Semiannual Groundwater Monitoring Report
Second Quarter 2009 and Third Quarter 2009
Lockheed Martin Corporation, Beaumont Site 2
Beaumont, California

Prepared for:

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TC# 23522-0103 / March 2010

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LOCKHEED MARTIN

March 29, 2010

Mr. Daniel Zogaib
Southern California Cleanup Operations
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630

Subject: Submittal of the *Semiannual Groundwater Monitoring Report, Second Quarter 2009 and Third Quarter 2009, Lockheed Martin Corporation, Beaumont Site 2, Beaumont, California*

Dear Mr. Zogaib:

Please find enclosed one (1) hard copy of the body of the report and two (2) CDs of the report and appendices of the *Semiannual Groundwater Monitoring Report, Second Quarter 2009 and Third Quarter 2009, Lockheed Martin Corporation, Beaumont Site 2, Beaumont, California* for your review and approval or comment.

If you have any questions regarding this submittal, please contact me at 408.756.9595 or denise.kato@lmco.com.

Sincerely,

Denise Kato

Denise Kato
Remediation Analyst Senior Staff

Enclosures

Copy with Enc:
Gene Matsushita, LMC (1 pdf and 1 hard copy)
John Eisenbeis, Camp, Dresser, McKee (1 pdf)
Thomas J . Villeneuve, Tetra Tech, Inc. (1 pdf and 1 hard copy)

SEMI-ANNUAL GROUNDWATER MONITORING REPORT
SECOND QUARTER AND THIRD QUARTER 2009
BEAUMONT SITE 2, BEAUMONT, CALIFORNIA

Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

March 2010

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Environmental Scientist

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ACRONYMS

ARCH	air rotary casing hammer
bgs	below ground surface
btoc	below top of casing
BOS	bottom of screen
CAM	California Assessment Manual
CDHS	California Department of Health Services
COPCs	chemical(s) of potential concern
CSM	Conceptual Site Model
DTSC	Department of Toxic Substances Control
DWNL	drinking water notification level
EC	electrical conductivity
EPA	United States Environmental Protection Agency
ft/ft	feet per foot
ft/day	feet per day
GCR	Grand Central Rocket Company
GMP	Groundwater Monitoring Program
HCP	Habitat Conservation Plan
HSA	hollow stem auger
HSUs	hydrostratigraphic units
K	hydraulic conductivity
LAC	Lockheed Aircraft Corporation
LEBs	Lockheed equipment blanks

LMC	Lockheed Martin Corporation
LPC	Lockheed Propulsion Company
LR	Linear Regression
LTBs	Lockheed trip blanks
MW	monitoring well
MCLs	maximum contaminant levels
MDLs	method detection limits
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
msl	mean sea level
µg/L	micrograms/liter
NA	not applicable
NDMA	N-nitrosodimethylamine
NWS	National Weather Service
PW	production well
PVC	polyvinyl chloride
PZ	piezometer
QAL	Quaternary alluvium
QA/QC	quality assurance/quality control
RDX	Research Department composition X
SAP	sampling and analysis plan
SKR	Stephens' Kangaroo rat
SS	stainless steel
STF	San Timoteo formation

SVOCs	semi-volatile organic compounds
TCE	trichloroethene
1,2,3-TCP	1,2,3-trichloropropane
TOC	top of casing
TOS	top of screen
Unk.	unknown
u-DMH	unsymmetrical dimethyl hydrazine
U.S.	United States
USFWS	United States Fish and Wildlife Service
VOCs	volatile organic compounds
WCA	West Coast Analytical Services, Inc.
wSTF	weathered San Timoteo formation

SECTION 1 INTRODUCTION

This Semi-annual Groundwater Monitoring Report (Report) prepared by Tetra Tech, Inc. (Tetra Tech), on behalf of Lockheed Martin Corporation (LMC), presents the results of the Second Quarter 2009 and Third Quarter 2009 groundwater quality monitoring activities of the Beaumont Site 2 (Site) Groundwater Monitoring Program (GMP). The Site is located southwest of the City of Beaumont, Riverside County, California (Figure 1-1). Currently, the Site is inactive with the exception of ongoing investigative activities performed under Consent Order (88/89 034) with the Department of Toxic Substances Control (DTSC).

The objectives of this Report are to:

- Briefly summarize the Site history;
- Document the water quality monitoring procedures and results;
- Analyze and evaluate the water quality monitoring data generated.

This Report is organized into the following sections: 1) Introduction, 2) Summary of Monitoring Activities, 3) Groundwater Monitoring results, and 4) Summary and Conclusions. A summary of recent environmental activities and the current conceptual site model (CSM) can be found in Appendix A. The CSM has been updated to include the recently performed structural analysis of Laborde Canyon (i.e., lineament study and geologic mapping) to better understand the possible influence of local faulting and fracturing on groundwater flow in the area.

1.1 Site Background

The Site is a 2,668 acre parcel located southwest of Beaumont, California. The parcels that comprise the Site were owned by individuals and the United States (U.S.) government prior to 1958. Between 1958 and 1960, portions of the Site were purchased by the Grand Central Rocket Company (GCR) and utilized as a remote test facility for early space and defense program efforts. In 1960, Lockheed Aircraft Corporation (LAC) purchased one-half interest in GCR. GCR became a wholly-owned subsidiary of LAC in 1961. The remaining parcels of land that comprise the Site were purchased from the U.S. government between 1961 and 1964. In 1963, Lockheed Propulsion

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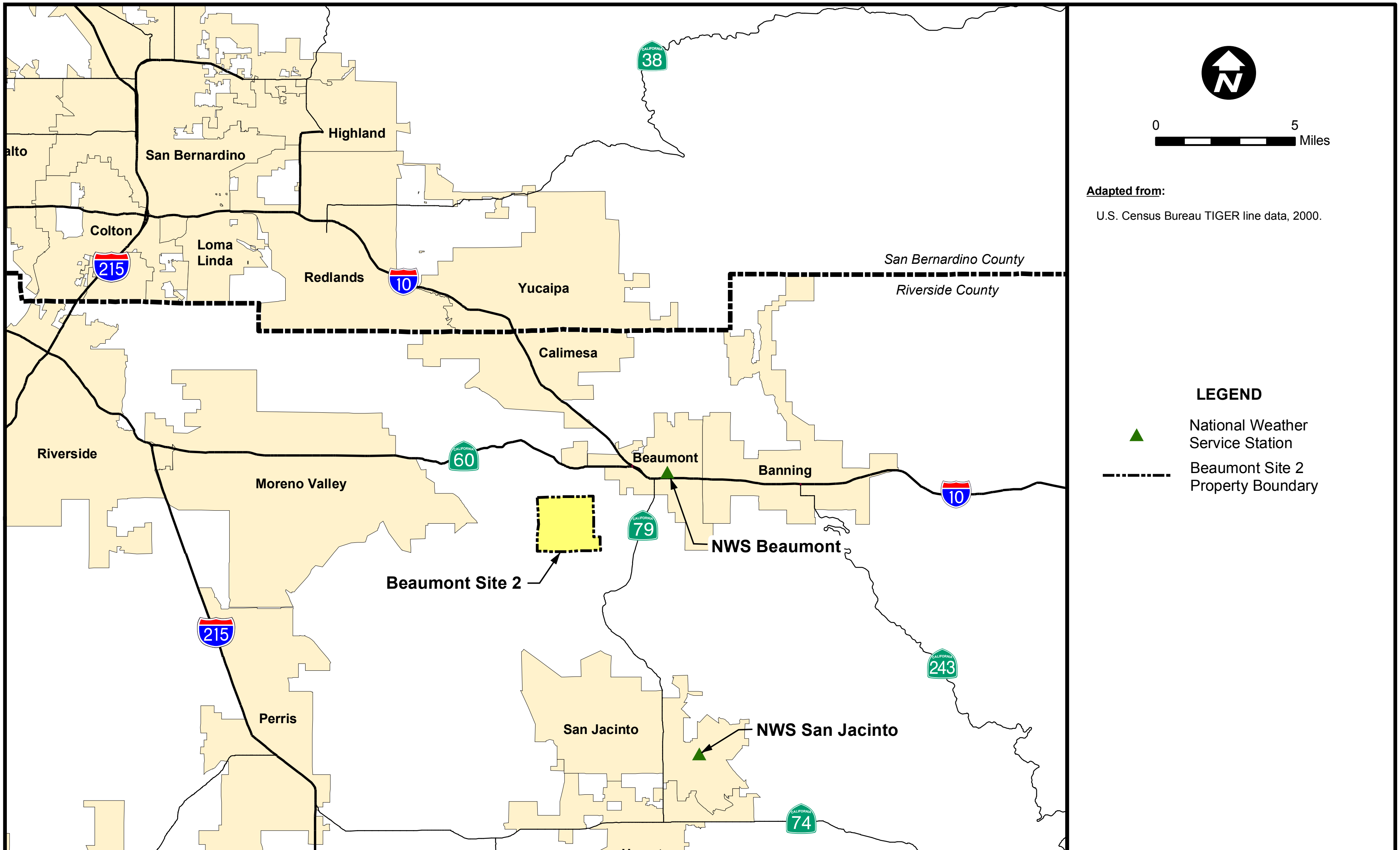


Beaumont Site 2

Figure 1-1
Regional Location of Beaumont Site 2

TETRA TECH

Company (LPC) became an operating division of LAC and was responsible for the operation of the Site until its closure in 1974. The Site was utilized by GCR and LPC 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 in the 1970s (Radian, 1986a).

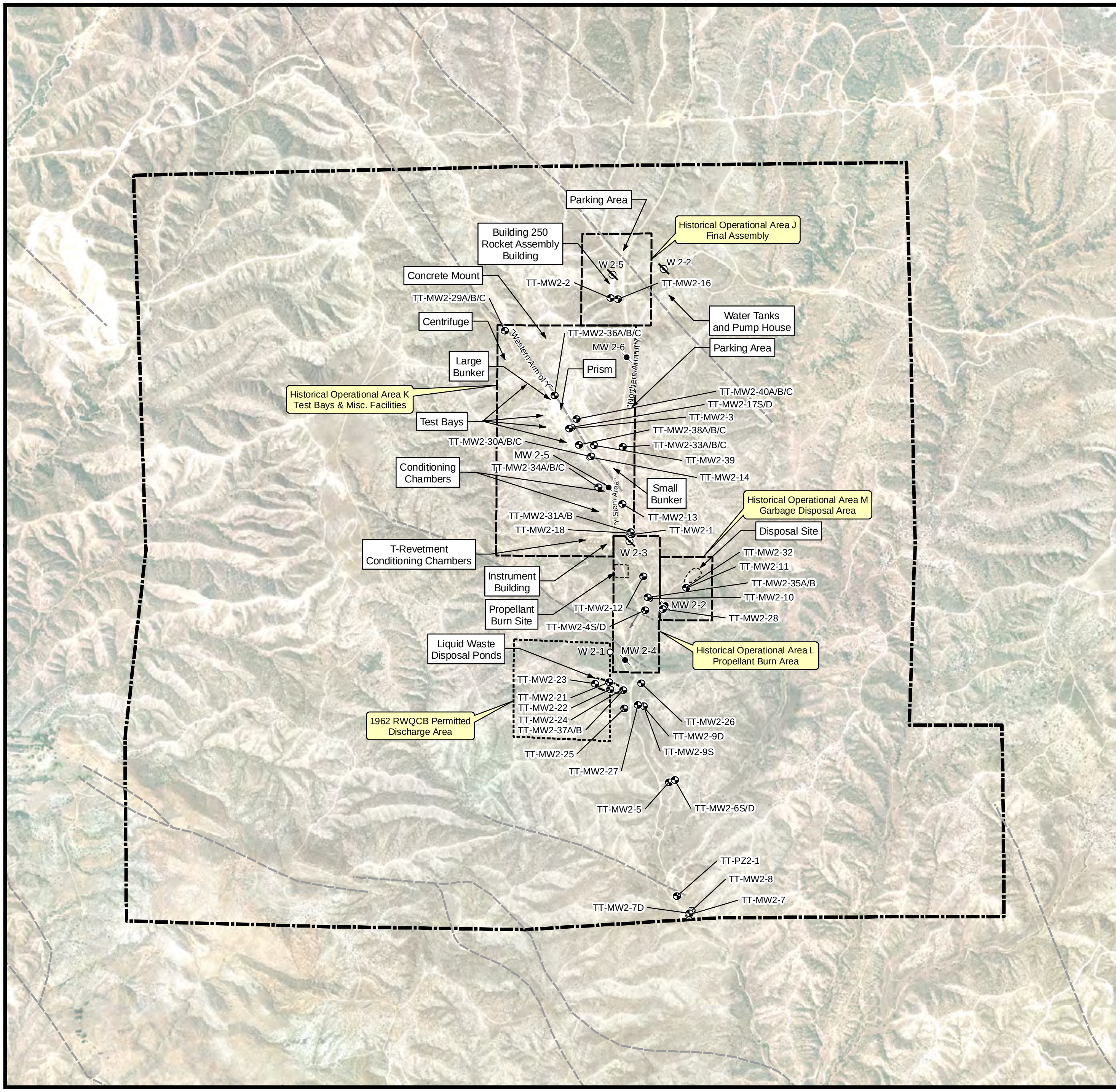
In 1989, the DTSC issued a consent order requiring LMC to cleanup contamination at the Site related to past testing activities (CDHS, 1989). Based on investigative and cleanup activities performed at the Site, the DTSC issued a no further remedial action letter to LMC in 1993.

Based on 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 (VOCs), perchlorate, and 1,4-dioxane to determine the potential presence and concentration of those chemicals in groundwater. The analytical results indicated that VOCs and 1,4-dioxane were not present at or above their respective method detection limits (MDLs). However, perchlorate was reported at a concentration of 4,080 micrograms per liter (μg/L), which exceeded the California Department of Public Health drinking water notification level (DWNL) which existed at that time of 6 μg/L. In October 2007 the DWNL was replaced by the California Department of Public Health Maximum Contaminant Level (MCL). Based on the detection of perchlorate in the groundwater sample collected, the DTSC reopened the Site for further assessment.

Four primary historical operational areas have been identified at the Site (Figure 1-2). Each operational area was responsible for various activities associated with rocket motor assembly, testing, and propellant incineration. A brief description of each operational area follows:

Historical Operational Area J (Area J) –Final Assembly

Rocket motor casings with solid propellant were transported to Building 250 where final assembly of the rocket hardware was conducted. The building was used from 1970 to 1974 for final assembly and shipment of short range attack missile rocket motors. Rocket motor 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, 1986a).



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N

0 1,000 2,000
Feet

Adapted from:

March 2007 aerial photograph.

Faults from structural analysis of Potrero Valley, *Lineament and Geologic Mapping Study, Tetra Tech, 2009.*

LEGEND

- Groundwater Monitoring Well Location
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- Liquid Waste Discharge Area
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

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

Disposal and Propellent Burn Site perimeters are estimated (Radian, 1986a).

Beaumont Site 2

Figure 1-2
Historical Operational Areas and Site Features

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

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

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

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

Previously, only three test bays were known; however, a former employee reported during a recent interview that a fourth test bay [located north of the other three bays] was also previously used in Area K. The initial testing activities had a history of explosions that destroyed complete test areas, especially during the period when GCR operated at the Site (Radian, 1986a). While vestiges from three test bays are currently visible at the Site, the fourth was reportedly destroyed by such an explosion during testing. Also reportedly, after motor failure, the area was checked to recover unburned propellant.

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

Solid propellant was reportedly transported to the burn area and set directly on the ground surface for burning (Radian, 1986a). No pits or trenches were dug as part of the burning process. The solid propellant was saturated with diesel fuel to initiate combustion. Reportedly, the solid propellant would burn rapidly. There is no evidence or physical features that identify the precise location of burning activities. Two production wells were located in this area (W2-1 and W2-3). W2-1 was reported to have been part of the agricultural homestead. The origin of W2-3 is unknown. The use of the wells is unknown. A waste discharge permit from 1962 was discovered in 2007 indicating that up to 5,000 gallons per year of waste water from rocket testing operations could be discharged into small surface depressions located in a small side canyon just south of Area L.

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

A garbage disposal area was located adjacent to a small creek at the Site (Radian, 1986a). Scrap metal, paper, wood, and concrete materials were disposed of at the disposal site by LPC. Hazardous materials, including explosives and propellants, were never disposed of at the disposal site by LPC according to employee interviews. Ogden Labs, a company that tested valves and explosive items, also used this disposal site. Reportedly, Ogden Labs disposed hazardous waste at the disposal site. In 1972, a Lockheed Safety Technician was exposed to toxic vapors of unsymmetrical dimethyl hydrazine (u-DMH) from a pressurized gas container located within the disposal site. Based on potential exposure risks to occupants, LPC's safety group required Ogden Labs to take measures to remove any potentially hazardous materials at the disposal site. Shortly thereafter, a disposal company was contracted by Ogden Labs to clean up the disposal site (Radian, 1986a).

Waste Discharge Area

In 2007, LMC discovered the existence of Santa Ana River Basin Regional Water Pollution Control Board Resolution 62-24, dated September 14, 1962. Resolution 62-24 prescribed 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 ¼ of the NW ¼ of Section 19, Township 3 South, Range 1 West, San Bernardino Baseline and Meridian. Resolution 62-24 further describes the wastes to be discharged as "residue remaining after the manufacturing refuse is burned," and indicates that 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 the 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 (WDA) as a large cleared area with roads leading to two circular structures, suggesting that the WDA was in use by 1961 (Tetra Tech, 2009a). Investigation of this area (Tetra Tech, 2007c; 2008a) found evidence for perchlorate impacts in both soil and groundwater.

Features remaining at the WDA 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

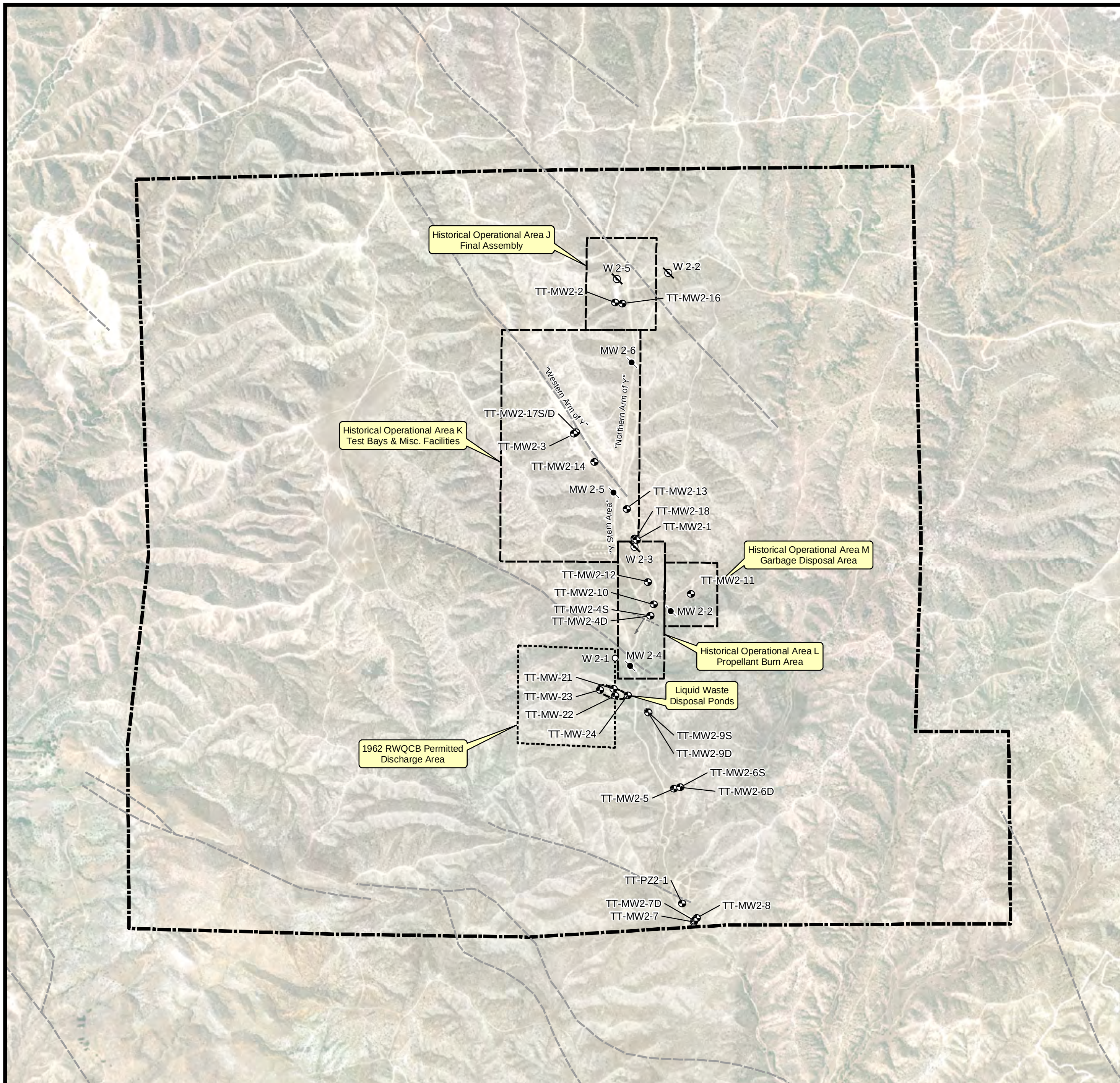
Section 2 summarizes the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events conducted at the Site. The results from these monitoring events are discussed in Section 3.

2.1 Groundwater Level Measurements

The Second Quarter 2009 groundwater level measurements were collected from 63 monitoring wells and one piezometer between May 13, 2009 and May 14, 2009. The Third Quarter 2009 groundwater level measurements were collected from 63 monitoring wells and one piezometer on August 11, 2009. Figure 2-1 presents a site map showing the well locations. Copies of the field data sheets from the water quality monitoring events are presented in Appendix B. A summary of well construction details is presented in Appendix C.

2.2 Groundwater Sampling

The GMP has a quarterly, semi-annual, and annual 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 semi-annual events are smaller, minor events. All new wells are sampled quarterly for one year after which they are evaluated and reclassified. The semi-annual event includes, horizontal extent, vertical distribution, increasing contaminant, and guard wells, and is sampled during the second and fourth quarter of each year. In addition to the quarterly and semi-annual wells, the annual event includes background wells and takes place during the second quarter of each year. The groundwater monitoring schedule is reviewed and modified as necessary annually during the Second Quarter groundwater monitoring event. Modifications are done in accordance with the approved Groundwater Sampling and Analysis Plan (SAP) (Tetra Tech, 2007b). Second Quarter 2009 and Third Quarter 2009 follow the schedule proposed in the Second and Third Quarter 2008 monitoring report (Tetra Tech, 2009b) which was presented to the DTSC in May 2009 and approved with no comments to the proposed schedule.



Beaumont Site 2

Figure 2-1

Site Map

TETRA TECH

During the Second Quarter 2009 monitoring event 61 groundwater samples and two surface water samples were collected between May 19 and June 15, 2009. During the Third Quarter 2009 monitoring event 41 groundwater samples and two surface water samples were collected between August 24 and September 12, 2009. Table 2-1 and 2-2 lists the wells monitored for the Second Quarter 2009 and Third Quarter 2009 monitoring events, analytical methods, sampling dates, and Quality Assurance/Quality Control (QA/QC) samples collected. Figures 2-2 and 2-3 illustrate the well locations sampled. Groundwater sampling, analytical, and QA/QC procedures for the monitoring event were described in the Groundwater Monitoring Well Installation Work Plan (Tetra Tech, 2004a) and the SAP.

The following water quality field parameters were measured and recorded on field data sheets (Appendix B) during well purging activities: water level, temperature, pH, electrical conductivity (EC), turbidity, dissolved oxygen (DO) and oxidation reduction potential (ORP). Measurement of water quality parameters was initiated 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 (evacuated). 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 are as follows: water level ± 0.1 foot, pH ± 0.1, and EC ± 3%, turbidity < 10 nephelometric turbidity units (NTUs) (or ± 10% if turbidity stabilizes at > 10 NTUs), DO ± 0.3 mg/L, and ORP ± 10 mV. Sampling instruments and equipment were maintained, calibrated, and operated in accordance with the manufacturer's specifications, guidelines, and recommendations. Groundwater monitoring wells were purged and sampled using low-flow purging and sampling techniques with dedicated double valve sampling pumps or a portable bladder pump.

Every effort was made to collect groundwater samples in order of increasing perchlorate and TCE concentration. Samples were placed in appropriate EPA method specified containers. A sample identification label was affixed to each sample container, and sample custody was maintained by a chain-of-custody record. Groundwater samples collected for the monitoring events were chilled and transported to EMAX Laboratories Inc., Calscience Environmental Laboratories, Inc., and E. S. Babcock & Sons, Inc., state-accredited analytical laboratories, via courier, thus maintaining proper temperatures and sample integrity. Trip blanks (LTBs) were collected on each day of the monitoring events to assess potential cross-contamination of water samples while in transit.

Equipment blanks (LEBs) were collected when sampling with non-dedicated equipment to assess cross-contamination potential of water samples via sampling equipment.

2.3 Surface Water Sampling

Storm water locations SW-01 through SW-07 are located in the ephemeral creek bed that runs through Laborde Canyon. Storm water runoff collects in the creek during periods of heavy precipitation and runs south through the Site and the former Wolfskill property, eventually crossing under Gilman Hot Springs Road. Water is present in the creek bed only during periods of heavy, prolonged precipitation. Surface water locations WS-1, WS-2 and WS-3 are located at a spring on the former Wolfskill property. Water is generally present at one or more of these locations throughout the year.

Surface water samples were collected from two locations, WS-1 and WS-2 during Second Quarter 2009 and Third Quarter 2009. SW-01 through SW-07 and WS-3 were dry during both quarters. Samples were analyzed for perchlorate. No other surface water samples were collected during this reporting period. Figure 2-4 presents the surface and storm water sampling locations.

2.4 Analytical Data QA/QC

The groundwater samples collected were analyzed using approved EPA methods. Since the analytical data were obtained by following EPA-approved method criteria, the data were validated using the EPA-approved evaluation methods described in the National Functional Guidelines (EPA, 2004 and EPA, 2008).

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.

2.5 Habitat Conservation

All monitoring activities were performed in accordance with the U.S. Fish and Wildlife Service approved Habitat Conservation Plan (HCP) [USFWS, 2005] and subsequent clarifications (LMC, 2006a and 2006b) of the HCP. Groundwater sampling activities were conducted with light duty vehicles and as specified in the Low Affect HCP does not require biological monitoring.

Table 2-1 Sampling Schedule and Analysis Method - Second Quarter 2009

Monitoring Well Location	Sample Date	VOCs (8260B)	Per chlorate (332.0)	Per chlorate (314.0)	1,4-Dioxane (8270C SIM)	CAM 17 Metals - Total (SW6010B/7470)	CAM 17 Metals - Dissolved (SW6010B/7470)	Natural Attenuation Parameters	NDMA (1625 B)	RDX (8330)	Comments and QA /QC Samples
WS-1	05/22/09	-	X	-	-	-	-	-	-	-	Spring Sample
WS-2	06/03/09	-	X	-	-	-	-	-	-	-	Spring Sample
WS-3	NA	-	-	-	-	-	-	-	-	-	Spring Sample - Dry
TT-MW2-1	06/01/09	-	X	X	-	X	-	X	X	X	MS/MSD, Duplicate Sample
TT-MW2-2	05/29/09	-	-	-	-	X	-	-	-	-	
TT-MW2-4S	05/26/09	-	X	X	-	X	-	-	X	X	
TT-MW2-5	05/28/09	X	X	X	X	X	-	X	X	X	
TT-MW2-6S	05/19/09	-	X	X	X	X	-	-	X	X	
TT-MW2-6D	05/19/09	X	-	X	X	X	-	-	-	-	
TT-MW2-7	05/28/09	-	X	X	X	X	X	X	X	X	MS/MSD
TT-MW2-7D	05/27/09	-	X	X	X	X	-	-	-	-	
TT-MW2-8	05/22/09	-	X	X	X	X	X	-	X	X	
TT-MW2-9S	05/28/09	-	X	X	X	X	-	X	X	X	
TT-MW2-9D	05/19/09	X	-	X	X	X	-	-	-	-	
TT-MW2-10	06/01/09	-	-	X	-	X	-	X	X	X	
TT-MW2-11	05/20/09	X	X	X	X	X	-	-	X	X	
TT-MW2-12	06/03/09	-	-	X	-	X	-	X	X	X	
TT-MW2-13	05/26/09	X	-	X	-	X	-	-	X	X	
TT-MW2-14	06/02/09	X	X	X	-	X	-	X	X	X	
TT-MW2-16	05/26/09	-	X	X	-	X	-	-	X	X	
TT-MW2-17S	05/29/09	X	X	X	-	X	-	-	X	X	Duplicate Sample
TT-MW2-17D	06/02/09	X	X	X	-	X	-	X	-	-	
TT-MW2-18	05/26/09	-	X	X	-	X	-	-	-	-	
TT-MW2-19S	05/22/09	-	X	-	X	X	-	-	X	X	
TT-MW2-19S	06/15/09	X	-	-	X	-	-	-	X	-	
TT-MW2-19D	05/22/09	-	X	-	X	X	-	-	-	-	
TT-MW2-20S	05/22/09	-	X	-	X	X	-	-	X	X	
TT-MW2-20D	05/22/09	-	X	-	X	X	-	-	-	-	
TT-MW2-21	05/20/09	X	-	X	X	X	-	-	X	X	
TT-MW2-22	05/19/09	X	-	X	X	X	-	-	X	X	
TT-MW2-23	05/29/09	X	X	X	X	X	-	X	X	X	
TT-MW2-24	05/29/09	X	X	X	X	X	-	X	X	X	Duplicate Sample
TT-MW2-25	05/20/09	X	-	X	X	X	-	-	X	X	
Second Quarter 2009: Total Sample Locations:											65
Total Samples Collected:											63

Notes:
EPA - United States Environmental Protection Agency.
QA/QC - Quality assurance / quality control
VOCs - Volatile Organic Compounds
NDMA - N-Nitrosodimethylamine
RDX - Research Department composition X
MS / MSD- Matrix Spike / Matrix Spike Duplicate.
"-" Not analyzed

Table 2 1 Sampling Schedule and Analysis Method - Second Quarter 2009 (continued)

Monitoring Well Location	Sample Date	VOCs (8260B)	Per chlorate (332.0)	Per chlorate (314.0)	1,4-Dioxane (8270C SIM)	CAM 17 Metals - Total (SW6010B/7470)	CAM 17 Metals - Dissolved (SW6010B/7470)	Natural Attenuation Parameters	NDMA (1625 B)	RDX (8330)	Comments and QA /QC Samples
TT-MW2-26	05/20/09	X	X	X	X	X	-	-	X	X	
TT-MW2-27	05/21/09	X	X	X	X	X	-	-	X	X	Duplicate Sample
TT-MW2-28	05/27/09	X	X	X	-	X	-	-	X	X	
TT-MW2-29A	NA	-	-	-	-	-	-	-	-	-	Dry
TT-MW2-29B	05/21/09	X	-	X	-	X	-	-	X	X	
TT-MW2-29C	05/21/09	X	-	X	-	X	-	-	-	-	
TT-MW2-30A	05/26/09	X	X	X	-	X	-	-	-	-	
TT-MW2-30B	05/26/09	X	X	X	-	X	-	-	-	-	Duplicate Sample
TT-MW2-30C	05/26/09	X	X	X	-	X	-	-	-	-	
TT-MW2-31A	05/28/09	X	-	X	-	X	-	-	-	-	
TT-MW2-31B	05/28/09	X	X	X	-	X	-	-	-	-	
TT-MW2-32	05/27/09	X	-	X	-	X	-	-	-	-	
TT-MW2-33A	05/27/09	X	-	X	-	X	-	-	X	X	Duplicate Sample
TT-MW2-33B	05/27/09	X	-	X	-	X	-	-	-	-	
TT-MW2-33C	05/27/09	X	X	X	-	X	-	-	-	-	
TT-MW2-34A	05/27/09	X	-	X	-	X	-	-	X	X	MS/MSD
TT-MW2-34B	05/27/09	X	-	X	-	X	-	-	-	-	
TT-MW2-34C	05/27/09	X	-	X	-	X	-	-	-	-	
TT-MW2-35A	05/28/09	X	-	X	-	X	-	-	-	-	
TT-MW2-35B	05/28/09	X	-	X	-	X	-	-	-	-	
TT-MW2-36A	05/29/09	X	X	X	-	X	-	X	X	X	
TT-MW2-36B	05/28/09	X	X	X	-	X	-	-	-	-	
TT-MW2-36C	05/28/09	X	X	X	-	X	-	-	-	-	
TT-MW2-37A	05/21/09	X	X	X	X	X	-	-	-	-	
TT-MW2-37B	05/21/09	X	X	X	X	X	-	-	-	-	
TT-MW2-38A	05/26/09	X	X	X	-	X	-	-	X	X	
TT-MW2-38B	05/26/09	X	X	X	-	X	-	-	-	-	
TT-MW2-38C	05/26/09	X	X	X	-	X	-	-	-	-	
TT-MW2-39	05/27/09	X	X	X		X		-	X	X	Duplicate Sample
TT-MW2-40A	06/08/09	X	-	X	-	X	-	-	-	-	MS/MSD
TT-MW2-40B	06/08/09	X	-	X	-	X	-	-	-	-	
TT-MW2-40C	06/08/09	X	X	X	-	X	-	-	-	-	
Second Quarter 2009: Total Sample Locations:											65
Total Samples Collected:											63

Notes:
EPA - United States Environmental Protection Agency.
QA/QC - Quality assurance / quality control
VOCs - Volatile Organic Compounds
NDMA - N-Nitrosodimethylamine
RDX - Research Department composition X
MS / MSD- Matrix Spike / Matrix Spike Duplicate.
"-" Not analyzed

Table 2-2 Sampling Schedule and Analysis Method - Third Quarter 2009

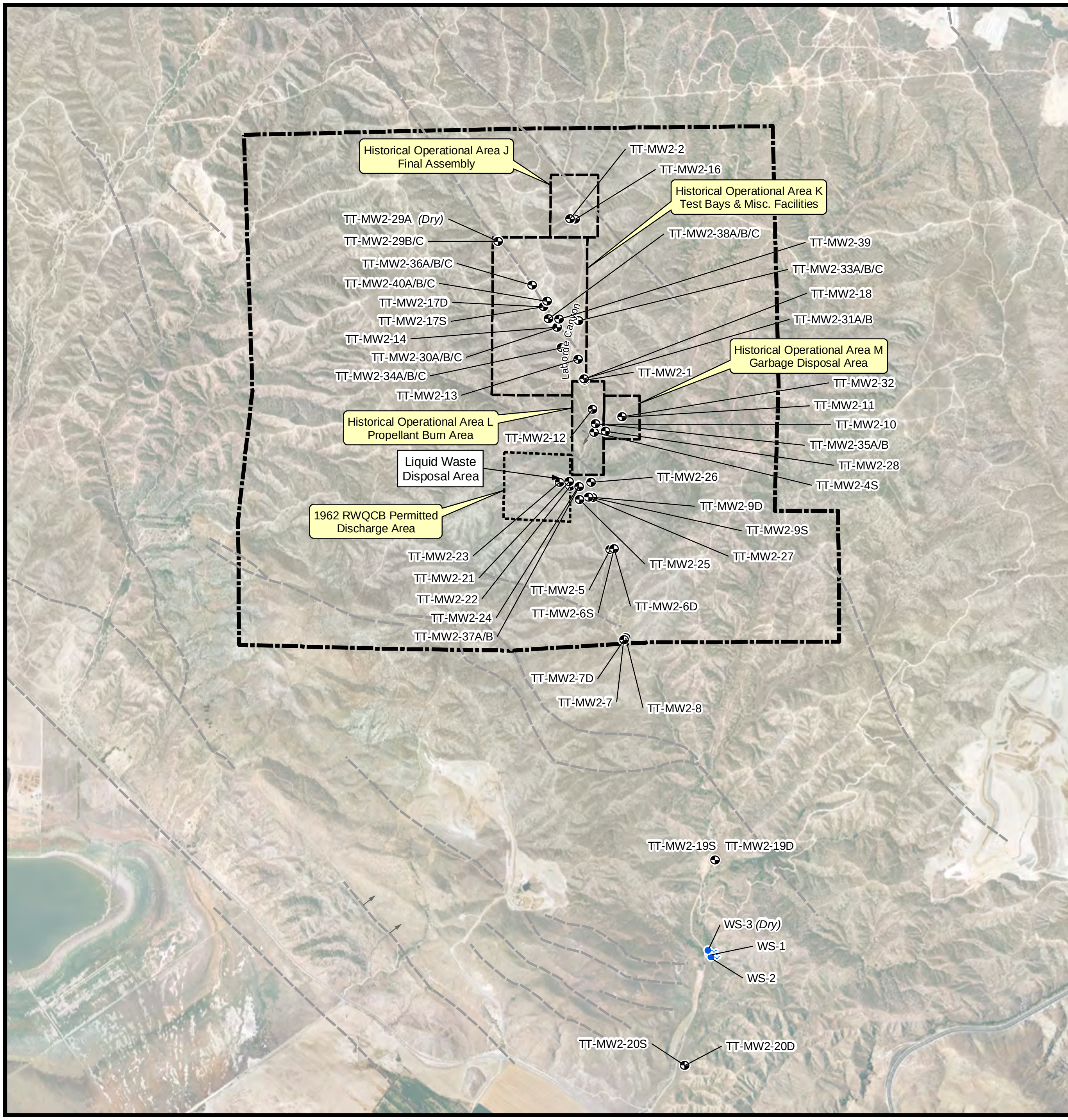
Monitoring Well Location	Sample Date	VOCs (8260B)	Per chlorate (332.0)	Ca, Mg, K, Na (SW 6010 B)	Total Dissolved Solids (E 160.1)	Chloride, Nitrate, Sulfate (E 300.0)	Carbonate, Bicarbonate (E310.1)	1,4-Dioxane (8270 SIM)	NDMA (E521)	NDMA (8270 SIM)	Comments and QA /QC Samples
WS-1	8/24/2009	-	X	-	-	-	-	-	-	-	Spring Sample
WS-2	8/24/2009	-	X	-	-	-	-	-	-	-	Spring Sample
WS-3	NA	-	-	-	-	-	-	-	-	-	Spring Sample - Dry
TT-MW2-5	9/2/2009	-	-	-	-	-	-	X	-	-	
TT-MW2-9S	9/2/2009	-	-	-	-	-	-	X	-	-	
TT-MW2-19S	8/24/2009	-	X	-	-	-	-	X	-	X	Duplicate TT-MW2-19S-Dup
TT-MW2-19S	9/23/2009	-	-	-	-	-	-	-	X	-	Duplicate TT-MW2-19S-Dup
TT-MW2-19D	8/24/2009	-	X	-	-	-	-	X	-	X	
TT-MW2-19D	9/24/2009	-	-	-	-	-	-	-	X	-	
TT-MW2-20S	8/24/2009	-	X	-	-	-	-	X	-	X	MS/MSD
TT-MW2-20S	9/23/2009	-	-	-	-	-	-	-	X	-	MS/MSD
TT-MW2-20D	08/24/09	-	X	-	-	-	-	X	-	X	
TT-MW2-20D	09/23/09	-	-	-	-	-	-	-	X	-	
TT-MW2-21	09/02/09	-	-	-	-	-	-	-	-	X	
TT-MW2-21	09/25/09	-	-	-	-	-	-	-	X	-	
TT-MW2-22	09/01/09	-	-	-	-	-	-	X	-	-	
TT-MW2-24	09/01/09	-	-	-	-	-	-	X	-	X	
TT-MW2-24	09/25/09	-	-	-	-	-	-	-	X	-	
TT-MW2-25	09/02/09	X	X	X	X	X	X	-	-	X	
TT-MW2-25	09/25/09	-	-	-	-	-	-	-	X	-	
TT-MW2-26	09/02/09	X	X	X	X	X	X	X	-	X	
TT-MW2-26	09/25/09	-	-	-	-	-	-	-	X	-	
TT-MW2-27	09/02/09	X	X	X	X	X	X	-	-	-	Duplicate TT-MW2-27-Dup
TT-MW2-28	09/01/09	X	X	X	X	X	X	-	-	X	
TT-MW2-28	09/25/09	-	-	-	-	-	-	-	X	-	
TT-MW2-29A	NA	-	-	-	-	-	-	-	-	-	Dry Well
TT-MW2-29B	08/31/09	X	X	X	X	X	X	-	-	X	
TT-MW2-29B	09/24/09	-	-	-	-	-	-	-	X	-	
Third Quarter 2009: Total Sample Locations:											56
Total Samples Collected:											54

Notes:
EPA - United States Environmental Protection Agency.
QA/QC - Quality assurance / quality control
VOCs - Volatile Organic Compounds
NDMA - N-Nitrosodimethylamine
RDX - Research Department composition X
Ca - Calcium
Mg - Magnesium
K - Potassium
Na - Sodium
MS / MSD- Matrix Spike / Matrix Spike Duplicate.
"-" Not analyzed

Table 2 2 Sampling Schedule and Analysis Method - Third Quarter 2009 (continued)

Monitoring Well Location	Sample Date	VOCs (8260B)	Per chlorate (332.0)	Ca, Mg, K, Na (SW 6010 B)	Total Dissolved Solids (E 160.1)	Chloride, Nitrate, Sulfate (E 300.0)	Carbonate, Bicarbonate (E310.1)	1,4-Dioxane (8270 SIM)	NDMA (E521)	NDMA (8270 SIM)	Comments and QA /QC Samples
TT-MW2-29C	08/31/09	X	X	X	X	X	X	-	-	-	
TT-MW2-30A	08/26/09	X	X	X	X	X	X	-	-	-	
TT-MW2-30B	08/26/09	X	X	X	X	X	X	-	-	-	
TT-MW2-30C	08/26/09	X	X	X	X	X	X	-	-	-	
TT-MW2-31A	09/01/09	X	X	X	X	X	X	-	-	-	
TT-MW2-31B	09/01/09	X	X	X	X	X	X	-	-	-	
TT-MW2-32	09/01/09	X	X	X	X	X	X	-	-	-	
TT-MW2-33A	08/26/09	X	X	X	X	X	X	-	-	-	MS/MSD
TT-MW2-33B	08/26/09	X	X	X	X	X	X	-	-	-	
TT-MW2-33C	08/26/09	X	X	X	X	X	X	-	-	-	
TT-MW2-34A	08/31/09	X	X	X	X	X	X	-	-	-	
TT-MW2-34B	08/31/09	X	X	X	X	X	X	-	-	-	
TT-MW2-34C	08/31/09	X	X	X	X	X	X	-	-	-	
TT-MW2-35A	09/01/09	X	X	X	X	X	X	-	-	-	
TT-MW2-35B	09/01/09	X	X	X	X	X	X	-	-	-	
TT-MW2-36A	08/31/09	X	X	X	X	X	X	-	-	X	Duplicate TT-MW2-36A-Dup
TT-MW2-36A	09/24/09	-	-	-	-	-	-	-	X	-	Duplicate TT-MW2-36A-Dup
TT-MW2-36B	08/27/09	X	X	X	X	X	X	-	-	-	
TT-MW2-36C	08/27/09	X	X	X	X	X	X	-	-	-	
TT-MW2-37A	09/02/09	X	X	X	X	X	X	X	-	-	
TT-MW2-37B	09/02/09	X	X	X	X	X	X	-	-	-	
TT-MW2-38A	08/27/09	X	X	X	X	X	X	-	-	-	
TT-MW2-38B	08/27/09	X	X	X	X	X	X	-	-	-	
TT-MW2-38C	08/27/09	X	X	X	X	X	X	-	-	-	Duplicate TT-MW2-38C-Dup
TT-MW2-39	08/27/09	X	X	X	X	X	X	-	-	-	MS/MSD, Duplicate TT-MW2-39-Dup
TT-MW2-40A	08/27/09	X	X	X	X	X	X	-	-	-	
TT-MW2-40B	08/27/09	X	X	X	X	X	X	-	-	-	
TT-MW2-40C	08/27/09	X	X	X	X	X	X	-	-	-	
Third Quarter 2009: Total Sample Locations:											56
Total Samples Collected:											54

Notes:
- EPA - United States Environmental Protection Agency.
- QA/QC - Quality assurance / quality control
- VOCs - Volatile Organic Compounds
- NDMA - N-Nitrosodimethylamine
- RDX - Research Department composition X
- Ca - Calcium
- Mg - Magnesium
- K - Potassium
- Na - Sodium
- MS / MSD- Matrix Spike / Matrix Spike Duplicate.
- "-" Not analyzed



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N

0 1,500 3,000
Feet

Adapted from:

April 2007 aerial photograph.

Faults from structural analysis of Potrero Valley, *Lineament and Geologic Mapping Study, Tetra Tech, 2009.*

LEGEND

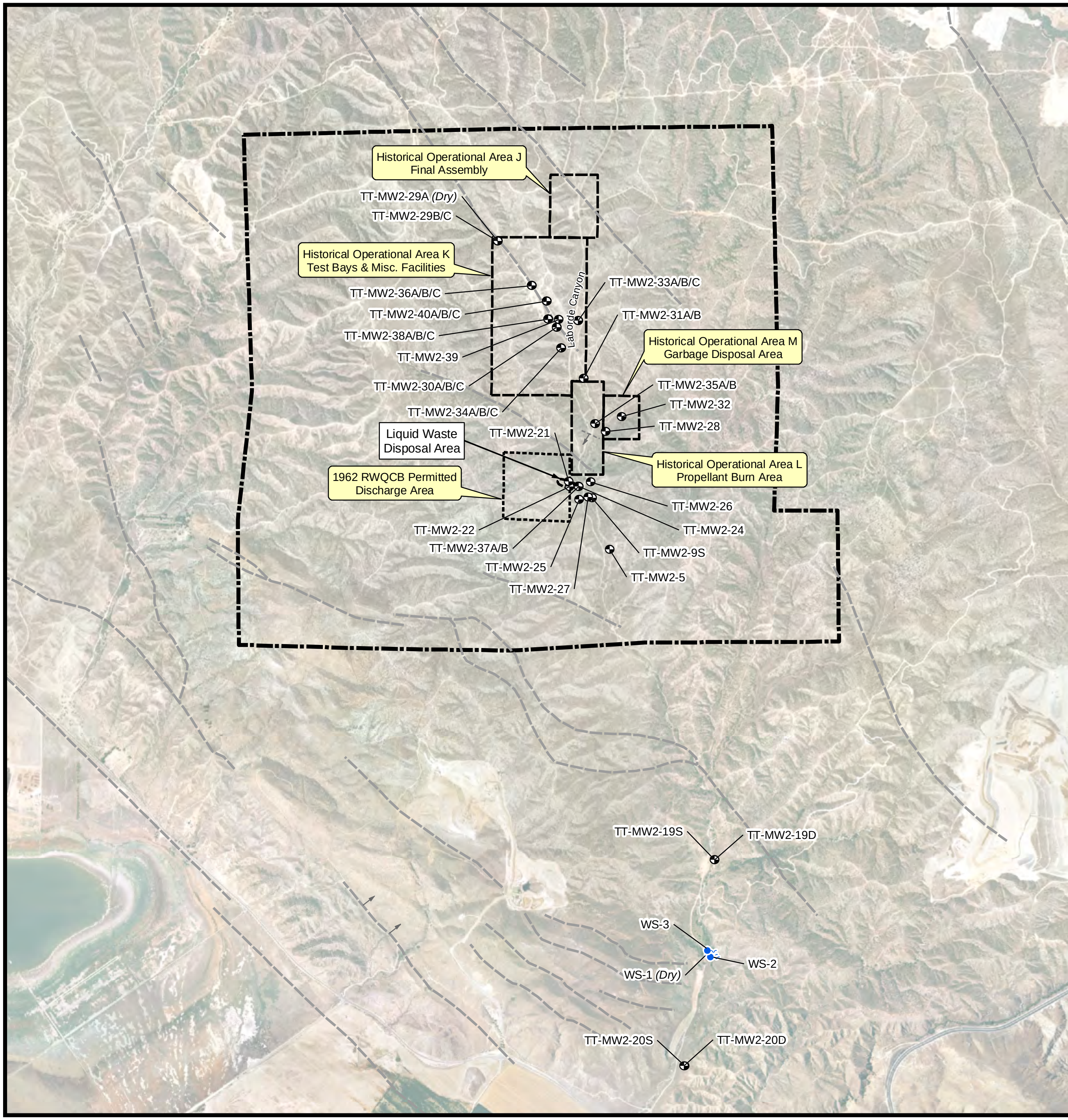
- Groundwater Monitoring Well Location
- Surface Sample Location (Spring)
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- Liquid Waste Disposal Area
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

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

Beaumont Site 2

Figure 2-2
Second Quarter 2009 Sample Locations

TETRA TECH



N

0 1,500 3,000
Feet

Adapted from:
April 2007 aerial photograph.

Faults from structural analysis of Potrero Valley,
Lineament and Geologic Mapping Study,
Tetra Tech, 2009.

LEGEND

- Groundwater Monitoring Well Location
- Surface Water Sampling Location (Spring)
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- Liquid Waste Disposal Area
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

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

Beaumont Site 2

Figure 2-3

Third Quarter 2009
Sample Locations

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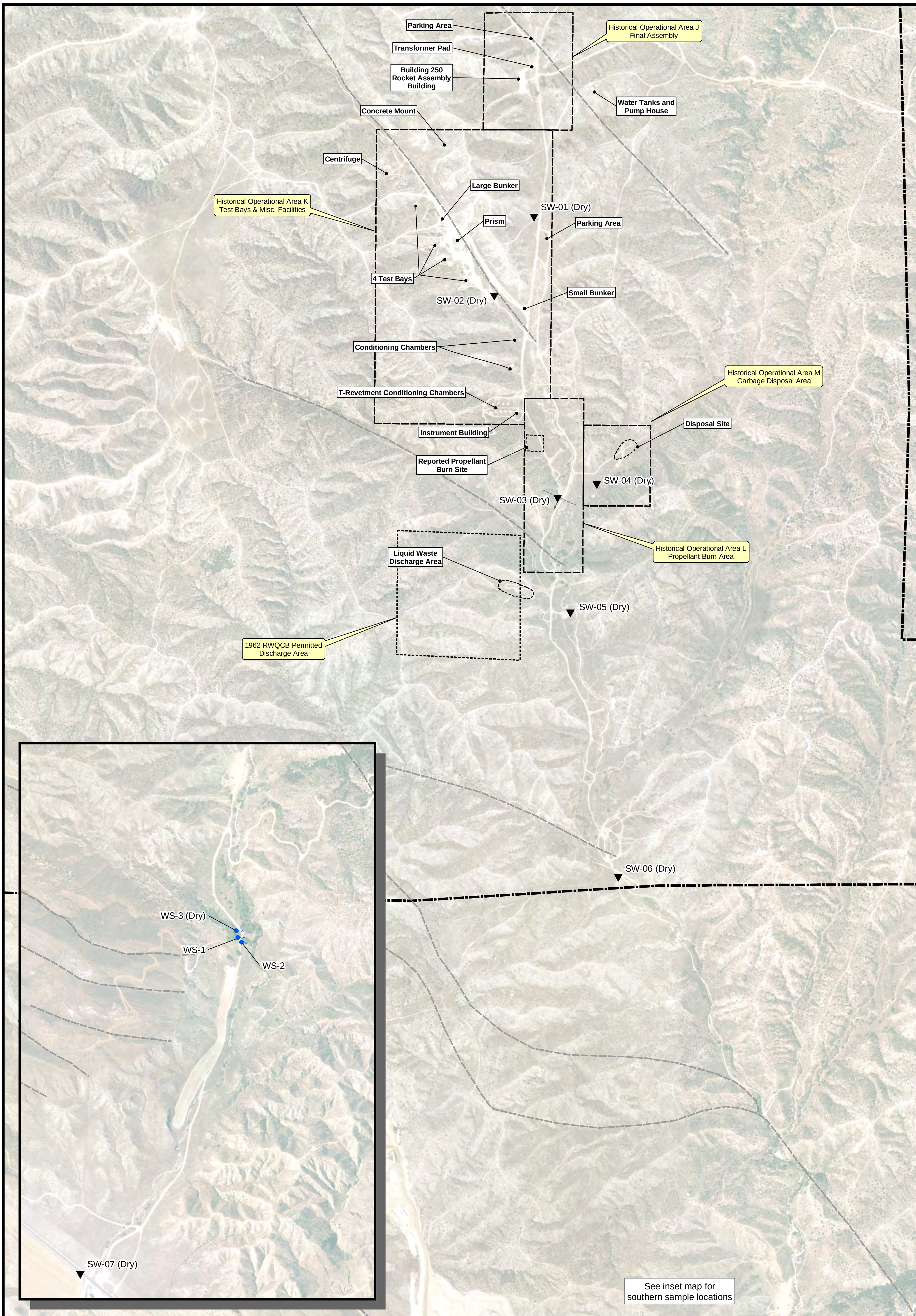

LEGEND

- ▼ Surface Water Sampling Location
- Spring Sampling Location
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

0 500 1,000 Feet

Adapted from: April 2007 aerial photograph.

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

Beaumont Site 2

Figure 2-4

Surface and Storm Water Sampling Locations

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SECTION 3 GROUNDWATER MONITORING RESULTS

The results of the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events are presented in the following subsections. These subsections include tabulated summaries of the groundwater elevation and water quality data, groundwater elevation maps, and analyte results figures.

3.1 Groundwater Elevation

Based on the groundwater levels measured during the Second Quarter 2009 and Third Quarter 2009 monitoring events, depth to groundwater at the Site ranges from about 59 feet bgs in the northern portion (elevation of 2,076 feet msl, TT-MW2-16) to about 15 feet bgs in the southern portion (elevation of 1,819 feet msl, TT-MW2-8). A tabulated summary of groundwater depths and elevations is presented in Table 3-1. Changes in groundwater elevations from the previous monitoring event for wells monitored for the Second Quarter 2009 and Third Quarter 2009 monitoring events are shown on Figures 3-1 and 3-2, respectively, and hydrographs for individual wells are presented in Appendix D.

In comparison to the First Quarter 2009 quarterly monitoring event, groundwater levels measured during the Second Quarter 2009 monitoring event decreased in the shallow QAL/wSTF screened monitoring wells an average of 0.15 feet and increased in the deeper STF screened monitoring wells an average of 0.10 feet.

In comparison to the Second Quarter 2009 quarterly monitoring event, groundwater levels measured during the Third Quarter 2009 monitoring event decreased in QAL/wSTF screened monitoring wells an average of 0.28 feet and decreased in STF screened monitoring wells an average of 0.20 feet.

Table 3-1 Groundwater Elevation Data - Second Quarter 2009 and Third Quarter 2009

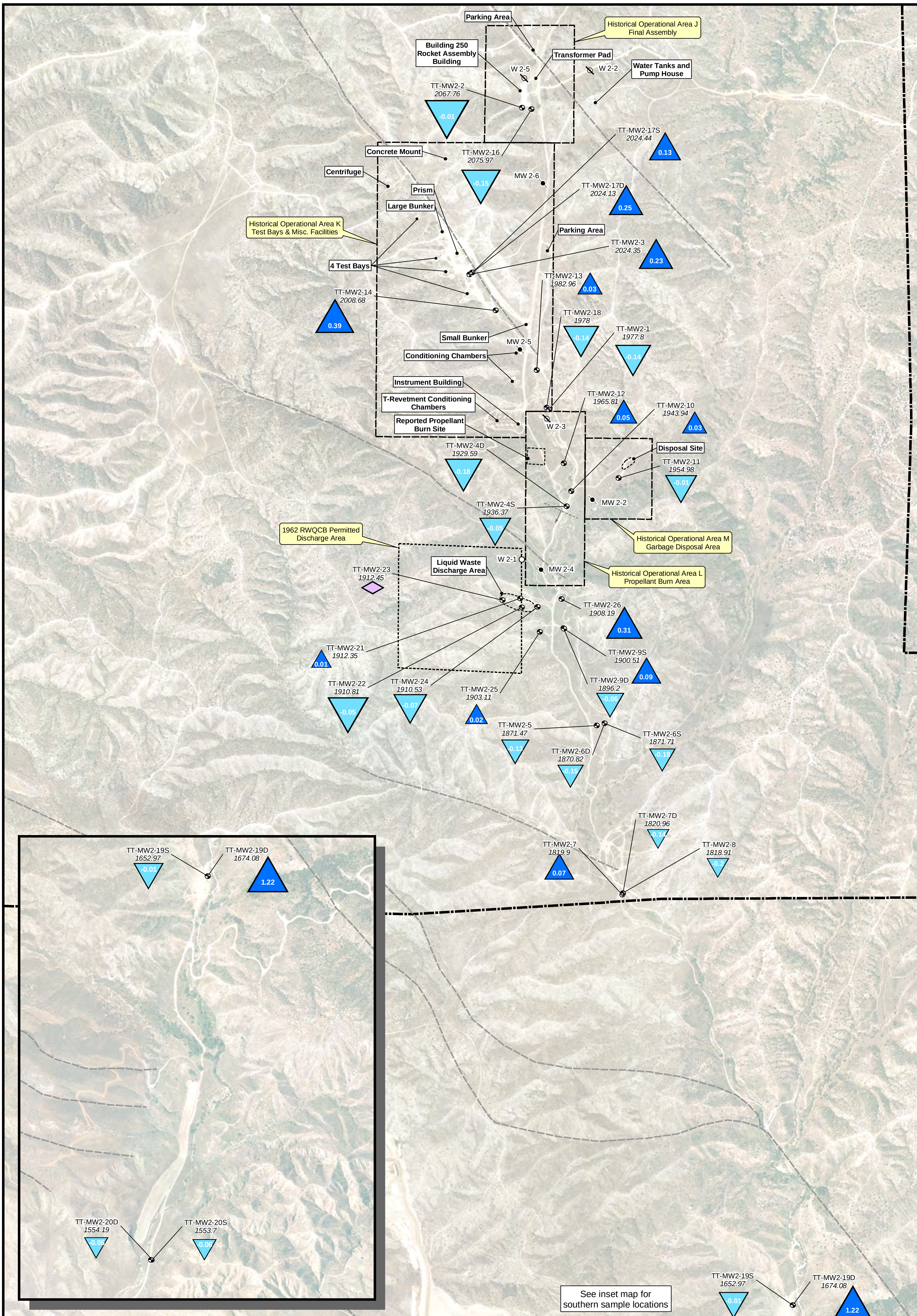
Well ID	Measuring Point Elevation (feet msl)	Second Quarter 2009				Third Quarter 2009			
		Date Measured	Depth to Water (from Measuring Point, feet)	Groundwater Elevation (feet msl)	Groundwater Elevation Change from First Quarter 2009 (feet)	Date Measured	Depth to Water (from Measuring Point, feet)	Groundwater Elevation (feet msl)	Groundwater Elevation Change from Second Quarter 2009 (feet)
TT-MW2-1	2035.21	05/14/09	57.41	1977.80	-0.14	08/11/09	57.64	1977.57	-0.23
TT-MW2-2	2137.75	05/13/09	69.99	2067.76	-0.01	08/11/09	70.21	2067.54	-0.22
TT-MW2-3	2094.66	05/13/09	70.31	2024.35	0.23	08/11/09	70.51	2024.15	-0.20
TT-MW2-4S	1986.94	05/14/09	50.57	1936.37	-0.05	08/11/09	50.74	1936.20	-0.17
TT-MW2-4D	1987.17	05/14/09	57.58	1929.59	-0.18	08/11/09	57.88	1929.29	-0.30
TT-MW2-5	1911.31	05/14/09	39.84	1871.47	-0.13	08/11/09	40.03	1871.28	-0.19
TT-MW2-6S	1908.00	05/14/09	36.29	1871.71	-0.18	08/11/09	36.55	1871.45	-0.26
TT-MW2-6D	1908.07	05/14/09	37.25	1870.82	-0.15	08/11/09	37.51	1870.56	-0.26
TT-MW2-7	1839.25	05/14/09	19.35	1819.90	0.07	08/11/09	20.72	1818.53	-1.37
TT-MW2-7D	1838.96	05/14/09	18.00	1820.96	-0.14	08/11/09	18.26	1820.70	-0.26
TT-MW2-8	1836.32	05/14/09	17.41	1818.91	-0.20	08/11/09	18.16	1818.16	-0.75
TT-MW2-9S	1938.38	05/14/09	37.87	1900.51	0.09	08/11/09	38.50	1899.88	-0.63
TT-MW2-9D	1938.78	05/14/09	42.58	1896.20	-0.06	08/11/09	42.90	1895.88	-0.32
TT-MW2-10	2001.57	05/14/09	57.63	1943.94	0.03	08/11/09	57.57	1944.00	0.06
TT-MW2-11	2004.51	05/14/09	49.53	1954.98	-0.01	08/11/09	49.75	1954.76	-0.22
TT-MW2-12	2016.26	05/14/09	50.45	1965.81	0.05	08/11/09	50.75	1965.51	-0.30
TT-MW2-13	2049.39	05/14/09	66.43	1982.96	0.03	08/11/09	66.49	1982.90	-0.06
TT-MW2-14	2074.78	05/13/09	66.10	2008.68	0.39	08/11/09	66.07	2008.71	0.03
TT-MW2-16	2137.20	05/13/09	61.23	2075.97	-0.15	08/11/09	61.80	2075.40	-0.57
TT-MW2-17S	2095.55	05/13/09	71.11	2024.44	0.13	08/11/09	71.31	2024.24	-0.20
TT-MW2-17D	2095.33	05/13/09	71.20	2024.13	0.25	08/11/09	71.41	2023.92	-0.21
TT-MW2-18	2035.32	05/14/09	57.32	1978.00	-0.14	08/11/09	57.57	1977.75	-0.25
TT-MW2-19S	1698.34	05/13/09	45.37	1652.97	-0.01	08/11/09	45.85	1652.49	-0.48
TT-MW2-19D	1698.37	05/13/09	24.29	1674.08	1.22	08/11/09	24.91	1673.46	-0.62
TT-MW2-20S	1587.77	05/13/09	34.07	1553.70	-0.06	08/11/09	34.10	1553.67	-0.03
TT-MW2-20D	1587.48	05/13/09	33.29	1554.19	-0.06	08/11/09	33.31	1554.17	-0.02
TT-MW2-21	1978.45	05/14/09	66.10	1912.35	0.01	08/11/09	66.34	1912.11	-0.24
TT-MW2-22	1975.86	05/14/09	65.05	1910.81	-0.05	08/11/09	65.22	1910.64	-0.17
TT-MW2-23	1995.17	05/14/09	82.72	1912.45	0.00	08/11/09	82.85	1912.32	-0.13
TT-MW2-24	1964.26	05/14/09	53.73	1910.53	-0.07	08/11/09	53.87	1910.39	-0.14
TT-MW2-25	1966.96	05/14/09	63.85	1903.11	0.02	08/11/09	64.01	1902.95	-0.16
TT-MW2-26	1944.43	05/14/09	36.24	1908.19	0.31	08/11/09	37.51	1906.92	-1.27

Notes:
NA - Not applicable
msl - Mean sea level
#.## - Denotes an increase in groundwater elevation
- #.## - Denotes a decrease in groundwater elevation

Table 3-1 Groundwater Elevation Data - Second Quarter 2009 and Third Quarter 2009 (Continued)

Well ID	Measuring Point Elevation (feet msl)	Second Quarter 2009				Third Quarter 2009			
		Date Measured	Depth to Water (from Measuring Point, feet)	Groundwater Elevation (feet msl)	Groundwater Elevation Change from First Quarter 2009 (feet)	Date Measured	Depth to Water (from Measuring Point, feet)	Groundwater Elevation (feet msl)	Groundwater Elevation Change from Second Quarter 2009 (feet)
TT-MW2-27	1948.27	05/14/09	48.87	1899.40	-0.01	08/11/09	49.41	1898.86	-0.54
TT-MW2-28	1995.65	05/14/09	02/29/00	1934.87	0.09	08/11/09	61.18	1934.47	-0.40
TT-MW2-29A	2147.77	05/13/09	Dry	Dry	NA	08/11/09	Dry	Dry	NA
TT-MW2-29B	2147.90	05/13/09	04/30/00	2026.35	0.32	08/11/09	121.95	2025.95	-0.40
TT-MW2-29C	2147.83	05/13/09	05/06/00	2020.21	0.12	08/11/09	127.81	2020.02	-0.19
TT-MW2-30A	2074.37	05/13/09	03/13/00	2001.31	-0.14	08/11/09	73.08	2001.29	-0.02
TT-MW2-30B	2074.41	05/13/09	03/15/00	1999.05	0.00	08/11/09	75.47	1998.94	-0.11
TT-MW2-30C	2074.35	05/13/09	03/17/00	1996.76	0.04	08/11/09	77.76	1996.59	-0.17
TT-MW2-31A	2036.11	05/14/09	02/27/00	1977.71	0.10	08/11/09	58.64	1977.47	-0.24
TT-MW2-31B	2036.15	05/14/09	03/06/00	1969.98	0.26	08/11/09	66.54	1969.61	-0.37
TT-MW2-32	2004.87	05/14/09	02/22/00	1951.49	0.05	08/11/09	53.57	1951.30	-0.19
TT-MW2-33A	2070.54	05/13/09	03/01/00	2009.40	0.08	08/11/09	61.26	2009.28	-0.12
TT-MW2-33B	2070.54	05/13/09	03/05/00	2004.67	0.14	08/11/09	66.03	2004.51	-0.16
TT-MW2-33C	2070.54	05/13/09	03/04/00	2006.53	0.07	08/11/09	64.17	2006.37	-0.16
TT-MW2-34A	2066.84	05/13/09	03/05/00	2001.19	0.09	08/11/09	65.91	2000.93	-0.26
TT-MW2-34B	2066.85	05/13/09	03/12/00	1993.94	-0.08	08/11/09	73.10	1993.75	-0.19
TT-MW2-34C	2066.84	05/13/09	03/14/00	1992.28	-0.03	08/11/09	74.76	1992.08	-0.20
TT-MW2-35A	2003.20	05/14/09	02/18/00	1953.32	1.99	08/11/09	49.71	1953.49	0.17
TT-MW2-35B	2003.20	05/14/09	02/23/00	1948.39	0.22	08/11/09	55.07	1948.13	-0.26
TT-MW2-36A	2100.99	05/13/09	03/18/00	2022.16	0.15	08/11/09	79.10	2021.89	-0.27
TT-MW2-36B	2101.04	05/13/09	03/19/00	2021.44	0.08	08/11/09	79.80	2021.24	-0.20
TT-MW2-36C	2100.88	05/13/09	03/19/00	2021.28	0.06	08/11/09	79.80	2021.08	-0.20
TT-MW2-37A	1963.62	05/14/09	03/02/00	1900.86	-0.90	08/11/09	63.01	1900.61	-0.25
TT-MW2-37B	1963.67	05/14/09	03/10/00	1893.11	-5.78	08/11/09	71.11	1892.56	-0.55
TT-MW2-38A	2084.56	05/13/09	02/27/00	2025.70	NA	08/11/09	59.19	2025.37	-0.33
TT-MW2-38B	2084.42	05/13/09	03/21/00	2002.92	NA	08/11/09	81.50	2002.92	0.00
TT-MW2-38C	2084.63	05/13/09	03/28/00	1995.64	NA	08/11/09	88.95	1995.68	0.04
TT-MW2-39	2079.53	05/13/09	02/29/00	2018.62	NA	08/11/09	61.21	2018.32	-0.30
TT-MW2-40A	2096.28	05/13/09	03/12/00	2024.11	NA	08/11/09	72.45	2023.83	-0.28
TT-MW2-40B	2096.24	05/13/09	03/23/00	2012.46	NA	08/11/09	83.85	2012.39	-0.07
TT-MW2-40C	2096.28	05/13/09	03/28/00	2007.46	NA	08/11/09	89.00	2007.28	-0.18
TT-PZ2-1	1847.06	05/14/09	18.81	1828.25	-0.18	08/11/09	19.64	1827.42	-0.83

Notes:
NA - Not applicable
msl - Mean sea level
#.## - Denotes an increase in groundwater elevation
- #.## - Denotes a decrease in groundwater elevation



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LEGEND

- Monitoring Well Location
- Groundwater Elevation Increase*
- No Change in Groundwater Elevation
- Groundwater Elevation Decrease*
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

Adapted from: April 2007 aerial photograph.

Faults from structural analysis of Potrero Valley, *Lineament and Geologic Mapping Study, Tetra Tech, 2009.*

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

* (feet) compared to First Quarter 2009.

Groundwater elevations in feet msl.

0 500 1,000 Feet

Beaumont Site 2

Figure 3-1

Second Quarter 2009 Changes in Groundwater Elevations

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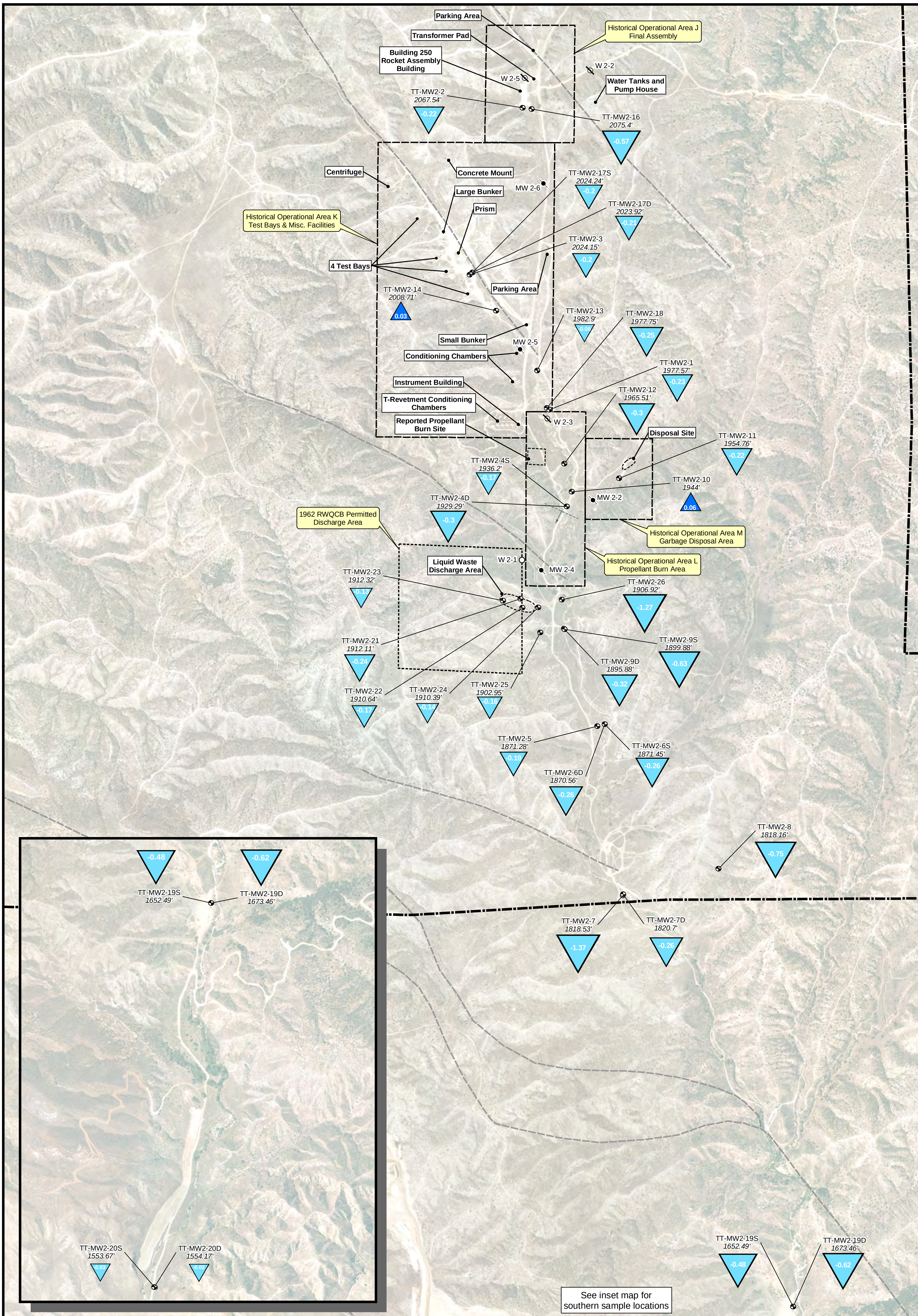


LEGEND

- Monitoring Well Location
- .23 Groundwater Elevation Increase*
- .23 Groundwater Elevation Decrease*
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

Adapted from: April 2007 aerial photograph.

Faults from structural analysis of Potrero Valley, *Lineament and Geologic Mapping Study, Tetra Tech, 2009.*

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

* (feet) compared to Second Quarter 2009.

Groundwater elevations in feet msl.

0 500 1,000 Feet

Beaumont Site 2

Figure 3-2

Third Quarter 2009 Changes in Groundwater Elevations

TETRA TECH

3.2 Groundwater Flow

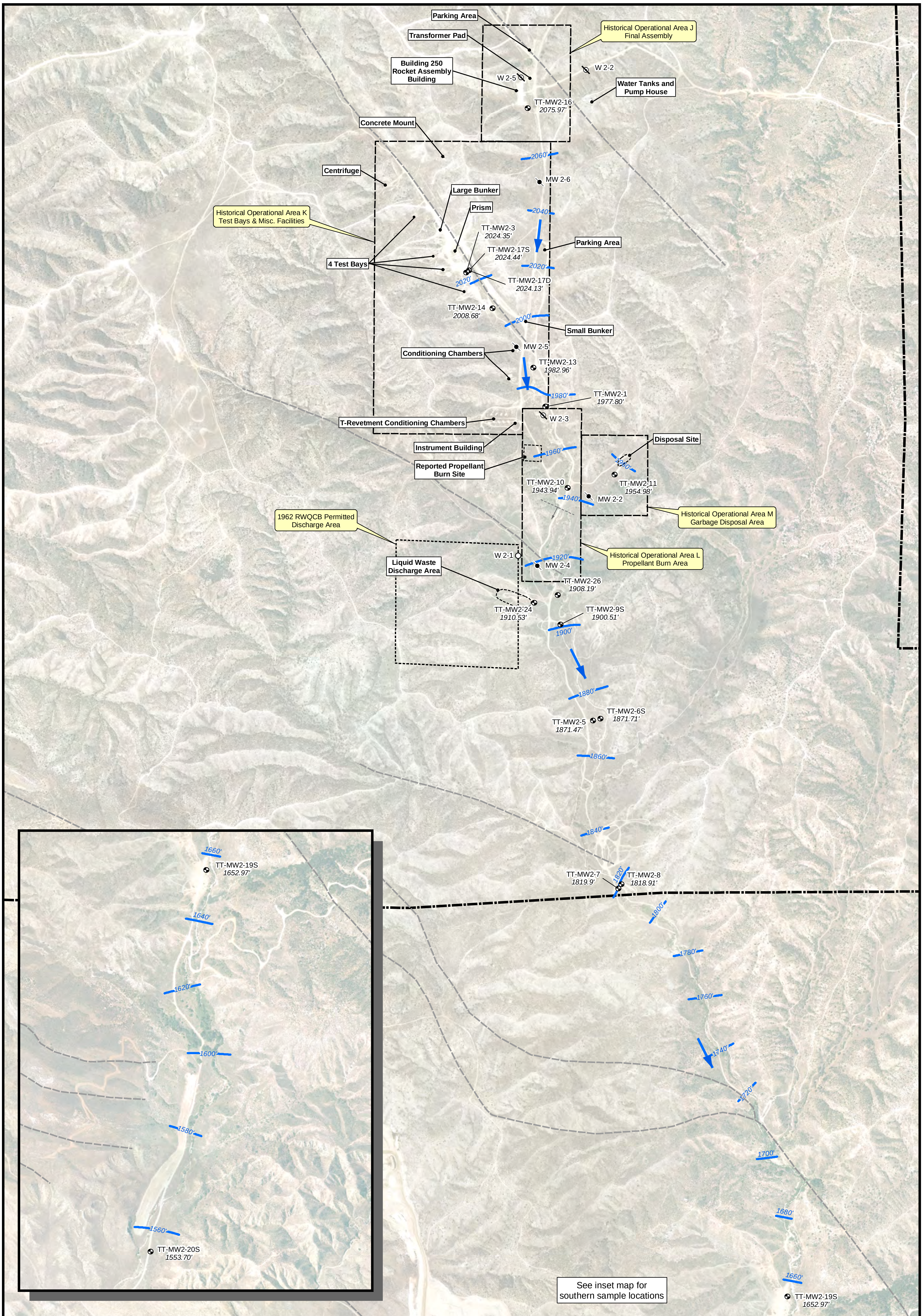
Groundwater contour maps for first groundwater screened wells from Second Quarter 2009 and Third Quarter 2009 groundwater levels are presented in Figures 3-3 and 3-4, respectively. Hydrographs for individual wells are presented in Appendix D.

3.3 Groundwater Gradients

The average horizontal groundwater gradients calculated between TT-MW2-16 and TT-MW2-6S from the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events for the QAL/wSTF screened wells were 0.030 ft/ft. The horizontal groundwater gradients calculated between TT-MW2-2 and TT-MW2-6D for the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events for the STF screened wells was 0.029 ft/ft.

Vertical groundwater gradients are calculated from individual clusters of wells. Well clusters are used to measure the differences in static water level at different depths within the aquifer. The vertical gradient is a comparison of static water level between wells at different depths within the aquifer and is an indication of the vertical flow, (downward – negative gradient, upward – positive gradient), of groundwater. Vertical groundwater gradients at the Site are generally downward. The vertical gradients range from -0.28 at well cluster TT-MW2-4S and 4D located in Area L to +0.19 at well cluster TT-MW2-19S and 19D located on the former Wolfskill property. A summary of calculated horizontal and vertical groundwater gradients is presented in Table 3-2. A complete listing of historical horizontal and vertical groundwater gradients and associated calculations is presented in Appendix E.

X:\GIS\Lockheed S2_Q2Q309GW_Level_QAL_Q209.mxd



LEGEND

- Monitoring Well Location with Groundwater Elevation (feet msl)
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Goundwater Elevation Contour
- Groundwater Flow Direction
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- RWQCB Permitted Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

N

0 500 1,000 Feet

Adapted from: April 2007 aerial photograph.

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

20-foot groundwater interval.

Groundwater elevations in feet msl.

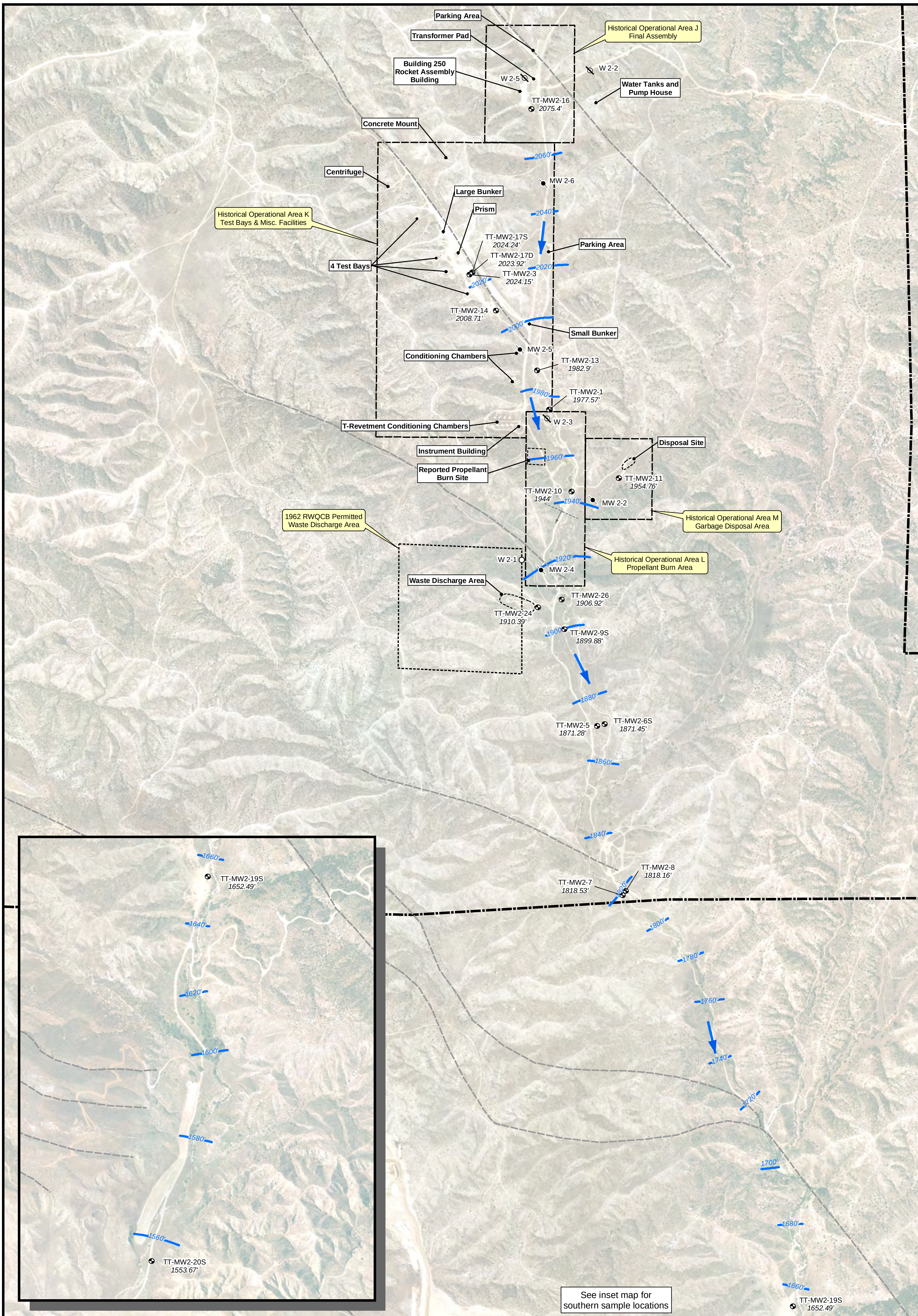
Beaumont Site 2

Figure 3-3

Second Quarter 2009 Groundwater Contours for First Groundwater

TETRA TECH

X:\GIS\Lockheed S2_Q2Q309GW_Level_QAL_Q309.mxd



LEGEND

- Monitoring Well Location with Groundwater Elevation (feet msl)
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Goundwater Elevation Contour
- Groundwater Flow Direction
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

0 500 1,000 Feet

Adapted from: April 2007 aerial photograph.

Faults from the, *Site 2 Lineament Study, Tetra Tech, 2009.*

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

20-foot groundwater interval.

Groundwater elevations in feet msl.

Beaumont Site 2

Figure 3-4

Third Quarter 2009 Groundwater Contours for First Groundwater

TETRA TECH

Table 3-2 Summary of Horizontal and Vertical Groundwater Gradient

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-MW2-6S**
Second Quarter (May) 2008	0.029	0.030
Third Quarter (August) 2009	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 2**	**Former Wolfskill Property**	**Former Wolfskill Property**
deep screen	**TT-MW2-2** (STF)	**TT-MW2-17D** (QAL/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** (QAL/WSTF)	**TT-MW2-17S** (QAL/WSTF)	**TT-MW2-1** (QAL / WSTF)	**TT-MW2-4S** (STF)	**TT-MW2-9S** (QAL/WSTF)	**TT-MW2-6S** (QAL/WSTF)	**TT-MW2-7** (QAL/WSTF)	**TT-MW2-19S** (QAL/MEF)	**TT-MW2-20S** (QAL)
Second Quarter (May) 2008	-0.17	-0.01	0.01	-0.27	-0.16	-0.05	0.03	0.19	0.01
Third Quarter (August) 2009	-0.17	-0.01	0.01	-0.28	-0.15	-0.05	0.05	0.19	0.01

Notes:

STF - San Timoteo Formation

MEF - Mt. Eden Formation

QAL - Quaternary Alluvium

QAL/WSTF - Quaternary Alluvium and weathered San Timoteo Formation

QAL/MEF - Quaternary Alluvium andMt. Eden Formation

3.4 Analytical Data Summary

Groundwater samples collected during the Second Quarter 2009 monitoring event were analyzed for VOCs and perchlorate. Select wells were sampled for total and dissolved CAM 17 metals, Research Department composition X (RDX), natural attenuation parameters, N-nitrosodimethylamine (NDMA), and 1,4-dioxane. VOCs and perchlorate are contaminants of potential concern at the Site. Groundwater samples collected during the Third Quarter 2009 monitoring event were analyzed for VOCs and perchlorate, and select wells were sampled for general minerals parameters, NDMA and 1,4-dioxane.

Summaries of validated laboratory analytical results for analytes detected above their respective MDLs during the Second Quarter 2009 monitoring event are presented in Tables 3-3 and 3-4. Summaries of validated laboratory analytical results for analytes detected above their respective MDLs during the Third Quarter 2009 monitoring event are presented in Tables 3-5 and 3-6. A complete list of the analytes tested along with validated sample results by analytical method are provided in Appendix F. VOC and perchlorate sample results above the published MCL (federal or state, whichever is lower) or DWNL are bolded in Tables 3-3 through 3-6. Tables 3-7 and 3-8 presents summary statistical for validated organic and inorganic analytes detected during the monitoring events. Laboratory analytical data packages, which include all environmental, field QC, and laboratory QC results, are provided in Appendix G. A consolidated laboratory data summary table is presented in Appendix H.

3.4.1 Data Quality Review

The quality control samples were reviewed as described in the Revised Groundwater Sampling and Analysis Plan (Tetra Tech, 2003b). The data for the groundwater sampling activities were contained in analytical data packages generated by EMAX Laboratories Inc, Calscience Environmental Laboratories Inc, Microseeps Laboratories Inc, and E.S. Babcock and Sons Laboratories Inc. These data packages were reviewed using the latest versions of the National Functional Guidelines for Organic and Inorganic Data Review documents from the EPA (EPA, 2008 and 2005).

Preservation criteria, holding times, field blanks, laboratory control samples (LCS), 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 include comparing statistically calculated control limits to percent recoveries of all spiked analytes and duplicate spiked analytes. Relative Percent Difference (RPD) control limits are compared to actual spiked (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: Method A209B for total dissolved solids, Method AM23G for volatile fatty acids, Method AM20GAX for hydrogen, Method E300.0 for nitrate, sulfate, and chloride, Method E521 for low level NDMA, Methods E314.0 and E332.0 for perchlorate, Method A5310 for total and dissolved organic carbon, Method RSK-175 for methane, ethane, ethene, Methods SW8270C and E1625C for 1,4-dioxane and NDMA, Methods SW6010B, E200.7, SW7470A, and SW6020 for metals, Method SW8330 for RDX, and Method SW8260B for VOCs. Unless otherwise noted below, all data results met required criteria, are of known precision and accuracy, did not require qualification, and may be used as reported.

Method SW8270 SIM and E1625C for 1,4-dioxane had matrix spike recovery RPD errors that qualified as estimated 3.4 percent of the total SW8270 SIM and E1625C data. Blank contamination caused 1.3 percent of the total SW8270 SIM and E1625C data to be qualified for blank contamination. The data qualified as estimated is usable for the intended purpose. The blank qualified results should be considered not detected.

Method E521 for low level NDMA had surrogate, LCS, and matrix spike errors that qualified as estimated in 44 percent of the total E521 data. The errors in the E521 data were minor since the magnitude of the control limit excedence was small. The data qualified as estimated is usable for the intended purpose.

Method SW8260B for VOCs had matrix spike recovery errors that qualified as estimated in 0.1 percent of the total SW8260B data. Blank contamination caused 0.2 percent of the total SW8260B data to be qualified for blank contamination. The data qualified as estimated is usable for the intended purpose. The blank qualified results should be considered not detected.

Method SW6020 for metals had field duplicate RPD errors that qualified as estimated in 0.9 percent of the total SW6020 data. The data qualified as estimated is usable for the intended purpose.

Method E300.0 for general minerals had matrix spike and holding time errors that qualified as estimated in 1.8 percent of the total E300.0 data. The data qualified as estimated is usable for the intended purpose.

Method AM23G for volatile fatty acids had field duplicate and matrix spike errors that qualified as estimated in 2.6 percent of the total AM23G data. The data qualified as estimated is usable for the intended purpose.

Method E332.0 for perchlorate had field duplicate errors that qualified as estimated in 4.5 percent of the total E332.0 data. Method E332.0 had holding time errors that qualified as estimated in 29.2 percent of the total E322.0 data. The holding time errors were less than two times the standard holding time and do not have a significant negative effect on the data quality. The data qualified as estimated is usable for the intended purpose.

Historically perchlorate was analyzed by EPA Method 314.0 at this site. Method 314.0 uses an ion chromatograph to analyze perchlorate. Retention time is the only criterion used to identify the perchlorate ion. Therefore, any peak detected at the correct retention time for perchlorate is judged to be perchlorate. Studies show that interferences that occur at the retention time can result in false positive detections that can be as high as twenty percent. These false positive detections are associated with high levels of total dissolved solids.

The EPA developed Method 332.0 to address the false positive nature of Method 314.0. Method 332.0 uses an ion chromatograph with a mass spectrometry. The mass spectra analysis is able to “see” through the 314.0 interference and generate data that has no false positive detection. Method 332.0 also has lower detection levels and greater perchlorate specificity than Method 314.0. For these reasons it was decided to analyze perchlorate samples by Method 332.0.

Table 3-3 Summary of Detected Validated Organic Analytes - Second Quarter 2009

Sample Location	Sample Date	1,4-Dioxane	NDMA	Acetone	2-Butanone	Benzene	Carbon Disulfide	Chloroform	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	c-1,2-Dichloroethene	Ethylbenzene	Methylene Chloride	Toluene	1,1,2-Trichloroethane	Trichloroethene	m,p-Xylenes	o-Xylene	RDX
All results reported in µg/L unless otherwise stated																				
TT-MW2-1	6/1/2009	NA	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-4S	5/26/2009	NA	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-5	5/28/2009	1.2 Jq	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-6S	5/19/2009	<0.40	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-6D	5/19/2009	<0.40	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-7	5/28/2009	<0.40	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-7D	5/27/2009	<0.40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-8	5/22/2009	<0.40	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-9S	5/28/2009	**6.8**	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-9D	5/19/2009	<0.40	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-10	6/1/2009	NA	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-11	5/20/2009	<0.40	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	**6.1**	<0.45	<0.24	<0.2
TT-MW2-12	6/3/2009	NA	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-13	5/26/2009	NA	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	**0.54 Jq**
TT-MW2-14	6/2/2009	NA	<0.00048	<9.1	<6.9	<0.28 UJc	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33 UJc	<0.54	<0.30 UJc	<0.45	<0.24	<0.2
TT-MW2-16	5/26/2009	NA	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-17S	5/29/2009	NA	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-17D	6/2/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	1.2	<0.45	<0.24	NA
TT-MW2-19S	5/22/2009	**8.7**	0.0081	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-19S	6/15/2009	<0.043	<0.00048	<9.1	<6.9	<0.28 UJc	<1.9	<0.46	<0.098	<0.21	<0.12	<0.18	<0.26	<0.50	<0.22	<0.31	<0.50	<0.36	<0.41	NA
TT-MW2-19D	5/22/2009	<0.40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20S	5/22/2009	<0.40	<0.00048	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.2
TT-MW2-20D	5/22/2009	<0.40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-21	5/20/2009	<0.40	**0.012**	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	**7.7 Jq**	<0.33	<0.54	1.6	<0.45	<0.24	<0.2
TT-MW2-22	5/19/2009	**45**	<0.00048	<9.1	<6.9	0.60	<1.9	<0.33	2.8	**1.9**	**21**	0.85 Jq	<0.22	**7.5 Jq**	<0.33	<0.54	**260**	<0.45	<0.24	<0.2
TT-MW2-23	5/29/2009	<0.40	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-24	5/29/2009	**270**	**0.018**	<9.1	<6.9	<0.28	<1.9	4.2	0.97 Jq	**0.76**	**2.2**	<0.49	<0.22	<2.6	<0.33	0.69 Jq	**98**	<0.45	<0.24	**5.9**
TT-MW2-25	5/20/2009	<0.40	0.0078	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-26	5/20/2009	**3.7**	**0.011**	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-27	5/21/2009	<0.40	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-28	5/27/2009	NA	0.0095	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-29B	5/21/2009	NA	**0.019**	<9.1	<6.9	<0.28	3.0 Jq	0.45 Jq	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-29C	5/21/2009	NA	NA	<9.1	<6.9	<0.28	2.4 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.46 Jq	<0.54	<0.30	<0.45	<0.24	NA
Method Detection Limit		0.043-0.4	0.00048	9.1	6.9	0.28	1.9	0.33	0.37	0.31	0.40	0.49	0.22	2.6	0.33	0.54	0.30	0.45	0.24	0.20
MCL (unless noted) / DWNL		3 (1)	0.01 (1)	-	-	1	160 (1)	-	5	0.5	6	6	300	5	150	5	5	1750	1750	0.3 (1)

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
NDMA - N-Nitrosodimethylamine
RDX - Research Department composition X
MCL - California Department of Health Services Maximum Contaminant Level.
DWNL - California Department of Health Services drinking water notification level.
(1) - DWNL
" - " MCL/DWNL not established.

Bold - Maximum Contaminant Level exceeded.
< # - Method detection limit concentration is shown.
NA - Not analyzed
J - The analyte was positively identified, but the concentration is an estimated value.
U - The analyte was analyzed for , but was not detected above the MDL.
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.
q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3 3 Summary of Detected Validated Organic Analytes - Second Quarter 2009 (continued)

Sample Location	Sample Date	1,4-Dioxane	NDMA	Acetone	2-Butanone	Benzene	Carbon Disulfide	Chloro form	1,1-Dichloro ethane	1,2-Dichloro ethane	1,1-Dichloro ethene	c-1,2-Dichloro ethene	Ethylbenzene	Methylene Chloride	Toluene	1,1,2-Trichloro ethane	Trichloro ethene	m,p-Xylenes	o-Xylene	RDX
All results reported in µg/L unless otherwise stated																				
TT-MW2-30A	5/26/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-30B	5/26/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	0.50 Jq	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-30C	5/26/2009	NA	NA	13 Jq	<6.9	<0.28	3.5 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	3.9	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-31A	5/28/2009	NA	NA	<9.1	<6.9	<0.28	3.6 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.44 Jq	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-31B	5/28/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	1.5	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-32	5/27/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-33A	5/27/2009	NA	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-33B	5/27/2009	NA	NA	<9.1	<6.9	<0.28	2.9 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-33C	5/27/2009	NA	NA	11 Jq	<6.9	0.32 Jq	2.5 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	4.2	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-34A	5/27/2009	NA	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-34B	5/27/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-34C	5/27/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-35A	5/28/2009	NA	NA	<9.1	<6.9	<0.28	2.3 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.39 Jq	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-35B	5/28/2009	NA	NA	<9.1	<6.9	<0.28	4.4 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	3.5	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-36A	5/29/2009	NA	0.0086	<9.1	<6.9	<0.28	6.5 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	2.8	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-36B	5/28/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-36C	5/28/2009	NA	NA	55	<6.9	<0.28	32	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.94 Jq	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-37A	5/21/2009	**3.3**	NA	110	19	0.60	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.99 Jq	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-37B	5/21/2009	<0.40	NA	13 Jq	<6.9	<0.28	26	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	1.0	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-38A	5/26/2009	NA	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-38B	5/26/2009	NA	NA	18 Jq	<6.9	<0.28	2.2 Jq	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.63 Jq	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-38C	5/26/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-39	5/27/2009	NA	<0.00048	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	<0.2
TT-MW2-40A	6/8/2009	NA	NA	<9.1	<6.9	<0.28	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	<0.33	<0.54	<0.30	<0.45	<0.24	NA
TT-MW2-40B	6/8/2009	NA	NA	<9.1	<6.9	**22**	<1.9	<0.33	<0.37	<0.31	<0.40	<0.49	1.2	<2.6	13	<0.54	<0.30	1.6	1.2	NA
TT-MW2-40C	6/8/2009	NA	NA	<9.1	<6.9	0.45 Jq	<1.9	0.80 Jq	<0.37	<0.31	<0.40	<0.49	<0.22	<2.6	0.42 Jq	<0.54	<0.30	<0.45	<0.24	NA
Method Detection Limit		0.043-0.4	0.00048	9.1	6.9	0.28	1.9	0.33	0.37	0.31	0.40	0.49	0.22	2.6	0.33	0.54	0.30	0.45	0.24	0.20
MCL (unless noted) / DWNL		3 (1)	0.01 (1)	-	-	1	160 (1)	-	5	0.5	6	6	300	5	150	5	5	1750	1750	0.3 (1)

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
NDMA - N-Nitrosodimethylamine
RDX - Research Department composition X
MCL - California Department of Health ServicesMaximum Contaminant Level.
DWNL - California Department of Health Services drinking water notification level.
(1) - DWNL
" - " MCL/DWNL not established.

Bold - Maximum Contaminant Level exceeded.
< # - Method detection limit concentration is shown.
NA - Not analyzed
J - The analyte was positively identified, but the concentration is an estimated value.
U - The analyte was analyzed for , but was not detected above the MDL.
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.
q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3-4 Summary of Detected Validated Inorganic Analytes - Second Quarter 2009

Sample Name	Sample Date	Filter Status	Perchlorate - ug/L (314)	Perchlorate - ug/L (332)	Arsenic - mg/L	Antimony - mg/L	Barium - mg/L	Cadmium - mg/L	Cobalt - mg/L	Chromium - mg/L	Copper - mg/L	Iron - mg/L	Lead -mg/L	Mercury - ug/L	Molybdenum -mg/L	Nickel - mg/L	Silver -mg/L	Selenium - mg/L	Vanadium - mg/L	Zinc -mg/L
TT-MW2-1	6/1/2009	Unfiltered	**7800**	**6200 Jf**	0.00208	<0.000380	0.0835	<0.000266	<0.000140	0.00126	0.000308 Jq	0.0407 Jq	<0.000170	<0.0177	0.00397	0.00141	<0.000120	0.00428	0.00720	0.00391 Jq
TT-MW2-2	5/29/2009	Unfiltered	NA	NA	0.00331	<0.000380	0.00441	<0.000266	<0.000140	<0.000618	0.00172	NA	0.000173 Jq	0.156 Jq	0.00204	0.000542 Jq	<0.000120	<0.000554	0.0101	0.00319 Jq
TT-MW2-4S	5/26/2009	Unfiltered	**7.3**	0.60 Je	**0.0427**	<0.000380	0.00870	<0.000266	<0.000140	0.00292	0.00193	NA	0.000230 Jq	<0.0177	0.0140	0.00278	0.000194 Jq	0.00122	**0.0686**	0.00241 Jq
TT-MW2-5	5/28/2009	Unfiltered	**890**	**810 Je**	0.00184	<0.000380	0.0659	<0.000266	0.000161 Jq	<0.000618	0.000846 Jq	0.174	<0.000170	0.202 Jq	0.0140	0.00134	<0.000120	0.00626	0.00491	0.0218
TT-MW2-6D	5/19/2009	Unfiltered	<2.3	NA	0.00530	<0.000380	0.00644	<0.000266	<0.000140	<0.000618	0.000148 Jq	NA	<0.000170	<0.0177	0.00292	<0.000155	<0.000120	<0.000554	0.00137	<0.00180
TT-MW2-6S	5/19/2009	Unfiltered	**150**	**150 Je**	0.00210	<0.000380	0.0312	<0.000266	<0.000140	0.000759 Jq	0.000477 Jq	NA	<0.000170	<0.0177	0.0158	0.000781 Jq	<0.000120	0.00682	0.00387	<0.00180
TT-MW2-7	5/28/2009	Filtered	NA	NA	<0.00308	<0.000380	0.0402	0.000457 Jq	<0.000140	<0.000350	0.000604 Jq	0.0391 Jq	<0.000170	0.136 Jq	0.0208	<0.00137	<0.000120	0.0123 Jq	0.00620	0.00462 Jq
TT-MW2-7	5/28/2009	Unfiltered	**370**	**430 Je**	0.00162	<0.000380	0.0375	<0.000266	<0.000140	<0.000618	0.000601 Jq	0.0449 Jq	<0.000170	0.145 Jq	0.0198	0.000870 Jq	<0.000120	0.00594	0.00598	0.00254 Jq
TT-MW2-7D	5/27/2009	Unfiltered	<2.3	0.68 Je	**0.0200**	<0.000380	0.00488	<0.000266	<0.000140	<0.000618	0.000956 Jq	NA	0.000488 Jq	<0.0177	0.0145	0.00102	<0.000120	0.0135	0.0157	0.00307 Jq
TT-MW2-8	5/22/2009	Filtered	NA	NA	0.00177	<0.000380	0.0455	<0.000266	<0.000140	0.00171	0.000748 Jq	NA	<0.000170	<0.0177	0.0181	0.000874 Jq	<0.000120	0.00435	0.0254	0.00490 Jq
TT-MW2-8	5/22/2009	Unfiltered	**280**	**290 Je**	0.00381	<0.000380	0.0440	<0.000266	<0.000140	0.000986 Jq	0.000414 Jq	NA	<0.000170	<0.0177	0.0175	0.000419 Jq	<0.000120	0.00715	0.0268	0.00216 Jq
TT-MW2-9D	5/19/2009	Unfiltered	<2.3	NA	0.00746	<0.000380	0.00835	<0.000266	<0.000140	<0.000618	0.000955 Jq	NA	<0.000170	<0.0177	0.0244	0.00112	<0.000120	<0.000554	0.00395	0.00415 Jq
TT-MW2-9S	5/28/2009	Unfiltered	**4300**	**4100 Je**	0.00183	<0.000380	0.0531	<0.000266	0.000197 Jq	<0.000618	0.00120	0.0429 Jq	<0.000170	0.149 Jq	0.00872	0.00241	<0.000120	0.00632	0.00389	0.0128
TT-MW2-10	6/1/2009	Unfiltered	<2.3	NA	0.00146	<0.000380	0.0841	<0.000266	<0.000140	<0.000618	0.000965 Jq	0.0697	<0.000170	<0.0177	0.00265	0.00811	<0.000120	0.00231	0.0169	0.00508
TT-MW2-11	5/20/2009	Unfiltered	**290**	**240 Je**	0.00331	<0.000380	0.0309	<0.000266	<0.000140	0.000628 Jq	0.00111	NA	<0.000170	<0.0177	0.000669 Jq	0.000689 Jq	<0.000120	0.0106	0.00820	<0.00180
TT-MW2-12	6/3/2009	Unfiltered	<2.3	NA	0.00515	<0.000380	0.0212	<0.000266	0.000277 Jq	<0.000618	0.00247	0.275	0.000251 Jq	0.0512 Jq	0.00291	0.00636	0.000174 Jq	0.000750 Jq	0.0102	0.00479 Jq
TT-MW2-13	5/26/2009	Unfiltered	**3300**	NA	0.000944 Jq	<0.000380	0.146	<0.000266	0.000236 Jq	0.00157	0.000549 Jq	NA	0.000203 Jq	<0.0177	0.00199	0.00249	<0.000120	0.00649	0.00757	0.00776
TT-MW2-14	6/2/2009	Unfiltered	**43000**	**42000**	0.00239	<0.000380	0.112	<0.000266	0.00412	0.0133	0.00155	**0.393**	<0.000170	<0.0177	0.00561	**0.209**	<0.000120	0.00692	0.00506	0.00647
TT-MW2-16	5/26/2009	Unfiltered	2.7 Jq	3.7	0.000618 Jq	<0.000380	0.360	<0.000266	<0.000140	<0.000618	0.000502 Jq	NA	<0.000170	<0.0177	0.000394 Jq	0.000928 Jq	<0.000120	0.00172	0.00532	0.0199
TT-MW2-17D	6/2/2009	Unfiltered	**50000**	**60000**	0.00260	<0.000380	0.0494	<0.000266	<0.000140	<0.000618	0.00238	0.0426 Jq	<0.000170	<0.0177	0.00338	0.00633	<0.000120	0.00436	0.00210	0.0255
TT-MW2-17S	5/29/2009	Unfiltered	**1600**	**1900**	0.00192	<0.000380	0.0262	<0.000266	<0.000140	<0.000618	0.00202	NA	<0.000170	0.163 Jq	0.0105	0.00142	<0.000120	0.000906 Jq	0.00271	0.0105 Jf
TT-MW2-18	5/26/2009	Unfiltered	**15000**	**14000 Je**	0.00669	<0.000380	0.00867	<0.000266	0.000273 Jq	<0.000618	0.00483	NA	<0.000170	<0.0177	0.0127	0.00103	<0.000120	0.00109	0.0306	0.00941
TT-MW2-19D	5/22/2009	Unfiltered	NA	<0.071	**0.0197**	<0.000380	0.00923	<0.000266	0.000621 Jq	0.00126	0.00615	NA	0.00150	<0.0177	0.0539	0.00221	<0.000120	0.00155	0.0103	0.0203
TT-MW2-19S	5/22/2009	Unfiltered	NA	2.9	0.00687	<0.000380	0.00281	<0.000266	<0.000140	0.000788 Jq	0.000812 Jq	NA	<0.000170	<0.0177	0.0292	0.000878 Jq	<0.000120	0.00282	0.00421	0.00775
TT-MW2-20D	5/22/2009	Unfiltered	NA	<0.071	0.00167	<0.000380	0.000768 Jq	<0.000266	<0.000140	<0.000618	<0.000105	NA	<0.000170	<0.0177	0.00257	<0.000155	<0.000120	<0.000554	0.000822 Jq	<0.00180
TT-MW2-20S	5/22/2009	Unfiltered	NA	<0.071	0.00154	<0.000380	0.0245	<0.000266	<0.000140	0.000751 Jq	0.00160	NA	<0.000170	<0.0177	0.0145	0.000617 Jq	<0.000120	0.000856 Jq	0.00526	0.0138
TT-MW2-21	5/20/2009	Unfiltered	<2.3	NA	**0.0145**	<0.000380	0.00223	<0.000266	<0.000140	<0.000618	0.000458 Jq	NA	<0.000170	<0.0177	0.0175	0.00236	<0.000120	<0.000554	0.00393	0.00206 Jq
TT-MW2-22	5/19/2009	Unfiltered	<2.3	NA	0.00866	<0.000380	0.00313	<0.000266	<0.000140	<0.000618	0.000175 Jq	NA	<0.000170	<0.0177	0.0129	0.00204	<0.000120	0.000633 Jq	<0.000790	<0.00180
TT-MW2-23	5/29/2009	Unfiltered	2.7 Jq	0.80	0.00749	<0.000380	0.428	<0.000266	0.000924 Jq	0.00249	0.00510	**2.10**	0.00109	0.151 Jq	0.00774	0.00250	<0.000120	<0.000554	0.0125	0.221
TT-MW2-24	5/29/2009	Unfiltered	**120000**	**190000**	0.00202	<0.000380	0.0880	<0.000266	0.000285 Jq	<0.000618	0.0571	0.138	<0.000170	0.163 Jq	0.0101	0.00186	<0.000120	0.00476	0.00289	0.00491 Jq
TT-MW2-25	5/20/2009	Unfiltered	<2.3	NA	0.00922	<0.000380	0.00126	<0.000266	0.000469 Jq	<0.000618	0.00190	NA	0.000228 Jq	<0.0177	0.0115	0.0337	<0.000120	<0.000554	0.00853	<0.00180
TT-MW2-26	5/20/2009	Unfiltered	**56**	**53 Je**	0.00119	0.000388 Jq	0.00566	<0.000266	0.0106	0.0289	0.00213	NA	<0.000170	<0.0177	0.0131	**1.76**	0.000146 Jq	0.00275	<0.000790	0.00694
TT-MW2-27	5/21/2009	Unfiltered	**22**	**33 Je**	0.00103 Jf	<0.000380	0.0142	<0.000266	0.000583 Jq	0.00312 Jf	0.00418	NA	<0.000170	<0.0177	0.0103	0.0495	<0.000120	<0.000554	0.00379	0.00559 Jf
Method Detection Limit			2.3	0.071	0.000589	0.00038	0.000105	0.000266	0.00014	0.000618	0.000105	0.05	0.00017	0.0177	0.001	0.000155	0.00012	0.000554	0.00079	0.0018
MCL (unless noted) / DWNL			6	6	0.01	0.006	1	0.005	-	0.05	1.3	0.3	0.015	2	-	0.1	0.1	0.05	0.05 (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 package.

µg/L - Micrograms per liter
mg/L - Milligrams per liter
MCL - California Department of Health Services Maximum Contaminant Level.
DWNL - California Department of Health Services drinking water notification level.
(1) - DWNL
" - " MCL/DWNL not established.

NA - Not analyzed.
Bold - Maximum Contaminant Level exceeded.
< # - Method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
e - A holding time violation occurred.
f - The duplicate Relative Percent Difference (RPD) was outside the control limit
q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3 4 Summary of Detected Validated Inorganic Analytes - Second Quarter 2009 (continued)

Sample Name	Sample Date	Filter Status	Per chlorate - ug/L (314)	Per chlorate - ug/L (332)	Arsenic - mg/L	Antimony - mg/L	Barium - mg/L	Cadmium - mg/L	Cobalt - mg/L	Chromium - mg/L	Copper - mg/L	Iron - mg/L	Lead -mg/L	Mercury - ug/L	Molybdenum -mg/L	Nickel - mg/L	Silver -mg/L	Selenium - mg/L	Vanadium - mg/L	Zinc -mg/L
TT-MW2-28	5/27/2009	Unfiltered	**19**	**29 Je**	0.00718	0.000995 Jq	0.00952	<0.000266	<0.000140	0.00205	0.00703	NA	0.000175 Jq	<0.0177	0.0659	0.00665	<0.000120	0.00362	0.00631	0.00537
TT-MW2-29B	5/21/2009	Unfiltered	<2.3	NA	0.00508	<0.000380	0.00540	<0.000266	<0.000140	0.00240	0.000646 Jq	NA	0.000429 Jq	<0.0177	0.0152	0.00229	<0.000120	0.000841 Jq	0.00156	0.0101
TT-MW2-29C	5/21/2009	Unfiltered	<2.3	NA	0.00585	<0.000380	0.00898	<0.000266	<0.000140	0.00224	0.000604 Jq	NA	<0.000170	<0.0177	0.0208	0.000902 Jq	<0.000120	0.000725 Jq	<0.000790	0.00244 Jq
TT-MW2-30A	5/26/2009	Unfiltered	**22000**	**23000 Je**	0.00248	<0.000380	0.0155	<0.000266	<0.000140	<0.000618	0.00167	NA	0.000410 Jq	<0.0177	0.0214	0.000713 Jq	<0.000120	0.00556	0.00560	0.00671
TT-MW2-30B	5/26/2009	Unfiltered	**1300**	**1300 Je**	0.00605	<0.000380	0.0152	<0.000266	0.000162 Jq	<0.000618	0.000889 Jq	NA	<0.000170	<0.0177	0.0755	0.00614	<0.000120	0.00129	<0.000790	0.00214 Jq
TT-MW2-30C	5/26/2009	Unfiltered	**300**	<0.071 UJe	0.00328	<0.000380	0.0102	<0.000266	<0.000140	<0.000618	<0.000105	NA	<0.000170	<0.0177	0.0984	0.000755 Jq	<0.000120	0.0144	<0.000790	0.0114
TT-MW2-31A	5/28/2009	Unfiltered	<2.3	NA	0.00658	<0.000380	0.0242	<0.000266	<0.000140	<0.000618	0.000412 Jq	NA	<0.000170	0.149 Jq	0.0508	0.00124	<0.000120	0.00231	0.00134	0.00542
TT-MW2-31B	5/28/2009	Unfiltered	**460**	<0.071	**0.0107**	<0.000380	0.00615	<0.000266	<0.000140	<0.000618	0.000428 Jq	NA	<0.000170	0.142 Jq	0.0263	0.000736 Jq	<0.000120	0.00434	0.000985 Jq	0.00241 Jq
TT-MW2-32	5/27/2009	Unfiltered	<2.3	NA	**0.0390**	<0.000380	0.0162	<0.000266	0.000236 Jq	<0.000618	0.00173	NA	0.000630 Jq	<0.0177	0.0157	0.000561 Jq	<0.000120	<0.000554	0.0359	0.00469 Jq
TT-MW2-33A	5/27/2009	Unfiltered	<2.3	NA	0.00697	<0.000380	0.00276	<0.000266	0.000292 Jq	<0.000618	0.00425	NA	<0.000170	<0.0177	0.0251	0.00314	<0.000120	0.00124	0.00371	0.0107 Jf
TT-MW2-33B	5/27/2009	Unfiltered	<2.3	NA	0.00523	<0.000380	0.00643	<0.000266	<0.000140	<0.000618	0.00158	NA	0.000301 Jq	<0.0177	0.0325	0.000920 Jq	<0.000120	0.00136	0.00138	0.00222 Jq
TT-MW2-33C	5/27/2009	Unfiltered	**480**	<0.071	0.00934	<0.000380	0.00568	<0.000266	<0.000140	0.000749 Jq	0.00125	NA	0.000387 Jq	<0.0177	0.0392	0.000660 Jq	<0.000120	0.00727	0.0119	0.00601
TT-MW2-34A	5/27/2009	Unfiltered	<2.3	NA	0.00615	<0.000380	0.0115	<0.000266	0.000145 Jq	<0.000618	0.000604 Jq	NA	<0.000170	<0.0177	0.00897	0.00416	<0.000120	0.00219	0.00135	0.00204 Jq
TT-MW2-34B	5/27/2009	Unfiltered	<2.3	NA	0.00320	<0.000380	0.0170	<0.000266	<0.000140	<0.000618	0.000123 Jq	NA	<0.000170	<0.0177	0.00602	0.000240 Jq	<0.000120	0.00135	0.000823 Jq	<0.00180
TT-MW2-34C	5/27/2009	Unfiltered	<2.3	NA	**0.0144**	<0.000380	0.00269	<0.000266	<0.000140	<0.000618	0.000109 Jq	NA	<0.000170	<0.0177	0.00513	0.000199 Jq	<0.000120	0.00801	0.00169	0.00252 Jq
TT-MW2-35A	5/28/2009	Unfiltered	<2.3	NA	0.00617	<0.000380	0.100	<0.000266	<0.000140	<0.000618	0.000759 Jq	NA	<0.000170	0.14 Jq	0.0531	0.00111	<0.000120	0.00258	0.00130	0.00383 Jq
TT-MW2-35B	5/28/2009	Unfiltered	<2.3	NA	**0.0214**	0.000427 Jq	0.0143	<0.000266	0.000496 Jq	0.00235	0.00361	NA	0.00299	0.144 Jq	0.0393	0.00210	<0.000120	0.00585	0.00457	0.0412
TT-MW2-36A	5/29/2009	Unfiltered	**20**	<0.071	0.00935	<0.000380	0.00526	<0.000266	<0.000140	<0.000618	0.000896 Jq	**0.102**	0.000781 Jq	0.163 Jq	0.0232	0.00134	<0.000120	<0.000554	0.00144	0.00835
TT-MW2-36B	5/28/2009	Unfiltered	**11**	0.071 Jeq	0.00719	<0.000380	0.00714	<0.000266	<0.000140	<0.000618	0.000164 Jq	NA	<0.000170	0.137 Jq	0.0136	0.000382 Jq	<0.000120	0.00423	0.00148	<0.00180
TT-MW2-36C	5/28/2009	Unfiltered	<2.3	0.83 Je	**0.0189**	<0.000380	0.495	<0.000266	<0.000140	<0.000618	0.000803 Jq	NA	<0.000170	0.352 Jq	0.0162	0.00500	<0.000120	0.0119	**0.0817**	0.0155
TT-MW2-37A	5/21/2009	Unfiltered	**650**	**560 Je**	<0.000589	0.000421 Jq	**1.96**	<0.000266	0.00123	**0.0528**	0.00356	NA	0.00111	<0.0177	0.0125	0.00746	<0.000120	<0.000554	0.00367	0.0589
TT-MW2-37B	5/21/2009	Unfiltered	**210**	<0.071 UJe	0.00534	<0.000380	0.0169	<0.000266	<0.000140	0.00137	0.000791 Jq	NA	<0.000170	<0.0177	0.0812	0.00197	<0.000120	<0.000554	<0.000790	0.0102
TT-MW2-38A	5/26/2009	Unfiltered	**120000**	**180000 Je**	0.00241	<0.000380	0.00732	<0.000266	<0.000140	<0.000618	0.000751 Jq	NA	<0.000170	<0.0177	0.00992	0.00197	<0.000120	0.00235	0.00219	0.00371 Jq
TT-MW2-38B	5/26/2009	Unfiltered	**16000**	**18000 Je**	**0.0114**	0.000704 Jq	0.0222	<0.000266	<0.000140	<0.000618	0.000406 Jq	NA	<0.000170	<0.0177	0.0576	0.00230	<0.000120	0.00151	0.0143	0.00456 Jq
TT-MW2-38C	5/26/2009	Unfiltered	**19**	**8.2 Je**	**0.0108**	<0.000380	0.00555	<0.000266	<0.000140	<0.000618	0.000325 Jq	NA	0.000174 Jq	<0.0177	0.0327	0.00116	<0.000120	0.00202	0.00268	<0.00180
TT-MW2-39	5/27/2009	Unfiltered	**82000**	**190000 Jef**	0.00258	<0.000380	0.0839	<0.000266	0.000618 Jq	0.00111	0.00441	NA	<0.000170	<0.0177	0.0119	0.0560	<0.000120	0.0109	0.00247	0.00244 Jq
TT-MW2-40A	6/8/2009	Unfiltered	<2.3	NA	0.00589	<0.000380	0.0173	<0.000266	0.000168 Jq	<0.000618	0.00114	NA	<0.000170	<0.0177	0.0229	0.00336	<0.000120	<0.000554	<0.000790	0.00223 Jq
TT-MW2-40B	6/8/2009	Unfiltered	<2.3	NA	0.00401	<0.000380	0.292	<0.000266	<0.000140	<0.000618	0.00201	NA	<0.000170	<0.0177	0.0469	0.00204	<0.000120	0.00103	<0.000790	0.168
TT-MW2-40C	6/8/2009	Unfiltered	2.6 Jq	3.9	0.00657	0.000843 Jq	0.324	<0.000266	0.000350 Jq	0.00233	0.00463	NA	0.00118	<0.0177	0.0755	0.00242	<0.000120	<0.000554	0.00539	0.194
WS-1	5/22/2009	Unfiltered	NA	<0.071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WS-2	6/3/2009	Unfiltered	NA	<0.071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Method Detection Limit			2.3	0.071	0.000589	0.00038	0.000105	0.000266	0.00014	0.000618	0.000105	0.05	0.00017	0.0177	0.001	0.000155	0.00012	0.000554	0.00079	0.0018
MCL (unless noted) / DWNL			6	6	0.01	0.006	1	0.005	-	0.05	1.3	0.3	0.015	2	-	0.1	0.1	0.05	0.05 (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 package.

- µg/L - Micrograms per liter
- mg/L - Milligrams per liter
- MCL - California Department of Health Services Maximum Contaminant Level.
- DWNL - California Department of Health Services drinking water notification level.
- (1) - DWNL
- " - " MCL/DWNL not established.
- NA - Not analyzed.

- **Bold** - Maximum Contaminant Level exceeded.
- < # - Method detection limit concentration is shown.
- J - The analyte was positively identified, but the concentration is an estimated value.
- e - a holding time violation occurred.
- f - The duplicate Relative Percent Difference (RPD) was outside the control limit
- e - A holding time violation occurred
- f - The duplicate Relative Percent Difference (RPD) was outside the control limit
- q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3-5 Summary of Detected Validated Organic Analytes - Third Quarter 2009

Sample Location	Sample Date	1,4-Dioxane	NDMA	Acetone	2-Butanone	Bromomethane	Benzene	Carbon Disulfide	Chloro form	Chloromethane	Ethylbenzene	2-Hexanone	4-Methyl-2-Pentanone	Styrene	Toluene	Trichloroethene	Tetrachloroethene	Vinyl Chloride	m,p-Xylenes	o-Xylene
All results reported in µg/L unless otherwise stated																				
TT-MW2-5	9/2/2009	0.79	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-9S	9/2/2009	**6.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-19S	8/24/2009	<0.043	**0.020 Jdf**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-19S	9/23/2009	NA	0.0040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-19D	8/24/2009	<0.043	0.0030 Jd	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-19D	9/24/2009	NA	0.0030	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20S	8/24/2009	<0.043	<0.00070 Jdq	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20S	9/23/2009	NA	0.00090 UJbc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20D	8/24/2009	<0.043	0.0060 Jd	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20D	9/23/2009	NA	0.0090	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-21	9/2/2009	NA	0.0054 Ba	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-21	9/25/2009	NA	0.0020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-22	9/1/2009	**37**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-24	9/1/2009	**250**	**0.093 Jf**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-24	9/25/2009	NA	<0.00070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-25	9/2/2009	NA	**0.010**	<5.0	<1.2	<0.48	<0.14	0.49 Jq	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-25	9/25/2009	NA	<0.00070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-26	9/2/2009	0.045 BJaq	**0.052**	<5.0	<1.2	<0.48	<0.14	<0.36	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-26	9/25/2009	NA	0.0050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-27	9/2/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	1.1	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-28	9/1/2009	NA	**0.042**	<5.0	<1.2	<0.48	<0.14	0.56	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-28	9/25/2009	NA	0.0050 Jb	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-29B	8/31/2009	NA	<0.0010	<5.0	<1.2	<0.48	<0.14	2.1	0.17 Jq	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-29B	9/24/2009	NA	0.0080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-29C	8/31/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	2.0	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	0.37 Jq	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-30A	8/26/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	<0.36	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-30B	8/26/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	3.3	0.25 Jq	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-30C	8/26/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	4.1	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	5.3	<0.17	<0.17	0.18 Jq	<0.36	<0.41
Method Detection Limit		0.022 - 0.043	0.001 - 0.0007	5	1.2	0.48	0.14	0.36	0.33	0.36	0.26	1.2	0.95	0.22	0.22	0.17	0.17	0.13	0.36	0.41
MCL (unless noted) / DWNL		3 (1)	0.01 (1)	-	-	-	1	160 (1)	-	-	300	-	-	100	150	5	5	0.5	1750	1750

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.

NDMA - N-Nitrosodimethylamine
µg/L - Micrograms per liter
MCL - California Department of Health Services Maximum Contaminant Level.
DWNL - California Department of Health Services drinking water notification level.
(1) - DWNL
" - " MCL/DWNL not established.
Bold - Maximum Contaminant Level exceeded.
< # - Method detection limit concentration is shown.
NA - Not analyzed

B - The sample result was less than 5 times blank contamination. Cross contamination is suspected.
J - The analyte was positively identified, but the concentration is an estimated value.
a - The analyte was found in the method blank.
b - the surrogate spike recovery was outside control limits.
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.
d - The Laboratory Control Sample (LCS) recovery was outside control limits.
f - The duplicate Relative Percent Difference (RPD) was outside the control limit
q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3 5 Summary of Detected Validated Organic Analytes - Third Quarter 2009 (continued)

Sample Location	Sample Date	1,4-Dioxane	NDMA	Acetone	2-Butanone	Bromomethane	Benzene	Carbon Disulfide	Chloro form	Chloromethane	Ethylbenzene	2-Hexanone	4-Methyl-2-Pentanone	Styrene	Toluene	Trichloroethene	Tetrachloroethene	Vinyl Chloride	m,p-Xylenes	o-Xylene
All results reported in µg/L unless otherwise stated																				
TT-MW2-31A	9/1/2009	NA	NA	<5.0	<1.2	0.48 Jq	<0.14	1.9	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	0.22 Jq	<0.17	<0.17	<0.13	0.39 Jq	<0.41
TT-MW2-31B	9/1/2009	NA	NA	<5.0	<1.2	1.2	0.34 Jq	2.5	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	1.9	<0.17	<0.17	<0.13	0.53	<0.41
TT-MW2-32	9/1/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	2.0	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-33A	8/26/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	0.59	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-33B	8/26/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	3.4	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-33C	8/26/2009	NA	NA	<5.0	<1.2	<0.48	0.27 Jq	2.0	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	6.2	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-34A	8/31/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	1.9	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-34B	8/31/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	1.4	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-34C	8/31/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	1.6	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-35A	9/1/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	3.4	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	0.56	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-35B	9/1/2009	NA	NA	<5.0	<1.2	0.69	0.32 Jq	3.8	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	4.2	<0.17	0.27 Jq	<0.13	<0.36	<0.41
TT-MW2-36A	8/31/2009	NA	<0.0010	<5.0	<1.2	<0.48	<0.14	1.8	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	1.3	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-36A	9/24/2009	NA	**0.010 Jf**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-36B	8/27/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	0.45 Jq	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-36C	8/27/2009	NA	NA	49	6.3	<0.48	0.45 Jq	52	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	1.1	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-37A	9/2/2009	**4.0**	NA	100	26	<0.48	0.79	<0.36	<0.17	<0.36	<0.26	3.0 Jq	2.0 Jq	<0.22	1.2	0.65	<0.17	<0.13	<0.36	<0.41
TT-MW2-37B	9/2/2009	NA	NA	<5.0	1.4 Jq	<0.48	0.23 Jq	24	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	1.5	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-38A	8/27/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	0.62	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-38B	8/27/2009	NA	NA	<5.0	1.6 Jq	<0.48	<0.14	28	<0.17	0.80	<0.26	<1.2	<0.95	<0.22	0.70	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-38C	8/27/2009	NA	NA	<5.0	<1.2	<0.48	0.14 Jq	1.2	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	0.25 Jq	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-39	8/27/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	<0.36	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	<0.22	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-40A	8/27/2009	NA	NA	<5.0	<1.2	<0.48	<0.14	1.2	<0.17	<0.36	<0.26	<1.2	<0.95	<0.22	0.26 Jq	<0.17	<0.17	<0.13	<0.36	<0.41
TT-MW2-40B	8/27/2009	NA	NA	<5.0	<1.2	<0.48	**26**	0.90	<0.17	<0.36	2.1	<1.2	<0.95	0.82	16	<0.17	<0.17	<0.13	3.0	2.0
TT-MW2-40C	8/27/2009	NA	NA	<5.0	1.6 Jq	<0.48	0.62	5.0	0.23 Jq	<0.36	<0.26	<1.2	<0.95	<0.22	0.44 Jq	<0.17	<0.17	<0.13	<0.36	<0.41
Method Detection Limit		0.022 - 0.043	0.001 - 0.0007	5	1.2	0.48	0.14	0.36	0.33	0.36	0.26	1.2	0.95	0.22	0.22	0.17	0.17	0.13	0.36	0.41
MCL (unless noted) / DWNL		3 (1)	0.01 (1)	-	-	-	1	160 (1)	-	-	300	-	-	100	150	5	5	0.5	1750	1750

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.

NDMA - N-Nitrosodimethylamine
µg/L - Micrograms per liter
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B - The sample result was less than 5 times blank contamination. Cross contamination is suspected.
J - The analyte was positively identified, but the concentration is an estimated value.
a - The analyte was found in the method blank.
b - the surrogate spike recovery was outside control limits.
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.
d - The Laboratory Control Sample (LCS) recovery was outside control limits.
f - The duplicate Relative Percent Difference (RPD) was outside the control limit
q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3-6 Summary of Detected Validated Inorganic Analytes - Third Quarter 2009

Sample Name	Sample Date	Per chlorate - ug/L	Alkalinity, Total (as CaCO3) - mg/L	Bicarbonate (as CaCO3) -mg/L	Carbonate (as CaCO3) - mg/L	Chloride -mg/L	Total Dissolved Solids - mg/L	Hydroxide (as CaCO3) - mg/L	Nitrate as N - mg/L	Sulfate -mg/L	Calcium -mg/L	Magnesium -mg/L	Potassium - mg/L	Sodium - mg/L
TT-MW2-19D	8/24/2009	<0.071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-19S	8/24/2009	**3.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20D	8/24/2009	0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-20S	8/24/2009	<0.071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TT-MW2-25	9/2/2009	0.12	98	120	<1.7	54	220	<1.7	<0.11	24	2.2	0.80 Jq	1.4	83
TT-MW2-26	9/2/2009	**64**	290	350	<1.7	170	**800**	<1.7	0.99	160	51	7.1	3.4	220
TT-MW2-27	9/2/2009	**100**	260	320	<1.7	110	**540**	<1.7	<0.11	72	21	2.4	2.1	170
TT-MW2-28	9/1/2009	**26**	640	780	<6.8	**250**	**1,200**	<6.8	3.0	98	22	6.3	5.1	400
TT-MW2-29B	8/31/2009	0.14	53	62	<1.7	140	320	<1.7	<0.11	27	6.9	2	1.4	110
TT-MW2-29C	8/31/2009	<0.071	150	180	<1.7	57	270	<1.7	<0.11	15	11	3.8	1.9	88
TT-MW2-30A	8/26/2009	**11,000**	100	120	<1.7	110	390	<1.7	3.2	31	8.8	0.82 Jq	0.70 Jq	120
TT-MW2-30B	8/26/2009	**67**	120	150	<1.7	170	**1,100**	<1.7	<0.11	**460**	35	7.2	3.9	290
TT-MW2-30C	8/26/2009	<0.071	120	150	<1.7	220	**660**	<1.7	<0.11	89	14	1.7	2.2	210
TT-MW2-31A	9/1/2009	<0.071	110	130	<1.7	160	**630**	<1.7	<0.11	190	15	4.4	3.4	180
TT-MW2-31B	9/1/2009	<0.35	150	190	<1.7	64	**540**	<1.7	<0.11	190	9.3	2.9	2.5	170
TT-MW2-32	9/1/2009	<0.071	72	56	16	18	170	<1.7	<0.11	20	1.4	<0.50	<0.50	55
TT-MW2-33A	8/26/2009	<0.071	150	180	<1.7	100	370	<1.7	<0.11	16	14	4.7	3.2	110
TT-MW2-33B	8/26/2009	<0.071	96	120	<1.7	65	260	<1.7	<0.11	15	4.1	0.97 Jq	1.3	84
TT-MW2-33C	8/26/2009	<0.071	100	120	<1.7	50	250	<1.7	<0.11	4.5	4.3	0.53 Jq	0.83 Jq	80
TT-MW2-34A	8/31/2009	0.27	71	87	<1.7	**960**	**1,800**	<1.7	<0.11	21	73	11	6.4	490
TT-MW2-34B	8/31/2009	<0.071	160	200	<1.7	240	**600**	<1.7	<0.11	45	11	1.3	1.1	210
TT-MW2-34C	8/31/2009	<0.071	42	39	6.0	120	290	<1.7	<0.11	19	2.8	<0.50	<0.50	93
Method Detection Limit		0.071 - 0.35	1.7	1.7 - 6.8	1.7 - 6.8	0.50	11	1.7 - 6.8	0.11	0.37	0.50	0.50	0.50	0.50
MCL (unless noted) / DWNL		6	-	-	-	250	500	-	10	250	-	-	-	-

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
mg/L - Milligrams per liter
MCL - California Department of Health Services Maximum Contaminant Level.
DWNL - California Department of Health Services drinking water notification level.
(1) - DWNL
" - " MCL/DWNL not established.

NA - Not analyzed
Bold - Maximum Contaminant Level exceeded.
< # - Method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
q - The analyte detected was below the Practical Quantitation Limit (PQL).
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.

Table 3 6 Summary of Detected Validated Inorganic Analytes - Third Quarter 2009 (continued)

Sample Name	Sample Date	Per chlorate - ug/L	Alkalinity, Total (as CaCO3) - mg/L	Bicarbonate (as CaCO3) -mg/L	Carbonate (as CaCO3) - mg/L	Chloride -mg/L	Total Dissolved Solids - mg/L	Hydroxide (as CaCO3) - mg/L	Nitrate as N - mg/L	Sulfate -mg/L	Calcium -mg/L	Magnesium -mg/L	Potassium - mg/L	Sodium - mg/L
TT-MW2-35A	9/1/2009	<0.071	68	83	<1.7	90	**1,900**	<1.7	<0.11	**1200**	86	4.1	2.3	470
TT-MW2-35B	9/1/2009	<0.071	130	160	<1.7	36	260	<1.7	<0.11	4	4.4	1.9	2.1	81
TT-MW2-36A	8/31/2009	<0.071	110	120	4.8	52	250	<1.7	<0.11	15	6	<0.50	1.9	75
TT-MW2-36B	8/27/2009	<0.071	88	110	<1.7	55	410	<1.7	<0.11	150	10	2.4	1.8	120
TT-MW2-36C	8/27/2009	0.68	960	<6.8	82	25	**1,000**	280	<0.11	11	46	<1.0	55	400
TT-MW2-37A	9/2/2009	**2,100**	2,000	<6.8	76	2.7 Jc	**1,700**	630	<0.11	7.3	280	<0.50	110	460
TT-MW2-37B	9/2/2009	<0.35	160	180	9.6 Jq	82	**690**	<6.8	<0.11	**260**	8.5	1.5	3.7	220
TT-MW2-38A	8/27/2009	**190,000**	100	120	<1.7	**330**	**1,100**	<1.7	**11**	32	69	10	3.4	230
TT-MW2-38B	8/27/2009	**19,000**	73	<1.7	30	110	370	7.8	<0.11	37	14	<0.50	1.9	100
TT-MW2-38C	8/27/2009	0.51	85	100	<1.7	69	480	<1.7	<0.11	200	11	2.6	2.7	170
TT-MW2-39	8/27/2009	**82,000**	99	120	<1.7	**650**	**1,800**	<1.7	**20**	51	180	17	5.2	260
TT-MW2-40A	8/27/2009	<0.071	280	340	<1.7	76	440	<1.7	<0.11	21	31	11	4.4	110
TT-MW2-40B	8/27/2009	2.8	200	240	<1.7	230	**760**	<1.7	<0.11	150	16	3.6	2.9	250
TT-MW2-40C	8/27/2009	<0.071	83	100	<1.7	81	310	<1.7	<0.11	4.3	3.3	0.61 Jq	2.7	91
WS-1	8/24/2009	<0.071	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WS-2	8/24/2009	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Method Detection Limit		0.071 - 0.35	1.7	1.7 - 6.8	1.7 - 6.8	0.50	11	1.7 - 6.8	0.11	0.37	0.50	0.50	0.50	0.50
MCL (unless noted) / DWNL		6	-	-	-	250	500	-	10	250	-	-	-	-

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
mg/L - Milligrams per liter
MCL - California Department of HealthServices Maximum Contaminant Level.
DWNL - California Department of Health Services drinking water notification level.
(1) - DWNL
" - " MCL/DWNL not established.

NA - Not analyzed
Bold - Maximum Contaminant Level exceeded.
< # - Method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
q - The analyte detected was below the Practical Quantitation Limit (PQL).
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.

Table 3-7 Summary Statistics of Validated Organic and Inorganic Analytes Detected Second Quarter 2009

Compounds Detected	Total Number of Samples Analyzed (1)	Total Number of Detections (1)	Number of Detections Exceeding MCL or DWNL (1)	Corresponding MCL (unless noted) / DWNL		Minimum Concentration Detected		Maximum Concentration Detected	
Organic Analytes:					μg/L		μg/L		μg/L
1,4-Dioxane	23	7	6	3 (2)	μg/L	3.3	μg/L	270	μg/L
NDMA	31	8	4	0.01 (2)	μg/L	0.0078	μg/L	0.019	μg/L
Acetone	45	6	0	-	μg/L	11	μg/L	110	μg/L
2-Butanone	45	1	0	-	μg/L	19	μg/L	19	μg/L
Benzene	45	5	1	1	μg/L	0.32	μg/L	22	μg/L
Carbon Disulfide	45	12	0	160 (2)	μg/L	2.2	μg/L	32	μg/L
Chloroform	45	4	0	-	μg/L	0.45	μg/L	4.2	μg/L
1, 1-Dichloroethane	45	2	0	5	μg/L	0.97	μg/L	2.8	μg/L
1, 2-Dichloroethane	45	2	2	0.5	μg/L	0.76	μg/L	1.9	μg/L
1, 1-Dichloroethene	45	2	1	6	μg/L	2.2	μg/L	21	μg/L
cis-1, 2-Dichloroethene	45	1	0	6	μg/L	0.85	μg/L	0.85	μg/L
Ethylbenzene	45	1	1	300	μg/L	1.2	μg/L	1.2	μg/L
Methylene Chloride	45	2	2	5	μg/L	7.5	μg/L	7.7	μg/L
Toluene	45	14	0	150	μg/L	0.39	μg/L	13	μg/L
1, 1, 2-Trichloroethane	45	1	0	5	μg/L	0.69	μg/L	0.69	μg/L
Trichloroethene	45	5	3	5	μg/L	1.2	μg/L	260	μg/L
m,p-Xylenes	45	1	0	1750	μg/L	1.6	μg/L	1.6	μg/L
o-Xylene	45	1	0	1750	μg/L	1.2	μg/L	1.2	μg/L
RDX	30	2	2	0.3 (2)	μg/L	0.54	μg/L	5.9	μg/L
Inorganic Analytes:									
Perchlorate (314)	55	33	30	6	μg/L	2.6	μg/L	120,000	μg/L
Perchlorate (332)	40	30	22	6	μg/L	0.071	μg/L	190,000	μg/L
Arsenic (total)	60	59	11	0.01	mg/L	0.000618	mg/L	0.0427	mg/L
Arsenic (dissolved)	2	1	0	0.01	mg/L	0.00177	mg/L	0.00177	mg/L
Antimony (total)	60	6	0	0.006	mg/L	0.000388	mg/L	0.000995	mg/L
Barium (total)	60	60	1	1	mg/L	0.000768	mg/L	1.96	mg/L
Barium (dissolvedl)	2	2	0	1	mg/L	0.0402	mg/L	0.0455	mg/L
Cadmium (total)	60	1	0	0.005	mg/L	0.000457	mg/L	0.000457	mg/L
Cadmium (dissolved)	2	1	0	0.005	mg/L	0.000457	mg/L	0.000457	mg/L
Cobalt (total)	60	21	0	-	mg/L	0.000145	mg/L	0.0106	mg/L
Chromium (total)	60	22	1	0.05	mg/L	0.000628	mg/L	0.0528	mg/L
Chromium (dissolved)	2	1	0	1	mg/L	0.00171	mg/L	0.00171	mg/L
Copper (total)	60	58	0	1.3	mg/L	0.000109	mg/L	0.0571	mg/L
Copper (dissolved)	2	2	0	1.3	mg/L	0.000604	mg/L	0.000748	mg/L
Iron (total)	11	8	3	0.3	mg/L	0.0407	mg/L	2.10	mg/L
Iron (dissolved)	1	1	0	0.3	mg/L	0.0391	mg/L	0.0391	mg/L
Lead (total)	60	19	0	0.015	mg/L	0.000174	mg/L	0.00299	mg/L
Mercury (total)	60	15	0	2	μg/L	0.0512	μg/L	0.352	μg/L
Mercury (dissolved)	2	1	0	2	μg/L	0.136	μg/L	0.136	μg/L
Molybdenum (total)	60	60	0	-	mg/L	0.000394	mg/L	0.0984	mg/L
Molybdenum (dissolved)	2	2	0	-	mg/L	0.0181	mg/L	0.0208	mg/L
Nickel (total)	60	58	2	0.1	mg/L	0.000199	mg/L	0.209	mg/L
Nickel (dissolved)	2	1	0	0.1	mg/L	0.000874	mg/L	0.000874	mg/L
Silver (total)	60	3	0	0.1	mg/L	0.000146	mg/L	0.000194	mg/L
Selenium (total)	60	46	0	0.05	mg/L	0.000633	mg/L	0.0144	mg/L
Selenium (dissolved)	2	2	0	0.05	mg/L	0.00435	mg/L	0.0123	mg/L
Vanadium (total)	60	52	2	0.05 (2)	mg/L	0.000822	mg/L	0.0817	mg/L
Vanadium (dissolved)	2	2	0	0.05 (2)	mg/L	0.00620	mg/L	0.0254	mg/L
Zinc (total)	60	51	0	5	mg/L	0.00204	mg/L	0.221	mg/L
Zinc (dissolvedf)	2	2	0	5	mg/L	0.00462	mg/L	0.00490	mg/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.

(1) - Number of detections exclude sample duplicates, trip blanks, and equipment blanks.
(2) - California Department of Health Services state drinking water notification level.
MCL - California Department of Health Services Maximum Contaminant Level.
DWNL - California Department of Health Services state drinking water notification level.
" - " MCL/DWNL not established.
μg/L - Micrograms per liter.

Table 3-8 Summary Statistics of Validated Organic and Inorganic Analytes Detected Third Quarter 2009

Compounds Detected	Total Number of Samples Analyzed (1)	Total Number of Detections (1)	Number of Detections Exceeding MCL or DWNL (1)	Corresponding MCL (unless noted) / DWNL		Minimum Concentration Detected		Maximum Concentration Detected	
Organic Analytes:									
1,4-Dioxane	10	5	4	3 (2)	µg/L	0.79	µg/L	250	µg/L
NDMA	24	16	6	0.01 (2)	µg/L	0.00090	µg/L	0.093	µg/L
Acetone	32	2	0	-	µg/L	48	µg/L	100	µg/L
2-Butanone	32	5	0	-	µg/L	1.4	µg/L	26	µg/L
Bromomethane	32	3	0	-	µg/L	0.48	µg/L	1.2	µg/L
Benzene	32	9	1	1	µg/L	0.14	µg/L	26	µg/L
Carbon Disulfide	32	28	0	160 (2)	µg/L	0.45	µg/L	52	µg/L
Chloroform	32	3	0	-	µg/L	0.17	µg/L	0.25	µg/L
Chloromethane	32	1	0	300	µg/L	0.80	µg/L	0.80	µg/L
Ethylbenzene	32	1	0	300	µg/L	3.1	µg/L	2.1	µg/L
2-Hexanone	32	1	0	-	µg/L	3.0	µg/L	3.0	µg/L
4-Methyl-2-Pentanone	32	1	0	-	µg/L	2.0	µg/L	2.0	µg/L
Styrene	32	1	0	100	µg/L	0.82	µg/L	0.82	µg/L
Toluene	32	16	0	150	µg/L	0.22	µg/L	16	µg/L
Trichloroethene	32	1	0	5	µg/L	0.65	µg/L	0.65	µg/L
Tetrachloroethene	32	1	1	5	µg/L	0.27	µg/L	0.27	µg/L
Vinyl Chloride	32	1	0	0.5	µg/L	0.18	µg/L	0.18	µg/L
m,p-Xylenes	32	3	0	1750	µg/L	0.39	µg/L	3.0	µg/L
o-Xylene	32	1	0	1750	µg/L	2.0	µg/L	2.0	µg/L
Inorganic Analytes:									
Perchlorate	38	18	10	6	µg/L	0.10	µg/L	190,000	µg/L
Bicarbonate (as CaCO3)	32	29	0	-	mg/L	39	mg/L	780	mg/L
Carbonate (as CaCO3)	32	6	0	-	mg/L	4.8	mg/L	82	mg/L
Chloride	32	32	4	250	mg/L	2.7	mg/L	960	mg/L
Total Dissolved Solids	32	32	16	500	mg/L	170	mg/L	1,900	mg/L
Nitrate as N	32	5	2	10	mg/L	0.99	mg/L	20	mg/L
Sulfate	32	32	3	250	mg/L	4.0	mg/L	1,200	mg/L
Calcium	32	32	0	-	mg/L	1.4	mg/L	280	mg/L
Magnesium	32	21	0	-	mg/L	1.3	mg/L	17	mg/L
Potassium	32	28	0	-	mg/L	1.1	mg/L	110	mg/L
Sodium	32	32	0	-	mg/L	55	mg/L	490	mg/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.
(1) - Number of detections exclude sample duplicates, trip blanks, and equipment blanks.
(2) - California Department of Health Services state drinking water notification level.
MCL - California Department of Health Services Maximum Contaminant Level.
DWNL - California Department of Health Services state drinking water notification level.
" - " MCL/DWNL not established.
RDX - Research Department composition X
µg/L - Micrograms per liter.
mg/L - Milligrams per liter

3.5 CHEMICALS OF POTENTIAL CONCERN

An evaluation of COPCs of the Second Quarter 2009 monitoring event was performed. The analytes detected were screened against the MCLs or DWNLs (if an MCL is not established). The analytes were organized and evaluated in two groups, organic and inorganic analytes, and divided into primary and secondary COPCs. Laboratory analytical results from the Second Quarter 2009 and Third Quarter 2009 monitoring events are presented in the following two subsections. Tables 3-3 through 3-6 present a summary of validated organic and inorganic analytes detected during the Second Quarter 2009 and Third Quarter 2009 monitoring events. Data which are B qualified because of association with either laboratory or field contamination is not included in the COPC evaluation.

Table 3-9 Groundwater Chemicals of Potential Concern

Analyte	Classification
Perchlorate	Primary
Trichloroethene	Primary
Methylene Chloride	Primary
1,4-Dioxane	Primary
RDX	Secondary
Notes:	
RDX - Research Department composition X	

3.5.1 Organic Analytes

Eight organic analytes (1,4-dioxane, 1,2-DCA, 1,1-DCE, benzene, methylene chloride, NDMA, RDX, and TCE) were detected above a published MCL or DWNL during the Second Quarter 2009 and Third Quarter 2009 monitoring events. Tables 3-3 and 3-5 presents a summary of validated organic analyte concentrations reported in groundwater samples collected during the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events, respectively.

Following the First Quarter 2009 detection of 1,4-dioxane in monitoring well TT-MW2-22 which is located in the former WDA, additional 1,4-dioxane sampling was conducted during the Second and Third Quarter 2009 sampling events. 1.4-dioxane analysis was performed on samples collected from monitoring wells located in and downgradient of the former WDA. 1,4-dioxane was reported in groundwater samples collected from seven monitoring wells, TT-MW2-5, TT-MW2-9S, TT-MW2-19S, TT-MW2-22, TT-MW2-24, TT-MW2-26, and TT-MW2-37A, during the Second Quarter 2009 monitoring events at concentrations ranging from 1.2 µg/L to 270 µg/L. Five monitoring wells, TT-MW2-5, -MW2-9S, TT-MW2-22, TT-MW2-24, and TT-MW2-37A, sampled during the Third Quarter 2009 monitoring event had concentrations ranging from 0.79 µg/L to 250 µg/L. With the exception of TT-MW2-19S which is located on the former Wolfskill property, all wells are located in or just downgradient of the former WDA. The DWNL for 1,4-dioxane is 3 µg/L. Figure 3-5 presents a 1,4-dioxane isoconcentration map for groundwater samples collected during the Second Quarter 2009 monitoring event.

1,2-DCA was reported in groundwater samples collected from two monitoring wells, TT-MW2-22 and TT-MW2-24, located in the former WDA during the Second Quarter 2009 monitoring event at concentrations of 1.9 µg/L and 0.76 µg/L respectively. The MCL for 1,2-DCA is 0.5 µg/L.

1,1-DCE was reported in groundwater samples collected from two monitoring wells, TT-MW2-22 and TT-MW2-24, located in the former WDA during the Second Quarter 2009 monitoring event at concentrations of 21 µg/L and 2.2 µg/L respectively. The MCL for 1,1-DCE is 6 µg/L.

Benzene was reported in groundwater samples collected from five monitoring wells, TT-MW2-22, TT-MW2-33C, TT-MW2-37A, TT-MW2-40B, and TT-MW2-40C, during the Second Quarter 2009 monitoring event at concentrations ranging from 0.32 µg/L to 22 µg/L. Benzene was reported in groundwater samples collected from nine monitoring wells, TT-MW2-31B, TT-MW2-33C, TT-MW2-35B, TT-MW2-36C, TT-MW2-37A, TT-MW2-37B, TT-MW2-38C, TT-MW2-40B, and TT-MW2-40C, during the Third Quarter 2009 monitoring event at concentrations ranging from 0.14 µg/L to26 µg/L. The MCL for benzene is 1 µg/L.

Methylene chloride was reported in groundwater samples collected from two monitoring wells, TT-MW2-21 and TT-MW2-22, located in the former WDA during the Second Quarter 2009 monitoring event at concentrations of 7.7 µg/L and 7.5 µg/L respectively. Methylene chloride has previously been reported in groundwater samples collected from monitoring well TT-MW2-22 at concentration up to 220 µg/L. The MCL for methylene chloride is 5 µg/L.

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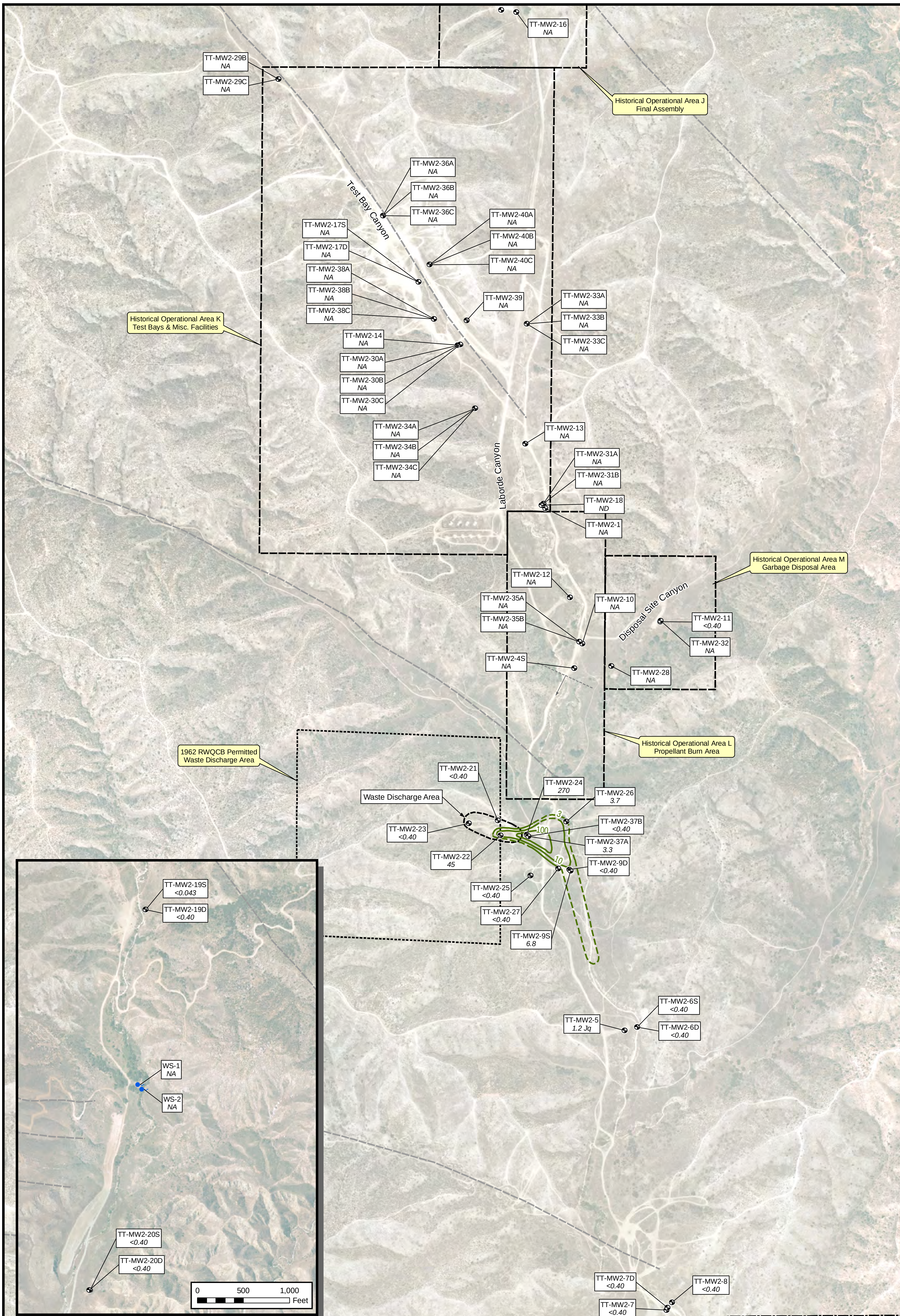

LEGEND

- Well Sample Location with Trichloroethene Concentration (µg/L)
- Spring Sample Location with Trichloroethene Concentration (µg/L)
- 1,4-Dioxane Isoconcentration contour (Dashed where inferred)
- Waste Discharge Area
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located

0 300 600 Feet

Adapted from: April 2007 aerial photograph.

Faults from the, *Site 2 Lineament Study, Tetra Tech, 2009.*

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

Beaumont Site 2

Figure 3-5

1,4-Dioxane Isoconcentration Map (µg/L)

TETRA TECH

Due to historic detections of NDMA, the 30 wells screened in the QAL and weathered STF were sampled for NDMA during Second Quarter 2009. NDMA was reported in groundwater samples collected from eight monitoring wells sampled during the Second Quarter 2009 monitoring event at concentrations ranging from 0.0078 µg/L to 0.019 µg/L. During the Third Quarter 2009 monitoring event NDMA groundwater samples were collected from 11 monitoring wells. The groundwater samples were mistakenly analyzed by the laboratory by EPA Method 8270 SIM and NDMA was detected in 7 out of 11 samples at concentrations ranging from 0.0030 µg/L to 0.093 µg/L. Due to concerns regarding the low level accuracy of method EPA 8270 SIM the samples were re-analyzed using EPA Method 521 and NDMA was detected in 9 out of 11 samples at concentrations ranging from 0.00090 µg/L to 0.010 µg/L. The DWNL for NDMA is 0.01 µg/L.

Due to the scattered nature of the locations where NDMA was detected, the potential for cross contamination from an outside source was investigated. The majority of NDMA detections, both historic and recent, occurred in wells sampled with the site-approved dedicated pump. Therefore, a leach test was conducted on the pump to determine if the pump was a source of the NDMA detections (Table 3-10). A new pump with attached hoses and safety cables of the type used on the Site was obtained for leach testing. The pump was placed in a section of well casing which was filled with deionized water. The pump was then operated until water was flowing through the pump. A second section of well casing was filled with deionized water as a blank. Both sections of pipe were covered and allowed to stand for three days. The water in the casing with the pump was pumped into sample bottles and the water in the blank casing was poured into sample bottles. All samples were then submitted to Babcock Laboratories Inc for analysis by EPA Method 521. Sample results showed detections of 0.020 µg/L and 0.010 µg/L in the primary and duplicate sample, respectively. NDMA was not detected above the method detection limit of 0.007 µg/L in the control sample. These results suggest that NDMA may be introduced into environmental samples by leaching from the dedicated sampling pumps.

Due to historic detections of RDX, the 30 wells screened in the QAL and weathered STF were sampled for RDX during Second Quarter 2009. RDX was reported in groundwater samples collected from two monitoring wells in two locations during the Second Quarter 2009 monitoring event, TT-MW2-13 located in Area K and TT-MW2-24 located in the former WDA, at concentrations of 0.54 µg/L and 5.9 µg/L respectively. The DWNL for RDX is 0.3 µg/L.

Table 3-10 NDMA Detections with Purge Method

Sample Name	Date Sampled	NDMA (µg/L)	Analytical Method	Pump Type	Purge Rate	Comments
TT-MW2-1	09/27/04	<0.00055	E1625C	Grundfos		
TT-MW2-1	02/16/05	<0.00055	E1625C	Grundfos	0.5 gpm	
TT-MW2-1	06/27/06	<0.00048	E1625C	Blatypus	110 ml/min	
TT-MW2-1	06/01/09	<0.00048	E1625C	Blatypus	140 ml/min	
TT-MW2-2	09/27/04	<0.00055	E1625C	Grundfos		
TT-MW2-2	02/16/05	<0.00055	E1625C	Grundfos	0.5 gpm	
TT-MW2-3	09/27/04	<0.00055	E1625C	Grundfos		
TT-MW2-3	02/16/05	<0.00055	E1625C	Grundfos	0.5 gpm	
TT-MW2-3	06/27/06	<0.00048	E1625C	Grundfos	0.25 gpm	
TT-MW2-4S	09/27/04	<0.00055	E1625C	Grundfos		
TT-MW2-4S	02/16/05	<0.00055	E1625C	Grundfos	1.5 gpm	purged dry, sampled with bailer
TT-MW2-4S	05/26/09	<0.00048	E1625C	Blatypus	30 ml/min	
TT-MW2-4D	09/27/04	<0.00055	E1625C	Grundfos		
TT-MW2-4D	02/16/05	<0.00055	E1625C	Grundfos	1.5 gpm	purged dry, sampled with bailer
TT-MW2-5	06/26/06	<0.00048	E1625C	Blatypus	120 ml/min	
TT-MW2-5	05/28/09	<0.00048	E1625C	Blatypus	80 ml/min	
TT-MW2-6S	05/19/09	<0.00048	E1625C	Blatypus	45 ml/min	
TT-MW2-7	11/06/06	<0.002	E1625C	Peristaltic	450 ml/min	
TT-MW2-7	05/28/09	<0.00048	E1625C	Blatypus	180 ml/min	
TT-MW2-8	11/06/06	<0.002	E1625C	Peristaltic	400 ml/min	
TT-MW2-8	05/22/09	<0.00048	E1625C	Blatypus	110 ml/min	
TT-MW2-9S	05/28/09	<0.00048	E1625C	Blatypus	70 ml/min	
TT-MW2-10	06/01/09	<0.00048	E1625C	Blatypus	65 ml/min	
TT-MW2-11	10/05/06	0.00889	E1625C	Grundfos	0.5 gpm	purged dry, sampled with bailer
TT-MW2-11	05/28/08	0.00202	E1625C	Blatypus	110 ml/min	
TT-MW2-11	05/20/09	<0.00048	E1625C	Blatypus	70 ml/min	
TT-MW2-12	10/05/06	0.00759	E1625C	Grundfos	1.0 gpm	purged dry, sampled with bailer
TT-MW2-12	05/22/08	0.00214	E1625C	Blatypus	30 ml/min	
TT-MW2-12	06/03/09	<0.00048	E1625C	Blatypus	30 ml/min	
TT-MW2-13	05/26/09	<0.00048	E1625C	Blatypus	100 ml/min	
TT-MW2-14	11/20/06	0.00305	E1625C	Grundfos	0.5 gpm	purged dry, sampled with bailer
TT-MW2-14	05/28/08	<0.002	E1625C	Blatypus	40 ml/min	
TT-MW2-14	06/02/09	<0.00048	E1625C	Blatypus	40 ml/min	
TT-MW2-16	05/26/09	<0.00048	E1625C	Blatypus	70 ml/min	
TT-MW2-17S	05/29/09	<0.00048	E1625C	Blatypus	30 ml/min	
TT-MW2-19S	05/22/09	0.0081	E1625C	Blatypus	60 ml/min	
TT-MW2-19S	06/15/09	<0.00048	E1625C	Blatypus	145 ml/min	
TT-MW2-19S	06/15/09	**0.017**	SW8270C SIM	Blatypus	145 ml/min	
TT-MW2-19S	08/24/09	**0.02 Jdf**	E521	Blatypus	140 ml/min	
TT-MW2-19S	09/23/09	0.004	E521	Blatypus	150 ml/min	

Notes:

NDMA - N-Nitrosodimethylamine
gpm - Gallons per minute
ml/min Milliliters per minute
µg/L - Micrograms per liter
Bold - California Department of Health Services drinking water notification level of 0.01 µg/L exceeded.
< # - Method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
B - The sample result was less than 5 times blank contamination. Cross contamination is suspected.
U - The analyte was analyzed for , but was not detected above the MDL.
a - The analyte was found in the method blank.
b - The surrogate spike recovery was outside control limits.
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.
d - The Laboratory Control Sample (LCS) recovery was outside control limits.
f - The duplicate Relative Percent Difference (RPD) was outside the control limit
q - The analyte detected was below the Practical Quantitation Limit (PQL).

Table 3-10 NDMA Detections with Purge Method (continued)

Sample Name	Date Sampled	NDMA (µg/L)	Analytical Method	Pump Type	Purge Rate	Comments
TT-MW2-19D	08/24/09	0.003 Jd	E521	Blatypus	40 ml/min	
TT-MW2-19D	09/24/09	0.003	E521	Blatypus	40 ml/min	
TT-MW2-20S	05/22/09	<0.00048	E1625C	Blatypus	180 ml/min	
TT-MW2-20S	08/24/09	0.0009 Jdq	E521	Blatypus	190 ml/min	
TT-MW2-20S	09/23/09	<0.0007 UJbc	E521	Blatypus	250 ml/min	
TT-MW2-20D	08/24/09	0.006 Jd	E521	Blatypus	90 ml/min	
TT-MW2-20D	09/23/09	0.009	E521	Blatypus	85 ml/min	
TT-MW2-21	05/20/09	**0.012**	E1625C	Blatypus	80 ml/min	
TT-MW2-21	09/02/09	0.0054 Ba	SW8270C SIM	Blatypus	60 ml/min	
TT-MW2-21	09/25/09	0.002	E521	Blatypus	110 ml/min	
TT-MW2-22	05/19/09	<0.00048	E1625C	Blatypus	75 ml/min	
TT-MW2-23	05/29/09	<0.00048	E1625C	Blatypus	100 ml/min	
TT-MW2-24	05/29/09	**0.018**	E1625C	Blatypus	130 ml/min	
TT-MW2-24	09/01/09	**0.093 Jf**	SW8270C SIM	Blatypus	140 ml/min	
TT-MW2-24	09/25/09	<0.0007	E521	Blatypus	135 ml/min	
TT-MW2-25	05/20/09	0.0078	E1625C	Blatypus	70 ml/min	
TT-MW2-25	09/02/09	**0.01**	SW8270C SIM	Blatypus	130 ml/min	
TT-MW2-25	09/25/09	<0.0007	E521	Blatypus	145 ml/min	
TT-MW2-26	05/20/09	**0.011**	E1625C	Blatypus	60 ml/min	
TT-MW2-26	09/02/09	**0.052**	SW8270C SIM	Blatypus	44 ml/min	
TT-MW2-26	09/25/09	0.005	E521	Blatypus	95 ml/min	
TT-MW2-27	05/21/09	<0.00048	E1625C	Blatypus	80 ml/min	
TT-MW2-28	05/27/09	0.0095	E1625C	Blatypus	90 ml/min	
TT-MW2-28	09/01/09	**0.042**	SW8270C SIM	Blatypus	95 ml/min	
TT-MW2-28	09/25/09	0.005 Jb	E521	Blatypus	90 ml/min	
TT-MW2-29B	05/21/09	**0.019**	E1625C	Blatypus	50 ml/min	
TT-MW2-29B	08/31/09	<0.001	SW8270C SIM	Blatypus	40 ml/min	
TT-MW2-29B	09/24/09	0.008	E521	Blatypus	50 ml/min	
TT-MW2-33A	05/27/09	<0.00048	E1625C	Blatypus	120 ml/min	
TT-MW2-34A	05/27/09	<0.00048	E1625C	Blatypus	40 ml/min	
TT-MW2-36A	05/29/09	0.0086	E1625C	Blatypus	120 ml/min	
TT-MW2-36A	08/31/09	<0.001	SW8270C SIM	Blatypus	120 ml/min	
TT-MW2-36A	09/24/09	**0.01 Jf**	E521	Blatypus	110 ml/min	
TT-MW2-38A	05/26/09	<0.00048	E1625C	Blatypus	65 ml/min	
TT-MW2-39	05/27/09	<0.00048	E1625C	Blatypus	155 ml/min	

Notes:

NDMA - N-Nitrosodimethylamine
gpm - Gallons per minute
ml/min Milliliters per minute
µg/L - Micrograms per liter
Bold - California Department of Health Services drinking water notification level of 0.01 µg/L exceeded.
< # - Method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
B - The sample result was less than 5 times blank contamination. Cross contamination is suspected.
U - The analyte was analyzed for , but was not detected above the MDL.
a - The analyte was found in the method blank.
b - The surrogate spike recovery was outside control limits.
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.
d - The Laboratory Control Sample (LCS) recovery was outside control limits.
f - The duplicate Relative Percent Difference (RPD) was outside the control limit
q - The analyte detected was below the Practical Quantitation Limit (PQL).

TCE was reported in groundwater samples collected from three monitoring wells, TT-MW2-21, TT-MW2-22, and TT-MW2-24, located in the former WDA during the Second Quarter 2009 monitoring event at concentrations of 1.6 µg/L, 260 µg/L, and 98 µg/L respectively and in monitoring wells TT-MW2-11, located in Area M, and TT-MW2-17D located in Area K at concentrations of 6.1 µg/L, and 1.2 µg/L respectively. TCE was reported in groundwater samples collected from one monitoring well, TT-MW2-37A, located downgradient of the former WDA during the Third Quarter 2009 monitoring event at a concentration of 0.65 µg/L. The MCL for TCE is 5 µg/L. Figure 3-6 presents a TCE isoconcentration map for groundwater samples collected during the Second Quarter 2009 monitoring event. Time-series graphs of TCE are provided in Appendix I.

Other organic analytes detected at low levels and below their respective MCLs or DWNLs during the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events were acetone, 2-butanone, bromomethane, carbon disulfide, chloromethane, chloroform, 1,1-DCA, cis-1.2-DCE, ethylbenzene, 2-hexanone, 4-methyl-2-pentanone, styrene, toluene, 1,1,2-trichloroethane, tetrachloroethene (PCE), vinyl chloride, m,p-xylenes, and o-xylenes. None of these compounds exceeded their MCL or DWNL, and generally they have not been detected consistently from monitoring event to monitoring event.

3.5.2 Organic COPCs

Based on the analysis above and the concentrations detected during previous groundwater monitoring events, TCE, methylene chloride, and 1,4-dioxane have been identified as primary COPCs at the Site. Based on the limited and relatively low RDX concentrations reported in groundwater samples collected from the Site, RDX is regarded as a secondary COPCs. NDMA will be further evaluated to determine whether the source is groundwater contamination or if it is being introduced as cross contamination from an outside source (i.e., dedicated sampling pumps). The remaining 21 organic analytes were either detected below their respective MCL or DWNL or at relatively low concentrations. Their distribution and concentration in groundwater will continue to be monitored and the results evaluated. Figure 3-7 presents sampling results for methylene chloride, RDX, and NDMA for groundwater samples collected during the Second Quarter 2009 monitoring event.

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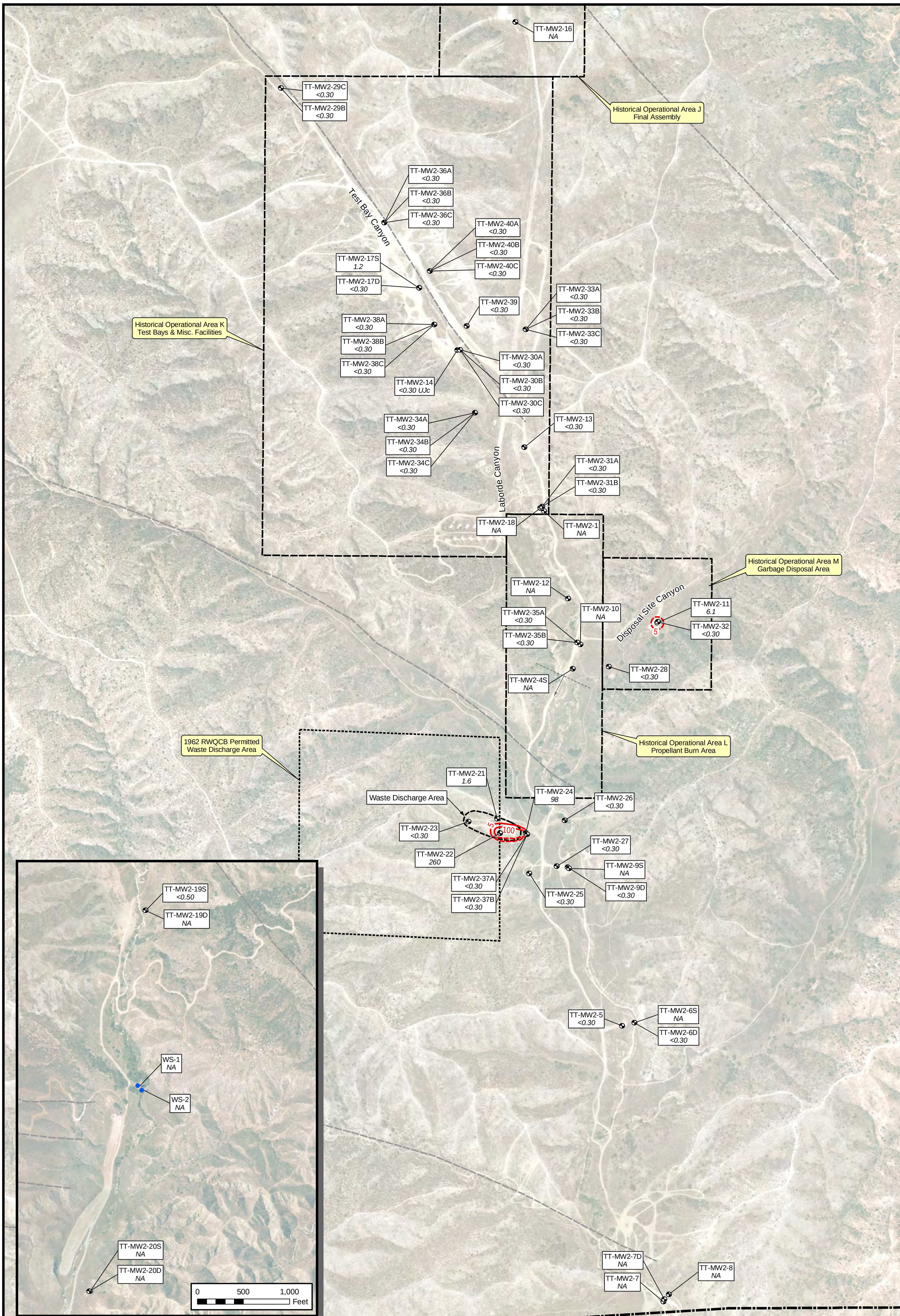


LEGEND

- Well Sample Location with Trichloroethene Concentration (µg/L)
- Spring Sample Location with Trichloroethene Concentration (µg/L)
- Trichloroethene Isoconcentration contour (Dashed where inferred)
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- Waste Discharge Area
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

0 300 600 Feet

Adapted from: April 2007 aerial photograph.

Faults from the, *Site 2 Lineament Study, Tetra Tech, 2009.*

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

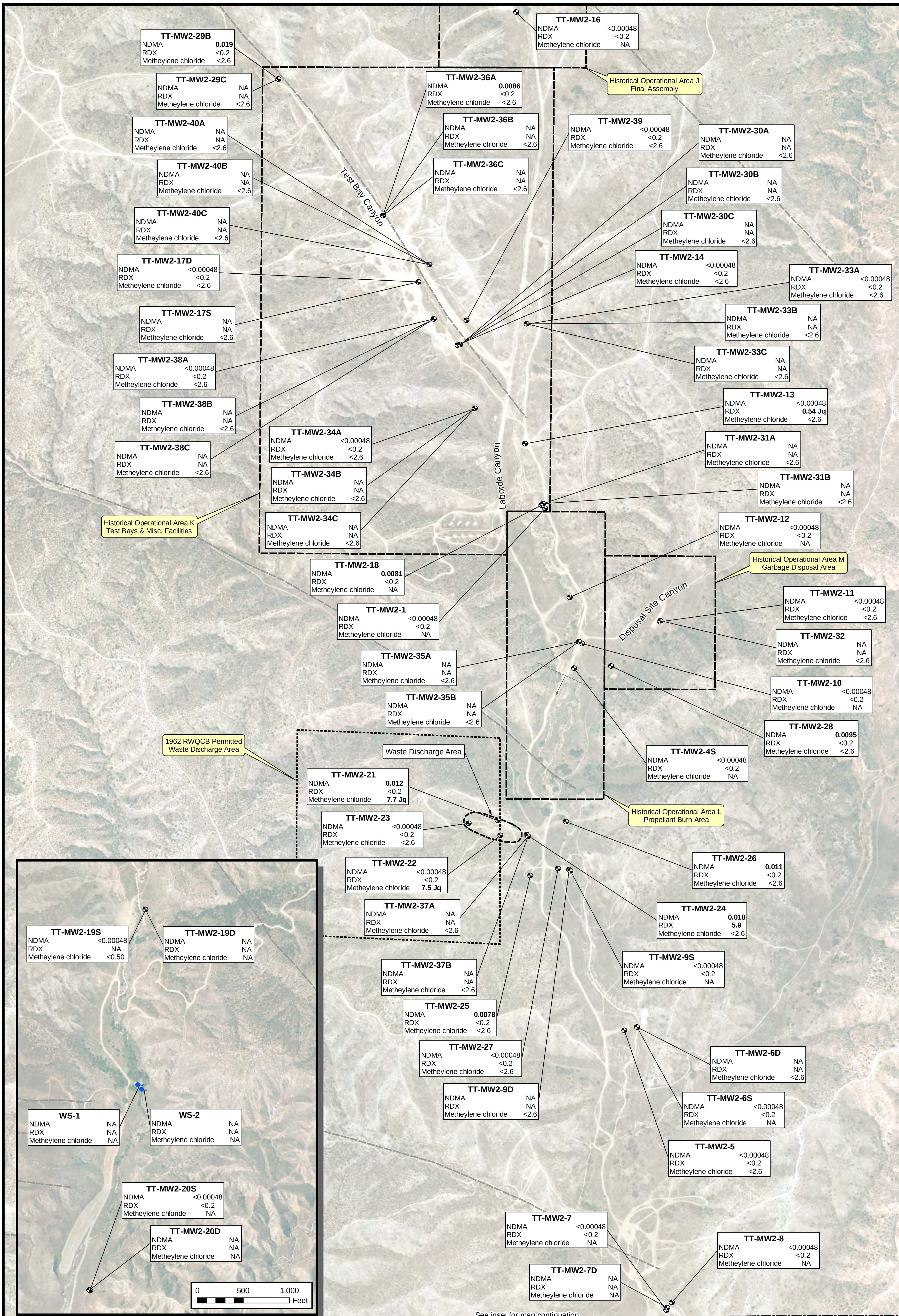
Beaumont Site 2

Figure 3-6

Trichloroethene (TCE) Isoconcentration Map (µg/L)

TETRA TECH

X:\GIS\Lockheed S2_Q2Q309\COPC_Q209.mxd



LEGEND

- Monitoring Well Location
- Spring Location
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- Waste Discharge Area
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

Adapted from: April 2007 aerial photograph.

Faults from the *Site 2 Lineament Study, Tetra Tech, 2009.*

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

Bold indicates corresponding MCL or DWNL exceeded.

Concentration shown are in micrograms per liter (μg/L)

MCL - Maximum Contamination Level.

RDX - Research Department Composition X.

NDMA - N-Nitrosodimethylamine.

0 300 600 Feet

N

Beaumont Site 2

Figure 3-7

COPC Sampling Results-Second Quarter 2009

TETRA TECH

3.5.3 Inorganic Analytes

Seven inorganic analytes, perchlorate, arsenic, barium, chromium, iron, nickel, and vanadium, were detected in groundwater above a published MCL or DWNL. Tables 3-4 and 3-6 present a summary of validated inorganic analyte concentrations reported in groundwater samples collected during the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events.

Perchlorate was reported in groundwater samples collected from 33 of 55 locations sampled during the Second Quarter 2009 groundwater monitoring event at concentrations up to 120,000; and 18 of 38 locations sampled during the Third Quarter 2009 monitoring event, at concentrations up to 190,000 μg/L. The California MCL for perchlorate is 6 μg/L. Figure 3-8 presents a perchlorate isoconcentration map for groundwater samples collected for the Second Quarter 2009. Time-series graphs of perchlorate are provided in Appendix I.

Total arsenic was detected in 59 of 60 unfiltered samples collected from groundwater monitoring wells during the Second Quarter 2009 groundwater monitoring event. The concentrations ranged from 0.000618 to 0.0427 mg/L. Eleven of the wells had concentrations that exceeded the 0.01 mg/L MCL for arsenic.

Generally, concentrations of arsenic in wells screened in the STF are elevated. Groundwater in many of these same wells, including those with arsenic concentrations above the MCL, exhibit low DO and low ORP (reduced conditions). Therefore, the elevated arsenic concentrations in these wells may be naturally occurring.

Total barium was detected in 60 of 60 unfiltered samples collected from groundwater monitoring wells during the Second Quarter 2009 groundwater monitoring event. The concentrations ranged from 0.000768 to 1.96 mg/L. One well, TT-MW2-37A, had a concentration that exceeded the 1.0 mg/L MCL for barium.

Total chromium was detected in 22 of 60 unfiltered samples collected from groundwater monitoring wells during the Second Quarter 2009 groundwater monitoring event. The concentrations ranged from 0.000628 to 0.0528 mg/L. One well, TT-MW2-37A, had a concentration that exceeded the 0.05 mg/L MCL for chromium.

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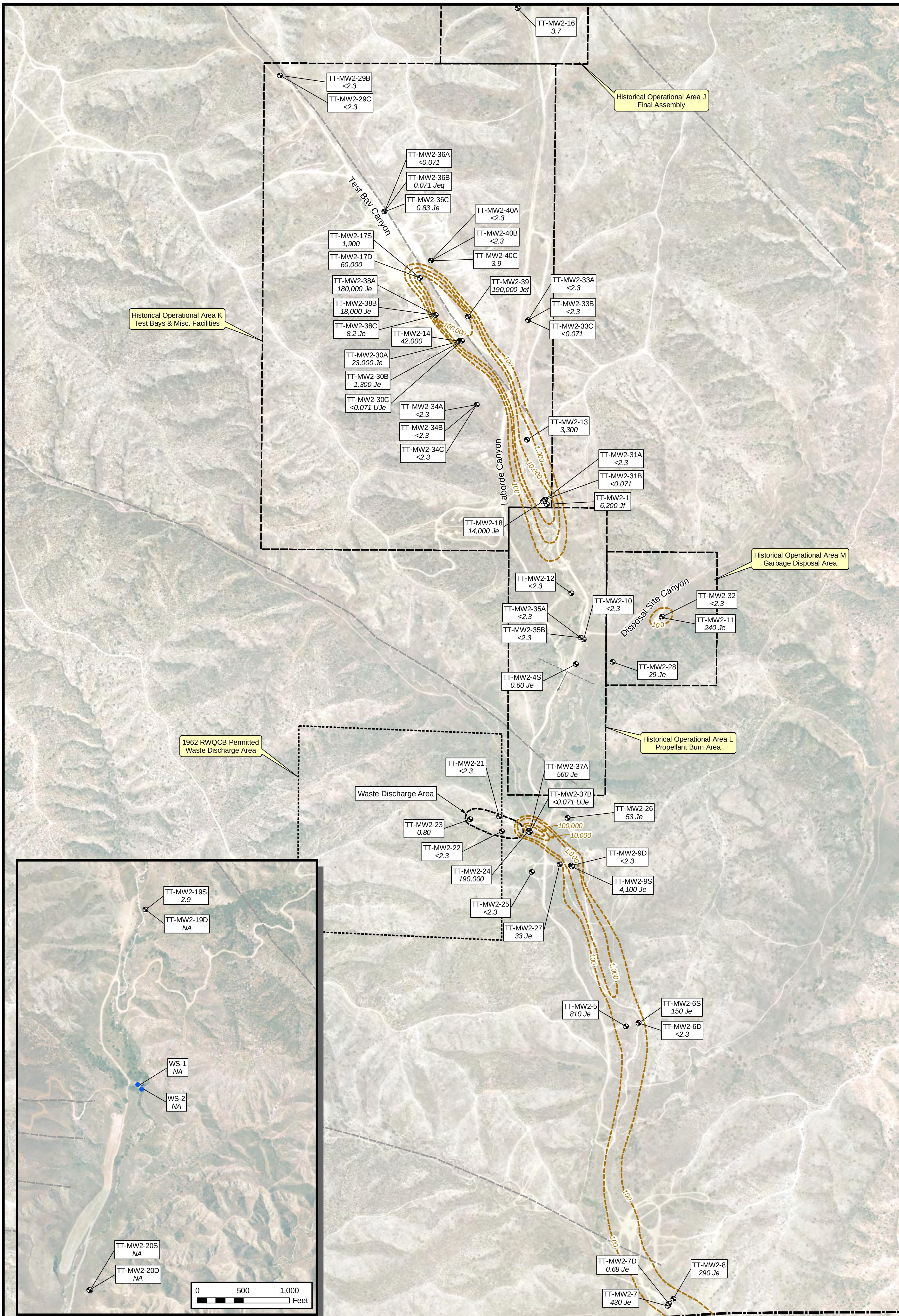

LEGEND

- Well Sample Location with Perchlorate Concentration (µg/L)
- Spring Sample Location with Perchlorate Concentration (µg/L)
- Perchlorate Isoconcentration Contour (Dashed where inferred)
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- Waste Discharge Area
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

0 300 600 Feet

Adapted from: April 2007 aerial photograph.

Faults from the, *Site 2 Lineament Study, Tetra Tech, 2009.*

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

Beaumont Site 2

Figure 3-8

Perchlorate Isoconcentration Map (µg/L)

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Total iron was detected in 8 of 11 unfiltered samples collected from groundwater monitoring wells during the Second Quarter 2009 groundwater monitoring event. The concentrations ranged from 0.0407 to 2.10 mg/L. Three of the wells had concentrations that exceeded the 0.3 mg/L MCL for iron.

Total nickel was detected in 58 of 60 unfiltered samples collected from groundwater monitoring wells during the Second Quarter 2009 groundwater monitoring event. The concentrations ranged from 0.000199 to 0.209 mg/L. Two wells had concentrations that exceeded the 0.1 mg/L MCL for nickel.

Total vanadium was detected in 52 of 60 unfiltered samples collected from groundwater monitoring wells during the Second Quarter 2009 groundwater monitoring event. The concentrations ranged from 0.000822 to 0.0817 mg/L. Two wells had concentrations that exceeded the 0.05 mg/L DWNL for vanadium.

3.5.4 Inorganic COPCs

Based on the analysis above and the concentrations detected during previous groundwater monitoring events, perchlorate is the only inorganic primary COPC identified at the Site. No secondary COPCs were identified. Metals will continue to be evaluated on an annual basis and as additional monitoring wells are added to the network.

3.6 SURFACE WATER SAMPLING RESULTS

Surface water samples were collected for perchlorate at two locations, WS-1 and WS-2, from a spring on the former Wolfskill property during the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events (Figure 2-4). During Second Quarter 2009 perchlorate was not detected above the MCL in either WS-1 or WS-2. During Third Quarter 2009 perchlorate was not detected above the MCL in WS-1 or WS-2. The MCL for perchlorate is 6 µg/L.

Table 3-11 presents a summary of validated perchlorate concentrations reported in surface water samples collected during the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events.

Table 3-11 Summary of Detected Perchlorate in Surface Water

Sample Name	Sample Date	Perchlorate µg/L
All results reported in µg/L unless otherwise stated		
WS-1	5/22/2009	<0.071
WS-1	8/24/2009	<0.071
WS-2	6/3/2009	<0.071
WS-2	8/24/2009	0.10
	Method Detection Limit	0.071
	MCL	6

Notes:
µg/L - Micrograms per liter
MCL - California Department of Health Services Maximum Contaminant Level.
< # - Method detection limit concentration is shown.

3.7 GENERAL MINERAL SAMPLING

All site monitoring wells are sampled for general minerals after they have been in place for a minimum of six months. Thirty-two of the new monitoring wells, TT-MW2-25 through TT-MW2-28 and TT-MW2-29B through TT-MW2-40C were sampled for general minerals during August 2009 (Third Quarter 2009). TT-MW2-29A was dry and was not sampled. The previously existing wells were sampled for general minerals during previous monitoring events. A summary of the results for new wells is included in Table 3-12.

The most abundant dissolved constituents measured in groundwater are the major ions, which can be both positively charged (cations) and negatively charged (anions) [Bartos, et. al., 2002]. Because of the requirements of electroneutrality, cations and anions are present at equal concentrations in water and comprise most of the dissolved solids in groundwater. The most abundant cations present in water are calcium (Ca^{++}), magnesium (Mg^{++}), sodium (Na^{+}), and potassium (K^{+}). The most abundant anions are bicarbonate (HCO_3), chloride (Cl), and sulfate (SO_4). By measuring the concentrations of these ions in groundwater samples, the ionic composition of the water is determined and the chemical quality of the water can be characterized and described.

The ionic composition of water is used to classify it into ionic types based on the dominant dissolved cation and anion, expressed in milliequivalents per liter (meq/L) [Bartos, et. al., 2002]. A milliequivalent (meq) is a measurement of the molar concentration of the ion, normalized by the ionic charge of the ion. Table 3-13 presents a summary of the general minerals data reported in milliequivalents.

Stiff diagrams are a visual method to compare the relative proportions of ions in water. Ion concentrations in mg/L are converted to meq/L. Cations are plotted on the left side of the diagram, with anions plotted on the right. The lengths of the diagram vertices are proportional to ionic concentration. Different ion combinations can be plotted in Stiff diagrams depending on the major ion geochemistry. Waters my then be classified into types based on the dominant cations and anions.

In general, calcium and magnesium cations change from dominant to subordinate cations in relation to total cations with increasing depth (age) and with increasing distance (age) from sources of recharge. The shallower wells screened in the QAL/wSTF at the Site generally show a mixed sodium and calcium cation signature with a bicarbonate dominant or a mixed bicarbonate and sulfate anion signature. The mixed anion signature appears to be more prevalent in the southern half of the Site. The deeper wells screened in the STF at the Site generally show little or no calcium or magnesium resulting in a sodium dominant cation signature with a bicarbonate dominant or a mixed bicarbonate and sulfate anion signature. The dominance of sodium seems to be the most significant characteristic distinguishing the wells screened in the QAL/wSTF from the wells screened in the STF (Stiff diagrams, Appendix J).

Site 2 has elevated levels of perchlorate in the groundwater and reduced conditions are exhibited in some of the wells. Under reducing conditions, perchlorate will reduce to oxygen and chloride, resulting in increased levels of chloride anions. There may be a correlation between elevated perchlorate and elevated chloride in some of the wells on the Site.

The dominant dissolved ion must be greater than 50 % of the total. For example, water classified as a sodium-bicarbonate type water contains more than 50 % of the total cation milliequivalents as sodium and more than 50 % of the total anion milliequivalents as bicarbonate. If no cation or anion is dominant (greater than 50 %), the water is classified as mixed and the two most common cations or anions in decreasing order of abundance are used to describe the water type.

Table 3-12 Summary of Validated General Minerals Results - Third Quarter 2009

Sample Location	Sample Date	Potassium K (mg/L)	Sodium Na (mg/L)	Calcium Ca (mg/L)	Magnesium Mg (mg/L)	Chloride Cl (mg/L)	Sulfate SO_4 (mg/L)	Alkalinity,Total -mg/L	Carbonate CO_3 (mg/L) (1)	Bicarbonate HCO_3 (mg/L) (1)	Nitrate NO_3 (mg/L) (2)	Total Dissolved Solids (mg/L)	Per chlorate (mg/L)	ORP (mv)	DO (mg/L)	pH
TT-MW2-25	9/2/2009	1.4	83	2.2	0.80 Jq	54	24	98	<1.7	120	<0.11	220	0.12	24.8	0.47	8.87
TT-MW2-26	9/2/2009	3.4	220	51	7.1	170	160	290	<1.7	350	0.99	**800**	**64**	-124.9	0.16	6.51
TT-MW2-27	9/2/2009	2.1	170	21	2.4	110	72	260	<1.7	320	<0.11	**540**	**100**	22.9	0.43	7.94
TT-MW2-28	9/1/2009	5.1	400	22	6.3	**250**	98	640	<6.8	780	3.0	**1,200**	**26**	-47.8	1.32	7.29
TT-MW2-29B	8/31/2009	1.4	110	6.9	2	140	27	53	<1.7	62	<0.11	320	0.14	48.7	1.09	8.76
TT-MW2-29C	8/31/2009	1.9	88	11	3.8	57	15	150	<1.7	180	<0.11	270	<0.071	-198.1	0.38	7.59
TT-MW2-30A	8/26/2009	0.70 Jq	120	8.8	0.82 Jq	110	31	100	<1.7	120	3.2	390	**11,000**	-214.3	0.62	8.33
TT-MW2-30B	8/26/2009	3.9	290	35	7.2	170	**460**	120	<1.7	150	<0.11	**1,100**	**67**	-108.8	0.17	7.83
TT-MW2-30C	8/26/2009	2.2	210	14	1.7	220	89	120	<1.7	150	<0.11	**660**	<0.071	-336.9	0.13	7.96
TT-MW2-31A	9/1/2009	3.4	180	15	4.4	160	190	110	<1.7	130	<0.11	**630**	<0.071	-131.3	0.29	7.91
TT-MW2-31B	9/1/2009	2.5	170	9.3	2.9	64	190	150	<1.7	190	<0.11	**540**	<0.35	-268.0	0.02	8.01
TT-MW2-32	9/1/2009	<0.50	55	1.4	<0.50	18	20	72	16	56	<0.11	170	<0.071	-126.2	0.53	9.24
TT-MW2-33A	8/26/2009	3.2	110	14	4.7	100	16	150	<1.7	180	<0.11	370	<0.071	26.2	0.25	8.64
TT-MW2-33B	8/26/2009	1.3	84	4.1	0.97 Jq	65	15	96	<1.7	120	<0.11	260	<0.071	-137.7	1.08	7.60
TT-MW2-33C	8/26/2009	0.83 Jq	80	4.3	0.53 Jq	50	4.5	100	<1.7	120	<0.11	250	<0.071	-118.5	0.15	8.19
TT-MW2-34A	8/31/2009	6.4	490	73	11	**960**	21	71	<1.7	87	<0.11	**1,800**	0.27	32.4	0.35	8.36
TT-MW2-34B	8/31/2009	1.1	210	11	1.3	240	45	160	<1.7	200	<0.11	**600**	<0.071	-177.6	0.57	7.87
TT-MW2-34C	8/31/2009	<0.50	93	2.8	<0.50	120	19	42	6.0	39	<0.11	290	<0.071	-288.9	0.13	9.37
TT-MW2-35A	9/1/2009	2.3	470	86	4.1	90	**1200**	68	<1.7	83	<0.11	**1,900**	<0.071	-242.1	0.13	7.93
TT-MW2-35B	9/1/2009	2.1	81	4.4	1.9	36	4	130	<1.7	160	<0.11	260	<0.071	-182.0	0.16	8.64
TT-MW2-36A	8/31/2009	1.9	75	6	<0.50	52	15	110	4.8	120	<0.11	250	<0.071	-203.1	0.50	8.63
TT-MW2-36B	8/27/2009	1.8	120	10	2.4	55	150	88	<1.7	110	<0.11	410	<0.071	-85.6	0.25	8.25
TT-MW2-36C	8/27/2009	55	400	46	<1.0	25	11	960	82	<6.8	<0.11	**1,000**	0.68	-381.5	0.27	11.86
TT-MW2-37A	9/2/2009	110	460	280	<0.50	2.7 Jc	7.3	2,000	76	<6.8	<0.11	**1,700**	**2,100**	-157.3	0.58	12.24
TT-MW2-37B	9/2/2009	3.7	220	8.5	1.5	82	**260**	160	9.6 Jq	180	<0.11	**690**	<0.35	-211.0	0.05	8.78
TT-MW2-38A	8/27/2009	3.4	230	69	10	**330**	32	100	<1.7	120	**11**	**1,100**	**190,000**	37.3	0.29	8.14
TT-MW2-38B	8/27/2009	1.9	100	14	<0.50	110	37	73	30	<1.7	<0.11	370	**19,000**	28.3	0.34	10.35
TT-MW2-38C	8/27/2009	2.7	170	11	2.6	69	200	85	<1.7	100	<0.11	480	0.51	-216.2	0.17	8.48
TT-MW2-39	8/27/2009	5.2	260	180	17	**650**	51	99	<1.7	120	**20**	**1,800**	**82,000**	-70.4	1.27	7.69
TT-MW2-40A	8/27/2009	4.4	110	31	11	76	21	280	<1.7	340	<0.11	440	<0.071	-215.2	0.69	7.67
TT-MW2-40B	8/27/2009	2.9	250	16	3.6	230	150	200	<1.7	240	<0.11	**760**	2.8	-84.3	0.12	8.11
TT-MW2-40C	8/27/2009	2.7	91	3.3	0.61 Jq	81	4.3	83	<1.7	100	<0.11	310	<0.071	-252.0	0.03	8.93
Method Detection Limit		0.5	0.5	0.5	0.5	0.5	0.37	2	1.7 - 6.8	1.7 - 6.8	0.11	11	0.071 - 0.35	NA	NA	NA
MCL/DWNL		-	-	-	-	250	250	-	-	-	10	500	6	NA	NA	NA

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.

(1) - As calcium carbonate (CaCO3).
(2) - As nitrogen (N).
MCL - Maximum Contaminant Level.
DWNL - California Department of Health Services state drinking water notification level.
"-" - MCL or DWNL not available.
J - The analyte was positively identified, but the analyte concentration is an estimated value.
q - The analyte detected was below the Practical Quantitation Limit (PQL).
c - The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) recoveries were outside control limits.

Bold - Maximum Contaminant Level exceeded.
mg/L - Milligrams per liter.
µg/L - Micrograms per liter
mv - Millivolts
< # - Method detection limit concentration is shown.
ORP - Oxydation reduction potential.
DO - Dissolved oxgen.

Table 3-13 Summary of General Minerals Reported in Milliequivalents - Third Quarter 2009

Well	Potassium (K) meq/l	Sodium (Na) meq/l	Calcium (Ca) meq/l	Magnesium (Mg) meq/l	Chloride (Cl) meq/l	Sulfate (SO_4) meq/l	Carbonate (CO_3) meq/l	Bicarbonate (HCO_3) meq/l	Nitrate (NO_3) meq/l	Total Dissolved Solids mg/l	Watertype
TT-MW2-25	0.04	3.61	0.11	0.07	1.52	0.50	<0.06	1.97	<0.00	220	Na-HCO3-Cl
TT-MW2-26	0.09	9.57	2.55	0.58	4.80	3.33	<0.06	5.74	0.02	800	Na-HCO3-Cl-SO4
TT-MW2-27	0.05	7.39	1.05	0.20	3.10	1.50	<0.06	5.24	<0.00	540	Na-HCO3-Cl
TT-MW2-28	0.13	17.40	1.10	0.52	7.05	2.04	<0.23	12.78	0.05	1200	Na-HCO3-Cl
TT-MW2-29B	0.04	4.78	0.34	0.16	3.95	0.56	<0.06	1.02	<0.00	320	Na-Cl
TT-MW2-29C	0.05	3.83	0.55	0.31	1.61	0.31	<0.06	2.95	<0.00	270	Na-HCO3-Cl
TT-MW2-30A	0.02	5.22	0.44	0.07	3.10	0.65	<0.06	1.97	0.05	390	Na-Cl-HCO3
TT-MW2-30B	0.10	12.61	1.75	0.59	4.80	9.58	<0.06	2.46	<0.00	1100	Na-SO4-Cl
TT-MW2-30C	0.06	9.13	0.70	0.14	6.21	1.85	<0.06	2.46	<0.00	660	Na-Cl-HCO3
TT-MW2-31A	0.09	7.83	0.75	0.36	4.51	3.96	<0.06	2.13	<0.00	630	Na-Cl-SO4-HCO3
TT-MW2-31B	0.06	7.39	0.46	0.24	1.81	3.96	<0.06	3.11	<0.00	540	Na-SO4-HCO3-Cl
TT-MW2-32	<0.01	2.39	0.07	<0.04	0.51	0.42	0.53	0.92	<0.00	170	Na-HCO3-CO3-Cl
TT-MW2-33A	0.08	4.78	0.70	0.39	2.82	0.33	<0.06	2.95	<0.00	370	Na-HCO3-Cl
TT-MW2-33B	0.03	3.65	0.20	0.08	1.83	0.31	<0.06	1.97	<0.00	260	Na-HCO3-Cl
TT-MW2-33C	0.02	3.48	0.21	0.04	1.41	0.09	<0.06	1.97	<0.00	250	Na-HCO3-Cl
TT-MW2-34A	0.16	21.31	3.64	0.91	27.08	0.44	<0.06	1.43	<0.00	1800	Na-Cl
TT-MW2-34B	0.03	9.13	0.55	0.11	6.77	0.94	<0.06	3.28	<0.00	600	Na-Cl-HCO3
TT-MW2-34C	<0.01	4.05	0.14	<0.04	3.38	0.40	0.20	0.64	<0.00	290	Na-Cl
TT-MW2-35A	0.06	20.44	4.29	0.34	2.54	25.00	<0.06	1.36	<0.00	1900	Na-SO4
TT-MW2-35B	0.05	3.52	0.22	0.16	1.02	0.08	<0.06	2.62	<0.00	260	Na-HCO3-Cl
TT-MW2-36A	0.05	3.26	0.30	<0.04	1.47	0.31	0.16	1.97	<0.00	250	Na-HCO3-Cl
TT-MW2-36B	0.05	5.22	0.50	0.20	1.55	3.13	<0.06	1.80	<0.00	410	Na-SO4-HCO3-Cl
TT-MW2-36C	1.41	17.40	2.30	<0.08	0.71	0.23	2.73	<0.11	<0.00	1000	Na-CO3
TT-MW2-37A	2.81	20.01	13.97	<0.04	0.08	0.15	2.53	<0.11	<0.00	1700	Na-Ca-CO3
TT-MW2-37B	0.09	9.57	0.42	0.12	2.31	5.42	0.32	2.95	<0.00	690	Na-SO4-HCO3-Cl
TT-MW2-38A	0.09	10.00	3.44	0.82	9.31	0.67	<0.06	1.97	0.18	1100	Na-Ca-Cl
TT-MW2-38B	0.05	4.35	0.70	<0.04	3.10	0.77	1.00	<0.03	<0.00	370	Na-Cl
TT-MW2-38C	0.07	7.39	0.55	0.21	1.95	4.17	<0.06	1.64	<0.00	480	Na-SO4-Cl-HCO3
TT-MW2-39	0.13	11.31	8.98	1.40	18.33	1.06	<0.06	1.97	0.32	1800	Na-Ca-Cl
TT-MW2-40A	0.11	4.78	1.55	0.91	2.14	0.44	<0.06	5.57	<0.00	440	Na-HCO3-Cl
TT-MW2-40B	0.07	10.87	0.80	0.30	6.49	3.13	<0.06	3.93	<0.00	760	Na-Cl-HCO3-SO4
TT-MW2-40C	0.07	3.96	0.16	0.05	2.28	0.09	<0.06	1.64	<0.00	310	Na-Cl-HCO3

Notes:

mg/L - Milligrams per liter.

meq/L - Milliequivalents per liter (concentration in mg/L divided by the ion molecular weight and charge)

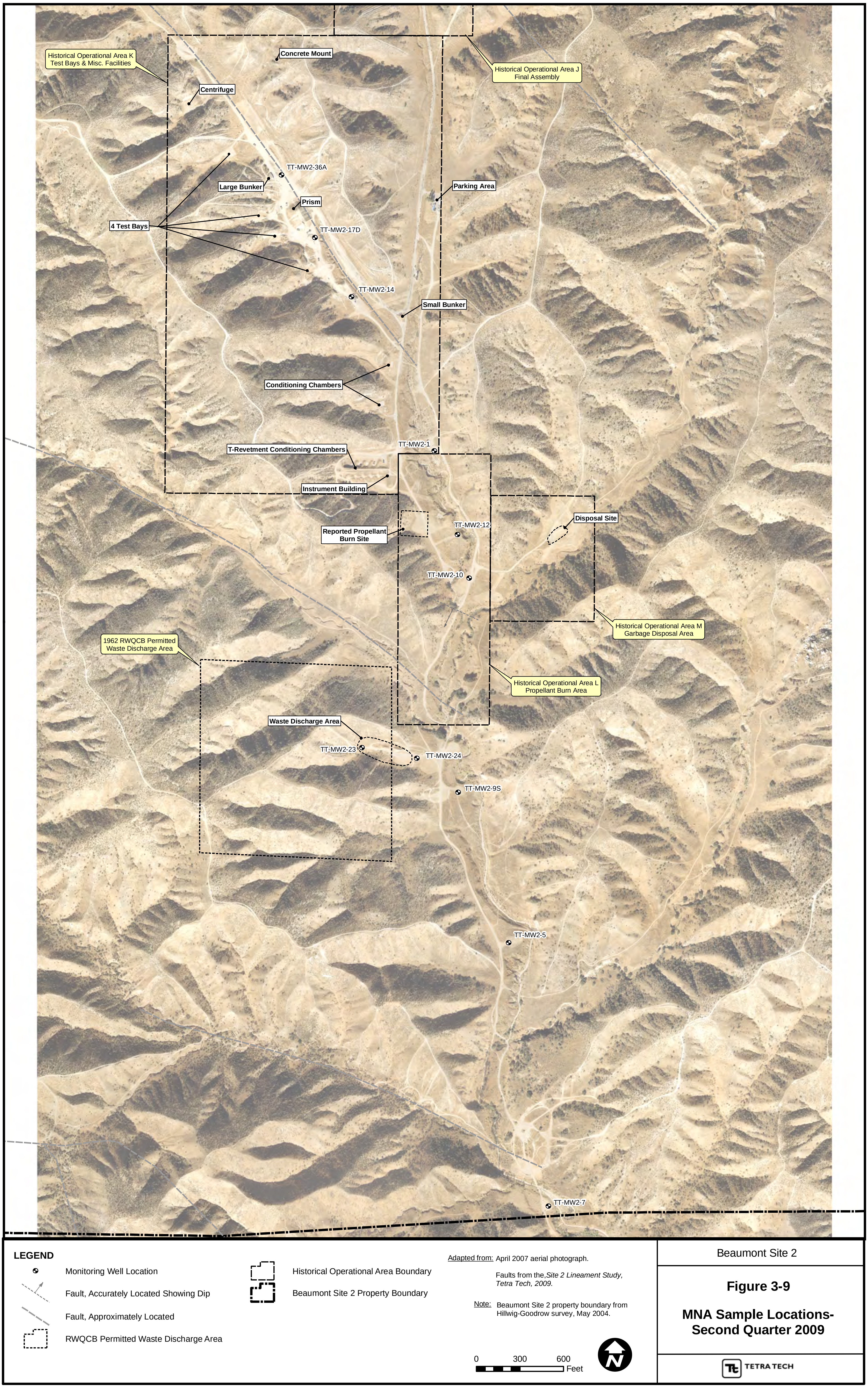
Based on the ionic composition evaluation discussed above the following monitoring wells on the Site have been designated STF monitoring wells: TT-MW2-25 through TT-MW2-33C, TT-MW2-34B through TT-MW2-36C, TT-MW2-37B, TT-MW2-38B, TT-MW2-38C, and TT-MW2-40A through TT-MW2-40C and monitoring wells TT-MW2-34A, TT-MW2-37A, TT-MW2-38A and TT-MW2-39 have been designated QAL/wSTF

3.8 MONITORED NATURAL ATTENUATION SAMPLING

Eleven monitoring wells, six associated with the groundwater perchlorate plume originating from the former Test Bay Area (TT-MW2-36A, TT-MW2-17D, TT-MW2-14, TT-MW2-1, TT-MW2-12 and TT-MW2-10), and five associated with the groundwater perchlorate plume originating from the former WDA (TT-MW2-23, TT-MW2-24, TT-MW2-9S, TT-MW2-5, and TT-MW2-7) were sampled and analyzed for monitored natural attenuation parameters (MNA) during the Second Quarter 2009 monitoring event. Samples for laboratory analysis were analyzed for total organic carbon (TOC), dissolved organic carbon (DOC), total iron, sulfate, methane, hydrogen, and volatile fatty acids (VFAs). Ferrous iron and sulfide were analyzed using a field instrument. Additionally, DO and ORP were monitored with field instruments during purging and sampling. Figure 3-9 presents monitoring well locations sampled for MNA during the Second Quarter 2009 monitoring event. Table 3-14 presents a summary of detected analytes and field measurements.

Former Test Bay Area

The aquifer geochemistry in the vicinity of the upgradient monitoring well (TT-MW2-36A) located outside of the perchlorate plume indicates an anaerobic environment as demonstrated by the low DO and ORP values. Sulfate was detected at a relatively low concentration of 3.3 mg/L compared to other sample locations in this area. Sulfide was detected at 800 µg/L. The relative concentrations of sulfate and sulfide indicate a sulfate-reducing environment in this vicinity. Nitrate, which is often a competitor for perchlorate biodegradation, was detected at a concentration of 0.33 mg/L which is relatively low as compared to other locations in this area. Acetic acid and TOC were detected at relatively higher concentrations in groundwater from this well, (3.3 mg/L and 4.7 mg/L), when compared to other locations in this area, which is potentially the reason for the sulfate-reducing conditions and the low DO and ORP.



Adapted from: April 2007 aerial photograph.

Faults from the, *Site 2 Lineament Study, Tetra Tech, 2009.*

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

Beaumont Site 2

Figure 3-9

MNA Sample Locations- Second Quarter 2009

TETRA TECH

Table 3-14 Summary of Validated Detected Natural Attenuation Analytes and Field Measurements –Second Quarter 2009

		Field Parameters				Analytes													
Sample Location	Sample Date	DO - mg/L	ORP - mVs	Sulfide - mg/L	Ferrous Iron - mg/L	Perchlorate - ug/L	Acetic Acid -mg/L	Butyric Acid -mg/L	Lactic Acid and HIBA - mg/L	Pentanoic Acid -mg/L	Propionic Acid -mg/L	Pyruvic Acid -mg/L	Dissolved Organic Carbon - mg/L	Total Organic Carbon - mg/L	Hydrogen - nM	Methane - ug/L	Nitrate (as N) -mg/L	Sulfate -mg/L	Iron -mg/L
TT-MW2-1	6/1/2009	3.90	47.8	0.00	0.00	**6,200 Jf**	0.150	<0.006	0.230	<0.016	<0.002	<0.026	1.9 Jf	1.5	6.000	<0.00784	7.6	37	0.0407 Jq
TT-MW2-5	5/28/2009	3.15	138.7	0.01	0.09	**810 Je**	0.210	<0.006	0.380	<0.016	<0.002	0.810	2.8	1.9	10.000	<0.00784	**10**	150	0.174
TT-MW2-7	5/28/2009	0.70	115.4	0.01	0.02	**430 Je**	0.190	<0.006	0.360	<0.016	<0.002	<0.026	2.3	2.2	1.000	<0.00784	8.0	170	0.0449 Jq
TT-MW2-9S	5/28/2009	2.44	106.4	0.00	0.00	**4,100 Je**	0.170	<0.006	0.200	<0.016	<0.002	<0.026	3.2	2.5	8.600	0.590 Jq	**11**	130	0.0429 Jq
TT-MW2-10	6/1/2009	2.57	41.8	0.01	0.05	ND < 2.3	0.087	<0.006	0.160	<0.016	<0.002	<0.026	2.9	1.7	6.800	0.0900 Jq	0.024 Jq	77	0.0697
TT-MW2-12	6/3/2009	2.76	-74.5	0.01	0.00	ND < 2.3	0.049 Jq	<0.006	0.170	<0.016	0.015 Jq	<0.026	3.0	2.0	3.500	0.170 Jq	1.0	58	0.275
TT-MW2-14	6/2/2009	4.48	64.8	0.00	0.03	**42,000**	0.069 Jq	<0.006	<0.042	<0.016	<0.002	<0.026	3.6	2.8	15.000	0.300 Jq	**14**	200	**0.393**
TT-MW2-17D	6/2/2009	0.29	38.7	0.00	0.04	**60,000**	0.240	<0.006	0.170	<0.016	<0.002	0.130	3.7	1.9	7.100	0.340 Jq	7.0	58	0.0426 Jq
TT-MW2-23	5/29/2009	0.51	-130.8	0.16	0.21	0.8	1.100	0.067 Jq	0.470	0.370	0.200	<0.026	1.5	1.1	3.900	22.3	<0.017	26	**2.10**
TT-MW2-24	5/29/2009	0.46	132.2	0.00	0.00	**190,000**	0.320 Jf	0.170	0.310	<0.016	0.210	<0.026	8.4	8.1	0.920	0.370 Jq	**66**	120	0.138
TT-MW2-36A	5/29/2009	0.48	-213.2	0.80	0.01	ND < 0.071	3.300	0.033 Jq	0.160	<0.016	0.060 Jq	<0.026	5.1	4.7	-	12.2	0.33	3.3	0.102
Reporting Limit (µg/L)		-	-	-	-	2	-	-	-	-	-	-	0.5	0.5	-	1	0.1	1	0.05
Method Detection Limit		-	-	-	-	0.071	0.07	0.07	0.10	0.07	0.07	0.07	0.021	0.021	0.6	0.00784	0.017	0.16	0.0122
MCL/DWNL (µg/L)		-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	10	250	0.3

Notes:
Only analytes positively detected are presented in this table. For a complete list, refer to the laboratory data package.
mg/L - milligrams per liter
µg/L - micrograms per liter.
nM - nanomoles
MCL - Maximum Contaminant Level.
DWNL - California Department of Health Services state drinking water notification level.
"-" - Not available.
<# - Analyte not detected, method detection limit concentration is shown.
J - The analyte was positively identified, but the concentration is an estimated value.
e - a holding time violation occurred.
f - The duplicate Relative Percent Difference (RPD) was outside the control limit
q -The analyte detected was below the Practical Quantitation Limit (PQL).

Well TT-MW2-17D lies within the Test Bay Canyon groundwater perchlorate plume. This well had the highest perchlorate detection within Test Bay Canyon during this sampling event at a concentration of 60,000 μg/L. As with TT-MW2-36A, the DO concentration (0.29 mg/L) and ORP value (38.7 mV) associated with this well indicates the presence of a slightly reducing environment in the groundwater aquifer within this area. Nitrate, (7.0 mg/L) and sulfate, (58 mg/L) concentrations in this well are higher than surrounding locations and organic carbon and acetic acid concentrations are lower, which may explain why perchlorate concentrations have remained high in this well.

Monitoring well TT-MW2-14 had the second highest perchlorate detection Test Bay Canyon at a concentration of 42,000 μg/L. This well is located slightly downgradient of TT-MW2-17D. The DO (4.48 mg/L) and ORP (64.8 mV) measurements in groundwater from this well indicate that aerobic conditions exist in this portion of the aquifer. The sulfate concentration is substantially higher at 200 mg/L and nitrate is at 14 mg/L, which further confirms the aerobic nature of the aquifer within this portion of Test Bay Canyon. The organic carbon and acetic acid concentrations are at levels which are unlikely to be sufficient to meet the demands of the electron acceptors such as DO, nitrate, and sulfate.

Monitoring well TT-MW2-1 located in Laborde Canyon, downgradient of Test Bay Canyon, had perchlorate detected at a concentration of 6,200 μg/L. The DO concentration (3.90 mg/L) and ORP value (47.8 mV) associated with this well indicates that aerobic conditions are present in the groundwater aquifer in this area. Although not as high as TT-MW2-14, sulfate concentrations are elevated, which further confirms the aerobic nature of the aquifer within this part of the Site. The organic carbon and acetic acid concentrations are at levels which are unlikely to be sufficient to meet the demands of the electron acceptors such as DO, nitrate, and sulfate.

Monitoring wells TT-MW2-10 and TT-MW2-11 are both located outside and immediately downgradient of the perchlorate groundwater plume associated with the Test Bay Canyon. Perchlorate was not detected at either well. In general, geochemical analyses indicate the presence of aerobic conditions in this area of Laborde Canyon, downgradient of Test Bay Canyon. This is indicated by elevated DO and sulfate concentrations.

With the exception of the upgradient portion of the plume (including the plume monitoring well located just slightly upgradient of the hot spot), the majority of the monitoring wells in Test Bay Canyon and immediately downgradient show the presence of aerobic conditions. Nitrate concentrations are at a level which pose strong competition with perchlorate for the relatively lower TOC in the area. Given these conditions it is unlikely that perchlorate is undergoing any significant natural bioreduction in this area of the Site.

Former Waste Discharge Area

Within the former WDA aquifer geochemistry in upgradient monitoring well (TT-MW2-23, located outside of the perchlorate plume) indicates an anaerobic environment as demonstrated by low DO concentrations (0.51 mg/L) and ORP values (-130.8 mV). Nitrate, which is often a competitor for perchlorate biodegradation, was not detected in groundwater from this well.

Well TT-MW2-24 had the highest perchlorate concentration during this sampling event at a concentration of 190,000 µg/L. The DO and ORP concentrations were 0.46 mg/L, which is indicative of slightly reducing conditions, and 132.2 mV, which is indicative of slighty aerobic conditions, respectively. TOC was measured at a relatively high concentration of 8.1 mg/L. Nitrate was measured at a relatively high concentrations of 60 mg/L. With the high concentrations of nitrate, there is likely to be strong competition for available organic carbon resulting in the unlikelihood of natural perchlorate bioreduction in this area.

Monitoring well TT-MW2-9S located in Laborde Canyon, downgradient of the former WDA, had the second highest perchlorate concentration during the May 2009 sampling event (4,100 µg/L). The DO concentration (2.44 mg/L) and ORP value (106.4 mV) associated with this well indicates that the plume is fairly aerobic in this part of Laborde Canyon. A high nitrate concentration (11 mg/L), and a relatively low TOC concentration (2.5 mg/L) point to the unlikelihood of the occurrence of natural bioreduction in this portion of the Site.

Monitoring well TT-MW2-5 and TT-MW2-7 had perchlorate concentrations of 810 µg/L and 430 µg/L, respectively. Overall, DO concentrations and ORP values in both wells are indicative of aerobic conditions within the groundwater aquifer in the downgradient portion of the perchlorate plume. The organic carbon concentration is relatively lower. This, along with persistent nitrate in the area, indicates that this portion of the aquifer is unlikely to support natural bioreduction of perchlorate.

3.9 TEMPORAL TRENDS IN GROUNDWATER CHEMICAL CONCENTRATIONS

Time trend analysis was conducted for the Site COPCs; perchlorate, TCE, methylene chloride, 1,4-dioxane, and RDX. Time trend analysis was also conducted for NDMA. The time period considered covers the entire period of record from September 2004 through September 2009. The monitoring locations considered include 63 monitoring wells and nine surface water and spring samples. Statistical trend analyses were conducted for the entire period of record to evaluate the long-term trends at the Site, and to assess the variability observed in the data since many locations fluctuate considerably from quarter to quarter.

Time trend analysis was conducted using the Monitoring and Remediation Optimization System (MAROS) developed by the Air Force Center for Environmental Excellence (AFCEE, 2004). MAROS is a statistical database application developed to assist with groundwater quality data trend analysis and long-term monitoring optimization at contaminated groundwater sites. The software performs parametric and nonparametric trend analyses to evaluate temporal and spatial contaminant trends using Mann-Kendall and linear regression methods. Brief descriptions of the methods follow:

- Mann Kendall Analysis – This statistical procedure was used to evaluate the data for trends. It is a non-parametric statistical procedure that is well suited for analyzing trends in data over time that do not require assumptions as to the statistical distribution of the data and can be used with irregular sampling intervals and missing data. The Mann-Kendall test for trend is suitable for analyzing data that follows a normal or non-normal distribution pattern. The Mann-Kendall test has no distributional assumptions and allows for irregularly spaced measurement periods. The advantage with this approach involves cases where outliers in the data would produce biased estimates of the least squares estimated slope.

- Linear Regression Analysis – This statistical procedure was used to calculate the magnitude of the trends. A parametric statistical procedure is typically used for analyzing trends in data over time and requires a normal statistical distribution of the data.

There are six statistical concentration trend types derived from Mann-Kendall analysis: 1) decreasing, 2) increasing 3) no trend [displaying two sets of conditions], 4) probably decreasing, 5) probably increasing, and 6) stable. These statistical concentration trend types are determined by the following conditions summarized in Table 3-15.

Table 3-15 Mann-Kendall Concentration Trend Matrix

Mann-Kendall Statistic (S)	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90 - 95%	Probably Increasing
S > 0	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
S ≤ 0	< 90% and COV < 1	Stable
S < 0	90 - 95%	Probably Decreasing
S < 0	> 95%	Decreasing

Notes:

> - Greater than.
< - Less than.
≤ - Less than or equal to.
COV - Coefficient of Variation.
S - Mann-Kendall statistic

The Mann-Kendall statistic (S) measures the trend in the data. Positive values indicate an increase in constituent concentrations over time, whereas negative values indicate a decrease in constituent concentrations over time. The strength of the trend is proportional to the magnitude of the Mann-Kendall Statistic (i.e., large magnitudes indicate a strong trend).

The Coefficient of Variation (COV) is a statistical measure of how the individual data points vary about the mean value. Values less than or near 1.00 indicate that the data form a relatively close group about the mean value. Values larger than 1.00 indicate that the data show a greater degree of scatter about the mean.

The "Confidence in Trend" is the statistical confidence that the constituent concentration is increasing (S>0) or decreasing (S<0).

If there is insufficient data (less than four sampling events) then not applicable (NA) would be applied to the results. Of the 72 monitoring locations evaluated, between 32 and 54 did not include enough data to perform Mann-Kendall analysis. A summary of the Mann-Kendall trend analysis is presented in Table 3-16.

Table 3-16 Summary of Mann-Kendall Trend Analysis of COPC for Second Quarter 2009 Sampled Wells

Analyte	Locations Tested	Insufficient Data	No Trend	Decreasing Trend	Probably Decreasing Trend	Stable Trend	Probably Increasing Trend	Increasing Trend
Trichloroethene	66	37	1	0	0	26	1	1
Methylene Chloride	66	37	10	2	0	16	0	1
Perchlorate	72	38	13	3	1	13	1	3
1,4-Dioxane	54	54	0	0	0	0	0	0
RDX	36	34	0	1	0	1	0	0
NDMA	33	32	0	0	0	1	0	0
Total Analysis	327	232	24	6	1	57	2	5

Notes:

COPC - Chemicals of Potential Concern.

NDMA - N-Nitrosodimethylamine

RDX - Research Department composition X

The Site COPCs and NDMA were analyzed for temporal trends at up to 72 monitoring locations for a total of 327 trends evaluated. Any one location may have a different trend for each of the six analytes evaluated. In general, the time trend analyses show that the majority of the sampling locations and chemicals were statistically stable over time. Note that 29 of the most recently installed wells had three or less quarters of sampling data and could not be analyzed for statistically significant trends, which require a minimum of four quarters of sampling data. Additionally 1,4-dioxane had no locations with sufficient data, RDX had only two locations with sufficient data, and NDMA had only one location with sufficient data for statistical analysis. For the remaining locations with sufficient data for statistical analysis; 24 have no trend, seven have a decreasing or probably decreasing trend, 57 have a stable trend, and seven have a increasing or probably increasing trend. The seven increasing or probably increasing trend are: perchlorate in TT-MW2-1 at 1,099.8 µg/L/yr, perchlorate in TT-MW2-9S at 1,299.0 µg/L/yr, TCE in TT-MW2-11 at 1.0 µg/L/yr, perchlorate in TT-MW2-14 at 2,663.4 µg/L/yr, TCE and methylene chloride in TT-MW2-21 at 0.9 µg/L/yr and 2.8 µg/L/y, respectively, and perchlorate in TT-MW2-26 at 58.4 µg/L/yr. Wells TT-MW2-1, and TT-MW2-14 are located in Area K, well TT-MW2-11 is located in Area M, well TT-MW2-21 is located in the former WDA, and wells TT-MW2-9S and TT-

MW2-26 are located just downgradient and cross gradient respectively of the former WDA. A summary of the magnitude of the trends determined by linear regression analyses are presented in Table 3-17.

Table 3-17 Magnitude of Trends Detected for COPC Second Quarter 2009 Sampled Wells

	Decreasing Trend		Probably Decreasing Trend		Probably Increasing Trend		Increasing Trend	
Analyte	**Number**	**Magnitude (ug/L/yr)**	**Number**	**Magnitude (ug/L/yr)**	**Number**	**Magnitude (and well) (ug/L/yr)**	**Number**	**Magnitude (and well) (ug/L/yr)**
Trichloroethene	0	NA	0	NA	1	1 (TT-MW2-11)	1	0.9 (TT-MW2-21)
Methylene Chloride	2	190.2 to 289.3	0	NA	0	NA	1	2.8 (TT-MW2-21)
Perchlorate	3	7.8 to 1,297.9	1	29.4	1	2663.4 (TT-MW2-14)	3	1,099.8 (TT-MW2-1) 1,299.0 (TT-MW2-9S) 58.4 (TT-MW2-26)
1,4-Dioxane	0	NA	0	NA	0	NA	0	NA
RDX	1	0.16	0	NA	0	NA	0	NA
NDMA	0	NA	0	NA	0	NA	0	NA

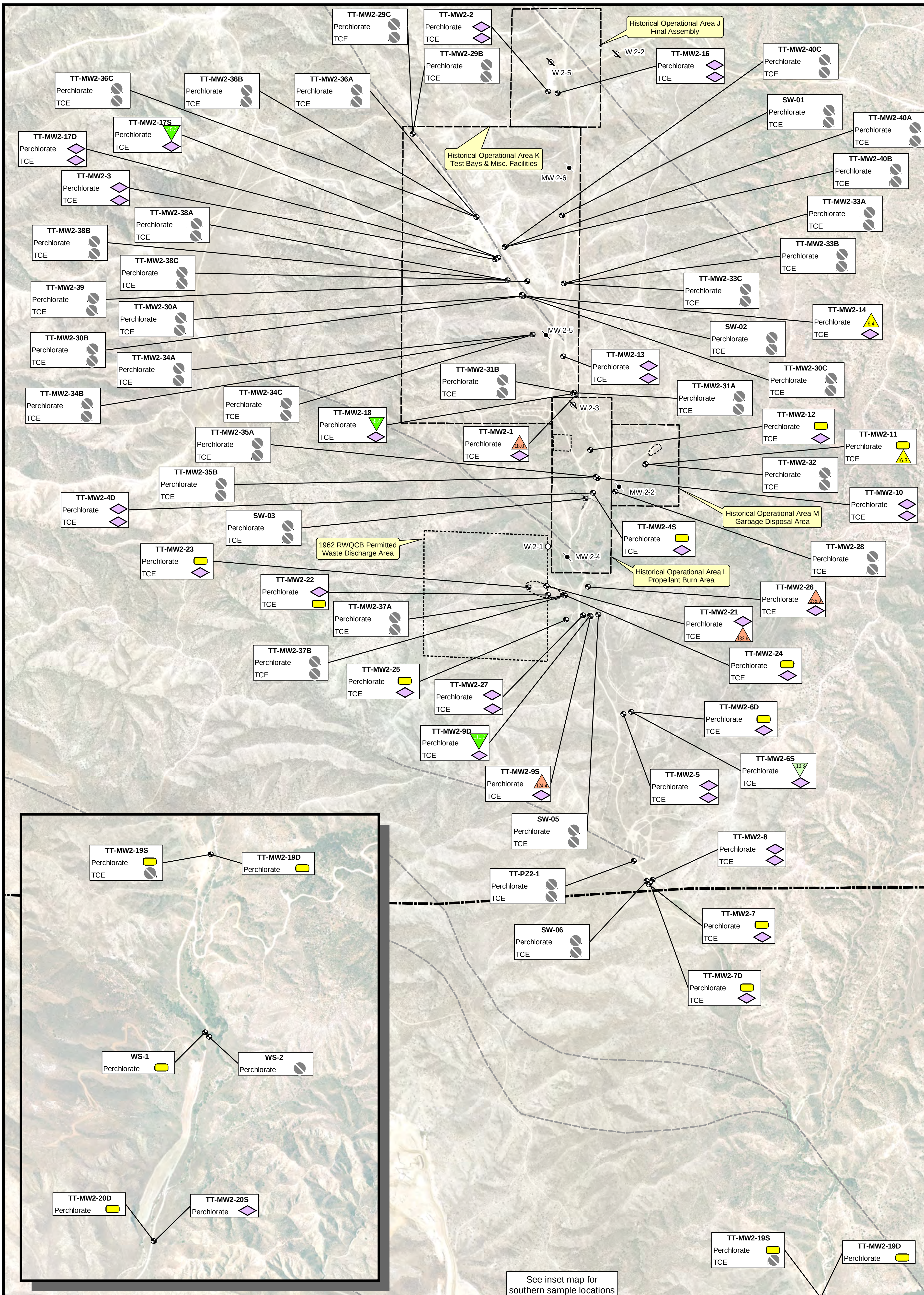
Notes:

ug/L/yr - Micrograms per liter per year.
NA - Not applicable.
COPC - Chemicals of Potential Concern.
NDMA - N-Nitrosodimethylamine
RDX - Research Department composition X

Surface water location WS-1 had no trend for perchlorate. The remaining surface water locations had insufficient data for Mann-Kendall trend analysis. Figure 3-10 is a spatial representation of the perchlorate and TCE trend analysis. Appendix K is a summary of the results of the Mann-Kendall and linear regression analyses.

3.10 HABITAT CONSERVATION

Consistent with the U.S. Fish and Wildlife Service (USFWS) approved HCP (USFWS, 2005) and subsequent clarifications (LMC, 2006a and 2006b) of the HCP describing environmental activities proposed at the Site, all field activities were performed under the supervision of a USFWS approved biologist who monitored each work location. Groundwater sampling activities were conducted with light duty vehicles and, as specified in the Low Affect HCP, do not require biological monitoring. As a result, no impact to SKR occurred during the performance of the field activities related to the Second Quarter 2009 and Third Quarter 2009 monitoring events.



LEGEND

Analyte Trend

- 10.5 Increasing
- 10.5 Probably Increasing
- No Trend
- Stable
- 8.3 Probably Decreasing
- 8.3 Decreasing
- Insufficient Data

- Monitoring Well Location
- Destroyed Production Well Location
- Destroyed Monitoring Well Location
- Reported Production Well Location
- Fault, Accurately Located Showing Dip
- Fault, Approximately Located
- RWQCB Permitted Waste Discharge Area
- Historical Operational Area Boundary
- Beaumont Site 2 Property Boundary

Adapted from:

April 2007 aerial photograph.

Faults from the *Site 2 Lineament Study, Tetra Tech, 2009.*

Note:

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

0 500 1,000 Feet

N

Beaumont Site 2

Figure 3-10

Perchlorate and TCE Statistical Analysis Summary Results

TETRA TECH

SECTION 4 SUMMARY AND CONCLUSIONS

This section summarizes the results of the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events. During the Second Quarter 2009 monitoring event 63 monitoring well locations and one piezometer were measured for groundwater levels and 61 monitoring wells and two surface water locations were sampled for groundwater quality. During the Third Quarter 2009 monitoring event 63 monitoring well locations and one piezometer were measured for groundwater levels and 41 monitoring wells and two surface water locations were sampled for groundwater quality.

4.1 GROUNDWATER ELEVATION AND FLOW

During the Second Quarter 2009 and Third Quarter 2009 monitoring events, depth to water at the Site ranged from approximately 59 feet bgs (elevation of 2,076 feet msl) upgradient in the northern most well to 15 feet bgs (elevation of 1,819 feet msl) downgradient in the southern most site well.

Based on the measured groundwater elevations, the current CSM, and the southward sloping topography at the Site, groundwater flow in the QAL/wSTF and STF screened wells appears to be southerly and generally follows the topography of Laborde Canyon. Groundwater flow will be refined as additional data are acquired.

Generally, groundwater elevations at the Site are relatively stable and demonstrate limited seasonal rise and fall. The exception is the shallow wells near the property boundary that appear to show stronger seasonal fluctuations. Although the data is limited but the overall long term trend appears to correspond to the long term precipitation pattern.

4.1.1 Groundwater Gradients

Horizontal groundwater gradients across the Site are relatively constant. The horizontal groundwater gradients calculated between TT-MW2-16 and TT-MW2-6S from the First Quarter 2009 and Second Quarter 2009 groundwater monitoring events for the QAL/wSTF screened wells averaged 0.030 ft/ft. The horizontal groundwater gradients calculated between TT-MW2-2 and

TT-MW2-6D for the Second Quarter 2009 and Third Quarter 2009 groundwater monitoring events for the deeper STF screened wells averaged 0.029 ft/ft.

Generally the vertical gradients are downward on-site and upward from the site boundary south. The vertical gradients range from negative 0.28 to positive 0.19. A summary of calculated horizontal and vertical groundwater gradients is presented in Table 3-2 and in Appendix E.

4.2 WATER QUALITY MONITORING

Groundwater samples collected during the Second Quarter 2009 and Third Quarter 2009 monitoring events were analyzed for VOCs and perchlorate. Select wells were analyzed for total and dissolved CAM 17 metals, natural attenuation parameters, general minerals parameters, 1,4 dioxane, NDMA, and RDX. Based on the historical operations at the Site and groundwater monitoring results, perchlorate, TCE, methylene chloride, and 1,4-dioxane were identified as primary COPCs. RDX was identified as a secondary COPC. NDMA will be further evaluated to determine whether the source is groundwater contamination or if it is being introduced as cross contamination from an outside source.

Perchlorate has not been detected in the groundwater above the MCL (6.0 µg/L) in Area J. In Area K, perchlorate in the groundwater was detected at concentrations ranging from below the MDL to 190,000 µg/L during Second and Third Quarter 2009. Previously, perchlorate was detected as high as 110,000 µg/L. A source of perchlorate was identified in Area K. In Area L, downgradient of both Areas J and K, perchlorate in the groundwater was detected at concentrations ranging from below the MDL to 0.6 µg/L during Second and Third Quarter 2009. Previously, perchlorate was detected as high as 2.1 µg/L. There are currently no indications that a source of perchlorate is present in Area L; the perchlorate detected in the groundwater in this Area appears to have originated in Area K. In Area M, the Garbage Disposal area, perchlorate in the groundwater was detected at concentrations ranging from below the MDL to 240 µg/L during Second and Third Quarter 2009. Previously, perchlorate was detected as high as 469 µg/L. Area M has been identified as a source of perchlorate in groundwater. In the former WDA, downgradient of the operational areas J, K, L, and M, perchlorate in the groundwater was detected at concentrations ranging from below the MDL to 190,000 µg/L during Second and Third Quarter 2009. Previously, perchlorate was detected as high as 158,000 µg/L. The former WDA has been identified as a source of perchlorate in groundwater. In the lower section of Laborde Canyon, downgradient of the operational areas and the former WDA, perchlorate in the groundwater was detected at concentrations ranging from below the MDL to 4,100 µg/L during Second and Third Quarter 2009. Previously, perchlorate was detected as high as 1,070 µg/L in the lower section of Laborde Canyon and as high as 519 µg/L at the southern site boundary. No source of perchlorate has been identified at the southern site boundary. On the former Wolfskill property, south of the southern site boundary, perchlorate was detected in TT-MW1-19S during Second and Third Quarter 2009 at concentrations of 2.9 µg/L and 3.6 µg/L respectively and at a concentration of 0.17 µg/L in TT-MW2-20D during Third Quarter 2009.

TCE was reported in groundwater samples collected from monitoring wells TT-MW2-1 located in Area M and TT-MW2-17D located in Area K at concentrations of 6.1 and 1.2 µg/L respectively during the Second Quarter 2009. In the former WDA, TCE was detected in monitoring wells TT-MW2-21, TT-MW2-22, and TT-MW2-24 at concentrations of 1.6, 260, and 98 µg/L, respectively during the Second Quarter 2009 and from TT-MW37A at a concentration of 0.65 µg/L during the Third Quarter 2009. The TCE MCL is 5 µg/L. Based on the data available at this time, the extent of the TCE plumes in groundwater appear to be isolated to small areas, and it does not extend off-site.

Methylene chloride was reported in groundwater samples collected from monitoring wells TT-MW2-21 and TT-MW2-22 located in the former WDA at concentrations of 7.7 and 7.5 µg/L respectively during the Second Quarter 2009. Methylene chloride was previously reported in samples collected from monitoring well TT-MW2-14 located in Area K at concentrations as high as 380 µg/L, but concentrations have declined steadily and are now below the MDL. The methylene chloride MCL is 5 µg/L. Repeated detections indicate the presence of methylene chloride is not spurious or related to undetected laboratory cross-contamination. Based on the data available at this time, the extent of the methylene chloride plumes in groundwater appear to be isolated to two small areas, and it does not extend off-site.

Following the detection of 1,4-dioxane in monitoring well TT-MW2-22 located in the former WDA during First Quarter 2009, additional 1,4-dioxane sampling was conducted during the Second and Third Quarter 2009 sampling events in samples collected from monitoring wells located in and downgradient of the former WDA. 1,4-dioxane was reported in groundwater samples collected from monitoring wells TT-MW2-5, TT-MW2-9S, TT-MW2-22, TT-MW2-24, TT-MW2-26, TT-MW2-37A at concentrations ranging from 0.79 µg/L to 270 µg/L. Additionally, 1,4-dioxane was detected in monitoring well TT-MW2-19S located on the former Wolfskill property during Second Quarter 2009 at a concentration of 8.7 µg/L. TT-MW2-19S was resampled for 1,4 dioxane approximately three weeks after the initial detection and again during Third Quarter 2009, both samples were below the MDL of 0.043 µg/L. Although it is believed that the 1,4-dioxane detection during Second Quarter 2009 was anomalous, additional sampling will be conducted for verification. 1,4-dioxane has not been reported in samples collected from monitoring wells located in Areas J, K, L, or M. The 1,4-dioxane DWNL is 3 µg/L.

Previously, RDX was reported in groundwater samples collected from monitoring wells TT-MW2-1 and TT-MW2-13 in Areas K and L and in monitoring well TT-MW2-24 located at the former WDA at concentrations exceeding the DWNL of 0.3 µg/L. Additional sampling has been conducted for RDX in select monitoring wells located upgradient, downgradient, and in wells screened in deeper intervals in comparison to TT-MW2-1 and TT-MW2-13 and it has not been detected above the MDL. During Second Quarter 2009 RDX samples were collected from 30 first water designated monitoring wells located across the Site to further evaluate the extent of the RDX groundwater plume. RDX was detected above the MDL only in monitoring wells TT-MW2-13 and TT-MW2-24 at concentrations of 0.54 µg/L and 5.9 µg/L respectively during the Second Quarter 2009 sampling event.

RDX was initially analyzed for as part of a screening evaluation for emerging contaminants. The origin of the RDX is unknown. Based on the data available at this time, the extent of the RDX plume in groundwater appears to be isolated to these small areas and does not extend off-site.

Previously, NDMA had been reported in the groundwater samples collected from monitoring wells TT-MW2-11, TT-MW2-12 and TT-MW2-14 located in Areas M, L, and K respectively. During Second Quarter 2009, NDMA samples were collected from 30 first water designated monitoring wells located across the Site to further evaluate the extent of the NDMA groundwater plume. NDMA was detected in seven monitoring wells scattered across the Site and one well located on the former Wolfskill property. During Third Quarter 2009 11 monitoring wells were sampled for NDMA, the eight wells with NDMA detections in Second Quarter and the three remaining wells on the former Wolfskill property. NDMA was detected in five monitoring wells scattered across the Site and three wells located on the former Wolfskill property. The origin of the NDMA is unknown. However, based on the data available at this time, the source of the NDMA contamination may be the site-approved dedicated purging and sampling pump.

Natural Attenuation Sampling

The objective of the MNA sampling and analyses effort is to understand the geochemical characteristics in and downgradient of the former Test Bay Area and the former WDA

A preliminary evaluation of MNA has been conducted in these two areas where perchlorate plumes exist. The analyses focused on wells in each of the two plumes which covered upgradient wells, plume wells, and downgradient wells. Overall, there appears to be limited potential for natural bioreduction to occur in these plumes. The reasons for the apparent lack of natural bioreduction is the high concentrations of perchlorate, the tendency for aerobic environments, limited amounts of natural organic carbon, and competition from nitrate and sulfate. With this type of an environment, it does not appear that bioreduction will be a significant contributor of MNA, remediation, or plume reduction.

Temporal Trend Analysis

Temporal trend analysis of perchlorate was performed on groundwater sampling results from 63 monitoring wells and nine surface water and spring locations sampled between Second Quarter 2004 and Third Quarter 2009. Trends were analyzed using Mann-Kendall and the magnitude of the trends was determined using linear regression analysis.

The results of the Mann-Kendall analyses for perchlorate indicated that wells TT-MW2-1, TT-MW2-9S, TT-MW2-14, and TT-MW2-26 displayed an increasing or probably increasing trend and wells TT-MW2-6S, TT-MW1-9D TT-MW2-17S, and TT-MW2-18 displayed a decreasing or probably deceasing trend. The remaining site wells displayed either no trend or were stable for perchlorate.

The results of the Mann-Kendall analyses for TCE indicated that wells TT-MW2-11 and TT-MW2-21 displayed an increasing or probably increasing trend. The remaining site wells displayed either no trend or were stable for TCE. The results of the Mann-Kendall analyses for methylene chloride indicated that well TT-MW2-21 displayed an increasing trend and TT-MW2-14 and TT-MW2-22 displayed an decreasing trend. The remaining site wells displayed either no trend or were stable for TCE. Only two wells had sufficient RDX data to perform Mann-Kendall analyses, TT-MW2-1 which showed a decreasing trend and TT-MW2-13 which showed a stable trend. No wells had sufficient 1,4-dioxane data to perform Mann-Kendall analyses. A summary of the Mann-Kendall and linear regression analyses is presented in Table 3-16. The relatively short time frame represented by the data analyzed makes it difficult to know the reason for the trends observed. The trends may represent plume migration. But they could have been influenced by the recent well construction or seasonal fluctuations in concentration. As the period of record grows, and the number of data points grow, more reliable long term trends should emerge from the data.

4.3 GROUNDWATER MONITORING PROGRAM AND THE GROUNDWATER QUALITY MONITORING NETWORK

Twenty quarters of water quality monitoring have been conducted at the Site since the September 2004 well installation activities. Groundwater samples have been routinely analyzed for VOCs and perchlorate. Selected testing for CAM 17 metals, general minerals, 1,4-dioxane, RDX, NDMA, 1,2,3-TCP and hexavalent chromium has also been performed. A groundwater monitoring sampling and analysis plan (SAP) was prepared to optimize and better define the GMP at the Site (Tetra Tech, 2007b). In concurrence with the DTSC, groundwater monitoring will be performed in accordance with the SAP.

Perchlorate, TCE, methylene chloride, and 1,4-dioxane have been identified as primary COPCs. All monitored wells will be tested for perchlorate semi-annually, and select wells will be sampled for VOCs and 1,4-dioxane semi-annually or annually. Because of the previous detections of RDX in TT-MW2-1, the continued detection of RDX above the MCL in TT-MW2-13, and the recent detection of RDX in TT-MW2 24 sampling for RDX will continue to be conducted annually in monitoring wells TT-MW2-1, TT-MW2-13, and TT-MW2-24.

Due to the uncertainty of the source of the contamination, select wells will continue to be sampled for NDMA semi-annually. Additionally, it is proposed to remove the dedicated pumps from six wells, TT-MW2-19S, TT-MW2-24, TT-MW2-26, TT-MW2-28, TT-MW2-29B, and TT-MW2-36A, with previous NDMA detections at the end of Fourth Quarter 2009 and allow the wells to equilibrate prior to the Second Quarter 2010 sampling event. During Second Quarter 2010 the six wells will be sampled for NDMA using a portable bladder pump. The resultant data will be compared to previously obtained data in an attempt to determine the source of the NDMA.

Because of previous detections of arsenic above the MCL, unfiltered metals will be analyzed for all monitored wells sampled annually until background levels for metals can be determined. Filtered metals will be collected for ecological risk assessment in water table monitoring wells where the water level is less than 25 feet below ground surface, and where the well screen is less than 25 feet below ground surface.

The analytical scheme is evaluated annually during the Second Quarter of each year and changes may be proposed to accommodate expanded site knowledge or changing site conditions. The classifications of the wells in the network and the corresponding sampling frequency is also evaluated annually during the Second Quarter of each year and modified to accommodate expanded site knowledge or changing site conditions. Table 4-1 summarizes monitoring well classification and sampling frequency.

Table 4-1 Well Classification and Sampling Frequency

Well Classification	Frequency
Horizontal Extent Wells	Semi-annual
Vertical Distribution Wells	Semi-annual
Increasing Contaminant Trend Wells	Semi-annual
Background Wells	Annual
Remedial Monitoring Wells	Vary, based on remedial action proposed
Guard Wells	Semi-annual
New Wells	4 Quarters then reclassify
Redundant Wells	Suspend (no sampling)

The proposed groundwater analytical program includes the following suite of analysis:

1. Perchlorate semi-annually or annually by EPA Method E332.0,
2. VOCs, including oxygenates, for new wells and semi-annually or annually for select groundwater samples by EPA Method SW 8260B,
3. 1,4-dioxane semi-annually for select wells by EPA Method SW 8270 SIM,
4. CAM 17 Metals, total, for all wells by EPA Method SW 6010B and SW 7470A annually until background concentrations for metals have been evaluated and the nature of the metals concentrations detected in the groundwater have been determined,
5. CAM 17 Metals, dissolved, for all water table wells by EPA Method SW 6010B and SW 7470A annually for ecological risk assessment in water table monitoring wells were the

water level is less then 25 feet below ground surface and the well screen is less than 25 feet below ground surface,

6. RDX annually for select wells by EPA Method SW 8330,
7. NDMA semi-annually or annually for select wells by EPA Method E 521,
8. Natural attenuation parameters semi-annually by various methods for select wells,

General mineral analyses will be performed on selected wells to determine cation and anion geochemistry for the aquifer. General minerals analysis will not be performed on new wells for a minimum of six months after installation to allow the aquifer to stabilize. The following suite of general mineral analysis will be performed during selected groundwater sampling events:

1. Total Dissolved Solids (TDS) by EPA Method E160.1,
2. Chloride, nitrate (as nitrogen) and sulfate by EPA Method E300.0, and
3. Carbonate and bicarbonate (as calcium carbonate) by EPA Method E310.1,
4. Calcium, manganese, potassium, and sodium by EPA Method SW6010.

Table 4-2 summarizes the proposed monitoring well sampling schedule and frequency.

Table 4-2 Monitoring Well Sampling Schedule and Frequency

Monitoring Well Location	Well Classification	VOCs (EPA 8260B)	Per chlorate (EPA 332.0)	Metals (EPA 6010B / 7470A)	1,4-Dioxane (EPA 8270 SIM)	NDMA (EPA 521)	RDX (EPA 8330)	Natural Attenuation (various methods)	Proposed 2010 Monitoring Frequency	2009 Monitoring Frequency
TT-MW2-1	Increasing Contaminant Trend Perchlorate		X	X			X	X	Semi-annual – Perchlorate, Nat Att Annual – RDX, and metals	Semi-annual – Perchlorate Annual – RDX, and metals
TT-MW2-2	Background			X					Annual – metals	Annual – metals
TT-MW2-3	Redundant	-	-	-	-	-	-	-	Suspend (no sampling)	Suspend (no sampling)
TT-MW2-4S	Vertical Distribution		X	X					Semi-annual – Perchlorate Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-4D	Redundant	-	-	-	-	-	-	-	Suspend (no sampling)	Suspend (no sampling)
TT-MW2-5	Horizontal Extent	X	X	X	X			X	Semi-annual – Perchlorate, Nat Att, 1,4-dioxane Annual – VOCs and metals	Semi-annual – Perchlorate Annual – VOCs and metals
TT-MW2-6S	Horizontal Extent	X	X	X					Semi-annual – Perchlorate Annual – VOCs and metals	Semi-annual – Perchlorate Annual – VOCs and metals
TT-MW2-6D	Vertical Distribution		X	X					Semi-annual – Perchlorate Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-7	Guard		X	X				X	Semi-annual – Perchlorate, Nat Att Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-7D	Vertical Distribution		X	X					Semi-annual – Perchlorate Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-8	Guard		X	X					Semi-annual – Perchlorate Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-9S	Increasing Contaminant Trend Perchlorate	X	X	X	X			X	Semi-annual – Perchlorate, Nat Att, 1,4-dioxane Annual – VOCs and metals	Semi-annual – Perchlorate Annual – VOCs and metals
TT-MW2-9D	Vertical Distribution		X	X					Semi-annual – Perchlorate Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-10	Horizontal Extent		X	X				X	Semi-annual – Perchlorate, Nat Att Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-11	Increasing Contaminant Trend TCE	X	X	X					Semi-annual – Perchlorate and VOCs Annual – metals	Semi-annual – Perchlorate and VOCs Annual – metals
TT-MW2-12	Vertical Distribution		X	X				X	Semi-annual – Perchlorate, Nat Att Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-13	Horizontal Extent	X	X	X			X		Semi-annual – Perchlorate Annual – VOCs, RDX, and metals	Semi-annual – Perchlorate Annual – VOCs, RDX, and metals
TT-MW2-14	Increasing Contaminant Trend Perchlorate	X	X	X				X	Semi-annual – Perchlorate, Nat Att Annual – VOCs and metals	Semi-annual – Perchlorate Annual – VOCs and metals
TT-MW2-16	Background		X	X					Annual – Perchlorate and metals	Annual – Perchlorate and metals
TT-MW2-17S	Vertical Distribution	X	X	X					Semi-annual – Perchlorate Annual – VOCs and metals	Semi-annual – Perchlorate Annual – VOCs and metals
TT-MW2-17D	Horizontal Extent	X	X	X				X	Semi-annual – Perchlorate, Nat Att Annual – VOCs and metals	Semi-annual – Perchlorate Annual – VOCs and metals
TT-MW2-18	Vertical Distribution		X	X					Semi-annual – Perchlorate Annual – metals	Semi-annual – Perchlorate Annual – metals
TT-MW2-19S	Guard		X		X	X			Quarterly – Perchlorate Semi-annual – 1,4-dioxane, NDMA	Quarterly – Perchlorate
TT-MW2-19D	Guard		X						Quarterly – Perchlorate	Quarterly – Perchlorate
TT-MW2-20S	Guard		X		X	X			Quarterly – Perchlorate Semi-annual – 1,4-dioxane, NDMA	Quarterly – Perchlorate
TT-MW2-20D	Guard		X						Quarterly – Perchlorate	Quarterly – Perchlorate
TT-MW2-21	Increasing Contaminant Trend TCE and Methylene Chloride	X	X	X	X	X			Semi-annual – Perchlorate, VOCs, 1,4-dioxane, NDMA Annual – metals	Semi-annual – Perchlorate and VOCs Annual – metals
TT-MW2-22	Horizontal Extent	X	X	X					Semi-annual – Perchlorate and VOCs Annual – metals	Semi-annual – Perchlorate and VOCs Annual – metals
TT-MW2-23	Horizontal Extent	X	X	X				X	Semi-annual – Perchlorate, VOCs, Nat Att Annual – metals	Semi-annual – Perchlorate and VOCs Annual – metals
TT-MW2-24	Horizontal Extent	X	X	X	X	X	X	X	Semi-annual – Perchlorate, VOCs, 1,4-dioxane, NDMA, Nat Att Annual – metals	Semi-annual – Perchlorate and VOCs Annual – metals
TT-MW2-25	New Well	X	X	X		X			Quarterly – Perchlorate, VOCs Semi-annual – NDMA Annual – metals	- -
TT-MW2-26	New Well	X	X	X	X				Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-27	New Well	X	X	X					Quarterly – Perchlorate and VOCs Semi-annual - 1,4-dioxane Annual – metals	- -

Notes:

EPA - United States Environmental Protection Agency
VOCs - Volatile organic compounds
RDX - Research Department composition X
Nat Att - Natural attenuation
NDMA - N-Nitrosodimethylamine

Table 4-2 Monitoring Well Sampling Schedule and Frequency (continued)

Monitoring Well Location	Well Classification	VOCs (EPA 8260B)	Per chlorate (EPA 332.0)	Metals (EPA 6010B / 7470A)	1,4-Dioxane (EPA 8270 SIM)	NDMA (EPA 521)	RDX (EPA 8330)	Natural Attenuation (various methods)	Proposed 2010 Monitoring Frequency	2009 Monitoring Frequency
TT-MW2-28	New Well	X	X	X		X			Quarterly – Perchlorate, VOCs Semi-annual - NDMA Annual – metals	- -
TT-MW2-29A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-29B	New Well	X	X	X		X			Quarterly – Perchlorate, VOCs Semi-annual - NDMA Annual – metals	- -
TT-MW2-29C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-30A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-30B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-30C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-31A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-31B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-32	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-33A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-33B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-33C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-34A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-34B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-34C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-35A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-35B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-36A	New Well	X	X	X		X		X	Quarterly – Perchlorate, VOCs Semi-annual - NDMA, Nat Att Annual – metals	- -
TT-MW2-36B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-36C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-37A	New Well	X	X	X	X				Quarterly – Perchlorate and VOCs Semi-annual - 1,4-dioxane Annual – metals	- -
TT-MW2-37B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-38A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-38B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-38C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-39	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-40A	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-40B	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -
TT-MW2-40C	New Well	X	X	X					Quarterly – Perchlorate and VOCs Annual – metals	- -

Notes:

EPA - United States Environmental Protection Agency
VOCs - Volatile organic compounds
RDX - Research Department composition X
Nat Att - Natural attenuation
NDMA - N-Nitrosodimethylamine

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