Semiannual Groundwater Monitoring Report
Fourth Quarter 2016 and First Quarter 2017
Laborde Canyon (Lockheed Martin Beaumont Site 2)
Beaumont, California

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LOCKHEED MARTIN

May 31, 2017

Mr. Daniel K. Zogaib
California Environmental Protection Agency
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Subject: Submittal of the *Semiannual Groundwater Monitoring Report, Fourth Quarter 2016 and First Quarter 2017, Lockheed Martin Corporation, Laborde Canyon (Lockheed Martin Beaumont Site 2), Beaumont California*

Dear Mr. Zogaib:

Please find enclosed one hardcopy of the body of the report and two compact discs with the report body and appendices of *the Semiannual Groundwater Monitoring Report, Fourth Quarter 2016 and First Quarter 2017, Lockheed Martin Corporation, Laborde Canyon (Lockheed Martin Beaumont Site 2), Beaumont California* for your review and approval or comment.

If you have any questions regarding this submittal, please contact me at 443-280-7176 or jeff.s.thomas@lmco.com .

Sincerely,

Jeffrey Thomas
Beaumont 2 Project Lead
Lockheed Martin Corporation

Enclosure: *Semiannual Groundwater Monitoring Report, Fourth Quarter 2016 and First Quarter 2017, Lockheed Martin Corporation, Laborde Canyon (Lockheed Martin Beaumont Site 2), Beaumont California*

cc: Mr. Brian Thorne, Lockheed Martin Corporation (electronic copy)
Ms. Barbara Melcher, CDM Smith (electronic copy)

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Laborde Canyon
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Prepared by:

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May 2017

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
BTOC	below top of well casing
cis-1,2-DCE	*cis*-1,2-dichloroethene
1,2-DCA	1,2-dichloroethane
1,1 -DCE	1,1-dichloroethene
DO	dissolved oxygen
DWNL	State Water Resources Control Board Division of Drinking Water drinking water notification level
EC	electrical conductivity
ft/ft	feet per foot
GMP	Groundwater Monitoring Program
HCP	Habitat Conservation Plan
J	This data validation qualifier means the analyte was positively identified, but the concentration is an estimated value.
LC	lower canyon
MW	monitoring well
MCL	State Water Resources Control Board Division of Drinking Water maximum contaminant level
MEF	Mt. Eden formation
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
msl	mean sea level
µg/L	micrograms per liter
µg/L/yr	micrograms per liter per year
NA	not applicable/not available/not analyzed
ND	non-detect
NTUs	nephelometric turbidity units
NWS	National Weather Service

ORP	oxidation-reduction potential
PQL	practical quantitation limit
q	This data validation qualifier means the analyte detected was below the PQL.
QAL	Quaternary alluvium
QA/QC	quality assurance/quality control
RCA	Western Riverside County Regional Conservation Authority
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
RPD	relative percent difference
RWQCB	Regional Water Quality Control Board, Santa Ana Region
STF	San Timoteo formation
TCE	trichloroethene
TOC	top of well casing
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOC	volatile organic compound
WDA	waste discharge area
wMEF	weathered Mt. Eden formation
wSTF	weathered San Timoteo formation

Section 1
Introduction

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech has prepared this Semiannual Groundwater Monitoring Report, which presents the results of the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring activities for the Laborde Canyon (former Lockheed Propulsion Company Beaumont Site 2) Groundwater Monitoring Program. Laborde Canyon is southwest of the City of Beaumont, Riverside County, California (Figure 1). Currently, the site is inactive except for ongoing investigative activities performed under Consent Order HSA 88/89-034, amended January 1, 1991, with the California Department of Toxic Substances Control.

The objectives of this report are to accomplish the following:

- Briefly summarize the site history
- Document the water quality monitoring procedures and results
- Analyze and evaluate the groundwater elevation and water quality monitoring data generated
- Identify groundwater chemicals of potential concern based on the analytes detected at the site.
- Propose changes to the monitoring network and sampling frequencies as necessary to meet the objectives of the overall program

This report is organized into the following sections: (1) Introduction, (2) Summary of Monitoring Activities, (3) Groundwater Monitoring Results, (4) Summary and Conclusions, and (5) References. Tables and figures are provided at the end of the report body following Section 5. Appendices are provided on a separate CD accompanying this report.

1.1 SITE BACKGROUND

The site consists of 2,668 acres of land located southwest of Beaumont, California. The parcels that comprise the site were owned by individuals and the United States government before 1958.

Between 1958 and 1960, portions of the site were purchased by the Grand Central Rocket Company and used as a remote test facility for early space and defense program efforts. In 1960, the Lockheed Aircraft Corporation purchased one-half interest in the Grand Central Rocket Company. The Grand Central Rocket Company became a wholly-owned subsidiary of the Lockheed Aircraft Corporation in 1961. The remaining parcels of land that comprise the site were purchased from the United States government between 1961 and 1964. In 1963, the Lockheed Propulsion Company became an operating division of the Lockheed Aircraft Corporation which was responsible for the operation of the site until its closure in 1974. The site was used by the Grand Central Rocket Company and the Lockheed Propulsion Company from 1958 to 1974 for small rocket motor assembly, testing operations, propellant incineration, and minor disposal activities. Ogden Labs is known to have leased portions of the site during the 1970s (Radian Corporation, 1986). In 2007 the property was sold to the County of Riverside, California, which remains the current owner.

In 1989, the California Department of Health Services issued a Consent Order requiring Lockheed Martin to clean up contamination at the site related to past testing activities (California Department of Health Services, 1989). After reviewing reports on investigative and cleanup activities performed at the site, the California Department of Toxic Substances Control, as a successor agency, issued a no further remedial action letter to Lockheed Martin in 1993.

Because of regulatory interest in perchlorate and 1,4-dioxane, a groundwater sample was collected from an inactive groundwater production well (identified as W2-3) at the site in January 2003. The sample was analyzed for volatile organic compounds, perchlorate, and 1,4-dioxane to determine the potential presence and concentration of those chemicals in groundwater. The analytical results indicated that volatile organic compounds and 1,4-dioxane were not present at or above their respective method detection limits. However, perchlorate was reported at a concentration of 4,080 micrograms per liter, which exceeded the then-current California Department of Public Health drinking water notification level of 4 micrograms per liter. (In October 2007, the drinking water notification level was replaced by the California Department of Public Health maximum contaminant level of 6 micrograms per liter.) Based on the detection of perchlorate in the groundwater sample collected, the California Department of Toxic Substances Control reopened the site for further assessment in August 2004.

Four primary historical operational areas have been identified at the site (Figure 2). Each operational area was used for various activities associated with rocket motor assembly, testing, and propellant incineration. In addition, a waste discharge area has been defined. A brief description of each area follows.

Historical Operational Area J (Area J) –Final Assembly

Area J was used from 1970 to 1974 for final assembly and shipment of rocket motors for the Short Range Attack Missile program. Rocket motor casings with solid propellant were transported to Building 250, where final assembly of the rocket motor hardware was conducted. Assembly operations included installation of the nozzle and headcap, pressure check of the motor, installation of electrical systems, and preparations for shipment. During plant closure in 1974, all usable parts of this facility were dismantled, taken off the site, and sold (Radian Corporation, 1986).

Historical Operational Area K (Area K) – Test Bays and Miscellaneous Facilities

The primary features in Area K included four test bays with two associated bunkers, conditioning chambers, a centrifuge, and a large earthen structure known as the "Prism."

Four test bays were present at the site. Initially, only three test bays were known; however, a former employee reported in an interview that a fourth test bay, north of the other three bays, was also used in Area K (Tetra Tech, 2009b). The initial testing activities had a history of explosions that destroyed complete test areas, especially during the period when the Grand Central Rocket Company operated at the site (Radian Corporation, 1986). Although vestiges from three test bays are currently visible at the site, the fourth was reportedly destroyed by such an explosion during testing. After a motor failure occurred, the area surrounding the test bay was reportedly inspected to recover any unburned propellant.

The conditioning chambers were used to examine the effects of extreme temperatures on rocket motors and to meet specification requirements (Radian Corporation, 1986). A centrifuge was located in the northwestern portion of Area K, where rocket motors were tested to determine if the solid propellant would separate from its casing under increased gravitational forces.

The Prism was reportedly built between 1984 and 1990, and was used by General Dynamics to test radar (Tetra Tech, 2007b). Details concerning construction of the Prism are not available, but it appears to have been constructed with soils from near the test bays.

Historical Operational Area L (Area L) – Propellant Burn Area

Solid propellant was reportedly transported to a burn area in Area L and set directly on the ground surface for burning (Radian Corporation, 1986). No pits or trenches were dug as part of the burning process according to the Radian report. No evidence or physical features identify the precise location of burning activities, and previous site investigations (Tetra Tech, 2005 and 2010a) found no evidence of significant contamination in Area L, suggesting that propellant incineration may not have been conducted in this area of the site.

Historical Operational Area M (Area M) – Garbage Disposal Area

The Area M garbage disposal area was located adjacent to a small creek at the site (Radian Corporation, 1986). Scrap metal, paper, wood, and concrete materials were discarded at the disposal site by the Lockheed Propulsion Company. Hazardous materials, including explosives and propellants, were not disposed of at the disposal site by the Lockheed Propulsion Company, according to employee interviews. However, Ogden Labs, a company that tested valves and explosive items, reportedly used this site for disposal of hazardous waste. In 1972, a Lockheed Safety Technician was exposed to toxic vapors of unsymmetrical dimethyl hydrazine from a pressurized gas container located in the disposal site. To avoid possible exposure risks to occupants, the Lockheed Propulsion Company safety group required Ogden Labs to remove any potentially hazardous materials at the disposal site. Shortly thereafter, Ogden Labs contracted for a disposal company to clean up the disposal site (Radian Corporation, 1986).

In March 1993, an excavation was performed to remove the debris from the Area M garbage disposal area. A total of 816 tons of debris was removed and disposed of off-site, and the excavation was backfilled to surrounding grade. Excavation activities were performed under the supervision of the Department of Toxic Substances Control (Radian Corporation, 1993).

Waste Discharge Area

In 2007, Lockheed Martin discovered the existence of Santa Ana River Basin Regional Water Pollution Control Board Resolution 62-24, dated September 14, 1962. Resolution 62-24 described requirements for the "discharge of industrial wastes (rocket fuel residuum) to excavated pits." The discharge area was described as two shallow basins protected by two-foot berms, located in a small canyon on the western side of Laborde Canyon, in the SW quarter of the NW quarter of Section 19, Township 3 South, Range 1 West, San Bernardino Baseline and Meridian. Resolution 62-24 further described the wastes to be discharged as “residue remaining after the manufacturing refuse is burned,” and indicated that the amount of material to be discharged was “approximately 5,000 gallons per year.”

The exact nature of the waste proposed for discharge is not clear from Resolution 62-24. The description of the waste material suggests that the area may have been used for burning propellant; but the description of the quantity of material to be discharged suggests that the waste may have been liquid rather than solid. A 1961 aerial photograph shows the waste discharge area as a large cleared area with roads leading to two circular structures, suggesting that the waste discharge area was in use by 1961 (Tetra Tech, 2009b). Investigation of this area found evidence for perchlorate impacts in both soil and groundwater (Tetra Tech, 2007b and 2008).

Features remaining at the waste discharge area include two roughly circular depressions surrounded by earthen berms, at the location of the circular structures identified in the 1961 aerial photograph.

Section 2
Summary of Monitoring Activities

Section 2 summarizes the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring activities conducted at the site. The results of these monitoring events are discussed in Section 3.

2.1 GROUNDWATER LEVEL MEASUREMENTS

Groundwater level measurements are collected at the site on a quarterly basis from all available wells. Water level measurements were proposed for 71 wells and four piezometers for Fourth Quarter 2016 and First Quarter 2017. During Fourth Quarter 2016, groundwater level measurements were collected from 69 monitoring wells and four piezometers on 12 December 2016. Two monitoring wells, TT-MW2-29A and TT-MW2-43, were found to be dry. During First Quarter 2017, groundwater level measurements were collected from 70 monitoring wells and four piezometers on 13 and 14 February 2017. One monitoring well, TT-MW2-43, was found to be dry. The groundwater level data are summarized in Table 1. Copies of the field data sheets from the water quality monitoring events are presented in Appendix A. A summary of well construction details is presented in Appendix B.

Precipitation data are collected from the local weather station in Beaumont to correlate observed changes in groundwater levels with local precipitation. During Fourth Quarter 2016, the Beaumont National Weather Service (NWS) station reported approximately 6.20 inches of precipitation. During First Quarter 2017, the Beaumont NWS station reported approximately 10.95 inches of precipitation.

2.2 SURFACE WATER SAMPLING

Surface water samples are collected at the site during the second and fourth quarter groundwater monitoring events. Surface water sampling locations WS-1, WS-2, and WS-3 are located at a spring approximately 3,700 feet south of the southern site boundary on the Western Riverside County Regional Conservation Authority (RCA) property. Surface water is generally present at one or more of these sampling locations throughout the year. Figure 3 shows the surface water sampling locations.

Storm water samples are collected at the site on an annual basis, usually during the first quarter. Storm-water sampling locations SW-01 through SW-07 are in ephemeral stream beds within Laborde Canyon and major side canyons. Storm water runoff drains to the stream beds during periods of heavy precipitation and flows south through the site and the RCA property, eventually crossing beneath Gilman Hot Springs Road. Water is present in the stream beds only during periods of heavy, prolonged precipitation. Surface water flow measurements are collected at locations SF1 and SF2 when surface water is present in the stream bed. Figure 3 shows the storm-water sampling and stream-flow measurement locations.

During the Fourth Quarter 2016 monitoring event, three surface water sampling locations (WS-1 through WS-3) were proposed for water quality monitoring but were found to be dry and were not sampled. Additionally, seven surface water sampling locations were proposed for water quality monitoring during a storm event on 22 December 2016. Six of the seven locations were dry so only one location, SW-07, was sampled. Table 2 lists the surface water locations monitored for the Fourth Quarter 2016 monitoring event; Figure 4 illustrates the locations that were sampled during the Fourth Quarter 2016.

2.3 SURFACE WATER MAPPING AND FLOW MEASUREMENT

2.3.1 Surface Water Mapping Procedures

If surface water is present, the areas within Laborde Canyon where surface water was observed were mapped during the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events. Mapping activities include plotting locations where surface water was encountered on a site map, collecting GPS coordinates, and determining whether the water was flowing or stagnant.

2.3.2 Stream Flow Measurement Procedures

If flowing water is observed in the stream bed, stream flow is estimated at two locations (SF-1, located at Gilman Hot Springs Road; and SF-2, located at the southern boundary of the property) using a modified version of the method presented in United States Environmental Protection Agency *Volunteer Stream Monitoring: A Methods Manual* (USEPA, 1997). At each location, a section of the stream bed that is relatively straight for a distance of at least 20 feet is chosen for measurement. This 20-foot section is marked and width measurements taken at various points to determine the average width. Depth measurements are then collected at nine points along the width of the stream to determine the average depth of the stream. The average width and average depth measurements are then multiplied together to estimate the channel cross-sectional area. Water velocity is then measured by releasing a float upstream and recording the time needed to traverse the 20-foot marked section. Three timed measurements are taken and averaged, and the length of the measured section is divided by the average time to obtain a velocity. This result is then multiplied by a correction factor of 0.9 to account for friction between the water and stream bed. The average cross-sectional area is then multiplied by the corrected average surface velocity to obtain the average flow in cubic feet of water per second through that section of the stream. The two stream flow measurement locations are shown on Figure 3.

2.4 GROUNDWATER SAMPLING

The Groundwater Monitoring Program (GMP) has a quarterly, semiannual, annual, and biennial frequency. Both groundwater and surface water are sampled as part of the GMP. The annual event is the major monitoring event, and the quarterly and semiannual events are smaller, minor events. All new wells are sampled quarterly for one year, after which a frequency for future sampling is proposed based on the well classification (i.e., the purpose of the well). The well classifications from the approved *Groundwater Sampling and Analysis Plan* (Tetra Tech, 2007a) include the following:

- Horizontal Extent Wells: Horizontal extent wells are utilized to assess the lateral extent of affected groundwater and the shape of the plume. Horizontal extent wells can be utilized to track plume migration and plume reduction rates as a result of remedial actions.

- Vertical Distribution Wells: Vertical distribution wells are utilized to assess the vertical extent of affected groundwater. Vertical distribution wells can also be utilized to track plume migration and plume reduction rates as a result of remedial actions.

- Increasing Contaminant Trend Wells: Increasing contaminant trend wells are wells that demonstrate statistically increasing contaminant trends. Increasing contaminant trend wells are utilized to assist in identifying new contaminant sources or areas where the remedial actions are not effective.

- Guard Wells: Guard wells would be utilized to provide an early warning to detect contaminants for the protection of private and municipal wells. Guard wells may also include wells used to monitor off-site contaminant migration.

- Background Wells: Background (or upgradient) wells are utilized to assess the quality of the groundwater that is entering the site.

- Remedial Monitoring Wells: Remedial monitoring wells are utilized to evaluate the effectiveness of remedial activities at the site. Remedial monitoring wells can be used to measure mass removal rates and assess remediation schedules for site cleanup.

- New Wells: New wells are wells that are new to the network or which have been out of the sampling program for an extended period of time.

- Redundant Wells: Redundant wells are wells that provide information that duplicates the data from other functional well classifications. Redundant wells are generally located in the same vicinity as one of the other well classifications. These wells provide no additional technical information and would not be monitored.

The annual monitoring event is performed during the second quarter of each year, and includes sampling of horizontal extent wells, vertical distribution wells, increasing contaminant trend wells, and guard wells. Background wells are also sampled during the annual monitoring event in even-numbered years. The semiannual event is performed during the fourth quarter of each year, and includes sampling of increasing contaminant trend and guard wells only. Quarterly events currently consist of water level measurements only. A complete list of the surface water and monitoring well locations in the monitoring program can be found in Table 3. The table shows the well classification and the current approved sampling frequency for each well.

The groundwater monitoring schedule is reviewed and modified as necessary annually following the second quarter groundwater monitoring event. Modifications to the sampling schedule are made in accordance with the approved *Groundwater Sampling and Analysis Plan* (Tetra Tech, 2007a). The Fourth Quarter 2016 and First Quarter 2017 sampling events followed the monitoring schedule proposed in the Second and Third Quarter 2015 monitoring report (Tetra Tech, 2015), which was submitted to the California Department of Toxic Substances Control in December 2015, and was approved with no comments to the proposed schedule in March 2016 (Appendix C).

2.4.1 Proposed and Actual Well Locations Sampled

During the Fourth Quarter 2016 monitoring event, 11 groundwater monitoring wells were proposed for water quality monitoring. Three monitoring wells were inadvertently overlooked during the Fourth Quarter 2016 monitoring event and were sampled during the First Quarter 2017 monitoring event. Due to an anomalous perchlorate result recorded in TT-MW2-42A during the

Fourth Quarter 2016 monitoring event, that well was resampled during the First Quarter 2017 monitoring event. Additionally, TT-MW2-42B, which is collocated with TT-MW2-42A, was also sampled during the First Quarter 2017 monitoring event to verify that high concentrations of perchlorate were not encountered at depth. No additional wells were proposed for sampling during the Fourth Quarter 2016 and First Quarter 2017 monitoring events. Therefore, water quality data were collected from 12 monitoring wells with one well, TT-MW2-42A, being sampled twice. Table 2 lists the locations monitored for the Fourth Quarter 2016 and First Quarter 2017 monitoring events, analytical methods, sampling dates, and quality assurance/quality control (QA/QC samples) collected. Figure 4 illustrates the sampling locations for the Fourth Quarter 2016 and First Quarter 2017 monitoring events.

2.4.2 Groundwater Sampling Procedures

Groundwater sampling was performed by low-flow purging and sampling methods, using either dedicated double-valve sampling pumps or a non-dedicated bladder pump, as indicated in Table 2. Water quality field parameters (water level, temperature, pH, electrical conductivity [EC], turbidity, oxidation-reduction potential [ORP], and dissolved oxygen [DO]) were measured during well purging and recorded on field data sheets (Appendix A). Collection of water quality parameters started when at least one discharge hose/pump volume had been removed, and purging was considered complete when the above parameters had stabilized, or the well was purged dry. Stabilization of water quality parameters was used as an indication that representative formation water had entered the well and was being purged. The criteria for stabilization of these parameters were as follows: water level ± 0.1 foot, pH ± 0.1, EC ± three percent, turbidity < 10 nephelometric turbidity units (NTUs) (if > 10 NTUs ± 10%), DO ± 0.3 milligrams per liter (mg/L), and ORP ± 10 millivolts. Sampling instruments and equipment were maintained, calibrated, and operated in accordance with the manufacturers' specifications, guidelines, and recommendations. If a well was purged dry but recharge occurred, the well was sampled with a disposable bailer after sufficient recharge had taken place to allow sample collection.

Groundwater samples were collected in order of decreasing volatilization potential and placed in appropriate containers. A sample identification label was affixed to each container, and sample custody was maintained by chain-of-custody record. To maintain proper temperatures and sample integrity, samples collected were chilled and transported via courier to American Environmental Testing Laboratories, Inc., EMAX Laboratories, Inc., or Eurofins Calscience, Inc., state-accredited analytical laboratories. Trip blanks were collected for the monitoring events to assess potential cross-contamination of water samples while in transit to the laboratory in accordance with the *Revised Programmatic Sampling and Analysis Plan* (Tetra Tech, 2016). Equipment blanks were collected when sampling with non-dedicated equipment to assess potential cross-contamination of water samples via sampling equipment.

2.5 ANALYTICAL DATA QUALITY ASSURANCE/QUALITY CONTROL

The samples were tested using approved United States Environmental Protection Agency (USEPA) methods. Since the analytical data were obtained by following USEPA-approved method criteria, the data were evaluated by using the USEPA-approved validation methods described in the *National Functional Guidelines* (USEPA, 2016a and 2016b). These guidelines contain instructions on method-required quality control parameters and on how to interpret these parameters to confer validation to environmental data results.

Quality control parameters used in validating data results include holding times, field blanks, laboratory control samples, method blanks, duplicate environmental samples, spiked samples, and surrogate and spike recovery data. A complete list of validation qualifiers and their definitions can be found in Appendix I.

2.6 HABITAT CONSERVATION

All monitoring activities were performed in accordance with the United States Fish and Wildlife Service (USFWS) approved Habitat Conservation Plan (HCP) (USFWS, 2005) and subsequent clarifications (Lockheed Martin, 2006a and 2006b) to the HCP. Groundwater sampling activities were conducted with light duty vehicles and were supervised by a USFWS-approved biologist, as specified in the Low Effect HCP.

Section 3
Groundwater Monitoring Results

The results of Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events are presented in the following subsections. These subsections describe tabulated summaries of the groundwater elevation and water quality data, groundwater elevation maps, and figures showing analytical results.

3.1 GROUNDWATER ELEVATION AND FLOW

Seventy-one monitoring wells and four piezometers were identified for groundwater level measurements during the Fourth Quarter 2016 and First Quarter 2017 monitoring events. Two wells were dry (TT-MW2-29A, and TT-MW2-43) during the Fourth Quarter 2016 event and one well (TT-MW2-43) was dry during the First Quarter 2017 event. A tabulated summary of groundwater depths and elevations is presented in Table 1.

On-site groundwater elevations during the Fourth Quarter 2016 and First Quarter 2017 monitoring events ranged from approximately 2,072 feet above mean sea level (msl) at TT-MW2-16, located in the northern portion of the site, to about 1,814 feet above msl at TT-MW2-7, located in the southern portion of the site. Depth to first groundwater ranged from about 121 feet below ground surface (bgs) at TT-MW2-29B to about 17 feet bgs at TT-MW2-8. Groundwater elevation contour maps for wells screened in first groundwater for the Fourth Quarter 2016 and First Quarter 2017 are presented in Figures 5 and 6, respectively. Hydrographs for individual wells are provided in Appendix D.

During Fourth Quarter 2016, the Beaumont National Weather Service (NWS) reported approximately 6.20 inches of precipitation, and the average site-wide groundwater elevation increased approximately 0.05 feet. During First Quarter 2017, the Beaumont NWS reported approximately 10.95 inches of precipitation, and the average site-wide groundwater elevation decreased approximately 0.68 feet. Table 4 presents the range and average change in groundwater elevation by area. Figures 7 and 8, respectively, present elevation differences between the Third

Quarter 2016 and Fourth Quarter 2016, and between the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events.

3.2 GROUNDWATER GRADIENTS

Horizontal groundwater gradients are calculated using a segmented path from well to well that approximates the overall site flowline. The horizontal gradient is a measure of the change in the hydraulic head divided by the distance between wells (i.e., the slope of the water table). The average horizontal groundwater gradient calculated between TT-MW2-16 and TT-MW2-6S for the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events for the shallow wells screened in the weathered San Timoteo formation (wSTF) was 0.030 feet per foot (ft/ft). The average horizontal groundwater gradient calculated between TT-MW2-2 and TT-MW2-6D for deeper wells screened in the San Timoteo formation (STF) was 0.029 ft/ft during the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events.

Vertical groundwater gradients are calculated from individual clusters of wells. Well clusters measure the differences in static water level at different depths in the aquifer. The vertical gradient is a comparison of static water levels between wells at different depths in the aquifer, and is an indication of the vertical head difference (downward—negative gradient, upward—positive gradient) of groundwater. Vertical groundwater gradients at the site are generally downward. During the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events, the vertical gradients ranged from -0.34 ft/ft at well cluster TT-MW2-4S and -4D located in Area L, to +0.17 ft/ft at well cluster TT-MW2-19S and -19D, located on the Western Riverside County Regional Conservation Authority (RCA) property to the south of the site respectively. A summary of calculated horizontal and vertical groundwater gradients is presented in Table 5. A complete listing of historical horizontal and vertical groundwater gradients and associated calculations is presented in Appendix F.

3.3 SURFACE WATER FLOW

During the Fourth Quarter 2016 and First Quarter 2017, Tetra Tech field personnel walked the Laborde Canyon drainage channel to determine the presence, nature, and quantity of surface water within the creek bed. Surface water was not present within the creek bed during either the Fourth Quarter 2016 or the First Quarter 2017 monitoring events, so surface water flow measurements were not taken. Surface water flow was measured during a storm event on 22 December 2016 at

1.52 cubic feet per second at location SF-01. All other surface water flow locations were observed to be dry during this storm event.

3.4 ANALYTICAL DATA SUMMARY

All groundwater samples collected during the Fourth Quarter 2016 and First Quarter 2017 monitoring events were analyzed for perchlorate. Select wells were also sampled for volatile organic compounds (VOCs) and 1,4-dioxane, as indicated in Table 6.

A summary of validated laboratory analytical results for analytes detected above their respective method detection limits during the Fourth Quarter 2016 monitoring event is presented in Table 6. Analytes with sample results above the published State Water Resources Control Board Division of Drinking Water maximum contaminant level (MCL) or the State Water Resources Control Board Division of Drinking Water drinking water notification level (DWNL) are indicated by bold type in Table 6. Table 7 presents summary statistics for validated organic and inorganic analytes detected during the monitoring event. A complete list of the analytes tested, along with validated sample results by analytical method, is provided in Appendix G. Laboratory analytical data packages, which include all environmental, field quality control (QC), and laboratory QC results, are provided in Appendix H. A consolidated laboratory data summary table is presented in Appendix I.

3.4.1 Data Quality Review

The quality control samples were reviewed as described in the *Revised Programmatic Sampling and Analysis Plan, Beaumont Sites 1 and 2* (Tetra Tech, 2016). The data for the groundwater sampling activities were contained in analytical data packages generated by American Environmental Testing Laboratories, Inc. EMAX Laboratories, Inc., or Eurofins Calscience, Inc. These data packages were reviewed using the latest versions of the United States Environmental Protection Agency *National Functional Guidelines* for organic and inorganic superfund data review (USEPA, 2016a and 2016b).

Preservation criteria, holding times, field blanks, laboratory control samples, method blanks, duplicate environmental samples, spiked samples, and surrogate and spike recovery data were reviewed. Within each environmental sample, the sample-specific quality control spike recoveries were examined. These data examinations included comparing statistically calculated control limits to percent recoveries of all spiked analytes and duplicate spiked analytes. Relative percent difference (RPD) control limits were compared to actual spiked (matrix spike/matrix spike duplicate [MS/MSD]) RPD results. Surrogate recoveries were examined for all organic compound analyses and compared to their control limits.

Environmental samples were analyzed by the following methods: Methods SW6850/E331.0 for perchlorate, Method SW8270C SIM for 1,4-dioxane, and Method SW8260B for VOCs. All data results met required criteria, are of known precision and accuracy, and may be used as reported.

3.5 CHEMICALS OF POTENTIAL CONCERN

The identification of chemicals of potential concern is an ongoing process that takes place annually as part of the second quarter sampling event, and is reported in each year's Second Quarter and Third Quarter Semiannual Groundwater Monitoring Report. The purpose of identifying chemicals of potential concern is twofold: to establish a list of analytes that best represents the extent and magnitude of affected groundwater, and to focus more detailed analysis on those analytes. The analytes were organized and evaluated in two groups, organic and inorganic, and divided into primary and secondary chemicals of potential concern. Table 6 presents a summary of the validated organic and inorganic analytes detected during the Fourth Quarter 2016 monitoring event.

The identification process for chemicals of potential concern does not eliminate analytes from testing, but does reduce the number of analytes that are evaluated and discussed during reporting. All of the secondary chemicals of potential concern will continue to be tested during future monitoring events because of their association with other analytes that are listed as primary chemicals of potential concern. However, they are not discussed further because they are detected on a more limited or inconsistent basis, and/or are detected at concentrations below a regulatory threshold. The standard list of analytes for each method will continue to be tested and screened annually to ensure that the appropriate chemicals of potential concern are being identified and evaluated. Table 8 presents a summary of the Laborde Canyon chemicals of potential concern. Time-series graphs of perchlorate, trichloroethene (TCE), and 1,4-dioxane concentrations are provided in Appendix E.

3.6 DISTRIBUTION OF THE PRIMARY CHEMICALS OF POTENTIAL CONCERN

The Fourth Quarter 2016 monitoring event is a minor event. Only guard wells, wells with increasing contaminant trends, and surface water locations were sampled and tested during this event. Figure 9 presents sampling results for the primary organic and inorganic chemicals of potential concern for groundwater samples collected during the Fourth Quarter 2016 and First Quarter 2017 monitoring events.

3.6.1 Surface Water and Storm Water Sampling Results

During Fourth Quarter 2016, surface water sample locations WS-1, WS-2, and WS-3 were dry and could not be sampled. One storm water sample was collected during the fourth quarter event from location SW-07 during a storm event on 22 December 2016 (Figure 3). Perchlorate was detected in this sample at a concentration of 0.788 micrograms per liter (µg/L). The remaining surface water locations were dry and unable to be sampled during this storm event. The California MCL for perchlorate is 6 µg/L. Surface water samples were not scheduled to be collected during the First Quarter monitoring event.

3.6.2 Guard Wells

Two monitoring wells are designated as guard wells: TT-MW2-20S, located south of the southern site boundary on the RCA property, and TT-MW2-42A, located downgradient of the southern site boundary. During the Fourth Quarter 2016 monitoring event, perchlorate was detected in TT-MW2-42A at a concentration of 61.8 µg/L. The perchlorate detection in TT-MW2-42A was considered to be anomalous based on previous sampling results. This well was therefore resampled during First Quarter 2017. In First Quarter 2017 perchlorate was detected in TT-MW2-42A at a concentration of 0.23 µg/L, which is consistent with previous sampling results. Additionally, during the First Quarter 2017 monitoring event, perchlorate was detected in TT-MW2-20S at a concentration of 0.18 µg/L.

No other chemicals of potential concern were detected in guard wells above the MCL or DWNL during the Fourth Quarter 2016 sampling event. A summary of the guard well sample results from First Quarter 2017 and previous sampling events can be found in Table 9.

3.6.3 Increasing Trend Wells

Nine monitoring wells designated as increasing trend wells were sampled during the Fourth Quarter 2016 monitoring event. These increasing trend wells were chosen based on the Second Quarter 2015 trend analyses (Tetra Tech, 2015). Sample results for the increasing trend wells from Fourth Quarter 2016 are generally consistent with results from previous sampling events. Table 10 presents a summary of the detected chemicals of potential concern in the increasing trend well samples collected during the First Quarter 2017 and previous monitoring events.

3.7 HABITAT CONSERVATION

Consistent with the United States Fish and Wildlife Service (USFWS) approved Habitat Conservation Plan (HCP) (USFWS, 2005) and subsequent clarifications (Lockheed Martin Corporation, 2006a and 2006b) to the HCP describing activities for environmental remediation at the site, field activities were performed under the supervision of a USFWS-approved biologist. No impact to the Stephens' kangaroo rat occurred during the performance of field activities related to the Fourth Quarter 2016 and First Quarter 2017 monitoring events.

Section 4
Summary and Conclusions

This section summarizes the results of the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events.

4.1 GROUNDWATER ELEVATION AND GRADIENT

Taking into account the measured groundwater elevations, the current conceptual site model, and the southward sloping topography at the site, groundwater flow is to the south, generally following the topography of Laborde Canyon. During Fourth Quarter 2016, a groundwater elevation decrease was seen in the lower canyon area and groundwater elevation increases were seen in all other areas. During First Quarter 2017, groundwater elevation decreases were seen in all areas. The overall groundwater elevation at the site has decreased since Fourth Quarter 2005, with the greatest decrease over time seen in monitoring well TT-MW2-1 (9.92 feet). Limited seasonal fluctuations can be seen to varying degrees following periods of precipitation. The overall long-term decreasing trend in groundwater elevation appears to generally correspond to long-term precipitation patterns.

The horizontal hydraulic gradients calculated between TT-MW2-16 and TT-MW2-6S from the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events for the weathered San Timoteo formation-screened wells averaged 0.030 feet per foot (ft/ft). The horizontal groundwater gradients calculated between TT-MW2-2 and TT-MW2-6D for the Fourth Quarter 2016 and First Quarter 2017 groundwater monitoring events for the deeper San Timoteo formation-screened wells averaged 0.029 ft/ft. Vertical gradients are generally downward on-site and upward from the site boundary south. The vertical gradients range from -0.34 ft/ft to +0.17 ft/ft. A summary of calculated horizontal and vertical groundwater gradients is presented in Table 5 and in Appendix F.

4.2 SURFACE WATER FLOW RESULTS

Surface water was not present in the stream beds during the Fourth Quarter 2016 and First Quarter 2017 monitoring events, so no flow measurements were collected. Storm water flow was measured during a storm event on 22 December 2016 at 1.52 cubic feet per second at location SF-01 (Figure 3). The remaining storm water flow measurement locations were dry during this storm event, so no flow measurements were collected.

4.3 SURFACE WATER AND STORM WATER SAMPLING RESULTS

During the Fourth Quarter 2016 sampling event, all surface water locations were dry, so no samples were collected. One storm water sample was collected during a storm event on 22 December 2016 at location SW-07. Perchlorate was detected in this sample at a concentration of 0.788 µg/L.

4.4 GROUNDWATER SAMPLING RESULTS

4.4.1 Groundwater Sampling Results

Guard Wells

Guard wells TT-MW2-20S and TT-MW2-42A were sampled during the Fourth Quarter 2016 and First Quarter 2017 sampling events. Due to an anomalous Fourth Quarter perchlorate detection of 61.8 micrograms per liter (µg/L) in well TT-MW2-42A, the well was resampled during First Quarter 2017. The concentration of perchlorate detected in the First Quarter 2017 sample was 0.23 µg/L, which is consistent with previous sampling results. The cause of the anomalous Fourth Quarter 2016 perchlorate result is unknown, but the well will continue to be sampled semiannually to monitor for future changes. No other chemicals of concern were detected in either well.

Increasing Trend Monitoring Wells

Sixteen wells with one or more increasing or probably increasing concentration trends were identified in the 2015 annual temporal trend analysis. Nine of these wells were sampled during the Fourth Quarter 2016 monitoring event. The data for the wells sampled then will be evaluated as part of the 2017 temporal trend analysis, which will be conducted following the Second Quarter 2017 sampling event.

In general, the plume morphology has not changed, and most of the well locations are either non-detect for chemicals of potential concern, display a stable trend, or show no trend.

Summary

Given the data available at this time, the trichloroethene (TCE) and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) plumes in groundwater appear to be small and isolated. These plumes do not extend off-site. The 1,4-dioxane plume is limited to the waste discharge area and lower Laborde Canyon, and does not appear to extend off-site. The perchlorate plume does appear to extend off-site, but terminates in the riparian corridor south of the southern site boundary.

4.5 PROPOSED CHANGES

The analytical scheme is evaluated annually during the second quarter of each year, and changes may subsequently be proposed to accommodate expanded site knowledge or changing site conditions. The current approved sampling frequency by well classification can be found in Table 11. No unusual events or observations occurred during this reporting period that require modification of the monitoring program.

Section 5
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FIGURES

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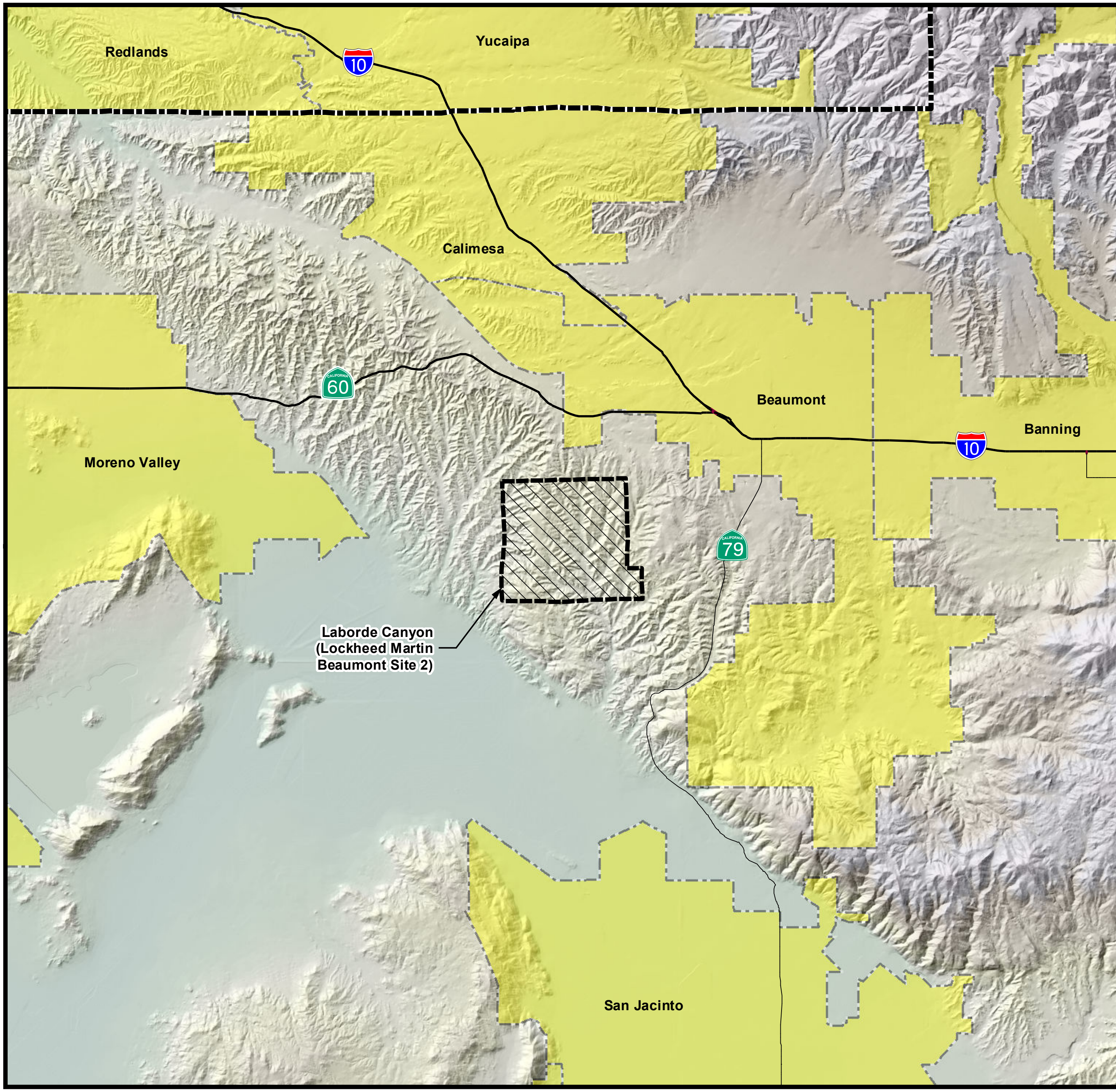

0 2 Miles

Adapted from:

U.S. Census Bureau TIGER line data, 2000.

LEGEND

- Interstate/Freeway
- State Highway
- County Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)
- City/Municipality

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 1

Regional Location of Laborde Canyon

TETRA TECH

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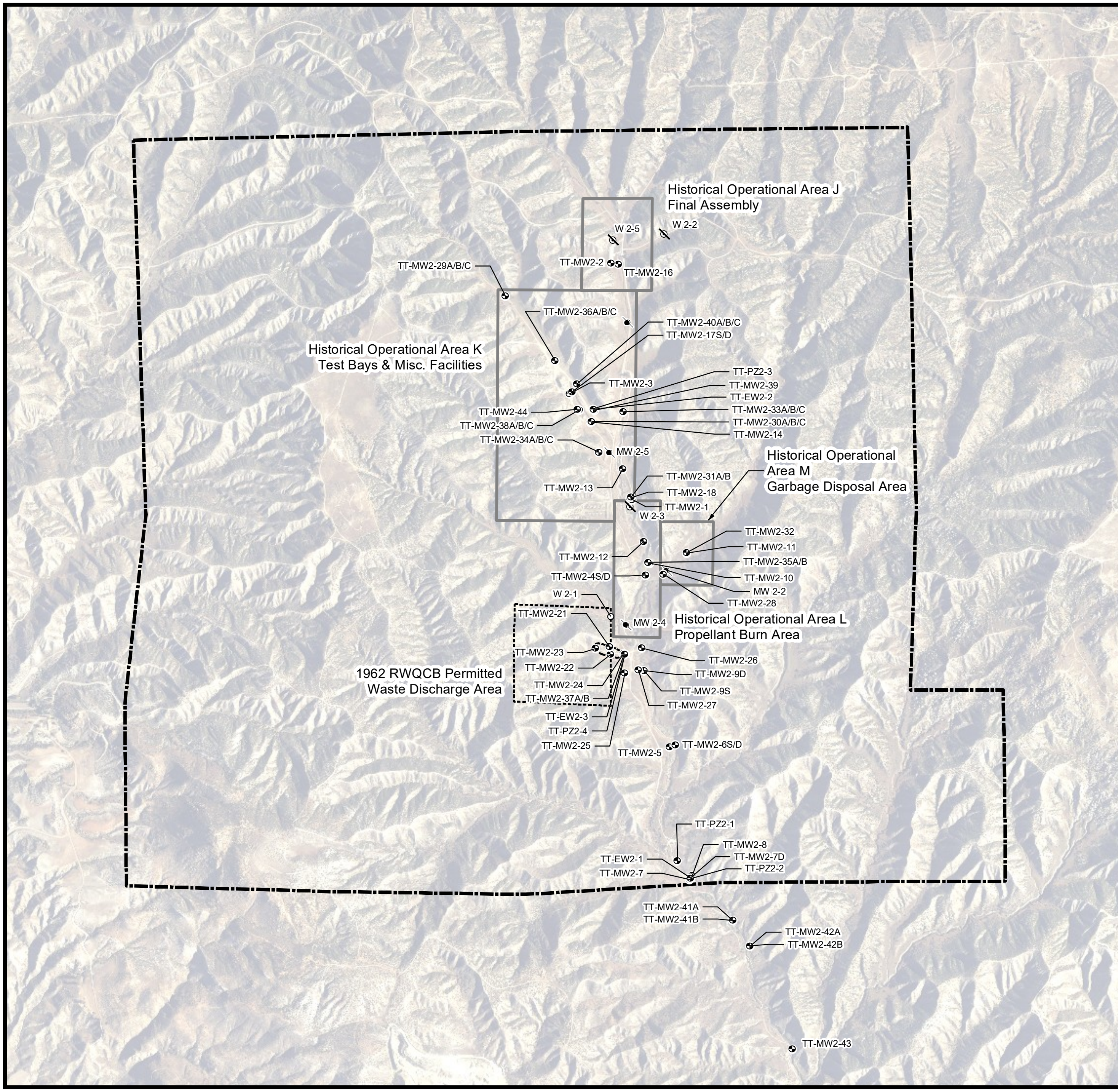

N

0 1,000 2,000 Feet

Adapted from:

May 2016 aerial photograph.

LEGEND

- Groundwater Monitoring Well Location
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Waste Discharge Area
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

Note: Laborde Canyon site boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004.

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 2
Historical Operational Areas and Site Features

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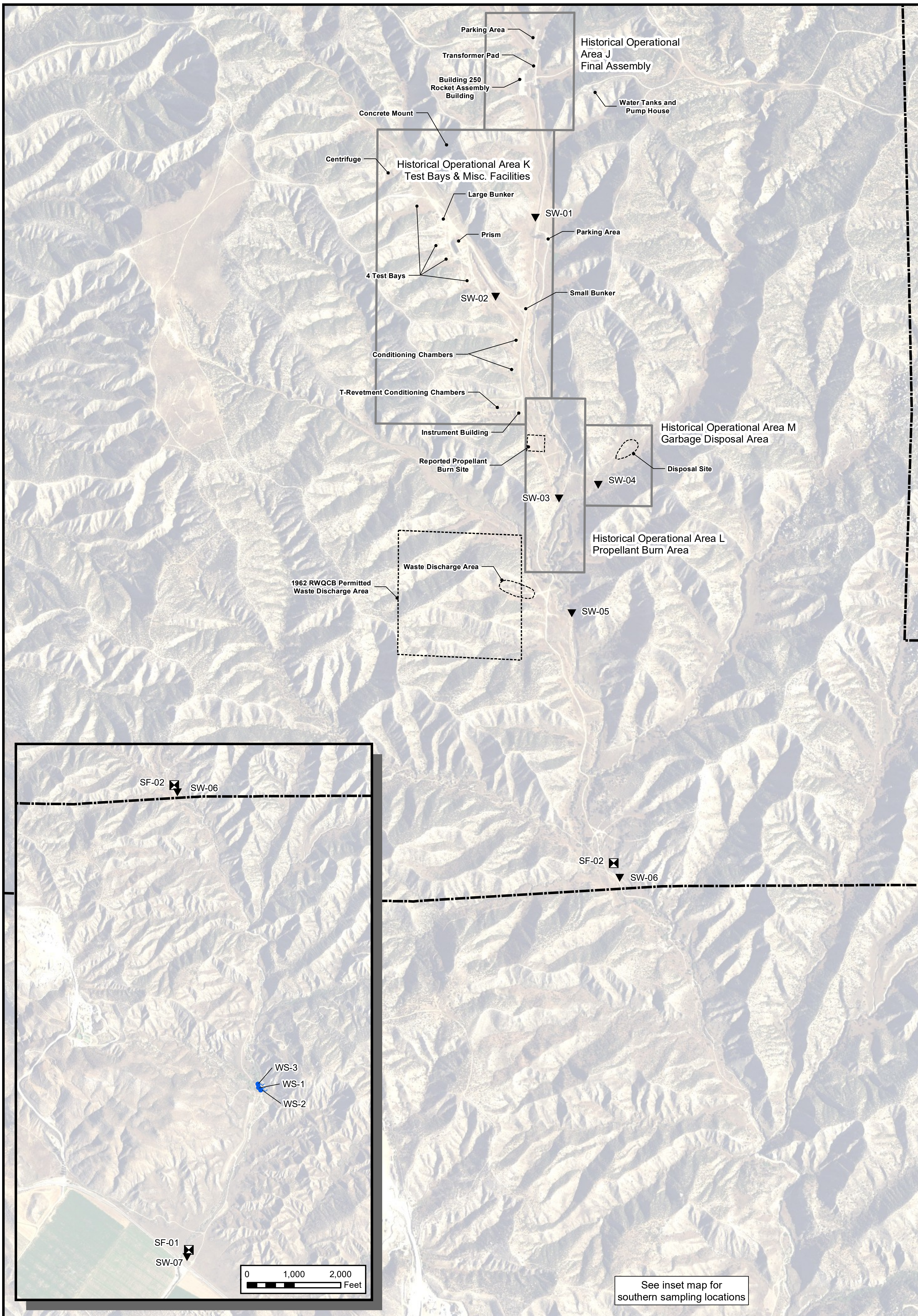

LEGEND

- Storm-Water Sampling Location
- Spring Sampling Location
- Stream Flow Sampling Point
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Property Boundary (Lockheed Martin Beaumont Site 2)

0 500 1,000 Feet

Adapted from: May 2016 aerial photograph

Note: Laborde Canyon property boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004.

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 3

Surface and Storm-Water Sampling Locations

TETRA TECH

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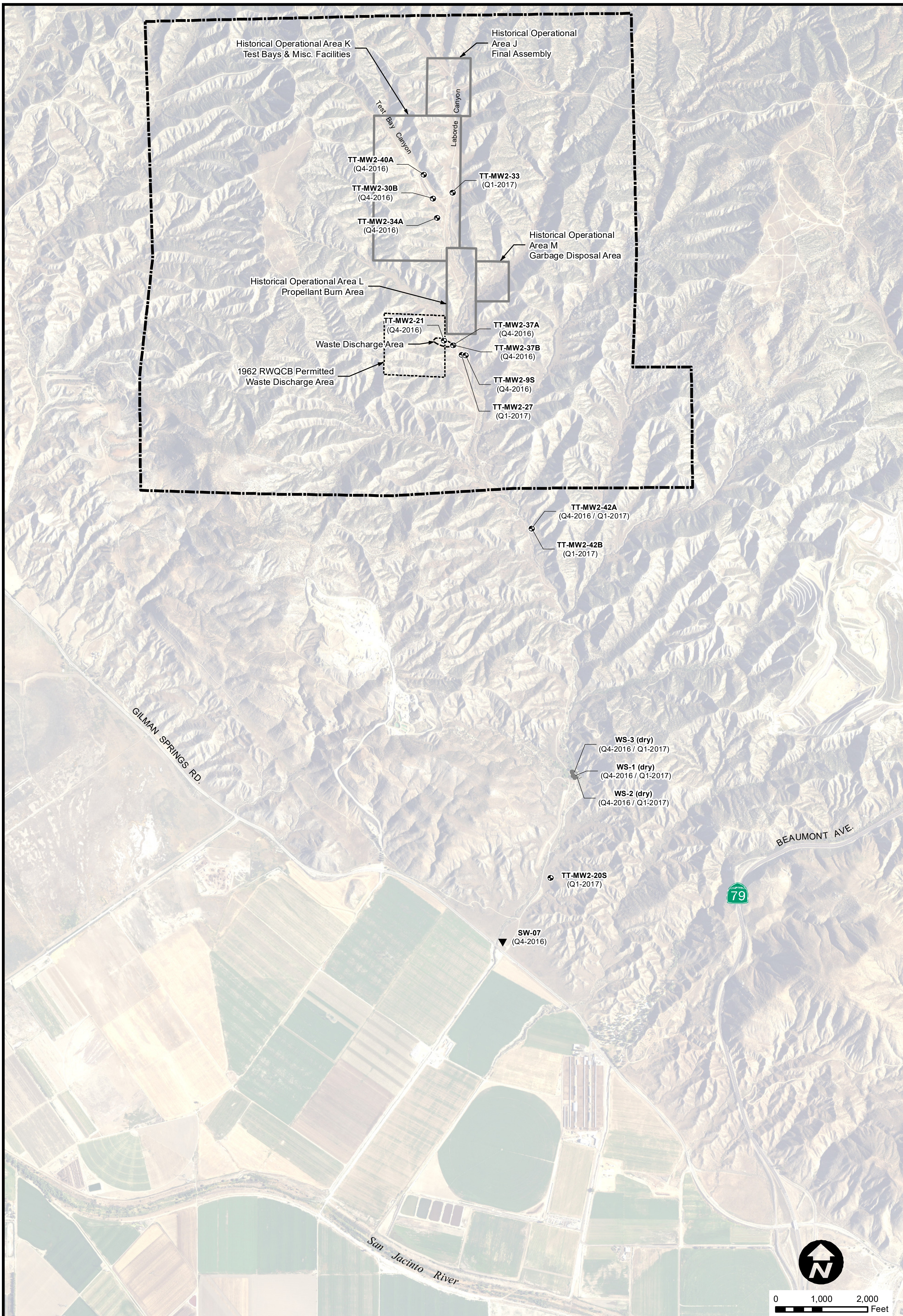

LEGEND

- Well Sampling Location
- Spring Sampling Location (dry)
- Storm-Water Sampling Location
- 1962 RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

Adapted from:
May 2016 aerial photograph.

Note:
Beaumont Site 2 property boundary from Hillwig-Goodrow survey, May 2004.

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 4
Fourth Quarter 2016 and First Quarter 2017 Sampling Locations

TETRA TECH

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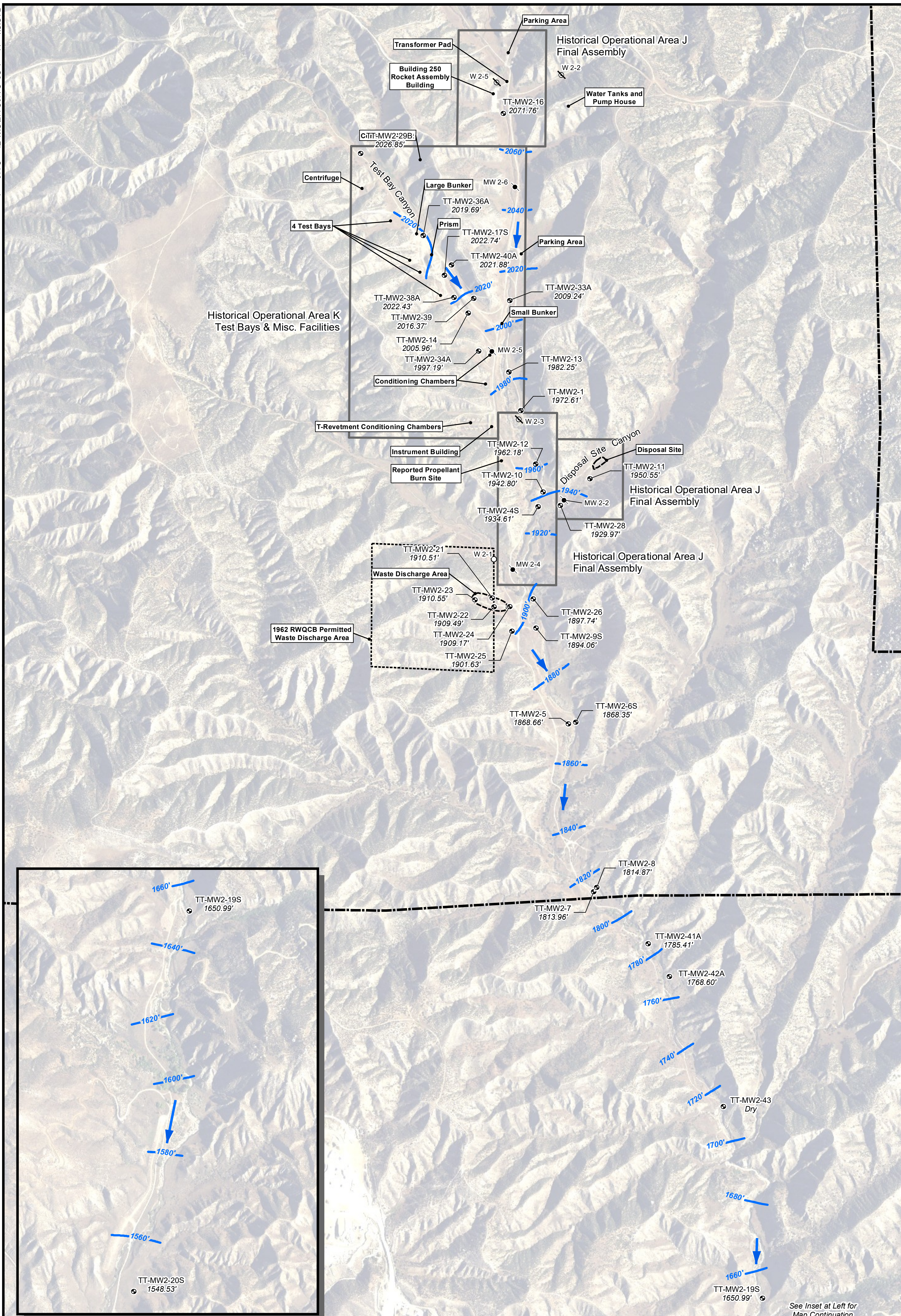

LEGEND

- Monitoring Well Location with Groundwater Elevation (feet msl)
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Groundwater Elevation Contour (feet msl)
- Groundwater Flow Direction
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

0 500 1,000 Feet

Adapted from: May 2016 aerial photograph

Notes: msl - mean sea level.

Laborde Canyon property boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 5

Groundwater Contours for First Groundwater - Fourth Quarter 2016

TETRA TECH

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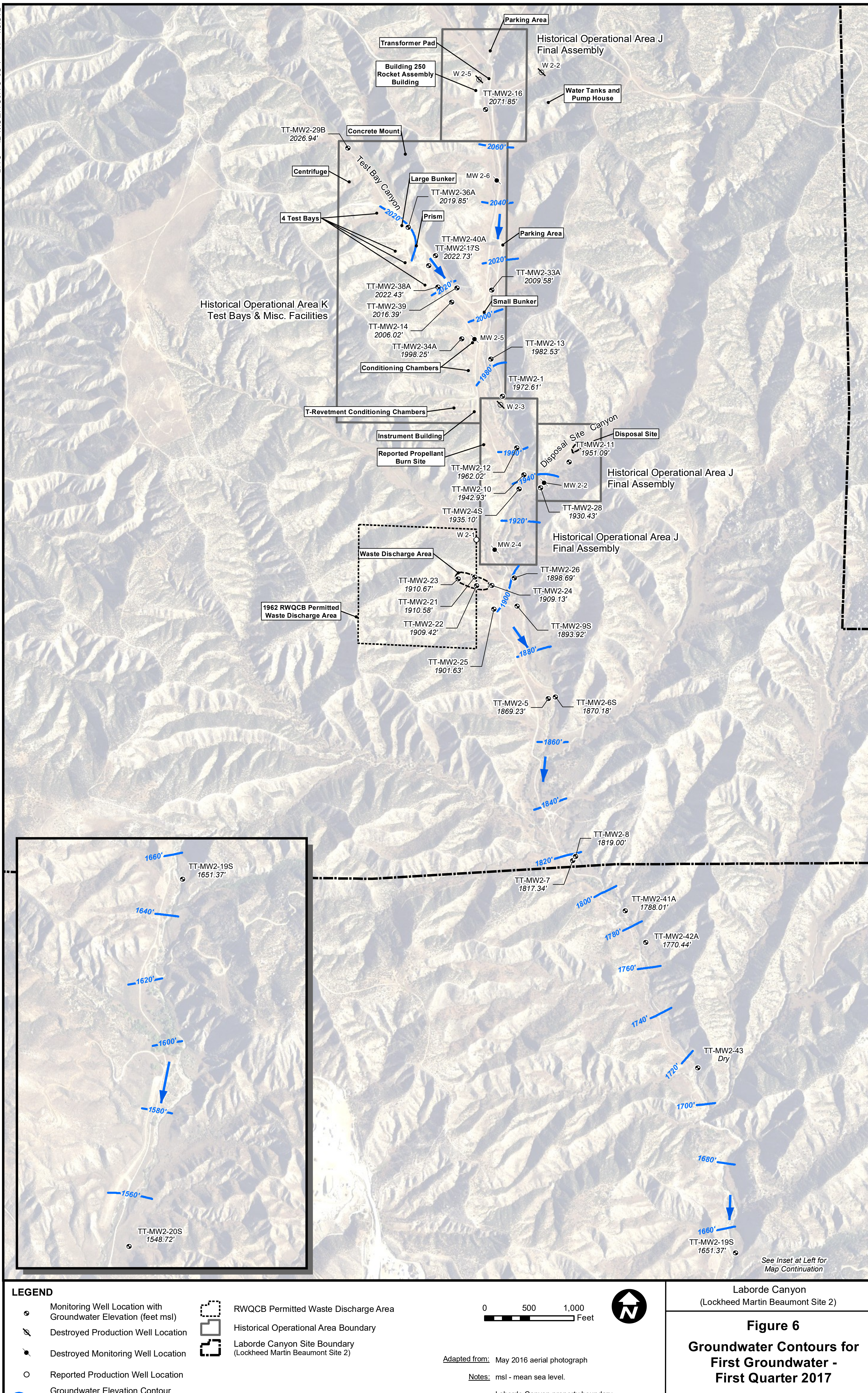

LEGEND

- Monitoring Well Location with Groundwater Elevation (feet msl)
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Groundwater Elevation Contour (feet msl)
- Groundwater Flow Direction
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

0 500 1,000 Feet

N

Adapted from: May 2016 aerial photograph

Notes: msl - mean sea level.

Laborde Canyon property boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 6

Groundwater Contours for First Groundwater - First Quarter 2017

TETRA TECH

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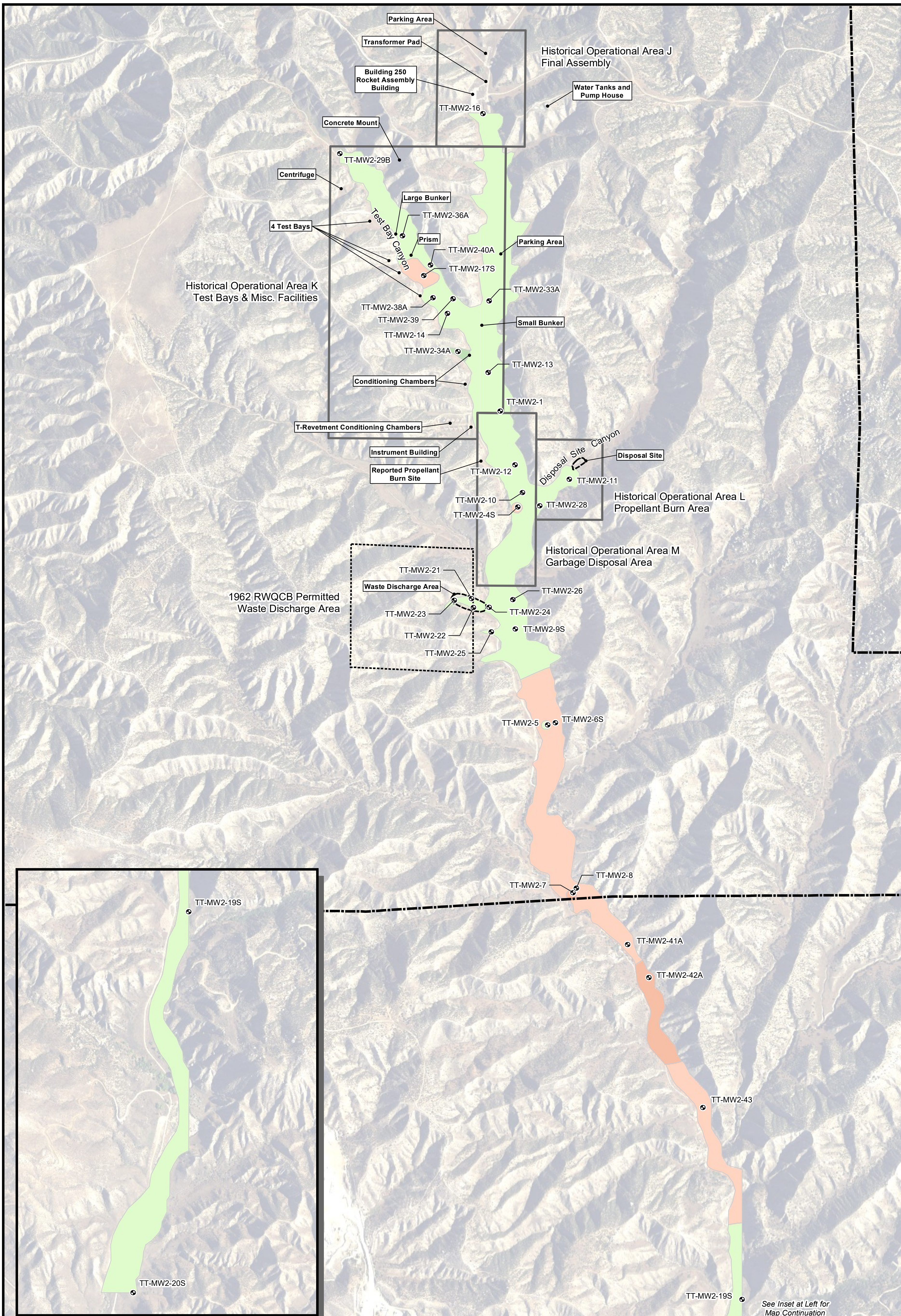

LEGEND

- Monitoring Well Location
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

Groundwater Elevation Change in Feet (from previous quarter)

- 1.01 — 2.00
- 0 — 1.00
- -0.99 — 0
- -1.99 — -1.00

0 500 1,000 Feet

N

Adapted from: May 2016 aerial photograph

Notes: Laborde Canyon property boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 7

Changes in Groundwater Elevation - Fourth Quarter 2016

TETRA TECH

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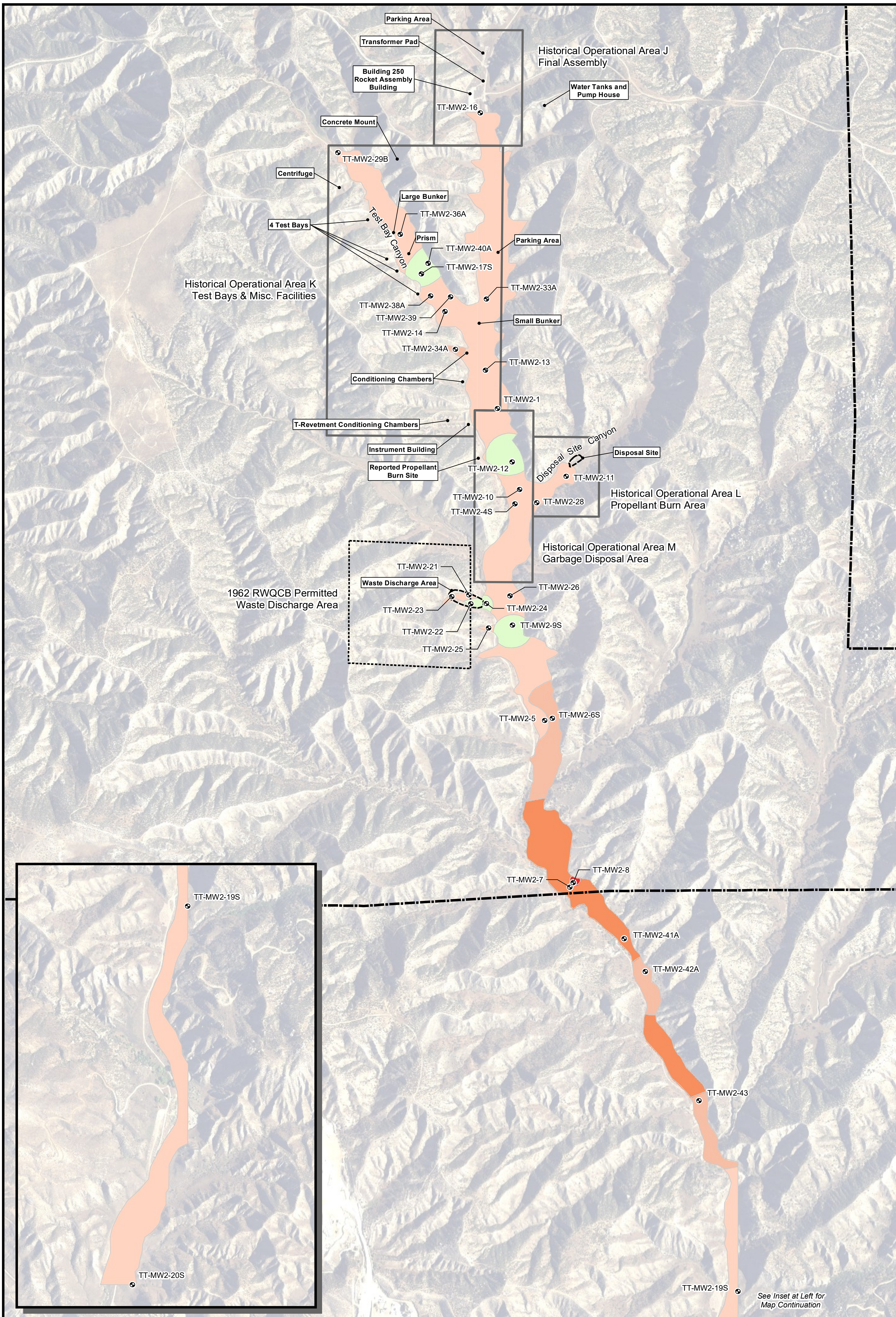

LEGEND

- Monitoring Well Location
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

Groundwater Elevation Change in Feet (from previous quarter)

- 0 — 1.00
- -0.99 — 0
- -1.99 — -1.00
- -3.99 — -2.00
- -5.99 — -4.00

0 500 1,000 Feet

Adapted from: May 2016 aerial photograph

Notes: Laborde Canyon property boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004

Laborde Canyon (Lockheed Martin Beaumont Site 2)

Figure 8

Changes in Groundwater Elevation - First Quarter 2017

TETRA TECH

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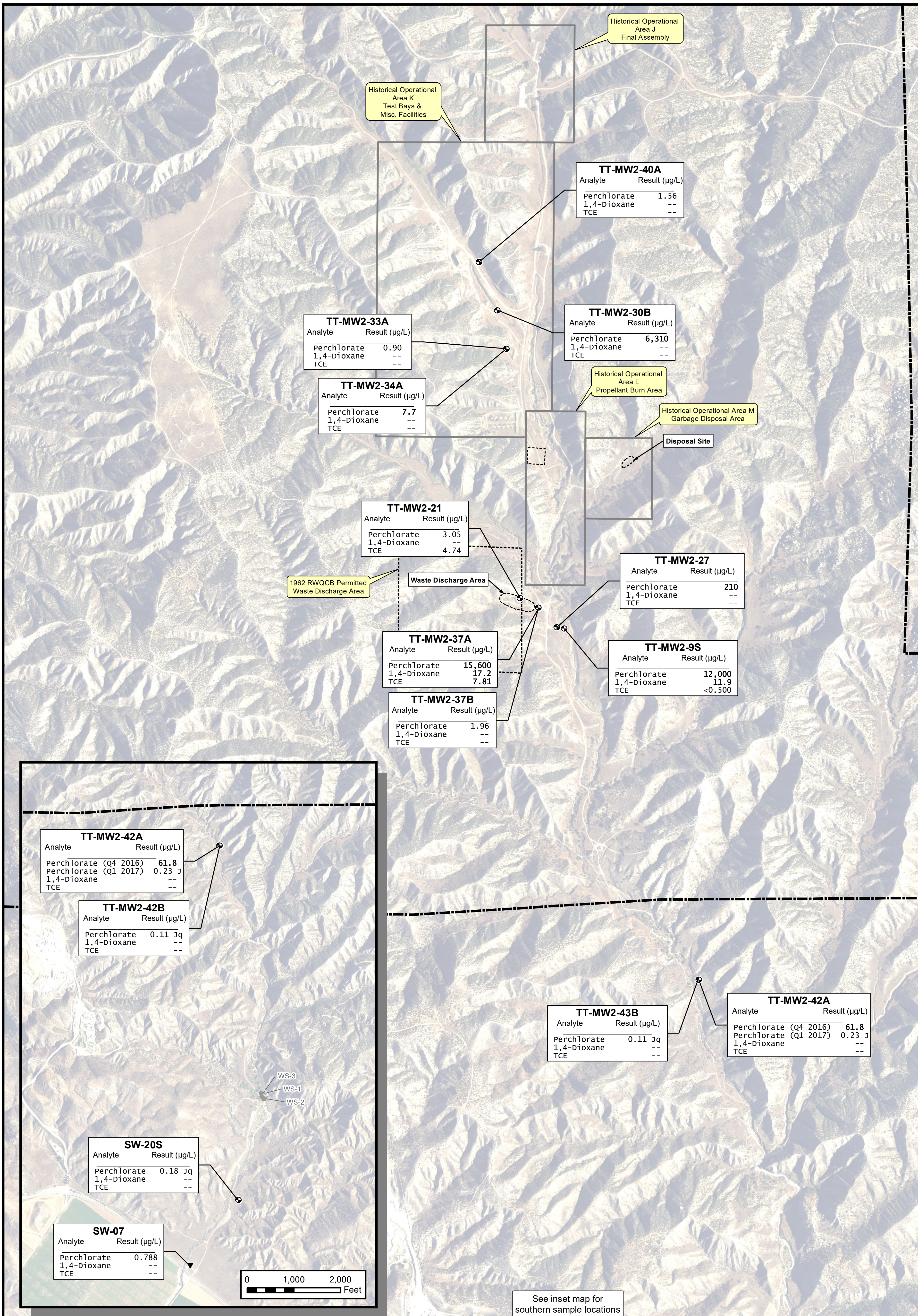

LEGEND

- Monitoring Well Location
- Surface Water Sampling Location
- Spring Location (dry or unable to sample)
- 1962 RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Laborde Canyon Site Boundary (Lockheed Martin Beaumont Site 2)

Notes: **Bold** indicates corresponding MCL or DWNL exceeded.
Concentrations shown are in micrograms per liter (µg/L).
Gray symbols indicate sample not available.
-- Not sampled
MCL - Maximum Contaminant Level
DWNL - Drinking Water Notification Limit

0 500 1,000 Feet

Laborde Canyon property boundary (Lockheed Martin Beaumont Site 2) from Hillwig-Goodrow survey, May 2004

Adapted from: May 2016 aerial photograph

Laborde Canyon
(Lockheed Martin Beaumont Site 2)

Figure 9
Primary Organic Chemicals of Potential Concern Sampling Results - Fourth Quarter 2016 and First Quarter 2017

TETRA TECH

TABLES

Table 1
Groundwater Elevation Data - Fourth Quarter 2016 and First Quarter 2017

Well ID	TOC Elevation (feet msl)	Fourth Quarter 2016				First Quarter 2017			
		Date Measured	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)	Elevation Change [1] (feet)	Date Measured	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)	Elevation Change[1] (feet)
TT-EW2-1	1840.24	12/12/16	25.58	1814.66	-0.49	02/14/17	21.78	1818.46	-3.80
TT-EW2-2	2079.12	12/12/16	62.34	2016.78	0.12	02/13/17	62.34	2016.78	0.00
TT-EW2-3	1962.82	12/12/16	54.10	1908.72	0.08	02/14/17	54.09	1908.73	-0.01
TT-MW2-1	2035.21	12/12/16	62.60	1972.61	0.10	02/13/17	62.60	1972.61	0.00
TT-MW2-2	2137.75	12/12/16	72.37	2065.38	0.12	02/13/17	72.20	2065.55	-0.17
TT-MW2-3	2094.66	12/12/16	72.22	2022.44	0.12	02/13/17	72.21	2022.45	-0.01
TT-MW2-4S	1986.94	12/12/16	52.33	1934.61	-0.01	02/14/17	51.84	1935.10	-0.49
TT-MW2-4D	1987.17	12/12/16	60.96	1926.21	0.27	02/14/17	60.47	1926.70	-0.49
TT-MW2-5	1911.31	12/12/16	42.65	1868.66	0.06	02/14/17	42.08	1869.23	-0.57
TT-MW2-6S	1908.00	12/12/16	39.65	1868.35	-0.67	02/14/17	37.82	1870.18	-1.83
TT-MW2-6D	1908.07	12/12/16	40.45	1867.62	0.88	02/14/17	38.79	1869.28	-1.66
TT-MW2-7	1839.25	12/12/16	25.29	1813.96	-1.13	02/14/17	21.91	1817.34	-3.38
TT-MW2-7D	1838.96	12/12/16	22.58	1816.38	-0.55	02/14/17	20.06	1818.90	-2.52
TT-MW2-8	1836.32	12/12/16	21.45	1814.87	-0.35	02/14/17	17.32	1819.00	-4.13
TT-MW2-9S	1938.38	12/12/16	44.32	1894.06	0.21	02/14/17	44.46	1893.92	0.14
TT-MW2-9D	1938.78	12/12/16	47.72	1891.06	0.16	02/14/17	47.05	1891.73	-0.67
TT-MW2-10	2001.57	12/12/16	58.77	1942.80	0.10	02/14/17	58.64	1942.93	-0.13
TT-MW2-11	2004.51	12/12/16	53.96	1950.55	0.60	02/13/17	53.42	1951.09	-0.54
TT-MW2-12	2016.26	12/12/16	54.08	1962.18	0.22	02/13/17	54.24	1962.02	0.16
TT-MW2-13	2049.39	12/12/16	67.14	1982.25	0.24	02/13/17	66.86	1982.53	-0.28
TT-MW2-14	2074.78	12/12/16	68.82	2005.96	0.15	02/13/17	68.76	2006.02	-0.06
TT-MW2-16	2137.20	12/12/16	65.44	2071.76	0.19	02/13/17	65.35	2071.85	-0.09
TT-MW2-17S	2095.55	12/12/16	72.81	2022.74	-0.24	02/13/17	72.82	2022.73	0.01
TT-MW2-17D	2095.33	12/12/16	73.17	2022.16	0.49	02/13/17	73.18	2022.15	0.01
TT-MW2-18	2035.32	12/12/16	62.45	1972.87	0.13	02/13/17	62.48	1972.84	0.03
TT-MW2-19S	1698.18	12/12/16	47.19	1650.99	0.05	02/13/17	46.81	1651.37	-0.38
TT-MW2-19D	1698.15	12/12/16	28.67	1669.48	0.21	02/13/17	27.91	1670.24	-0.76
TT-MW2-20S	1587.10	12/12/16	38.57	1548.53	0.80	02/13/17	38.38	1548.72	-0.19
TT-MW2-20D	1587.62	12/12/16	37.85	1549.77	-0.66	02/13/17	37.62	1550.00	-0.23
TT-MW2-21	1978.45	12/12/16	67.94	1910.51	0.10	02/14/17	67.87	1910.58	-0.07
TT-MW2-22	1975.86	12/12/16	66.37	1909.49	0.05	02/14/17	66.44	1909.42	0.07
TT-MW2-23	1995.17	12/12/16	84.62	1910.55	0.12	02/14/17	84.50	1910.67	-0.12
TT-MW2-24	1964.26	12/12/16	55.09	1909.17	0.06	02/14/17	55.13	1909.13	0.04
TT-MW2-25	1966.96	12/12/16	65.33	1901.63	0.06	02/22/17	65.33	1901.63	0.00
TT-MW2-26	1944.43	12/12/16	46.69	1897.74	0.65	02/14/17	45.74	1898.69	-0.95
TT-MW2-27	1948.27	12/12/16	57.13	1891.14	0.32	02/14/17	56.55	1891.72	-0.58
TT-MW2-28	1995.65	12/12/16	65.68	1929.97	0.43	02/14/17	65.22	1930.43	-0.46
TT-MW2-29A	2147.77	12/12/16	Dry	Dry	Dry	02/13/17	109.18	2038.59	NA
TT-MW2-29B	2147.90	12/12/16	121.05	2026.85	0.13	02/13/17	120.96	2026.94	-0.09
TT-MW2-29C	2147.83	12/12/16	128.01	2019.82	0.12	02/13/17	127.82	2020.01	-0.19
TT-MW2-30A	2074.37	12/12/16	73.78	2000.59	0.08	02/13/17	73.57	2000.80	-0.21
TT-MW2-30B	2074.41	12/12/16	76.02	1998.39	0.09	02/13/17	75.65	1998.76	-0.37
TT-MW2-30C	2074.35	12/12/16	78.27	1996.08	0.13	02/13/17	77.64	1996.71	-0.63
TT-MW2-31A	2036.11	12/12/16	63.63	1972.48	0.20	02/13/17	63.60	1972.51	-0.03
TT-MW2-31B	2036.15	12/12/16	70.03	1966.12	0.05	02/13/17	69.26	1966.89	-0.77
TT-MW2-32	2004.87	12/12/16	55.18	1949.69	0.14	02/14/17	54.69	1950.18	-0.49
TT-MW2-33A	2070.54	12/12/16	61.30	2009.24	0.06	02/13/17	60.96	2009.58	-0.34
TT-MW2-33B	2070.54	12/12/16	66.36	2004.18	0.13	02/13/17	65.77	2004.77	-0.59
TT-MW2-33C	2070.54	12/12/16	64.67	2005.87	0.01	02/13/17	64.37	2006.17	-0.30
TT-MW2-34A	2066.84	12/12/16	69.65	1997.19	1.11	02/13/17	68.59	1998.25	-1.06
TT-MW2-34B	2066.85	12/12/16	74.63	1992.22	0.10	02/13/17	74.42	1992.43	-0.21
TT-MW2-34C	2066.84	12/12/16	76.44	1990.40	0.09	02/13/17	76.25	1990.59	-0.19
TT-MW2-35A	2003.20	12/12/16	53.89	1949.31	0.10	02/14/17	52.99	1950.21	-0.90
TT-MW2-35B	2003.20	12/12/16	58.83	1944.37	0.18	02/14/17	58.23	1944.97	-0.60
TT-MW2-36A	2100.99	12/12/16	81.30	2019.69	0.14	02/13/17	81.14	2019.85	-0.16
TT-MW2-36B	2101.04	12/12/16	82.07	2018.97	0.23	02/13/17	81.79	2019.25	-0.28
TT-MW2-36C	2100.88	12/12/16	81.95	2018.93	-0.02	02/13/17	81.91	2018.97	-0.04
TT-MW2-37A	1963.62	12/12/16	66.49	1897.13	0.11	02/14/17	66.06	1897.56	-0.43
TT-MW2-37B	1963.67	12/12/16	74.76	1888.91	0.13	02/14/17	74.24	1889.43	-0.52

Table 1
Groundwater Elevation Data - Fourth Quarter 2016 and First Quarter 2017

Well ID	TOC Elevation (feet msl)	Fourth Quarter 2016				First Quarter 2017			
		Date Measured	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)	Elevation Change [1] (feet)	Date Measured	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)	Elevation Change[1] (feet)
TT-MW2-38A	2084.56	12/12/16	62.13	2022.43	0.19	02/13/17	62.13	2022.43	0.00
TT-MW2-38B	2084.42	12/12/16	82.30	2002.12	0.06	02/13/17	82.09	2002.33	-0.21
TT-MW2-39	2079.53	12/12/16	63.16	2016.37	0.13	02/22/17	63.14	2016.39	-0.02
TT-MW2-40A	2096.28	12/12/16	74.40	2021.88	0.10	02/13/17	74.45	2021.83	0.05
TT-MW2-40B	2096.24	12/12/16	85.31	2010.93	0.05	02/13/17	85.13	2011.11	-0.18
TT-MW2-40C	2096.28	12/12/16	89.97	2006.31	0.03	02/13/17	89.65	2006.63	-0.32
Tt-MW2-41A	1812.47	12/12/16	27.06	1785.41	-0.44	02/14/17	24.46	1788.01	-2.60
Tt-MW2-41B	1812.22	12/12/16	23.49	1788.73	-0.68	02/14/17	20.78	1791.44	-2.71
Tt-MW2-42A	1799.06	12/12/16	30.46	1768.60	-1.35	02/14/17	28.62	1770.44	-1.84
Tt-MW2-42B	1799.07	12/12/16	28.60	1770.47	-0.70	02/14/17	26.63	1772.44	-1.97
Tt-MW2-43	1771.44	12/12/16	Dry	Dry	Dry	02/14/17	Dry	Dry	Dry
Tt-MW2-44	2085.22	12/12/16	62.89	2022.33	0.14	02/13/17	62.92	2022.30	0.03
TT-PZ2-1	1847.06	12/12/16	27.97	1819.09	0.13	02/14/17	24.34	1822.72	-3.63
TT-PZ2-2	1840.76	12/12/16	25.75	1815.01	-0.50	02/14/17	21.79	1818.97	-3.96
TT-PZ2-3	2079.89	12/12/16	60.97	2018.92	0.13	02/13/17	61.00	2018.89	0.03
TT-PZ2-4	1961.49	12/12/16	53.36	1908.13	0.21	02/14/17	53.35	1908.14	-0.01

Acronyms and Abreviations
BTOC: below top of well casing
NA - Not applicable
msl - Mean sea level
TOC: top of well casing
Notes
1. Positive values indicate an increase in elevations; negative values indicate a decrease in elevation

Table 2
Sampling Schedule and Analysis Method
Fourth Quarter 2016 and First Quarter 2017

Sampling Location	Sample Date	VOCs (1)	1,4-dioxane (2)	Per chlorate (3)	Comments and QA/QC Samples
Surface Water					
WS-1	NA	-	-	-	Wolfskill Spring Sample, Dry
WS-2	NA	-	-	-	Wolfskill Spring Sample, Dry
WS-3	NA	-	-	-	Wolfskill Spring Sample, Dry
Monitoring Wells					
TT-MW2-9S	12/13/16	X	X	X	Sample with Dedicated Pump
TT-MW-20S	02/20/17	-	-	X	Sample with Dedicated Pump, MS/MSD
TT-MW2-21	12/13/16	X	-	X	Sample with Dedicated Pump
TT-MW2-27	02/20/17	-	-	X	Sample with Dedicated Pump
TT-MW2-30B	12/13/16	-	-	X	Sample with Dedicated Pump
TT-MW2-33A	02/20/17	-	-	X	Sample with Dedicated Pump, Duplicate Sample
TT-MW2-34A	12/13/16	-	-	X	Sample with Dedicated Pump
TT-MW2-37A	12/13/16	X	X	X	Sample with Dedicated Pump, Duplicate Sample
TT-MW2-37B	12/13/16	-	-	X	Sample with Dedicated Pump
TT-MW2-40A	12/13/16	-	-	X	Sample with Dedicated Pump, MS/MSD
TT-MW2-42A	12/13/16	-	-	X	Sample with Portable Pump
TT-MW2-42A	04/07/17	-	-	X	Sample with Portable Pump, Duplicate Sample
TT-MW2-42B	04/07/17	-	-	X	Sample with Portable Pump, MS/MSD
Surface Water (December 22, 2016 Storm Event)					
SW-01	NA	-	-	-	Surface Water, Dry
SW-02	NA	-	-	-	Surface Water, Dry
SW-03	NA	-	-	-	Surface Water, Dry
SW-04	NA	-	-	-	Surface Water, Dry
SW-05	NA	-	-	-	Surface Water, Dry
SW-06	NA	-	-	-	Surface Water, Dry
SW-07	12/22/16	-	-	X	Surface Water Sample
	Total Sampling Locations:	23			
	Total Samples Collected:	14			

Notes:

(shaded) Well not sampled or surface water sample not collected
"-" Not analyzed
EPA - United States Environmental Protection Agency
QA/QC - Quality assurance / quality control
MS / MSD - Matrix Spike / Matrix Spike Duplicate
NA - Not available
VOCs - Volatile organic compounds
(1) - Volatile organic compounds (VOCs) analyzed by EPA Method SW8260B
(2) - 1,4 - Dioxane analyzed by EPA Method SW8270C SIM
(3) - Perchlorate analyzed by EPA Method SW6850

Table 3
2015 Water Quality Monitoring Locations and Sampling Frequency

Monitoring Well	2015 Well Classification	1st Quarter 2015 to 4th Quarter 2015 Monitoring Program: VOCs (EPA SW8260B or SW524.2)				Perchlorate (EPA SW6850 or SW331.0)					1,4-Dioxane (EPA SW8270C SIM)				RDX (EPA SW8330)			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	Bi	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Wolfskill Spring Locations																		
WS-1	-						•		•									
WS-2	-						•		•									
WS-3	-						•		•									
Surface Water Locations																		
SW-01	-					•												
SW-02	-					•												
SW-03	-					•												
SW-04	-					•												
SW-05	-					•												
SW-06	-					•												
SW-07	-					•												
Private Production Wells and Springs																		
PPW1	-	•				•					•							
PPW2	-	•				•					•							
PPW3	-	•				•					•							
PPW4	-	•				•					•							
PPW5	-	•				•					•							
PPW6	-	•				•					•							
PPW7	-	•				•					•							
PPW8	-	•				•					•							
Monitoring Wells																		
TT-MW2-1	H						•											
TT-MW2-4S	H						•											
TT-MW2-5	H		•				•					•						
TT-MW2-6S	H		•				•					•						
TT-MW2-6D	V						•											
TT-MW2-7	H						•					•						
TT-MW2-7D	V						•											
TT-MW2-8	H						•					•						
TT-MW2-9S	H/I		•		•		•		•			•		•				
TT-MW2-9D	V						•					•						
TT-MW2-10	H						•											
TT-MW2-11	H		•				•											
TT-MW2-12	H						•											
TT-MW2-13	H						•									•		
TT-MW2-14	H		•				•											
TT-MW2-16	B									•								
TT-MW2-17S	H		•				•											
TT-MW2-17D	V		•				•											
TT-MW2-18	V						•											
TT-MW-19S	H						•											
TT-MW-19D	V						•											
TT-MW-20S	G						•		•									
TT-MW2-21	H/I		•		•		•		•			•						
TT-MW2-22	H		•				•					•						
TT-MW2-23	R																	
TT-MW2-24	H		•				•					•				•		
TT-MW2-25	H		•				•					•						
TT-MW2-26	H		•				•					•						
TT-MW2-27	H/I		•				•		•			•						
TT-MW2-28	H						•											
TT-MW2-29A	B									•								
TT-MW2-29B	B									•								
TT-MW2-29C	B									•								
TT-MW2-30A	V		•				•											
TT-MW2-30B	V/I						•		•									
TT-MW2-30C	V						•											
TT-MW2-31A	V						•											
TT-MW2-32	V		•				•											
TT-MW2-33A	H/I						•		•									
TT-MW2-34A	H/I						•		•									

Table 3
2015 Water Quality Monitoring Locations and Sampling Frequency

Monitoring Well	2015 Well Classification	1st Quarter 2015 to 4th Quarter 2015 Monitoring Program																
		VOCs (EPA SW8260B or SW524.2)				Perchlorate (EPA SW6850 or SW331.0)					1,4-Dioxane (EPA SW8270C SIM)				RDX (EPA SW8330)			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	Bi	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Monitoring Wells (continued)																		
TT-MW2-35A	V						●											
TT-MW2-36A	H						●											
TT-MW2-37A	H/I		●		●		●		●			●		●				
TT-MW2-37B	V/I		●				●		●			●						
TT-MW2-38A	H						●											
TT-MW2-38B	V						●											
TT-MW2-38C	V						●											
TT-MW2-39	H						●											
TT-MW2-40A	H/I		●				●		●									
TT-MW2-40B	V		●				●											
TT-MW2-41A	H						●					●						
TT-MW2-42A	G						●		●			●						
TT-MW2-44	H						●											
Monitoring Wells (Not Sampled)																		
TT-MW2-2	R																	
TT-MW2-3	R																	
TT-MW2-4D	R																	
TT-MW-20D	R																	
TT-MW2-23	R																	
TT-MW2-31B	R																	
TT-MW2-33B	R																	
TT-MW2-33C	R																	
TT-MW2-34B	R																	
TT-MW2-34C	R																	
TT-MW2-35B	R																	
TT-MW2-36B	R																	
TT-MW2-36C	R																	
TT-MW2-40C	R																	
TT-MW2-41B	-																	
TT-MW2-42B	-																	
TT-MW2-43	R																	
Piezometers (Not Sampled)																		
TT-PZ2-1	-																	
TT-PZ2-2	-																	
TT-PZ2-3	-																	
TT-PZ2-4	-																	
Extraction Wells (Not Sampled)																		
TT-EW2-1	-																	
TT-EW2-2	-																	
TT-EW2-3	-																	
TT-EW2-4	-																	
Totals	-	8	19	0	3	15	51	0	14	4	8	16	0	2	0	2	0	0
		30				84					26				2			

Notes

EPA: United States Environmental Protection Agency
VOCs: Volatile organic compounds
RDX: Hexahydro-1,3,5-trinitro-1,3,5-triazine
Bi: Biennial (sampled in even numbered years)
B: Background well
G: Guard well
H: Horizontal extent well
I: Increasing contaminant trend well
R: Redundant well
V: Vertical distribution well

Table 4
Groundwater Elevation Change
Fourth Quarter 2016 and First Quarter 2017

Site Area	Range of Groundwater Elevation Change - Fourth Quarter 2015		Average Change By Area (feet)	Range of Groundwater Elevation Change - First Quarter 2016		Average Change By Area (feet)
	Minimum	Maximum		Minimum	Maximum	
J	0.12	0.19	0.15	-0.17	-0.09	-0.13
K	-0.24	1.11	0.14	-1.06	0.05	-0.20
L	-0.01	0.27	0.14	-0.90	0.16	-0.41
M	0.14	0.60	0.39	-0.54	-0.46	-0.50
WDA	0.05	0.21	0.11	-0.52	0.07	-0.13
LC	-1.35	0.88	-0.24	-4.13	0.14	-2.04
RCA	-0.66	0.80	0.10	-0.76	-0.19	-0.39

Notes

J: Final Assembly Area

K: Former Test Bay Area

L: Former Burn Area

M: Garbage disposal Area

WDA: Waste discharge area

LC: Lower Canyon

RCA: Western Riverside County Regional Conservation Authority Property

Table 5
Summary of Horizontal and Vertical Groundwater Gradients Fourth Quarter 2016 and First Quarter 2017

Horizontal Groundwater Gradients (feet / foot), approximating a flowline perpendicular to groundwater contours

	Overall	**Overall**
	STF	QAL/wSTF
	TT-MW2-2	**TT-MW2-16**
	to	to
	TT-MW2-6D	**TT-MW2-5**
Third Quarter (August 2016)	0.029	0.030
Fourth Quarter (December 2016	0.029	0.030
First Quarter (February 2017)	0.029	0.030

Vertical Groundwater Gradients (feet / foot)

	Area J	**Area K**	**Area K**	**Area L**	**Southern portion of Site 2**	**Southern portion of Site 2**	**Southern portion of Site**	**RCA Property**	**RCA Property**
deep screen	**TT-MW2-2** (STF)	**TT-MW2-17D** (wSTF)	**TT-MW2-18** (STF)	**TT-MW2-4D** (STF)	**TT-MW2-9D** (STF)	**TT-MW2-6D** (STF)	**TT-MW2-7D** (STF)	**TT-MW2-19D** (MEF)	**TT-MW2-20D** (MEF)
shallow screen	**TT-MW2-16** (wSTF)	**TT-MW2-17S** (wSTF)	**TT-MW2-1** (wSTF)	**TT-MW2-4S** (STF)	**TT-MW2-9S** (wSTF)	**TT-MW2-6S** (wSTF)	**TT-MW2-7** (wSTF)	**TT-MW2-19S** (wMEF)	**TT-MW2-20S** (wMEF)
Third Quarter (August 2016)	-0.14	0.01	0.01	-0.32	-0.13	0.05	0.08	0.17	-0.01
Fourth Quarter (December 2016	-0.14	-0.02	0.01	-0.34	-0.13	-0.04	0.06	0.17	0.03
First Quarter (February 2017)	-0.14	-0.02	0.01	-0.34	-0.09	-0.05	0.04	0.17	0.03

Notes:

(1) - TT-MW2-6S was found to be dry during the Third and Fourth Quarter 2014

Area J - Final Assembly Area
Area K - Former Test Bay Area
Area L - Former Burn Area
RCA Property - Western Riverside County Regional Conservation Authority Property

QAL - Quaternary Alluvium
STF - San Timoteo formation
MEF - Mt. Eden formation
wSTF - Weathered San Timoteo formation
wMEF - Weathered Mt. Eden formation

Table 6
Summary of Validated Detected Organic and Inorganic Analytes
Fourth Quarter 2016 and First Quarter 2017

Sampling Location	Sample Date	Perchlorate	1,4-Dioxane	Trichloroethene
All results reported in µg/L unless otherwise stated				
TT-MW2-09S	12/13/16	**12,000**	**11.9**	<0.500
TT-MW2-20S	02/20/17	0.18 Jq	--	--
TT-MW2-21	12/13/16	3.05	--	4.74
TT-MW2-27	02/20/17	**210**	--	--
TT-MW2-30B	12/13/16	**6,310**	--	--
TT-MW2-33A	02/20/17	0.90	--	--
TT-MW2-34A	12/13/16	**7.7**	--	--
TT-MW2-37A	12/13/16	**15,600**	**17.2**	**7.81**
TT-MW2-37B	12/13/16	1.96	--	--
TT-MW2-40A	12/13/16	1.56	--	--
TT-MW2-42A	12/13/16	**61.8** (2)	--	--
TT-MW2-42A	04/07/17	0.23 Jq	--	--
TT-MW2-42B	04/07/17	0.11 Jq	--	--
SW-07	12/22/16	0.788	--	--
Method Detection Limit		0.100	0.25	0.50
MCL (unless noted) / DWNL		6	1 (1)	5

Notes: Only analytes positively detected in samples are presented in this table.
For a complete list of constituents analyzed, refer to the laboratory data packages in Appendix H.

µg/L - Micrograms per liter
MCL - California Division of Drinking Water Maximum Contaminant Level
DWNL - California Division of Drinking Water Drinking Water Notification Level
"--" Not analyzed
(1) - DWNL
(2) - Perchlorate data from 13 December 2016 is considered to be anomalous, the well was resampled on 7 April 2017 for verification
Bold - MCL or DWNL exceeded.
< # - Analyte not detected, method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
q - The analyte detection was below the Practical Quantitation Limit (PQL).

Table 7
Summary Statistics for Validated Detected Organic and Inorganic Analytes
Fourth Quarter 2016 and First Quarter 2017

Organic Analytes Detected	Total Number of Samples Analyzed	Total Number of Detections (1)	Number of Detections Exceeding MCL or DWNL (1)	MCL/DWNL		Minimum Concentration Detected		Maximum Concentration Detected	
1,4-Dioxane	2	2	2	1 (2)	µg/L	11.9	µg/L	17.2	µg/L
Trichloroethene	3	2	1	5	µg/L	4.74	µg/L	7.81	µg/L
Inorganic Analytes Detected	**Total Number of Samples Analyzed**	**Total Number of Detections (1)**	**Number of Detections Exceeding MCL or DWNL (1)**	**MCL/DWNL**		**Minimum Concentration Detected**		**Maximum Concentration Detected**	
Perchlorate	14	14	6	6	µg/L	0.11	µg/L	15,600	µg/L

Notes: Only analytes positively detected in groundwater or surface water samples are presented in this table.
For a complete list of constituents analyzed, refer to the laboratory data package.
MCL - California Division of Drinking Water Maximum Contaminant Level
DWNL - California Division of Drinking Water Drinking Water Notification Level
" - " MCL/DWNL not established.
(1) - Number of detections exclude sample duplicates, trip blanks, and equipment blanks.
(2) - DWNL.
µg/L - Micrograms per liter.

Table 8
Groundwater Chemicals of Potential Concern

Analyte	Classification
Perchlorate	Primary
Trichloroethene	Primary
1,4-Dioxane	Primary
Benzene	Secondary
1, 2-Dichloroethane	Secondary
1, 1-Dichloroethene	Secondary
cis-1,2-dichloroethene	Secondary
RDX	Secondary

Note:
RDX - Hexahydro-1,3,5-trinitro-1,3,5-triazine

Table 9
Summary of Detected Primary Chemicals of Potential Concern in Guard Wells
Fourth Quarter 2016 and First Quarter 2017

Sampling Location	Sample Date	Perchlorate	1,4-Dioxane	Trichloroethene
All results reported in µg/L unless otherwise stated				
TT-MW2-20S	12/02/14	0.57	--	--
	06/10/15	0.28	--	--
	12/02/15	<0.100	--	--
	06/13/16	<0.100	--	--
	02/20/17	0.18 Jq	--	--
TT-MW2-42A	12/10/14	<0.071	--	--
	06/15/15	1.70	<0.100	--
	12/03/15	<0.100	--	--
	06/13/16	0.255 Jq	<0.250	
	12/13/16	**61.8**	--	--
	04/07/17	0.23 Jq	--	--
MCL (unless noted) / DWNL		6	1 (1)	5.0

Notes: Only analytes positively detected in samples are presented in this table.
For a complete list of constituents analyzed, refer to the laboratory data package.

µg/L - Micrograms per liter
MCL - California Division of Drinking Water Maximum Contaminant Level
DWNL - California Division of Drinking Water Drinking Water Notification Level
"--" Not analyzed
(1) - DWNL
(2) - Perchlorate data from 13 December 2016 is considered to be anomalous, the well was resampled on 7 April 2017 for verification
Bold - MCL or DWNL exceeded.
< # - Analyte not detected, method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
q - The analyte detection was below the Practical Quantitation Limit (PQL).

Table 10
Summary of Detected Primary Chemicals of Potential Concern in Increasing Trend Wells
Fourth Quarter 2016 and First Quarter 2017

Sampling Location	Sample Date	Perchlorate	1,4-Dioxane	Trichloroethene
All results reported in µg/L unless otherwise stated				
TT-MW2-9S	12/9/2014	**16,000**	**17.0**	1.30
	06/16/15	**16,000**	**20.0**	1.29
	12/3/2015	**16,100**	**18.7**	0.770 Jq
	06/10/16	**7,710**	**19.5**	0.870 Jq
	12/13/2016	**12,000**	**11.9**	<0.500
TT-MW2-21	12/9/2014	**13.00**	--	3.60
	06/12/15	**9.20**	<0.100	3.51
	12/4/2015	**6.85**	--	4.64
	06/10/16	2.52	<0.250	4.76
	12/13/2016	3.05	--	4.74
TT-MW2-27	12/10/2014	**540**	--	--
	06/12/15	**590**	**1.10**	<0.500
	12/4/2015	**444**	--	--
	06/10/16	**174**	0.950 Jq	<0.500
	2/20/2017	**210**	--	--
TT-MW2-30B	12/4/2014	**10,000**	--	--
	6/9/2015	**9,600**	--	--
	12/2/2015	**9,770**	--	--
	6/9/2016	**5,000**	--	--
	12/13/2016	**6,310**	--	--
TT-MW2-33A	6/9/2014	0.78	--	--
	6/9/2015	0.69	--	--
	12/2/2015	0.77	--	--
	6/9/2016	1.33 Jf	--	--
	2/20/2017	0.90	--	--
TT-MW2-34A	12/8/2014	**11.00**	--	--
	06/09/15	**11.00**	--	--
	12/2/2015	**10.30**	--	--
	06/09/16	5.41	--	--
	12/13/2016	**7.70**	--	--
TT-MW2-37A	12/9/2014	**18,000**	**17.0**	**6.00**
	06/16/15	**17,000**	**21.0**	1.22
	12/4/2015	**18,500**	**17.4**	3.83
	06/10/16	**9,380**	**22.4**	**5.85**
	12/13/2016	**15,600**	**17.2**	**7.81**
TT-MW2-37B	12/9/2014	**150**	--	--
	06/12/15	4.60	**1.20**	<0.500
	12/4/2015	0.93	--	--
	06/10/16	0.92	0.670 Jq	<0.500
	12/13/2016	1.96	--	--
TT-MW2-40A	12/04/14	5.00	--	--
	06/10/15	1.30	--	<0.500
	12/02/15	1.78	--	--
	06/09/16	1.24	--	<0.500
	12/13/16	1.56	--	--
MCL (unless noted) / DWNL		6	1 (1)	5.0

Notes: Only analytes positively detected in samples are presented in this table.
For a complete list of constituents analyzed, refer to the laboratory data package.
µg/L - Micrograms per liter
MCL - California Division of Drinking Water Maximum Contaminant Level
DWNL - California Division of Drinking Water Drinking Water Notification Level
(1) - DWNL
"--" Not analyzed
Bold - MCL or DWNL exceeded.
< # - Analyte not detected, method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
q - The analyte detection was below the Practical Quantitation Limit (PQL).

Table 11
Current Sampling Frequencies by Well Classification

Well Classification	Approved Sampling Frequency
Horizontal Extent Wells	Annual
Vertical Distribution Wells	Annual
Increasing Contaminant Trend Wells	Semiannual
Background Wells	Biennial
Remedial Monitoring Wells	Vary, based on remedial action proposed
Guard Wells	Semiannual
New Wells	4 quarters then reclassify
Redundant Wells	Suspend (no sampling)

APPENDICES
(PROVIDED ON CD)