FD	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401766431	GLW3.78-20170209-16:30-1.4	2/9/2017	E300	16887-00-6	Chloride	370		0.50	50	mg/l				
4401766431	GLW3.78-20170209-16:30-1.4	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766431	GLW3.78-20170209-16:30-1.4	2/9/2017	E300.1	14866-68-3	Chlorate	200		20.00	40	ug/l				
4401766431	GLW3.78-20170209-16:30-1.4	2/9/2017	E314.0	14797-73-0	Perchlorate	43		0.95	4.0	ug/l				
4401766431	GLW3.78-20170209-16:30-1.4	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401766431	LW3.4-20170209-16:55-0.6	2/9/2017	E300	16887-00-6	Chloride	290		0.25	25	mg/l				
4401766431	LW3.4-20170209-16:55-0.6	2/9/2017	E300	24959-67-9	Bromide	0.27	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401766431	LW3.4-20170209-16:55-0.6	2/9/2017	E300.1	14866-68-3	Chlorate	160		20.00	40	ug/l				
4401766431	LW3.4-20170209-16:55-0.6	2/9/2017	E314.0	14797-73-0	Perchlorate	38		0.95	4.0	ug/l				
4401766431	LW3.4-20170209-16:55-0.6	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401766431	LW3.75-20170209-16:11-0.8	2/9/2017	E300	16887-00-6	Chloride	320		0.50	50	mg/l				
4401766431	LW3.75-20170209-16:11-0.8	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766431	LW3.75-20170209-16:11-0.8	2/9/2017	E300.1	14866-68-3	Chlorate	130		20.00	40	ug/l				
4401766431	LW3.75-20170209-16:11-0.8	2/9/2017	E314.0	14797-73-0	Perchlorate	31		0.95	4.0	ug/l				
4401766431	LW3.75-20170209-16:11-0.8	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401766431	LW3.85-20170209-15:45-0.6	2/9/2017	E300	16887-00-6	Chloride	290		0.50	50	mg/l				
4401766431	LW3.85-20170209-15:45-0.6	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766431	LW3.85-20170209-15:45-0.6	2/9/2017	E300.1	14866-68-3	Chlorate	130		20.00	40	ug/l				
4401766431	LW3.85-20170209-15:45-0.6	2/9/2017	E314.0	14797-73-0	Perchlorate	32		0.95	4.0	ug/l				
4401766431	LW3.85-20170209-15:45-0.6	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	20	mg/l				
4401766431	LWC3.7-20170209-16:00-0.6	2/9/2017	E300	16887-00-6	Chloride	460		1.25	100	mg/l				
4401766431	LWC3.7-20170209-16:00-0.6	2/9/2017	E300	24959-67-9	Bromide	1.25	U	1.25	2.5	mg/l				
4401766431	LWC3.7-20170209-16:00-0.6	2/9/2017	E300.1	14866-68-3	Chlorate	3100		200.00	400	ug/l				
4401766431	LWC3.7-20170209-16:00-0.6	2/9/2017	E314.0	14797-73-0	Perchlorate	1100		19.00	80	ug/l				
4401766431	LWC3.7-20170209-16:00-0.6	2/9/2017	SM2540C	TDS	Total Dissolved Solids	2500		5.00	20	mg/l				
4401766441	LW6.05-20170209-15:23-0.7	2/9/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l				
4401766441	LW6.05-20170209-15:23-0.7	2/9/2017	E300	24959-67-9	Bromide	0.31	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualific	
4401766441	LW6.05-20170209-15:23-0.7	2/9/2017	E300.1	14866-68-3	Chlorate	60	Qualifici	20.00	40	ug/l	quamioi	0000	Dominion	1 1110	g
4401766441	LW6.05-20170209-15:23-0.7	2/9/2017	E314.0	14797-73-0	Perchlorate	6.8		0.95	4.0	ug/l					+
4401766441	LW6.05-20170209-15:23-0.7	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					+
4401766441	LW6.7-20170209-15:04-0.6	2/9/2017	E300	16887-00-6	Chloride	220		0.25	25	mg/l					+
4401766441	LW6.7-20170209-15:04-0.6	2/9/2017	E300	24959-67-9	Bromide	0.71		0.25	0.50	mg/l					
4401766441	LW6.7-20170209-15:04-0.6	2/9/2017	E300.1	14866-68-3	Chlorate	66		20.00	40	ug/l					
4401766441	LW6.7-20170209-15:04-0.6	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766441	LW6.7-20170209-15:04-0.6	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401766441	LW7.2-20170209-14:41-0.9	2/9/2017	E300	16887-00-6	Chloride	200		0.25	25	mg/l					
4401766441	LW7.2-20170209-14:41-0.9	2/9/2017	E300	24959-67-9	Bromide	0.35	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401766441	LW7.2-20170209-14:41-0.9	2/9/2017	E300.1	14866-68-3	Chlorate	67		20.00	40	ug/l					
4401766441	LW7.2-20170209-14:41-0.9	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766441	LW7.2-20170209-14:41-0.9	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
4401766441	LW7.2-20170209-14:41-0.9-FD	2/9/2017	E300	16887-00-6	Chloride	200		0.25	25	mg/l					
4401766441	LW7.2-20170209-14:41-0.9-FD	2/9/2017	E300	24959-67-9	Bromide	0.33	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401766441	LW7.2-20170209-14:41-0.9-FD	2/9/2017	E300.1	14866-68-3	Chlorate	69		20.00	40	ug/l					
4401766441	LW7.2-20170209-14:41-0.9-FD	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766441	LW7.2-20170209-14:41-0.9-FD	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l					
4401766451	LW4.95-20170209-12:30-1.1	2/9/2017	E300	16887-00-6	Chloride	290		0.25	25	mg/l					
4401766451	LW4.95-20170209-12:30-1.1	2/9/2017	E300	24959-67-9	Bromide	0.27	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401766451	LW4.95-20170209-12:30-1.1	2/9/2017	E300.1	14866-68-3	Chlorate	91		20.00	40	ug/l					
4401766451	LW4.95-20170209-12:30-1.1	2/9/2017	E314.0	14797-73-0	Perchlorate	22	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	141/144	%
4401766451	LW4.95-20170209-12:30-1.1	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401766461	GLWC6.1_3-20170209-09:32-1.2	2/9/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l					
4401766461	GLWC6.1_3-20170209-09:32-1.2	2/9/2017	E300	24959-67-9	Bromide	0.39	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401766461	GLWC6.1_3-20170209-09:32-1.2	2/9/2017	E300.1	14866-68-3	Chlorate	87		20.00	40	ug/l					
4401766461	GLWC6.1_3-20170209-09:32-1.2	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766461	GLWC6.1_3-20170209-09:32-1.2	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l					
4401766461	GLWC6.1_4-20170209-10:33-1.3	2/9/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401766461	GLWC6.1_4-20170209-10:33-1.3	2/9/2017	E300	24959-67-9	Bromide	0.45	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td> !</td></pql<>	-	!
4401766461	GLWC6.1_4-20170209-10:33-1.3	2/9/2017	E300.1	14866-68-3	Chlorate	71		20.00	40	ug/l					
4401766461	GLWC6.1_4-20170209-10:33-1.3	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766461	GLWC6.1_4-20170209-10:33-1.3	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l					
4401766461	LW5.9-20170209-10:01-0.4	2/9/2017	E300	16887-00-6	Chloride	260	_	0.50	50	mg/l					
4401766461	LW5.9-20170209-10:01-0.4	2/9/2017	E300	24959-67-9	Bromide	0.60	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401766461	LW5.9-20170209-10:01-0.4	2/9/2017	E300.1	14866-68-3	Chlorate	74		20.00	40	ug/l					
4401766461	LW5.9-20170209-10:01-0.4	2/9/2017	E314.0	14797-73-0	Perchlorate	15		0.95	4.0	ug/l					
4401766461	LW5.9-20170209-10:01-0.4	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401766461	LWC6.1_1-20170209-09:10-1.0	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l			D DO!		+
4401766461	LWC6.1_1-20170209-09:10-1.0	2/9/2017	E300	24959-67-9	Bromide	0.41	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401766461	LWC6.1_1-20170209-09:10-1.0	2/9/2017	E300.1	14866-68-3	Chlorate	88		20.00	40	ug/l					+
4401766461	LWC6.1_1-20170209-09:10-1.0	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					+
4401766461	LWC6.1_1-20170209-09:10-1.0	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				+	+
4401766461	LWC6.1_2-20170209-09:25-0.6	2/9/2017	E300	16887-00-6	Chloride	100		0.25	25	mg/l	1	0.5	Dotoot (DO)		+
4401766461 4401766461	LWC6.1_2-20170209-09:25-0.6	2/9/2017	E300	24959-67-9 14866-68-3	Bromide	0.30	J		0.50 40	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
	LWC6.1_2-20170209-09:25-0.6	2/9/2017	E300.1		Chlorate	50 0.95	U	20.00		ug/l					+
4401766461 4401766461	LWC6.1_2-20170209-09:25-0.6 LWC6.1 2-20170209-09:25-0.6	2/9/2017 2/9/2017	E314.0 SM2540C	14797-73-0 TDS	Perchlorate Total Dissolved Solids	610	U	0.95 5.00	4.0	ug/l					+
4401766461	GLWC6.1_2-20170209-09:25-0.6 GLWC6.1_3-20170209-14:57-1.1	2/9/2017	E300	16887-00-6	Chloride	270		0.25	25	mg/l					+
4401766471	_	2/9/2017	E300	24959-67-9		0.25	U	0.25	0.50	mg/l					+
4401/004/1	GLWC6.1_3-20170209-14:57-1.1	2/9/2017	E300	24909-07-9	Bromide	0.25	U	0.25	0.50	mg/l					

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualification
	Sample ID	Date		Analyte ID	-	Result	Qualifier				Qualifier	Code	Definition	Finding
4401766471	GLWC6.1_3-20170209-14:57-1.1	2/9/2017	E300.1	14866-68-3	Chlorate	76		20.00	40	ug/l				
4401766471	GLWC6.1_3-20170209-14:57-1.1	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401766471	GLWC6.1_3-20170209-14:57-1.1	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401766471	GLWC6.1_4-20170209-15:51-1.6	2/9/2017	E300	16887-00-6	Chloride	290		0.25	25	mg/l			Data et DOI	
4401766471	GLWC6.1_4-20170209-15:51-1.6	2/9/2017	E300	24959-67-9	Bromide	0.35	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401766471	GLWC6.1_4-20170209-15:51-1.6	2/9/2017	E300.1	14866-68-3	Chlorate	72		10.00	20	ug/l				
4401766471	GLWC6.1_4-20170209-15:51-1.6	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401766471	GLWC6.1_4-20170209-15:51-1.6	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401766471	LW5.9-20170209-15:27-0.7	2/9/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l			D DO!	
4401766471	LW5.9-20170209-15:27-0.7	2/9/2017	E300	24959-67-9	Bromide	0.26	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401766471	LW5.9-20170209-15:27-0.7	2/9/2017	E300.1	14866-68-3	Chlorate	61		20.00	40	ug/l				
4401766471	LW5.9-20170209-15:27-0.7	2/9/2017	E314.0	14797-73-0	Perchlorate	6.9		0.95	4.0	ug/l				
4401766471	LW5.9-20170209-15:27-0.7	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l				
4401766471	LWC6.1_1-20170209-14:39-1.1	2/9/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l				
4401766471	LWC6.1_1-20170209-14:39-1.1	2/9/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401766471	LWC6.1_1-20170209-14:39-1.1	2/9/2017	E300.1	14866-68-3	Chlorate	79		20.00	40	ug/l				
4401766471	LWC6.1_1-20170209-14:39-1.1	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401766471	LWC6.1_1-20170209-14:39-1.1	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1200		5.00	10	mg/l				
4401766471	LWC6.1_1-20170209-14:39-1.1-FD	2/9/2017	E300	16887-00-6	Chloride	280		0.25	25	mg/l				
4401766471	LWC6.1_1-20170209-14:39-1.1-FD	2/9/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
	LWC6.1_1-20170209-14:39-1.1-FD	2/9/2017	E300.1	14866-68-3	Chlorate	81		20.00	40	ug/l				
4401766471	LWC6.1_1-20170209-14:39-1.1-FD	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401766471	LWC6.1_1-20170209-14:39-1.1-FD	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1100		5.00	10	mg/l				
4401766471	LWC6.1_2-20170209-14:52-0.8	2/9/2017	E300	16887-00-6	Chloride	100		0.25	10	mg/l				
4401766471	LWC6.1_2-20170209-14:52-0.8	2/9/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				
4401766471	LWC6.1_2-20170209-14:52-0.8	2/9/2017	E300.1	14866-68-3	Chlorate	51		20.00	40	ug/l				
4401766471	LWC6.1_2-20170209-14:52-0.8	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l				
4401766471	LWC6.1_2-20170209-14:52-0.8	2/9/2017	SM2540C	TDS	Total Dissolved Solids	590		5.00	10	mg/l				
4401766481	GLW4.4-20170209-10:22-1.1	2/9/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l				
4401766481	GLW4.4-20170209-10:22-1.1	2/9/2017	E300	24959-67-9	Bromide	0.52		0.25	0.50	mg/l				
4401766481	GLW4.4-20170209-10:22-1.1	2/9/2017	E300.1	14866-68-3	Chlorate	120		20.00	40	ug/l				
4401766481	GLW4.4-20170209-10:22-1.1	2/9/2017	E314.0	14797-73-0	Perchlorate	26		0.95	4.0	ug/l				
4401766481	GLW4.4-20170209-10:22-1.1	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401766481	GLW4.85-20170209-09:58-0.7	2/9/2017	E300	16887-00-6	Chloride	340		0.50	50	mg/l				
4401766481	GLW4.85-20170209-09:58-0.7	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l				
4401766481	GLW4.85-20170209-09:58-0.7	2/9/2017	E300.1	14866-68-3	Chlorate	1600		200.00	400	ug/l				
4401766481	GLW4.85-20170209-09:58-0.7	2/9/2017	E314.0	14797-73-0	Perchlorate	320		4.75	20	ug/l				
4401766481	GLW4.85-20170209-09:58-0.7	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	20	mg/l				
4401766481	LW4.1-20170209-10:38-0.3	2/9/2017	E300	16887-00-6	Chloride	290		0.25	25	mg/l				
4401766481	LW4.1-20170209-10:38-0.3	2/9/2017	E300	24959-67-9	Bromide	0.28	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td></td></pql<>	
4401766481	LW4.1-20170209-10:38-0.3	2/9/2017	E300.1	14866-68-3	Chlorate	230		20.00	40	ug/l				
4401766481	LW4.1-20170209-10:38-0.3	2/9/2017	E314.0	14797-73-0	Perchlorate	40		0.95	4.0	ug/l				
4401766481	LW4.1-20170209-10:38-0.3	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l				
4401766491	LW6.05-20170209-09:31-0.5	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l				
4401766491	LW6.05-20170209-09:31-0.5	2/9/2017	E300	24959-67-9	Bromide	0.77		0.25	0.50	mg/l				
4401766491	LW6.05-20170209-09:31-0.5	2/9/2017	E300.1	14866-68-3	Chlorate	69		20.00	40	ug/l				
4401766491	LW6.05-20170209-09:31-0.5	2/9/2017	E314.0	14797-73-0	Perchlorate	19		0.95	4.0	ug/l				
4401766491	LW6.05-20170209-09:31-0.5	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l				
4401766491	LW6.05-20170209-10:40-FB	2/9/2017	E300	16887-00-6	Chloride	0.25	U	0.25	0.50	mg/l				
4401766491	LW6.05-20170209-10:40-FB	2/9/2017	E300	24959-67-9	Bromide	0.25	U	0.25	0.50	mg/l				

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client	Sample	Method	Client	Analyte	Lab	Lab	SQL	PQL	Units	Validator	Reason	Reason Code	Qualific	
	Sample ID	Date		Analyte ID	-	Result	Qualifier				Qualifier	Code	Definition	Findi	ng
4401766491	LW6.05-20170209-10:40-FB	2/9/2017	E300.1	14866-68-3	Chlorate	10.00	U	10.00	20	ug/l					
4401766491	LW6.05-20170209-10:40-FB	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766491	LW6.05-20170209-10:40-FB	2/9/2017	SM2540C	TDS	Total Dissolved Solids	5.00	U	5.00	10	mg/l					
4401766491	LW6.7-20170209-09:11-0.3	2/9/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401766491	LW6.7-20170209-09:11-0.3	2/9/2017	E300	24959-67-9	Bromide	1.7		0.50	1.0	mg/l					
4401766491	LW6.7-20170209-09:11-0.3	2/9/2017	E300.1	14866-68-3	Chlorate	76		20.00	40	ug/l					
4401766491	LW6.7-20170209-09:11-0.3	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766491	LW6.7-20170209-09:11-0.3	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1700		5.00	20	mg/l					
4401766491	LW7.2-20170209-08:56-0.7	2/9/2017	E300	16887-00-6	Chloride	230		0.25	25	mg/l					
4401766491	LW7.2-20170209-08:56-0.7	2/9/2017	E300	24959-67-9	Bromide	1.1		0.25	0.50	mg/l					
4401766491	LW7.2-20170209-08:56-0.7	2/9/2017	E300.1	14866-68-3	Chlorate	71		20.00	40	ug/l					
4401766491	LW7.2-20170209-08:56-0.7	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	U	0.95	4.0	ug/l					
4401766491	LW7.2-20170209-08:56-0.7	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l					
4401766501	GLW4.9-20170209-10:50-1.2	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401766501	GLW4.9-20170209-10:50-1.2	2/9/2017	E300	24959-67-9	Bromide	0.33	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td></td></pql<>	-	
4401766501	GLW4.9-20170209-10:50-1.2	2/9/2017	E300.1	14866-68-3	Chlorate	100		20.00	40	ug/l					
4401766501	GLW4.9-20170209-10:50-1.2	2/9/2017	E314.0	14797-73-0	Perchlorate	27		0.95	4.0	ug/l					
4401766501	GLW4.9-20170209-10:50-1.2	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401766501	LW4.95-20170209-10:35-1.0	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401766501	LW4.95-20170209-10:35-1.0	2/9/2017	E300	24959-67-9	Bromide	0.65		0.25	0.50	mg/l					
4401766501	LW4.95-20170209-10:35-1.0	2/9/2017	E300.1	14866-68-3	Chlorate	82		20.00	40	ug/l					
4401766501	LW4.95-20170209-10:35-1.0	2/9/2017	E314.0	14797-73-0	Perchlorate	24		0.95	4.0	ug/l					
4401766501	LW4.95-20170209-10:35-1.0	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401766501	LW4.95-20170209-10:35-1.0-FD	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401766501	LW4.95-20170209-10:35-1.0-FD	2/9/2017	E300	24959-67-9	Bromide	0.54		0.25	0.50	mg/l					
4401766501	LW4.95-20170209-10:35-1.0-FD	2/9/2017	E300.1	14866-68-3	Chlorate	86		20.00	40	ug/l					
4401766501	LW4.95-20170209-10:35-1.0-FD	2/9/2017	E314.0	14797-73-0	Perchlorate	23		0.95	4.0	ug/l					
4401766501	LW4.95-20170209-10:35-1.0-FD	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401766501	LW5.3-20170209-10:00-1.0	2/9/2017	E300	16887-00-6	Chloride	240		0.25	25	mg/l					
4401766501	LW5.3-20170209-10:00-1.0	2/9/2017	E300	24959-67-9	Bromide	0.56		0.25	0.50	mg/l					
4401766501	LW5.3-20170209-10:00-1.0	2/9/2017	E300.1	14866-68-3	Chlorate	67		20.00	40	ug/l					
4401766501	LW5.3-20170209-10:00-1.0	2/9/2017	E314.0	14797-73-0	Perchlorate	22		0.95	4.0	ug/l					
4401766501	LW5.3-20170209-10:00-1.0	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1500		5.00	10	mg/l					
4401766501	LW5.3-20170209-10:03-2.0	2/9/2017	E300	16887-00-6	Chloride	280		0.50	50	mg/l					
4401766501	LW5.3-20170209-10:03-2.0	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401766501	LW5.3-20170209-10:03-2.0	2/9/2017	E300.1	14866-68-3	Chlorate	120		20.00	40	ug/l					
4401766501	LW5.3-20170209-10:03-2.0	2/9/2017	E314.0	14797-73-0	Perchlorate	30		0.95	4.0	ug/l					
4401766501	LW5.3-20170209-10:03-2.0	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401766521	LW6.05-20170209-12:00-0.6	2/9/2017	E300	16887-00-6	Chloride	290		0.25	25	mg/l					
4401766521	LW6.05-20170209-12:00-0.6	2/9/2017	E300	24959-67-9	Bromide	0.30	J	0.25	0.50	mg/l					
4401766521	LW6.05-20170209-12:00-0.6	2/9/2017	E300.1	14866-68-3	Chlorate	74		20.00	40	ug/l					
4401766521	LW6.05-20170209-12:00-0.6	2/9/2017	E314.0	14797-73-0	Perchlorate	14		0.95	4.0	ug/l					
4401766521	LW6.05-20170209-12:00-0.6	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1600		5.00	10	mg/l					
4401766521	LW7.2-20170209-10:52-0.8	2/9/2017	E300	16887-00-6	Chloride	250		0.25	25	mg/l					
4401766521	LW7.2-20170209-10:52-0.8	2/9/2017	E300	24959-67-9	Bromide	0.27	J	0.25	0.50	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>-</td></pql<>	-	-
4401766521	LW7.2-20170209-10:52-0.8	2/9/2017	E300.1	14866-68-3	Chlorate	69		20.00	40	ug/l					
4401766521	LW7.2-20170209-10:52-0.8	2/9/2017	E314.0	14797-73-0	Perchlorate	0.95	UF1	0.95	4.0	ug/l		m	matrix spike %R	122/126	%
4401766521	LW7.2-20170209-10:52-0.8	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1300		5.00	10	mg/l			'		
4401766531	GLW4.4-20170209-13:11-1.2	2/9/2017	E300	16887-00-6	Chloride	270		0.50	50	mg/l					
4401766531	GLW4.4-20170209-13:11-1.2	2/9/2017	E300	24959-67-9	Bromide	0.62	J	0.50	1.0	mg/l	J	sp	Detect <pql< td=""><td>-</td><td>1-</td></pql<>	-	1-

Table 4
All Results, Qualifiers, and Reason Codes
NERT Downgradient Study Area
Henderson, Nevada

SDG	Client Sample ID	Sample Date	Method	Client Analyte ID	Analyte	Lab Result	Lab Qualifier	SQL	PQL	Units	Validator Qualifier	Reason Code	Reason Code Definition	Qualific Find	
4401766531	GLW4.4-20170209-13:11-1.2	2/9/2017	E300.1	14866-68-3	Chlorate	140		20.00	40	ug/l					
4401766531	GLW4.4-20170209-13:11-1.2	2/9/2017	E314.0	14797-73-0	Perchlorate	31	F1	0.95	4.0	ug/l	J+	m	matrix spike %R	145/144	%
4401766531	GLW4.4-20170209-13:11-1.2	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	20	mg/l					
4401767151	GLW3.78-20170209-11:28-0.3	2/9/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401767151	GLW3.78-20170209-11:28-0.3	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401767151	GLW3.78-20170209-11:28-0.3	2/9/2017	E300.1	14866-68-3	Chlorate	230		20.00	40	ug/l					
4401767151	GLW3.78-20170209-11:28-0.3	2/9/2017	E314.0	14797-73-0	Perchlorate	47		0.95	4.0	ug/l					
4401767151	GLW3.78-20170209-11:28-0.3	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401767151	LW3.4-20170209-12:00-0.5	2/9/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401767151	LW3.4-20170209-12:00-0.5	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401767151	LW3.4-20170209-12:00-0.5	2/9/2017	E300.1	14866-68-3	Chlorate	190		20.00	40	ug/l					
4401767151	LW3.4-20170209-12:00-0.5	2/9/2017	E314.0	14797-73-0	Perchlorate	42		0.95	4.0	ug/l					
4401767151	LW3.4-20170209-12:00-0.5	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401767151	LW3.75-20170209-10:58-0.5	2/9/2017	E300	16887-00-6	Chloride	260		0.25	25	mg/l					
4401767151	LW3.75-20170209-10:58-0.5	2/9/2017	E300	24959-67-9	Bromide	0.59		0.25	0.50	mg/l					
4401767151	LW3.75-20170209-10:58-0.5	2/9/2017	E300.1	14866-68-3	Chlorate	140		20.00	40	ug/l					
4401767151	LW3.75-20170209-10:58-0.5	2/9/2017	E314.0	14797-73-0	Perchlorate	27		0.95	4.0	ug/l					
4401767151	LW3.75-20170209-10:58-0.5	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401767151	LW3.85-20170209-10:30-0.5	2/9/2017	E300	16887-00-6	Chloride	260		0.50	50	mg/l					
4401767151	LW3.85-20170209-10:30-0.5	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401767151	LW3.85-20170209-10:30-0.5	2/9/2017	E300.1	14866-68-3	Chlorate	140		20.00	40	ug/l					
4401767151	LW3.85-20170209-10:30-0.5	2/9/2017	E314.0	14797-73-0	Perchlorate	28		0.95	4.0	ug/l					
4401767151	LW3.85-20170209-10:30-0.5	2/9/2017	SM2540C	TDS	Total Dissolved Solids	1400		5.00	10	mg/l					
4401767151	LWC3.7-20170209-10:48-0.4	2/9/2017	E300	16887-00-6	Chloride	360		0.50	50	mg/l					
4401767151	LWC3.7-20170209-10:48-0.4	2/9/2017	E300	24959-67-9	Bromide	0.50	U	0.50	1.0	mg/l					
4401767151	LWC3.7-20170209-10:48-0.4	2/9/2017	E300.1	14866-68-3	Chlorate	1800		200.00	400	ug/l					
4401767151	LWC3.7-20170209-10:48-0.4	2/9/2017	E314.0	14797-73-0	Perchlorate	670		9.50	40	ug/l					
4401767151	LWC3.7-20170209-10:48-0.4	2/9/2017	SM2540C	TDS	Total Dissolved Solids	2100		5.00	20	mg/l					

	Samples coordina	ted with the USGS Seepage Stu	dy	
SDG	Analyte	LW3.85-20161208-0.3	FD	RPD
4401688961	Bromide	0.50 mg/l	0.54 J mg/l	7.69
4401688961	Chloride	250 mg/l	250 mg/l	0.00
4401688961	Chlorate	100 ug/l	96 ug/l	4.08
4401688961	Perchlorate	24 ug/l	25 ug/l	4.08
4401688961	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	LWC3.7-20161208-0.6	FD	RPD
4401688961	Bromide	2.4 J mg/l	2.9 mg/l	NC
4401688961	Chloride	490 mg/l	490 mg/l	0.00
4401688961	Chlorate	4300 ug/l	4300 ug/l	0.00
4401688961	Perchlorate	1600 ug/l	1600 ug/l	0.00
4401688961	Total Dissolved Solids	3300 mg/l	3200 mg/l	3.08
	Transect	Surface Water Samples	· · · · · ·	
SDG	Analyte	T3.5B-20170202-0.5	FD	RPD
4401755981	Bromide	0.64 J mg/l	1.0 mg/l	NC
4401755981	Bromide	0.64 mg/l	50 mg/l	NC
4401755981	Chloride	280 mg/l	270 mg/l	3.64
4401755981	Chlorate	430 ug/l	440 ug/l	2.30
4401755981	Perchlorate	140 ug/l	140 ug/l	0.00
4401755981	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	T3.8C-20170130-0.4	FD	RPD
4401751531	Bromide	0.53 mg/l	0.90 mg/l	51.75
4401751531	Chloride	250 mg/l	250 mg/l	0.00
4401751531	Chlorate	110 ug/l	110 ug/l	0.00
4401751531	Perchlorate	32 ug/l	32 ug/l	0.00
4401751531	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	T4.2B-20170201-1.0	FD	RPD
4401753881	Bromide	0.67 J mg/l	0.60 mg/l	11.02
4401753881	Chloride	260 mg/l	260 mg/l	0.00
4401753881	Chlorate	170 ug/l	170 ug/l	0.00
4401753881	Perchlorate	40 ug/l	40 ug/l	0.00
4401753881	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	T4.65B-20170131-0.9	FD	RPD
4401752491	Bromide	1.8 mg/l	1.7 mg/l	5.71
4401752491	Chloride	260 mg/l	270 mg/l	3.77
4401752491	Chlorate	210 ug/l	210 ug/l	0.00
4401752491	Perchlorate	51 ug/l	51 ug/l	0.00
4401752491	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	T4.6B-20170131-0.6	FD	RPD
4401752731	Bromide	1.6 mg/l	1.6 mg/l	0.00
4401752731	Chloride	280 mg/l	280 mg/l	0.00
4401752731	Chlorate	210 ug/l	220 ug/l	4.65
4401752731	Perchlorate	57 ug/l	56 ug/l	1.77
4401752731	Total Dissolved Solids	1600 mg/l	1600 mg/l	0.00
SDG	Analyte	T4.75A-20170201-1.3	FD	RPD
4401755201	Bromide	0.69 J mg/l	0.71 J mg/l	2.86
4401755201	Chloride	360 mg/l	360 mg/l	0.00

	Samples coordina	ted with the USGS Seepage Study		
4401755201	Chlorate	3100 ug/l	3100 ug/l	0.00
4401755201	Perchlorate	820 ug/l	830 ug/l	1.21
4401755201	Total Dissolved Solids	2200 mg/l	2200 mg/l	0.00
SDG	Analyte	T5.3B-20170202-2.0	FD FD	RPD
4401755961	Bromide	1.0 mg/l	1.0 mg/l	NC
4401755961	Bromide	1.0 mg/l	50 mg/l	NC
4401755961	Chloride	290 mg/l	290 mg/l	0.00
4401755961	Chlorate	54 ug/l	55 ug/l	1.83
4401755961	Perchlorate	18 ug/l	18 ug/l	0.00
4401755961	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
1101100001		Surface Water Samples	1000 mg/1	0.00
SDG	Analyte	GLW4.4-20170207-14:11-1.3	FD	RPD
4401763741	Bromide	1.6 mg/l	1.2 mg/l	28.57
4401763741	Chloride	270 mg/l	270 mg/l	0.00
4401763741	Chlorate	97 ug/l	96 ug/l	1.04
4401763741	Perchlorate	25 ug/l	25 ug/l	0.00
4401763741	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	GLW4.85-20170207-15:42-0.8	FD	RPD
4401763801	Bromide	0.29 J mg/l	0.32 J mg/l	9.84
4401763801	Chloride	300 mg/l	310 mg/l	3.28
4401763801	Chlorate	1200 ug/l	1200 ug/l	0.00
4401763801	Perchlorate	290 ug/l	310 ug/l	6.67
4401763801	Total Dissolved Solids	1600 mg/l	1600 mg/l	0.00
SDG	Analyte	GLW4.9-20170208-16:35-1.4	FD	RPD
4401765081	Bromide	1.4 mg/l	1.0 mg/l	33.33
4401765081 4401765081	Bromide Chloride	1.4 mg/l 240 mg/l	1.0 mg/l 240 mg/l	33.33 0.00
4401765081	Chloride	240 mg/l	240 mg/l	0.00
4401765081 4401765081	Chloride Chlorate	240 mg/l 84 ug/l	240 mg/l 84 ug/l	0.00 0.00
4401765081 4401765081 4401765081 4401765081 SDG	Chloride Chlorate Perchlorate	240 mg/l 84 ug/l 15 ug/l	240 mg/l 84 ug/l 14 ug/l	0.00 0.00 6.90
4401765081 4401765081 4401765081 4401765081	Chloride Chlorate Perchlorate Total Dissolved Solids	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l	0.00 0.00 6.90 0.00
4401765081 4401765081 4401765081 4401765081 SDG	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD	0.00 0.00 6.90 0.00 RPD
4401765081 4401765081 4401765081 4401765081 SDG 4401763901	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 5DG 4401753901	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 SDG 4401759941 4401759941	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Chlorate Chlorate Chlorate Chlorate Chloride Chloride	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48 0.00
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 SDG 4401759941 4401759941 4401759941	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Chlorate Chlorate Chlorate Chlorate	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l 93 ug/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l 91 ug/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 5DG 4401759941 4401759941 4401759941 4401759941	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Formide Chloride Chloride Chloride Chlorate Perchlorate	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l 93 ug/l 1.3 J ug/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l 91 ug/l 1.2 J ug/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48 0.00 2.17 8.00
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 4401759941 4401759941 4401759941 4401759941 4401759941	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chloride Chloride Chlorate Total Dissolved Solids Analyte Bromide Chlorate Chlorate Perchlorate Total Dissolved Solids	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l 93 ug/l 1.3 J ug/l 1400 mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l 91 ug/l 1.2 J ug/l 1400 mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48 0.00 2.17 8.00 0.00
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 SDG 4401759941 4401759941 4401759941 4401759941 4401759941 SDG	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chloride Chloride Chloride Total Dissolved Solids Analyte Perchlorate Total Dissolved Solids Analyte Perchlorate Total Dissolved Solids Analyte	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l 93 ug/l 1.3 J ug/l 1400 mg/l GLWC6.1_4-20170208-10:35-1.3	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l 91 ug/l 1400 mg/l FD	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48 0.00 2.17 8.00 0.00 RPD
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 4401759941 4401759941 4401759941 4401759941 4401759941 4401759941 4401759941 4401759941 4401759941	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chloride Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chlorate Perchlorate Total Dissolved Solids Analyte Bromide	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l 93 ug/l 1.3 J ug/l 1400 mg/l GLWC6.1_4-20170208-10:35-1.3 0.46 J mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l 91 ug/l 1.2 J ug/l 1400 mg/l FD 0.25 J mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48 0.00 2.17 8.00 0.00 RPD 59.15
4401765081 4401765081 4401765081 4401765081 SDG 4401763901 4401763901 4401763901 4401763901 4401763901 3DG 4401759941 4401759941 4401759941 4401759941 4401759941 4401763701 4401763701	Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chloride Total Dissolved Solids Analyte Bromide Chlorate Perchlorate Total Dissolved Solids Analyte Bromide Chloride Chloride Total Dissolved Solids Analyte Bromide Chloride	240 mg/l 84 ug/l 15 ug/l 1400 mg/l GLWC6.1_3-20170207-15:06-0.9 0.50 mg/l 260 mg/l 100 ug/l 4.0 ug/l 1100 mg/l GLWC6.1_4-20170206-15:45-1.3 0.68 J mg/l 330 mg/l 93 ug/l 1.3 J ug/l 1400 mg/l GLWC6.1_4-20170208-10:35-1.3 0.46 J mg/l 220 mg/l	240 mg/l 84 ug/l 14 ug/l 1400 mg/l FD 0.50 mg/l 270 mg/l 100 ug/l 4.0 ug/l 1100 mg/l FD 0.67 J mg/l 330 mg/l 91 ug/l 1.2 J ug/l 1400 mg/l FD 0.25 J mg/l 230 mg/l	0.00 0.00 6.90 0.00 RPD NC 3.77 0.00 NC 0.00 RPD 1.48 0.00 2.17 8.00 0.00 RPD 59.15 4.44
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	Samples coordina	ted with the USGS Seepage Study	/	
SDG	Analyte	LW3.4-20170209-13:33-0.5	FD	RPD
4401766421	Bromide	1.0 mg/l	1.0 mg/l	NC
4401766421	Chloride	290 mg/l	290 mg/l	0.00
4401766421	Chlorate	200 ug/l	200 ug/l	0.00
4401766421	Perchlorate	52 ug/l	57 ug/l	9.17
4401766421	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	LW3.85-20170207-15:50-0.6	FD	RPD
4401763841	Bromide	0.70 J mg/l	0.50 J mg/l	33.33
4401763841	Chloride	250 mg/l	250 mg/l	0.00
4401763841	Chlorate	110 ug/l	110 ug/l	0.00
4401763841	Perchlorate	31 ug/l	30 ug/l	3.28
4401763841	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	LW3.85-20170208-09:27-0.5	FD	RPD
4401763631	Bromide	0.58 J mg/l	0.52 J mg/l	10.91
4401763631	Chloride	260 mg/l	260 mg/l	0.00
4401763631	Chlorate	130 ug/l	130 ug/l	0.00
4401763631	Perchlorate	34 ug/l	34 ug/l	0.00
4401763631	Total Dissolved Solids	1400 mg/l	1500 mg/l	6.90
SDG	Analyte	LW4.1-20170208-10:22-0.4	FD	RPD
4401763641	Bromide	0.50 mg/l	1.0 mg/l	NC
4401763641	Chloride	270 mg/l	260 mg/l	3.77
4401763641	Chlorate	210 ug/l	220 ug/l	4.65
4401763641	Perchlorate	53 ug/l	52 ug/l	1.90
4401763641	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	LW4.1-20170209-16:02-0.4	FD	RPD
4401766411	Bromide	1.0 mg/l	1.0 mg/l	NC
4401766411	Chloride	270 mg/l	260 mg/l	3.77
4401766411	Chlorate	160 ug/l	170 ug/l	6.06
4401766411	Perchlorate	36 ug/l	35 ug/l	2.82
4401766411	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	LW4.95-20170207-16:30-1.2	FD	RPD
4401763821	Bromide	0.26 J mg/l	0.50 mg/l	NC
4401763821	Chloride	270 mg/l	270 mg/l	0.00
4401763821	Chlorate	63 ug/l	59 ug/l	6.56
4401763821	Perchlorate	13 ug/l	12 ug/l	8.00
4401763821	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	LW4.95-20170209-10:35-1.0	FD	RPD
4401766501	Bromide	0.65 mg/l	0.54 mg/l	18.49
4401766501	Chloride	240 mg/l	240 mg/l	0.00
4401766501	Chlorate	82 ug/l	86 ug/l	4.76
4401766501	Perchlorate	24 ug/l	23 ug/l	4.26
4401766501	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	LW6.05-20170208-12:35-0.8	FD	RPD
4401763751	Bromide	0.56 mg/l	0.70 J mg/l	22.22
4401763751	Chloride	240 mg/l	250 mg/l	4.08
4401763751	Chlorate	72 ug/l	70 ug/l	2.82
4401763751	Perchlorate	11 ug/l	8.0 ug/l	31.58

	Samples coordina	ted with the USGS Seepage Study	,	
4401763751	Total Dissolved Solids	1500 mg/l	1500 mg/l	0.00
SDG	Analyte	LW6.7-20170207-14:25-0.6	FD	RPD
4401763761	Bromide	1.4 mg/l	1.4 mg/l	0.00
4401763761	Chloride	240 mg/l	240 mg/l	0.00
4401763761	Chlorate	55 ug/l	55 ug/l	0.00
4401763761	Perchlorate	4.0 ug/l	4.0 ug/l	NC
4401763761	Total Dissolved Solids	1400 mg/l	1400 mg/l	0.00
SDG	Analyte	LW7.2-20170209-14:41-0.9	FD	RPD
4401766441	Bromide	0.35 J mg/l	0.33 J mg/l	5.88
4401766441	Chloride	200 mg/l	200 mg/l	0.00
4401766441	Chlorate	67 ug/l	69 ug/l	2.94
4401766441	Perchlorate	4.0 ug/l	4.0 ug/l	NC
4401766441	Total Dissolved Solids	1200 mg/l	1200 mg/l	0.00
SDG	Analyte	LWC6.1_1-20170209-14:39-1.1	FD	RPD
4401766471	Bromide	0.50 mg/l	0.50 mg/l	NC
4401766471	Chloride	280 mg/l	280 mg/l	0.00
4401766471	Chlorate	79 ug/l	81 ug/l	2.50
4401766471	Perchlorate	4.0 ug/l	4.0 ug/l	NC
4401766471	Total Dissolved Solids	1200 mg/l	1100 mg/l	8.70

Appendix A

Notification Letter from Test America to AECOM



July 24, 2017

Carmen Caceres-Schnell AECOM, Inc. 1220 Avenida Acaso Camarillo, CA 93012

Subject: NDEP Accreditation, Laboratory ID for Perchlorate Non-Potable Water

Dear Ms. Caceres-Schnell:

It is the policy of TestAmerica to provide its clients with defensible data of the highest quality and to comply with the certification requirements of all appropriate regulatory authorities. TestAmerica Irvine is notifying affected clients of a recent gap on our certification with the Nevada Department of Environmental Protection (NDEP) for determination of Perchlorate in non-potable water at our Irvine laboratory. This notification is a part of our standard client notification procedure for events involving State or agency certifications. This certification change does not affect the validity of any data reported by TestAmerica Irvine, and all other required certifications are in place.

- CWA perchlorate was included on our NDEP Fiscal Year 2016 scope, which expired 07/31/16, but was extended per NDEP until an updated scope could be issued, on 10/27/16.
- CWA perchlorate was not included on the 2017 scope issued by NDEP, due to the lack of state-specific Performance Testing studies (PTs) for CWA perchlorate. CWA perchlorate was added to our PT schedule for NDEP, and PTs completed successfully on 2/18/17 and 5/16/17. CWA perchlorate was added back to our NDEP scope effective 06/21/2017.
- We have maintained passing PTs for perchlorate by EPA 314.0 under the Safe Drinking Water Act (SDWA) and Resource Conservation and Recovery Act (RCRA) throughout this timeframe for both ORELAP and NDEP. We have maintained this parameter on our Oregon TNI-NELAP (ORELAP) scope throughout this timeframe. ORELAP is our primary accrediting authority and NDEP certification is based upon reciprocity with ORELAP. The analytical method (EPA 314.0), instrumentation, standards, and analysts are the same for all three programs (CWA, SDWA and RCRA).
- As an immediate corrective action we engaged with NDEP to ensure a return to scope for
 perchlorate in non-potable water. As a long term corrective action, we have implemented a more
 rigorous review procedure with regard to scope requests versus existing scope elements versus PT
 availability in the case of state-specific accreditation programs.



 Initial client notifications were made upon our discovery of the issue and follow up with NDEP regarding requirements for adding perchlorate back to the scope. These notifications occurred in June 2017.

Through this process, TestAmerica has complied with all requests from NDEP for supporting documentation. We appreciate NDEP's dedication and thoroughness to review the PT and comparison data, and assist us in obtaining the appropriate certification. We look forward to continuing to serve our clients, their programs, and the residents of the State of Nevada.

If you have any questions regarding this or require further information, please contact me at linda.scharpenberg@testamericainc.com, or via phone at 949.261.1022.

Sincerely yours,

Linda Scharpenberg Ed. D. Laboratory Director - Irvine

cc: Chad Roper - AECOM

Kathryn Chang, Quality Assurance Manager - TestAmerica Pamela Schemmer, Quality Assessment Director - TestAmerica

Patty Mata, Project Manager - TestAmerica

Appendix B

Notification Email from AECOM to NDEP

Roper, Chad

From: Roper, Chad

Sent: Thursday, July 20, 2017 1:47 PM To: 'jcarltonparker@ndep.nv.gov'

Cc: Van Den Berg, Harry; Caceres-Schnell, Carmen; Bilodeau, Sally; Durocher, Kristen Subject: Follow up on TestAmerica certification lapse - Downgradient Study Area Surface

Water Investigation

Carlton.

As Harry has discussed with you, TestAmerica notified us that their certification for perchlorate analysis in non-potable water lapsed during the period from August of 2016 to June of 2017.

Our Quality Assurance Project Plan (QAPP) states "The laboratories used for chemical surface water and groundwater testing will be certified by the State of Nevada for the analysis of interest." Once we were aware that we had deviated from our plan, we began our investigation. Thus far, our investigation has indicated the following.

- 1. Only perchlorate analyses contained in the Surface Water Investigation Technical Memorandum (SWI Tech Memo) were performed by Test America during the timeframe of the lapse.
- 2. Data usability in regards to the data quality objectives for the perchlorate data included in the SWI Tech Memo was unaffected for the following reasons:
 - a. TestAmerica maintained their drinking water certification for perchlorate (by the same method- 314.0) with the State of Nevada and maintained their certification as an environmental laboratory from the State of Nevada throughout the affected period.
 - b. The analytical method (314.0) used for the analysis was accredited by other states with similar accreditation requirements as the State of Nevada.
 - c. Standard Operating Procedures, Instrumentation, Standards, and Staff performing the perchlorate analysis remained the same throughout the affected period.
 - d. Accreditation was restored June 21, 2017 including the successful completion of a performance test.

In conclusion, it is our opinion that the data are valid for their intended use and that no additional qualifiers are warranted. We plan to include this statement in the data validation summary report for the SWI tech memo as well as a copy of this email and a copy of our notification from TestAmerica.

Despite our opinion that there was no effect on data quality due to the lapse, our deviation from our QAPP and TestAmerica's failure to maintain accreditation both require the following corrective actions:

- 1. AECOM will require the labs to provide proof of current certification for each of the analytical methods when we place the order. Current certification will be confirmed by the Analytical Task Leader or Investigation Task Leader prior to samples being shipped for analysis.
- 2. TestAmerica renewed their certification as soon as they were aware of the lapse. To prevent any future occurrences of certification lapses, TestAmerica will be checking their annual scope of accreditation against what was applied for and what was on the scope the previous year. Any discrepancies would be investigated and resolved within 30 days (or less) of the issuance of the scope.

We will keep you posted on any developments in this situation. Please let us know if you have any questions or additional suggestions for corrective actions.

Sincerely,

Chad Roper, PhD Analytical Task Leader D +1-805-764-4027 M +1-805-236-1009 Chad.Roper@aecom.com

AECOM

1220 Avenida Acaso Camarillo, California 93012-8750, USA T +1-805-388-3775 aecom.com

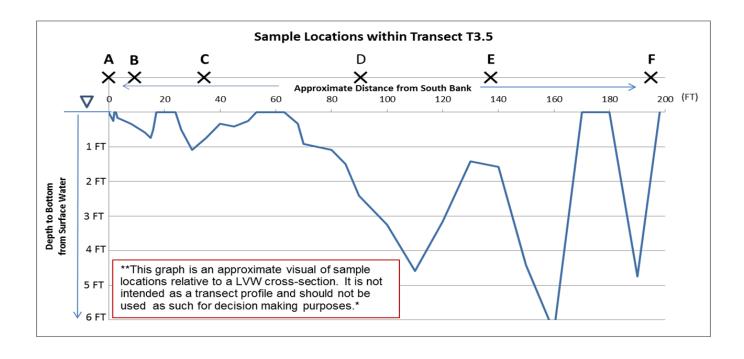
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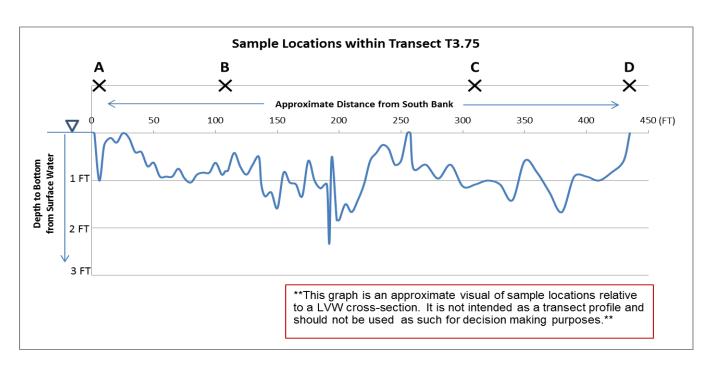
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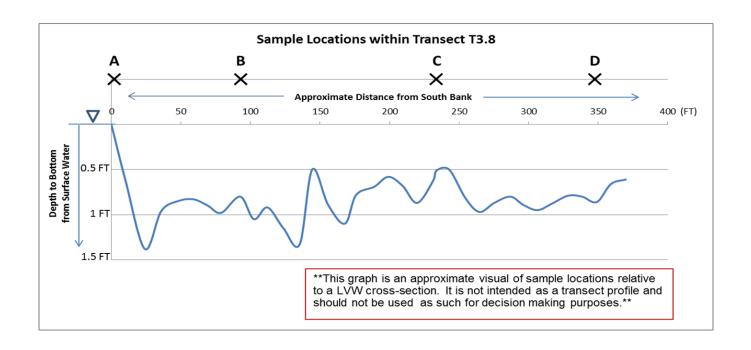
Appendix G

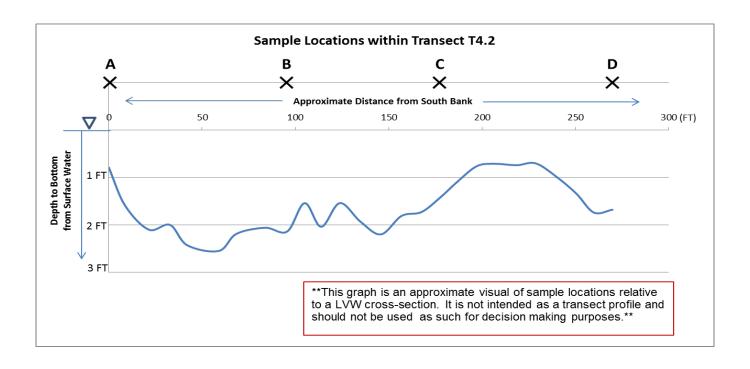
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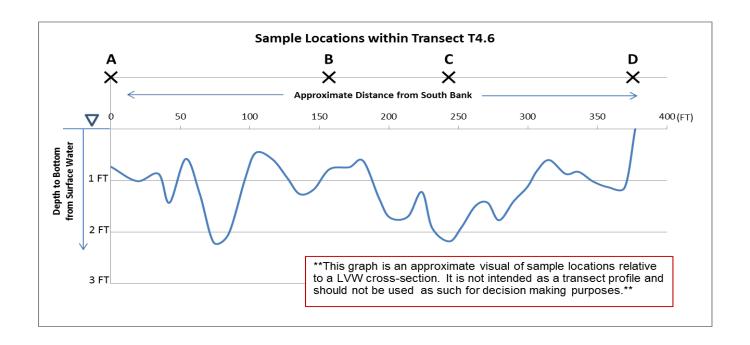
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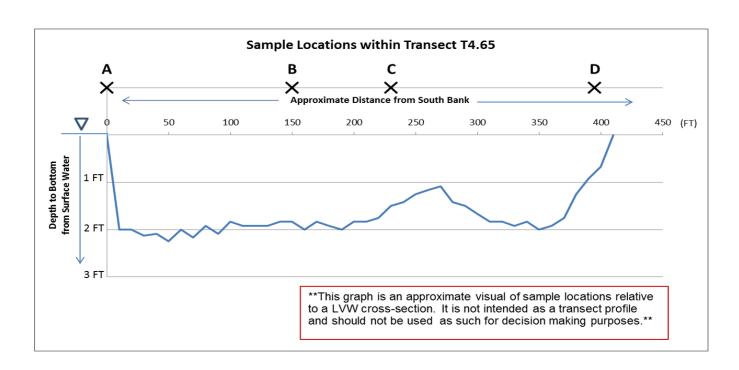


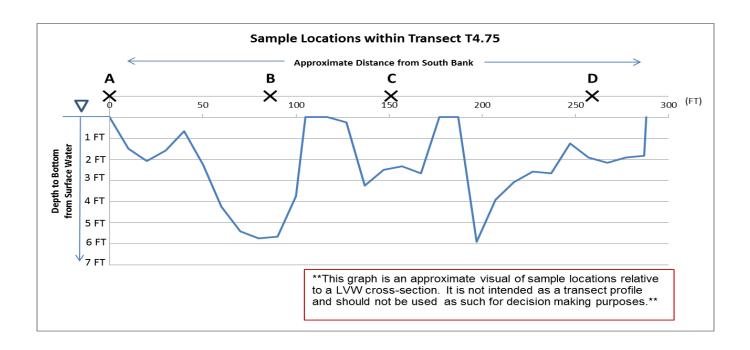


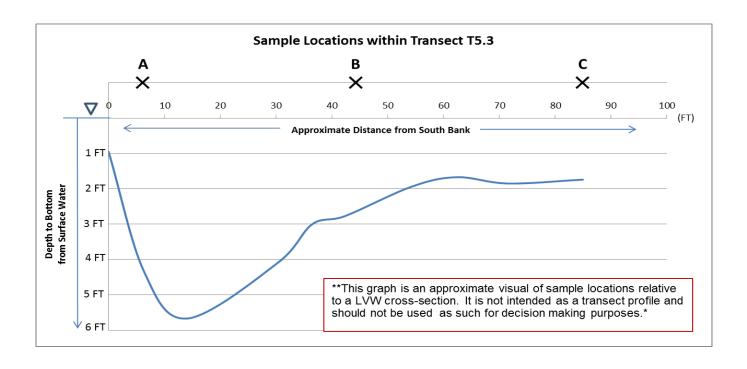


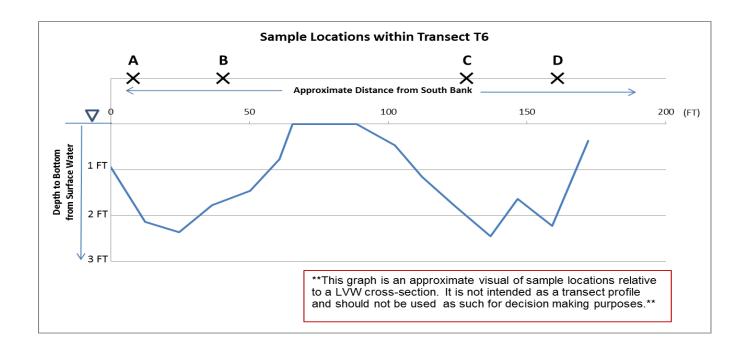


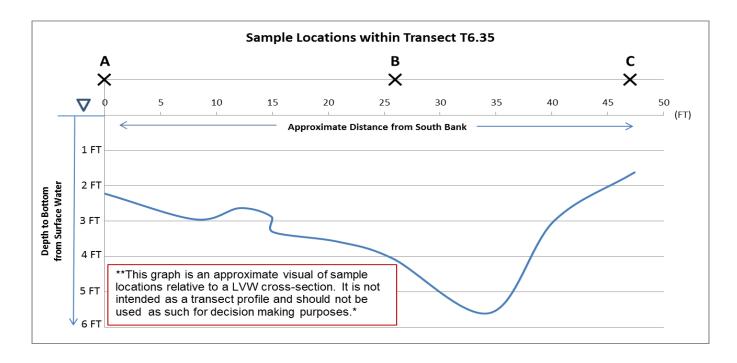


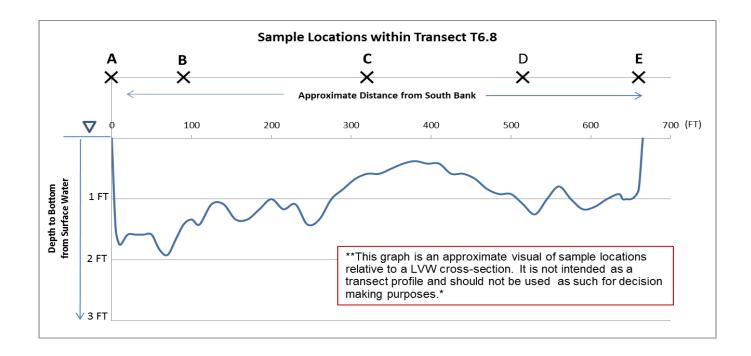




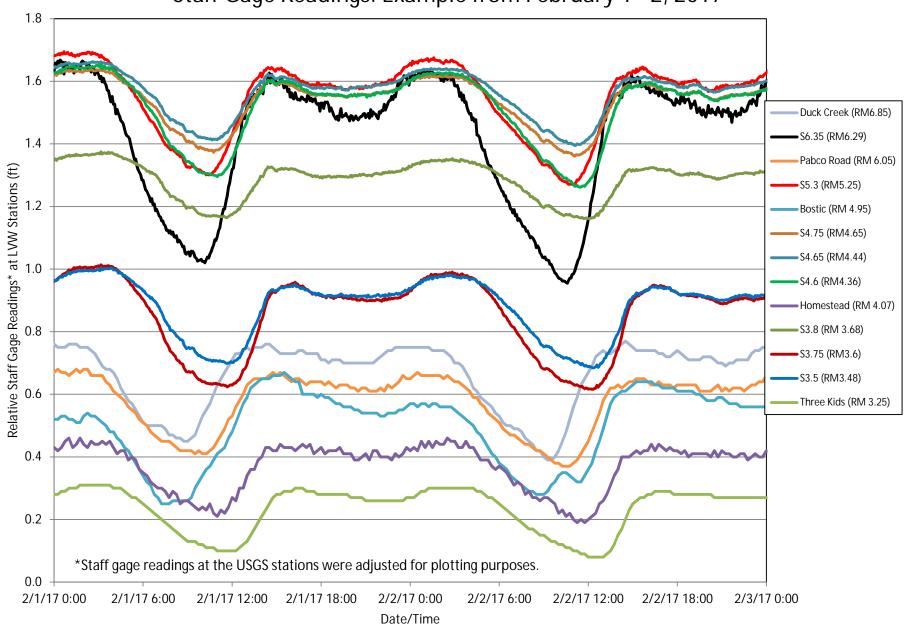








Staff Gage Readings: Example from February 1 - 2, 2017



Staff Gage Readings from S3.8

