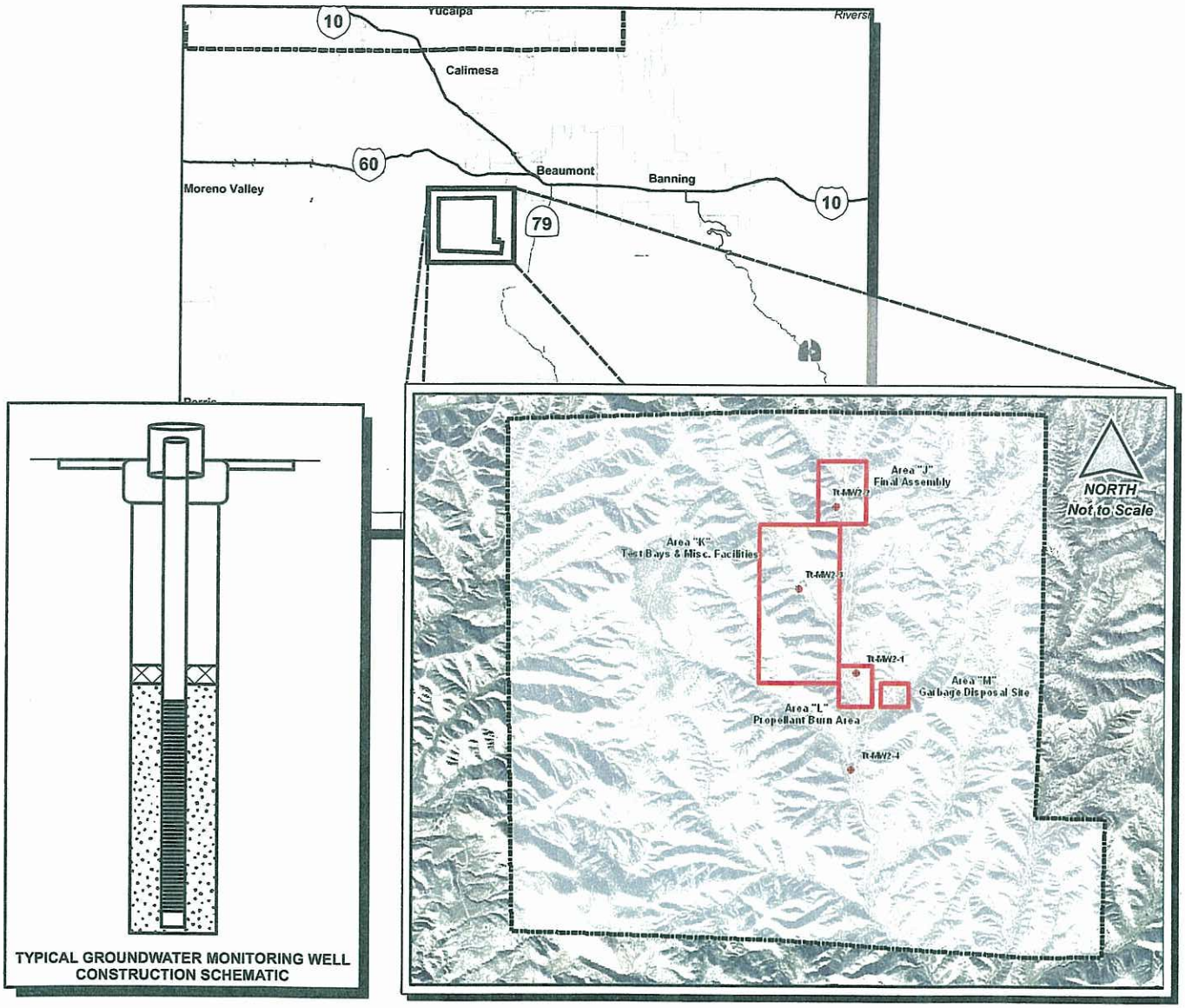
FINAL

Lockheed Martin Beaumont Site 2 Groundwater Monitoring Well Installation Report

Beaumont, California



TYPICAL GROUNDWATER MONITORING WELL CONSTRUCTION SCHEMATIC

LOCKHEED MARTIN

Tetra Tech, Inc.
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Pasadena, California

TC# 13505-02 / November 15, 2004

Lockheed Martin Beaumont Site 2
Groundwater Monitoring Well
Installation Report
Beaumont, California

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Prepared for
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Corporate Energy, Environmental Safety and Health
Burbank, California

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SECTION 1.0
INTRODUCTION

On behalf of Lockheed Martin Corporation (LMC), Tetra Tech, Inc. has prepared the following Groundwater Well Installation Report for LMC's Beaumont Site 2 (herein referred to as the Site) – *see Figure 1-1*. The Site (also known as the Laborde Canyon Site) consists of approximately 2,500 acres and is located approximately 70 miles east of Los Angeles, near the City of Beaumont, California. Historically, the Site was primarily used for small rocket motor assembly, testing, and minor disposal activities.

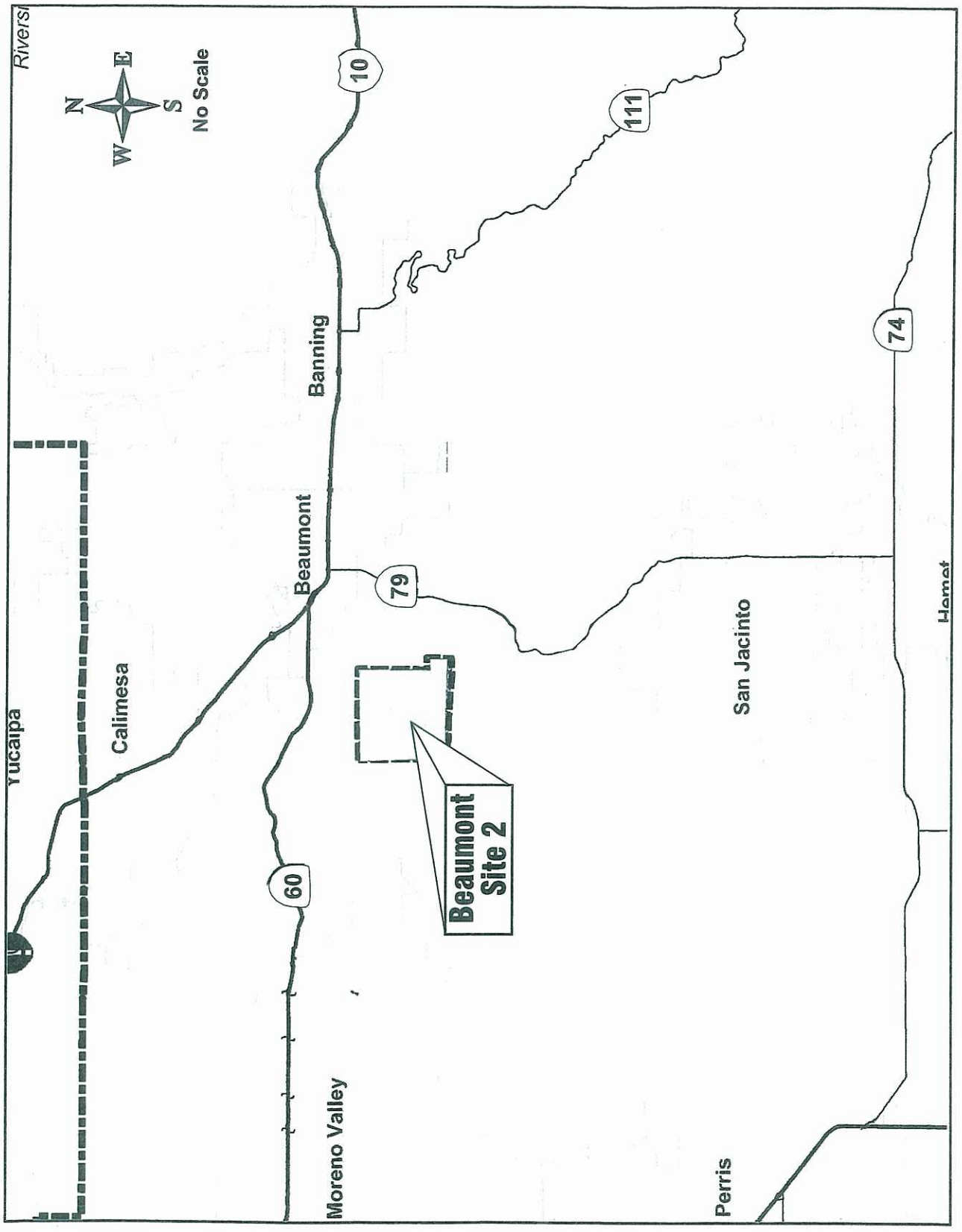
Based on recent regulatory interest in perchlorate and 1,4-dioxane, a groundwater sample was collected from a historical groundwater production well (identified as W2-3) at the Site in January 2003. The sample was analyzed for volatile organic compounds (VOCs), perchlorate, and 1,4-dioxane to determine the potential presence and concentration of the chemicals in groundwater. The analytical results indicated that VOCs and 1,4-dioxane were not present at or above their respective detection limits. However, perchlorate was reported at a concentration of 4,080 micrograms per liter (μg/L), which exceeds the State of California recommended action level of 6 μg/L for that compound.

As a result, a limited investigation with respect to the chemicals of potential concern (COPCs) in the groundwater at the Site was conducted in accordance with the Department of Toxic Substances Control (DTSC) approved Final LMC Beaumont Site 2 Groundwater Well Installation Work Plan (Tetra Tech, 2004). The objective of this groundwater well installation program was to determine the current groundwater conditions (i.e., groundwater gradient, COPCs, and extent of COPCs) at the Site. In order to accomplish the program objective, Tetra Tech installed four (4) groundwater monitoring wells, collected groundwater samples, and analyzed them for COPCs related to the historical operations at the Site.

This report presents a summary of the groundwater well installation and sampling activities performed at the Site, including the findings of the limited groundwater investigation. The report is organized into the following sections:

- Section 2.0 - Site History: This section presents a brief description of the Site, historical operations and chemical usage, regional geology and hydrogeology, and a summary of previous environmental investigations conducted at the Site;
- Section 3.0 – Well Drilling/Installation Activities: This section presents descriptions of all the field activities associated with drilling, installation, and sampling of the four (4) groundwater monitoring wells;
- Section 4.0 – Summary of Analytical Results: This section provides a summary of the analytical results obtained during the initial groundwater sampling round of the newly installed wells, including a description of the general groundwater occurrence and flow patterns beneath the Site;
- Section 5.0 – Waste Management: This section presents a summary of the management of wastes generated during the field efforts;
- Section 6.0 – Evaluation of Findings: This section presents a summary of the findings of the limited groundwater investigation;
- Section 7.0 – References: This section presents the list of documents cited in this report.

FIGURE 1-1
LOCATION MAP OF BEAUMONT SITE 2



SECTION 2.0
SITE HISTORY

2.1 SITE DESCRIPTION

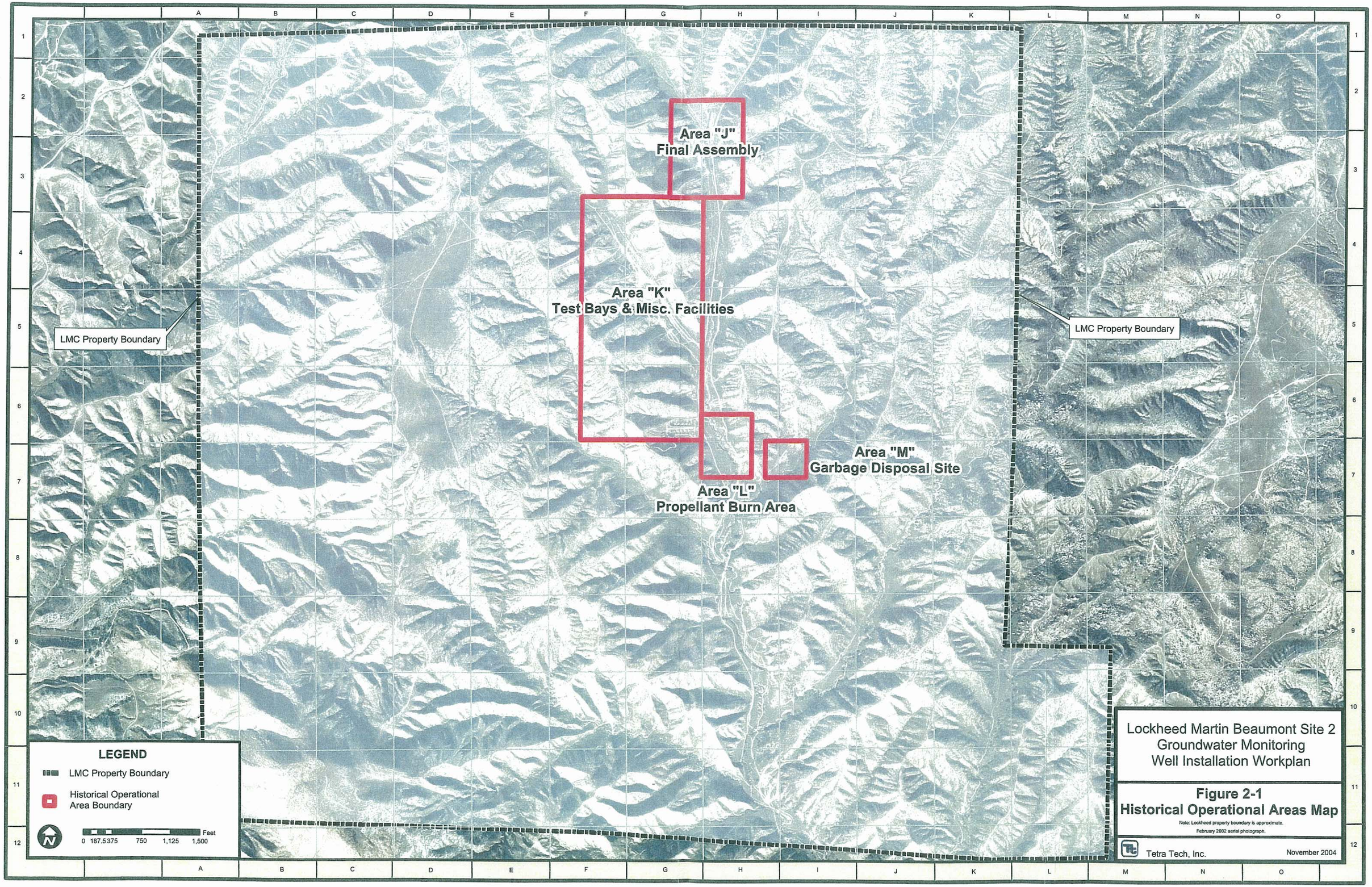
The Site consists of approximately 2,500 acre located south of Beaumont, California. The majority of the Site was owned by the Grand Central Rocket (GCR) Company who purchased the land from private owners in 1958. Lockheed Propulsion Corporation (LPC) acquired the Site parcels through the acquisition of GCR in 1963. The Site was primarily used by GCR and LPC for small rocket motor assembly and testing operations from 1960 to 1974 and has been vacant from 1974 to present.

2.2 HISTORICAL OPERATIONS AND CHEMICAL USAGE

The Site was used by GCR and LPC from 1960 to 1974 for small rocket motor assembly and testing operations. A summary of each historical operational area within the Site is presented in this section. The locations of the historical operational areas are presented on Figure 2-1.

The Site was made up of four primary historical operational areas. Each area was responsible for various activities associated with rocket motor assembly and testing. The historical operational areas at the Site with corresponding grid point locations in Figure 2-1 are presented below:

Operational Area	Historical Operation Name	Location (Grid Points)
J	Final Assembly	G2 through H2 and G3 through H3
K	Test Bays and Miscellaneous Facilities	F3 through H3 and F6 through H6
L	Propellant Burn Area	Actual Location Unknown (approximate area: H6 through H7)
M	Garbage Disposal Area	H7 through I7


Area "J"
Final Assembly
Area "K"
Test Bays & Misc. Facilities
Area "M"
Garbage Disposal Site
Area "L"
Propellant Burn Area
LMC Property Boundary
LMC Property Boundary
LEGEND
LMC Property Boundary
Historical Operational
Area Boundary
0 187.5375 750 1,125 1,500
Feet
Lockheed Martin Beaumont Site 2
Groundwater Monitoring
Well Installation Workplan
Figure 2-1
Historical Operational Areas Map
Note: Lockheed property boundary is approximate.
February 2002 aerial photograph.
Tetra Tech, Inc.
November 2004

Operational Area "J"– Final Assembly

Rocket motor casings with solid propellant were transported to Building 250 within the Site 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 (SRAM) 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 the plant closure in 1974, all usable parts of this facility were dismantled, taken off site, and sold.

Operational Area "K"– Test Bays and Miscellaneous Facilities

A conditioning chamber and its associated bunker were located just north of the Surface Propellant Burn Area (Historical Operational Area L). The conditioning chamber was used to examine the effects of extreme temperatures on rocket motors and to meet specification requirements. A centrifuge was located in the western test bay, where rocket motors were centrifuged in order to see if the solid propellant would separate from its casing under increased gravitational forces (g-forces). Four test bays were located at the Site. The initial testing activities had a history of explosions that destroyed complete test areas, especially during the period when Grand Central Rocket operated at the Site. As the technology became better understood, motor failures occurred less often. Following any motor failure, the hillsides were thoroughly policed to recover any unburned solid propellant.

Operational Area "L"– Burn Area

Large slabs of solid propellant were transported to the Site and set directly on the ground surface for burning. 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 identifies the precise location of the burning activities.

Operational Area "M"– Garbage Disposal Site

A garbage disposal site was located adjacent to a small creek at the Site. 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 this 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 garbage disposal site. In 1972, a Lockheed Safety Technician was exposed to toxic vapors of unsymmetrical dimethyl hydrazine (UDMH) from a pressurized gas container located within the disposal site. Based on potential exposure risks to occupants, Lockheed'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.

2.3 GEOLOGY AND HYDROGEOLOGY

2.3.1 Regional Geology

The Site is located at the northern end of the Peninsular Range Geomorphic Province. In general, the Peninsular Range is a large block uplifted abruptly along its eastern edge and tilted westward. The province has a subtle northwest trend expressed by its higher mountains and longer valleys (Sharp, 1975). Major faults within the region include the San Jacinto Fault, and associated branch faults that have been mapped near the southern end of the Site. In addition, approximately 8 miles northeast of the Site, the Banning fault adjoins with the San Andreas Fault. The San Jacinto and San Andreas Fault zones have been active with moderate to major earthquakes occurring over the last 200 years.

The regional stratigraphy in the vicinity of the Site has been described and mapped by Dibblee (1981). Geologic units, from oldest to youngest, consist of: the basement complex of late Paleozoic to middle Mesozoic age meta-sedimentary rocks and Mesozoic granitic rocks; non-marine sedimentary rocks of the Tertiary Mount Eden Formation overlain by the non-marine Tertiary sandstones and siltstones of the San Timoteo Formation; and Quaternary alluvium

(Radian, 1990). A detailed description of site geology and hydrogeology is presented in the following subsections.

The Site is located in an area that is commonly referred to as the "Badlands," an area of relatively soft sedimentary sandstone and siltstone deeply incised into numerous canyons by runoff. The Site is bisected by Laborde Canyon, which traverses a north-south pathway through the area. Laborde Canyon forms the principal drainage course through the Site, and allows ephemeral storm water to drain to the San Jacinto Valley.

2.3.2 Site Geology

The Site is primarily located within the confines of the Laborde Canyon valley floor and is underlain by Quaternary alluvium and colluvium. These geologic materials were derived from the weathering of the hillsides directly adjacent to the canyon. The alluvial deposits consist of very fine- to fine-grained silty sands and fine- to medium-grained poorly graded sands. These sandy zones are typically interbedded with finer grained silts and, in some cases, with silty clays.

The San Timoteo Formation, as encountered in the subsurface and exposed on site, consists of very fine-grained siltstone and very fine- to medium-grained silty sandstone. Some coarse pebbles and fragments were encountered in the more coarse-grained, sandy portions of the formation. The rocks of the San Timeteo are generally poorly cemented, but are more indurated than the alluvial sediments that overlie the formation.

2.3.3 Site Hydrogeology

A large portion of the Site is located within Laborde Canyon, which bisects the site from north to south. The watershed area, including the canyon itself, is ephemeral in nature and remains dry when there is no rainfall.

Groundwater at the Site is found primarily in the siltstones of the San Timoteo Formation, although these deposits yield only small quantities of water to wells (Radian, 1986). However, at

the southern end of the Site, groundwater is present within the alluvium above the San Timoteo Formation. Based on the historical and most recent groundwater levels measured at the Site, the groundwater gradient and flow direction generally follows the southward slope of the canyon floor. Recharge to the groundwater aquifer through the shallow alluvium occurs from direct infiltration of rainfall and loss from surface drainage through the sides and bottoms of stream channels.

2.4 PREVIOUS INVESTIGATIONS

Reports and documentation regarding environmental activities (i.e., soil/groundwater investigations, excavations, regulatory agency correspondence, etc.) were reviewed to provide a comprehensive historical environmental evaluation of the Site. The review focused upon identifying activities conducted at the Site that would describe specific findings regarding chemical impacts to groundwater. The previous investigations reviewed included a preliminary remedial investigation (Radian, 1986), hydrogeologic investigation (Radian, 1992a), disposal area removal action report (Radian, 1993), monitoring well destruction report (LMC, 1995), and groundwater sampling results former production well W2-3 letter report (Tetra Tech, 2003a). These investigations are briefly summarized in the following subsections.

2.4.1 Preliminary Remedial Investigation (Radian, 1986)

In October 1986, Radian Corporation (Radian) conducted a remedial groundwater and geophysical investigation at the Site. The objective of the remedial investigation was to determine the potential presence and lateral extents of any possible contaminants in the groundwater beneath the Site. The remedial groundwater investigation was to include sampling the four (4) existing groundwater production wells (designated W2-1, W2-2, W2-3, and W2-5) on the current Site property and an existing groundwater production well (W2-4) located on the North Gate property (Radian, 1986). However, only well W2-3, which is located upgradient of the probable surface propellant burn area, was accessible during this investigation. A sample was collected from well W2-3 and analyzed for purgeable hydrocarbons using U.S. Environmental Protection Agency

(EPA) Method 601. Trichloroethylene (TCE) was reported at concentrations of 4.2 μg/L in the sample.

Additionally, a geophysical survey was conducted in the area previously identified as the garbage disposal site. The objective of the survey was to determine the location and physically define the lateral extents of the former permitted garbage disposal area through the use of ground penetrating radar (GPR), terrain conductivity (TC) and magnetic locator (ML). The survey identified an area of approximately 250 feet wide by 450 feet long.

2.4.2 Hydrogeologic Investigation (Radian, 1992)

In 1992, Radian performed a hydrogeologic investigation at the Site in order to assess potential source areas and to characterize the subsurface soil and groundwater conditions. The investigation included performing a soil vapor survey, soil sampling, and groundwater well installation and sampling.

The soil vapor survey was performed at the disposal area, final assembly building, and propellant burn area. During the soil vapor survey, soil vapor samples were also collected at the southernmost portion of the test bay area (Historical Operational Area K). During the investigation, a total of 42 soil vapor samples (9 at the Garbage Disposal Area, 9 at the Final Assembly Building, 8 at the Propellant Burn Area, and 16 general area samples) were collected at a maximum depth of 5 feet below ground surface (bgs) and analyzed for VOCs. Analytical results from the soil vapor samples reported detectable concentrations of one or more of the following VOCs: 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), TCE, and tetrachloroethene (PCE).

A total of four soil samples were collected from 5 to 6.5 feet bgs in four borings (designated as BH2-1, BH2-2, BH2-6, and BH2-7) at the Site. Two soil borings (BH2-1 and BH2-2) were drilled upgradient and downgradient of the disposal area. Soil boring BH2-7 was drilled adjacent to the Final Assembly Building and soil boring BH2-6 was drilled adjacent to well MW2-6,

approximately 1,000 feet south of the Final Assembly Building. The soil samples were analyzed for halogenated volatile organics, aromatic volatile organics, metals, and perchlorate. The report concluded that the laboratory results for the halogenated and aromatic volatile organics did not indicate any of the analytes above their detection limits. The results for the metals analyses were within the range of values expected for natural soil and were below their respective Total Threshold Limit Concentrations (TTLC).

During this investigation four (4) new groundwater monitoring wells (designated MW2-2, MW2-4, MW2-5, and MW2-6) were installed at the Site. MW2-2 is located approximately 400 feet southeast of the former propellant burn area and downgradient of the disposal area. MW2-4 is the furthest downgradient well and is located approximately 800 feet south of the former propellant burn area. MW2-5 and MW2-6 are located approximately 2,600 feet and 800 feet, respectively, south of the former assembly building area.

The four (4) new groundwater monitoring wells, along with three of the existing production wells (designated W2-3, W2-4, and W2-5), were sampled during this investigation and analyzed for halogenated volatile organics, aromatic volatile organics, semivolatile organic, metals, and perchlorate. The laboratory results from the halogenated and aromatic volatile organics analysis indicated that none were present in the groundwater above their respective detection limits. The inorganic analytical results were also less than the detection limits for all metals except zinc, which ranged from 2,100 to 1,600 μg/L. Additionally, all seven samples were analyzed for perchlorate. Only one sample from well W2-3 reported perchlorate at a concentration of 3,300 μg/L (detection limit 20 μg/L).

2.4.3 Disposal Area Removal Action (Radian, 1993)

An electromagnetic survey was conducted to determine the location and boundary of the former Garbage Disposal Area. Subsurface anomalies were detected in the center portion of Historical Operational Area M in an area approximately 250 wide by 450 feet long. In order to visually confirm the presence of debris, a total of 12 hand-auger borings were drilled to depths ranging

from 3 to 5.5 feet bgs. Based on the hand-auger sampling activities, the subsurface debris coincides with the surface debris area. Subsequently, three (3) trenches were excavated (north, central, and south) to approximately 5 to 8 feet bgs across the debris area. A total of nine (9) soil samples were collected and analyzed for VOCs, semivolatile organic compounds (SVOCs), and metals. Neither VOCs nor SVOCs were reported above their respective detection limits. All metals results were below the 10 times Soluble Threshold Limit Concentration (STLC) guidelines. An excavation was performed to remove all debris, in which a total of 816 tons of debris was removed and disposed of off site (BKK landfill). Following the excavation, three (3) confirmation soil samples were collected from the perimeter and analyzed for VOCs, SVOCs, and metals. All results were below their respective guideline values. The excavation was then backfilled to surrounding grade. All excavation activities were performed under the supervision of Department of Toxic Substances Control (DTSC), which provided a Report of Completion of Removal Action dated May 4, 1993.

2.4.4 Monitoring Well Destruction Report (LMC, 1995)

Based on the DTSC's July 20, 1993 letter indicating that "the remediation activities at the Site have been completed and no further action is necessary," LMC abandoned the four (4) groundwater monitoring wells designated MW2-2, MW2-4, MW2-5, and MW2-6 in the southern parcel of Beaumont Site 2. Prior to abandonment activities in 1995, the four monitoring wells were sampled and analyzed for VOCs using EPA Methods 8010 and 8020. No VOCs were reported at or above their respective detection limits. All well abandonment activities were performed in accordance with the abandonment work plan approved by the California Regional Water Quality Control Board (CRWQCB), which involved using a neat cement/bentonite injection technique, cutting, capping, and removal of the top 5 feet of casing through excavation, and backfilling the excavation area with native clean soils. This pressure grouting technique satisfied all monitoring well abandonment requirements and guidelines set froth by the County of Riverside Department of Environmental Health Services (CRDEHS) and the California Department of Water Resources (Bulletin 74-90).

2.4.5 Groundwater Sampling Results Former Production Well W2-3 (Tetra Tech, 2003a)

In January 2003, Tetra Tech conducted groundwater sampling activities at the Site. The objective of the sampling was to confirm the historical detection of perchlorate in groundwater at the Site. Field activities included the location and identification of existing production wells, recording the physical condition of each well, and groundwater sampling and analysis.

Based on a file review of Unites States Geological Survey (USGS) topographic maps, Western Municipal District and Department of Water Resource (DWR) records and available Site reports, Tetra Tech identified four (4) production wells (W2-1, W2-2, W2-3 and W2-5) at the Site. Only wells W2-3 and W2-5 were visually identified at the Site. The depth to groundwater measured in well W2-3 was 45.65 feet below the top of the casing (BTOC) and the total depth of well W2-3 was 209.94 feet BTOC. Well W2-5 was dry with a total measured depth of 86.12 feet BTOC. However, based on historical documents, total well depth of W2-5 was reported to be 500 feet BTOC. A visual inspection with a mirror identified an obstruction in well W2-5, possibly consisting of dirt and debris. Therefore, only well W2-3 was sampled.

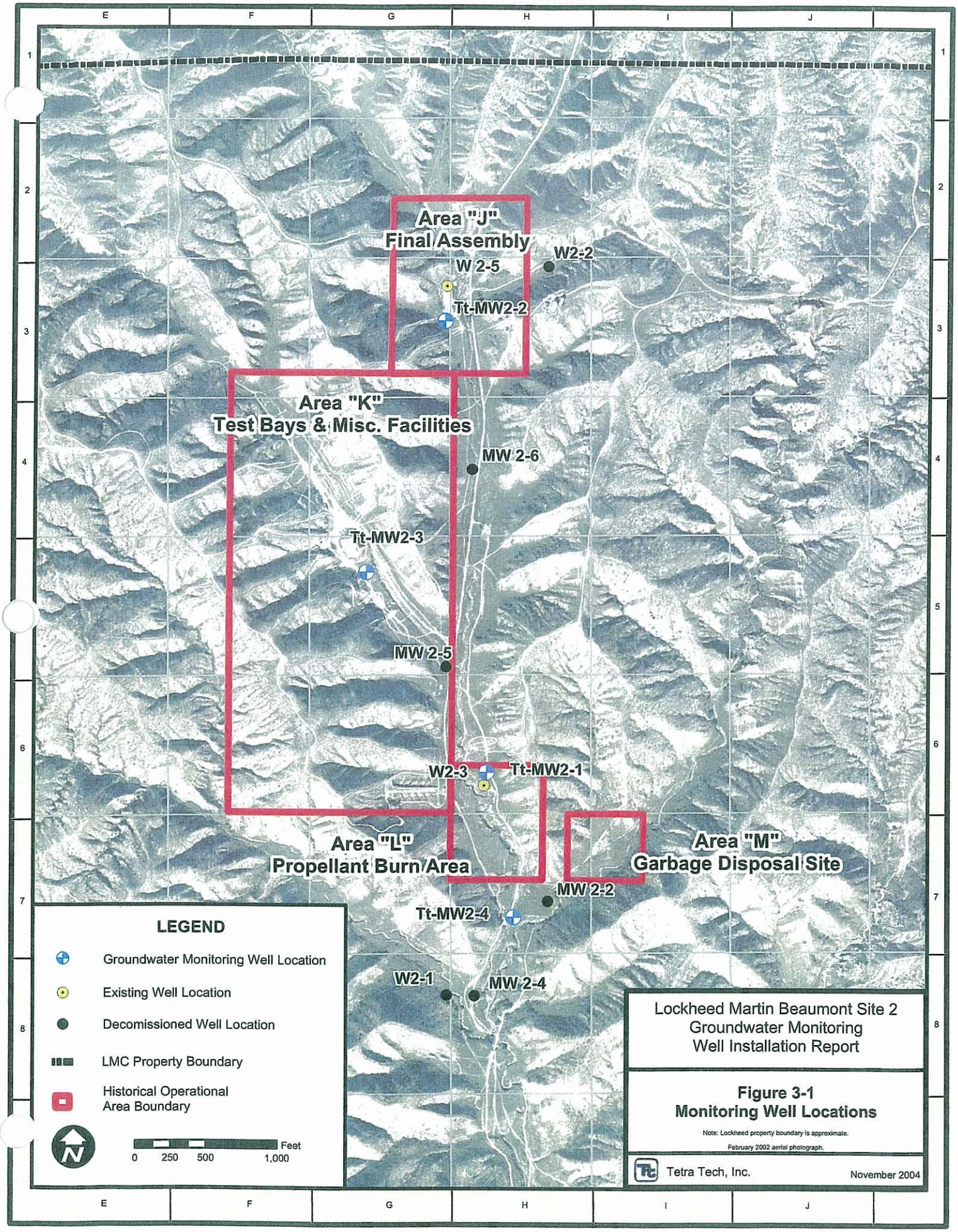
A groundwater sample was collected from W2-3 and analyzed for VOCs, perchlorate and 1,4-dioxane. Analytical results from the sample reported non-detectable concentrations for VOCs and 1,4-dioxane. Perchlorate was detected at 4,080 μg/L in well W2-3.

SECTION 3.0
WELL DRILLING/INSTALLATION ACTIVITIES

3.1 PROJECT APPROACH AND DESCRIPTION

In order to delineate the lateral extent of perchlorate affected groundwater at the Site, Tetra Tech installed four (4) groundwater monitoring wells (designated Tt-MW2-1, Tt-MW2-2, Tt-MW2-3, and Tt-MW2-4) in August and September 2004. The locations of the four (4) groundwater monitoring wells were selected based on the rationale provided in Section 3.1 of the Final Groundwater Monitoring Well Installation Work Plan (Tetra Tech, 2004) – *see Figure 3-1.*

In general, the final locations for three of the wells, Tt-MW2-1 through Tt-MW2-3 remained unchanged from those proposed in the Work Plan. Due to deterioration of road conditions in the southern portion of the Site, the proposed location for well Tt-MW2-4 could not be accessed. Initially, Tt-MW2-4 was intended to be installed approximately 450 feet south of former well MW2-4, but was moved to the farthest downstream location to which the drill rig and support equipment could be safely deployed. As a result, the final location for Tt-MW2-4 was placed approximately 400 north of former well MW2-4 – *see Figure 3-1.*


Area "J"
Final Assembly
W2-2
W 2-5
Tt-MW2-2
Area "K"
Test Bays & Misc. Facilities
MW 2-6
Tt-MW2-3
MW 2-5
W2-3
Tt-MW2-1
Area "L"
Propellant Burn Area
Area "M"
Garbage Disposal Site
MW 2-2
Tt-MW2-4
W2-1
MW 2-4
LEGEND
Groundwater Monitoring Well Location
Existing Well Location
Decomissioned Well Location
LMC Property Boundary
Historical Operational Area Boundary
N
0 250 500 1,000 Feet
Lockheed Martin Beaumont Site 2
Groundwater Monitoring
Well Installation Report
Figure 3-1
Monitoring Well Locations
Note: Lockheed property boundary is approximate.
February 2002 aerial photograph.
Tetra Tech, Inc.
November 2004

3.2 PRE-WELL INSTALLATION ACTIVITIES

The following subsections provide detailed descriptions of the pre-well installation activities including the biological, underground utility, and geophysical surveys.

3.2.1 Well Permits

Prior to commencing any field activities, well permit applications for each groundwater monitoring well were submitted to the Riverside County Department of Environmental Health Services (DEHS). Copies of the approved permits are provided in Appendix A.

3.2.2 Biological Survey

Prior to initiating the field activities, a biological survey of the proposed groundwater monitoring well locations was performed by a Section 10A permitted or sub-permitted biologist to evaluate the potential for impacts to sensitive species / habitats (i.e., Stephen's Kangaroo Rat [SKR]) during the field activities. As part of the biological survey, the biologist identified and marked all potential or suspected SKR burrows that were located in the vicinity (i.e., several hundred feet around) of each well location to avoid the potential "take" (i.e., harm, harassment, and / or death) of SKRs. In order to avoid potential "take" of SKRs, the biologist also clearly marked the ingress and egress routes to each well location in an effort to minimize the overall footprint of the field activities and to prevent potential "take" of sensitive habitat.

Furthermore, all of the field activities, including the geophysical survey, well drilling, installation, development, sampling, and land survey activities, were performed under the direct supervision of the biologist who continuously monitored each work location, including ingress and egress pathways, to track daily changes in SKR habitat / burrow activity within the well installation areas. As a result, no impacts to SKR habitats occurred during the performance of the activities related to the installation and sampling of the groundwater wells.

3.2.3 Underground Utility and Geophysical Survey

Prior to the commencement of any intrusive activities, all the well locations were marked with wooden stakes for subsurface utility clearance. Although the Site is currently inactive, Underground Service Alert (USA) was contacted prior to the start of drilling activities to help identify any potential underground utility or service lines in the proposed well locations. Based on the size of the Site, two (2) separate ticket numbers were issued by USA; Ticket #A2321095 was issued for the southern half of the Site and Ticket #A2321099 was issued for the northern half.

In addition, to ensure that private underground utilities or subsurface structures were not encountered during drilling activities, a geophysical survey at each well location was performed by Geovision, a California-licensed geophysical subcontractor. The geophysical survey was performed at each proposed well location to determine the presence and lateral dimensions of any potential subsurface structures (e.g., underground utility lines) that were not identified by USA. In order to minimize the potential for encountering any subsurface anomalies near the proposed well location, a 10-foot by 10-foot area was surveyed using ground-penetrating radar (GPR) and electromagnetic (EM) techniques. All anomalies identified during the survey were clearly marked with paint. If a subsurface structure was identified beneath the proposed groundwater monitoring well location, the groundwater well location was moved to the nearest area where no subsurface anomalies were identified.

3.3 WELL INSTALLATION

A total of four (4) groundwater monitoring wells, Tt-MW2-1 through Tt-MW2-4, were drilled and installed at the Site between August 30, 2004 and September 7, 2004. All well drilling and installation activities were performed by West Hazmat Drilling Corporation, a California-licensed drilling subcontractor, under the direct supervision of a California-registered geologist. A summary of the drilling and installation activities are presented in the subsections below.

3.3.1 Groundwater Well Drilling

All boreholes were initiated by hand-augering and/or manually digging a pilot borehole to a depth of approximately 5 feet bgs, prior to drilling with the hollow-stem auger drill (HSA) rig. This step was taken as a final precaution to minimize the potential for breaching any underground utility or service lines that may not have been identified during the geophysical and utility surveys. No underground utility or service lines were encountered during the drilling of the monitoring wells.

Once the pilot borehole was successfully cleared to 5 feet bgs at each well location, a 12-inch-diameter borehole was advanced using a CME-95 HSA rig to the approximate depth at which first groundwater was encountered. Once first groundwater was encountered, its depth was measured and drilling was paused temporarily to allow the water to equilibrate to static levels. A summary of the depth to groundwater at each of the four borehole locations, as measured at the time of drilling, including the static depth to groundwater is provided in Table 3-1.

Table 3-1
Summary of Depth to Groundwater as Measured at Time of Drilling/Installation

Well Location	Date	Approximate Depth Groundwater First Encountered (in feet bgs)	Depth to Static Groundwater (in feet bgs)
Tt-MW2-1	9/2/2004	55	54.9
Tt-MW2-2	8/30/2004	105	69.7
Tt-MW2-3	9/1/2004	80	69.78
Tt-MW2-4	9/3/2004	65	51.5

3.3.2 Groundwater Well Logging Methods

During the drilling activities, undisturbed soil samples were collected at 5-foot intervals using a California split-spoon sampler. The samples were used for headspace analyses and lithologic logging purposes only and were not submitted to a laboratory for chemical analysis. All samples were described by the field geologist using the Unified Soil Classification System (USCS) and the Munsell Soil Color chart and were recorded on a boring log. Also included on the boring logs are

the results of the headspace (vapor) screening analyses for VOCs using a photo-ionization detector (PID) in the field. Copies of the boring logs are provided in Appendix B.

Groundwater well Tt-MW2-1 was drilled with continuous core from ground surface to approximately 10 feet bgs to determine the potential presence of subsurface burn material in the former surface burn pit area. Based on visual inspection of the continuous cores and field monitoring activities, no discoloration or elevated PID readings were observed.

3.3.3 Groundwater Well Design

At each location, the final well construction details, such as the total depth of the well and screen interval, were determined based on the relationship between the first-encountered groundwater and static groundwater levels. In general, once the static groundwater level was established, the borehole was advanced until the bottom of the saturated zone could be determined.

The general design for the four groundwater monitoring wells at the Site was provided in Section 3.2.2 of the Final Work Plan (Tetra Tech, 2004). However, based on direct field observation of subsurface soil and groundwater conditions, the actual well designs were modified to suit the conditions observed. The rationale for each well design is presented below. A summary of the final construction details for each well is provided in Table 3-2.

Table 3-2
Summary of Groundwater Monitoring Well Construction Details

Well I.D.	Casing	Diameter	Total Depth (in ft. bgs)	Screen Length (in ft.)	Screen Interval (in ft. bgs)	Screen Material	Slot-Size (in inches)
Tt-MW2-1	Sched. 40 PVC	4"	70	20'	50-70	Sched. 40 PVC	0.020
Tt-MW2-2	Sched. 40 PVC	4"	118.5	15'	103.5-118.5	Sched. 40 PVC	0.020
Tt-MW2-3	Sched. 40 PVC	4"	98	20'	78-98	Sched. 40 PVC	0.020
Tt-MW2-4 (Shallow)	Sched. 40 PVC	4"	70	10'	60-70	Sched. 40 PVC	0.020
Tt-MW2-4 (Deep)	Sched. 40 PVC	4"	95	10'	85-95	Sched. 40 PVC	0.020

Note: All screens were perforated by manufacturer (factory-slotted)

Tt-MW2-1:

At well location Tt-MW2-1, groundwater was first-encountered at approximately 55 feet bgs, and drilling was temporarily paused to allow water to infiltrate the augers/borehole. After several minutes, groundwater was measured at approximately 54.9 feet bgs and remained relatively stable thereafter.

Once static water level was achieved, drilling then resumed with the intent to either locate the bottom of the saturated zone or continue to approximately 10 to 15 feet below first-encountered water. Observations of soil samples and drill cuttings at Tt-MW2-1 indicated that a confining bed may be present below approximately 70 feet bgs (see boring log for Well Tt-MW2-1 in Appendix B). Between approximately 65 and 70 feet bgs, the lithology of the soil changed from relatively unconsolidated sands and silts to well-indurated sandstone and siltstone. This change at 65 feet bgs likely represents the contact between the recent alluvial deposits and the Tertiary San Timoteo Formation. Below the contact, the soil/rock samples recovered during drilling were typically dry or unsaturated.

Based on these observations, it was determined that a 20-foot screened interval would be appropriate for Tt-MW2-1, extending from 50 to 70 feet bgs. This design will provide access to the entire length of the saturated zone, but will not allow for cross-communication with any deeper, hydraulically distinct water-bearing zones that may potentially exist below the contact. The final construction details for Tt-MW2-1 are illustrated in Appendix B.

In addition to standard lithologic evaluations, the soil samples and cuttings recovered from the surface down to 10 feet bgs at Tt-MW2-1 were examined closely for any discolorations, foreign material, or other non-native materials that may be associated with activities that occurred in the former surface burn area. No foreign materials, discolorations, or unusual odors were observed in the soil between the surface and 10 feet bgs during the drilling of Tt-MW2-1.

Tt-MW2-2:

At well location Tt-MW2-2, first encountered groundwater was observed at approximately 105 feet bgs and drilling was temporarily paused to allow water to infiltrate the augers/borehole. After several minutes, groundwater appeared to be rising at a rate of approximately 2 to 3 feet per minute. Within 15 minutes, the groundwater level in well Tt-MW2-2 had stabilized at approximately 70 feet bgs.

Based on these observations, it was determined that the uppermost saturated zone at Tt-MW2-2 was under pressure and likely represents a confined or partly confined condition. Therefore, drilling was resumed beyond 105 feet bgs with the intent to locate the bottom of the saturated zone and top of the lower confining bed. Field observations of soil samples and drill cuttings indicated that a confining bed, comprised of hard sandstone with silt and clay, was present below approximately 120 feet bgs (see boring logs in Appendix B).

Evaluation of the soil samples and field logs indicated that the hard silty sandstone at approximately 99 feet bgs may serve as the uppermost confining layer for that hydrologic unit. Therefore, it was determined that a 15-foot screen interval extending from 103.5 to 118.5 feet bgs was appropriate for the saturated zone at Tt-MW2-2. This design provides a screen that extends nearly the entire length of the saturated zone, but does not allow for hydraulic communication between the zones above or below. The final construction details for Tt-MW2-2 are illustrated in Appendix B.

Additionally, observations of the soil samples indicates that the contact between the alluvial sediments and the harder rock types of the San Timoteo Formation lies at approximately 20 feet bgs at the Tt-MW2-2 location.

Tt-MW2-3:

Groundwater at Tt-MW2-3 was first encountered at approximately 80 feet bgs. After 30 minutes, the level remained static, and drilling was resumed. No impermeable or potential confining layers were encountered beneath the saturated zone until approximately 104 feet bgs. This depth also corresponds with the contact between the alluvial sediments and the San Timoteo Formation at this location. Based on these observations, it was determined that a 20-foot screen, extending from 78 to 98 feet, was appropriate for Tt-MW2-3. Details regarding the final construction of Tt-MW2-3 are illustrated in Appendix B.

Tt-MW2-4:

During drilling at Tt-MW2-4, the majority of the soil samples and drill cuttings recovered at the surface consisted of relatively fine-grained, well-indurated soil types and it was difficult to determine if water was entering into the borehole/augers. Furthermore, few, if any of the soil samples or cuttings were clearly saturated, which added to the difficulty in identifying the water bearing zone. Therefore, the advancement of the borehole continued until approximately 105 feet bgs, although it was still difficult to determine if water was entering the borehole.

The borehole was then allowed to sit over the weekend, with the augers in place, to serve as a temporary casing to protect the integrity of the borehole and prevent potential communication between discrete hydraulic zones within the borehole. Upon return, groundwater was measured at approximately 65 feet bgs in the augers. Additional review of the samples and field logs indicated that two separate water-bearing zones may have been encountered in the borehole, one from approximately 60 to 70 feet bgs, and the other from 85 to 95 feet bgs. Based on soil samples recovered during drilling, the contact between the alluvial sediments and the San Timoteo Formation was identified at approximately 43 feet bgs at this location, indicating that both zones were encountered within the rocks of the San Timoteo Formation.

Based on field observations and evaluation of the ligthology, it was determined that two separate well casings, each with a short 10-foot screen interval, would be appropriate for Tt-MW2-4. A deep screen was selected to extend from 85 to 95 feet bgs, and a shallow screen from 60 to 70 feet bgs. This design allows for samples to be collected from each of the individual water-bearing zones, but also ensures that there is no communication between them. Care was taken to ensure that an adequate seal was placed between the two screens and that no hydraulic communication between the zones would occur within the borehole. Details with respect to the final construction of Tt-MW2-4 are illustrated in Appendix B.

3.3.4 Well Installation/Construction

All four (4) groundwater monitoring wells were constructed under the supervision of a California Registered Geologist after evaluation of the lithology and groundwater conditions at each location. Each groundwater monitoring well was constructed with a 4-inch diameter 0.020-inch factory-slotted Schedule 40 polyvinyl chloride (PVC) screen and 4-inch-diameter Schedule 40 PVC riser casing.

Once the total depth at each location was reached, the screen and casing were assembled and placed within the borehole. The annular space around the screen was then backfilled with clean #3 RMC Monterey silica sand to serve as the filter pack. At each location, filter pack materials were installed to a minimum height of 1 foot or more above the top of the screen. Directly above the filter pack, a 5-foot thick layer of $^{3}/_{8}$-inch bentonite pellets were installed to form the well seal. The bentonite pellets were hydrated and allowed to set up prior to installing any additional backfill materials. The remaining annular space above the well seal was then backfilled with a bentonite grout that extended to approximately 1 foot bgs. All backfill materials were carefully added in lifts and measured periodically to avoid the potential for bridging within the annular space.

The selection of the #3 sand for the filter pack materials was based on previous experience installing groundwater monitoring wells at the Site and other locations where fine-grained sand and silt is present. Based on the fine-grained nature of the sediments encountered during drilling

at the Site, the #3 sand adequately provides a zone of higher permeability around the screen, relative to the surrounding formation material, while still being small enough in size to restrict suspended fines from entering the well.

In addition, 0.020-inch perforations were selected for the wells as this allows for the maximum permeability of the screens where the #3 sand is used for the filter pack materials. The use of these materials is appropriate for the subsurface soil conditions encountered at the Site and is consistent with standard design and construction materials used for groundwater monitoring wells at other locations where similar conditions have been documented.

At the surface, each well was completed with a steel outer monument casing that extends approximately 3 feet above grade. Each monument casing contains a locking well cap to provide protection against tampering or unauthorized access. The base of each monument is secured by a 2-foot by 2-foot concrete pad.

3.3.5 Well Development

After their completion, the four (4) groundwater monitoring wells were allowed to set for approximately 48 hours prior to being developed. The development was performed in a step-wise process as described below.

Initially, all well casings and screens were swabbed and bailed to settle the filter pack materials and draw fine-grained materials from the surrounding formation into the well. At each screen, swabbing was conducted in 5-foot increments for approximately 15 minutes per section, working from the bottom of the screen to the top. After swabbing, a bottom-bailer was used to remove any silty or fine-grained material from the bottom of each well. Once most of the fine-grained materials were removed, each screen was bailed again for approximately 5 to 10 minutes in order to remove any additional fine-grained materials. This cycle was repeated until only very small quantities of fine-grained materials were observed.

The final step in the development procedure consisted of purging water from each well using a portable submersible pump. During this purging phase, depth to water and water quality parameters such as temperature, conductivity, pH, and turbidity were measured at regular intervals. All field measurements and observations obtained during development were documented on well development logs. Copies of these logs are provided in Appendix C.

Based on the relatively fine-grained nature of the soil and rock types encountered during the drilling for the Site monitoring wells, continuous purging could not always be sustained at all well locations, even at low flow rates (less than 0.5 gpm). As a result, several of the wells, Tt-MW2-2, Tt-MW2-4 (shallow), and Tt-MW2-4 (deep), could not be continuously pumped without becoming dry. If a given well became dry, it would be allowed to recover for several hours or more, before purging was resumed.

During the recovery period, water levels were measured periodically to determine the rate at which the groundwater would return to the well. For wells Tt-MW2-1 and Tt-MW2-3, the surrounding formation/sediments were able to produce enough water to sustain continuous pumping at relatively low flow rates without causing the wells to become dry. Details regarding the purging process are provided in Appendix C. A summary of purge volumes, number of casing volumes purged, and recovery rates for each well is provided in Table 3-3.

Table 3-3
Summary of Well Development Data

Well I.D.	Total Volume Purged (in gallons)	Number of Casing Volumes Purged	Recovery Rate (in gallons per minute)	Comments
Tt-MW2-1	168	14.1	Not applicable	--
Tt-MW2-2	210	6.7	0.08	Purged dry
Tt-MW2-3	290	14.1	Not applicable	--
Tt-MW2-4 (shallow)	79	5.3	0.03	Purged dry
Tt-MW2-4 (deep)	107	5.7	0.11	Purged dry

The development process was considered complete when: (1) at least three consecutive measurements of temperature, conductivity, and pH were observed within 10% differences; and

(2) the water appeared relatively clean (i.e., no further sediment entered the casing or the turbidity remained below 10 NTU) or five well volumes of water were removed during the well development process. A summary of the final water quality parameters obtained during development is provided in Table 3-4.

Table 3-4
Summary of Final Water Quality Parameters at Completion of Well Development Procedure

Well I.D.	Water Quality Parameter					
	Temperature (°C)	Electrical Conductivity (mS/cm)	pH	Tubidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)
Tt-MW2-1	25.01	1.308	7.52	15.8	5.36	14.5
Tt-MW2-2	24.59	0.496	8.86	98.7	3.74	-12.4
Tt-MW2-3	25.80	0.972	7.43	47.2	7.30	-67.3
Tt-MW2-4 (shallow)	25.72	0.405	8.97	602	5.93	-74.6
Tt-MW2-4 (deep)	26.6	0.336	9.40	>1000	4.71	-95.6

°C = degrees centigrade; mg/L = milligrams per liter; mS/cm = microsiemens per centimeter; mV = millivolt; NTU = nephelometric turbidity units; ORP = oxidation-reduction potential

3.4 CIVIL/LAND SURVEY

A survey of the well locations was performed by Hillwig-Goodrow, LLC., a California-certified land surveyor on October 28, 2004. Each well location was surveyed for vertical and horizontal coordinates based on the California State Plane Coordinate System, Zone 5, using NAGVD88 datum for vertical control and NAD83 datum for horizontal control. At each well location, a measuring or reference point was clearly marked on the top rim of the casing by cutting a small notch on the north side. Two elevations were then surveyed at each well location, one at the measuring point (notch in the casing rim) and the other at the ground surface adjacent to the well monument. The resulting horizontal, expressed as northings and eastings (in feet), and vertical (elevation in feet above mean sea level) coordinates for each well are provided in Table 3-5 below.

Table 3-5
Summary of Well Location Coordinates and Elevation Data -
Groundwater Monitoring Wells

Well I.D.	Northing	Easting	Elevation (ft.AMSL)	
			Ground Surface	Measuring Point
Tt-MW2-1	2273430.33	6325373.78	2032.90	2035.21
Tt-MW2-2	2276662.64	6325085.92	2135.73	2137.75
Tt-MW2-3	2274876.52	6324520.74	2092.10	2094.66
Tt-MW2-4 (shallow)	2272392.82	6325561.45	1984.56	1986.94
Tt-MW2-4 (deep)	2272392.82	6325561.45	1984.56	1987.16

AMSL = above mean sea level

3.5 GROUNDWATER SAMPLING

Once the well development activities were completed, the wells were allowed to remain undisturbed for approximately 72 hours. All of the samples were collected in accordance with the procedures outlined in the Final Work Plan (Tetra Tech, 2004) and were submitted to Calscience Environmental Laboratories, Inc. for the following analyses: VOCs by EPA Method 8260B, Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270C, 1,4-Dioxane by EPA Method 8270C, n-nitrosodimethylamine (NDMA) by EPA Method 8270C, Title 22 metals by EPA Method 6000/7000, and perchlorate by EPA Method 314.0. A summary of the analytical results from the groundwater sampling activities are presented in Section 4.0.

During sampling, continuous purging could only be sustained at wells Tt-MW2-1 and Tt-MW2-3. At these wells, three (3) casing volumes of groundwater were purged prior to collecting a sample. Due to the relatively poor recovery rates at wells Tt-MW2-2, Tt-MW2-4 (shallow), and Tt-MW2-4 (deep) continuous purging could not be sustained (see Section 3.3.5) and the wells were pumped dry before three (3) casing volumes could be achieved. Once dry, the wells were allowed to recover for several hours prior to collecting a sample.

SECTION 4.0
SUMMARY OF ANALYTICAL RESULTS

4.1 GROUNDWATER OCCURRENCE AND FLOW

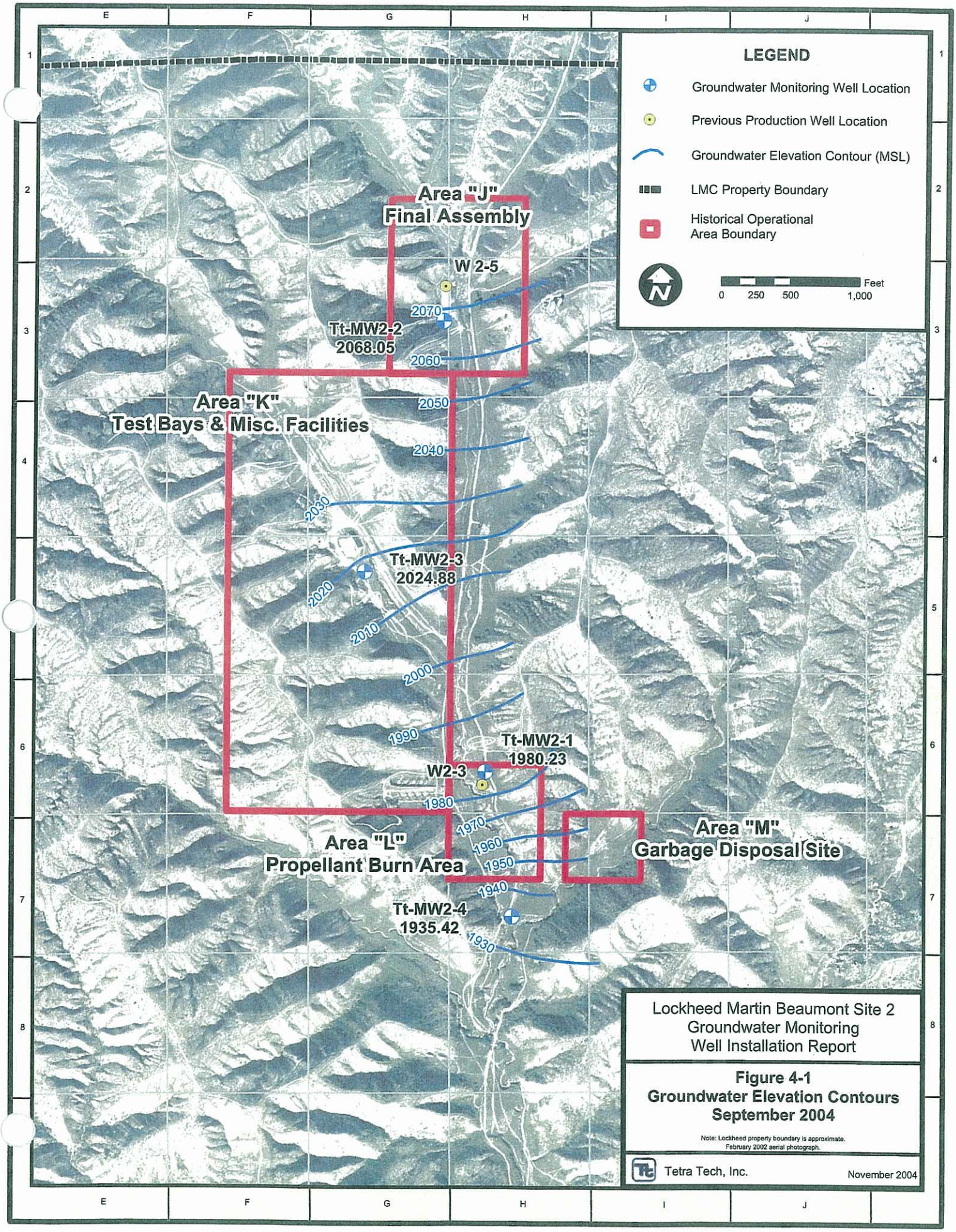
Groundwater level measurements were recorded from the four (4) new wells on September 27, 2004. Based on the results of these measurements, groundwater elevations were calculated for each well. A summary of the depth to water and groundwater elevations is presented in Table 4-1. Figure 4-1 presents the groundwater elevations beneath the Site.

Table 4-1
Summary of Groundwater Elevation Data
from Recently Installed Monitoring Wells

Well Location	Date	Measured Depth to Groundwater (in feet bgs)	Groundwater Elevation (in feet AMSL)
Tt-MW2-1	9/27/04	54.98	1980.23
Tt-MW2-2	9/27/04	69.70	2068.05
Tt-MW2-3	9/27/04	69.78	2024.88
Tt-MW2-4 (shallow)	9/27/04	51.52	1935.42
Tt-MW2-4 (deep)	9/27/04	77.58	1909.58

AMSL = above mean sea level
bgs = below ground surface

Based on the elevations presented in Table 4-1 and on Figure 4-1, groundwater flow beneath the Site generally follows the southward sloping topography of Laborde Canyon. This pattern is consistent with that observed in a previous hydrogeologic study of the area (Radian, 1992b). However, it is unclear if this pattern is truly representative of actual hydraulic conditions, as there is some indication that a more complex or multi-layered hydrogeologic system exists beneath the Site.



Lockheed Martin Beaumont Site 2
Groundwater Monitoring
Well Installation Report

Figure 4-1
Groundwater Elevation Contours
September 2004

Note: Lockheed property boundary is approximate.
February 2002 aerial photograph.

Tetra Tech, Inc.

November 2004

4.2 ANALYTICAL SAMPLING RESULTS

During the limited groundwater investigation, a total of five (5) samples were collected and analyzed for VOCs, SVOCs (including 1,4-dioxane and NDMA), Title 22 metals, and perchlorate. A summary of these analytical results is presented in Table 4-2. Copies of the laboratory analytical reports, including the results of quality control protocols, are provided in Appendix D.

Based on the analytical results, TCE was the only VOC detected in one of the samples, designated Tt-MW2-3, collected during the limited groundwater investigation. TCE was reported at a concentration of 1.6 µg/L (located within Historical Operational Area "K"), which is below its reporting limit of 1 µg/L but above the detection limit. The reported concentration is also below the maximum contaminant level (MCL) of 5 µg/L. TCE was not reported in the samples collected from any of the other wells.

No other VOCs were reported at or above their respective reporting limits in the other samples collected during this sampling event, including the duplicate sample collected from Tt-MW2-1. A summary of the analytical results for VOCs is presented in Table 4-2.

Table 4-2
Summary of Volatile Organic Compound Results

Sample Location	Sample Date	VOCs (µg/L)
Tt-MW2-1	09/27/04	ND*
Tt-MW2-1 (DUP.)	09/27/04	ND*
Tt-MW2-2	09/27/04	ND*
Tt-MW2-3	09/27/04	Trichloroethene = 1.6
Tt-MW2-4 (shallow)	09/27/04	ND*
Tt-MW2-4 (deep)	09/27/04	ND*
Equipment Blank	09/27/04	ND*
Trip Blank	09/27/04	ND*
Reporting Limit (µg/L)		1.0
[(1)]Maximum Contaminant Level (µg/L)		5.0

Notes: (1) - Based on U.S.EPA Drinking Water Standards and Health Advisories Table (June 1998), unless otherwise indicated
µg/L – micrograms per liter
DUP. – duplicate sample
N/A - not analyzed
ND – compound not detected at or above its respective reporting limits
VOC – volatile organic compound

* None of the VOCs analyzed under EPA Method 8260B were detected at or above their respective reporting limits

All four (4) wells were sampled for SVOCs including 1,4-dioxane and NDMA. Only one SVOC, bis(2-ethylhexl)phthalate, was reported above its reporting limit of 1 µg/L in groundwater well Tt-MW2-3 at a concentration of 22µg/L, which exceeds its MCL of 6 µg/L. No other SVOCs (including 1,4-dioxane and NDMA) were reported at or above their respective reporting limits from any of the wells. A summary of the analytical results for SVOCs is presented in Table 4-3.

Table 4-3
Summary of Semi-Volatile Organic Compound Results

Sample Location	Sample Date	1,4-Dioxane (µg/L)	NDMA (µg/L)	SVOCs (µg/L)
Tt-MW2-1	09/27/04	ND	ND	ND*
Tt-MW2-1 (DUP.)	09/27/04	ND	ND	ND*
Tt-MW2-2	09/27/04	ND	ND	ND*
Tt-MW2-3	09/27/04	ND	ND	Bis(2-Ehtylhexl) Phthalate = **22**
Tt-MW2-4 (shallow)	09/27/04	ND	ND	ND*
Tt-MW2-4 (deep)	09/27/04	ND	ND	ND*
Equipment Blank	09/27/04	ND	ND	ND*
Trip Blank	09/27/04	N/A	N/A	N/A
Reporting Limit (µg/L)		1.0	2.0	1.0
(1)Maximum Contaminant Level (µg/L)		5.0	NE	6.0

Note:
(1) - Based on U.S.EPA Drinking Water Standards and Health Advisories Table (June 1998), unless otherwise indicated
bold – at or above maximum contaminant level/Action Level
µg/L – micrograms per liter
DUP. – duplicate sample
NDMA - N-Nitrosodimethylamine
N/A - not analyzed
NE - not established
ND – compound not detected at or above its respective reporting limits
SVOC –semivolatile organic compound
*None of the SVOCs analyzed under EPA Method 8270C were detected at or above their respective reporting limits

Based on the results of the Title 22 metals analyses, concentrations of arsenic, antimony, barium, beryllium, cadmium, chromium(total), cobalt, copper, and lead were detected in the groundwater samples. However, all reported concentrations were below their respective drinking water MCLs for each of the individual metals. A summary of the analytical results for the Title 22 metals is presented in Table 4-4.

Table 4-4
Summary of Title 22 Metals Results

Sample Location	Sample Date	Title 22 Metals (mg/L)								
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (Total)	Cobalt	Copper	Lead
Tt-MW2-1	09/27/04	ND	ND	0.22	ND	ND	0.0172	0.00591	0.0129	ND
Tt-MW2-1 (DUP.)	09/27/04	ND	ND	0.228	ND	ND	0.017	0.00661	0.014	ND
Tt-MW2-2	09/27/04	ND	ND	0.299	ND	ND	ND	ND	ND	ND
Tt-MW2-3	09/27/04	ND	ND	0.112	ND	ND	0.00656	ND	0.00501	ND
Tt-MW2-4 (shallow)	09/27/04	0.0177	0.0598	0.256	0.0023	ND	0.0573	0.0194	0.0427	0.0188
Tt-MW2-4 (deep)	09/27/04	ND	0.0833	0.0532	ND	ND	0.0115	ND	0.00882	ND
Equipment Blank	09/27/04	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank	09/27/04	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reporting Limit (µg/L)		0.015	0.015	0.01	0.001	0.005	0.005	0.005	0.005	0.01
[1]Maximum Contaminant Level (µg/L)		0.006	0.05	2.0	0.004	0.005	0.1	NE	1.0	NE

Notes:
(1) - Based on U.S.EPA Drinking Water Standards and Health Advisories Table (June 1998), unless otherwise indicated
µg/L – micrograms per liter
DUP. – duplicate sample
N/A - not analyzed
ND – compound not detected at or above its respective reporting limits
NE - not established

During the limited groundwater investigation, perchlorate was not detected in any of the samples collected from Tt-MW2-2, Tt-MW2-4 shallow, or Tt-MW2-4 deep. However, perchlorate was detected at concentrations of 3,500 µg/L and 1,300 µg/L in the samples collected from wells Tt-MW2-1 and Tt-MW2-3, respectively. A concentration of 3,700 µg/L of perchlorate was also reported from the duplicate sample collected from well Tt-MW2-1. A summary of the analytical results for perchlorate is presented in Table 4-5, and brief discussion of these results is provided in Section 6.0.

Table 4-5
Summary of Perchlorate Results

Sample Location	Sample Date	Perchlorate (µg/L)
Tt-MW2-1	09/27/04	**3500**
Tt-MW2-1 (DUP.)	09/27/04	**3700**
Tt-MW2-2	09/27/04	ND
Tt-MW2-3	09/27/04	**1300**
Tt-MW2-4 (shallow)	09/27/04	ND
Tt-MW2-4 (deep)	09/27/04	ND
Equipment Blank	09/27/04	ND
Trip Blank	09/27/04	N/A
Reporting Limit (µg/L)		2.0
[1]Maximum Contaminant Level (µg/L)		6.0[1]

Note: (1) - Current State of California Public Health Goal
bold – at or above maximum contaminant level/Action Level
µg/L – micrograms per liter
DUP. – duplicate sample
N/A - not analyzed
ND – compound not detected at or above its respective reporting limits

SECTION 5.0
WASTE MANAGEMENT

All of the soil cuttings and purge water generated during the drilling, development, and initial sampling of the monitoring wells were placed in 55-gallon Department of Transportation (DOT) approved drums and placed in a temporary storage area in Historical Operational Area J of the Site. All of the drums were properly labeled with the location, date, and potential disposition pending the results of analytical sampling.

In order to properly characterize/profile the investigation-derived waste (IDW), the following sampling protocols were applied, as required by the recycling facility:

1. For each 55-gallon drum containing decontamination water/purged groundwater: one grab sample was collected per drum.
2. For 55-gallon drums containing the soil cuttings: one representative composite sample was collected at each boring location. A composite was created by mixing soil from a minimum of three separate drums from a given well location.

Each of the samples were analyzed for VOCs, SVOCs, perchlorate, and Title 22 metals. The analytical results were used to determine the proper disposal of all IDW. All wastes will be removed from the Site within 90 days of their accumulation.

SECTION 6.0
SUMMARY OF FINDINGS

As part of the Site characterization groundwater program, Tetra Tech has conducted a limited groundwater investigation to evaluate the current groundwater conditions and to verify the presence of COPCs (i.e., VOCs, SVOCs, 1,4-dioxane, NDMA, Title 22 Metals, and Perchlorate) within the groundwater beneath the Site. During the limited groundwater investigation program, Tetra Tech installed and sampled four (4) groundwater monitoring wells, designated Tt-MW2-1 though Tt-MW2-4, to confirm the presence and lateral extent of any COPCs. In addition, groundwater elevations from the four (4) new wells were measured to determine the current groundwater flow direction.

Based on the groundwater elevations presented in Subsection 4.1, groundwater flow beneath the Site generally follows the southward sloping topography of Laborde Canyon. This pattern is consistent with that observed in a previous hydrogeologic study of the area (Radian, 1992b).

Based on the analytical results, only samples collected from groundwater monitoring wells Tt-MW2-1 and Tt-MW2-3 reported concentrations of SVOCs (e.g., Bis(2-Ehtylhexl) Phthalate) and perchlorate above their respective MCL or recommended action level (RAL). No other COPCs were reported at or above their respective action levels (e.g., MCL or RAL) in the samples from the other wells.

SECTION 7.0
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COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

29131

WELL DRILLING PERMIT

ALL ELECTRICAL, PLUMBING, MECHANICAL, AND STRUCTURAL REPAIRS AND INSTALLATIONS SHALL BE DONE UNDER PERMIT FROM RIVERSIDE COUNTY DEPT. OF BUILDING AND SAFETY.

Date June 29, 2004

Expiration Date 12-25-04

Fee $138.04
(non-refundable)

This permit is granted on condition that the person named in the permit will comply with the laws, ordinances and regulations that are now or may hereafter be in force.

LOCATION OF PROPOSED WELL SW ¼ SE ¼; Sec. 18 ; T 3S ; R 1W

PHYSICAL ADDRESS OF WELL 36251 Highway 60 Community Beaumont
APN: 421-080-001-6 Laborde Canyon (Site 2) #TE-MW-2-1

NAME Lockheed Martin Corporation

MAILING ADDRESS 2550 N. Hollywood Way, 3rd Flr.

CITY & STATE Burbank, Ca. 91505

DRILLER West Hazmat Drilling Corp.
1016 East Katella Avenue
Anaheim, Ca. 92805

By Charlene Robbins
Charlene Robbins

DEH-SAN-025 (Rev 10/02)

Distribution: WHITE—Environmental Health Department; YELLOW—Owner; PINK—Well Driller; GOLDENROD—Flood Control

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
WELL PERMIT APPLICATION
(For Construction, Reconstruction & Destruction)

☒ 4080 Lemon Street, 2nd Floor / P.O. Box 1206 - Riverside, CA 92502 - (909) 955-8980
☐ 82675 Hwy. 111, CAC - Indio, CA 92201 - (760) 863-7000
☒ 39493 Los Alamos - Murrieta, CA 92563 - (909) 600-6180

Consultants check #0610 $332.92 TH

Tt-MW2-1

PLEASE REPLY TO ADDRESS CHECKED ABOVE

NOTE: Any abandoned wells on the property must be properly destroyed before an application for construction or reconstruction can be processed.

FOR DEPARTMENT USE ONLY
Permit No. 29131
Expiration 12-25-04

Please Print ETTW040397

1. OWNER: Name Lockheed Martin Corporation
Mailing Address 2550 N. Hollywood Way, 3rd Floor
City Burbank State CA
Zip 91505 Phone No. (818) 847-0899

2. DATE OF WORK (approximate):
Start 6/21/04 Complete 6/30/04

3. WELL DRILLER
Name Test America Drilling DBA West Hazmat Drilling
WDC Exploration & Wells
Riv. Co. Registration No. WDR-04-057 04-013
C-57 License No. ~~657283~~ 657819548

4. WELL CHECK (check) Tt-MW2-1
☐ Community ☒ Monitoring ☐ Industrial
☐ Individual ☐ Cathodic ☐ Other
☐ Agricultural ☐ Horizontal

4A. FOR MONITORING WELL: (Name of Consultant)
Name Tetra Tech Phone (909) 381-1674

5. TYPE OF WORK (check)
☒ New ☐ Reconstruction ☐ Destruction

5A. If reconstruction or destruction, please describe method on reverse side of attached Plot Plan.

6. ANNUAL SEAL: 33
Depth 30 ft.
Borehole Diam. 10 in.
Conductor Diam. — in.
Annular Thickness 3" in.
Sealing Material Bent. Slurry (must be tremied through tremie pipe in hollow-stem auger)

7. DEPTH OF WELL (feet)
Proposed 65' Existing —
DIAMETER OF BORE (in.) 10"

8. PRODUCTION WELL CASING INSTALLED:
☐ Steel ☒ Plastic ☐ Other

From (ft.)	To (ft.)	Dia. (in.)	Wall (Gage)
0	65'	4"	Sched. 40

GRAVEL PACK: ☒ Yes ☐ No
From 33' to 65' ft.
Type of rig —

9. PERFORATIONS (if applicable):
From 35 to 65 ft.

10. SEALED ZONES (if applicable):
From — to — ft.

11A. The California Labor code requires Worker's Compensation Insurance as a prerequisite to permit issuance unless the applicant signs the following certificate: **I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers Compensation Insurance laws of California.**

Driller's Signature NA Date —

11B. I have read this application and agree to comply with all laws regulating the type of work being performed.

Driller's Signature Steve Hall Date 6-11-04

12. I declare under penalty of perjury under the laws of the State of California that the information furnished as part of this application is true and correct. I also understand that I am legally obligated to obey all requirements of state law and Riverside County Ordinances in connection with the approval of this application.

Property Owner's Signature Linda Cartier, Lockheed Martin Date 6/11/04

OK OK

DISPOSITION OF PERMIT

Approved subject to the following:

FOR DEPARTMENT USE ONLY

A. Notify the Department, , forty-eight (48) hours in advance to make an inspection of the following operations:
☒ Prior to sealing of the annular space or filling of the conductor casing.
☐ Verify the depth of the conductor (outer) casing prior to further drilling and installation of the inner casing.
☒ After installation of the surface protective slab and pumping equipment.
☐ During destruction of wells, prior to pouring the sealing material.

B. Approved Plot Plan.

C. Submit to the Department within thirty (60) days after completion of work, a copy of: 06-14-04A11:56 0420
☒ Water Well Driller's Report (DWR 188).

NOTE: Property located within the Rancho California Water District may be subject to an existing Agency Agreement with said District.

D. Other: —

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

29132

WELL DRILLING PERMIT

ALL ELECTRICAL, PLUMBING, MECHANICAL, AND STRUCTURAL REPAIRS AND INSTALLATIONS SHALL BE DONE UNDER PERMIT FROM RIVERSIDE COUNTY DEPT. OF BUILDING AND SAFETY.

Date June 29, 2004

Expiration Date 12-25-04

Fee $64.96
(non-refundable)

This permit is granted on condition that the person named in the permit will comply with the laws, ordinances and regulations that are now or may hereafter be in force.

LOCATION OF PROPOSED WELL SW ¼ SE ¼; Sec. 18 ; T 3S ; R 1W

PHYSICAL ADDRESS OF WELL 36251 Highway 60 Community Beaumont
APN: 421-080-001-6 Laborde Canyon (Site 2) #TE-MW-2-2

NAME Lockheed Martin Corporation DRILLER West Hazmat Drilling Corp.
1016 East Katella Avenue
Anaheim, Ca. 92805

MAILING ADDRESS 2550 N. Hollywood Way, 3rd Flr.

CITY & STATE Burbank, Ca. 91505

By Charlene Robbins
Charlene Robbins

DEH-SAN-025 (Rev 10/02)

Distribution: WHITE—Environmental Health Department; YELLOW—Owner; PINK—Well Driller; GOLDENROD—Flood Control

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
WELL PERMIT APPLICATION
(For Construction, Reconstruction & Destruction)

☒ 4080 Lemon Street, 2nd Floor / P.O. Box 1206 - Riverside, CA 92502 - (909) 955-8980 (# 0611)
☐ 82675 Hwy. 111, CAC - Indio, CA 92201 - (760) 863-7000
☐ 39493 Los Alamos - Murrieta, CA 92563 - (909) 600-6180

Consultant chose Tetra Tech low $ 332 TT-MW2-2

PLEASE REPLY TO ADDRESS CHECKED ABOVE

NOTE: Any abandoned wells on the property must be properly destroyed before an application for construction or reconstruction can be processed.

Please Print EHW04039

FOR DEPARTMENT USE ONLY
Permit No. 29132
Expiration 12-25-04

1. OWNER: Name Lockheed Martin Corporation
Mailing Address 2550 N. Hollywood Way, 3rd Floor
City Burbank State CA
Zip 91505 Phone No. (818) 847-0899

2. DATE OF WORK (approximate):
Start 6/21/04 Complete 6/30/04

3. WELL DRILLER
Name Test America Drilling DBA, West Hazmat Drilling ~~WDC Exploration & Wells~~
Riv. Co. Registration No. ~~WDB 04-05-04-013~~
C-57 License No. ~~C57283376~~ C57819548

4. WELL CHECK (check) TT-MW2-2
☐ Community ☒ Monitoring ☐ Industrial
☐ Individual ☐ Cathodic ☐ Other
☐ Agricultural ☐ Horizontal

4A. FOR MONITORING WELL: (Name of Consultant)
Name Tetra Tech Phone (909) 381-1674

5. TYPE OF WORK (check)
☒ New ☐ Reconstruction ☐ Destruction

5A. If reconstruction or destruction, please describe method on reverse side of attached Plot Plan.

6. ANNUAL SEAL:
Depth 30 ft.
Borehole Diam. 10 in.
Conductor Diam. — in.
Annular Thickness 3" in.
Sealing Material Bent. Slurry (must be tremied through tremie pipe to bottom of hole)

7. DEPTH OF WELL (feet)
Proposed 65' Existing —
DIAMETER OF BORE (in.) 10"

8. PRODUCTION WELL CASING INSTALLED:
☐ Steel ☒ Plastic ☐ Other

From (ft.)	To (ft.)	Dia. (in.)	Wall (Gage)
0	65'	4"	sched. 40

GRAVEL PACK: ☒ Yes ☐ No
From 33' to 65' ft.
Type of rig —

9. PERFORATIONS (if applicable):
From 35 to 65 ft.

10. SEALED ZONES (if applicable):
From ____ to ____ ft.

11A. The California Labor code requires Worker's Compensation Insurance as a prerequisite to permit issuance unless the applicant signs the following certificate: **I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers Compensation Insurance laws of California.**
Driller's Signature NA Date ____

11B. I have read this application and agree to comply with all laws regulating the type of work being performed 6-11-04
Driller's Signature Steve Hall Date 6/8/04

12. I declare under penalty of perjury under the laws of the State of California that the information furnished as part of this application is true and correct. I also understand that I am legally obligated to obey all requirements of state law and Riverside County Ordinances in connection with the approval of this application.
Property Owner's Signature Linda Getter, Lockheed Martin Date 6/11/04

OK SHall 6/25/04

DISPOSITION OF PERMIT

Approved subject to the following:

FOR DEPARTMENT USE ONLY

A. Notify the Department, , forty-eight (48) hours in advance to make an inspection of the following operations:
☒ Prior to sealing of the annular space or filling of the conductor casing.
☐ Verify the depth of the conductor (outer) casing prior to further drilling and installation of the inner casing.
☒ After installation of the surface protective slab and pumping equipment.
☐ During destruction of wells, prior to pouring the sealing material.

B. Approved Plot Plan.

C. Submit to the Department within thirty (60) days after completion of work, a copy of: 06-14-04 A11:56
☒ Water Well Driller's Report (DWR 188).

NOTE: Property located within the Rancho California Water District may be subject to an existing Agency Agreement with said District.

D. Other: ____

DEH-SAN-185A (Rev 5/02)

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

29133

WELL DRILLING PERMIT

ALL ELECTRICAL, PLUMBING, MECHANICAL, AND STRUCTURAL REPAIRS AND INSTALLATIONS SHALL BE DONE UNDER PERMIT FROM RIVERSIDE COUNTY DEPT. OF BUILDING AND SAFETY.

Date June 29, 2004

Expiration Date 12-25-04

Fee $64.96
(non-refundable)

This permit is granted on condition that the person named in the permit will comply with the laws, ordinances and regulations that are now or may hereafter be in force.

LOCATION OF PROPOSED WELL SW ¼ SE ¼; Sec. 18 ; T 3S ; R 1W

PHYSICAL ADDRESS OF WELL 36251 Highway 60 Community Beaumont
APN: 421-080-001-6 Laborde Canyon (Site 2) #TE-MW-2-3

NAME Lockheed Martin Corporation

MAILING ADDRESS 2550 N. Hollywood Way, 3rd Flr.

CITY & STATE Burbank, Ca. 91505

DRILLER West Hazmat Drilling Corp.
1016 East Katella Avenue
Anaheim, Ca. 92805

By Charlene Robbins
Charlene Robbins

DEH-SAN-025 (Rev 10/02)

Distribution: WHITE—Environmental Health Department; YELLOW—Owner; PINK—Well Driller; GOLDENROD—Flood Control

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
WELL PERMIT APPLICATION
(For Construction, Reconstruction & Destruction)

- [x] 4080 Lemon Street, 2nd Floor / P.O. Box 1206 - Riverside, CA 92502 - (909) 955-8980 (# 0611)
- [ ] 82675 Hwy. 111, CAC - Indio, CA 92201 - (760) 863-7000
- [ ] 39493 Los Alamos - Murrieta, CA 92563 - (909) 600-6180

Consultant: Tetra Tech, Inc. — $532.92 — Tt-MW2-3

PLEASE REPLY TO ADDRESS CHECKED ABOVE

NOTE: Any abandoned wells on the property must be properly destroyed before an application for construction or reconstruction can be processed.

Please Print EHWO40397

FOR DEPARTMENT USE ONLY

Permit No. 29133

Expiration 12-25-04

1. OWNER: Name Lockheed Martin Corporation
   Mailing Address 2550 N. Hollywood Way 3rd floor
   City Burbank State CA
   Zip 91505 Phone No. (818) 847-0899

2. DATE OF WORK (approximate):
   Start 6/21/04 Complete 6/30/04

3. WELL DRILLER
   Name Test America Drilling DBA West Hazmat Drilling ~~WDC Exploration & Wells~~
   Riv. Co. Registration No. ~~54-05~~ WDR 04-013
   C-57 License No. ~~657283326~~ 657819548

4. WELL CHECK (check) Tt-MW2-3
   - [ ] Community
   - [x] Monitoring
   - [ ] Industrial
   - [ ] Individual
   - [ ] Cathodic
   - [ ] Other
   - [ ] Agricultural
   - [ ] Horizontal

4A. FOR MONITORING WELL: (Name of Consultant)
   Name Tetra Tech Phone (949) 381-1674

5. TYPE OF WORK (check)
   - [x] New
   - [ ] Reconstruction
   - [ ] Destruction

5A. If reconstruction or destruction, please describe method on reverse side of attached Plot Plan.

6. ANNUAL SEAL:
   Depth 30 ft.
   Borehole Diam. 10 in.
   Conductor Diam. — in.
   Annular Thickness 3" in.
   Sealing Material Bent. Slurry

7. DEPTH OF WELL (feet)
   Proposed 65' Existing
   DIAMETER OF BORE (in.) 10"

8. PRODUCTION WELL CASING INSTALLED:
   - [ ] Steel
   - [x] Plastic
   - [ ] Other

From (ft.)	To (ft.)	Dia. (in.)	Wall (Gage)
0	65'	4"	sched. 40

   GRAVEL PACK: [x] Yes [ ] No
   From 33' to 65' ft.
   Type of rig —

9. PERFORATIONS (if applicable):
   From 35 to 65 ft.

10. SEALED ZONES (if applicable):
   From ______ to ______ ft.

11A. The California Labor code requires Worker's Compensation Insurance as a prerequisite to permit issuance unless the applicant signs the following certificate: **I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers Compensation Insurance laws of California.**

Driller's Signature N/A Date ______

11B. I have read this application and agree to comply with all laws regulating the type of work being performed. 6-11-04

Driller's Signature [signature] Steve Hall Date ~~6/8/04~~

12. I declare under penalty of perjury under the laws of the State of California that the information furnished as part of this application is true and correct. I also understand that I am legally obligated to obey all requirements of state law and Riverside County Ordinances in connection with the approval of this application.

Property Owner's Signature [signature], Lockheed Martin Date 6/11/04

DISPOSITION OF PERMIT

OK [initials] 6/25/04

Approved subject to the following:

FOR DEPARTMENT USE ONLY

A. Notify the Department, , forty-eight (48) hours in advance to make an inspection of the following operations:
   - [x] Prior to sealing of the annular space or filling of the conductor casing.
   - [ ] Verify the depth of the conductor (outer) casing prior to further drilling and installation of the inner casing.
   - [x] After installation of the surface protective slab and pumping equipment.
   - [ ] During destruction of wells, prior to pouring the sealing material.

B. Approved Plot Plan.

C. Submit to the Department within thirty (60) days after completion of work, a copy of: 06-14-04A11:56 0418
   - [x] Water Well Driller's Report (DWR 188).

NOTE: Property located within the Rancho California Water District may be subject to an existing Agency Agreement with said District.

D. Other: ______

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

29134

WELL DRILLING PERMIT

ALL ELECTRICAL, PLUMBING, MECHANICAL, AND STRUCTURAL REPAIRS AND INSTALLATIONS SHALL BE DONE UNDER PERMIT FROM RIVERSIDE COUNTY DEPT. OF BUILDING AND SAFETY.

Date June 29, 2004

Expiration Date 12-25-04

Fee $64.96
(non-refundable)

This permit is granted on condition that the person named in the permit will comply with the laws, ordinances and regulations that are now or may hereafter be in force.

LOCATION OF PROPOSED WELL NW ¼ SE ¼; Sec. 19 ; T 3S ; R 1W

PHYSICAL ADDRESS OF WELL 36501 Jack Rabbit Trail Community Beaumont
APN: 421-190-001-6 Laborde Canyon (Site 2) #TE-MW-2-4

NAME Lockheed Martin Corporation

MAILING ADDRESS 2550 N. Hollywood Way, 3rd Flr.

CITY & STATE Burbank, Ca. 91505

DRILLER West Hazmat Drilling Corp.
1016 East Katella Avenue
Anaheim, Ca. 92805

By Charlene Robbins
Charlene Robbins

DEH-SAN-025 (Rev 10/02)

Distribution: WHITE—Environmental Health Department; YELLOW—Owner; PINK—Well Driller; GOLDENROD—Flood Control

COUNTY OF RIVERSIDE COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
WELL PERMIT APPLICATION
(For Construction, Reconstruction & Destruction)

☒ 4080 Lemon Street, 2nd Floor / P.O. Box 1206 - Riverside, CA 92502 - (909) 955-8980
☐ 82675 Hwy. 111, CAC - Indio, CA 92201 - (760) 863-7000
☒ 39493 Los Alamos - Murrieta, CA 92563 - (909) 600-6180

Call #0611 # 332-92 TW
TE-MW2-4
Carol Hatsch - Tetra Tech

PLEASE REPLY TO ADDRESS CHECKED ABOVE

NOTE: Any abandoned wells on the property must be properly destroyed before an application for construction or reconstruction can be processed.

FOR DEPARTMENT USE ONLY
Permit No. 29134
Expiration 12-25-04

Please Print EH W040398

1. OWNER: Name Lockheed Martin Corporation
Mailing Address 2550 N. Hollywood Way 3rd floor
City Burbank State CA
Zip 91505 Phone No. (818) 847-0899

2. DATE OF WORK (approximate):
Start 6/21/04 Complete 6/30/04

3. WELL DRILLER
Name Test America Drilling DBA West Hazmat Drilling ~~WDC Exploration & Wells~~
Riv. Co. Registration No. ~~WDR 04-054~~ 04-013
C-57 License No. ~~C57283326~~ C57819548

4. WELL CHECK (check) TE-MW2-4
☐ Community ☒ Monitoring ☐ Industrial
☐ Individual ☐ Cathodic ☐ Other
☐ Agricultural ☐ Horizontal

4A. FOR MONITORING WELL: (Name of Consultant)
Name Tetra Tech Phone (909) 381-1674

5. TYPE OF WORK (check)
☒ New ☐ Reconstruction ☐ Destruction

5A. If reconstruction or destruction, please describe method on reverse side of attached Plot Plan.

6. ANNUAL SEAL:
Depth 30 ft.
Borehole Diam. 10 in.
Conductor Diam. — in.
Annular Thickness 3" in.
Sealing Material Bent. Slurry (must be tremied through tremie pipe)

7. DEPTH OF WELL (feet)
Proposed 65' Existing —
DIAMETER OF BORE (in.) 10" (or hollow stem auger)

8. PRODUCTION WELL CASING INSTALLED:
☐ Steel ☒ Plastic ☐ Other

From (ft.)	To (ft.)	Dia. (in.)	Wall (Gage)
0	65'	4"	sched. 40

GRAVEL PACK: ☒ Yes ☐ No
From 33' to 65' ft.
Type of rig —

9. PERFORATIONS (if applicable):
From 35 to 65 ft.

10. SEALED ZONES (if applicable):
From ____ to ____ ft.

11A. The California Labor code requires Worker's Compensation Insurance as a prerequisite to permit issuance unless the applicant signs the following certificate: **I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers Compensation Insurance laws of California.**
Driller's Signature N/A Date ____

11B. I have read this application and agree to comply with all laws regulating the type of work being performed.
Driller's Signature Steve Hall Date 6-11-04 6/10/04

12. I declare under penalty of perjury under the laws of the State of California that the information furnished as part of this application is true and correct. I also understand that I am legally obligated to obey all requirements of state law and Riverside County Ordinances in connection with the approval of this application.
Property Owner's Signature Linda Gerber, Lockheed Martin Date 6/11/04

OK Sellis 6/25/04

DISPOSITION OF PERMIT

Approved subject to the following:

FOR DEPARTMENT USE ONLY

A. Notify the Department, , forty-eight (48) hours in advance to make an inspection of the following operations:
☒ Prior to sealing of the annular space or filling of the conductor casing.
☐ Verify the depth of the conductor (outer) casing prior to further drilling and installation of the inner casing.
☒ After installation of the surface protective slab and pumping equipment.
☐ During destruction of wells, prior to pouring the sealing material.

B. Approved Plot Plan.

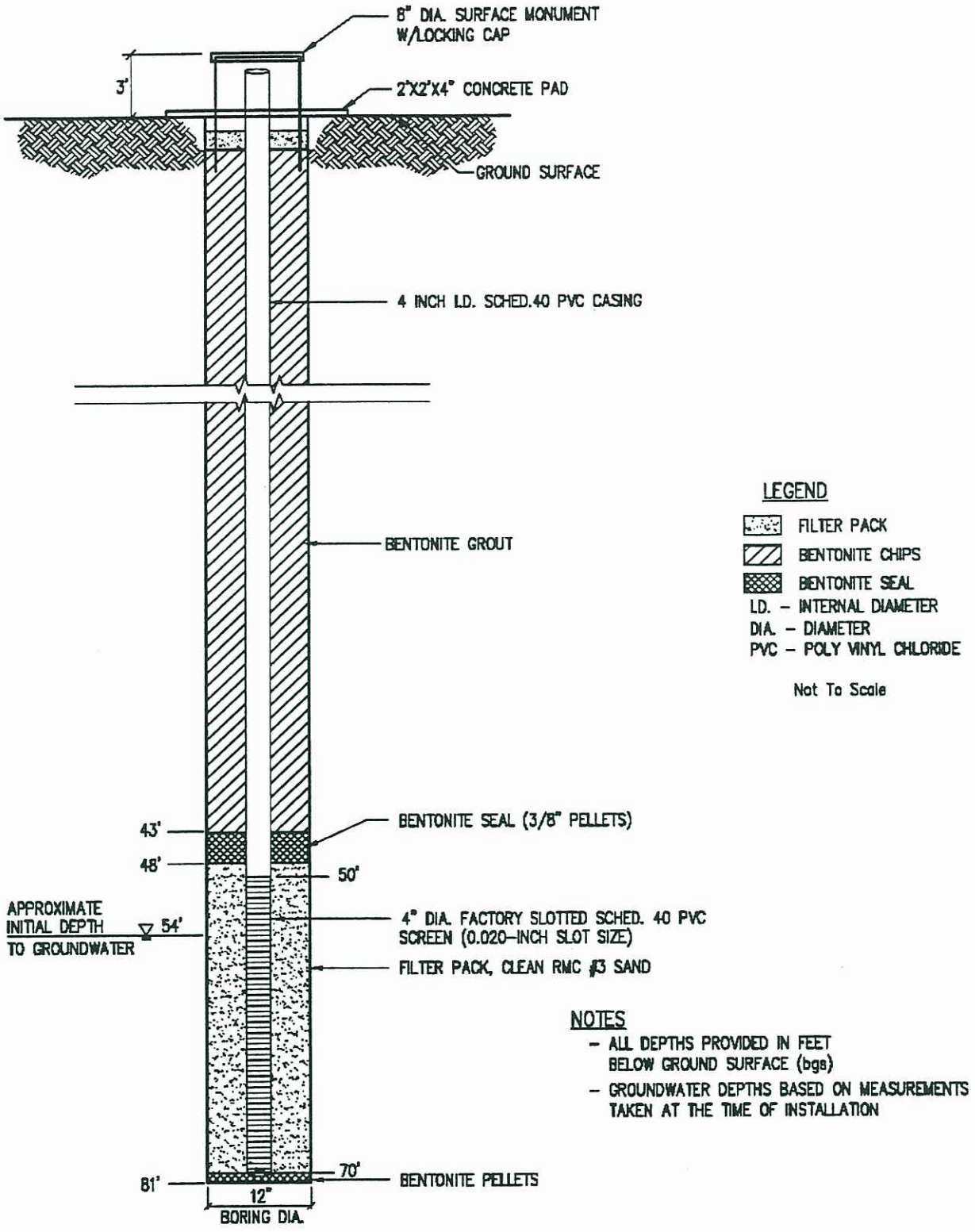
C. Submit to the Department within thirty (60) days after completion of work, a copy of:
☒ Water Well Driller's Report (DWR 188). 06-14-04 A11:56 041

NOTE: Property located within the Rancho California Water District may be subject to an existing Agency Agreement with said District.

D. Other: ____

DEH-SAN-185A (Rev 5/02)

FIGURE 3-2
CONSTRUCTION DETAILS FOR
GROUNDWATER MONITORING WELL
FOR Tt-MW2-1



TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-1

(Sheet 1 of 5)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,273,430.33 Feet
Date Started: September 1, 2004	Easting: 6,325,373.90 Feet
Date Completed: September 1, 2004	Ground Surface Elevation: 2,032.90 Feet AMSL, NAVD 88
Total Depth: 81.0 Feet bgs	Top of Casing Elevation: 2,035.21 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							ML		0 to 3 ft. SILT WITH SAND: Loose, (2.5Y 6/1) Gray, Predominantly Silt with Fine Sand, Subrounded Grains, Dry, No Odor.	
										2030
		9 10 13			0.2	BZ 0.3	SW-SM		3 to 9 ft. WELL GRADED SAND WITH SILT: Loose, (2.5Y 6/2) Light Brownish Gray, Mostly Fine Well Graded Sand with Silt, Trace Gravel, Granitic, Subangular Grains, Dry. No Foreign Material, Discolorations, or Odors Observed between 0-10 ft. bgs.	
5										
										2025
		10 10 12			0	BZ 0.3				
10							ML		9 to 13 ft. SILT WITH SAND: Loose, (2.5Y 6/1) Gray, Fine to Medium Grained Sand, Trace Coarse Grained Sand, Subrounded Grains, Dry.	
										2020
		7 11 15			1.6	BZ 0.3			13 to 21.5 ft. POORLY GRADED SAND WITH SILT: Loose, (2.5Y 6/2) Light Brownish Gray, Fine to Medium Grained Sand, Trace Coarse Grained Sand, Subangular to Subrounded Grains, Dry.	
15							SP-SM			
										2015
		11 13 21			1.6	BZ 0.3				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-1

(Sheet 2 of 5)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,273,430.33 Feet
Date Started: September 1, 2004	Easting: 6,325,373.90 Feet
Date Completed: September 1, 2004	Ground Surface Elevation: 2,032.90 Feet AMSL, NAVD 88
Total Depth: 81.0 Feet bgs	Top of Casing Elevation: 2,035.21 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SP-SM		AS ABOVE	
									21.5 to 32.5 ft. SILT WITH SAND: Firm, (2.5Y 4/2) Dark Grayish Brown, Predominantly Silt with Fine to Medium Grained Subrounded Sand, Some Coarse Grained Sand, Trace Gravel, Granitic Mineralogy, Moist.	2010
25		10 15 16			1.9	BZ 0.2				
							ML			2005
		13 19 21			2.1	BZ 0.2				
30									AS ABOVE	
									32.5 to 48 ft. WELL GRADED SAND WITH SILT AND GRAVEL: Moderately Dense, (5Y 6/2) Light Olive Gray, Well Graded Sand with Some Silt and Gravel, Subrounded to Rounded Grains, Granitic, Moist.	2000
		14 17 22			2.8	BZ 0.2				
35							SW-SM			
										1995
		13 19 20			2.1	BZ 0.3				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-1

(Sheet 3 of 5)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,273,430.33 Feet
Date Started: September 1, 2004	Easting: 6,325,373.90 Feet
Date Completed: September 1, 2004	Ground Surface Elevation: 2,032.90 Feet AMSL, NAVD 88
Total Depth: 81.0 Feet bgs	Top of Casing Elevation: 2,035.21 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									AS ABOVE	
		16 22 25			1.6	BZ 0.3	SW-SM			1990
45										
										1985
		17 18 28			1.9	BZ 0.3			48 to 65 ft. POORLY GRADED SAND WITH SILT: Moderately Dense, (2.5Y 5/2) Grayish Brown, Fine to Medium Grained Sand with Silt, Trace Gravel, Subrounded Grains, Moist.	
50										
										1980
		21 25 50			1.7	BZ 0.3	SP-SM			
55									POORLY GRADED SAND WITH SILT: Dense, (2.5Y 5/2) Grayish Brown, Fine Sand with Silt, Trace Gravel, Subrounded, Saturated.	
										1975
		27 31 50				BZ 0.3				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-1
(Sheet 4 of 5)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,273,430.33 Feet
Date Started: September 1, 2004	Easting: 6,325,373.90 Feet
Date Completed: September 1, 2004	Ground Surface Elevation: 2,032.90 Feet AMSL, NAVD 88
Total Depth: 81.0 Feet bgs	Top of Casing Elevation: 2,035.21 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SP-SM			1970
		22 35 50			1.9	BZ 0.3			POORLY GRADED SAND WITH SILT: Dense, (2.5Y 5/2) Grayish Brown, Fine Sand with Silt, No Gravel, Subrounded, Saturated.	
65									65 to 81 ft. SILTSTONE: Very Dense, (7.5YR 6/2) Pinkish Gray, Predominantly Silt with Fine Grained Sand, Some Gypsum, Moist.	
									Change in Lithology from Unconsolidated Sediments to Indurated Sandstone and Siltstone at 65 ft. bgs. Contact between Alluvial Sediments and San Timoteo Formation.	1965
		26 39 41			1.3	BZ 0.3				
70									SILTSTONE: Hard, (2.5Y 6/1) Gray, Predominantly Silt with Very Fine Grained Sand, Trace Coarse Grained Sand, Trace Gravel Inclusions, Subrounded Grains, Moist.	
							SS (ML)			1960
		27 39 50			0.9	BZ 0.3				
75										
										1955

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-1
(Sheet 5 of 5)

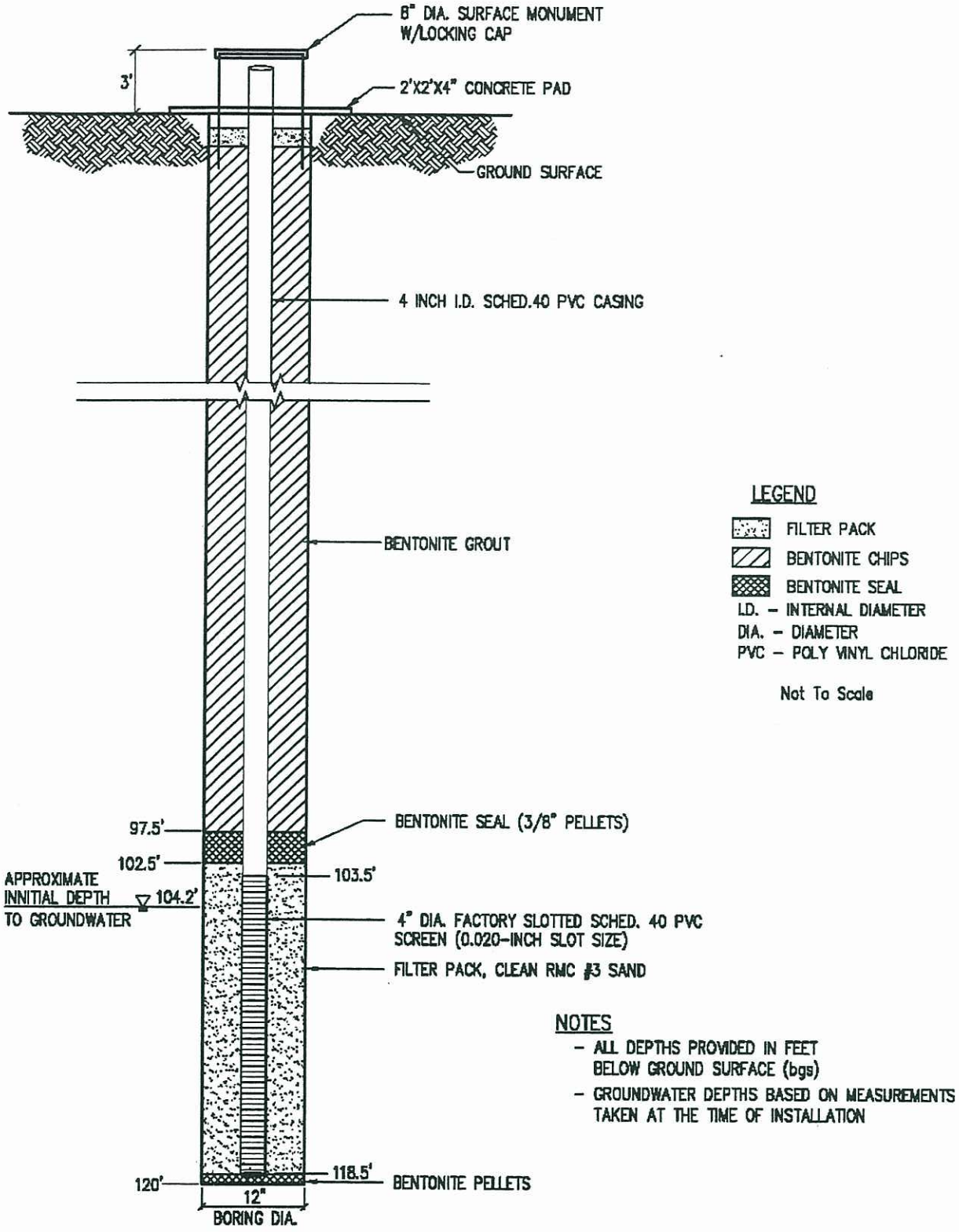
Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,273,430.33 Feet
Date Started: September 1, 2004	Easting: 6,325,373.90 Feet
Date Completed: September 1, 2004	Ground Surface Elevation: 2,032.90 Feet AMSL, NAVD 88
Total Depth: 81.0 Feet bgs	Top of Casing Elevation: 2,035.21 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
		50 50	X		0.9	BZ 0.3	SS (ML)		SILTSTONE: Very Hard, (2.5Y 7/2) Light Gray, Predominantly Silt with Very Fine Grained Sand, Dry Lower Confining Layer. Boring Terminated at TD of 81 Feet bgs.	
85										1950
90										1945
95										1940
										1935

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

FIGURE 3-3
CONSTRUCTION DETAILS FOR
GROUNDWATER MONITORING WELL
FOR Tt-MW2-2



TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-2
(Sheet 1 of 7)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									0 to 0.5 ft. Asphalt	
									0.5 to 5 ft. Non-Native Fill Material to Approximately 5 Feet bgs.	2135
5		7 10 11			0.3	BZ 0.0				
									5 to 15 ft. SILT WITH SAND, Firm, (7.5YR 5/2) Brown, Predominantly Silt with Fine to Medium Grained Sand, Trace Coarse Sand, Trace Gypsum, Quartz, Feldspar, Subrounded Grains, Dry.	2130
		8 12 16			1	BZ 0.0				
10							ML		Some Gypsum (10%) at 10 ft. bgs.	2125
		12 16 17			1.7	BZ 0.0			AS ABOVE	
15									15 to 20 ft. POORLY GRADED SAND: Firm to Hard, (2.5Y 7/2) Light Gray, Mostly Fine Grained Sand, Partially Cemented Gypsum in Fractures, Subrounded Grains, Dry.	2120
							SP			
		11 21 22			1.7	BZ 0.1				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-2

(Sheet 2 of 7)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									20 to 35 ft. SANDSTONE: Hard, (1GLEY 7/104) Light Greenish Gray, Predominantly Fine Grained Sand, Iron Oxide Staining (7.5YR 4/8) Red, Mineralogy: Quartz, Feldspar, Subrounded Grains, Dry.	2115
		21 27 50			1.9	BZ 0.2				
25							SS		SANDSTONE: Very Hard, (2.5Y 7/1) Light Gray, Fine Grained Sand, Quartz, Feldspar, Partially Weathered to Silt and Clay Fragments, Trace Coarse Grained Sand, Well Rounded Grains, Dry.	2110
		19 21 27			1.8	BZ 0.2				
30							SS (CL)		SANDSTONE: Hard, (1GLEY 5/104) Greenish Gray, Dry, Fine Grained Sand mottled with Clay, (5Y 6/2) Light Olive Gray, Dry.	2105
		20 27 41			1.7	BZ 1.0				
35									35 to 60 ft. SANDSTONE: Hard, (5Y 5/2) Olive Gray, Fine Grained Sand with Silt and Clay, Biotite, Trace Gypsum, Well Rounded Grains, Dry.	2100
							SS (SP-SM)			
		26 31 42				BZ 0.2				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-2

(Sheet 3 of 7)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									SANDSTONE: (5Y 7/2) Light Gray, Fine Grained Sand with Silt and Clay, Trace Quartz Inclusions, Angular (1mm), Dry.	2095
		27 33 50			2.4	BZ 0.3				
45									SANDSTONE: Hard, (10YR 5/3) Brown, Fine Grained Sand with Silt and Trace Clay, Trace Medium Grained Sand, Quartz, Biotite, Well Rounded Grains, Dry.	2090
		27 31 50			3.8	BZ 0.3				
50							SS (SP-SM)		SANDSTONE: Hard, (5YR 5/3) Reddish Brown, Fine Grained Sand mottled with (5YR 7/1) Light Gray Silt, Quartz, Biotite, Well Rounded Grains, Dry.	2085
		26 35 40			2.6	BZ 0.3				
55									SANDSTONE: Hard, (2.5Y 6/2) Light Brownish Gray, Fine Grained Sand with Silt and Clay, Some Biotite, Well Rounded Grains, Dry.	2080
		26 34 50			4.8	BZ 0.5				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
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NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-2

(Sheet 4 of 7)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									60 to 74 ft. SANDSTONE: Hard, (2.5Y 5/2) Grayish Brown, Mostly Fine Grained Sand with Some Clay, Trace Inclusions of Very Hard Sandstone, Well Rounded, Dry.	2075
		26 34 50			2.4	BZ 0.5				
65										2070
							SS (CL)			
		27 39 50			2.3	BZ 0.4			SANDSTONE: Loose, (5Y 5/2) Olive Gray, Fine Grained Sand with Grayish Brown Clay, Interbedded with Sandy Clay, Moist.	
70										2065
		29 33 49			2.7	BZ 0.8	SP		74 to 75 ft. POORLY GRADED SAND WITH SILT: Loose, (5Y 1/1) Dark Grey, Fine Grained Poorly Graded Sand with Silt, Moist.	
75							CL		75 to 78 ft. CLAY WITH SILT: (5Y 5/2) Olive Gray, Hard, Trace Fine Sand, Friable, Dry. (Silt Stone)	2060
		25 33 50			2.6	BZ 0.6	SS		78 to 81 ft. SANDSTONE: Hard, (5Y 5/1) Gray, Fine Grained Sand, Well Rounded Grains, Moist.	

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-2

(Sheet 5 of 7)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SS		AS ABOVE	2055
							SP-SM		81 to 86 ft. POORLY GRADED SAND WITH SILT: Moderately Dense, (5Y 5/2) Olive Gray, Fine Grained Sand with Silt, Trace Medium Grained Sand, Quartz, Mica, Subangular Grains, Moist.	
		23 37 50			3	BZ 1.0				
85									Note: Vertical Sedimentation Bedding	2050
									86 to 121 ft. SANDSTONE: Hard, (10R 5/2) Red, Fine Grained Sand with Silt, Well Rounded Grains, Dry.	
		27 32 50			2.9	BZ 0.3				
90									SANDSTONE/SILTSTONE: Hard, (10YR 7/1) Light Gray, Fine to Medium Grained Sand with Silt, Quartz, Well Rounded Grains, Dry.	2045
							SS (SP-SM)			
		28 37 50			0.8	BZ 0.8				
95									SANDSTONE: Hard, (10YR 5/1) Gray, Moist, Fine Grained Sand, Trace to Some Silt, Subrounded Grains, Moist.	2040
		26 35 50			1.2	BZ 0.8				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-2

(Sheet 6 of 7)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									SANDSTONE: Hard, (10YR 5/1) Gray, Fine Grained Sand with Silt, Well Rounded Grains, Moist.	2035
		21 33 50			1.9	BZ 0.8				
105									SANDSTONE: Hard, (5Y 6/1) Gray, Fine Grained Sand with Silt, Well Rounded Grains, Moist.	2030
		20 31 43			2.6	BZ 0.7				
110							SS (SP-SM)		SANDSTONE: Hard, (5Y 6/2) Light Olive Gray, Moist, Fine Grained Sand with Silt, Well Rounded Grains, Moist.	2025
		20 32 41			1.7	BZ 0.7				
115									SANDSTONE: Hard, (5Y 6/2) Light Olive Gray, Fine Grained Sand with Silt, Smaller Percentage of Silt, Well Rounded Grains, Moist.	2020

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-2
(Sheet 7 of 7)

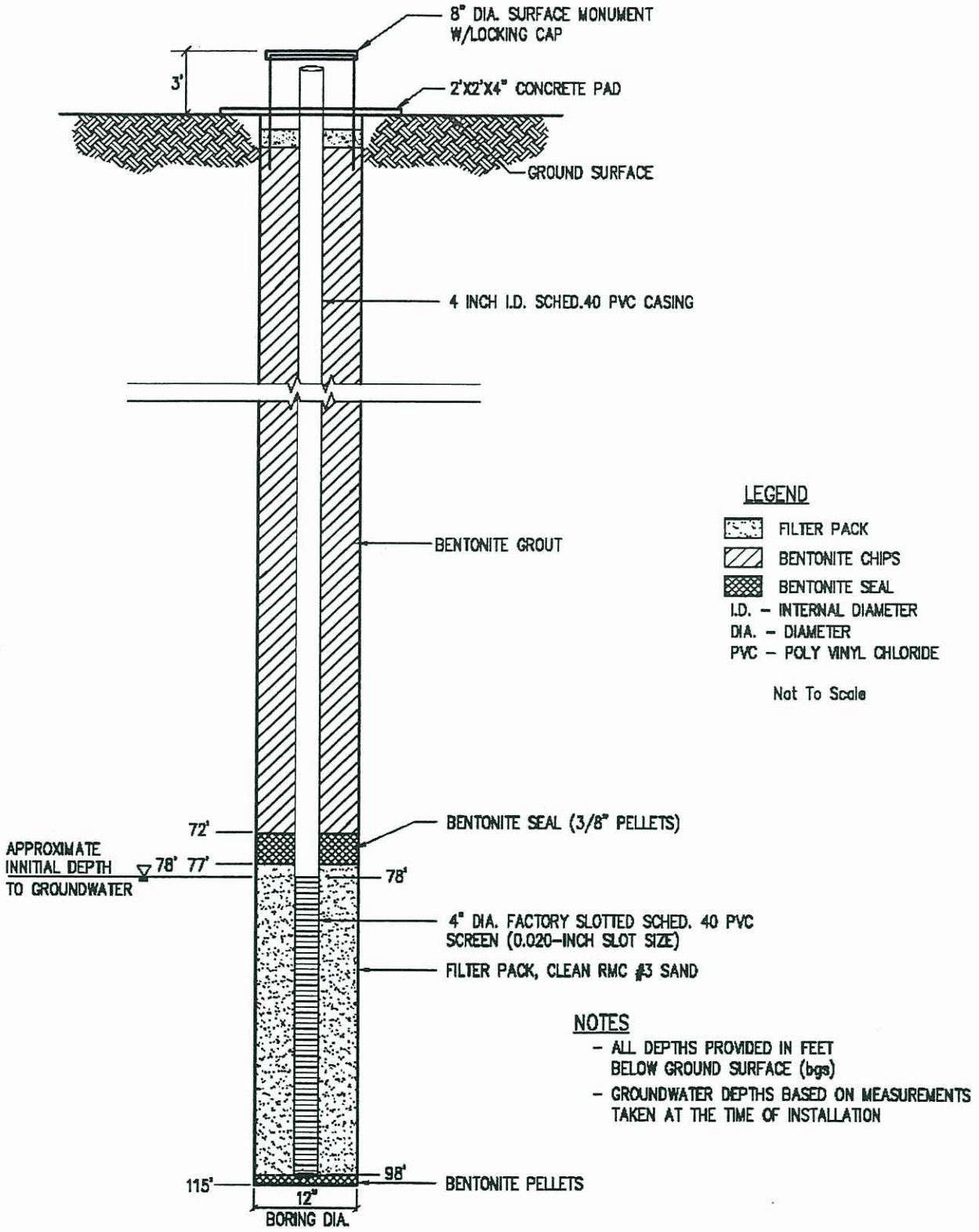
Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,276,662.64 Feet
Date Started: August 30, 2004	Easting: 6,325,085.92 Feet
Date Completed: August 30, 2004	Ground Surface Elevation: 2,135.73 Feet AMSL, NAVD 88
Total Depth: 121.0 Feet bgs	Top of Casing Elevation: 2,137.75 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SS (SP-SM)		Basal Confining Layer at 120 Feet bgs: Sand with Clay and Silt, Friable, Hard, (10YR 5/3) Brown, Very Fine Grained Sand, Siltstone, Dry.	2015
									Boring Terminated at TD of 121 Feet bgs.	
125										2010
130										2005
135										2000

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

FIGURE 3-4
CONSTRUCTION DETAILS FOR
GROUNDWATER MONITORING WELL
FOR Tt-MW2-3



TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-3

(Sheet 1 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,274,876.52 Feet
Date Started: August 31, 2004	Easting: 6,324,520.74 Feet
Date Completed: August 31, 2004	Ground Surface Elevation: 2,092.10 Feet AMSL, NAVD 88
Total Depth: 115.0 Feet bgs	Top of Casing Elevation: 2,094.66 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
					0	BZ 0.0	ML		0 to 5 ft. SILT WITH SAND AND GRAVEL: Loose, Predominantly Silt with Well Graded Sand and Gravel, Subangular Grains, Dry.	2090
5		12 16 17			0.3	BZ 0.3			5 to 25.5 ft. SILT WITH SAND: Firm to Hard, (5Y 5/2) Olive Gray, Predominantly Silt with Fine to Medium Grained Sand with Some Gypsum, Subangular Grains, Dry.	2085
10		9 10 14			0.5	BZ 0.3	ML			2080
15		10 13 18			0.5	BZ 0.3			SILT WITH SAND: Firm, (5Y 6/2) Light Olive Gray, Predominantly Silt with Fine Grained Sand, Some Gypsum Nodules (5mm-8mm), Well Rounded Grains, Dry.	2075
		12 13 21			0.5	BZ 0.3				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-3

(Sheet 2 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,274,876.52 Feet
Date Started: August 31, 2004	Easting: 6,324,520.74 Feet
Date Completed: August 31, 2004	Ground Surface Elevation: 2,092.10 Feet AMSL, NAVD 88
Total Depth: 115.0 Feet bgs	Top of Casing Elevation: 2,094.66 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							ML		SILT WITH SAND AND CLAY: Firm to Hard, (5Y 6/2) Light Olive Gray, Predominantly Silt with Fine Grained Sand and Some Clay, Some Gypsum Nodules (5mm-8mm), Well Rounded Grains, Dry.	2070
25		11 16 20			0.5	BZ 0.3			SILT WITH SAND, Same as Above, Trace Clay.	
							SP		25.5 to 30 ft. POORLY GRADED SAND: Moderately Dense, (1GLEY 7/10Y) Light Greenish Grey, Very Fine Grained to Fine Grained Sand, Trace to Few Silt, Trace Medium to Coarse Grained Sand, Subangular Grains, Dry.	2065
30		13 19 22			0.3	BZ 0.2				
							SP-SM		30 to 50 ft. POORLY GRADED SAND WITH SILT: Medium Dense, (5Y 6/3) Pale Olive, Fine Grained Poorly Graded Sand with Silt, Trace Medium Grained Sand, Trace to Some Gypsum, Subrounded Grains, Dry.	2060
		31 50			1.4	BZ 0.2				
35									POORLY GRADED SAND WITH SILT: Dense, (5Y 6/3) Pale Olive, Fine to Medium Grained Poorly Graded Sand with Silt, Subangular Grains, Dry.	2055
		36 50 50								

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-3

(Sheet 3 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,274,876.52 Feet
Date Started: August 31, 2004	Easting: 6,324,520.74 Feet
Date Completed: August 31, 2004	Ground Surface Elevation: 2,092.10 Feet AMSL, NAVD 88
Total Depth: 115.0 Feet bgs	Top of Casing Elevation: 2,094.66 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									Horizontal Interbedding of Silt and Sand at 40 Feet bgs.	2050
45		29 31 50			4.1	BZ 0.3	SP-SM		POORLY GRADED SAND WITH SILT: Dense, (5Y 7/3) Pale Yellow, Fine Grained Sand with Silt, Trace Gypsum, Dry.	2045
50		27 29 41			2.2	BZ 0.3				
							ML		50 to 55 ft. SILT WITH SAND: Hard, (5Y 6/3) Pale Olive, Predominantly Silt with Very Fine Grained Sand, Horizontal Interbedding of Sand and Silt, Subrounded Grains, Dry.	2040
55		25 32 47								
							SP-SM		55 to 68.5 ft. POORLY GRADED SAND WITH SILT: Dense, (5Y 6/1) Gray, Fine Grained Poorly Graded Sand with Silt, Trace Medium Grained Sand, Subangular Grains, Dry.	2035
		41 50			12.2	BZ 0.3				

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-3
(Sheet 4 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,274,876.52 Feet
Date Started: August 31, 2004	Easting: 6,324,520.74 Feet
Date Completed: August 31, 2004	Ground Surface Elevation: 2,092.10 Feet AMSL, NAVD 88
Total Depth: 115.0 Feet bgs	Top of Casing Elevation: 2,094.66 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
									POORLY GRADED SAND WITH SILT: Dense, (5Y 6/1) Gray, Fine Grained Poorly Graded Sand with Silt, Trace Medium Grained Sand, SubangularGrains, Slightly Moist.	2030
65		39 50			2.2	BZ 0.3	SP-SM		POORLY GRADED SAND WITH SILT: Same as Above, (5Y 5/2) Olive Gray.	2025
70		31 41 50			1.9	BZ 0.3	ML		68.5 to 76.5 ft. SILT WITH SAND: Hard, (5Y 5/3) Olive, Moist, Predominantly Silt with Fine Grained Sand, Interbedded (Trace) Iron Oxide Horizontal Stringers Approximately 1mm Thick, Trace Coarse Grained Sand, Subangular, Quartz, Plagioclase Feldspar, Moist.	2020
75		26 29 39			1.8	BZ 0.4			SILT WITH SAND: Hard, (5Y 5/2) Olive Gray, Predominantly Silt with Fine Grained Sand, Trace Coarse Grained Sand, Subrounded Grains, Moist.	
							SW		76.5 to 77 ft. WELL GRADED SAND: Interbedded, (10R 5/4) Red, Quartz, Feldspar, Mica, Subrounded to Rounded Grains, Slightly Moist.	2015
							ML		77 to 78.5 ft. SILT WITH SAND: Hard, (5Y 5/2) Olive Gray, Predominantly Silt with Fine Grained Sand, Trace Coarse Grained Sand, Subrounded Grains, Moist.	
		27 37 49			1.9	BZ 0.3	SP		78.5 to 83 ft. POORLY GRADED SAND WITH SILT: Dense, (5Y 6/2) Light Olive Gray, Fine to Medium	

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-3
(Sheet 5 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,274,876.52 Feet
Date Started: August 31, 2004	Easting: 6,324,520.74 Feet
Date Completed: August 31, 2004	Ground Surface Elevation: 2,092.10 Feet AMSL, NAVD 88
Total Depth: 115.0 Feet bgs	Top of Casing Elevation: 2,094.66 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SP		Grained Poorly Graded Sand with Silt, Subangular Grains, Moist.	2010
85		37 50					SP-SM		83 to 88 ft. POORLY GRADED SAND WITH SILT: Dense, (5Y 5/2) Olive Gray, Fine Grained Poorly Graded Sand with Silt, Trace Medium Grained Sand, Subangular Grains, Moist.	2005
90		37 39 50			1.7	BZ 0.7	SP		88 to 98 ft. POORLY GRADED SAND: Dense, (5Y 5/3) Olive, Fine Grained Sand, Trace Medium Grained Sand, Subangular Grains, Moist.	2000
95		21 31 50			1.9	BZ 0.3				1995
		31 39 50				BZ 0.3	ML		98 to 104 ft. SILT WITH SAND: Hard, (5Y 5/3) Olive, Predominantly Silt with Fine Grained Sand, Subangular Grains, Moist.	

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_14.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-3
(Sheet 6 of 6)

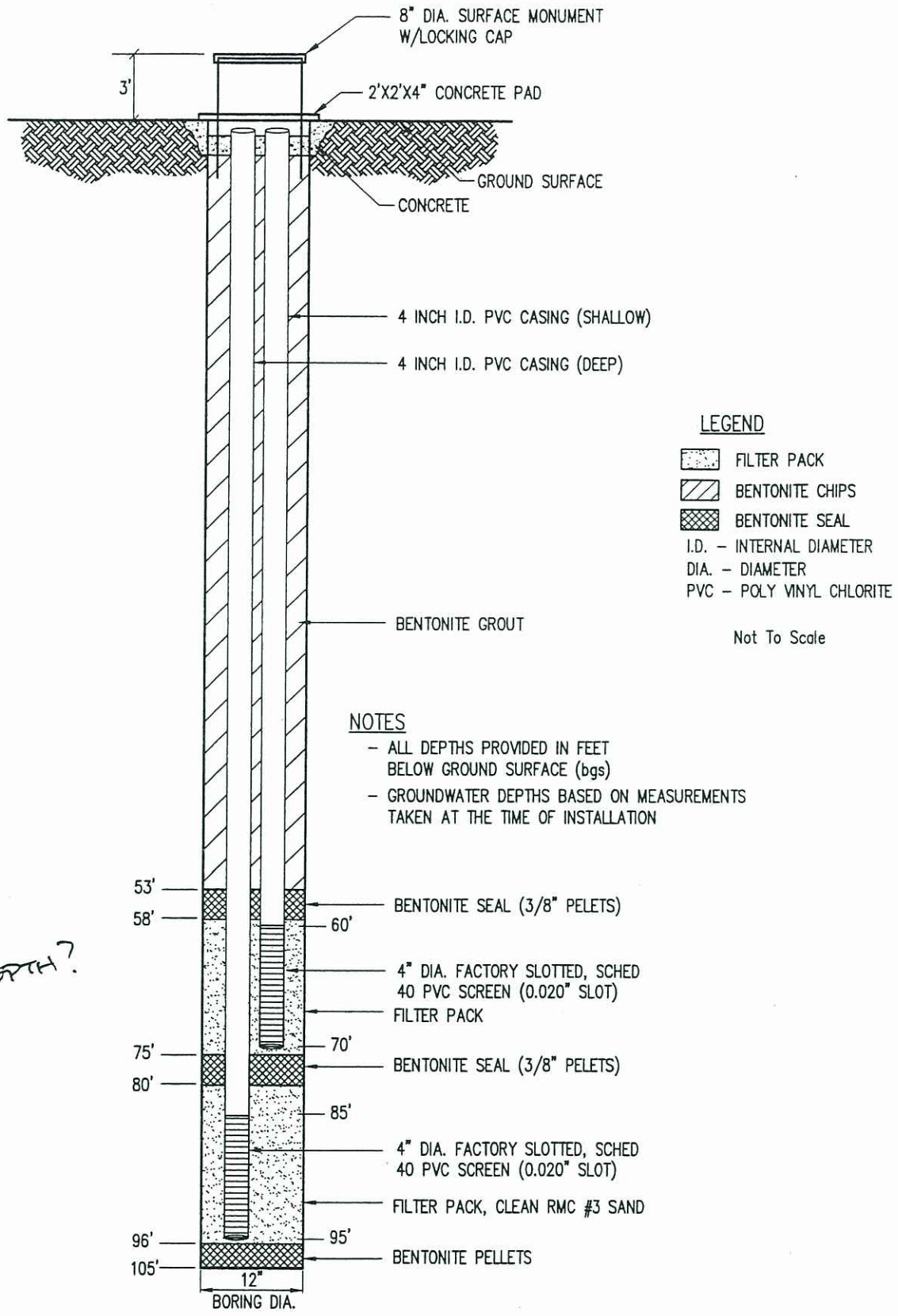
Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,274,876.52 Feet
Date Started: August 31, 2004	Easting: 6,324,520.74 Feet
Date Completed: August 31, 2004	Ground Surface Elevation: 2,092.10 Feet AMSL, NAVD 88
Total Depth: 115.0 Feet bgs	Top of Casing Elevation: 2,094.66 Feet AMSL, NAVD 88

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							ML		AS ABOVE	1990
105		50	☒		19.2	BZ 0.3	SS (ML)		104 to 109 ft. SILTSTONE: Very Hard, (5Y 4/1) Dark Gray, Predominantly Silt with Very Fine Grained Sand, Trace Fine Grained Sand, Friable with Horizontal Fracturing, Slightly Moist.	1985
110		50	☒			BZ 0.3	SS (ML)		109 to 110 ft. POTENTIAL CONFINING LAYER: Undetermined Thickness of Siltstone.	
							SP		110 to 115 ft. POORLY GRADED SAND: Dense, (5Y 5/2) Olive Grey, Fine Grained Sand, Subrounded Grains, Moist.	1980
115									Boring Terminated at TD of 115 Feet bgs.	1975

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

FIGURE 3-5
CONSTRUCTION DETAILS FOR
GROUNDWATER MONITORING WELL
FOR Tt-MW2-4



GW DEPTH?

P:\5876 LMC-BEAUMONT\SITE 2_LA BORDE\DWG\FIG4.DWG
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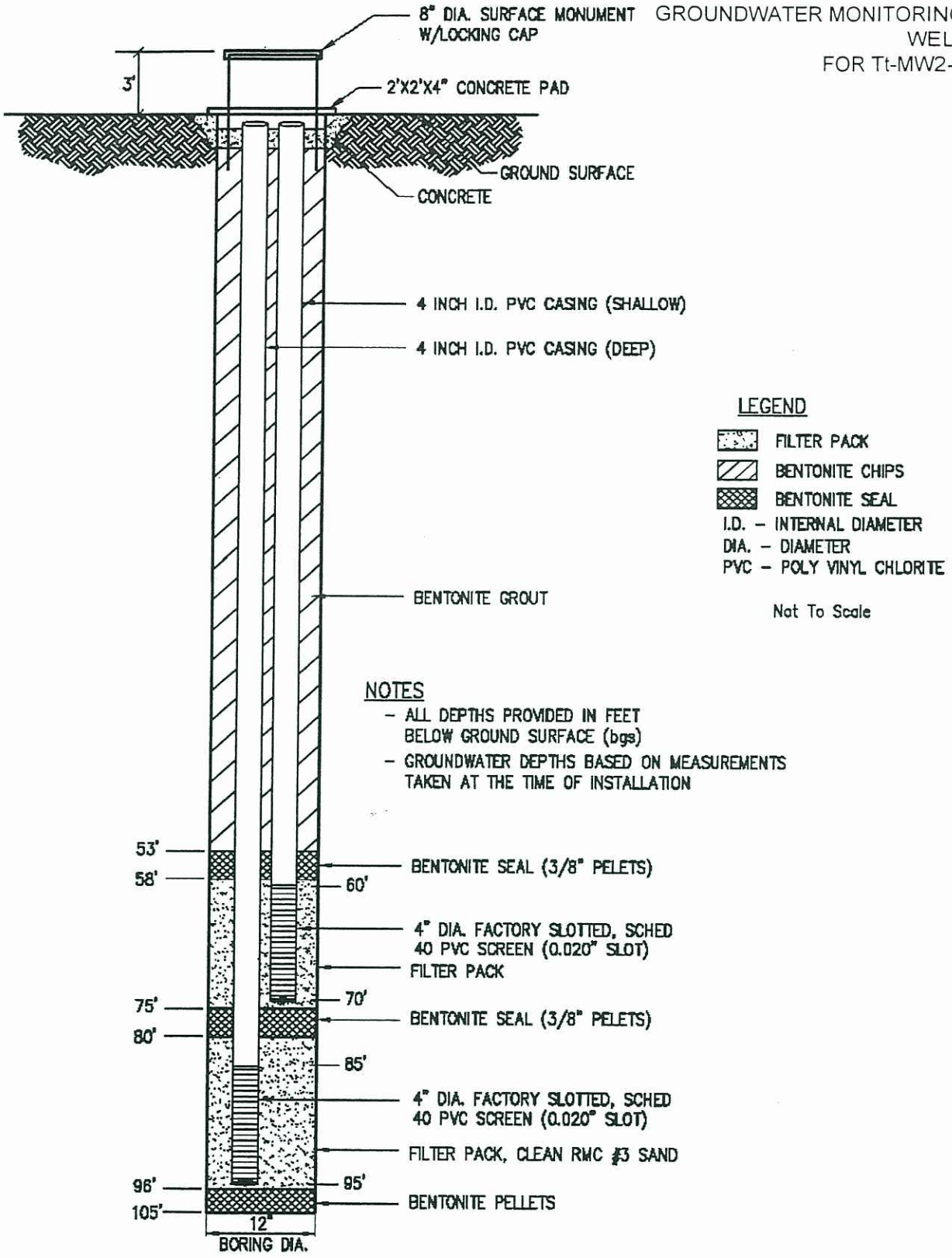
FIGURE 3-5
CONSTRUCTION DETAILS FOR
GROUNDWATER MONITORING
WELL
FOR Tt-MW2-4



TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-4

(Sheet 2 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,272,392.82 Feet
Date Started: September 3, 2004	Easting: 6,325,561.45 Feet
Date Completed: September 7, 2004	Ground Surface Elevation: 1,984.56 Feet AMSL, NAVD 88
Total Depth: 105.0 Feet bgs	Top of Casing Elevation: 1986.94(s) 1987.16(d) Feet AMSL

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SP-SM		POORLY GRADED SAND WITH SILT: Same as Above, Moist.	
25		11 16 17			2.2	BZ 0.3			23 to 43 ft. SILT WITH SAND: Firm, (5Y 5/2) Olive Gray, Predominantly Silt with Mostly Fine to Medium Grained Sand, Trace Coarse Sand, Trace Gypsum, Subangular Grains, Moist.	1960
30		13 17 23			1.9	BZ 0.3				1955
							ML		SILT WITH SAND: Same as Above, Some Gypsum Nodules (4mm).	
35		17 21 27								1950
										1945

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-4

(Sheet 3 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,272,392.82 Feet
Date Started: September 3, 2004	Easting: 6,325,561.45 Feet
Date Completed: September 7, 2004	Ground Surface Elevation: 1,984.56 Feet AMSL, NAVD 88
Total Depth: 105.0 Feet bgs	Top of Casing Elevation: 1986.94(s) 1987.16(d) Feet AMSL

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							ML		SILT WITH SAND: Hard, (2.5Y 4/3) Olive Brown, Predominantly Silt with Fine Grained Sand, Trace Medium to Coarse Sand, Trace Gravel, Subangular Grains, Moist.	
45		32 50			1.9	BZ 0.3	SS (ML)		43 to 49 ft. SILTSTONE: Very Hard, (5Y 7/2) Light Gray, Predominantly Silt with Very Fine Grained Sand, Some Clay, Moderate to Strong Cementation, Dry. Contact between Alluvial Sediments and San Timoteo Formation at Approximately 43 ft. bgs.	1940
50		27 30 33			1.9	BZ 0.3			49 to 60 ft. SANDSTONE: Very Dense, (5Y 5/2) Olive Gray, Fine to Medium Grained Poorly Graded Sand with Silt, Moderate Cementation, Subangular Grains, Dry.	1935
55		37 43 50			2.1	BZ 0.3	SS (SP-SM)			1930
		39 46 50				BZ 0.3			SANDSTONE: Very Dense, (7.5YR 5/4) Brown, Fine to Medium Grained Poorly Graded Sand with Silt, Subangular Grains, Dry.	1925

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-4

(Sheet 4 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,272,392.82 Feet
Date Started: September 3, 2004	Easting: 6,325,561.45 Feet
Date Completed: September 7, 2004	Ground Surface Elevation: 1,984.56 Feet AMSL, NAVD 88
Total Depth: 105.0 Feet bgs	Top of Casing Elevation: 1986.94(s) 1987.16(d) Feet AMSL

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SS		60 to 64 ft. SILTSTONE: Predominantly Silt with Sand, Strongly Cemented.	
65		30 31 50				BZ 0.3			64 to 84 ft. SANDSTONE: Weathered, Lesser Cementation, Dense, (5Y 7/2) Light Gray, Fine Grained Sand, Interbedded Layers of Silt/Clay (3mm Thick), Trace Gravel, Subrounded Grains, Moist.	1920
70		30 32 50				BZ 0.3	SS (SP-SM)		SANDSTONE: Dense (5Y 7/2) Light Gray, Moist, Very Fine Grained Sand with Silt, Increased Cementation, Moist.	1915
75		32 39 50				BZ 0.3			AS ABOVE	1910
		42 49 50				BZ 0.3				1905

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING Tt-MW-2-4

(Sheet 5 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,272,392.82 Feet
Date Started: September 3, 2004	Easting: 6,325,561.45 Feet
Date Completed: September 7, 2004	Ground Surface Elevation: 1,984.56 Feet AMSL, NAVD 88
Total Depth: 105.0 Feet bgs	Top of Casing Elevation: 1986.94(s) 1987.16(d) Feet AMSL

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
							SS (SP-SM)		AS ABOVE	
		49 50			1.9	BZ 0.3				
85							SS (ML)		84 to 90 ft. SILTSTONE: Dense, (5Y 7/2) Light Gray, Predominantly Silt with Fine to Medium Grained Sand, Subangular Grains, Dry. Slightly Moist at 86 ft. bgs.	1900
90		50			1.8	BZ 0.3				1895
							SS (SP-SM)		90 to 95 ft. SANDSTONE: Dense (5Y 6/2) Light Olive Gray, Moist, Fine to Medium Grained Sand with Silt, Lesser Degree of Cementation, Well Rounded Grains, Moist, Crushes Somewhat Easily in Hand.	
95		50			2.1	BZ 0.3				1890
							SS (ML)		95 to 105 ft. SILTSTONE: Very Hard, (2.5Y 7/2) Light Gray, Predominantly Silt with Very Fine Grained Sand, Trace Gravel Inclusions, Subangular to Subrounded Grains, Dry.	1885

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

TETRA TECH FW, INC.

LOG OF BORING
Tt-MW-2-4
(Sheet 6 of 6)

Client: Lockheed-Martin Corporation	Drilling Company: West Hazmat
Project: Beaumont Site 2	Drilling Method: Hollow-stem auger
Project Number: 13505-02	Sampling Method: Split Spoon
Location: Beaumont, CA	Borehole Diameter: 12 in.
Geologist: Steve Hruby	Northing: 2,272,392.82 Feet
Date Started: September 3, 2004	Easting: 6,325,561.45 Feet
Date Completed: September 7, 2004	Ground Surface Elevation: 1,984.56 Feet AMSL, NAVD 88
Total Depth: 105.0 Feet bgs	Top of Casing Elevation: 1986.94(s) 1987.16(d) Feet AMSL

Depth (ft.)	Time	Blow Counts	Samples	Sample ID	PID Readings PPM	Comments	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation (ft.)
		50	☒				SS (ML)		AS ABOVE	
105		50	☒			BZ 0.3	SS		105 to 106 ft. SANDSTONE: Dense, (5Y 5/3) Olive, Moist, Fine Grained Sand with Silt, Subrounded, Dry.	1880
									Boring Terminated at TD of 106 Feet bgs.	
110										1875
115										1870
										1865

Notes: Boring Log Reviewed By: J. Brenner 10/20/04
bgs = below ground surface
AMSL = above mean sea level
NA = not applicable

SOIL LOG TT-MW-2_1-4.GPJ FSTRW_SA.GDT 11/4/04

GROUNDWATER MONITORING WELL FIELD DATA LOG SHEET - PURGING

DATE 9/15/04 SITE NUMBER 2 PURGING DEVICE 3" SS bailer

PROGRAM NAME Lockheed Beermont - Site 2 SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION TT-MW2-B1 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to) —

STATIC WATER LEVEL (ft btoc) 54.88 TOTAL WELL DEPTH (feet) start 65.02 finish FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) — CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE —

WELL/PUMP VOLUME (V) (gals) — 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
11:05	start bail	54.88	—								0	0	—
11:35	end bail	55.90	(TD-73.23)								20		
unable to swab well due to hydraulic leak													
7:10	start bail	55.91		(TD-71.24)							20		
7:20	end bail	52.11		(TD-73.25)							30		
7:25	start swab		—										
7'55	end swab		—										
8:00	start bail	54.75	—								30		
8:15	end bail	58.35	—	TD - 73.27	—	—	—	—	—		40		#
8:20	start pump												1
8:25	pump	stopped working - impellers destroyed									45		1
9:15	start bail										45		
9:30	end bail										60		
										1			

Fe+2 (ppm) ____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ± 1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤ 5 NTUs

Comments: 20' Screen

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SHEET - ~~PURGING~~ Development

DATE 9/20/04 SITE NUMBER 2 PURGING DEVICE grnd Sa red. Slot II

PROGRAM NAME Lockheed Remat SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION TT-MW2-1 OVA: FID ☐ PID ☑ in Casing (ppm) (initial) nil (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) nil (vented to) —

STATIC WATER LEVEL (ft btoc) 54.91 TOTAL WELL DEPTH (feet) start 73.14 / finish 73.25 FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) 18.34 CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE —

WELL/PUMP VOLUME (V) (gals) 18.34 X 0.65 = 11.92 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
9:36	start purge	54.91	73	—	—	—	—	—	—	—	60	5.03	2.0
9:46		67.85	73	—	—	—	+1000	—	—	brn	80	6.71	2.0
9:50	lower pump rate	72.25	73	—	—	—	+1000	—	—	brn	88	7.38	0.5
10:00		73.40	73	—	—	—	+1000	—	—	brn	93	7.80	0.5
~~10:10~~	shut off pump to allow recharge												
10:16	start pump	60.00	71	—	—	—	—	—	—	—	93	7.80	1.0
10:26		63.81	71	—	—	—	+1000	—	—	brn/cloudy	103	8.64	1.0
10:36		68.85	71	—	—	—	+1000	—	—	" "	113	9.48	0.8
10:40	well purged dry						+1000			" "	117	9.82	—
10:55	start pump	60.00	71	—	—	—	—	—	—	—	117	9.82	1.0
11:05		66.78	71				+1000				127	10.65	1.0
11:13	well purged dry										135	11.33	~~1.0~~
11:25	start purge	62.00	71	—	—	—	—	—	—	—	135	11.33	0.5
11:30		63.99	71				268			cloudy	138	11.58	0.5

Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ±0.1	Turbidity ≤5 NTUs

Comments: —

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SHEET - PURGING

DATE 9/20/04 SITE NUMBER Site2 PURGING DEVICE grundfos redi-flo #

PROGRAM NAME Lockheed - Barnett SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION TT-MW2-1 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to) —

STATIC WATER LEVEL (ft btoc) — TOTAL WELL DEPTH (feet) 73.25 FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) — CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE —

WELL/PUMP VOLUME (V) (gals) 11.92 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
11:35		64.69	71	—	—	—	339	—	—	cloudy	140	11.74	0.5
11:40		65.02	71	—	—	—	329	—	—	"	143	11.95	
11:45		65.29	71	—	—	—	168	—	—	"	145	12.16	
11:50		65.50	71	—	—	—	114	—	—	"	148	12.42	
11:55		65.65	71	—	—	—	44.8	—	—	"	150	12.58	
12:00		65.77	71	—	—	—	52.0	—	—	"	153	12.84	
12:05		65.88	71	—	—	—	25.2	—	—	clear	155	13.00	
12:10		65.95	71	—	—	—	26.8	—	—	"	158	13.26	
12:15		66.02	71	—	—	—	14.5	—	—	"	160	13.42	
12:20		66.11	71	—	—	—	13.4	—	—	"	163	13.67	
12:25		66.15	71	—	—	—	16.3	—	—	"	165	13.84	
12:30		66.21	71	—	—	—	15.8	—	—	"	168	14.09	

Fe+2 (ppm) ____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ±5%
pH ±0.1	Turbidity ≤5 NTUs

Comments: —

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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GROUNDWATER MONITORING WELL FIELD DATA LOG SH - ~~PURGING~~ Development

DATE 9/13/04 SITE NUMBER 2

PROGRAM NAME Lockheed Benmatt - Site 2

MONITORING WELL IDENTIFICATION TT-MW2-2

SAMPLE I.D. — DUPLICATE I.D. —

STATIC WATER LEVEL (ft btoc) 69.35 TOTAL WELL DEPTH (feet) start 117.25 / finish 120.25

WATER COLUMN (feet) 47.9 CASING/TUBING DIAMETER (in/ft) 4

WELL/PUMP VOLUME (V) (gals) 47.9 x 0.65 = 31.14 3 V (gals) —

PURGING DEVICE 3" SS bailer / swab

SAMPLING DEVICE —

OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) —

IN BREATHING ZONE (ppm) (initial) ND (vented to) —

FINAL PUMP DEPTH (feet) —

SAMPLER'S SIGNATURE

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
8:00	start bail	69.35	—								0	0	—
8:15	end bail										5	0.16	—
8:25	start swab	74.98	—								5#	0.16#	—
9:10	end swab												
9:15	start bail	73.43	—								5	0.16	—
9:35	end bail	89.03									20	0.64	—
9:40	start pump	89.03									20	0.64	# 1
9:50	end pump	103.00	- pump malfunction				TD 120.25				30	0.96	1
	well return to site with a new pump to finish purging.												
7:10	start pump	70.41	(TD - 120.14)								30	0.96	0.80
7:20		81.30	120				+1000	—	—	cloudy	38	1.22	0.80
7:30		91.20	120				+1000	—	—	"	46	1.48	
7:40		100.72	120				+1000	—	—	"	54	1.73	
7:50		108.49	120				579	—	—	"	62	1.99	↓

Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

Comments: 15' Screen

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤5 NTUs

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET - ~~PURGING~~ Development

DATE 9/14/04 SITE NUMBER 2 PURGING DEVICE gwnd Sub redi-Flo II

PROGRAM NAME Lockheed Beaumont - Site 2 SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION TT-MW2-2 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to) —

STATIC WATER LEVEL (ft btoc) 70.41 TOTAL WELL DEPTH (feet) start 120.14 FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) 49.73 CASING/TUBING DIAMETER (in/ft) 2 SAMPLER'S SIGNATURE —

WELL/PUMP VOLUME (V) (gals) 49.73 x 0.65 = 32.3 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC ~~(umhos/cm)~~ mS/cm	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
8:00		108.50	120	23.25	0.651	8.39	+1000	1.12	26.4	cloudy	70	2.17 ~~1.67~~	0.8
8:10		111.08	120	24.23	0.830	8.60	+1000	1.24	20.9	brn	78	2.41	0.5
8:20		113.00	120	24.67	0.950	8.52	+1000	1.47	11.8	brn	83	2.57	0.5
8:30		114.08	120	25.58	0.981	8.51	+1000	1.60	-7.9	brn	88	2.72	0.5
8:45		116.42	120	24.98	0.920	8.60	+1000	2.85	-39.0	brn	95	2.94	0.5
8:48	well purged dry - recharge ≈ 10 min / foot												
12:30		96.90	—	recharge ≈ 10 min / foot									
20 7:02	start pump	69.58	118	—	—	—	—	—	—	—	95	2.94	1.5
7:12		89.22	118	—	—	—	239	—	—	cloudy	110	341	1.5
7:22		106.10	118	—	—	—	282	—	—	cloudy	125	3.87	1.5
7:32		112.65	118	—	—	—	702	—	—	brn/cloudy	140	4.33	1.5
7:36	well purged dry						+1000			brn	146	4.52	1.5
7:42	WL	116.04	7:48 WL 115-04						7:57 WL 114.04				
≈	recharge	0.08	gall / min										

Fe+2 (ppm) — Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤ 5 NTUs

Comments: 9/20 TD - 120.17

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SHEET - ~~PURGING~~ Development

DATE 9/23/04 SITE NUMBER 2 PURGING DEVICE grundfos redi-flo 2

PROGRAM NAME Lockheed Remedial SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION TT-MW2-2 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) nd (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) 4 (vented to) —

STATIC WATER LEVEL (ft btoc) 69.75 TOTAL WELL DEPTH (feet) 120.08 FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) 50.33 CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE

WELL/PUMP VOLUME (V) (gals) 50.33 x 0.65 = 32.7 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
8:33	start purge	69.75	119	—	—	—	—	—	—	—	0	0	1.50
8:45	pump shut down										26		
9:12	restart pump	83.21	119										
9:25		98.15	pump shut down								52		
	left site to assist in 911 call												
'24 7:40	start purge	70.42	118	—	—	—	—	—	—	—	0	0	0.75
7:45	lower purge rate	77.25	118				800				3.75		0.50
7:50	lower purge rate	79.90	118				379				6.25		0.25
7:55		83.25	118				162				7.50		
8:00		84.48	118	24.09	0.509	8.15	152	4.34	6.0	cloudy	6.75		
8:05		86.00	118	24.76	0.506	8.69	130	3.86	-4.9	"	8.00		
8:10		87.95	118	24.51	0.499	8.78	108.3	3.72	-8.2	"	9.25		
8:15		90.30	118	24.50	0.493	8.82	128	3.76	-9.4	"	10.50		
8:20		93.12	118	24.59	0.496	8.86	98.7	3.74	-8.4	"	11.75		

Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ±5%
pH ±0.1	Turbidity ≤5 NTUs

Comments: —

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET - ~~PURGING~~ Development

DATE 9/13/04 SITE NUMBER 2 PURGING DEVICE 3" SS bailer/sub
PROGRAM NAME Lockheed Benument - Site 2 SAMPLING DEVICE —
MONITORING WELL IDENTIFICATION TT-MW2-3 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) —
SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to) —
STATIC WATER LEVEL (ft btoc) 69.55 TOTAL WELL DEPTH (feet) start 91.74 finish 101.33 FINAL PUMP DEPTH (feet)
WATER COLUMN (feet) 22.19 CASING/TUBING DIAMETER (in/ft) SAMPLER'S SIGNATURE
WELL/PUMP VOLUME (V) (gals) 22.19 X 0.65 = 14.4 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
10:50	start bail	69.55	—	—	—	—	—	—	—	—	0	0	—
11:30	end bail	77.25	—	(TD - 101.33)	—	—	—	—	—	—	30	2.08	
~~11:35~~	~~start pump~~		101	(pump not working)	—	—	—	—	—	—			
11:50	start swab	71.82									30	2.08	
12:20	end swab										30	2.08	
12:25	start bail	70.04	—	—	—	—	—	—	—	—	30	2.08	
12:45	end bail	73.93		(TD 101.33)							50	3.47	
9:30	start pump	69.62	95	—	—	—	—	—	—	—	50	3.47	1.5
9:45		78.65	98	—	—	—	+1000	—	—	brn	73	~~3.65~~	1.5
10:00		80.57	98	turned pump	and lower					brn	95	~~4.8~~	1.5
10:05	restart pump	77.12	101	—	—	—	+1000	—	—	brn	95	~~4.8~~	1.5
10:20		79.35	101	—	—	—	+1000	—	—	brn	115	~~5.75~~	1.2
10:35		79.87	101	—	—	—	+1000	—	—	brn	135	~~6.35~~	1.2
												6.75	
10:36	pump shut off / got restrtd 10:38												

Fe+2 (ppm) ____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ±5%
pH ±0.1	Turbidity ≤5 NTUs

Comments: 20 scfm

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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GROUND WATER MONITORING WELL
FIELD DATA LOG SHEET - ~~PURGING~~ Development

DATE 9/14/01 SITE NUMBER 2

PROGRAM NAME Lockheed Beaumont - Site 2

MONITORING WELL IDENTIFICATION TT-MW2-3

SAMPLE I.D. — DUPLICATE I.D. —

STATIC WATER LEVEL (ft btoc) 69.62 TOTAL WELL DEPTH (feet) 101.33

WATER COLUMN (feet) 31.71 CASING/TUBING DIAMETER (in/ft) 4

WELL/PUMP VOLUME (V) (gals) 31.71 X 0.65 = 20.61 3 V (gals) —

PURGING DEVICE grundfos redi-flo II

SAMPLING DEVICE

OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to)

IN BREATHING ZONE (ppm) (initial) ND (vented to)

FINAL PUMP DEPTH (feet) 101

SAMPLER'S SIGNATURE [signature]

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (~~µmhos/cm~~ mS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
10:50		80.68	98	24.73	1.215	~~6.44~~ 7.66	+1000	~~7.66~~ 6.41	-11.6	cloudy	150	7.28	1.5
11:05		81.68	98	24.52	1.237	7.53	280	5.41	-29.0	"	170	8.25	
11:10		81.67	98	24.52	1.220	7.52	105.7	5.35	-30.5	cloudy	177	8.59	
11:15		81.68	98	24.55	1.212	7.50	451	5.31	-31.2	"	185	8.98	
11:20		81.68	98	24.64	1.217	7.50	+1000	5.20	-33.0	brn	192	9.32	
11:25		81.68	98	24.69	1.236	7.50	+1000	5.07	-36.0	brn	200	9.71	
11:35		81.68	98	24.62	1.252	7.47	+1000	5.08	-35.5	brn	220	10.68	
11:50	raise pump	81.92	98	24.74	1.251	7.48	+1000	5.11	-36.2	brn	245	11.89	2.0
12:00	~~end purge~~	83.01	90	24.50	1.174	7.43	+1000	6.62	-28.8	brn	265	12.86	
12:05	2nd purge	83.65	90	—	—	—	+1000		—	brn	275	13.34	

3

Fe+2 (ppm) ________ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION
Temperature ± 1° C (1.8°F) Conductivity ± 5%
pH ± 0.1 Turbidity ≤ 5 NTUs

Comments:

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SHEET - ~~PURGING~~ Development

DATE 9/23/04 SITE NUMBER 2 PURGING DEVICE grundfos redi56 II

PROGRAM NAME Lockheed Barnett SAMPLING DEVICE

MONITORING WELL IDENTIFICATION TT-MW2-3 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to)

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to)

STATIC WATER LEVEL (ft btoc) 69.82 TOTAL WELL DEPTH (feet) 101.33 FINAL PUMP DEPTH (feet)

WATER COLUMN (feet) CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE

WELL/PUMP VOLUME (V) (gals) 3 V (gals)

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
12:15	start purge	69.82	85	—	—	—	—	—	—	—	0	0	0.5
12:25		72.28	85				431			cloudy	5		
12:35		72.64	85				553			"	10		
12:45		72.72	85				551			"	15		
12:55	end purge	72.81	85				450			"	20		↓
10:15		69.73	85	—	—	—	—	—	—	—	0	0	0.5
10:20		72.63	85	25.35	0.972	7.78	305	7.07	-50.7	cloudy	2.5		
10:25		72.95	85	25.56	0.952	7.60	108.1	7.25	-61.9	"	5.0		
10:30		73.23	85	25.66	0.947	7.55	63.5	7.31	-64.6	"	7.5		
10:35		73.33	85	25.70	0.975	7.49	59.1	7.33	-66.0	"	10.0		
10:40		73.36	85	25.73	0.987	7.44	48.1	7.31	-66.7	"	12.5		
10:45		73.37	85	25.80	0.992	7.43	47.2	7.30	-67.3	"	15.0		

Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤ 5 NTUs

Comments:

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG S ET - PURGING

DATE 9/14/04 SITE NUMBER 2

PROGRAM NAME Lockheed Beaumont - Site 2

MONITORING WELL IDENTIFICATION TT-MW2-4 Shallow

SAMPLE I.D. — DUPLICATE I.D. —

STATIC WATER LEVEL (ft btoc) 50.55 TOTAL WELL DEPTH (feet) start 69.73 / finish 73.15

WATER COLUMN (feet) 19.18 / 22.6 CASING/TUBING DIAMETER (in/ft) 4

WELL/PUMP VOLUME (V) (gals) 19.18 x 0.65 = 12.47 3 V (gals) —

PURGING DEVICE 3" SS bailer / sub

SAMPLING DEVICE —

OVA: FID ☐ PID ☒ In Casing (ppm) (initial) NP (vented to) —

IN BREATHING ZONE (ppm) (initial) NP (vented to) —

FINAL PUMP DEPTH (feet) —

SAMPLER'S SIGNATURE —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
1325	start bail	50.55	—	—	—	—	—	—	—	—	0	0	—
1340	end bail	71.31	(TD - 73.12)	—	—	—	—	—	—	—	20	1.60	—
5 7:14		59.78											
8:00	start sub		—	—	—	—	—	—	—	—			
8:30	end sub		—	—	—	—	—	—	—	—			
8:35	start bail	60.15	—	—	—	—	—	—	—	—	20	1.60	—
8:50	end bail	72.85	(TD - 73.15)								45	3.06	—
10:25		71.28	recharge 1.57' / 95 min					≈ 1 foot / hr					
0 8:08		50.43											
8:48	start pump	50.42									45		1.5
8:58		67.65	—	—	—	—	570	—	—	Brn	60	4.08	1.5
9:01	well purged dry												
903	WL.	70.95		9:13 WL - ~~69.95~~				70.51					
	≈ recharge		0.03 gall/min							1			

Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ± 1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤ 5 NTUs

Comments: 10' screen

needs lock

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG S[illegible]T - PURGING

DATE 9/23/04 SITE NUMBER 2 PURGING DEVICE grundfos redi-flo 2

PROGRAM NAME Lockheed Bernard SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION FT-MW2-4 Shallow OVA: FID ☐ PID ☒ In Casing (ppm) (initial) 0.0 (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) 0.0 (vented to) —

STATIC WATER LEVEL (ft btoc) — TOTAL WELL DEPTH (feet) — FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) — CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE —

WELL/PUMP VOLUME (V) (gals) — 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x —	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
11:25	start purg	51.07	71	—	—	—	—	—	—	—	Ø	Ø	1.0
11:35		63.58	71	—	—	—	107.2	—	—	cloudy	10		
11:45		70.50	71	—	—	—	710	—	—	"	20		
11:48	well purged dry (TD - 73.15)												
4 8:13		59.59	71	—	—	—	—	—	—	—	Ø	Ø	0.5
8:30		64.00	71	24.62	0.426	8.96	298	5.86	-18.9	cloudy	3.5		
8:55		65.50	71	25.35	0.402	8.97	134	5.40	-51.7	"	6.0		
9:00		66.68	71	25.58	0.397	8.96	226	5.42	-62.5	"	8.5		
9:05		68.00	71	25.87	0.407	8.97	522	5.64	-72.4	brn	11.0		
9:10		69.00	71	25.72	0.405	8.97	602	5.93	-74.6	brn	13.5		
9:14	well purged	dry											
										1			

Fe+2 (ppm) — Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ±5%
pH ±0.1	Turbidity ≤5 NTUs

Comments: —

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SHEET - PURGING

DATE 9/14/04 · SITE NUMBER 2 · PURGING DEVICE 3" SS bailer/swab

PROGRAM NAME Lockheed Beaumont site 2 · SAMPLING DEVICE

MONITORING WELL IDENTIFICATION TT-MW2-4 Deep · OVA: FID ☐ PID ☒ In Casing (ppm) (initial) nd (vented to)

SAMPLE I.D. — · DUPLICATE I.D. — · IN BREATHING ZONE (ppm) (initial) nd (vented to)

STATIC WATER LEVEL (ft btoc) 63.95 · TOTAL WELL DEPTH (feet) start 98.05 · FINAL PUMP DEPTH (feet)

WATER COLUMN (feet) 34.10 · CASING/TUBING DIAMETER (in/ft) 4 · SAMPLER'S SIGNATURE

WELL/PUMP VOLUME (V) (gals) 34.10 x 0.65 ~ 22.17 · 3 V (gals) —

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
1310	start bail	63.95	—								0	0	—
1320	end bail	75.42	—	(TD - 98.05)							~~10~~ 15	0.68	—
15 7:10		67.31											
7:25	start swab												
7:55	end swab												
9:10	start bail	66.85	—								15	0.68	—
9:20	end bail	74.25	(TD - 98.05)								~~30~~ 25	1.13	—
9:30	start pump	74.25	95								25	1.13	1.5
9:35		82.82	95	—	—		+1000	—		brn	33	1.49	
9:40		88.65	98	—	—		+1000	—		brn	40	1.80	
9:45		90.72	98				+1000			brn	48	2.17	
9:48	well purged	dry		—	—		—			brn	52	2.35	↓
9:50	WL - 91.00		9:55	WL - 90.00				recharge ½		min/ 1 spot			
~~10:00~~	WL - 89.00		10:13	WL - 88.00									

10:01 pumped additional 10 gall @ 1.5 gpm

Re+2 (ppm) ____ Taken from first bailer, immediately before sampling.

Comments: 10' screen

needs lock

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ±5%
pH ±0.1	Turbidity ≤5 NTUs

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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GROUNDWATER MONITORING WELL

FIELD DATA LOG SHEET - ~~PURGING~~ Development

Page ___ of ___

DATE 9/20/01 SITE NUMBER 2 PURGING DEVICE grund fos rad. 8lo ft pump

PROGRAM NAME Lockheed-Beaumont Site 2 SAMPLING DEVICE —

MONITORING WELL IDENTIFICATION TT- mw2-4 Deep OVA: FID ☐ PID ☒ In Casing (ppm) (initial) nd (vented to) —

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) nd (vented to) —

STATIC WATER LEVEL (ft btoc) 68.92 TOTAL WELL DEPTH (feet) 98.05 FINAL PUMP DEPTH (feet) —

WATER COLUMN (feet) 29.13 CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE —

WELL/PUMP VOLUME (V) (gals) 29.13 x 0.65 = 18.93 3 V (gals) —

	Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ___	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
.43	8:10		68.92									52	2.75	
.43	8:17	start purge	68.92	96	—	—			—		—	52	2.75	1.5
.42	8:27		88.78	96	—	—		+1000	—		brn	67	3.54	1.5
.42	8:37		93.85	96	—	—		+1000	—		brn	82	4.33	1.5
	8:42	well purged dry												
	8:46	WL - 95.76		8:51	WL -	94.76				8:57	WL - 93.76			
		~ recharge 0.11 gal/min						5						
/23	10:25		74.46											
.05	10:32	start purge	74.46	94	—	—			—		—	∅	∅	1.0
.06	10:42		85.18	94	—	—		+1000	—		brn	10		5
.07	10:52	lower purge rate	89.64	94	—	—		934	—		brn	20		0.5
.07	11:02		91.55	94	—	—		+1000	—		brn	25		
	11:10	well purged dry												
											1			

Fe+2 (ppm) ___ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤ 5 NTUs

Comments: —

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SHEET - PURGING

DATE 9/24/04 SITE NUMBER 1 PURGING DEVICE grndfos red. 5/8 ft

PROGRAM NAME Lockheed- Baumont SAMPLING DEVICE

MONITORING WELL IDENTIFICATION JFMW2-4 Deep OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to)

SAMPLE I.D. — DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to)

STATIC WATER LEVEL (ft btoc) TOTAL WELL DEPTH (feet) 98.05 FINAL PUMP DEPTH (feet)

WATER COLUMN (feet) CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE

WELL/PUMP VOLUME (V) (gals) 3 V (gals)

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC (µmhos/cm) x ____	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
9:23	start pump	81.82	95	—	—					—	0	0	0.5
9:28		86.95	95	25.40	0.323	9.35	631	4.67	-99.5	Dry	2.5		
9:33		88.80	95	26.68	0.330	9.49	563	4.11	-93.4	"	5.0		
9:38		89.83	95	26.42	0.351	9.46	580	4.08	-100.4	"	7.5		
9:43		91.12	95	26.48	0.347	9.39	+1000	4.61	-94.1	"	100		
9.48		92.53	95	26.60	0.336	9.40	+1000	4.71	-95.6	"	12.5		
										1			

Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ±5%
pH ±0.1	Turbidity ≤5 NTUs

Comments:

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

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FIELD DATA LOG SH[illegible] - PURGING

DATE 9/27/04 SITE NUMBER 2

PROGRAM NAME Lockheed Bennett

MONITORING WELL IDENTIFICATION TT-MW2-1

SAMPLE I.D. TT-MW2-1 DUPLICATE I.D. TT-MW2-20

STATIC WATER LEVEL (ft btoc) 54.98 TOTAL WELL DEPTH (feet) 73.25

WATER COLUMN (feet) 18.27 CASING/TUBING DIAMETER (in/ft) 4

WELL/PUMP VOLUME (V) (gals) 18.27 x 0.65 = 11.88 3 V (gals) 3564

PURGING DEVICE gwnd Sub pmp. 5/8 ft -dedicated hose

SAMPLING DEVICE " " "

OVA: FID ☐ PID ☒ In Casing (ppm) (initial) WD (vented to) _____

IN BREATHING ZONE (ppm) (initial) WD (vented to) _____

FINAL PUMP DEPTH (feet) 68

SAMPLER'S SIGNATURE _____

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC ~~(µmhos/cm)~~ mS/cm	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
12:11	start purge	54.98	68								Ø	Ø	0.5
12:16		56.95	68	25.04	1.308	7.52	35.0	5.36	14.5	cloudy	2.5	021	
12:21		57.36	68	25.25	1.313	7.52	45.6	4.95	15.5	"	5.0	0.42	
12:26		57.63	68	25.42	1.323	7.54	174	4.93	14.1	"	7.5	0.63	
12:31		57.50	68	25.98	1.342	7.55	303	4.90	11.4	"	10.0	0.84	
12:36		57.48	68	25.99	1.342	7.54	373	4.93	8.9	"	12.5	1.05	
12:41		57.45	68	26.03	1.344	7.52	369	4.96	8.1	"	150	1.26	
12:46		57.45	68	25.59	1.342	7.53	369	5.16	7.8	"	17.5	1.47	↓
12:46	sample well												
1500	dup sample time												

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Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

Comments: 15' screen

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ±0.1	Turbidity ≤5 NTUs

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

FIELD DATA LOG SHEET - PURGING

DATE 9/27/04 SITE NUMBER 2 PURGING DEVICE grundfos redi Sub ft - dedicated hose

PROGRAM NAME Lockheed Beaumont SAMPLING DEVICE

MONITORING WELL IDENTIFICATION TT-MW2-2 OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to)

SAMPLE I.D. TT-MW2-2 DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to)

STATIC WATER LEVEL (ft btoc) 69.70 TOTAL WELL DEPTH (feet) 120.25 FINAL PUMP DEPTH (feet) 119

WATER COLUMN (feet) 50.55 CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE

WELL/PUMP VOLUME (V) (gals) 50.55 x 0.65 = 32.86 3 V (gals) 98.58

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC ~~(µmhos/cm)~~ mS/cm	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
8:05	start pump	69.70	119	—							0	0	1.5
8:10		80.88	119	21.92	0.466	8.48	75.7	3.23	10.8	cloudy	7.5	0.23	
8:15		87.99	119	22.14	0.462	8.62	58.8	3.03	13.8	"	15	0.45	
8:20		94.92	119	22.18	0.457	8.72	68.2	3.08	14.0	"	22.5	0.68	
8:25		103.82	119	22.37	0.461	8.76	54.2	3.04	13.2	"	30	0.91	
8:30		108.75	119	22.41	0.454	8.80	83.2	3.12	12.5	"	37.5	1.08	
8:35		110.80	119	22.24	0.510	8.74	202	4.89	13.7	"	45	1.37	
8:39	well purged dry										51	1.55	↓
1400		86.14											
1405	sample well												
										1			

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Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

Comments:

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤5 NTUs

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

FIELD DATA LOG SH T - PURGING

DATE 9/27/04 SITE NUMBER 2

PROGRAM NAME Lockheed Bauman

MONITORING WELL IDENTIFICATION TT-MW2-3

SAMPLE I.D. TT-MW2-3 DUPLICATE I.D. —

STATIC WATER LEVEL (ft btoc) 69.78 TOTAL WELL DEPTH (feet) 101.33

WATER COLUMN (feet) 31.55 CASING/TUBING DIAMETER (in/ft) 4

WELL/PUMP VOLUME (V) (gals) 31.55 x 0.65 = 20.51 3 V (gals) 61.53

PURGING DEVICE grundfos redi flo II - dedicated hose

SAMPLING DEVICE " " "

OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) —

IN BREATHING ZONE (ppm) (initial) ND (vented to) —

FINAL PUMP DEPTH (feet) —

SAMPLER'S SIGNATURE

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC ~~(umhos/cm)~~ mS/cm	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
10:57	start pump	69.78	90	—	—	—	—	—	—	—	0	0	0.5
11:02		73.23	90	24.46	1.000	7.37	455	7.69	16.1	cloudy	2.5	0.12	
11:07		73.55	90	24.53	1.024	7.41	147	7.59	16.3	"	5.0	0.24	
11:12		73.58	90	24.77	1.034	7.40	80.0	7.59	14.5	"	7.5	0.36	
11:17		73.57	90	24.87	1.039	7.39	73.2	7.63	13.8	"	10.0	0.49	
11:22		73.61	90	24.80	1.033	7.37	67.5	7.64	13.1	"	12.5	0.61	
11:27		73.63	90	24.84	1.039	7.35	64.2	7.66	12.3	"	15.0	0.73	
11:32		73.65	90	24.82	1.037	7.34	63.9	7.65	11.8	"	17.5	0.85	
11:32	sample well												

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Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

Comments: 20' sand

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤5 NTUs

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

FIELD DATA LOG SHEET - PURGING

DATE 9/27/04 SITE NUMBER 2

PROGRAM NAME Lockheed Bowmer

MONITORING WELL IDENTIFICATION TT-MW2-4 shallow

SAMPLE I.D. TT-MW2-4S DUPLICATE I.D. —

STATIC WATER LEVEL (ft btoc) 51.52 TOTAL WELL DEPTH (feet) 73.15

WATER COLUMN (feet) 21.63 CASING/TUBING DIAMETER (in/ft) 4

WELL/PUMP VOLUME (V) (gals) 21.63 x 0.65 = 14.06 3 V (gals) 42.18

PURGING DEVICE grundfos rd.5 ft - dedicated hose

SAMPLING DEVICE

OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to) ___

IN BREATHING ZONE (ppm) (initial) ND (vented to) ___

FINAL PUMP DEPTH (feet) 72

SAMPLER'S SIGNATURE

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC ~~(µmhos/cm)~~ mS/cm	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
10:00	start pump	51.52	72	—	—	—	—	—	—	—	Ø	Ø	1.5
10:05		62.58	72	23.25	0.378	8.62	106.2	5.38	18.4	cloudy	7.5	0.53	
10:10		67.50	72	23.40	0.381	8.78	402	5.81	18.3	brn	15	1.06	
10:15		71.60	72	23.50	0.505	8.71	+1000	5.53	18.6	"	22.5	1.60	
10:16	well purged	dry									24.0	1.71	↓
13:20		69.01											
13:25	sample well												

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Fe+2 (ppm) ___ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤5 NTUs

Comments:

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

FIELD DATA LOG SH T - PURGING

DATE 9/27/04 SITE NUMBER 2 PURGING DEVICE grund fos redi flo II - dedicated hose

PROGRAM NAME Lockheed Baumit SAMPLING DEVICE

MONITORING WELL IDENTIFICATION TT-mw2-4 Deep OVA: FID ☐ PID ☒ In Casing (ppm) (initial) ND (vented to)

SAMPLE I.D. TT-mw2-4D DUPLICATE I.D. — IN BREATHING ZONE (ppm) (initial) ND (vented to)

STATIC WATER LEVEL (ft btoc) 77.58 TOTAL WELL DEPTH (feet) ~~97.5~~ 98.05 FINAL PUMP DEPTH (feet) 96.5

WATER COLUMN (feet) 20.47 CASING/TUBING DIAMETER (in/ft) 4 SAMPLER'S SIGNATURE

WELL/PUMP VOLUME (V) (gals) 20.47 X 0.65 = 13.31 3 V (gals) 39.9

Time	Activity	Water Level (ft btoc)	Pump Depth (ft btoc)	Temp (Deg. C / F)	EC ~~(µmhos/cm)~~ mS/cm	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mV)	Color	Volume Purged (gals)	Bore Hole Volumes Purged	Flow Rate (mlPM / GPM)
9:20	start purge	77.58	96.5								0	0	1.5
9:25		85.01	96.5	23.93	0.320	8.76	264	3.52	136	cloudy	7.5	0.56	
9:30		89.45	96.5	24.26	0.321	9.04	190	3.20	17.4	"	15	1.13	
9:35		92.15	96.5	24.24	0.356	9.16	856	4.25	17.4	brn	22.5	1.69	
9:40		95.12	96.5	24.10	0.309	9.25	+1000	3.52	16.8	"	30.0	2.25	
9:42	well purged dry										33.0	2.48	↓
13:23		88.09											
1340	sample well												

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Fe+2 (ppm) _____ Taken from first bailer, immediately before sampling.

PARAMETERS FOR WATER QUALITY STABILIZATION

Temperature ±1° C (1.8°F)	Conductivity ± 5%
pH ± 0.1	Turbidity ≤ 5 NTUs

Comments:

Note: All water levels and pump depths are measured from the notch in the top of the well casing. If volatiles are detected in the breathing zone during the initial screening, the breathing zone will be periodically monitored during purging and sampling activities and recorded in the logbook..

Calscience
Environmental
Laboratories, Inc.

October 12, 2004

Jeff Brenner
Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Subject: **Calscience Work Order No.:** **04-09-1607**
Client Reference: **Lockheed Martin - Site 2 / TC #13505-02**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/28/2004 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Stephen Nowak
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3010A Total / EPA 7470A Total
Method: EPA 6010B / EPA 7470A
Units: mg/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
EB1	**04-09-1607-2**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:24:11 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	ND	0.0150	1		Molybdenum	ND	0.00500	1	
Barium	ND	0.0100	1		Nickel	ND	0.00500	1	
Beryllium	ND	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	ND	0.00500	1		Thallium	ND	0.0150	1	
Cobalt	ND	0.00500	1		Vanadium	ND	0.00500	1	
Copper	ND	0.00500	1		Zinc	ND	0.0100	1	
Lead	ND	0.0100	1						

TT-MW2-3	**04-09-1607-3**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:27:13 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	ND	0.0150	1		Molybdenum	ND	0.00500	1	
Barium	0.112	0.010	1		Nickel	ND	0.00500	1	
Beryllium	ND	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	0.00656	0.00500	1		Thallium	ND	0.0150	1	
Cobalt	ND	0.00500	1		Vanadium	0.0107	0.0050	1	
Copper	0.00501	0.00500	1		Zinc	0.0231	0.0100	1	
Lead	ND	0.0100	1						

TT-MW2-1	**04-09-1607-4**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:30:14 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	ND	0.0150	1		Molybdenum	0.00521	0.00500	1	
Barium	0.220	0.010	1		Nickel	0.0120	0.0050	1	
Beryllium	ND	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	0.0172	0.0050	1		Thallium	ND	0.0150	1	
Cobalt	0.00591	0.00500	1		Vanadium	0.0288	0.0050	1	
Copper	0.0129	0.0050	1		Zinc	0.0460	0.0100	1	
Lead	ND	0.0100	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3010A Total / EPA 7470A Total
Method: EPA 6010B / EPA 7470A
Units: mg/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4S	**04-09-1607-5**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:33:17 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	0.0177	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	0.0598	0.0150	1		Molybdenum	0.0158	0.0050	1	
Barium	0.256	0.010	1		Nickel	0.0364	0.0050	1	
Beryllium	0.00230	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	0.0573	0.0050	1		Thallium	ND	0.0150	1	
Cobalt	0.0194	0.0050	1		Vanadium	0.191	0.005	1	
Copper	0.0427	0.0050	1		Zinc	0.148	0.010	1	
Lead	0.0188	0.0100	1						

TT-MW2-4D	**04-09-1607-6**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:36:21 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	0.0833	0.0150	1		Molybdenum	0.0112	0.0050	1	
Barium	0.0532	0.0100	1		Nickel	0.00721	0.00500	1	
Beryllium	ND	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	0.0115	0.0050	1		Thallium	ND	0.0150	1	
Cobalt	ND	0.00500	1		Vanadium	0.129	0.005	1	
Copper	0.00882	0.00500	1		Zinc	0.0276	0.0100	1	
Lead	ND	0.0100	1						

TT-MW2-2	**04-09-1607-7**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:39:26 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	ND	0.0150	1		Molybdenum	ND	0.00500	1	
Barium	0.0299	0.0100	1		Nickel	ND	0.00500	1	
Beryllium	ND	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	ND	0.00500	1		Thallium	ND	0.0150	1	
Cobalt	ND	0.00500	1		Vanadium	0.0166	0.0050	1	
Copper	ND	0.00500	1		Zinc	0.0228	0.0100	1	
Lead	ND	0.0100	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3010A Total / EPA 7470A Total
Method: EPA 6010B / EPA 7470A
Units: mg/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-20	**04-09-1607-8**	**09/27/04**	**Aqueous**	**09/28/04**	**09/29/04**	**040928L05**

Comment(s): Mercury was analyzed on 9/29/2004 10:42:32 AM with batch 040928L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Mercury	ND	0.000500	1	
Arsenic	ND	0.0150	1		Molybdenum	ND	0.00500	1	
Barium	0.228	0.010	1		Nickel	0.0115	0.0050	1	
Beryllium	ND	0.00100	1		Selenium	ND	0.0150	1	
Cadmium	ND	0.00500	1		Silver	ND	0.00500	1	
Chromium (Total)	0.0170	0.0050	1		Thallium	ND	0.0150	1	
Cobalt	0.00661	0.00500	1		Vanadium	0.0313	0.0050	1	
Copper	0.0140	0.0050	1		Zinc	0.0440	0.0100	1	
Lead	ND	0.0100	1						

Method Blank	099-04-008-1,653	N/A	Aqueous	09/28/04	09/28/04	040928L02

Parameter	Result	RL	DF	Qual
Mercury	ND	0.000500	1	

Method Blank	097-01-003-4,194	N/A	Aqueous	09/28/04	09/29/04	040928L05

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Antimony	ND	0.0150	1		Molybdenum	ND	0.00500	1	
Arsenic	ND	0.0150	1		Nickel	ND	0.00500	1	
Barium	ND	0.0100	1		Selenium	ND	0.0150	1	
Beryllium	ND	0.00100	1		Silver	ND	0.00500	1	
Cadmium	ND	0.00500	1		Thallium	ND	0.0150	1	
Chromium (Total)	ND	0.00500	1		Vanadium	ND	0.00500	1	
Cobalt	ND	0.00500	1		Zinc	ND	0.0100	1	
Copper	ND	0.00500	1		Lead	ND	0.0100	1	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
EB1	**04-09-1607-2**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	86	15-138		Phenol-d6	83	17-141	
Nitrobenzene-d5	103	28-139		2-Fluorobiphenyl	106	33-144	
2,4,6-Tribromophenol	89	32-143		p-Terphenyl-d14	104	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-3	**04-09-1607-3**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	22	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	81	15-138		Phenol-d6	98	17-141	
Nitrobenzene-d5	100	28-139		2-Fluorobiphenyl	97	33-144	
2,4,6-Tribromophenol	95	32-143		p-Terphenyl-d14	110	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-1	**04-09-1607-4**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	83	15-138		Phenol-d6	100	17-141	
Nitrobenzene-d5	104	28-139		2-Fluorobiphenyl	97	33-144	
2,4,6-Tribromophenol	92	32-143		p-Terphenyl-d14	104	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received:	09/28/04
Work Order No:	04-09-1607
Preparation:	EPA 3520B
Method:	EPA 8270C
Units:	ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4S	**04-09-1607-5**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	80	15-138		Phenol-d6	87	17-141	
Nitrobenzene-d5	98	28-139		2-Fluorobiphenyl	89	33-144	
2,4,6-Tribromophenol	85	32-143		p-Terphenyl-d14	76	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4D	**04-09-1607-6**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	79	15-138		Phenol-d6	89	17-141	
Nitrobenzene-d5	96	28-139		2-Fluorobiphenyl	94	33-144	
2,4,6-Tribromophenol	89	32-143		p-Terphenyl-d14	91	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-2	**04-09-1607-7**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	78	15-138		Phenol-d6	86	17-141	
Nitrobenzene-d5	96	28-139		2-Fluorobiphenyl	87	33-144	
2,4,6-Tribromophenol	77	32-143		p-Terphenyl-d14	76	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-20	**04-09-1607-8**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	74	15-138		Phenol-d6	67	17-141	
Nitrobenzene-d5	92	28-139		2-Fluorobiphenyl	87	33-144	
2,4,6-Tribromophenol	79	32-143		p-Terphenyl-d14	87	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**095-01-003-1,553**	**N/A**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
N-Nitrosodimethylamine	ND	10	1		2,4-Dinitrophenol	ND	50	1	
Aniline	ND	10	1		4-Nitrophenol	ND	10	1	
Phenol	ND	10	1		Dibenzofuran	ND	10	1	
Bis(2-Chloroethyl) Ether	ND	25	1		2,4-Dinitrotoluene	ND	10	1	
2-Chlorophenol	ND	10	1		2,6-Dinitrotoluene	ND	10	1	
1,3-Dichlorobenzene	ND	10	1		Diethyl Phthalate	ND	10	1	
1,4-Dichlorobenzene	ND	10	1		4-Chlorophenyl-Phenyl Ether	ND	10	1	
Benzyl Alcohol	ND	10	1		Fluorene	ND	10	1	
1,2-Dichlorobenzene	ND	10	1		4-Nitroaniline	ND	10	1	
2-Methylphenol	ND	10	1		Azobenzene	ND	10	1	
Bis(2-Chloroisopropyl) Ether	ND	10	1		4,6-Dinitro-2-Methylphenol	ND	50	1	
3/4-Methylphenol	ND	10	1		N-Nitrosodiphenylamine	ND	10	1	
N-Nitroso-di-n-propylamine	ND	10	1		4-Bromophenyl-Phenyl Ether	ND	10	1	
Hexachloroethane	ND	10	1		Hexachlorobenzene	ND	10	1	
Nitrobenzene	ND	25	1		Pentachlorophenol	ND	10	1	
Isophorone	ND	10	1		Phenanthrene	ND	10	1	
2-Nitrophenol	ND	10	1		Anthracene	ND	10	1	
2,4-Dimethylphenol	ND	10	1		Di-n-Butyl Phthalate	ND	10	1	
Benzoic Acid	ND	50	1		Fluoranthene	ND	10	1	
Bis(2-Chloroethoxy) Methane	ND	10	1		Benzidine	ND	50	1	
2,4-Dichlorophenol	ND	10	1		Pyrene	ND	10	1	
1,2,4-Trichlorobenzene	ND	10	1		Pyridine	ND	10	1	
Naphthalene	ND	10	1		Butyl Benzyl Phthalate	ND	10	1	
4-Chloroaniline	ND	10	1		3,3'-Dichlorobenzidine	ND	25	1	
Hexachloro-1,3-Butadiene	ND	10	1		Benzo (a) Anthracene	ND	10	1	
4-Chloro-3-Methylphenol	ND	10	1		Bis(2-Ethylhexyl) Phthalate	ND	10	1	
2-Methylnaphthalene	ND	10	1		Chrysene	ND	10	1	
Hexachlorocyclopentadiene	ND	25	1		Di-n-Octyl Phthalate	ND	10	1	
2,4,6-Trichlorophenol	ND	10	1		Benzo (k) Fluoranthene	ND	10	1	
2,4,5-Trichlorophenol	ND	10	1		Benzo (b) Fluoranthene	ND	10	1	
2-Chloronaphthalene	ND	10	1		Benzo (a) Pyrene	ND	10	1	
2-Nitroaniline	ND	10	1		Benzo (g,h,i) Perylene	ND	10	1	
Dimethyl Phthalate	ND	10	1		Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Acenaphthylene	ND	10	1		Dibenz (a,h) Anthracene	ND	10	1	
3-Nitroaniline	ND	10	1		1-Methylnaphthalene	ND	10	1	
Acenaphthene	ND	10	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorophenol	77	15-138		Phenol-d6	99	17-141	
Nitrobenzene-d5	102	28-139		2-Fluorobiphenyl	79	33-144	
2,4,6-Tribromophenol	65	32-143		p-Terphenyl-d14	96	23-160	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.	Date Received: 09/28/04
348 West Hospitality Lane, Ste 100	Work Order No: 04-09-1607
San Bernardino, CA 92408-3216	Preparation: EPA 3520B
	Method: GC/MS Isotope Dilution

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
EB1	**04-09-1607-2**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	103	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-3	**04-09-1607-3**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	100	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-1	**04-09-1607-4**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	104	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4S	**04-09-1607-5**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	98	56-123	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: GC/MS Isotope Dilution

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4D	**04-09-1607-6**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	96	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-2	**04-09-1607-7**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	96	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-20	**04-09-1607-8**	**09/27/04**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	92	56-123	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-09-004-305**	**N/A**	**Aqueous**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	Result	RL	DF	Qual	Units
1,4-Dioxane	ND	2.0	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
Nitrobenzene-d5	102	56-123	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 1625CM

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
EB1	**04-09-1607-2**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	113	50-130	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-3	**04-09-1607-3**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	66	50-130	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-1	**04-09-1607-4**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	108	50-130	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4S	**04-09-1607-5**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	100	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 1625CM

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4D	**04-09-1607-6**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	99	50-130	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-2	**04-09-1607-7**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	100	50-130	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-20	**04-09-1607-8**	**09/27/04**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	87	50-130	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-07-027-126**	**N/A**	**Aqueous**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	Result	RL	DF	Qual	Units
N-Nitrosodimethylamine	ND	2.0	1		ng/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Dichlorobenzene-d4	72	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TB1	**04-09-1607-1**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	109	80-120		Dibromofluoromethane	113	78-132	
Toluene-d8	99	82-118		1,4-Bromofluorobenzene	90	71-119	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
EB1	**04-09-1607-2**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
=Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	107	80-120		Dibromofluoromethane	113	78-132	
Toluene-d8	96	82-118		1,4-Bromofluorobenzene	89	71-119	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-3	**04-09-1607-3**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	1.6	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	80-120			Dibromofluoromethane	107	78-132		
Toluene-d8	96	82-118			1,4-Bromofluorobenzene	91	71-119		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-1	**04-09-1607-4**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
=Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	80-120			Dibromofluoromethane	113	78-132		
Toluene-d8	94	82-118			1,4-Bromofluorobenzene	90	71-119		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4S	**04-09-1607-5**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	106	80-120		Dibromofluoromethane	112	78-132	
Toluene-d8	97	82-118		1,4-Bromofluorobenzene	91	71-119	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-4D	**04-09-1607-6**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	103	80-120		Dibromofluoromethane	109	78-132	
Toluene-d8	96	82-118		1,4-Bromofluorobenzene	90	71-119	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-2	**04-09-1607-7**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	108	80-120		Dibromofluoromethane	112	78-132	
Toluene-d8	97	82-118		1,4-Bromofluorobenzene	89	71-119	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.	Date Received:	09/28/04
348 West Hospitality Lane, Ste 100	Work Order No:	04-09-1607
San Bernardino, CA 92408-3216	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
TT-MW2-20	**04-09-1607-8**	**09/27/04**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	113	80-120			Dibromofluoromethane	112	78-132		
Toluene-d8	98	82-118			1,4-Bromofluorobenzene	90	71-119		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
Method Blank	**099-10-006-12,164**	**N/A**	**Aqueous**	**N/A**	**09/29/04**	**040928L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	10	1		1,3-Dichloropropane	ND	1.0	1	
Benzene	ND	0.50	1		2,2-Dichloropropane	ND	1.0	1	
Bromobenzene	ND	1.0	1		1,1-Dichloropropene	ND	1.0	1	
Bromochloromethane	ND	1.0	1		c-1,3-Dichloropropene	ND	0.50	1	
Bromodichloromethane	ND	1.0	1		t-1,3-Dichloropropene	ND	0.50	1	
Bromoform	ND	1.0	1		Ethylbenzene	ND	1.0	1	
Bromomethane	ND	10	1		2-Hexanone	ND	10	1	
2-Butanone	ND	10	1		Isopropylbenzene	ND	1.0	1	
n-Butylbenzene	ND	1.0	1		p-Isopropyltoluene	ND	1.0	1	
sec-Butylbenzene	ND	1.0	1		Methylene Chloride	ND	10	1	
tert-Butylbenzene	ND	1.0	1		4-Methyl-2-Pentanone	ND	10	1	
Carbon Disulfide	ND	10	1		Naphthalene	ND	10	1	
Carbon Tetrachloride	ND	0.50	1		n-Propylbenzene	ND	1.0	1	
Chlorobenzene	ND	1.0	1		Styrene	ND	1.0	1	
Chloroethane	ND	1.0	1		1,1,1,2-Tetrachloroethane	ND	1.0	1	
Chloroform	ND	1.0	1		1,1,2,2-Tetrachloroethane	ND	1.0	1	
Chloromethane	ND	10	1		Tetrachloroethene	ND	1.0	1	
2-Chlorotoluene	ND	1.0	1		Toluene	ND	1.0	1	
4-Chlorotoluene	ND	1.0	1		1,2,3-Trichlorobenzene	ND	1.0	1	
Dibromochloromethane	ND	1.0	1		1,2,4-Trichlorobenzene	ND	1.0	1	
1,2-Dibromo-3-Chloropropane	ND	5.0	1		1,1,1-Trichloroethane	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1	
Dibromomethane	ND	1.0	1		1,1,2-Trichloroethane	ND	1.0	1	
1,2-Dichlorobenzene	ND	1.0	1		Trichloroethene	ND	1.0	1	
1,3-Dichlorobenzene	ND	1.0	1		Trichlorofluoromethane	ND	10	1	
1,4-Dichlorobenzene	ND	1.0	1		1,2,3-Trichloropropane	ND	5.0	1	
Dichlorodifluoromethane	ND	1.0	1		1,2,4-Trimethylbenzene	ND	1.0	1	
1,1-Dichloroethane	ND	1.0	1		1,3,5-Trimethylbenzene	ND	1.0	1	
1,2-Dichloroethane	ND	0.50	1		Vinyl Acetate	ND	10	1	
1,1-Dichloroethene	ND	1.0	1		Vinyl Chloride	ND	0.50	1	
c-1,2-Dichloroethene	ND	1.0	1		p/m-Xylene	ND	1.0	1	
t-1,2-Dichloroethene	ND	1.0	1		o-Xylene	ND	1.0	1	
1,2-Dichloropropane	ND	1.0	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	80-120			Dibromofluoromethane	109	78-132		
Toluene-d8	97	82-118			1,4-Bromofluorobenzene	90	71-119		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix
EB1	**04-09-1607-2**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	ND	2.0	1		ug/L	N/A	10/01/04	EPA 314.0

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TT-MW2-3	**04-09-1607-3**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	1300	100	50	D	ug/L	N/A	10/05/04	EPA 314.0

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TT-MW2-1	**04-09-1607-4**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	3500	200	100	D	ug/L	N/A	10/05/04	EPA 314.0

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TT-MW2-4S	**04-09-1607-5**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	ND	2.0	1		ug/L	N/A	10/01/04	EPA 314.0

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TT-MW2-4D	**04-09-1607-6**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	ND	2.0	1		ug/L	N/A	10/01/04	EPA 314.0

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TT-MW2-2	**04-09-1607-7**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	ND	2.0	1		ug/L	N/A	10/01/04	EPA 314.0

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607

Project: Lockheed Martin - Site 2 / TC #13505-02

Client Sample Number	Lab Sample Number	Date Collected	Matrix
TT-MW2-20	**04-09-1607-8**	**09/27/04**	**Aqueous**

Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	3700	200	100	D	ug/L	N/A	10/05/04	EPA 314.0

Method Blank			**N/A**		**Aqueous**			
Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Perchlorate	ND	2.0	1		ug/L	N/A	10/01/04	EPA 314.0
Perchlorate	ND	2.0	1		ug/L	N/A	10/04/04	EPA 314.0

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 3010A Total
Method: EPA 6010B

Project Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
TT-MW2-3	**Aqueous**	**ICP 3300**	**09/28/04**	**09/29/04**	**040928S05**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	99	104	80-120	5	0-20	
Arsenic	101	106	80-120	5	0-20	
Barium	103	108	80-120	4	0-20	
Beryllium	99	104	80-120	4	0-20	
Cadmium	99	103	80-120	4	0-20	
Chromium (Total)	99	103	80-120	4	0-20	
Cobalt	101	105	80-120	4	0-20	
Copper	99	103	80-120	4	0-20	
Lead	97	102	80-120	4	0-20	
Molybdenum	99	103	80-120	4	0-20	
Nickel	98	102	80-120	4	0-20	
Selenium	98	103	80-120	5	0-20	
Silver	101	104	80-120	3	0-20	
Thallium	97	102	80-120	5	0-20	
Vanadium	99	102	80-120	4	0-20	
Zinc	102	106	80-120	4	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 7470A Total
Method: EPA 7470A

Project Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
04-09-1584-2	**Aqueous**	**Mercury**	**09/28/04**	**09/28/04**	**040928S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	100	99	71-134	0	0-14	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607
Preparation: EPA 5030B
Method: EPA 8260B

Project Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
04-09-1609-4	**Aqueous**	**GC/MS FF**	**N/A**	**09/29/04**	**040928S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	103	84-120	4	0-9	
Carbon Tetrachloride	131	133	71-137	1	0-10	
Chlorobenzene	104	102	87-111	3	0-8	
1,2-Dichlorobenzene	98	97	82-112	1	0-8	
1,1-Dichloroethene	105	106	76-130	1	0-18	
Toluene	107	103	85-115	4	0-8	
Trichloroethene	100	99	84-114	0	0-10	
Vinyl Chloride	110	113	68-128	3	0-16	
Methyl-t-Butyl Ether (MTBE)	92	89	63-135	3	0-20	
Tert-Butyl Alcohol (TBA)	95	82	25-169	15	0-41	
Diisopropyl Ether (DIPE)	103	103	70-130	0	0-11	
Ethyl-t-Butyl Ether (ETBE)	100	103	73-127	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	92	93	71-125	1	0-12	
Ethanol	102	115	59-143	12	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: 09/28/04
Work Order No: 04-09-1607

Project: Lockheed Martin - Site 2 / TC #13505-02

Matrix: Aqueous

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	MS% REC	MSD % REC	%REC CL	RPD	RPD CL	Qualifiers
Perchlorate	EPA 314.0	04-09-1596-1	10/01/04	N/A	117	117	80-120	0	0-15	
Perchlorate	EPA 314.0	04-09-1787-5	10/04/04	N/A	119	117	80-120	2	0-15	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: N/A
Work Order No: 04-09-1607
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-01-003-4,194	Aqueous	ICP 3300	09/28/04	09/29/04	040928L05

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Antimony	88	88	80-120	0	0-20	
Arsenic	89	89	80-120	1	0-20	
Barium	96	96	80-120	0	0-20	
Beryllium	88	89	80-120	0	0-20	
Cadmium	93	93	80-120	0	0-20	
Chromium (Total)	93	93	80-120	0	0-20	
Cobalt	96	96	80-120	0	0-20	
Copper	89	89	80-120	0	0-20	
Lead	93	93	80-120	0	0-20	
Molybdenum	92	92	80-120	0	0-20	
Nickel	93	93	80-120	0	0-20	
Selenium	85	85	80-120	0	0-20	
Silver	88	88	80-120	0	0-20	
Thallium	91	91	80-120	0	0-20	
Vanadium	90	90	80-120	0	0-20	
Zinc	93	93	80-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Tetra Tech, Inc.	Date Received: N/A
348 West Hospitality Lane, Ste 100	Work Order No: 04-09-1607
San Bernardino, CA 92408-3216	Preparation: EPA 7470A Total
	Method: EPA 7470A

Project: Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
099-04-008-1,653	**Aqueous**	**Mercury**	**09/28/04**	**040928L02**	**040928L02**

Parameter	Conc Added	Conc Recovered	LCS %Rec	%Rec CL	Qualifiers
Mercury	0.0100	0.0104	104	90-122	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: N/A
Work Order No: 04-09-1607
Preparation: EPA 3520B
Method: EPA 8270C

Project: Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-003-1,553	**Aqueous**	**GC/MS P**	**09/29/04**	**10/01/04**	**040929L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Phenol	97	89	4-118	9	0-18	
2-Chlorophenol	95	88	35-101	9	0-21	
1,4-Dichlorobenzene	85	78	39-93	10	0-45	
N-Nitroso-di-n-propylamine	109	102	33-123	6	0-38	
1,2,4-Trichlorobenzene	79	73	47-101	8	0-35	
4-Chloro-3-Methylphenol	98	92	0-295	6	0-30	
Acenaphthene	99	94	31-133	5	0-31	
4-Nitrophenol	122	115	1-143	5	0-44	
2,4-Dinitrotoluene	104	101	16-166	2	0-49	
Pentachlorophenol	103	98	1-154	5	0-53	
Pyrene	95	91	15-159	4	0-47	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Tetra Tech, Inc.	Date Received: N/A
348 West Hospitality Lane, Ste 100	Work Order No: 04-09-1607
San Bernardino, CA 92408-3216	Preparation: EPA 3520B
	Method: GC/MS Isotope Dilution

Project: Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-09-004-305	**Aqueous**	**GC/MS P**	**09/29/04**	**10/01/04**	**040929L01D**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	81	86	50-130	6	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Tetra Tech, Inc.	Date Received: N/A
348 West Hospitality Lane, Ste 100	Work Order No: 04-09-1607
San Bernardino, CA 92408-3216	Preparation: EPA 3520B
	Method: EPA 1625CM

Project: Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-027-126	**Aqueous**	**GC/MS H**	**10/04/04**	**10/07/04**	**041004L06**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
N-Nitrosodimethylamine	102	115	50-130	12	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Tetra Tech, Inc.		Date Received:	N/A
348 West Hospitality Lane, Ste 100		Work Order No:	04-09-1607
San Bernardino, CA 92408-3216		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: Lockheed Martin - Site 2 / TC #13505-02

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-12,164	**Aqueous**	**GC/MS FF**	**N/A**	**09/28/04**	**040928L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	102	87-117	1	0-6	
Carbon Tetrachloride	127	129	75-141	2	0-11	
Chlorobenzene	101	102	88-112	1	0-6	
1,2-Dichlorobenzene	98	97	88-112	1	0-6	
1,1-Dichloroethene	103	104	80-128	1	0-15	
Toluene	105	100	87-117	5	0-7	
Trichloroethene	99	95	86-116	4	0-8	
Vinyl Chloride	107	111	74-128	4	0-10	
Methyl-t-Butyl Ether (MTBE)	94	97	85-121	3	0-17	
Tert-Butyl Alcohol (TBA)	110	98	51-153	11	0-37	
Diisopropyl Ether (DIPE)	101	104	74-128	3	0-9	
Ethyl-t-Butyl Ether (ETBE)	105	106	81-123	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	104	98	81-123	5	0-9	
Ethanol	101	100	56-146	1	0-41	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Tetra Tech, Inc.
348 West Hospitality Lane, Ste 100
San Bernardino, CA 92408-3216

Date Received: N/A
Work Order No: 04-09-1607

Project: Lockheed Martin - Site 2 / TC #13505-02

Matrix: Aqueous

Parameter	Method	Quality Control Sample ID	Date Extracted	Date Analyzed	LCS % REC	LCSD % REC	%REC CL	RPD	RPD CL	Qual
Perchlorate	EPA 314.0	099-05-203-202	N/A	10/01/04	98	101	85-115	3	0-15	
Perchlorate	EPA 314.0	099-05-203-204	N/A	10/04/04	109	111	85-115	2	0-15	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 04-09-1607

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike or Matrix Spike Duplicate compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
D	The analyte concentration was reported from analysis of the diluted sample.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

09-1607

CHAIN OF CUSTODY RECORD

TETRA TECH, INC.
348 W. Hospitality Lane, Suite 100
San Bernardino, California 92408
Telephone: (909) 381-1674
FAX: (909) 889-1391

SHIP TO: Cal Science

DATE 9/27/04 PAGE 1 OF 1

CLIENT: Lockheed Martin
PROJECT NAME: Site 2
PROJECT MANAGER: Jess Brenner
TC #: 13505702
SAMPLERS (Signatures)

TURN-AROUND TIME: Standard

OBSERVATIONS/COMMENTS: Store at 4°C refrigerate @ 4°C until shipped

LINE ITEM	SAMPLE NO.	DATE	TIME	8260	8270 SVOC	1-4 Dioxane	NDMA	Tot 22 metals	Perchlorate	FILTERED/UNFILTERED	MATRIX TYPE	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
1.	TB1	9/27/04	7:00	X						U	W	G	2	HCl
2.	EB1		7:30	X	X	X	X	X	X			G/P	8	HCl/HNO3 NaSO3
3.	TT-MW2-3		1132	X	X	X	X	X	X				8	
4.	TT-MW2-1		1246	X	X	X	X	X	X				8	
5.	TT-MW2-4S		1325	X	X	X	X	X	X				8	
6.	TT-MW2-4D		1340	X	X	X	X	X	X				8	
7.	TT-MW2-		1405	X	X	X	X	X	X				8	
8.	TT-MW2-20		1500	X	X	X	X	X	X				8	
9.														
10.														

FILTERING: ☐ FILTERED ☒ UNFILTERED

MATRIX TYPE: S - Soil; ~~M - Sediment~~; W - Water

CONTAINER TYPE: G - Glass Bottle/Jar; SS - Stainless Steel Sleeve; SB - Brass Sleeve; P - Plastic Bottle/Jar

PRESERVATIVES: (Water Only) HCL; NaOH; NR (None required); H_2SO_4

RELINQUISHED BY	SIGNATURE Christopher Patula	TETRA TECH, INC.	DATE 9/28/04	TIME 11:30AM	TOTAL NUMBER OF CONTAINERS ON THIS CHAIN OF CUSTODY: 58
RECEIVED BY BAC TA	SIGNATURE	COMPANY CEL	DATE 9/28/4	TIME 1130	METHOD OF SHIPMENT/SHIPMENT NO.
RELINQUISHED BY BAC TA	SIGNATURE	COMPANY CEL	DATE 9/28/4	TIME 1450	Special Shipping/Handling/Storage Requirements:
RECEIVED BY	SIGNATURE victoria lam	COMPANY CBL	DATE 9/28/04	TIME 1400	

DISTRIBUTION: White and Pink = Tetra Tech, Inc. Canary = Laboratory

X:\GIS\ATT-MISC\COCR.CDR

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 04 - 09 - 1607

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Yetta Ted DATE: 9/28/04

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

- _____ Chilled, cooler with temperature blank provided.
- _____ Chilled, cooler without temperature blank.
- ✓ Chilled and placed in cooler with wet ice.
- _____ Ambient and placed in cooler with wet ice.
- _____ Ambient temperature.

2.1 °C Temperature blank.

LABORATORY (Other than Calscience Courier):

- _____ °C Temperature blank.
- _____ °C IR thermometer.
- _____ Ambient temperature.

Initial: [signature]

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Applicable (N/A): ✓

Initial: [signature]

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.			
Tedlar bag(s) free of condensation			✓

Initial: [signature]

COMMENTS:

-7 : Sample ID is TT-MW2-2 per sample labels on containers.